



# Digital India – Scope, Impact and Challenges

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**Abstract:** *The course of human development has taken new dimension with the introduction of information and communication technology (ICT). The explosive growth of ICT services is presenting policymakers with three key challenges. The challenge for all stakeholders in the ICT ecosystem has been to quantify the impact of digitization. However, realizing the opportunity that broadband presents will require that policymakers undergo a shift in their thinking. They must go beyond considering ICT and focus instead on digitization, with an emphasis on ICT usage rather than just access. They must take into account their current level of digitization in order to ensure that they are focusing on the right investments to advance to the next stage. And they need to look with fresh eyes at policies that were developed a decade ago to understand how they can be updated for a new era. Policymakers are hopeful about this opportunity, and many are committed to action. The steps they take in the coming years will determine whether they can translate opportunity into reality.*

## I. INTRODUCTION

For India, the rise of Information and Communication Technology is an opportunity to overcome historical disabilities and to become the master of one's own national destiny. The GOI has recognised the potential of ICT for rapid and all-round national development. The National Agenda for Governance, which is the Government's policy blueprint, has taken due note of the ICT Revolution that is sweeping the globe. The types of documents published by the Government Organisations : Administrative Reports, Governmental Notifications, Statistical Reports, Budget Documents, Committee and Commission Reports, Research Reports.

### TECHNOLOGICAL INITIATIVES BY GOVERNMENT

Initiatives have been taken by National Informatics Centre to provide most of the information through a portal where in different kinds of digital documents on the governmental activities can be accessed. But these efforts also have not been properly coordinated and digital documents brought out by many of the departments do not form part of the Web site.

Country's digitisation can be measured using six key attributes:

**Ubiquity**— the extent to which consumers and enterprises have universal access to digital services and applications.

**Affordability**— the extent to which digital services are priced in a range that makes them available to as many people as possible.

**Reliability**— the quality of available digital services.

**Speed**— the extent to which digital services can be accessed in real time.

**Usability**— the ease of use of digital services and the ability of local ecosystems to boost adoption of these services.

**Skill**— the ability of users to incorporate digital services into their lives and businesses the pace of digitization and movement between stages is accelerating rapidly. Not only has the pace quickened, but the jump in development has also been more marked.

## II. DIGITAL INDIA: TOWARDS DIGITALISING GOVERNANCE

An influential umbrella project of the government and blessings for the citizens to bring India to a global platform with participation from people and businesses. This initiative will ensure that all government services and information are available anywhere, anytime, on any device that are user friendly and secured. This transformation will make into reality when every citizen of India will participate in this transformative impact. Digital India initiative could help in achieving the objectives of:

EDUCATION FOR ALL.

INFORMATION FOR ALL.

BROADBAND FOR ALL.

LEADERSHIP STRUCTURE.

GLOBALLY INDUSTRY PARTICIPATION

## VISION OF DIGITAL INDIA: INITIATIVE OF DREAM PROJECT

### I. DIGITAL INFRASTRUCTURE AS A UTILITY TO EVERY CITIZEN:

This initiative brings together to deliver high speed communication technologies and digital services that will reach to the remotest villages, round the clock. Public services like land records, certificates and many more will be made available online or public cloud.

### II. GOVERNANCE AND SERVICES ON DEMAND:

This vision will provide single window access to every individual. Every government services or information is available online and on mobile platforms with a single touch.

### III. DIGITAL EMPOWERMENT OF CITIZENS:

Under this vision, every citizen will empower through digital literacy and universal access to digital resources. All documents and certificates to be available on cloud and in Indian languages.

## III PILLARS OF DIGITAL INDIA: THE ROAD TO SMART GOVERNANCE

### I. BROADBAND HIGHWAYS:

The first step is to provide high speed broadband highways through fiber optics that connect all the remote areas, government departments, universities, R&D etc. Web based portals and Mobile apps will be developed to access online information while on the move.

### II. UNIVERSAL MOBILE ACCESS:

In the coming years, network technologies like 3G, 4G and upcoming 5G will storm the speed. Government is specially preparing to connect unconnected areas and speedy use of these technologies. General public will access the online government services with the help of handheld devices. Nation is ready to be well-connected, efficient, and more productive in every aspect.

### III. PUBLIC INTERNET ACCESS:

Virtuous technologies that support cost containment, collaboration, security, services-on-the-go, social-connect, and in-built intelligence that deliver remote access to any information or service available across the domain. This change will open new doors of e-services to every citizen.

IV. E-GOVERNANCE: This governance will transform every manual work into fully automation system. It will revolutionize the system in the following ways:

Online access to applications i.e. availability of all databases and information in electronic format.

- *Effortlessly tracking of assignments.*
- *Interface between departments for superior production of work.*
- *Quickly respond, analyze and resolve persistent problems and many more.*

### V. E-KRANTI:

This kranti will fully focus on digital knowledge program where education, health, farming, rights, financial and many more services will be delivered on a very high bandwidth. Physical boundaries no longer are a limitation when almost everyone and everything is a digital handshake away.

### VI. INFORMATION FOR ALL:

Websites and mobile apps will convey data and realistic participation and through social media. Everything is connected through virtual networks. Swift work flow and no delays due to wait in queues.

### VII. ELECTRONICS MANUFACTURING:

This milestone will create a huge base for electronics manufacturing in India with the aid of digital technologies and skills. The empowerment of manufacturing through the Internet of Things will enable intelligent workshops that demonstrate data driven operational excellence and decentralized production control systems within and beyond the physical factory walls.

## IV. KEY POLICY IMPERATIVES

The digitization index and analysis will be an invaluable tool for countries to understand their current level of digitization and how to build on it. In recent years, both developing and developed countries have invested significantly in broadband infrastructure, ensuring that their citizens have high-speed access to the Internet and communications services. But this investment is not enough. It is observed that the countries that have made rapid advances through the four stages of digitization to see what measures and policies contributed to their progress and found that policymakers can play a pivotal role by focusing on five key imperatives. These imperatives are critical for all countries both the mature economies that have reached the advanced stage of digitization, and the developing economies that fall primarily into the constrained, emerging, and transitional stages of digitization. They are:

- Elevate digitization on the national agenda: Ensure that national policy and senior government stewardship provide the platform for progress; create a plan for digitization that is tracked and monitored, with accountability residing at senior levels of government.

- Evolve sector governance: Segregate regulatory and policy roles; clarify both ownership and accountability for ICT and digitization.
- Adopt an ecosystem philosophy: Address the convergence of telecommunications, media, and information technology; develop a strategy that addresses all stages of the value chain in a holistic way; and consider the local ecosystem as well as export opportunities.
- Enable sustainable competition: Develop a competitive ICT model that stimulates both innovation and adoption, while ensuring sector sustainability and investments.
- Stimulate demand: Invest in boosting digitization usage and service adoption; ensure that public services are available through e-channels.

#### **V. SOCIAL IMPACT**

Assessing the impact of digitization on societies is complicated because there are no universal metrics that act as a barometer of societal advancement. Studies often tend to look at the level of inequality in a society but in emerging economies that are in the process of elevating millions from poverty, a complex relationship between economic growth and inequality remains. Therefore we analyzed societal impact on two levels: the level of quality of life in a society and the equality of access to basic services that a society requires. However, the analysis reveals that in countries with lower levels of economic development, the impact of digitization is not as pronounced. The difference appears to be that in less developed economies, factors beyond digitization are more critical to quality of life: of primary importance is food; then housing, clothing, water, and energy; followed by health; and finally transportation and communication. As a result, it would appear that, as expected, digitization has an impact on quality of life only when the population has satisfied its basic needs.

#### **VI. GOVERNANCE IMPACT**

The final area in which we analyzed the impact of digitization was government effectiveness. As for the analysis reviewed above, we relied on three metrics: the transparency of governmental activities, the delivery of e-government services, and the provisioning of public education a key government service. Our correlational analysis demonstrates that greater digitization enables a society to be more transparent, increasing public participation and the government's ability to disseminate information in an accessible manner. Digital technology gives the population more insight into government policies and function an insight that might, in turn, lead to more active political participation and support the development of human rights. Additionally, as expected, e-government services are more effective in a digitized environment. Current research indicates that causality in this case acts both ways. Higher digitization contributes to more efficient delivery of e-government services, while better e-government services stimulate an increase in digitization. Finally, digitization supports better delivery of basic government services, such as public education. Overall, our analysis indicates that digitization clearly has a positive impact on economic advancement, societal well-being, and government effectiveness, although this impact varies according to a country's level of digitization. Digitization has an increasing impact on the economy and quality of life as countries advance through the stages of digitization, and more impact on access to basic services and education in countries that are just beginning their journey.

#### **VII. CHALLENGES**

The first challenge is to establish standard performance indicators to measure the extent to which ICT is being assimilated in societies. During most of the sector's development, ICT stakeholders focused primarily on access, building the networks that today connect much of the planet; they devised metrics accordingly. In a world of near ubiquity in terms of access, policymakers need a new way to look at the ICT sector. The second challenge concerns the lack of tools to determine the impact that the mass adoption of connected digital technologies and applications is having on societies and economies. With practical, reliable tools to measure the benefits of digitization, governments could potentially be more ambitious in developing and investing in the ICT sector. The third challenge is for policymakers to adopt new policy tools to accelerate digitization and reap its accompanying benefits. Over the past two decades, policymakers established rules to enhance access to communication services. In this paper we laid emphasis on the need to gain a similar understanding of the ways in which they can encourage adoption and boost the usage of digital applications by consumers, businesses, and public institutions.

#### **VIII. CONCLUSION**

It has been clear to policymakers for several years that digitization has the potential for dramatic economic, social, and political improvements. Anecdotal evidence abounds: water utilities have installed sensors that reduce leakage, saving water and money; healthcare organizations send text messages to pregnant women with advice on prenatal care, creating a healthier new generation before children are even born; fleets of trucks use digital GPS devices that direct them to shorter routes, cutting down on their greenhouse gas emissions. Numerous organizations, including the World Economic Forum with its evolution of the Networked Readiness Index, are taking steps in that direction. As we move into the electronic era of digital objects it is important to know that there are new barbarians at the gate and that we are moving into an era where much of what we know today, much of what is coded and written electronically, will be lost forever. We are, to my mind, living in the midst of digital Dark Ages; consequently, much as monks of times past, it falls to librarians and archivists to hold to the tradition which reveres history and the published heritage of our times.



The outcome of Digital India is to produce Wi-Fi locations for people, creating jobs, universal phone connections, high-speed internet, digital inclusion, e-services, e-governance, digitally motivated people, National Scholarships Portal, Digital Lockers System, e-education and e-health, making India to be a pioneer in IT use solutions. Some of the projects are under various stages of implementation which may require some transformational process reengineering, refinements and adjustment of scoping and implementation strategy to achieve the desired service level objectives by the concerned line Ministries/Departments at the Central, State and Local Government levels.

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