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A Roadmap for the Development of India through Digitalization

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ABSTRACT: The ride of e-Governance ingenuities in India took a wider dimension in mid 90s. It laid broader sectorial applications with emphasis on citizen-centric services. Afterwards various States and UTs have undergone various e-Governance projects. Although these e-Governance plans were citizen-centric, they could make lesser than the desired impact. The Government of India launched National e-Governance Plan (NeGP) in 2006. This initiated 31 Mission Mode Projects covering various domains. Notwithstanding the fruitful application of numerous e-Governance schemes across the country, e-Governance as a whole has not been able to make the preferred impact and fulfil all its objectives. It has been felt that a lot more effort is required to ensure e-Governance in the country. There is a need to promote inclusive growth that covers electronic services, products, devices and job opportunities. Moreover, electronic manufacturing in the country needs to be made stronger. For transforming the entire ecosystem of public services by the use of information technology, the Government of India has launched the Digital India programme with the vision to transform India into a digitally empowered society and knowledge economy. .

KEYWORDS: Digital India, Technology, Government of India, Services, Internet

I. INTRODUCTION

The history of the Internet began in the United States in the early 1960s. This was the Cold War period, when the world was bi-polar: The United States and the Soviet Union were contending in increasing their power in the world, watching each other with great cautiousness and disbelief. India underway the first use of internet services in 1986. Since that year until today, our country is developing at a very high growth rate. Earlier the government work was not transparent as we were working on a traditional system. The VSNL, 20 years back, started the public internet access in India via dialup services and thus there was a beginning of the digitalization process.

Some organizations like, Times of India, the Hindu and others launched their websites, and rediff.com launched the India's first cyber café in Mumbai in 1996. In the year 1999-2000, parliament approved the Information Technology Act 2000. This resulted into the beginning of foreign portals like yahoo and MSN set up Indian sites, Bazeer.com launched based on the eBay model, Indya.com launched with Rs. 4.5 crore campaign blitz, birth of online journalism etc.[1]. A digital India is government of India initiative, to ensure government services are made available to publics online by increasing internet connectivity. The apparition of Digital India program also purposes at inclusive growth in areas of electronic services, products, manufacturing and job opportunities.

II. DIGITAL INDIA'S VISION

A. *Digital Infrastructure as a utility for every citizen*

Digital infrastructure as a utility which pursues to provide every citizen with high speed internet facility, a support to severe internet identity, mobile phone and bank account, access to common service centre, sharable private space on a public cloud and safe and secure cyberspace. Public services like land records, certificates and many more will be made available online or public cloud [6].

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B. *Governance and Services on Demand*

This vision will offer single window access to every individual. Governance and services on demand which will be obtainable in real time for online and mobile platforms, flawlessly integrated across departments and jurisdictions. All citizen papers to be made accessible on the cloud platform; as a consequence, citizens will not be requested to provide such documents for availing services. In addition, the providing of cashless electronic dealings will help generate business. Geographical Information Systems (GIS) will be integrated with the growth schemes [4].

C. *Digital Empowerment of Citizens*

Under this vision, each citizen will allow through digital literacy and universal access to digital resources. This will be done using collaborative digital platforms and by making accessible the digital resources in their innate language with an understanding to making their partaking a reality. It will support tap into the data that will be easily available on the cloud computing platform— independent of an intervention.

III. PILLARS OF DIGITAL INDIA

Digital India is an aegis program that protections multiple Government Ministries and Departments. It intertwines together a huge number of ideas and beliefs into a single, complete vision so that each of them can be considered as part of a larger goal. Each distinct element stands on its own, but is also portion of the bigger picture. Digital India is to be incorporated by the whole Government with complete coordination being done by the Department of Electronics and Information Technology. Digital India purposes to offer the much desired thrust to the nine pillars of growing areas, namely Broadband Highways, Universal Access to Mobile Connectivity, Public Internet Access Programme, e-Governance: Reforming Government through Technology, e-Kranti - Electronic Delivery of Services, Information for All, Electronics Manufacturing, IT for Jobs and Early Harvest Programmes. All of these parts is a complex program in itself and cuts crossways multiple Ministries and Departments[8].



Figure 1. The 9 pillars of digital India

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A. *Broadband Highways*

This is the first pillar of the digital India program of the Government of India. According to it 2,50,000 village Panchayats would be covered under the National Optical Fiber Network (NOFN) by December 2016. Department of Telecommunications (DoT) is the nodal department for this project. The Virtual Network Operators would be leveraged for service delivery and communication infrastructure in new urban development's and buildings would be mandated. National Information Infrastructure (NII) would integrate the network and cloud infrastructure in the country to provide high speed connectivity and cloud platform to various government departments up to the panchayat level.

B. *Universal access to mobile connectivity*

There are about 55,619 villages in the country with no mobile coverage. The comprehensive development plan has been initiated for North East, which will provide mobile coverage to uncovered villages. Mobile coverage of remaining uncovered villages will be done in a phased manner. The Department of Telecommunications will be the nodal department for this and project will be costing around Rs.16,000 Cr during 2014-18.

C. *Public Internet Access Program*

The two parts of the Public Internet Access Program are Common Services Centres (CSCs) and Post Offices as multi-service centres. CSCs would be strengthened and their number will be increased to 250,000 i.e. one CSC in each Gram Panchayat. CSCs are to be made viable and multi-functional end-points for delivery of government and business services. DeitY would be the nodal department to implement the scheme. Around 150,000 Post Offices are to be converted into multi service centres. Department of Posts would be the nodal department to implement this scheme.

D. *E-Governance – Reforming Government through Technology*

Government Process Re-engineering will be done by using IT. This would streamline and make the government progressions more competent. It is critical for transformation to make the supply of government services more operative across various government spheres and therefore needs to be executed by all the departments.

E. *E-Kranti - Electronic delivery of services*

E-Governance in India has gradually advanced from computerization of Government Departments to ingenuities that summarize the finer points of Governance, such as service orientation, citizen centricity and transparency. Teachings from previous e-Governance ingenuities have played a significant role in determining the progressive e-Governance policy of the country. Due understanding has been taken of the conception that to speed up e-Governance execution across the numerous arms of Government at National, State, and Local levels, a program methodology needs to be adopted, directed by common visualization and strategy. This methodology has the potential of facilitating huge savings in overheads through distribution of core and support infrastructure, facilitating interoperability through standards, and of presenting a unified view of Government to citizens.

F. *Information for All*

Open Data policy facilitates preemptive release of datasets in a vulnerable format by the departments for usage, reuse and redeployment. Online comparing of information & documents would enable vulnerable and easy access to information for citizens. Government will pro-actively employ through social media and web based platforms to apprise and relate with citizens. The Hon'ble Prime Minister on 26th July, 2014 has launched MyGov. , which is a platform for citizen engagement in governance. It is a medium to exchange notions with Government. It will enable 2-way communication among citizens and Government to carry in good governance. Online messaging to citizens on special programs would be done through emails and SMS.

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G. *Electronics Manufacturing*

This pillar concentrates on encouraging electronics manufacturing in the country with the objective of net zero imports by 2020 as a conspicuous demonstration of intent. This aspiring goal requires synchronized action on many frontages, such as; Taxation, incentives, eliminating cost disadvantages, Economies of scale, Incubators, clusters, Government procurement, Skill development, Enhancing PhDs, Safety Standards – Compulsory registration, National Award, Support for Labs and MSMEs, Brand Building, Marketing, National Centers – Security Forces, Flexible Electronics, R & D in electronics. There are many continuing programs which will be fine-tuned. Existing arrangements are insufficient to handle this objective and requires strengthening [3]

H. *IT for Jobs*

These pillar emphasizes on providing preparation to the youth in the abilities required for availing employment chances in the IT/ITES sector. There are eight constituents with specific possibility of actions under this pillar.

I. *Early Harvest Program*

This pillar consists of those projects, which are to be completed within short timeline. The tasks under the Early Harvest Program are like Government Greetings to be e-Greetings, IT Platform for messages, Biometric attendance, Secure Email within Government, Wi-Fi in All Universities, Public Wi-fi hotspots, Standardize Government Email Design etc.

IV. BARRIERS TO DIGITAL INDIA

The Digital India Year will make sure that all aspects of the program are pushed to show results on the ground and shall not end into hibernation after one week of eagerness. Seeing that most of the nine pillars of the Digital India program face serious contests in application since the request of continuousness is always at palisade, thus it is vital that intensive and persistent attention should be set to each of its pillars, so that it does not humiliate at the conclusion of the day [2].

A. *Data Susceptibility*

Every citizen of India should have all the individual details online comprising PAN details, Income tax details, bank details etc which might be susceptible if not secured appropriately. If this is broken, then any person would lose the confidentiality of the data and would be conceded.

B. *Improve IT Literacy*

Improvement in IT illiterateness is very significant because the whole mass that is using internet should have knowledge of how to secure his/her online data. Providing proper guidance for using of Anti-Virus software and its role in safeguarding the records should materialize instantaneously.

C. *Implementation*

The entire program is premeditated as a top-level model on the technological front. There is barely any guidance on how to implement it on the ground level for making it successful. To be clear-cut, the nine pillars of the program are directly associated to high-end customers and not for 70% (almost, according to 2013 – 2014 survey) of the rural population in India.

D. *Security*

It is vital to overwhelmed all the encounters stated above with the support of a proper IT safety solution like eScan. With several people associated to such numerous networks, data security will certainly become one of the urgencies of the Government. Since various departments like LIC, Income Tax, Passport Dept., Election Commission etc. will have sufficient sensitive data of citizens, thus there is a high prospect of data fissures once

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bulk of the population converted digitally literate. The extraordinary task of obtaining all the Wi-Fi hotspots and data centers should be taken into contemplation seriously. E-Scan Anti-Virus products for domestic users, small and medium industry and even corporate can suggestion comprehensive protection to the networks and efficaciously fulfill the dream of an ideal “Digital India”!

E. Excessive server Hits

If bulk of the population begin using online, and then there will be more number of hits day by day on the Government portal sever. There is limitless and the IT team prerequisites to be ready enough to hold the situation where the probability of crash would reduce.

F. Man-In-The-Middle Attack

It is a sort of cyber-attack where a wicked actor interferes him/ herself into a dialogue between two parties, replicates both parties and increases access to information that the two parties were wearisome to send to each other. A man-in-the-middle outbreak permits such interrupts of the data intended for someone else, without information of any of the party till, it is too late.

G. Deploy Wi-Fi Centers & Hotspot

BSNL's has made a mass disposition of Wi-Fi hotspots across the country. If the government impetuses BSNL to have at least one hotspot per village, it could do wonders and experience the progressive outcome. However, if the locations which are populated by mostly tribal's, minorities, backward castes and geographically difficult areas are selected as hotspot, then it can bring a new era in our country.

IV. CONCLUSION

Digitalization is a progression of transformation, which is altering every day's life, people and economic activities in a variability of ways. New business models are evolving, work is varying, processes and organizational forms are being redefined. Internet platforms are becoming competitors and rivals. Given the importance of digitalization, India must endure at the forefront of developments. India as a business destination can only remain successful if the customary sectors of the economy and above all Indian small and medium-sized companies rise to the challenges of digitalization. This means not only responding to new developments but also grabbing the opportunities to show a leading role in influencing the digital future.

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