

In Focus

Digital India Programme



The Game Changer

The next lap of India's growth will be powered by technology and propelled by citizen-centric governance in multi-stakeholder partnership. That's Mission Digital India.

By Sangita Thakur Varma

Prime Minister Narendra Modi's Digital India Vision has raised expectations and excited citizens as never before. From the common man on the street to the industrialists in their plush office suites—all are trying to decode Vision Digital India. What is it? How will it unfold? How will the government manage to deliver on the tall promises? What is undoubtedly true is that everybody wants to partake in this grandiose vision, but what is also undeniable is that nobody yet seems to know a clear roadmap to achieving it. As a result, there are debates and critiques, opinions and counter-opinions, with all ending where they began—How will Digital India Vision be given a concrete shape?

The Department of Electronics and IT, Government of India, as the architect of Digital India Programme (DIP), has a central role to play in the overall structuring and implementation of the programme. It was in fact the department's mandate to use technology in the transformation of society and to improve the quality of life. "This is what we have been doing since the department was set up," says Dr Ajay Kumar, Joint Secretary to the Government of India, Ministry of Communications and IT, Department of Electronics and Information Technology. What is new in DIP he says is the "much bigger and the much more transformative mandate". Elaborating on it, he adds, "The government wanted a programme which could touch every one of the 1.25 billion citizens and said it should not only touch them, but also enable each one of them to use technology to improve the quality of his/her life and participate in governance—DIP is a programme of that wide implication."

DIP, as a transformative programme, aims to lead India into becoming a digitally empowered society and knowledge economy. It lays thrust on nine pillars of growth (See infographics) through which it aims to achieve the three major objectives:

1. Provide infrastructure as utility to every citizen
2. Ensure governance and services on demand to citizens and through this lead to
3. Digital empowerment of citizens

Osama Manzar, Founder-Director, Digital Empowerment Foundation and Member, Working Group for Internet Proliferation and Governance, Ministry of Communication and Information Technology, calls DIP "a newly re-packaged programme". In fact, Digital India Vision lays no claim to being original. It outrightly clarifies that DIP is the overarching thematic umbrella to bring the various existing programmes of the government on a single platform, restructure and refocus them and implement them in a synchronized manner. It is an agenda to provide the much needed thrust to the myriad scattered schemes under the common branding of DIP. The most important thrust of course comes from the fact that DIP is a flagship programme of none other than the Prime Minister.

Captain Steers the Ship

With the captain of the country helming the DIP ship, none can doubt the direction of the programme. Everybody wants to be seen on board, such is the motivating power of the skipper. And this is what makes DIP unique, as Osama explains: "The government has packaged DIP in such a way that anybody can identify it as a digitally inclusive programme for the whole country and this is a good



Dr Ajay Kumar
 Joint Secretary to the Government of India, DeitY

"The USP of Digital India Programme is that it involves citizens, businesses, government, technology, academic players—it's about everyone...it has a much bigger and much more transformative mandate..."

thing. Also because of the emphasis of the Prime Minister on DIP, it is building momentum much like *Swachh Bharat*."

Dr Kumar elaborates, "The USP of Digital India is that it involves citizens, businesses, government, technology players, academic players—it's about everyone. Of the nine pillars three are more important. One is infrastructure, another is services and the third is empowerment." Much in a similar vein, Bhaskar Pramanik, Chairman, Microsoft India, finds DIP a programme "about empowering citizens, involving them in the governance process and involving the private sector and certainly not about the government undertaking all the work—much in line with Mr Modi's view—maximum governance and minimum government." The best part is that DIP is multi-stakeholder and everyone has to participate, says Osama, who sees the industry and civil society playing a big part.

M N Vidyashankar, former Principal Secretary to the Government of Karnataka, Department of e-Governance and current President, India Electronics & Semiconductor Association, says, "The attempt of a digital inclusiveness programme must be to increase the user population who enjoy access to internet-enabled or mobile-enabled

9 Pillars of Growth Areas Under Digital India Programme

Source: Department of Electronics and Information Technology, Government of India

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| <p>01 Broadband Highways</p> <ul style="list-style-type: none"> • Rural: 250,000 Gram Panchayats to be Covered by Dec 2016 • Urban: Virtual Network Operators for Service Delivery; Communication Infrastructure in New Urban Development and Buildings • Nationwide National Information Infrastructure by March 2017 | <p>02 Universal Access to Mobile Connectivity</p> <ul style="list-style-type: none"> • Remaining Uncovered Villages (~ 42,300) to be Covered by FY2014-18 | <p>03 Public Internet Access Programme</p> <ul style="list-style-type: none"> • CSCs to be Made Viable, Multi-functional End-points for Service Delivery • Post Offices to Become Multi-service Centres | <p>04 e-Governance: Reforming Government through Technology</p> <ul style="list-style-type: none"> • Government Business Process Re-engineering to be Done to Improve Transactions • Electronic Databases • Workflow Automation Inside Government • Public Grievance Redressal—Largely Process Improvements |
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public services. This is where the role of corporate fraternity will be effective." He finds new investment confidence in the country due to the right vibes created by the government and says many technology companies, small and big, have shown interest in getting involved in this revolution. "Being an industry association, we are confident and positive about the impact of the program," he adds.

Building the Bulwark

Imagine an India of 1.2 billion networked digitally literate individuals. Now imagine what will go into making them digitally empowered. Yes! There will be a lot of activity—beginning with total literacy, digital literacy, manufacturing activity, business and commerce activity, infrastructure building activity, women's empowerment, financial inclusion, inclusion and empowerment of marginalized classes like the disabled, elderly, BoP, children, among others. It's a vision of India like a busy anthill or a beehive, with each member carrying out an assigned task assiduously. Exactly as visualized in DIP.

Dr Kumar elaborates on the multiple opportunities: "Under Digital Infrastructure, there are large numbers of areas where industry can participate in a big way—investment, technical expertise,

goods and services, etc." Giving the example of NOFN, he says, it requires huge investments and people to implement the project in a time-bound basis. "The whole idea is how you connect people in a big way. Each of these features will have roles for stakeholders." Elaborating further, Dr Kumar continues, "There are three fundamental things which will be essential to ensure Digital India for every citizen—a unique lifelong identity, a mobile phone and a bank account. These are opportunities for business again, for supply chain, mobile phone industry and will involve app developers, content developers, services providers and language developers. Financial inclusion will involve the whole financial sector and financial transactions will offer a huge opportunity area as we move towards cashless transactions. This touches everyone—financial institutions, bankers, individuals and people at large and changes the way we function today."

Talking about the electronics sector, Vidyashankar says, "There are plenty of opportunities in the electronics system design and manufacturing (ESDM) space under DIP. The total market for electronics goods by 2020 is likely to be of the order of US\$ 400 billion. This demand covers the entire spectrum of inputs in

the electronics space. The opportunities available under *Make in India* are such that the job potential in the sector can be close to 28 million, with its contribution to GDP close to 12 per cent." Notably, the ESDM sector is all pervasive and not sector agnostic. With Smart Cities and internet of things occupying centre stage, electronics will play a very important role in each of the nine pillars, he adds. "These days, there are no independent verticals functioning in silos. Each pillar is dependent on each of the other pillars for providing the most optimum solution. Consequently, electronics will be the common denominator in each of the pillars," says Vidyashankar.

Bhaskar believes that the future of electronics manufacturing in India or in fact any kind of manufacturing is not just about building another physical product but about building intelligent products. It is time to create *Made in India* hardware for the digital economy and Microsoft wants to play a big part here. As Bhaskar explains, "Manufacturing hardware today is a question of the value of a product and wanting to make it affordable. It is about the internet of things and in India there is a huge demand potential. To be competitive a manufacturer will need to marry hardware with software industry



and come out with intelligent products." He points to the advantages of such a step in a digital economy. "Small and medium businesses (SMBs) for example, are going to become very important in the digital economy as they contribute 70-80 per cent to manufacturing. By helping them use technology, like cloud-based services, we will give a tremendous fillip to manufacturing." Apparently, the opportunity for industry would span from manufacturing to services, to skilling to education, as the nation has to be readied to board the information highway. As Vidyashankar points out, public-private partnerships (PPPs) will be the key to the success of Digital India Programme. "With PPPs, we can have the opportunity to forge blueprints, policies, and industry's best practices." As he says, PPPs are a win-win for both the parties—they ensure the government gets access to world's best ideas and technology and the private sector the scale which only the government can provide.

The government will be spending an estimated ₹1.13 lakh crore on the project. The impact of the project will be felt in every area of life starting with 1.7 crore job opportunities to the youth which will affect an estimated 8.5 million people. The thrust on domestic manufacturing of electronics will end the monopoly of imported products and in turn spawn a number of related industries and opportunities.

A Vision Unfolds

Under Infrastructure as Utility to Every Citizen, the government envisages high speed internet as a core utility to be made available in all gram panchayats. This would in effect mean broadband internet connectivity to 250,000 clusters of villages by 2016; broadband for all in the urban spaces and national information infrastructure by 2017. It also includes providing private space on cloud for citizens and banking and other data on mobile. Internet facility will be made available at around 4 lakh public places and 2.5 lakh government schools will get wifi facility, according to reports. As of now about 1.1 billion of India's population is deprived of internet connectivity, chiefly in the rural areas, according to a McKinsey & Co report. It is estimated that the digital infrastructure project will cost US\$ 5.9 billion. This translates into huge business opportunity for industry as pointed out by India's



M N Vidyashankar
President, IESA

"To complement government's programme of digital inclusion, we must innovate and offer the most advanced solutions which integrate software with hardware and enhance... manufacturing..."

Communications and Information Technology Minister Ravi Shankar Prasad in a media interaction.

In June this year, the Department of Telecom (DoT), as part of its National Broadband Policy, had announced plans to make Right to Broadband a basic right. Osama, who clubs four of the nine pillars under the group internet and access, is all in favour of it. Obviously, only if citizens have the right to broadband can they access the benefits of other services under DIP. Prof Sowmyanarayanan Sadagopan, Director IIIT-Bangalore and Chairman of the Core Committee on e-Governance of the Government of Karnataka, too identifies broadband as the most important thrust area for growth and lists the specific requirements that must go into making it a solid foundation for Digital India. "Provision of reasonable speed of 2-5 Mbps at all times and at less than ₹ 200 per month is critical as is universal access to mobile phones," he says. He does not hold public internet access as that important if mobile access is reliable and affordable (which he defines as sub

₹5,000 device @ ₹200 per month including broadband plus phone).

Broadband as a Right would effectively democratize and decentralize information and accessibility down to the grassroots and the bottom of the pyramid (BoP) levels. The National Telecom Policy 2012 has set the target to reach broadband connections to 175 million people by 2017 and 600 million people by 2020 at minimum 2 Mbps download speed and make available higher speeds of at least 100 Mbps on demand. At the end of March 2014, the number of broadband subscribers stood at 61 million. Experts believe increased broadband penetration is achievable through convergence of various platforms like cable TV, optical fibre, wireless connection through spectrum, VSAT and satellite, which as of now, are under different departments.

According to Vidyashankar, the industry would have to improve the processes, remove capacity constraints and adopt efficient operational models by leveraging emerging technologies such as cloud, social media, analytics and mobility to assist the government. As 75 per cent of new internet users and 50 per cent of netizens are active on mobile phones, it is imperative for the ICT industry to innovate applications and solutions specific to the new generation of mobile users for viewing on small screens. "To complement government's programme of digital inclusion, we must innovate and offer the most advanced solutions to the government which integrate software with hardware and enhance electronics manufacturing, hence creating more job opportunities," he concludes.

With the government widening the scope of Aadhaar under Unique Identification Authority of India (UIDAI) as a cradle to grave digital identity under DIP—unique, lifelong, online and authenticable—digital and financial inclusion of individuals will take a paradigmatic leap. It will also enable the government in direct benefit transfer to citizens through bank accounts. Under the second vision area of DIP the government seeks a transformative change by "seamlessly integrated across departments or jurisdictions to provide easy and a single window access to all persons." DIP visualizes a common service centre within each locality where citizens will have easy access to governance and services

on demand in real time online and on mobile platforms. Post offices will be made multi-service centres, while the existing NeGP, which Dr Kumar calls “a wonderfully thought out programme across sectors in terms of service”, will be revamped to reach out services spanning health, education, financial education, justice, etc., to citizens. Osama does see this happening, however, he feels all mobile networks will have to become 3G capable to allow seamless integration and access.

According to Dr Charru Malhotra, Associate Professor (e-Governance and ICT), IIPA, “Universal digital literacy is critical for digital empowerment since other vision areas such as delivery of government services to citizens are directly dependent on the ability of citizens to avail such services electronically.” Charru also cautions that digital literacy must be achieved in areas where infrastructure is laid in a time-bound manner to pump up citizens’ enthusiasm. “It is imperative to show citizens immediate benefits that an ambitious new program like Digital India offers, else inadequate and poor quality digital education will quickly make them apathetic towards the program in the medium to long term.”



Osama Manzar
Founder-Director,
Digital Empowerment
Foundation

“Digital India needs to figure out last mile access and for that broadband access is essential... every household must also be digitally literate...”

Osama advises, “institutional digital literacy”. That is to say, make all three million elected panchayat members, seven million government school teachers and two million health workers and municipality staff digitally literate first. Charru seconds his view adding, “For the initial success of DIP e-initiatives, it is crucial to identify literate citizens at the local level and equip them with digital skills. In the short term, these trained individuals must be leveraged to ensure delivery of government services and exploit the benefits of the digital paradigm. In the medium to long term, these individuals must then facilitate an increase in literacy through the use of ICTs. Moreover, 100 per cent digital literacy for teachers at all levels must be ensured. Illiteracy is a huge challenge.”

Satyanarayana Sangita, Professor and Head, Centre for Political Institutions, Governance and Development Institute for Social and Economic Change, Bangalore, finds Digital India programme very “broad based”. Explaining this observation, he adds, “It combines two aspects of e-governance—e-administration and e-democracy. While through the first the government seeks to streamline administrative procedures and enhance public service delivery, using e-democracy it is seeking to harness the internet for a more direct empowerment of the citizens.” Enumerating the benefits of such an approach, Sangita says, “They are immense—from simple, accountable, responsive, transparent, quick easy corrupt free and citizen friendly administration to speedy delivery of services to citizens, improved interactions with business and industry, citizen empowerment through access to information, increased transparency, revenue growth, and cost reduction, among others.”

An important pillar of DIP is e-Governance which requires reforming government through technology. Dr Kumar speaks of a digital locker concept that the government is working on which involves retrieving informations from applications across domains and where “integration of application is a very important part of it”. Such technologies will make multiple documentations redundant for citizens as all will be archived and accessible across functions. The second important part of services is business process engineering, informs Dr Kumar, which

Estimated Costs and Impacts

Overall Cost of Digital India

- ₹100,000 crore in ongoing schemes (only DeitY, DOT & not inclusive of those in other line ministries)
- ₹13,000 crore for new schemes and activities

Impact of Digital India by 2019

- Broadband in 2.5 lakh villages, universal phone connectivity
- Net Zero Imports by 2020
- 400,000 Public Internet Access Points
- Wifi in 2.5 lakh schools, all universities; Public wifi hotspots for citizens
- Digital Inclusion: 1.7 crore trained for IT, Telecom and Electronics Jobs
- Job creation: Direct 1.7 crore and Indirect at least 8.5 crore
- e-Governance & e-Services: Across government
- India to be leader in IT use in services—health, education, banking
- Digitally empowered citizens: Public cloud, internet access

Source: Department of Electronics and Information Technology, Government of India

is an ongoing process. The government is already working on a number of digitization programmes like the Jeevan Pramaan portal launched for pensioners. The government has currently several programmes running in mission mode to ensure that India becomes digitally empowered. Citizen empowerment is tied into the vision of universally accessible digital resources, availability of all government documentation on the cloud, digital resources and services in local languages, collaborative digital platform for participative governance and portability of entitlements for individuals through the cloud. Private players like Microsoft are rising to the challenge of providing “shareable private space on a public cloud and safe and secure cyber space in the country”. India truly moves towards a digitally empowered future as industry, citizens and government join hands with the motto—together we can! ■