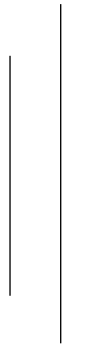# TRIBHUVAN UNIVERSITY

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E-GOVERNANCE

CASE STUDY REPORT ON

GENERAL INFORMATION SERVICES OF NATIONAL INFORMATICS CENTRE

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EXECUTIVE SUMMARY

This document solely aims for the thorough study of the general information services provides by the Indian e-governance organization, National Informatics Centre (NIC) which is the key player in the promotion of the e-governance in India. The main objective of the study is to explore the entire e-governance functions, for instance transparency and openness in government services, electronic connection between government department and ministries, improved delivery of services to citizens, enhanced communication within business and industry, easy access of information and many more. This study aims for building solutions, technology and infrastructure related aspect to implement e-governance application programs.

INTRODUCTION

The National Informatics Centre (NIC) is an attached office under the Ministry of Electronics and Information Technology (MeitY) in the Indian government. It is a premier Science and Technology Organization under the Government of India actively working in the area of Information and Communication Technology (ICT) Applications in the Government Sector. The NIC provides infrastructure to help support the delivery of government IT services and the delivery of some of the initiatives of Digital India. It has an annual budget of US$160 million for the year 2018-19. The IT services of NIC range from Consultancy, Software Design and Development, Office Automation and Networking services to Training, Video Conferencing, CAD, EDI, Multimedia and Internet Services including Web Site Development and Hosting. NIC has a nationwide presence with its offices across the Country, from Leh to Andaman and Nicobar Islands.

History

With the financial assistance of United Nation Development Union (UNDP), the government of India laid the foundation of NIC as the small project in 1975. Later, it became fully functional in 1976.The headquarter of NIC lies in New Delhi. NIC now is located in PAN India. The vision behind the establishment of NIC was of Dr. Narasimhiah Seshagiri. It has been over 4 decades of establishment.

Legislation

THE INFORMATION TECHNOLOGY ACT, 2000 provide legal recognition for transactions carried out by means of electronic data interchange and other means of electronic communication, commonly referred to as "electronic commerce". Later THE INFORMATION TECHNOLOGY (AMENDMENT) BILL, 2008 further amended the Information Technology Act, 2000 enacted by Parliament in the Fifty-ninth Year of the Republic of India.

General Information Services

NIC plays a significant role in delivering citizen centric e-services. It offers a wide range of services which includes the following:

NICNET
- ➡ NIC established NICNET, the pan India communication network for the exclusive use of government connecting government offices across the length and breadth of India to as early as 80's.
- ➡ NIC was able to reach the unreached by effective usage of NICNET.

Today, NICNET is the backbone of all government communication connecting even the remotest parts of India for effective delivery of digital services.

Video Conferencing
- ➡ Video Conferencing Services offered over NICNET which is initiated in 1995 connect government functionaries virtually from offices and has transformed the way government officials interact.
- ➡ This is now an integral component of government functioning and effective monitoring saving valuable time and money.
- ➡ NIC VC, Vidyo Desktop, Webex, Teams, Jitsi are some of the Video Conferencing (VC) tools used in government and Private Sectors.

National Knowledge Network
- ➡ NIC further established National knowledge Network (NKN) in 2009.
- ➡ It has been set up to connect institutions, organizations carrying out research and development, higher education and governance with speed of the order of multi gigabits per second.
- ➡ The first experiment was to link classrooms. So, the teachers can teach from his own host institution and it can go to the target institution.
- ➡ The network enable co-sharing of information, enormous data and collaboration through classroom, lectures, presentations, and handout among different institutions.

Messaging
- ➡ From snail mail messaging services have transitioned to the era of instant communication through e-mail and SMS.
- ➡ The government e-mail services grown to late 1980s has now grown to become the primary backbone of effective communication across all tiers of central and State governments.
- ➡ The technology-agnostic policy is neutral enough to cover not only email and instant-messaging (IM) but also social media, cloud computing, mobile computing and other means of communications.

National Data Centres
- ➡ NIC provides Data Centre Services from National Data Centres at Delhi, Hyderabad, Pune, Bhubaneswar. It is a Cloud-enabled data centre which has been offering Cloud Services to government department since its inauguration during 2018.

- National Data Centre at Delhi was upgraded with high speed network backbone, 1.6 petabyte enterprise class storage, high throughput network load balancer, and intrusion prevention system.
- ICT infrastructure of no. of national level projects was hosted/enhanced; These includes e-office, e-courts and e-transport.

Command and Control Centre
- NIC has been offering services to the government through its 4 national data centres and 30 mini-data centres across India.
- Over 10,000 e-governance applications are being hosted by these centres.
- CCC is providing users with the customized dashboards of network management system (NMS) to enable them to monitor their respective application.
- NIC is also providing application performance management (APM) through CCC to improve the availability, performance and functioning of critical applications.

Remote Sensing and GIS
- NIC now provides a multi-layered GIS based platform part of maps comprising of base maps, satellite images and hybrid maps for provisioning of location-based governance services.
- The impact of NICs contribution was also visible in teletext services for Durshan and Indian Railways and collection and dissemination of election result.
- NIC took up projects in the 80's and 90's in the areas of analysis of engineering structures such as Taj Mahal and offshore structure for ONGC and Mazagon docks at Bombay high . This has led to the development of the indigenous 3d CAD software collab CAD.

Domain Registration
- NIC has been made the authorized registrar for .GOV.IN.
- NIC has been allocating .GOV.IN domain names in accordance with its guidelines.
- These guidelines are now being revised with prospective effect in order to cater to the rapidly growing requirements for the future as well as to provide greater clarity for registration under .GOV.IN domain.
- Domain Names can be renewed, cancelled and delegated.

National Cloud
- The first national Cloud of government under the initiative was set up by NIC to utilize and harness the benefit of cloud computing and provide robust and agile infrastructure with on-demand services.
- This has speed up the delivery of e-service to the government business and citizens a nationwide view of ICT infrastructure for effective monitoring and management of all critical services facilitated by the state-of–the-art command and control centre at NIC headquarters.

Webcast

- ➧ NIC has been providing live/on-demand webcast services to central and state government for important national, international and regional, educational events and conferences.
- ➧ Live webcast services are provided for government TV channels such as lok sabha TV, rajya sabha TV Durdarsan news DD-Kisan, UGC – CEC higher education channels, DD Punjabi on 24*7 basis.
- ➧ Important events such as union budget speech, president's address to the nation, prime minister's Mann Ki Baat and other speeches and other national and international events /conferences like made in India, Skill India, Start-up India, Digital India were covered.

Security

- ➧ To address the ever increasing threats of cyberattacks, NIC offer cyber security, infrastructure and services to their platforms and products at both network and application level.
- ➧ A computer emergency response team, NIC CERT has been constituted with objective of analysing , monitoring, and responding to cyber threats on critical government infrastructure , keeping in pace with emerging technologies.
- ➧ NIC has also established Centre Of Excellence For Application Security in data analytics, artificial intelligence and block chain.

Present Context

NIC has developed a Work from Home platform for Government which provides access to all the productivity tools as well as domain specific applications of Government in a seamless manner. To promote national self-reliance and to be Vocal For Local, UP launched the online version of 4 MSME Scheme for the citizen of UP. NIC's Digital Solution e-Office is implemented in Rangareddy District by Ministry of Education, Government of Telangana, and in Kamareddy District. The e-office facilitate paperless movement of files and documents. Technical Education Minister of Haryana inaugurated NIC developed Web Portal for online admissions in technical courses in all Government aided and Self-financing institutions in Haryana for the session 2020-21.And many more.

Literature Review

NIC is a premier Information Technology Organization in India committed to providing state-of-the-art solutions for the IT needs of the Government of India at all levels. NIC carries the distinction of being the largest IT Organization in India and has set up a satellite based nationwide computer communication network called NICNET having over 1400 nodes connecting the National Capital, and the District Headquarters to one another.

METHODOLOGY

The prime research design is to collect the data from over the internet and analyze the case files by reviewing and studying them. However, this approach is intended to justify the current situation of immobility and health precautions due to the pandemic COVID-19. Though, the data

are collected through the internet and the respective website of the intended subject matter, the below mentioned study and analysis can depict the purpose of the case study.

STUDY

Planning

The implementation of the project is to be premeditated throughout the country. With the financial assistance of United Nation Development Union (UNDP), the government of India laid the foundation of NIC as the small project in 1975. Later, it became fully functional in 1976. NIC is able to reach the unreached along with its evergreen invention in technology.

Intended Beneficiaries

The intended beneficiaries are all the citizens as well as the government of India as NIC is providing network backbone and e-Governance support to Central Government, State Governments, UT Administrations, Districts and other Government bodies , likewise every sets of citizens like general public, employees, pensioners, businessmen are benefitted by the following ways:

- Improved delivery of services to citizens.

- Enhanced communication within businesses and industry.

- Easy access to information enables citizen empowerment.

- The e-governance portal enables citizens to access government services easily along with conducting online transactions quickly. And so on.

Technologies

Deploying of computer and many computer related technologies, NIC has built many services like NICNET, NKN, VC, Wireless LAN, and many more. NIC has been continuously working towards a meaningful use of emerging technologies in governance across all levels of government like Centre of Excellence for Artificial Intelligence, Data Analytics, Centre of Excellence for application security and Computer Emergency Response Team (NIC-CERT).

ANALYSIS

Following mentioned are the reasons why a government of a developing nation is recommended to adopt e-governance policies in its operations:

- Effectiveness and efficiency being the key factor for government concern: The factors of ICT can best judge the role of government in different aspects either predominantly or partly. The connection between the applications of ICT, the optimization of every governmental operation and the achievement of various important goals of social development came out to be quite a convincing reason for developing nations to adopt e-governance policies.

- The need for priority development which also requires government intervention: The applications of e-governance are best fixed within areas which are in close connection with the priority development requirements of the society. Through this approach, broader support is developed thereby, making it very easy to overcome inherent hurdles as well as sustaining funding, commitment and attention.

CONCLUSION

The report portrays many areas where opportunity lies and within which developing countries can attempt to pursue their underlying strategy for the implementation of e-governance by means of innovative and practical applications. Efficient applications of e-governance are considered to be a transparent and an innovative way to pass out governmental services and to exchange information with that of the citizens thereby, saving money and time. There are numerous developing nations which have reached to the edge of solid progress however, there are a still a number of challenges that should be faced. The governments must take more strategic steps in order to mobilize limited resources for the purpose of responding towards citizen's need effectively along with bridging the gap between citizens and public institutions. Moreover, developing a robust infrastructure for electronic participation can also be quite expensive. There is a need to learn from each other experiences, investments in infrastructure projects, plans, policies, human capital and technological aspects for both the developing as well as developed countries. Having this in thoughts, multilateral organizations and countries tends to increase their efforts to share their e-governance experience with others.

REFERENCES

National Informatics Centre | Govt. of India (www.nic.in)

National Informatics Centre - Wikipedia

Services | Welcome to National Informatics Centre, Punjab State Unit, Chandigarh | India (pbsc.nic.in)