МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ РФ

Национальный исследовательский Томский государственный университет Томский государственный университет систем управления и радиоэлектроники Болгарская Академия наук

Академия инженерных наук им. А.М. Прохорова Международная научно-техническая организация «Лазерная ассоциация»

ИННОВАТИКА-2020

СБОРНИК МАТЕРИАЛОВ

XVI Международной школы-конференции студентов, аспирантов и молодых ученых 23–25 апреля 2020 г. г. Томск, Россия

Под редакцией А.Н. Солдатова, С.Л. Минькова



DIGITAL INDIA: E-GOVERNMENT INITIATIVE

M. Mondal, S.L. Minkov

National Research Tomsk State University mainakme2140@gmail.com

Digital India is an initiative by the government of India, along with several other parties to provide a digital interface to the government's services to citizens electronically, by improved online infrastructure and by increasing Internet connectivity.

Keywords: Aadhaar, Biometric Identification, Digitalization, e-Government

Digital India Initiative is a program by the Government of India with a vision to transform India into a digitally empowered society and knowledge economy. Launched in 2015, its focus is to realize the following motto:

$$IT + IT = IT$$

or, in other words,

Indian Talent + Information Technology = India Tomorrow [1].

Objectives

- Government's services are made available to citizens electronically by improved online infrastructure and by increasing Internet connectivity.
- Growth in areas of electronic services, products, manufacturing and job opportunities.
- Connecting rural areas with high-speed Internet networks and improving digital literacy [2].

Implementation

BBNL (Bharat Broadband Network Limited) is the group, which executes the BharatNet project is the custodian of Digital India (DI) project.

The implementation of this project includes:

- 1) services:
- National e-Governance Plan;
- Back-end digitization;
- Facilities to digitally empower citizens.
- 2) training programs:
- Pradhan Mantri Gramin Digital Saksharta Abhiyan (Prime Minister Rural Digital Literacy Campaign);
 - Ongoing awareness campaign;
 - State Level Programs.

National e-Governance Plan

The National e-Governance plan includes laying down the infrastructure for people use digital services provided by the government. These services include:

- mygov.in (Government's Website open to suggestions from the people);
 - UMANG (Unified Mobile Application for New-age Governance);
 - E-Sign framework (Signature Authentication);
 - Swachh Bharat Mission (Clean India Mission) mobile app;
 - E-Hospital application;
 - Digital attendance (For Government Employees).

Note: UMANG [3] provides access to, over 1,200 central and state government services in multiple Indian languages over Android, iOS, Windows and USSD (feature phone) devices.

The other services are self-explanatory Backend Digitization

This step is focused on insisting banks to improve its back end services, to improve its security and to recognize and eliminate "off the books" money harming the Indian economy. This includes black money, money lost in tax evasions etc. The 2016 Union budget of India announced IT initiatives to include the use of data analytics to nab tax evaders, creating a substantial opportunity for IT companies to build out the systems that will be required [4]. In 2019 it was estimated that India's offshore accounts to have over 18 billion US Dollars [5]. These steps are taken by the Reserve Bank of India, with other banks in India (Private and Public) to promote Back-end digitization.

Facilities to digitally empower citizens

Digital Locker: An application to access all the documents that are important to any citizen digitally.

BPO and Job Growth: To abolish unemployment, India is open to Business Process Outsourcing.

e-Sampark- Vernacular Email Service(DATAMAIL): A service that allows creating email ids in multiple Indian languages, English; and seven foreign languages – Arabic, Russian, Sinhala, Korean, Japanese, Thai and Chinese.

Like these services, the Digital India Initiative provides a lot of training programs for its citizens and employees alike, to empower them, as well as train them to use the services provided by the government.

Aadhar India Initiative, which assigns an UID or Unique Identity number to every citizen, is probably the biggest initiative of Digital India [6]. The Aadhar card contains address, date of birth, the enrolment number and the UID number which links to the CIDR database of biometric records. It is the biggest biometric record system in the world.

Results

India has come a long way since its independence and the Digital India Initiative is one of the biggest positive steps that the government has taken. To truly understand the improvement, we have to look at the change in India's position in a global perspective.

As of 2018, 1.23 Billion Aadhar Digital IDs have been assigned to citizens 1.3 Billion. 1.21 billion mobile phones and 446 million Smartphones are in use, out of which 560 million are internet users and there is a 51 per cent growth in e-commerce industries. In the years since, the inception of the Digital India Program, the **United Nations E-Government Development Index** of India has risen from 125 in 2012 to 96 in 2018 as seen in Figure 1 [7].

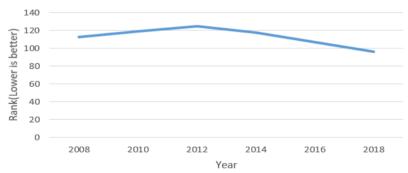


Figure 1. United Nations E-Government Development Index of India

The **Global Innovation Index** (by WIPO, Cornell University, and INSEAD) [8] which is an annual ranking of countries by their capacity for and success in innovation, says a lot about the improvements in India from the past 5 years, as we can see in Figure 2.

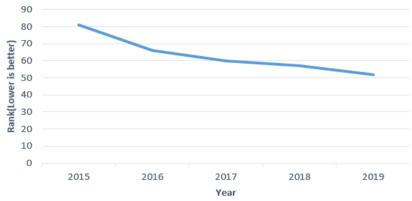


Figure 2. Global Innovation Index

The innovation capacity of a country directly reflected in the propensity for countries to exploit the opportunities offered by networked information and communications technology, thus we can see that India has shakily improved over the years in the **Network Readiness Index** (by Portulans Institute and WITSA – World Information Technology and Services Alliance) [9] as seen in Figure 3.

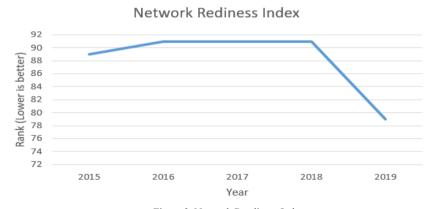


Figure 3. Network Readiness Index

Its been 72 years since India's independence as of 2019 and there are still a lot of problems in India [10] including corruption within the ranks of the

government, illiteracy, poverty, poor health care system, and the sheer inablity to embrace development. These issues have become great barries to the development of the country. There are a lot of kinks that are needed to addressed but we can see a small glimmer of hope recently in 2019 by seeing the Network Readiness Index which has reached the rank of 79 in 2019 from 91 in 2018.

India has a population of over 1.37 billion, making it the world's 2nd most populated country in the world and it is understandable that providing for its citizens and improving the state of the country is a difficult feat but the Government of India with its perseverance has shown some promise, and capacity for improvement in the past years.

It can be seen in the UN E-Government Index and Global Innovation Index, and with more developments to come, we are looking forward to see how it turns out

References

- 1. Digital India // International Journal of Academic Research. 2015. Vol. 2, Is. 3(1).
- Digital India [Electronic Resource]. URL: https://digitalindia.gov.in/content/vision-and-vision-areas.
- 3. Government unveils Umang app for citizen services [Electronic Resource] // The Economic Times. URL: https://m.economictimes.com/news/economy/finance/government-unveils-umang-app-for-citizen-services/articleshow/61769676.cms?from=desktop.
- 4. Digital India // Varun Kanojia [Electronic Resource]. URL: https://prezi.com/rsbxf-vircno/digital-india-is-a-campaign-launched-bv-the-government-of-in.
- The Economic Times [Electronic Resource]. URL https://m.economictimes.com/news/economy/finance/rs-1-30-lakh-cr-undisclosed-incomedetected-post-anti-black-money-measures/articleshow/67790279.cms.
- Mondal Mainak, Minkov S.L. AADHAAR (India): A National Biometric Identification Program (Experience and Implementation) // Innovation-2019: Proc. of XVth International school-conference of students, graduate students and young scientists (April 25–27, 2019) / Edited by A.N. Soldatov, S.L. Minkov. – Tomsk: STT, 2019. – P. 330–336.
- 7. UN E-Government Development Index [Electronic Resource]. URL: https://publicadministration.un.org/egovkb/en-us/Data-Center.
- 8. Global Innovation Index [Electronic Resource]. URL: https://www.wipo.int/pressroom/en/articles/2019/article 0008.html.
- 9. Network Readiness Index [Electronic Resource] URL: https://networkreadinessindex.org/wp-content/uploads/2020/03/The-Network-Readiness-Index-2019-New-version-March-2020.pdf.
- Major Issues in India [Electronic Resource]. URL: https://www.mapsofindia.com/my-india/india/major-issues-in-india.