National Policy on Information Technology, 2012
(NPIT 2012)

PREAMBLE

Information Technology is a key driver of an increasingly knowledge based global economy. A knowledge based economy is now a sine qua non for leadership. Given its current global position in the IT and ITES sector, India is well positioned to enhance and leverage its IT capabilities towards this end. Technology has transformational power. It is a great leveler of opportunity within and across economies. Recognizing this potential of IT, several economies in the Asia-Pacific region have invested in infrastructure and adopted proactive policies to foster adoption of IT pervasively. Consequently their economies have experienced much faster and more equitable growth and their development indices have moved up rapidly.

India aspires to become a knowledge economy with a global role. The Indian economy has achieved a growth rate of around 8 % over the last decade, and the contribution of IT Sector to this growth is significant. The Indian IT industry is a USD 100 Billion industry (2011-12) with 80% of the revenues coming from exports. The Indian IT & ITES sector employs over 2.8 million skilled people. The IT sector has been one of the major employment generators in the last two decades. The global IT-ITES market has been growing. Current negative trends in many economies around the globe provide both challenges and new opportunities. New competitors emerge, often unpredicted. This flux in the global economy highlights the need for constant reappraisal of strategy and the imperative of identifying new markets and new services and seeking ways to leverage and extend the reach of domestic non-IT services like engineering, health, education, skill development, security, legal, financial, accounting, transport & logistics etc. There is room for growth but no room for complacency. A conducive policy environment and a concerted strategy is needed for the country to remain a global player on a long term basis.

While IT export growth is satisfactory despite global recession in the last few years, the impact of IT within the country is uneven. Despite relatively sluggish growth of the domestic market and low levels of ICT usage and penetration in the past, today there are very encouraging signs of accelerating recourse to ICTs in most sectors of the economy and society. There are many drivers propelling this change. Global competition, pressure to cut costs and improve

efficiency, need to address IT-savvy global and domestic markets and compulsion to provide client-centric services to a large number of customers are some of the factors responsible.

However, the bulk of Indian IT exports is still targeted towards North America and Europe. Besides, major IT hubs like Bangalore, Chennai, Hyderabad, Mumbai, Pune and NCR which account for nearly 90% of the total Industry in India are near saturated and face infrastructural challenges and human resource constraints for further expansion. This necessitates the absolute imperative for Indian IT and ITES Industry to diversify into Tier II and Tier III cities. Emerging technologies such as Mobile Technology, Localization, Virtualization, and Cloud Computing provide Indian IT / ITES industry a major opportunity to become partners in value creation and drive transformation domestically.

India today stands at the cusp of development. The Indian workforce is young - with 50% of the population below 25 years. The younger generation is also quick to adopt new technologies. This factor is one of our core competitive strengths. Relying on this advantage, enhanced use of ICT (Information & Communication Technologies) can help usher in sustained growth of the Indian economy.

ICT is known to have transformed businesses and created new products and markets and improved the productivity and efficiency in other sectors. Sectors like Finance, Retail, Courier, Media are just a few examples in this context. For India to retain its competitive edge in sectors in which it is traditionally strong like textiles as also in emerging sectors, it is imperative that ICTs are appropriately adopted. Similarly, the importance of ICTs in strategic sectors like Defence, Atomic Energy, Space etc is paramount.

The National Policy on IT focuses on application of technology-enabled approaches to overcome monumental developmental challenges in education, health, skill development, financial inclusion, employment generation, governance etc. to greatly enhance efficiency across the board in the economy. The policy seeks to achieve the twin goals of bringing the full power of ICT within the reach of the whole of India and harnessing the capability and human resources of the whole of India to enable India to emerge as the Global Hub and Destination for IT and ITES Services by 2020.The focus of the IT policy is therefore on deployment of ICT in all sectors of the economy and on providing IT solutions to the world. The Policy aims at attaining these objectives through coordinated action on the part of both the Central and State governments.

Emerging technology trends will make it possible for millions of citizens to access services electronically in self-service mode using mobile phones and the Internet or through assisted service points such as Common Services Centers etc. This goal is made possible through ubiquitous network connectivity based on mobile technology, broadband Internet, fiber penetration to all villages, high-technology and low-cost affordable devices and software solutions which enable electronic access to services including e-payments.

A unique AADHAAR based electronic authentication framework would be an integral part of systems providing services to the people. Cloud computing will significantly speed up design and roll out of services, enable social networking and participative governance and e-Commerce on a scale which was just not possible with traditional technology solutions.

Adoption of IT by civil society is also increasing by leaps and bounds. Rising use of social media presents a unique opportunity to reach a large percentage of the population in ways that were not possible earlier. Used appropriately, they could substantially enhance the democratic and governance fabric of the country.

In keeping with these trends, Governments at all levels in the country are aggressively adopting e-Governance to improve accessibility, transparency and efficiency. Social Media could also be utilised to facilitate peer-to-peer interaction and thereby promote horizontal communication to foster the growth of a connected society.

There is a strong synergy between IT adoption and the growth of Broadband Infrastructure. Mobile telephony is now well spread out all over the country due to a combination of factors ï including low cost devices and low tariff. Over 850 million subscribers can benefit from Mobile Internet with a supportive development environment with low cost smartphones/ handheld devices, competitive tariffs and provision of value added services at affordable prices. Policy-driven convergence of ICT based business models and service capabilities with the rapidly evolving Telecom infrastructure has the potential to create an environment which will foster the growth of citizen-services and business models to bring about transformational change in governance and markets.

The National Policy on IT aims to maximally leverage the power of ICT to help address monumental economic and developmental challenges the country faces. It is rooted in the conviction that ICT has the power to transform India and improve the lives of all Indians.

I. VISION

To strengthen and enhance Indiaôs position as the Global IT hub and to use IT and cyber space as an engine for rapid, inclusive and substantial growth in the national economy

II. MISSION

1. To consolidate India's position as the global IT & ITES hub and leverage IT to contribute significantly to GDP and employment.
2. To create a sustainable ecosystem for R&D and Innovation to emerge as a global leader in the conception, design and development of new products, services, processes and business models.
3. To leverage ICT for enhanced competitiveness and productivity of key economic and strategic sectors.
4. To provide ubiquitous affordable access to information and public services for enhancing efficiency, transparency, accountability and reliability and leverage use of ICT as a driver for social inclusion
5. To be the leading resource base for IT and ITES talent for domestic and global markets.
6. To ensure a secure cyber space to facilitate trust and enable sustained growth of ICT.
7. To transform India into a Knowledge Society.

III. OBJECTIVES

1. To increase revenues of IT and ITES Industry from 100 Billion USD at present to 300 Billion USD by 2020 and expand exports from 69 Billion USD at present to 200 Billion USD by 2020.

2. To gain significant global market-share in emerging technologies and Services.

3. To promote innovation and R&D in cutting edge technologies and development of applications and solutions in areas like localization, location based services, mobile value added services, Cloud Computing, Social Media and Utility models.

4. To encourage adoption of ICTs in key economic and strategic sectors to improve their competitiveness and productivity.

5. To provide fiscal benefits to SMEs and Startups for adoption of IT in value creation

6. To create a pool of 10 million additional skilled manpower in ICT.
7. To make at least one individual in every household e-literate.
8. To provide for mandatory delivery of and affordable access to all public services in electronic mode.
9. To enhance transparency, accountability, efficiency, reliability and decentralization in Government and in particular, in delivery of public services.
10. To leverage ICT for key Social Sector initiatives like Education, Health, Rural Development and Financial Services to promote equity and quality.
11. To make India global hub for development of language technologies, to encourage and facilitate development of content accessible in all Indian languages and thereby help bridge the digital divide.
12. To enable access of content and ICT applications by differently-abled people to foster inclusive development.
13. To leverage ICT for expanding the workforce and enabling life-long learning.
14. To strengthen the Regulatory and Security Framework for ensuring a Secure and legally compliant Cyberspace ecosystem.
15. To adopt Open standards and promote open source and open technologies

IV. STRATEGIES

1. Creating ecosystem for a globally competitive IT/ITES Industry

1.1 To make requisite policy changes to make India a preferred destination to establish and operate IT/ITES enterprises including a stable tax regime and strengthening of the enabling infrastructure.

1.2 To formulate Fiscal and other Policies to attract investment in IT Industry in Tier II & Tier III cities and rural areas for expanding the base of IT and for creating employment opportunities across the country.

1.3 To promote ICT companies in accessing new markets through bilateral agreements enhancing smooth trade and facilitating mobility for skilled workforce and creating awareness

1.4 To formulate policies to provide fiscal benefits to SMEs and Startups in the key industrial sectors for adoption of IT in value creation

1.5 To evolve sector specific strategies in areas like engineering, health, education, skill development, security, legal, financial, accounting, etc. with the ministries and representative sector bodies concerned to create/ open up the remote services market in new fields/ services and to enhance value addition in existing services

1.6 To evolve new region/ market specific strategies with the ministries and industry bodies concerned in order to enter/expand new markets

1.7 To integrate Indian IT products, services and expertise in Indian foreign aid programs

2. Human Resource Development

2.1 To create necessary physical and institutional infrastructure for creating a pool of 10 million trained persons in IT sector by the year 2020 through formal and non-formal sectors, with focus on skill development and expertise creation.

2.2 To set up Centers of Excellence in institutes of higher learning to promote high-end research in specialized ICT areas and producing quality doctoral and post-doctoral level researchers.

2.3 To create a mechanism to ensure that at least one individual in every household is e-literate.

2.4 To create a framework a to certify the level of applied knowledge and skills of personnel in specific areas of ICT.

2.5 To catalyse continuous updation of curriculum and syllabi at all levels to include the current developments and relevant knowledge of ICT as an integral part of the educational programmes.

3. Promotion of Innovation and R&D in IT Sector

3.1 To support SMEs and startup companies to equip them for competitive environment through fiscal benefits, innovation fund and incubation facilities.

3.2 To create an Innovation Challenge Agenda to promote innovation in ICT sector.

3.3 To build R&D infrastructure and test facilities for development and adoption of emerging technologies like: Next Generation Computing Systems, High Performance Computing (HPC), Cloud Computing, GIS, Mobile Technologies,

Inter-operable Infrastructure for Small Financial Transactions, Switch, Language Technologies etc.

3.4 To incentivize innovation in public supported research.

3.5 To promote industry-academia collaborative R&D with emphasis on innovation, products, patents and IPs

3.6 To encourage adoption of ICT based Green technologies as well as to promote green technologies by making them competitive through appropriate fiscal & non-fiscal policies.

3.7 To strengthen the ecosystem for creation as well as protection of Intellectual Property

4. Enhancing productivity and competitiveness in key sectors through ICT

4.1 To leverage ICT including mobile technology to enable outreach of secure and interoperable financial and banking services in remote areas at affordable cost.

4.2 To enable long term partnership with Industry for:

i. use of ICT in cutting edge technology and

ii. driving development of new ICT technologies through strategic sectors (defence, atomic energy, space etc).

iii. facilitate growth of IT SMEs and use of IT across all SMEs

4.3 To promote use of IT in key economic sectors such as Construction, Textiles, Pharmaceuticals, Banking, Finance, Retail, Energy, Automobiles, Healthcare, Education, Agriculture, Engineering Services, Transport and Logistics for improved efficiency and productivity.

4.4 To promote the availability and use of Public Key Infrastructure, payment gateways and authentication systems leveraging Aadhaar.

5. Creating an ecosystem for Internet and mobile driven Service Industry

5.1 To leverage Internet and Web technologies for developing new products, technologies and businesses.

5.2 Enable seamless, ubiquitous, secure and personalized delivery of government and non-government services through Internet based and mobile based delivery of services throughout the country.

5.3 Foster an ecosystem for innovation in services by leveraging Aadhaar as well as financial and location-based services

5.4 To leverage mobile devices as instruments for enabling secure transactional services including financial services.

5.5 To promote development of an ecosystem for enabling innovation and entrepreneurship related to mobile Value added Services.

6. Enabling Service Delivery through e-Governance

6.1 To implement the National e-Governance Plan (NeGP) and mandate provision of all Government Services through Electronic mode within a fixed time frame by enactment of the Electronic Delivery of Services (EDS) Bill and through re-engineering processes to enhance efficiencies of service delivery.

6.2 To mandate public procurement through electronic mode across all departments to enhance transparency and competition.

6.3 To set up a widespread network of Common Service Delivery Access points for enabling assisted access to electronic services.

6.4 To accelerate and standardize delivery of electronic services by providing Common Shareable Service Delivery Platforms by leveraging technologies like Cloud Computing.

6.5 To develop, adopt, evolve and notify standards for seamless interoperability of data and applications.

6.6 To promote open standards and open technologies.

6.7 To enhance institutional framework for Capacity Building Programme for imparting training across all levels.

6.8 To design and create a citizen engagement framework for utilization of social media by the government and its agencies.

6.9 To design and implement policy framework for placing data in public domain for use and value addition.

6.10 To promote Public Private Partnerships in e-Governance projects and facilitate flow of private sector financial and technical capabilities into the national e-governance effort especially in areas where viable investments are feasible.

7. Development of Language Technologies

7.1 To undertake development of language technologies that enable text to speech and speech to text conversion, voice recognition, machine translation, Voice Web, Inter lingua etc to enable language independent delivery of services.

7.2 To make India the global hub for language technologies.

8. GIS based IT Services

8.1 To develop GIS platform for facilitating location based planning, service delivery, information availability and disaster management

8.2 Enabling availability of public spatial data for value addition and innovation.

9. Security of Cyber Space

9.1 To undertake policy, promotion and enabling actions for compliance to international security best practices and conformity assessment (product, process, technology & people) and incentives for compliance.

9.2 To promote indigenous development of suitable security techniques & technology through frontier technology research, solution oriented research, proof of concept, pilot development etc. and deployment of secure IT products/processes

9.3 To create a culture of cyber security for responsible user behavior & actions including building capacities and awareness campaigns.

9.4 To create, establish and operate an ôInformation Security Assurance Framework.ô