

DECEMBER 2020

KURUKSHETRA SUMMARY

AN INITIATIVE BY THE PRAYAS INDIA

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Summary of Kurukshetra

December 2020

Theme: Digital India

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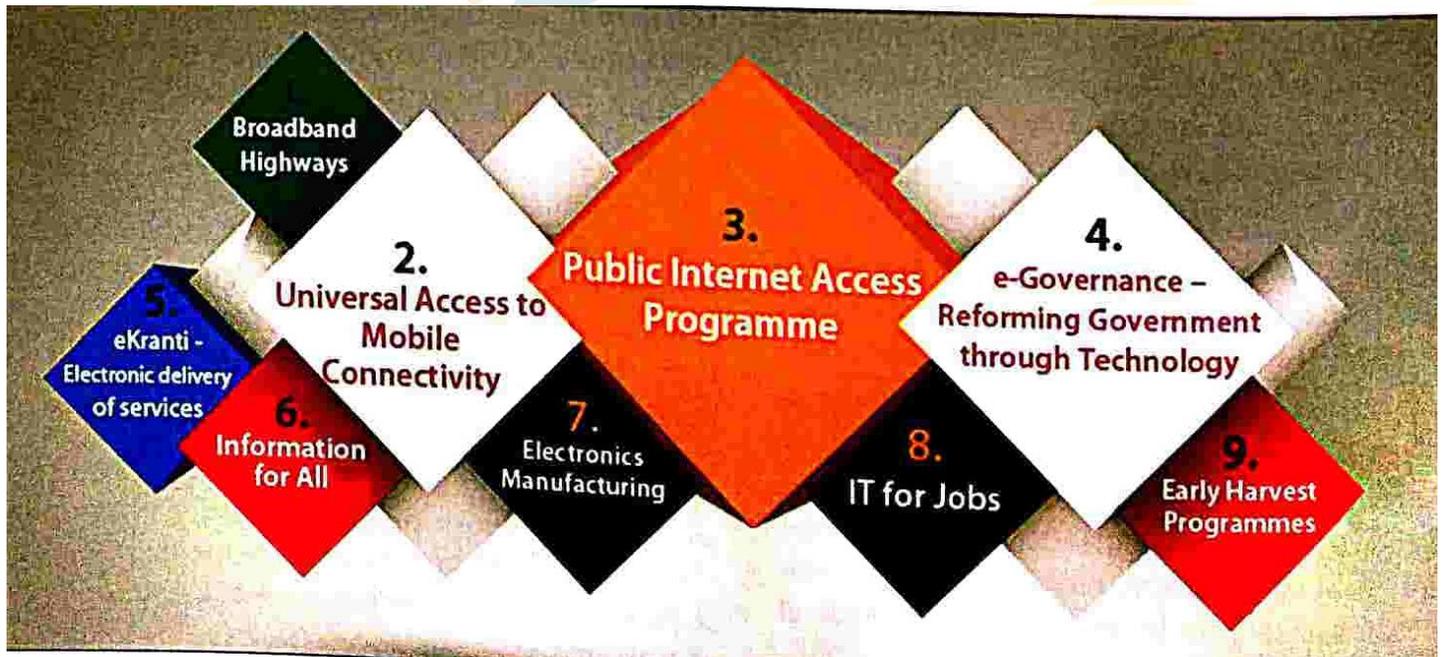


Realising 'Digital India' through its different Pillars

- The Digital India programme has emerged not only as an initiative but also as an aspiration for the country.
- It took one step ahead and aspired to provide seamlessly integrated services across departments or jurisdictions by adopting single window framework.
- It also promotes the use of Open source and Open API, to ensure interoperability of all e-governance applications and provide access to data and services for promoting participation of citizens.

Broadband highways

- This pillar has three components including Broadband for rural; Broadband for urban and National Information Infrastructure.



Universal Access to Mobile Connectivity

- The rapidly growing smartphone penetration and consistently declining data rate have provided a boost to the mobile connectivity across India.



- As a part of Digital India Programme, the Ministry has been providing mobile coverage to remaining uncovered villages would be provided in a phased manner.

Public Internet Access Programme

- The Public Internet Access Programme aims to establish the infrastructure mechanisms for enabling access to public internet for the common people.
- The Public Internet Access programme focused mainly two components including CSCs and transforming Post Offices as multi-service centres.
- Around 150,000 post offices are proposed to be converted into multi service centres and this project is being driven by the Department of Posts.
- Considering the expanse of presence of post offices, the project could have a huge transformational effect on the public internet access programme.

e-Governance – Reforming government through Technology

- The Government of India has recognized the eGovernance as the way forward and the Ministry has been striving to ensure effectiveness of government services across different domains offered by line ministries.
- Under this pillar, the government has different focus areas including form simplification and form reduction, online applications and tracking, online repositories and integration of services and platforms.
- This programme also aims to transform the workflow inside the government departments to enable efficient government processes to citizens.
- The Digital India Programme, under this pillar has also established the Traditional Development of Indian Languages Programme, to facilitate human-machine interactions in Indian languages.

e-Kranti, Electronic delivery of Services

- The National e-Governance Plan was the first step towards making government services accessible to the common man, through service delivery outlets, to transparency and reliability of services at an affordable price.



- Under this pillar, the Digital India programme has identified 44 mission mode programs which have been grouped under Central, State and Integrated projects.
- The major focus areas include banking, income tax, transport, commercial taxes, financial inclusion and so on.
- This pillar also aims to leverage technology in transforming different domains with different projects such as Technology for Health, Technology for Farmers, Technology for Security, Technology for Justice, Technology for Financial Inclusion and Technology for Cyber security.

Information for All

- This pillar aims to ensure transparency and availability of reliable data generated by the line ministries for use, reuse and redistribution for the people of India.
- Under this pillar, government aims to pro-actively leverage the social media and web-based platforms to inform and interact with citizens.
- The Mygov platform is a significant step towards ensuring governance and promoting government-citizen interactions.

Electronics Manufacturing

- Electronics are deemed as the backbone of technology development for a company and technology is increasingly recognized as a key contributing factor for economic development.
- The major focus areas under this pillar include FABS, Fab-less design, Set top boxes, VSATs, Mobiles, Consumer and Medical Electronics, Smart Energy meters, Smart cards and micro-ATMs.
- The recent policies including Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS), Production Linked Incentive Scheme (PLI) and the Modified Special Incentive Package Scheme (M-SIPS) have been monumental in strengthening the electronics in India.

IT for Jobs

- This pillar focuses on skill development of the Indian youth in rural and urban areas for making them skilled for the IT/ITes sector.



- Setting up of BPOs and providing IT trainings has been the biggest focus of this pillar under the Digital India programme.

Early Harvest Programmes

- This pillar consists of a group of different short term projects which have immediate effect on the Indian digital ecosystem.
- The major projects under this pillar include IT platform for mass messaging, crowd sourcing of eGreetings, biometric attendance in the govt offices, Wi-Fi in all universities, secure email with government, etc.

Challenges

- **Technical Challenges**
 - The integration and alignment of different networks, interfaces/platforms across different states has been a major challenge in implementation of Digital India.
 - Challenges such as interoperability of solutions, privacy, security and multi service interaction have been consistently faced by the implementing agencies.
 - Digital illiteracy is another major challenge which has prevented the effective utilization of the projects.
- **Organisational Challenges**
 - Lack of highly skilled individuals, huge population, presence of different languages and the distributed control of subject between the state and the Center are the major challenges.
- **Economic Challenges**
 - The scale of the Digital India programme warrants huge budget outlay, which has been a major challenge in the implementation of the programme.
 - With limited project funding, it becomes difficult for implementing agencies to completely achieve the desired objectives of a project.

Way Forward

- **Improving the Regulatory Framework**



- A robust regulatory framework has to be developed by the government to ensure wide spread adoption of digital services and platforms.
- Recent example, AarogyaSetu, which facilitated contact tracing in the pandemic.
- **Effective implementation of Projects**
 - In order to ensure effective implementation of projects, the government has to focus on two aspects namely, the skill enhancement of its workforce and the futuristic planning of the projects.
 - It is particularly important to adopt agile implementation practices to make projects upgradable and scalable.
- **Optimisation of Resources**
 - Adequate feedback and monitoring mechanism have to be put in place in order to recognize and address any futile/ suboptimal use of resources such as manpower, budgets, private sector fund, etc.
 - An output-outcome based monitoring framework effectively highlights the issues and thus, such a framework must be developed for individual project and the programme.
- **Bridging the Digital Divide**
 - A major effort to create awareness about the Digital India programme in addition to the digital education and information dissemination initiatives of the programme.
- **Driving Inclusive Participation in Projects**
 - Inclusive efforts with participation of industry and academia are crucial to the widespread success of the Digital India Programme..
 - PPP models may also be explored for sustainable development of digital infrastructure.
 - Tax incentives and quicker clearances of projects could also facilitate the implementation of the Digital India programme.

India's eHealth Revolution

What is eHealth?

- The use of technology to deliver health sector services, solutions, interventions and services that ride on the digital platforms can all be clubbed under this broad term.



- According to WHO, it is defined as: “the cost effective and secure use of information and communication technologies in support of the health and health related fields including healthcare, health surveillance and health education, knowledge and research.”

National Digital Health Mission

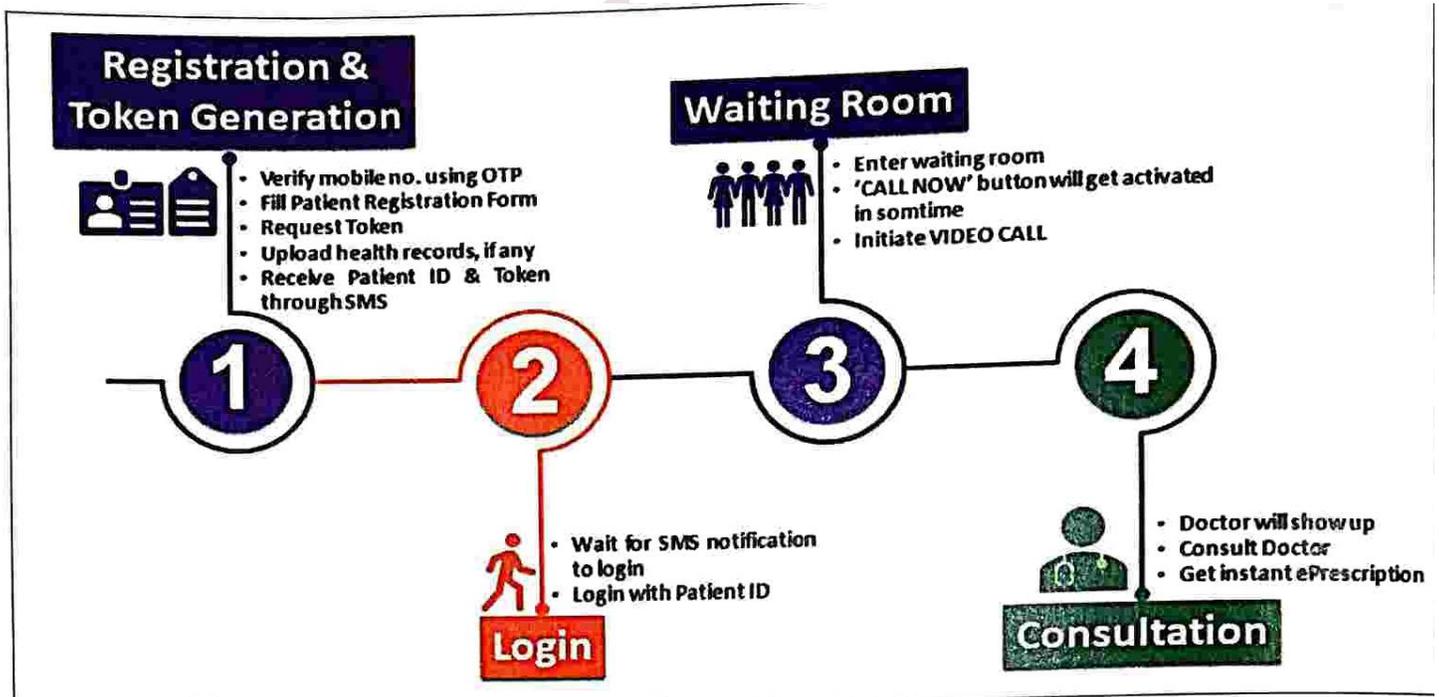
- Under this scheme, Health ID will be given to every Indian. This health account will contain details of every test, every disease, the doctors visited, the medicines taken and the diagnosis.
- National Digital Health Mission is holistic, voluntary healthcare programme which will integrate doctors, hospitals, pharmacies, insurance companies and make a digital health infrastructure.
- The National Digital Health Blueprint envisages achievement of the following objectives:
 - To establish state-of-the-art digital health systems
 - To establish National and Regional Registries
 - To enforce adoption of open standards
 - To create a system of Personal health Records
 - To promote development of enterprise-class health application systems.
 - To ensure National Portability
 - To promote the use of Clinical Decision Support (CDS) Systems.

Other eHealth Initiatives

- National Health Portal – provides information to citizens and stakeholders in different languages about health, Government programmes and services in Health sector.
- E-Hospital@NIC – a Hospital Management System, specifically meant for the hospitals in Government sector.
- Online Registration System – provides services to citizens for taking online registration and appointment, payment of fees, viewing reports etc. in public hospitals.
- Mera Aspatal – initiative to capture feedback for the services received at the hospital through user friendly multiple channels like SMS.
- SUGAM- Enables online submission of applications, their tracking processing and grant of approvals online mainly for drugs, clinical trials, ethics committee, medical devices, vaccines and cosmetics.



- Kilkari – It delivers free, weekly, time appropriate 72 audio messages about pregnancy, child birth and child care delivery to families’ on mobile phones.
- Nikshay – It is a TB Monitoring System that tracks individuals for treatment-adherence.
- Tobacco Cessation Programme – It is a mobile based interventional initiative for counseling and helping people to quit tobacco.
- mDiabetes Programme – It is a mobile based initiative for prevention and care of diabetes.
- Hospital Information System – It is being implemented in hospitals for automation of hospital processes to achieve better efficiency and service delivery in Public Health facilities upto CHC level.
- eAushidi – It is a Drugs and Vaccines Distribution Management System which deals with purchase, inventory management and distribution of various drugs, sutures and surgical items to various District Drug Warehouses of State/UT, District Hospitals etc.
- e-Rakt Kosh – It is a comprehensive, efficient and total quality management approach with the help of online systems and is being rolled out for all the licensed blood banks in public and private health facilities.
- E-Sanjeevani- It is a digital platform for provisioning of health services. It has two varied facility:
 - E-Sanjeevani which is meant for doctor-to-doctor teleconsultations
 - E-Sanjeevani OPD which is meant for patient-to-doctor teleconsultations





- eVIN (Electronic Vaccine Intelligence Network) – It aimed at strengthening immunization supply chain systems in India implemented under National Health Mission.
 - It aims to provide real-time information on vaccine stocks and flows, and storage temperatures across all cold chain points in the country.

Rural e-Governance

- E-Governance is the mechanism for providing and managing government services via electronic means and is expected to help in ensuring a SMART (Simple, Moral, Accountable, Responsible and Transparent) government.
- The World Bank has defined e-Governance in the following words: “E-Government refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to the citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions.”

Some e-Governance Projects

- **E Panchayats:**
 - It delivers e-Governance services to rural populations.
 - It include information on topics such as agriculture, irrigation, fisheries, loans, seeds, fertilizers, etc.
 - It provides services like various taxes, death and birth certificates, pensions and approvals for building constructions.
- **Bhoomi:**
 - A Karnataka government initiative, Bhoomi has been instrumental in digitization of land records.
- **E-Choupal:**



- This is a private sector project, launched by ITC limited to address various requirements of farmers, including selling their produce directly to buyers, and ruling out the role of middlemen in the process.
- Under the project, Internet kiosks have been set up in villages where farmers can access services and important information relevant to farming.
- **Gyandoot:**
 - A project launched by Madhya Pradesh government, Gyandoot works through soochnalayas set up in Dhar district of the state.
 - The soochnalayas are self-sustaining as local youth selected to run them are not given any salaries. Rather, they get paid for the services provided to citizens.

Limitations of Rural India

- The biggest limitation is related with infrastructure; especially telecom/ broadband infrastructure and power supply related infrastructure. A large number of people in rural areas still use feature phones which limit their ability to access services electronically.
- Literacy levels among rural masses is low. Literacy would have a direct link with the ability of masses to leverage e-Governance mechanism.
- IT awareness and IT literacy is another important aspect of the situation as even among those who are literate, a significant number of people find it difficult to deal with digital equipments and internet.
- In rural areas, an extremely limited number of people understand English which is the primary language of interaction on e-Governance platforms. This seriously hinders peoples' ability to take advantage of the system.

Way Forward

- E-Governance contributes in eradicating corruption as there is no middleman involved in the process of delivery and receipt of services.
- It also helps in reducing red tapes and bureaucratic hurdles, and improving efficiency.
- It not only makes access to government services convenient and on demand to a large extent but they also save valuable financial resources on both sides of the system.



- Even though e-Governance services are making impressive advancements in connecting the two important stakeholders of government services at both ends of the system, there are many challenges, especially in the rural areas, which need to be addressed if we want to tap full potential of e-Governance and get the desired outcome.
- We have made significant progress in terms of establishing e-Governance structures, conceptualizing and implementing e-Governance plans, making government systems ICT friendly, and establishing a connect between the providers and users of government services.
- E-Governance can be a key enabler towards attaining the goal of Simple, Moral, Accountable, Responsible and Transparent (SMART) governance and is going to remain a priority area for Central and State Governments.

E-Learning

- E-learning is the process of using electronic technologies for teaching-learning processes in which the learning activities take place either entirely or partially online.
- They can be conducted by means of electronic media without the use of the internet.

Innovative Digital Education initiatives

- **Diksha – Digital Infrastructure for Knowledge:**

- It is a national platform for school education to address the challenge of remote learning especially in rural areas.
- It is available for all learners of grades 1 to 12 and it can be accessed through a web-portal and mobile applications.
- Features:
 - Autonomy and choice within a national framework.
 - Online-offline and varied types of devices.
 - Diversity of content and energized textbooks
 - Data provides the ability to see and empower
 - Local language content and open licensing framework



- Bridging the physical and digital world
- Diversity, flexibility and evolving, etc.

- **ePathshala**

- It is designed for bridging the digital divide of rural India by facilitating the students, teachers, educators and parents ease of access to eBooks, ICT interventions and many other digital and virtual resources.

- **Swayam Prabha Channels**

- This is the access to digital education through TV channels for those who do not have access to internet.
- Through 32 channels earmarked for school education and higher education separately, high quality educational programmes are telecasted by the MHRD and the same are open for people of rural India for accessing remote digital learning.

- **NROER – National Repository of Open Educational Resources**

- It is a collaborative platform for sharing of open educational resources.
- As a national repository, it hosts large number of educational resources in many subjects and in different Indian languages for Primary, Secondary and Senior Secondary classes.

- **Samagra Shiksha**

- The scheme of Samagra Shiksha has integrated the efforts of Computer Aided Learning of Sarva Shiksha Abhiyan with ICT interventions of Rashtriya Madhyamik Shiksha Abhiyan enabling the learners towards creative participation and innovative digitalization in order to improve access, quality and efficiency in school education.

- **Shaala Darpan**

- Shaala Darpan is an e-Governance platform for all Kendriya Vidyalas in the country including rural areas.
- It aims at improving quality of learning, efficiency of school administration, governance of schools and service delivery to students, teachers, parents, community members and schools.

- **Shaala Siddhi**

- The National Programme on School Standards and Evaluation is known as Shaala Siddhi.
- It is a comprehensive instrument for school evaluation leading to school improvement.
- It enables the schools to evaluate their performance and thereby bring improvement.

- **E-Granthalaya**



- It is an Integrated Library Management Software developed by National Informatics Centre.
- The application is useful for automation of in-house activities of libraries and to provide various online member services.
- It can strengthen digital library facilities in schools and colleges of rural India.
- **Digital Saksharta Abhiyan (DISHA)**
 - It is also known as National Digital Literacy Mission.
 - It has been formulated to impart IT training to people including Anganwadi workers, ASHA workers and authorized ration dealers.
 - It aims at training non-IT literate citizens to become IT literate and encourage their effective participation in the developmental process.
- **Pradhan Mantri Gramin Digital Saksharta Abhiyaan (PMGDISHA)**
 - It aims at empowering the citizens of India particularly rural India by training them to access and accelerate the Digital India initiatives by operating computers or digital devices like smart phones and tablets.
 - The major focus is to bridge the digital divide, specifically targeting the rural population including the marginalized sections of society.

Conclusion

- India is moving towards a global knowledge super power in which educational technology, digital initiatives and virtual classrooms play prominent roles especially for the people of rural and remote India.
- Hence digital education and virtual learning need to be the essential prerequisites of most of the rural development programmes.
- Education is a nation-building process and digital education is the progressive education for building a healthy rural India.
- States and UTs have to actively support and be involved in creating and providing innovative resources and implementing diverse centrally sponsored digital initiatives under 'Digital Education' and 'Virtual Learning'.



Precision Agriculture and IoT-based Solutions

- The ‘Precision Agriculture’ which is also referred alternatively as ‘precision farming’ or ‘site-specific crop management’, or ‘prescription farming’ is one of the emerging systems in agriculture across the globe, since 1990s.
- The PA describes the “process of technology-enabled and integrated approach to agricultural crop management system that comprises the observation, measurement, and analysis of the needs of individual fields of farmers and crops in the regions, so that the productivity and farmers’ income are significantly enhanced.”
- The precision agriculture adopts the general cycle with various components like observation, recording the data analysis/ evaluation using analytics, targeted management and effective implementation with close monitoring and evaluation, so that the agricultural productivity and profitability can be significantly increased.
- It uses the technology-driven solutions for managing the entire set of ‘Agricultural Management Systems (AMS)’ for various interventions like:
 - Generating onsite/on-farm data on continuous basis, about various agricultural practices thereby using the technological tools to enhance the yield, quality and profits for the farmers in the agricultural production systems.
 - Using remote sensing, geographic information systems (GIS), global positioning systems (GPS) and robotics & analytics for data-driven decision making in farm management.
 - Adopting latest technologies like big data, robotics, aerial imagery etc. by the farmers which will result in decrease in undue variations and enhanced stability in crop-yields.
 - Enhancing the Good management practices in agriculture where technology will play the supportive, supplementary roles to reduce the farm-input-costs and simultaneously improving the agricultural productivity.
 - Adopting the technology based identification, analysis and managing the soil and nutrient management.
 - Using drones for spraying pesticides, insecticides, etc. so that input costs are optimized and issue of skilled labour shortage are addressed.
 - Reducing the cost of inputs used in farming and also to protect the crops from biotic stresses and abiotic stresses thereby optimizing the resource utilization in most effective manners.



- Improving management of variability in space and time, which can result in the most-suitable use of agri-inputs and therefore increasing the profitability at all scales and levels of managing the agri-based system/enterprises and natural resource management.
- Equipping the agricultural-farmers with weather patterns and market intelligence information systems.

Benefits of Adopting Precision Agriculture

- Adopting the improved set of agricultural production practices and choice of crops, based on suitability of localized lands and climate
- Optimizing the input-resource like water, fertilisers, plant protection measures against pests diseases.
- Helping to minimize/ avoid the wastages, by technological interventions
- Managing the water and soil nutrients for agriculture effectively.
- Eliminating the risk and volatility in crop-production systems
- Increasing farmers income through technology driven customized solutions.

Challenges in Adopting PA

- The information technology infrastructure systems and service facilities oriented to agricultural sector (which are locally accessible, cost-effective and user-friendly) are inadequate, unlike their availability and easy accessibility to the industrial and service sectors.
- Most of the Indian farmers are not familiar in using of technology based agricultural systems and app-based decision making systems in farm management practices.
- Socio-economic factors in villages where Indian farmers are generally acquainted with their traditional systems of agricultural practices, who are generally reluctant to try something new like PA/tech driven agriculture.
- The banking and financial institutional systems have preferential bias in financing/ funding the industrial// service sector, when compared to lending to the agricultural sector, owing to uncertainty.
- There is a need of a paradigm-shift in the mind-set of all the stakeholders (including government, farmers, private players) who supply the agri-inputs, agricultural marketing systems, traders, banks and financial institutions etc.



Way Forward

- The strategic policy formulation and effective implementation should be robust, at both central and state government levels, for PA/ IoT based solutions for agri sector. In addition to feeding domestic consumers, Indian agricultural system should focus on exploring or harnessing the export markets which will give the higher returns to farmers and increased foreign exchange reserves to the central government for managing the national economy.
- The adoption of technology oriented Agricultural management system and data driven decision making in crop production have to gain the momentum, which primarily requires more of a mind-set shift and cultural transformation in both bottom up approach and top down approach.
- The PPP model is one of the best way forward to foster ownership and inclusive growth among all the stakeholders, so that PA/ IoT-technologies will become comprehensive, complete and holistic in their approaches.
- Although the initial costs on PA/IoT systems are likely to be higher, the benefits/ dividends of PA will be significant in the medium and long term perspective when all the stakeholders play their roles proactively and decisively.

Digitising Agri Value Chain

- In agriculture, drones, satellites, sensors and robots have the potential to revolutionise farming, even at small-scale.
- Digital agriculture could help farmers to be more precise with inputs through precise weather forecasts or sensors scanning the soil.

Challenges faced by farmers in adopting Digitalisation in Agriculture

- There is no policy and operational guidelines to use digital media and ICTs for the agriculture digitalization.
- The capacity and skill in effectively using digital media and technologies among knowledge intermediaries (extension personnel) is limited.



- The lack of timely information on farm inputs, unorganized credit, and absence of market linkages are the major hurdles faced by farmers in adopting new technologies.
- In rural areas, the reach of e-technology is really poor, even the distribution of technology is uneven throughout the country.
- Insufficient connectivity, along with lack of basic computer and smartphone usage skill and knowledge, high costs for services and less literacy hinder rapid development of digitization in agriculture.
- Despite the visible benefits of the new agricultural technologies, farmers either do not adopt them or it takes a long time for them to begin the adoption process and scaling up. But the truth is that there is need to demonstrate technology to the farmers so as to give them the confidence and believe in the new technologies.
- Key challenges like poor connectivity in rural areas, less awareness of varying farm production functions, small size of individual management zones, barriers to entry for new terms, lack of scalability and configuration problems and limited skill and knowledge on digital media and technologies of the agricultural extension professionals.

Way Forward

- For digital farming to succeed in India, the innovations must focus on lowering the cost of technology so that it is available and affordable for the smaller farmers, ensuring mobility and renting and sharing platforms for agriculture equipment and machinery.
- Digitalisation of farming related reliable and quality data is of paramount importance to harness the potential of the digital agriculture initiatives.
- More specifically, full potential of ICT, big data, Artificial intelligence, Internet of Things, Block chain and Machine learning and precision agriculture will need to be harnessed to the task of generating sustainable productivity growth, including resolving the water crisis, coping with climate change and for ensuring better market price.
- The private sector can play a crucial role in expanding e-commerce and other platforms into food supply chains to standardize production, organize the farmers, and build logistics capacity in remote areas.
- More and continuous long term investment is needed in public sector to scale up digitally connected and decentralized agricultural knowledge-technology-food processing supply chain with linkage to alternative logistics providers would increase resilience.



- Additionally, agriculture related research should also reorient itself towards digital agriculture for the better impact.
- There is also a need for robust research and development that also factors in last mile delivery, preferences, capacity and digital skill of the stakeholders, challenges, and socio-economic impact so that digital farming can empower Indian farmers in a meaningful way.

PPP for Digitalisation in Rural India

Government Initiatives

- **Kisan Suvidha**

- It is an omnibus mobile app developed to help farmers get relevant information instantly.
- The app provide information on various details such as weather, market prices, seeds, fertilisers, pesticides, agriculture machinery, dealers, agro advisories, plant protection and IPM practices etc.

- **Farmer Portal**

- The portal is envisaged to make available relevant information and services to the farming community and private sector through the use of information and communication technologies, to supplement the existing delivery channels provided by the department.
- With this Indian farmer will not be required to sift through maze of websites created for specific purposes.

- **mKisan**

- It has been conceptualized to give a quantum leap in coverage of farmers and geographical area in a timely, specific, holistic and need based knowledge dissemination among the farmers by leveraging the power of mobile telephony in such a way that all sectors use this platform to not only reach out to the farmers but also to address their concerns and queries.

- **NREGA soft**

- It provides information to citizen in compliance with the RTI Act.
- It makes available all the documents like Muster Rolls, registration application register, job card/ employment register/ muster roll issue register, muster roll receipt register which are hidden from public otherwise.

- **Pradhan Mantri Grami Digital Saksharta Abhiyaan (PMGDISHA)**



- It aims to bridge digital divide, specifically targeting the rural population including the marginalized sections of society like SC/ ST, minorities, BPL, women and differently abled persons and minorities.
- **PM Jan Dhan Yojana (PMJDY)**
 - It envisages universal access to banking facilities at least one basic banking account in every household, financial literacy, access to credit, insurance and pension facility.
 - It envisages channeling all Government benefits to the beneficiaries' accounts and pushing the Direct Benefit Transfer (DBT) scheme of the Union govt.
- **BHIM (Bharat Interface for Money)**
 - It is an app that makes payment transactions simple, easy and quick using Unified Payment Interface (UPI).
- **Crop Insurance Mobile App**
 - It can be used to calculate the insurance premium for notified corps based on area, coverage amount and loan amount in case of loanee farmer.
- **E-Panchayat**
 - It is an e-governance initiative for the rural sector providing comprehensive software solution attempting automation of Gram Panchayat functions.
- **E-NAM**
 - The National Agriculture Market (NAM) Portal provides a single window service for all APMC related information and services.
 - This include commodity arrivals and prices, buy and sell trade offers and provision to respond to trade offers, among other services.
- **Pusa Krishi**
 - This app helps farmers to find easy solutions to problems in their farm fields and get information about weather and accordingly take measures to save crops.
- **Soil Health Card**
 - It aims at promoting Integrated Nutrient Management (INM) through judicious use of chemical fertilisers including secondary and micro nutrients in conjunction with organic manures and bio-fertilisers for improving soil health and its productivity.
- **Deendayal Upadhyay Gram Jyoti Yojana**
 - It is designed to provide continuous power supply to the entire rural India.



- It can benefit rural households significantly as electricity is extremely vital for growth and development of the country.
- **GARV (Grameen Vidyutikaran Mobile App)**
 - This app provides real-time updated data of ongoing electrification process to all users/ stakeholders and provides information about government schemes and electrification data.

Benefits of Digitisation:

- **To Get skilled:** Today, more than education in the school and learning books, skills and talent are important. With activation of internet facility new skills sets from different e-learning courses to accessing large number of books etc could be done with touch of a key.
- **Transform their way of working:** Manual work continues to be the mainstay of rural areas which consumes a lot of time, money and data breach risks. This manual work and process need to be transformed into an automated process which can be done by widespread digitization through the medium of a software.
- **Digitalisation of Education:** Education can be imparted with relative ease and efficiency via digitalization. This process via digital access is not only cheap and effective but also make it available to a larger mass of audience regardless of the terrain.
- **To ensure safety and security:** Digital technology also helps in providing safety and security. For eg., CCTV via sensory and alarm based systems could be implemented by intelligent systems that help in analyzing the data and generate outcomes accordingly.
- **Digitalisation of Agriculture:** This entails increasing use of information and Communication Technology to support the transmission of localized information and services. This method has been proved useful in making farming socially, economically and environmentally sustainable and at the same time, contributing to the delivery of nutritious and cheaper food for the population.
- **Mobile apps:** Mobile apps and other agriculture- based information would speed up its outreach to the farming community and could be a final game changer in the long run.
- **Transportation:** Transportation of agri produce is critical and an indispensable component of the supply chain. In order to produce food, farmers need certain resources, such as seed, fertilisers, pesticides, packaging materials, and many others. It is crucial in the sense that if the transport system is managed efficiently then farming becomes successful and profitable.



- **Valuable Platform:** Under current context when the country struggles to come out of the ongoing pandemic and lift the lockdown restrictions, launch of “Kisan Rath” is seen as a valuable platform in ensuring uninterrupted supply linkages between farmers, warehouses, FPOs, APMC mandis and intra-state and inter-state buyers.

Key areas where PPP model could be of critical use

- **Providing Cutting Edge Tools**

- Through PPP, India’s rural and agriculture sector would have the potential to transform itself- raise production levels besides outputs, offer farmers critical information, methodologies and cutting edge tech tools.
- With internet laden devices like computers or mobile phones farmers could connect themselves with the marketplaces or financial institutions for micro-funding.

- **Insulating from Vagaries of Nature**

- Partnerships could help navigate the agriculture sector which is overwhelmingly depended on the whims of nature as the sector is constantly threatened by factors like flooding and droughts that could be of disastrous for their produce.
- For eg. The Maharashtra government has rolled out its Maharashtra Public Private Partnership for Integrated Agricultural Development project that is developing integrated value chains for selected crops through PPP and co-investment.

- **Helping the Food Processing Industry**

- The PPP could help the food processing industry in particular. The government’s role besides funding through partnership can also provide tax rationalization, duty exemptions, increase in public spending, priority sector lending and FDI.

- **Agri start ups**

- Agritech Startups are providing relevant and innovative solutions to a number of challenges faced all across the agricultural value chain.
- These have become the missing link between the farmers, input dealers, wholesalers, retailers and consumers connecting each of them to each other.
- Startups have provided solutions such as biogas plants, solar powered cold storage, fencing and water pumping, weather prediction, etc.



Conclusion

- Digital Society is broader than ‘digital economy’. A digital society integrates all social spheres and lends a competitive edge to the overall economy.
- In this decade of broadband- realizing the vital importance of connectivity as a social and economic development tool becomes a critical component of smart society.
- The Digital India programme is aimed at further bridging the divide between digital “haves” and “have-nots”.
- It is an opportune time for both the industry and the government to work in synergy to bolster India’s socio economic development through digital empowerment.
- The initiatives of e-health, e-education and a wide variety of citizen services, can be delivered to rural India subject with the joint participation of the entire ecosystem.