Public administration all over the world has undergone substantial changes in recent years with the expansion of technology in New Public Management era. This is true also for a developing nation like India. After attaining independence, India became a ‘sovereign, socialist, secular, democratic, republic’. The goal of the government was to eradicate poverty, inequality and socio-economic disparity from the society. A number of programmes were devised and executed but these programme(s) could not deliver to the expectations of government as well people. This was mainly because since independence people’s engagement in administration was minimal. However, the success of democracy depends upon the effective engagement of its citizens in administration. But in a developing country like India, where society is divided horizontally and vertically and population is coupled with complexities it is difficult to make effective engagement of people in governance. The State’s policy changed during 1990s, In order to transform the entire ecosystem of administration and public services, it was decided to use information and communication technology (ICT) in the delivery of services to the people.

Over the past two decades, India's contribution to global economic growth has doubled to almost 15 percent. Further, income poverty levels have declined, resulting in 133 million people being lifted out of poverty in the past 20 years. However, nearly 300 million people still live in extreme poverty (UNDP- INDIA, 2018)

Technology in Governance in India

Evolution of Digital Governance in India can be traced back to 1970s when ‘the Government of India established the Department of Electronics in 1970. The subsequent establishment of the National Informatics Centre (NIC) in 1977 was the first major step towards e-Governance in India as it brought ‘information’ and its communication in focus. In the early 1980s, use of computers was confined to very few organizations. The advent of personal computers brought the storage, retrieval and processing capacities of computers to Government offices. By the late 1980s, a large number of government officers had computers
but they were mostly used for ‘word processing’. Gradually, with the introduction of better software, computers were put to other uses like managing databases and processing information. Advances in communications technology further improved the versatility and reach of computers, and many Government departments started using ICT for a number of applications like tracking movement of papers and files, monitoring of development programmes, processing of employees’ pay rolls, generation of reports etc.

However, the main thrust for e-Governance was provided by the launching of NICNET in 1987 – the national satellite-based computer network. This was followed by the launch of the District Information System of the National Informatics Centre (DISNIC) programme to computerize all district offices in the country for which free hardware and software was offered to the State Governments. NICNET was extended via the State capitals to all district headquarters by 1990. In the ensuing years, with ongoing computerization, and internet connectivity came a large number of e-Governance initiatives, both at the Union and State levels. A National Task Force on Information Technology and Software Development was constituted in May 1998. While recognizing Information Technology as a frontier area of knowledge per se, it focused on utilizing it as an enabling tool for assimilating and processing all other spheres of knowledge. It recommended the launching of an ‘Operation Knowledge’ aimed at universalizing computer literacy and spreading the use of computers and IT in education. In 1999, the Union Ministry of Information Technology was created’ (COMMISSION, 2008).

In the early 1990s, two changes swept across the world – the focus on good governance with increasing non-government participation in delivery of public services and Information Communication Technologies (ICTs) and internet technologies that potentially could connect any and every one in real time. The concept of e-Government or e-Governance was born through the amalgamation of these two. E-Governance marked a paradigm shift in the philosophy of governance – citizen centricity instead of process centricity and large scale public participation through ICTs enablement (Sen, 2016). The Government approved the National e-Governance Plan (NeGP), comprising of 27 Mission Mode Projects and 8 components, on May 18, 2006. In the year 2011, 4 projects - Health, Education, PDS and Posts were introduced to make the list of 27 MMPs to 31 Mission Mode Projects (MMPs). Further, In order to promote e-Governance in a holistic manner, various policy initiatives and projects have been undertaken to develop core and support infrastructure like creation of
State Data Centres (SDCs), State Wide Area Networks (SWAN), Common Services Centres (CSCs) and middleware gateways i.e. National e-Governance Service Delivery Gateway (NSDG), State e-Governance Service Delivery Gateway (SSDG), and Mobile e-Governance Service Delivery Gateway (MSDG) (National e-Governance Plan: Ministry of Information and Technology, 2018). These initiatives boosted the e-governance initiatives in the country.

**Governance and e-Participation**

E-participation is an evolving concept. There is vast evidence that e-participation technologies expand opportunities for civic engagement, including increased possibilities for people to participate in decision-making processes and service delivery to make societies more inclusive. It helps connect “citizens with one another and with their elected representative. E-participation can be defined “as the process of engaging citizens through ICTs in policy, decision-making, and service design and delivery in order to make it participatory, inclusive, and deliberative” (UN’s E-Government Survey, 2016) The table 1 present e-participation index of different countries.

**Table 1: e-Participation Index of top 25 Countries in the world**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Country</th>
<th>Rank 2016</th>
<th>Rank 2018</th>
<th>Rank Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Republic of Korea</td>
<td>4</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Denmark</td>
<td>22</td>
<td>1</td>
<td>21</td>
</tr>
<tr>
<td>3</td>
<td>Finland</td>
<td>8</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>Netherlands</td>
<td>5</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Japan</td>
<td>2</td>
<td>5</td>
<td>-3</td>
</tr>
<tr>
<td>6</td>
<td>New Zealand</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Australia</td>
<td>2</td>
<td>5</td>
<td>-3</td>
</tr>
<tr>
<td>8</td>
<td>Spain</td>
<td>7</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>United Kingdom of Great Britain and Northern Ireland</td>
<td>1</td>
<td>5</td>
<td>-4</td>
</tr>
<tr>
<td>10</td>
<td>United States of America</td>
<td>12</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>11</td>
<td>Norway</td>
<td>27</td>
<td>11</td>
<td>16</td>
</tr>
<tr>
<td>12</td>
<td>Brazil</td>
<td>37</td>
<td>12</td>
<td>25</td>
</tr>
<tr>
<td>13</td>
<td>France</td>
<td>12</td>
<td>13</td>
<td>-1</td>
</tr>
<tr>
<td>14</td>
<td>Singapore</td>
<td>8</td>
<td>13</td>
<td>-5</td>
</tr>
<tr>
<td>15</td>
<td>Italy</td>
<td>8</td>
<td>15</td>
<td>-7</td>
</tr>
<tr>
<td>16</td>
<td>India</td>
<td>27</td>
<td>15</td>
<td>12</td>
</tr>
<tr>
<td>17</td>
<td>Mexico</td>
<td>14</td>
<td>17</td>
<td>-3</td>
</tr>
<tr>
<td>18</td>
<td>United Arab Emirates</td>
<td>32</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td>19</td>
<td>Luxembourg</td>
<td>43</td>
<td>19</td>
<td>24</td>
</tr>
<tr>
<td>20</td>
<td>Philippines</td>
<td>67</td>
<td>19</td>
<td>48</td>
</tr>
<tr>
<td>21</td>
<td>Sweden</td>
<td>27</td>
<td>19</td>
<td>8</td>
</tr>
</tbody>
</table>
Governance and e-Participation in India

E-participation is in India is an evolving concept. The technological innovations and development has created an environment for proactive civic engagement, possibilities and desirability of people to participate in decision-making processes and service delivery to make societies more inclusive. E-Participation in India can be seen as following:

1. G2G: Government to Government
2. G2C: Government to Citizen
3. C2G: Citizen to Government
4. G2B: Government to Business
6. G2E: Government to Employee
7. E2G: Employee to Government

E-participation helps in promoting the more inclusive societies. Citizens and other stakeholders use websites as the primary method of interacting with the government and prefer to complete government transactions online. E-participation, seen in terms of e-information, e-consultation and e-decision-making brings in civic engagement and transparency in administration. However, e-participation is more prevalent in developed nations as citizens are more informative curious to participate in policy making process. Every action of government is placed on websites and citizens have all time access to information. Due to the infrastructure development, India has seen a dramatic growth in the number of online transactions involving citizens and the government. The number of such e-transactions has been growing year by year. The number of transactions per service category is shown in table 2 below:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>Ireland</td>
<td>39</td>
</tr>
<tr>
<td>23</td>
<td>Russian Federation</td>
<td>32</td>
</tr>
<tr>
<td>24</td>
<td>Colombia</td>
<td>27</td>
</tr>
<tr>
<td>25</td>
<td>Germany</td>
<td>27</td>
</tr>
</tbody>
</table>

Source: https://publicadministration.un.org/egovkb/en-us/Data/Compare-Countries
Table 2: Year Wise E-Transaction in India

<table>
<thead>
<tr>
<th>S. No</th>
<th>Year</th>
<th>No. of Transactions</th>
<th>Avg. Transactions Per Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2014</td>
<td>3,57,70,13,076</td>
<td>96,42,812</td>
</tr>
<tr>
<td>2</td>
<td>2015</td>
<td>7,60,75,36,284</td>
<td>2,06,80,918</td>
</tr>
<tr>
<td>3</td>
<td>2016</td>
<td>10,89,38,30,221</td>
<td>2,96,01,244</td>
</tr>
<tr>
<td>4</td>
<td>2017</td>
<td>30,83,82,17,310</td>
<td>8,43,13,040</td>
</tr>
<tr>
<td>5</td>
<td>2018</td>
<td>19,18,48,66,249</td>
<td>8,86,72,532</td>
</tr>
<tr>
<td>Total e-Transactions</td>
<td>74,51,91,21,197</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: http://etaal.gov.in/etaal/YearlyChartIndex.aspx (August, 2018)

It is revealed from the Time-line Analysis, as shown in table 3 that from 2014 onward number of e-transaction has increased considerably. E-Transaction is a transaction of delivering public services through the use of ICT tools to improve access, enhance transparency, improve governance, and also to improve the response time.

Whole of Government Approach (WoG)

WoG denotes public service agencies working together across organisational portfolio boundaries in a shared response to particular issues. The growing importance attached to WoG approaches has been accompanied by a more integrated approach to e-government and online service delivery. There is a trend towards providing service delivery through “one-stop-shops” online, or through other systems, including call centres, allowing managing public services in interrelated areas. WoG approaches to policy making and WoG approaches to service delivery and e-government are mutually reinforcing. Both are complex endeavours and face challenges related to institutional dynamics, regulations, technological difficulties, capacities and resources as well as cultural and developmental dimensions (E-Government Survey, 2016).

A new trend in governance has been the evolution towards the provision of integrated public services online through single platforms allowing people accessing a range of public
services online or via mobiles through digital ID like Aadhaar in India. This integrated nature has shed new light on the need for integrated policy making. Integrated policies and Whole-of-Government (WoG) approaches allow government to pursue sustainable development more effectively, by taking into account the interrelations between economic, social and environmental dimensions as well as between the sectors and subsectors addressed by the goals and targets. Engagement and e-participation practices help governance more participatory thus make policies more people-centric and effective. This engagement is being facilitated by under digital programme by utilizing digital technologies to deliver services to the people. E-governance capabilities of a nation are measured world over by the UN e-government survey rankings. The progress in online service delivery and e-government initiatives of all 193 United Nations Member States has been analyzed in E-Government Development Index (EGDI). The e-Government Development Index is measured in term of online service component, Telecommunication Infrastructure and human Capital Index. The table 3 shows that in 2014 the India ranked 118 out of 184 countries in 2016 the rank has improved to 107 out of 193 countries and in 2018 India ranked rank 96 out of 193 countries.

Table 3: E-Government Development Index (EDGI) – India

<table>
<thead>
<tr>
<th>Year</th>
<th>Rank</th>
<th>EGDI</th>
<th>Online Service Component</th>
<th>Telecomm Infrastructure Component</th>
<th>Human Capital Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>118</td>
<td>0.3834</td>
<td>0.5433</td>
<td>0.1372</td>
<td>0.4698</td>
</tr>
<tr>
<td>2016</td>
<td>107</td>
<td>0.4637</td>
<td>0.7464</td>
<td>0.1430</td>
<td>0.5019</td>
</tr>
<tr>
<td>2018</td>
<td>96</td>
<td>0.5669</td>
<td>0.9514</td>
<td>0.2009</td>
<td>0.5484</td>
</tr>
</tbody>
</table>

Source: Data Compiled from Report on EGDI 2014, 2016 and 2018

Digital India Programme

India is one of the largest countries democratically, demographically and geographically. It has gap of using Government Services to its large population. Country is facing a large number problems and issues like unemployment, poverty, education, health, banking and business, etc. As a result, Government of India has been launched various initiatives in order to overcome these problems with an objective of minimum government and maximum governance by enormous use of Information and Communication Technology (ICT). India is one of the largest countries democratically, demographically and
geographically. It has gap of using Government Services to its large population. Country is facing a large number problems and issues like unemployment, poverty, education, health, banking and business, etc. As a result, Government of India has launched various initiatives in order to overcome these problems with an objective of minimum government and maximum governance by enormous use of Information and Communication Technology (ICT). In fact, ‘India is on the cusp of an information technology revolution. In order to transform the entire ecosystem of public services through the use of information technology, the Government of India has undertaken the Digital India program with the vision to transform India into a digitally empowered society and knowledge economy. Digital India focuses on providing easy accessibility of services to its citizens anytime from anywhere. Digital India also covers several development aspects such as promoting investments, improving ease of doing business, creating IT jobs, encouraging entrepreneurship, providing financial inclusion, promoting literacy, catalyzing growth across all sectors and encouraging women’s participation in the professional, economic and social arena’ (World Bank, 2018).

The Digital India Programme is a mission to prepare India for a knowledge future by making technology central to enabling change. It rests on nine pillars: 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 (Taking the Power of Digital to Next Level 2015). The focus of Digital India programme is on being transformative to realize - IT (Indian Talent) + IT (Information Technology) = IT (India Tomorrow) and making technology central to enable change. This programme pulls together many existing schemes. These schemes have been restructured and re-focused and are being implemented in a synchronized manner.

**Vision of Digital India**

The Digital India programme is centered on three key vision areas:

1. Digital Infrastructure as a Utility to Every Citizen
2. Governance and Services on Demand
The focus of the digital India is not merely to provide Digital Infrastructure, delivery of services, governance on demand or empowerment of citizens but also to reduce the import imbalance in electronics. The demand of Electronics System Design and Manufacturing (ESDM) is estimated to grow exponentially to USD 400 Billion by 2023-24. The Government attaches high priority to electronics & IT hardware manufacturing. It has the potential to generate domestic wealth and employment, apart from enabling cyber-secure ecosystem. The electronic manufacturing sector requires continuous push with the overall objective of promoting “Make in India”, not only to meet the domestic demand but also to promote India as a hub for electronics manufacturing (Electronics and Information Technology, Annual Report 2017-18). The production of electronic items, used by different sector, is not sufficient for the country and large portion of demand is met from exporting from different countries. However, in recent times under ‘make in India’ initiatives of the government production in the electronics sector has risen over the time period. Table 5 provides an overview of production in production in Electronics Sector in India during 2014-18 periods.

### Table 4: Production in Electronics Sector in India 2014-18

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Consumer Electronics</td>
<td>47599</td>
<td>55806</td>
<td>55765</td>
<td>64752</td>
<td>73,524</td>
</tr>
<tr>
<td>2.</td>
<td>Industrial Electronics</td>
<td>33600</td>
<td>39374</td>
<td>45083</td>
<td>62214</td>
<td>69,057</td>
</tr>
<tr>
<td>3.</td>
<td>Computer Hardware</td>
<td>17484</td>
<td>18691</td>
<td>19885</td>
<td>20879</td>
<td>21,401</td>
</tr>
<tr>
<td>4.</td>
<td>Mobiles Phones</td>
<td>26650</td>
<td>18900</td>
<td>54000</td>
<td>94000</td>
<td>1,32,000</td>
</tr>
<tr>
<td>5.</td>
<td>Strategic Electronics</td>
<td>13800</td>
<td>15700</td>
<td>18055</td>
<td>20760</td>
<td>23562</td>
</tr>
<tr>
<td>6.</td>
<td>Electronics Components</td>
<td>32102</td>
<td>39723</td>
<td>45383</td>
<td>52099</td>
<td>58351</td>
</tr>
<tr>
<td>7.</td>
<td>Light Emitting Diodes</td>
<td>1941</td>
<td>2172</td>
<td>5092</td>
<td>7134</td>
<td>9630</td>
</tr>
<tr>
<td>8.</td>
<td>Computed Total</td>
<td>180454</td>
<td>190366</td>
<td>243263</td>
<td>317331</td>
<td>387525</td>
</tr>
</tbody>
</table>

*Source: Report on Electronics and IT 2017-18, Ministry of Electronics and Information Technology, Govt. of India*

Electronics industry is among the largest and fastest growing manufacturing Industry in the world. The total global electronics hardware industry is about US $ 2 Trillion, out of
which, India’s Production was about US$ 47 billion during the year 2016-17. The domestic consumption in India was about $ 86.4 billion during the year 2016-17, while exports were about US$ 6 billion. (Electronics and Information Technology Report, 2017-18). It is pertinent to note three points. First, India had not much success in penetrating the export markets so far. At $6 billion, India has less than 1 percent share in the world markets. Second, electronic components and electronic instruments account for the bulk of India’s exports. Finally, imports of electronic goods account for more than half of India’s total consumption at home. India is particularly large importer of telecom instruments. As a whole, Indian electronic industry does not present a picture of strength. (Make in India Strategy for Electronic Products, 2016). Further, India’s share in world electronic hardware production is 1.5 percent and contribution to country’s Gross Domestic Product (GDP) was 1.7 percent. While many other countries the contribution of electronic industry to Gross Domestic Product (GDP) is significant. For example, it contributes 15.5 percent to GDP in Taiwan, 15.1 percent in South Korea and 12.7 percent in China (Make in India Strategy for Electronic Products 2016). So as a whole, Indian electronic industry does not present strong picture. India is considered superpower in software industry; however, in hardware electronics country largely depends upon exported equipments.

**Table 5: Electronics Hardware in India, 2014-15**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Parameter</th>
<th>Value (US $ Billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Production (Revenues)</td>
<td>32.7</td>
</tr>
<tr>
<td>2.</td>
<td>Exports</td>
<td>6.0</td>
</tr>
<tr>
<td>3.</td>
<td>Imports</td>
<td>36.9</td>
</tr>
</tbody>
</table>

(Source: Make in India Strategy for Electronic Products, NITI Aayog, Government of India, May 2016, P 2)

Table 5 present a clear picture that country largely depends upon imports of electronics hardware. At $6 billion, India has less than 1 percent share in the world markets. Keeping in view the overall scenario, one of the key features of the digital India programme is reduce export to zero by 2020.

**Transformation of Indian Society through Digital India Programme**

Digital India programme is launched by the Government of India to improve online infrastructure and governance and also offer citizens an easy online government services as
well as making India a digitally empowered economy in the world. Some of the major initiatives of Digital India are:-

**Pradhan Mantri Jandhan Yojna**

"Pradhan Mantri Jan-Dhan Yojana (PMJDY)" is world’s largest financial inclusion scheme ensuring access to various financial services like availability of basic savings bank account, access to need based credit, remittances facility, insurance and pension to the excluded sections i.e. weaker sections and low income groups. This deep penetration at affordable cost is possible only with effective use of technology (About:Pradhan Mantri Jan Dhan Yojana 2018). The total no of (Beneficiaries as on 29/08/2018 with their deposit is given in the Table-6 below:-

**Table 6: No. Beneficiary and their Deposits (Amount in crore) in Pradhan Mantri Jan - Dhan Yojana**

<table>
<thead>
<tr>
<th>Bank Name Type / Type</th>
<th>Number of Beneficiaries at rural/semi urban centre bank branches</th>
<th>Number of Beneficiaries at urban metro centre bank branches</th>
<th>No Of Rural-Urban Female Beneficiaries</th>
<th>Number of Total Beneficiaries</th>
<th>Deposits in Accounts(In Crore)</th>
<th>Number of Rupay Debit Cards issued to beneficiaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Rural Banks</td>
<td>4.46</td>
<td>0.82</td>
<td>2.90</td>
<td>5.28</td>
<td>14476.20</td>
<td>3.71</td>
</tr>
<tr>
<td>Private Sector Banks</td>
<td>0.60</td>
<td>0.40</td>
<td>0.53</td>
<td>1.00</td>
<td>2194.12</td>
<td>0.93</td>
</tr>
<tr>
<td>Grand Total</td>
<td><strong>19.21</strong></td>
<td><strong>13.33</strong></td>
<td><strong>17.18</strong></td>
<td><strong>32.54</strong></td>
<td><strong>82039.35</strong></td>
<td><strong>24.51</strong></td>
</tr>
</tbody>
</table>

Source: [https://www.pmjdy.gov.in/account](https://www.pmjdy.gov.in/account)

**Aadhaar**

Aadhaar is a 12-digit unique number issued by the Unique Identification Authority of India (UIDAI) by taking a person's biometric details such as iris scan and fingerprints, and demographic information like date of birth and address. It is the world's largest biometric ID system, with over 1.171 billion i.e. over 99% of Indians already enrolled in Aadhaar. It can be equated with America's Social Security number as it has more uses and fewer safeguards.
The Aadhaar is managed by Unique Identification Authority of India (UIDAI) which is a statutory authority established in January 2009 by the Government of India, under the Ministry of Electronics and Information Technology, under the provisions of the Aadhaar (Targeted Delivery of Financial and other Subsidies, benefits and services) Act, 2016.

Aadhaar system is becoming backbone of digital India programme. By linking Aadhaar with mobile and bank account user can get benefits of various public services easily. The unique identification mechanism has ensured savings of over Rs 90,000 crore by eliminating middlemen (Core biometrics under Aadhaar Safe 2018).

**Direct Benefit Transfer**

Direct Benefit Transfer is a unique initiative of reforming government delivery system by re-engineering the existing process in welfare schemes for simpler and faster flow of funds and to ensure accurate targeting of the beneficiaries, de-duplication and reduction of fraud Direct Benefit Transfer (DBT) was started on 1st January, 2013. (About Us: Direct Benefit Transfer, Govt. of India 2018)

Direct Benefit transfer (DBT) is considered as ‘a game-changer, a nationwide technology-backed initiative that promises to change the way the government delivers entitlement to citizens’ (Direct Benefits Transfer: How the 'Game' has Changed 2013). Transferring subsidies directly to the people through their bank or Post office account is Direct Benefit Transfer. It aims to timely transfer of benefit to the citizen by bringing efficiency, effectiveness, transparency and accountability in the Government system. Through the DBT Government intend to achieve electronic transfer of benefits, reduce delays in payments and most importantly, accurate targeting of beneficiaries, thereby curbing leakages and duplication (Direct Benefit Transfer (DBT) n.d.). Direct Benefit Transfer (DBT) has made significant progress in recent times. Initially, there were 27 schemes and services covered under DBT which have now risen to total Schemes: 395 from 56 Ministries now the Presently, Aadhaar Enabled Services are 35 from 17 Ministries (Aadhaar Enabled Services: Direct Benefit Transfer, Govt. of India 2018), Non aadhaar enabled DBT schemes are 450 from 57 Ministries and DBT Applicable Schemes & Services are 485 from 63 Ministries (DBT Applicable Schemes: Direct Benefit Transfer, Govt. of India 2018).

**Mobile Governance - Jandhan, Aadhaar and Mobile (JAM) Trinity**
Integration of services under digital India initiative is a challenging job before the government as well as before the service provider. It is also a challenge before the common people to know various programmes and how to get benefits out of them. In order to overcome such limitations government has started an integrated approach i.e. integration of JanDhan Accounts, Aadhaar and Mobile popularly known as mobile Governance or JAM trinity. JAM i.e. Jan Dhan, Aadhaar and Mobile are Direct Benefit Transfer (DBT) enablers and use of modern technology. Government is set to pursue a unique and ambitious "1 billion, 1 billion, 1 billion" connectivity vision. This means one billion unique Aadhaar numbers would be linked to one billion bank accounts and one billion mobiles (Govt's next mega mission: 1 billion UIDs, 1 billion accounts .. 2017).

Thus, the Government is driving the universalisation of the Jan Dhan-Aadhaar-Mobile combination across the country, to enable citizens to better access digital services. This has driven enormous benefits to citizens; Aadhaar has allowed 19000 billion (19 trillion) to be transferred to the poor or needy beneficiaries till May 2017. Aadhaar has also driven a great new wave of transparency and accountability in governance services; Aadhaar-based Direct Benefit Transfer has been rolled out for 232 schemes of 47 on-boarded Ministries have been on-boarded with DBT resulting in overall savings of 500 billion, by removing fictitious beneficiaries (Global Conference on Cyber Space- GCCS 2017). So the approach by the government is to bring efficiency, effectiveness, transparency and accountability in the Government system and infuse confidence of citizen in the governance. The ultimate use of modern technology and IT tools will realize the dream of ‘maximum governance minimum government’.

With the help of apps in mobile any individual can take the services and benefits of the government though Aadhaar authentication method and benefit will be transferred automatically to individual’s accounts. Various apps of the governments has been integrated into one app known as UMANG, which is available in android and iOS platform, so the user or beneficiary don’t need to download all apps in his or her Smartphone. By searching the UMANG app an individual can get desired service through this app on his Smartphone.

**E-District**

Districts are the de facto front-end of government where most Government-to-Consumer or G2C interaction takes place. The e-District project was conceptualized to
improve this experience and enhance the efficiencies of the various Departments at the district-level to enable seamless service delivery to the citizen. Front-ends under the scheme, in the form of citizen facilitation centres, are envisioned to be built at District, Tehsil, Sub-division and Block levels. Village-level front-ends have been established through Common Services Centres (CSCs) for delivery of services.

Following services are being provided through e-district programmes by many states

- Certificates: Creation and distribution of certificates for income, domicile, caste, Birth, Death etc.
- Licences: Arms Licenses etc.
- Public Distribution System (PDS): Issue of Ration Card, etc.
- Social Welfare Schemes: Disbursement of old-age pensions, family pensions, widow pensions, etc.
- Complaints: Related to unfair prices, absentee teachers, non-availability of doctor, etc.
- RTI: Online filing and receipt of information relating to the Right to Information Act
- Linking with other e government projects: Registration, Land Records, and Driving Licences, etc.
- Information Dissemination: About government schemes, entitlements, etc.
- Assessment of taxes: Property tax, and other government taxes.
- Utility Payment: Payments relating to electricity, water bills property taxes etc

(Ministry of Electronics and IT, 2018).

Digital India and Sustainable Development

The seventeen Sustainable Development Goals (SDGs) set by the UN provide us with a vision for a fairer, more equitable world by ending poverty, protecting the planet and ensuring that all people enjoy peace and prosperity. The targets related to each of these goals sets out several paths for all of us to follow in the mission to achieve the overall goals. The core vision of the SDGs that we should ‘Leave No One Behind’ is matched by India’s own national development policies of sab ka saath, sab ka vikas or ‘development with all, and for all’. This alignment recognises not just the transformative effect that the SDGs can have on the “social, economic and environmental linkages that define our lives” in India, but in India’s sustainability leadership in the world. Digital India is not only transforming India but
also helping to achieve the United Nations Sustainable Development Goals Agenda 2030. Government’s priority in 2017 is three pronged. The first priority is to address poverty. The second priority stands over industry, innovation and infrastructure and the third priority is to bring in partnerships. Technology mobile internet and aadhaar is just one fantastic example of how Digital India is already paying dividends for social development through digital innovation. By registering 1.25 billion people on the central digital identification system, the Indian government is able not only to distribute welfare services more efficiently to those who need it most, it is also able to save money by reducing corruption and targeting its services effectively.

**Connectivity**

Connectivity is vital to the success of Digital India as every service or scheme is available online. Therefore for a vast country like India it is important that each and every individual should have easy access to broadband or mobile connectivity. With a subscriber base of nearly 1,185.88 million, as of November 2017, India accounted for the 2nd largest telecom network in the world Second-largest subscriber base With 429.23 million internet subscriber India stands 2nd highest in terms of total internet users. Mobile based Internet is a key component of Indian Internet usage, with 7 out of 8 users accessing internet from their mobile phones (Telecommunication 2018). However, it is still reality that there is rural urban divide in term of the access to technologies in the rural areas. In order to provide easy access to various services at the door step to the rural community high speed internet facility is being provided under BharatNet scheme i.e. Optical Fibre Network connectivity to villages. Till now, optical fiber cable has been laid reaching 1, 00,572 Gram Panchayats against a target of 2, 50,000 village Panchayats.

**Digital Infrastructure under Digital India Campaign**

For a vast country like India, it has been felt that e-Governance is one of the best measures to reach the yet “unreached”. All implementers and drivers of e-Governance initiatives would agree that one of the key challenges associated with e-Governance is not technology but extending the reach of services to nearly 70% of the population that resides in the rural belt of the country. Digital Governance is a core priority for the Government. India’s UN e-Governance ranking has increased several levels from 118 in 2014 to 107 in 2016. To ensure that digital governance services can reach citizens on the ground, the Government has rapidly
expanded the Common Service Centre (CSC) network: trebling the CSCs from 83,000 in 2014 to 3, 01,000 in 2017. 20% of CSC village level entrepreneurs are drawn from marginalized communities–dalits, and tribals and there are more than 34,000 women working as VLEs today. These able entrepreneurs are providing critical services to various sections of the society from infants & children to the octogenarian.

**Participatory Governance**

India is the largest democracy in the world and citizens here are highly enthusiastic to be a part of Governance. In a democratic system, citizen participation is one of the key components of decision making process. MyGov an innovative platform launched to ensure citizens' engagement in decision making by the Government so that the ultimate goal of "Good Governance" for building India is achieved. The platform - MyGov - encourages citizens as well as people abroad to 'Discuss' and 'Do'. There are multiple theme-based discussions on MyGov where a wide range of people can share their thoughts and ideas. Further, any idea shared by a contributor will also be discussed on these discussion forums, allowing constructive feedback and interaction among participants. MyGov - aims to establish a link between Government and Citizens towards meeting the goal of good governance in the country. The platform has been divided into many Groups namely Clean Ganga, Green India, Job Creation, Girl Child Education Skill Development, Digital India, Swachh Bharat (Clean India). Each group consists of online and on ground tasks that can be taken up by the contributors. The objective of each group is to bring about a qualitative change in that sphere through people's participation (Home: My Gov- Citizen Participation towards Good Governance 2018).

The number of registered users on the platform has increased from 874 thousand in 2014-15 to 4.68 million to 6491 thousands till date in 2018, 223 thousands submissions in 777 Tasks and 3894 thousands in 781 discussions.

**E-Health under Digital India**

Online Registration System (ORS) is a framework to link various hospitals across the country for Aadhaar based online registration and appointment system, where counter based OPD registration and appointment system through Hospital Management Information System (HMIS) has been digitalized (Online Registraion System, Govt. of India n.d.). the system facilitates citizens make appointments, lab reports or check for blood availability through the Online Registration System using Aadhaar with Doctors of reputed hospital. The ORS is
connected to 122 hospitals and over 988 thousand patients have been given appointments as on date.

**Paperless Governance through DigiLocker**

Targeted at the idea of paperless governance, DigiLocker is a platform for issuance and verification of documents and certificates in a digital way, thus eliminating the use of physical documents. Indian citizens, who sign up for a DigiLocker account, get a dedicated cloud storage space that is linked to their Aadhaar (UIDAI) number. Organizations that are registered with Digital Locker can push electronic copies of documents and certificates (e.g. driving license, Voter ID, School certificates) directly into citizen’s lockers (About: DigiLocker 2018). DigiLocker, Digital India’s key platform for issuance and verification of documents in a digital manner, has seen a steady growth in DigiLocker registration and documents. Nearly 1crore 47 crore have registered till now, with over 1.90 crore documents having been uploaded on the platform.

**Digital Life Certificate for Pensioners**

Pension is an essential source of income after retirement for senior citizens. It supports them financially during emergency and helps them look after their needs at this stage of life. One of the main requisites for the pensioners post their retirement, is to provide life certificates to the authorized pension disbursing agencies like the bank, following which their pension got credited to their account. It was very difficult to get a life certificate, before to Jeevan Pramaan scheme. The Jeevan Pramaan or Digital Life Certificate eased this very problem. Now a pensioner can get this certificate hassle free and in an easier way. In fact, it uses the Aadhaar platform for biometric authentication of the pensioner. A successful authentication generates the Digital Life Certificate which is submitted online to the agency which releases the pension in the account of a person (Jeevan pramaan: India.gov.in n.d.).

**Technology for Agriculture**

Digital India Programme tools have also been driven across rural economic sectors; the e-National Agricultural Market (eNAM) agricultural marketing platform has been extended to 250 mandis across 10 States; 36.4 lakh(3.64 million) farmers and 84,000 traders are registered on the portal.

**Digital Transaction and Digital India**

Government, On November 8, 2016 decided to discontinue the legal tender character of high denomination banknotes of Rs 500 and Rs 1000. The decision was made to curb
financing of terrorism through the proceeds of Fake Indian Currency Notes for the eliminating black money. Demonetization followed by the implementation of GST has provided a golden opportunity to the policy makers to make the economy digitized, transparent and more formal. The financial transactions in any economy are probably the biggest motivator to go digital. It lessens the dependence on cash transactions and resort to digital payments.

As part of fillip to digitalization, Aadhaar identification based payment system, Bhim App, Unified Payments Interface (UPI), secure and seamless digital payments infrastructure has been created by the government sector and similarly in private sector also Paytm, Jio pay, Google’s Tez etc. and many more has launched giving boost to digital transaction. Similarly GST transactions are monitored online through GSTN portal.

The Government of India launched the Digital India Programme with the vision to transform India into a digitally empowered society and knowledge economy. Digital India is a inclusive campaign which ensures that public services be made available to citizens electronically by improving online infrastructure and by increasing internet connectivity or by making the country digitally empowered in the field of technology. Digital India, an ambitious programme of Government of India, is projected at Rs 1, 13,000 crores of investment with a purpose to create a digitally empowered society and for bringing good governance to citizens through synchronized and coordinated engagement of the entire government and different stakeholders.

**Digital India: An Evaluation**

India’s economic agenda, as laid out by the government, largely focuses on economic revival and inclusive growth. It aims to carry out these by financially empowering citizens, focusing on industrial development and reducing corruption in subsidies through the use of digital technologies. The agenda has the following action points: poverty elimination, containing the food inflation, agricultural reforms, co-operation between Centre and states, transparent and time-bound delivery of government services, e-governance and governance enabled through mobile devices, ease of doing business, job creation and development of infrastructure. In order to achieve these objectives several large-scale campaigns or Flagship programmes have been launched by the government. Flagship initiatives such as JAM (Jan-Dhan Yojana, Aadhar, mobile),
DBT (Direct Benefit Transfer), PM’s Bima Yojana, Smart Cities, etc. have received significant attraction. Jan-Dhan has secured international acclaim by setting a world record for most number of bank accounts opened under a financial inclusion programme in the country. The reach of such schemes among the masses has been made possible through the use of technology-enabled channels. Additionally, subsidy reforms have also been initiated with the aim of reducing the burden on the economy and ensuring that the benefit of subsidies should reaches the right people. Under the PAHAL scheme, for instance, LPG subsidies can be directly transferred to the bank accounts of the actual owner of gas connection, which is verified through e-KYC (Know Your Customer- an Aadhaar based authentication method.) The impact of these schemes is visible in a short span of time. The Aadhar programme has already achieved 1 billion enrolments by December 2015. Similarly, the Jan-Dhan programme received 15 million enrolments on the opening day itself, and reached 115 million enrolments by 17 Jan 2015. This has been possible only through the use of technology-enabled automation for managing data and a centralized banking system, which has also reduced the cost of operations in rural areas. Given that over 700 million Indians have mobile connections, the next step is to enable citizens to transact with the government via online or mobile channels. It is, thus, vital that people and processes be brought onto a common, integrated technology and services platform. The key enabler in this regard is technology. It is only through technology that documents, transaction logs, bank accounts and identities can be integrated and accessed seamlessly.

**Challenges in Digital India**

The Digital India initiative is one of the biggest programme of Government of India which aims to engage government with citizens and industry to transform India into a digitally empowered society and knowledge economy. It is an umbrella infrastructural programme as it holds all government machinery and departments in its fold. The programme also aims to create a truly participatory democracy with the use of digital technology as its target is to connect more than 130 crore Indians with their Government so that they could avail services and benefits of government services in real time and also get their grievances redressed in quick time. Despite of that there are following problems in the way of Digital India Initiative: -

1. **Connecting Rural India**
The programme emphasizes to connect nearly 250,000 Gram Panchayats (Rural Government) by December 2016. However, connecting 250000 Gram Panchayats through National Optical Fibre Network (NOFN) is not an easy task. Further, the internet penetration in the rural areas is fifteen percent only which is a biggest challenge before the success of Digital India.

2. Digital Literacy and Digital Divide

Digital Literacy means the capacity of individuals and communities to understand and use digital technologies for effective participation in the democratic and developmental process. However, the lack of digital knowledge among people particularly in the rural area can hamper the success of this programme. Due to lack of infrastructure in rural area people don’t have effective access to digital and information technology therefore, they are not able to get the benefit of various schemes and services as compared to people living in cities.

3. Protection and control over Government Information

Digital India Initiatives has led to start a number of projects by State Government and Central Government with the help of various agencies. The Government agencies need to maintain a Strategic Security Control (SSC) to protect the sensitive information and data of the department. Recently it has been reported that some persons theft information from Aadhaar Server. Such breaches in the security system of the Aadhaar can be dangerous to the entire digital India programme.

4. Communication or E-Mail Policy

Government employee cannot send information and data through e-mail of private service providers. The famous Hillary Clinton controversy in US for mixing up her personal and business accounts is well known example in this context. Although, Government of India has formulated e-mail policy in 2014 for sending official communication, yet many officials of different departments are resorting to send information through e-mails like using private service providers like g- mail or yahoo. This is against the provisions of Informational Technology act and also various provisions of e-mail policy of the government. The digital India Programme does not focus on such issues and also it requires a huge investment in building of infrastructure.

5. Cyber Security
The Concept of e-governance includes government to citizen and citizen to government interface. The Government interface provides useful information required by the citizens. Both of these interfaces should be free from any outside cyber intervention. The cyber intervention by hackers can be dangerous to the very existence of the governance. Therefore, continuous monitoring of the data inside the computer and at the department level is required. Department cannot escape from their responsibility. While adopting e-governance policy it is the responsibility of the department to focus on issues of safety and security of the data.

**Conclusion**

Digital India programme aims to transform the entire ecosystem of public services through the use of information technology with a vision to convert India into a digitally empowered society and knowledge economy. With the adoption of the 2030 agenda for Sustainable Development India is committed to transform the country. The 2030 Agenda is people centric and include universal Sustainable Development Goals (SDGs). Achieving these goals in the country for creating peaceful, just and inclusive societies depends upon effective, accountable inclusive institutions proper infrastructure and processes. All the institutions are required to accomplish the agenda to the national aspiration. These institutions need to mobilize the society and the all stake holders in implementing the Sustainable Development Goals (SDGs). The capacities and innovation are required to promote the policy of integration, enhance public accountability, promote participation for more inclusive societies as well as ensure equitable and effective public services for all, particularly for the poorest and most vulnerable groups. ICT and e-government are important tools to realize these objectives.

Governance coupled with the use of technology, indeed, has the potential to transform government, making it more transparent, accountable, accessible and participative. Digital technology, further, can empower the people, but all this needs massive infrastructure in rural and urban areas of India. The Digital India Programme seeks to lay emphasis on e-governance and transform India into a digitally empowered society. We can easily observe globally, that technology has been the biggest enabler in bringing out massive transformation in both public and private sectors. Given the complexity of implementation at such a large scale and unprecedented scope of the project, it is critical to choose disruptive and emerging
technologies, which have mass reach, can be customized and are ubiquitous in nature. Considering the timelines involved, the implementation would need to be done in a lean and agile manner, apart from being cost effective and secure. However, this requires a huge domestic as well as foreign direct investment in the digital India programme.

In new public management era, we know that the size of the government and administration is squeezing but the administration is always committed to pour down the benefits of its various programmes and services to the citizens through the application of technology The success of the programme, however, depends upon proper regulation and execution, empowerment of citizens, enhancement of digital literacy and skill development, removing digital divide, ensuring cyber security and privacy etc. These measures are essential not only for inclusive growth but also for building a knowledge economy in the country.
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