

CHALLENGES AND OPPORTUNITIES OF DIGITALIZATION

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INTRODUCTION

In the whole world, Information and Communication Technologies (ICT) continue to increase rapidly at unbelievable speed. Digitalization is the beginning of digital revolution. Digitalization is a programme having one mission and one target that is to take nation forward digitally and economically. India has the second highest number of internet users across the internet.

Digital India is a dream which is created by the Government of India to ensure that government services are made available to citizens electronically, even in remote areas, by improving online infrastructure and by increasing Internet connectivity. It is a programme launched by the Prime Minister of India Narendra Modi on 1 July 2015 - with an objective of connecting rural areas with high-speed internet networks and improving digital literacy. The vision of this programme is to transform India into a digitally empowered society.

RESEARCH METHODOLOGY

This research work carried out on the basis of secondary data only. The particular type of information or data required to conduct a secondary analysis will depend on the focus of study. For this research purpose, secondary data analysis is conducted to study in detail and to understand Digitalization. Secondary data review and analysis involves collecting information, statistics, and other relevant data at various levels in order to conduct a requirement analysis of the rural area and the paper is based on the information retrieved from the internet via journals, magazines, research papers and expert opinions on the same subject matter, and published data from different sites. Various studies on this subject have also been referred in this study.

OBJECTIVE OF THE PAPER

The study has following objectives:

1. To study the Benefits of digitalization
2. To compare the Size of digital Economy in USA
3. To study about the Digitalization in India
4. To identify Challenges faced in implementation of Digitalization
5. To give Suggestions and Recommendations

BENEFITS OF DIGITALIZATION PROGRAMME

Digitalization is a big initiative to empower people of the country. Main benefits of this programme are

- ❖ The digitalization of a country would make all the government services available to people of country through common service delivery outlets. This would lead to inclusive growth by enabling access to education, healthcare and government services to all the citizens of the country. People can get better advice on health services. Those who can't afford school/ colleges can get chance to online education.
- ❖ There would be more transparency as all the data would be made online and would be accessible to citizens of the country.
- ❖ E Governance will help in reducing corruption and getting things done quickly.
- ❖ Digital locker facility will help citizen to digitally store their important documents like Pan card, passport, mark sheets etc
- ❖ It will help in getting things done easily. For example when we need to open an account, we will give official details of our digital locker, where they can verify our documents. By this we can save time and the pain of standing in long queues for getting our documents would be reduced.
- ❖ It will help in decreasing documentation and reducing paper work.
- ❖ Digitalization leads to cashless transactions.
- ❖ It can help small businesses. People can use online tools to expand their business.

- ❖ It can play a key role in GDP growth . According to analyst the digital India could boost GDP up to \$1 trillion by 2025. According to World Bank report a 10% increase in mobile and broadband penetration increases per capita GDP by 0.81% and 1.31% respectively in developing countries.
- ❖ The programme would generate huge number of jobs in IT, electronics and telecommunication sector directly or indirectly.

Size of the Digital Economy in USA

**98 % of US economy impacted by digitaliization.Where as
30 % of Indian economy impacted by digitalitization
(source:Internet)**

The percentage in different cases is as follows as on 2016 in USA

1.Retail via e-commerce	13%
2,Investment in ICT as a share of total investment	17 %
3.Households subscribing to online video streaming services	28 %
4.payments made digitally	36%
5.Freelancers who have done work online	42 %
6.Americans who get news from online aggregators	51 %
7.Adults with smartphones	64 %
8.Households with broadband	73 %
9.Adults who use social media	74%
10.Taxes that are e-filed	85 %
11.Adults who use the Internet	87%
12. Millennials who regularly use e-mail	90%
13.Americans with access to high-speed wireless Internet	98 %

Digitalization in India

In case of India,the Government of India hopes to achieve growth on multiple fronts with the **Digital India Programme**. Specifically, the government aims to target **NINE** 'Pillars of the Digital India' that they identify as being.

- Broadband Highways
- Universal Access to Mobile Connectivity
- Public Internet Access Programme
- e-Governance – Reforming Government through Technology
- eKranti - Electronic delivery of services
- Information for all
- Electronics Manufacturing
- Digital or IT for Jobs
- Early Harvest Programmes.

The vision of digital India is grand. It is a huge step towards building a truly empowered nation. If successful it transform citizen access to multimedia information content and services. However the goal is still far away since most of the nine pillars of digital India mission are facing serious challenges in implementation . It is imperative that focused persistent attention must be given to each and every pillar so that this programme does not end up in failure.

But for India or any country, Implementing Digitalization is a great challenge.

.There are many obstacles in the way of its successful implementation.

It is facing multiple challenges in successful implementation.

Challenges

- High level of digital illiteracy is the biggest challenge in the success of digitalization. Low digital literacy is a big obstacle in adaptation of technologies .
According to ASSOCHAM-Deloitte report on Digital India, November, 2016, around 950 million Indians are still not on internet.
- Creating an awareness among common masses about its benefits is also a great challenge.
- It is a huge task to have connectivity with each and every village , town and city. In India, Connecting all Gram Panchayats through National Optical Fibre is not an easy task. The biggest challenge is ensuring that each panchayat point of broad band is fixed up and functional.
- Lack of coordination among various departments, poor infrastructure etc is another challenge
- A key component under this vision is high speed of internet as a core utility to facilitate online delivery of various services. According to third quarter 2016 Akamai report on internet speed ,India is at the 105th position in the world in average internet speed. This rank is the lowest in entire Asia Pacific region .
- According to **ASSOCHOM**- Deloitte report , the issue pertaining to taxation and regulatory guidelines have proved to road block in realizing the vision of Digital India.
- The biggest challenge faced by Digitalization is slow and delayed infrastructure development. India's digital infrastructure is comprehensively not enough to tackle growing increase in digital transactions. India needs over 80 lakh hotspots as against the availability of about 31000 hotspot at present to reach global level, according to **ASSOCHOM**-Deloitte report.
- The private participation in government projects in India is poor because of long and complex regulatory processes
- Many request proposals issued by government are not picked up by competent private sector organizations since they are not commercially viable. Currently Over 55000 villages remain deprived of mobile connectivity because providing mobile connectivity in such locations is not commercially viable for service providers .
- There is a wide digital divide between urban and rural India. Till now funds have not been deployed effectively to meet the cost of infrastructure creation in rural areas.
- India has 1600 languages and dialects. Non availability of digital services in local languages is a great barrier in digital literacy.
- Fear of cybercrime and breaking a law has been a discouraging thing in adoption of digital technologies. Most of the technology including cyber security tools are imported. We do not have necessary skills to inspect these for hidden malwares (a software which is specially designed to disrupt damage or gain authorised access to a computer system)
- We have no top level experts for these high end jobs at present. According to NASSCOM, India needs one million trained cyber security professionals by 2025. The current estimated number is 62000
These challenges need to be addressed in order to realize the full potential of Digitalization. It requires a lot of efforts and dedication from all departments of government as well as private sector. If implemented properly, it will open various new opportunities for the citizens of the country.

SUGGESTIONS

Digitalization cannot be successful on its own or by implementation or by motivating or encouraging the industry Policy changes, amending unnecessary laws, focusing on necessary infrastructure building etc are needed to make digitalization in reality.

Few of the suggestions are –

- ❖ Digital literacy is first step in empowering citizens. People should know how to secure their online data.
- ❖ To make this programme successful, a massive awareness programme has to be conducted. There is pressing need to educate and inform the citizens, especially in rural and remote areas, about the benefits of internet services to increase the growth of internet usage
- ❖ Digital divide needs to be addressed. The content that needs to be relevant to the citizens and address their real-time requirements
- ❖ Manufacturing content is not government's strength. . Digital infrastructure, is to be put in place. This mission needs content and service partnerships with telecom companies and other firms form the base. Ontop of this layer we need the IT infrastructure in the form of apps, software etc
- ❖ Private sector should be encouraged for development of last mile infrastructure in rural and remote areas. To encourage private sector, there must be favorable taxation policies ,quicker clearance of projects.
- ❖ The success of digital India project depends upon maximum connectivity with minimum cyber security risks. For this we need a strong anti cyber crime team which maintains the database and protects it round the clock.
- ❖ To improve skill in cyber security , we need to introduce cyber security course at graduate level and encourage international certification bodies to introduce various skill based cyber security courses
- ❖ There is need for effective participation of various departments and demanding commitment and efforts. Various policies in different areas should support this goal.

- ❖ For successful implementation, there must be amendments in various legislations that have for long hindered the growth of technology in India

RECOMMENDATIONS

If this point is not taken proper care of, then there would be clashes between the people in the rural areas and the government which will result in delay in commencing the project which will ultimately defeat the Digitalization dream in business sectors. If this government takes the agenda forward and does not leave any of the constituent parts gasping for funds, the opportunities are huge for the country in general and for willing participants in the IT sector as well.

- There is much to be done, from the creation of smart cities to the comprehensive availability of broadband, from connectivity in education, healthcare, agriculture, and manufacturing to a National Digital Literacy Mission (NDLM) that Nasscom Foundation has already taken up with the Department of Electronics & IT (DeitY).
- Another recommendation as to digital connectivity is to reduce the judicial clearances and stability in ruling which can act as a major impetus to the technological sector as it will attract high investor confidence with the judicial rulings being fair and pro-business.
- As another recommendation, Prime Minister Shri Narendra Modi in his inimitable style touched all the right chords in his speech, which included the opportunities for access to better healthcare, education, and information for better livelihood that is at the core of the digital opportunity. A lot will be expected from the national broadband mission to lay the digital infrastructure on which many of these national applications can be mounted.
- Providing a better transparent legislation with not only comprehensive availability of broadband, from connectivity in education, healthcare, agriculture, and manufacturing but also ensuring the implementation of the same would be a step forward in Digitalization with regard to connectivity.
- Improving the relations between the government and the corporate with regard to favourable taxation policies, quicker clearances of projects, minimal interference and removal of inaccessibility problems is another important thing for the success of Digitalization.

Conclusion

It is necessary to overcome all the challenges mentioned above with the help of a proper IT security solution like eScan. With so many people connected to such numerous networks, data security will definitely become one of the priorities of the Government. Since all the departments like Income Tax, LIC, Election Commission, Passport Dept – will have enough sensitive data of citizens, thus there is a high possibility of data breaking once majority of the population become digitally literate. The difficult task of securing all the Wi-Fi hotspots and data centers should be taken into consideration seriously. eScan Anti-Virus products for home users, small and medium business and even corporates can offer complete protection to the networks and successfully materialize the dream of an ideal Digitalization.

Though Digitalization is facing number of challenges yet if properly implemented it can make the best future of every citizen. So we should work together to shape the knowledge economy. [

In fact we all should be mentally prepared for the change and be ready to face the challenges in implementing this policy, only then it would be possible to make this vision a reality.

REFERENCES

- .Rani Suman(2016) .Digital India: Unleashing Prosperity . *Indian Journal of Applied Research*, volume-6, Issue 4, pp187-189 Retrieved from <https://www.worldwidejournals.com/indian-journal-of-applied...>
- Midha Rahul (2016). Digital India: Barriers and Remedies . International Conference on Recent Innovations in Sciences, Management, Education and Technology. Retrieved from [http:// data. Conference world .in/ICISMET/P256-261. Pdf.](http://data.conferenceworld.in/ICISMET/P256-261.Pdf)
- Gupta Neeru and Arora Kirandeep (2015). Digital India: A Roadmap for the development of Rural India. *International Journal of Business Management*, vol(2)2, pp1333-1342. Retrieved from www.ijbm.Co.in
- .Digital India Programme : Importance and Impact .Retrieved from <http://iasscore.in/national-issues/digital-india-programme-importance-and-impact>
- Digital India. Unlocking the trillion Dollar Opportunity: ASSOCHAM –Deloitte report, November 2016.Retrieved from www.assochem.org.
- .www.akamai.com
- Kadam Avinash (2015). Why cyber security is important for digital India. Retrieved from <http://www.firstpost.com/business/why-cyber-security-is-important-for-digital-india-2424380.html>