Chapter – III
ITES in India & Maharashtra

3.1 Introduction to ITES in India:
India is fundamentally advantaged and uniquely positioned to sustain its global leadership position, grow its offshore IT-ITES industries at an annual rate of 13-14 per cent, sustain nearly 10 million direct jobs, and generate export revenues of about USD 175 billion by 2020. This represents an opportunity, capable of catapulting us into a high growth orbit. The transformational impact that this industry can achieve has the potential for India to not only sustain global leadership, but also build a truly inclusive growth environment in the country. The domestic IT-ITES industry in India is at an inflection point today. As Indian consumers and corporations rapidly adopt mobile phones, Internet access and broadband connectivity expand, there is likely to be a significant increase in spend on IT hardware, Software and Services. Finally, the biggest domestic opportunity in most sectors (e.g., banking, insurance, retail, telecom and healthcare) lies in tapping the opportunity to serve the billions of underserved at the bottom of the pyramid. The other big positive is that our knowledge sector is largely driven by youth—the average age of employees in the industry is between 25 and 28. The basis of the “demographic dividend” is that in 2020, the average age in India will be only 29 years, compared with 37 in China and the United States, 45 in Western Europe, and 48 in Japan. Moreover, 70 percent of Indians will be of working age in 2025, up from 61 percent now. According to the Indian Labor Report, 300 million youth would enter the labor force by 2025, and 25 per cent of the world's workers in the next three years would be Indians. This demographic advantage—will become a bigger edge for the country. The global demographic composition is increasingly getting skewed towards a few countries having a large working age population and the developed countries having a deficit. The young people need to be properly educated to fully contribute to the growing economy. India’s young demographic profile, where over 3.5 million graduates and postgraduates including over 500,000 IT & Electronics & Communication Engineering graduates are added annually to the talent base, will continue to give us an unassailable edge. Today, no other country offers a similar mix and scale of human resources. There is no
denying that there are gaps in talent suitability. The lack of suitability poses challenge and the same needs to be proactively addressed.

On the plus side, the Indian IT-ITES industry has also moved up the value chain of global perception. India is a global partner delivering several mission critical services to clients globally. Today, Indian companies are stepping out of India and are going global. Indian companies have set up delivery centers across the world and are actually providing services from different regions. Around 340 delivery centers in 184 cities across 48 countries in 2007 have now increased to over 500 centers across 60 countries, and 200 cities.

IT-ITES/BPO industry provides employment to people with various skill levels i.e. Engineers, Lawyers, Arts/Science/Commerce/ Literature etc. graduates; High School Pass outs etc. This sector is the largest employment provider of women and has about 30% of its workforce comprising women. In the ITES/BPO segment, women employment is about 40%.

The IT-ITES industry has become one of the most significant growth catalysts for the Indian economy. In addition to fueling the economy, the industry is also positively influencing the lives of its people through an active direct and indirect contribution to the various socio-economic parameters such as employment, standard of living and diversity, among others.

3.2 IT-ITES Industry Performance:

The Indian Information Technology - Information Technology Enabled Services (IT-ITES) industry has continued to perform its role as the consistent growth driver for the economy. It has built the global brand for India as a knowledge economy. Global leaders, media and analysts have recognized the potential for India through the brand built by this sector. IT enabled solutions have helped government and industry enhance governance and efficiency. Government of India has played a key role in supporting development of this sector. From providing tax incentives under Section 10A/10B, setting up STPI, creating capacity and competition for telecom services, zero import duty on software are some of the steps taken for this industry to develop as the leading global sourcing hub of the world.

While the sector has maintained a CAGR of over 30 percent in the tenth plan, the IT-ITES industry has continued to sustain growth rate in the Eleventh Plan despite the global economic downturn, which has impacted the growth trajectory of the
industry, to single digits in FY 2009-10. With worldwide technology spending declining significantly in 2009, and being an export led sector with a key thrust on banking and financial services, there was single digit growth in exports revenues. Along with the decline in global demand, many other low-cost countries are building a significant value proposition to challenge India’s leadership position aided by enabling investment policies.

3.3. Strength of Software & Service Sector:

3.3.1 Goal of the Industry

The main aim is to harness the potential of the software and services sector to contribute to the country’s development and growth, particularly in terms of investment, exports, employment generation and contribution to GDP. Keeping in view the growing congestion in Metros (90% of the IT-ITES revenue is from 7 Metros); the IT-ITES industry needs to look beyond the Metro cities for balanced regional development. The key objectives for the twelfth plan are as under:

1. To retain India’s leadership position as a global IT-BPO destination, consolidate and grow in both mature and emerging markets.
2. Enhance innovation and build India as the hub for global design, IP and product development.
3. To harness ICT technology for inclusive growth, promote gender inclusivity and ensure balanced regional growth.
4. To nurture and accelerate the growth for the SMEs and start-up enterprises in the country.
5. Build India centric software industry, drive domestic market IT adoption, and enhance SMB competitiveness in the country.
6. To focus on development of IT- ITES/ BPO industry beyond the current 7 Metros including NCR.

3.3.2 Targets for the ITES/BPO Industry:

Over the next decade, several global mega trends will shape the technology and ITES/BPO industry as they reshape the global economy. Hence with increased GDP growth of emerging markets, and shrinking working age populations, these mega trends will present a new set of hitherto untapped opportunities that will include emergence of new verticals, service lines, geographic and customer
segments. On the back of these trends, the addressable market opportunity for the IT-ITES/BPO sector is likely to expand from the current USD 500 billion to USD 1.5 trillion by 2020.

Given the backdrop of large untapped demand potential and strong fundamentals, India is uniquely positioned to secure global leadership, grow its IT-BPO exports at a compounded annual rate of 13.8 percent, and generate export revenues of USD 130 billion, and domestic revenues of USD 40 billion by FY 2017. Direct employment generation is expected to increase by 65% from FY 2011 levels, to 4.2 million, while indirect employment is expected to touch 10.6 million by FY 2017. This translates to incremental direct employment of about 1.4 million people and incremental indirect employment of 2.3 million.

Further, establishing India’s leadership in the global IT-BPO sector will mean more than achieving a targeted growth in exports. Following are a proposed set of indicators that may be used as targets to be achieved during the 12th plan. Attaining these ambitious outcomes will require breakthrough collaboration amongst, central and state governments, industry players and industry associations – to ensure that appropriate actions required to maximize the global sourcing market potential and sustain India’s superiority as the preferred sourcing destination are executed in a timely manner.

Table - 3.1: Goals identified to achieve the aspirations:

<table>
<thead>
<tr>
<th>Description</th>
<th>FY 2010-11</th>
<th>Target FY 2016-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT-ITES Exports</td>
<td>59 Billion $</td>
<td>130 Billion $</td>
</tr>
<tr>
<td>IT-ITES Domestic Revenue</td>
<td>17.2 Billion $</td>
<td>40 Billion $</td>
</tr>
<tr>
<td>Direct Employment</td>
<td>2.54 Million $</td>
<td>4.2 Million $</td>
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Source: MIT, Govt of India

3.3.3 Policy of the Industry:

1. Build an enabling policy environment for India to sustain and grow its leadership in the global sourcing sector in developed and emerging markets.
2. To support small and medium enterprises and provide competitive edge through fiscal benefits, innovation fund and incubation.
3. To build world class infrastructure in identified tier II & tier III cities to create new hubs for industry development as potential centers of excellence.
4. To address the gap of employability through skill development initiatives.
3.4 Software Technology Parks of India (STPI):
In view of the withdrawal of the tax benefits for STP units, STPI is working out a road map to facilitate the IT sector in the changed scenario. Some of the salient steps in this direction are given below:

- A non-profit linked incentive schemes for STP registered units is being formulated to ensure accelerated growth of IT/ITES exports and the dispersal of IT/ITES industry to the Tier II and Tier III cities across the country. Based on the format of the scheme, requirement of funds would be worked out.

- The present incubation programme of STPI would be further strengthened for innovation led Business Incubation and entrepreneurial development for start up units. This programme would be designed to provide venture, infrastructural and mentoring support to the entrepreneurs. In addition to the existing infrastructure available at 52 STPI centers, STPI is in process of creating additional incubation space at Gurgaon, Mohali and Bengaluru as of now. STPI would explore creating more and more incubation space in Tier II and Tier III cities across the country. Proposal for above initiative is under preparation at this stage.

- STPI is working with DIT for establishment of a National Productivity Network, which would create capacity and necessary IT infrastructure across STPI centers to provide support primarily to SMEs across the country. For this, the data centers at major STPI centers having excellent data communication and cloud computing resources would be created.

- MSMEs in India are facing unprecedented challenges necessitating the need for ICT adoption in their business processes and integrating into globalize economic environment. With ICT tools, the MSME sector can improve upon the way it is doing businesses currently and become more vigilant in the finer details in its day-to-day operations thereby increasing its own competiveness. The ICT adoption in manufacturing sector can change the way the organizations conduct their business which will enable them to compete in the national and international markets. The major
objective of ICT application is the cost-effective and efficient improvement in business activities.

- STPI would promote and assist the start-up companies in innovation/research & development. Further, STPI would also create awareness & encourage the start-up companies to register the IPR of their innovative products.

3.5 Key Constraints and Challenges of the Industry:
While India continues to be the dominant player in the global sourcing sector, its future will depend on how challenges to its continued competitiveness are tackled. The primary sources of risk are low employability, infrastructure constraints, rising costs, discontinuation of fiscal incentives and a supportive policy framework and lack of an innovation ecosystem. In addition, the competition is intensifying and many countries are now positioning themselves as global sourcing destinations providing a plethora of incentives.

(i) Competition and strong pull from other countries: China, Philippines, Vietnam, Poland, Hungary, Mexico, Brazil, Egypt are an indicative list of countries that are emerging as competitive locations with this increasing to almost 50 locations which present a huge challenge to India’s success story. Many of these countries are offering a host of incentives (income tax holiday, deduction from taxable income up to 40% of the salary of additional skilled and unskilled workers, reduced rentals, subsidy on trainings, access to government contracts) to attract global players to set-up operations in their countries. Various Governments provide attractive incentives through fiscal, indirect and ICT sector-specific schemes. There is real danger that some of these locations will move from being small second-source alternatives to primary sources. Already, many MNCs and Indian companies are setting up centers in these countries. As an example, Philippines is already half the size of the Indian ITES/BPO industry and is expected to grow at rapid pace.

China is intent on transforming its economy from a manufacturing engine into a services hub, and the Chinese Government has been pushing the growth of the country’s service outsourcing market. Though the total off shoring market in India is much higher compared to China, R&D off shoring has a different story. India’s
accounts for 20-25% of the global R&D off shoring market with China close behind at 15-20% market share. There are about 920 MNCs with about 1,200 subsidiary centers carrying out R&D related work in China. However, there are only about 400 R&D centers in India. Chinese government has initiated several policies & programs to promote R&D activities in the country. The financial and tax incentives and other preferential treatments have been able to save 15-20% of the operations cost and has also helped reduce the set up costs significantly for MNCs. China is pushing talent development and its’ strategy is to increase spending on education and provide monetary incentives to companies developing talent pool.

Another important factor to be considered is that due to its nature of being less capital intensive and flexibility in operations, IT/ITES industry can be relocated in a very short time. If India is not able to retain its competitiveness and the status of being most preferred destination for outsourcing, not only the foreign companies would move to other destinations that are more attractive but Indian companies may also prefer to set up operations in those countries due to the same reasons.

(ii) Reduced competitiveness of the industry: India’s competitiveness is declining due to a diminishing employable talent pool, high cost of doing business due to inefficiencies of power, transport, security, concentration in metros due to inadequate infrastructure in other towns etc. Currently, over 90 per cent of total revenues are generated from 7 Tier 1 locations which are nearing peak capacities in terms of infrastructure support. And hence there is a pressing need to fast-track the development of alternate delivery locations in Tier 2/3 cities. The companies in India have invested in world class facilities, extensive talent development initiatives, disaster recovery and business continuity, high cost of transport, enhanced security, captive power generation, UPS and other equipments which have over all created a cost disadvantage of 10 – 15% as compared to other emerging markets. Thus, India will be hard pressed to manage its competitiveness in the wake of rising costs and increasing competition.

(iii) Improving the Supply and Capacity of Suitable Talent: Though India accounts for over 28% of the total suitable talent pool available to work in the IT-ITES/BPO sector across all the potential global sourcing low-cost locations, the proportion of graduates found suitable for employment is fairly low (quoted estimates range 10-
20 percent). As a result the effective pool of employable graduates is far lower than the overall pool of people entering the working-age population.

Currently, any graduate who is hired, irrespective of the institute he comes from or his skill levels, is put through the 16-week training (in areas such as technical skills, soft skills, company orientation and process-specific domain skills) when he joins the firm. Research shows that the industry spends over 1.5% of its revenues on training activities alone. This incremental training post education completion of students is a clearly a drag, and recruiting a trainable pool is not a sustainable option going forward. Inadequate English-language proficiency and lack of soft skills are the key gaps in the current graduate pool, reported by the industry. Further, as highly skilled talent enters the workforce, the gestation period before new employees can generate revenues (up to six months for some players) will diminish and there will be a much greater focus on ongoing development of specialized skills and capabilities. There are many initiatives being run by the industry to partner with the universities to enhance the employability of the talent pool.

(iv) Lack of early stage/angel funding: While venture capital availability has grown strongly in India, most of it is concentrated towards later stage (Stage 2 onwards) and private equity funding. There continues to be a severe shortfall in seed stage funding/angel funding. Even the available seed funding is skewed towards entrepreneurs focused on services business as it has a relatively short gestation period. This result in the IP focused entrepreneurs facing a severe ‘access to capital’ challenge as IP development requires a long time horizon and hence patient investment. VC funds are reluctant to invest in early stage start-ups as they do not have access to low cost capital. Government (CSIR, DST, DBT etc) have several schemes for providing seed capital to entrepreneurs but the amounts are low and none of these schemes is IT focused.

(v) Global economic recovery: The Indian IT-ITES/BPO sector has been an export led industry with USA and UK accounting for almost 75-80 percent of the industry’s export revenues. The global recession of 2009 had a great impact on the growth trajectory, with growth declining FY2008-09 inwards, to single digit levels in FY2009-10. While the situation improved in FY2010-11 with double digit revenue and employment growth, major global economies have not yet fully recovered.
(vi) Direct and indirect protectionism in key markets: US, UK, Australia are some of the key markets wherein there is increasing movement on direct and indirect protectionism. This is being manifested through introduction of legislations on visas, taxation, TARP (Troubled Asset Relief Program) regulations etc. Some of the suggested measures have the potential of severely impacting the business models that the industry has developed and pioneered over the last decade.

(vii) Transparent and stable policy framework with defined implementation: Multinational companies today account for over 30 percent of the industry revenues and employment creation. Lack of clarity in approach to transfer pricing is leading to inflated tax demands and enhanced litigation with these organizations, some of whom are choosing to relocate their APAC headquarters and hence decision making to other countries like Malaysia, Singapore etc. There also continues to be uncertainty on policies, changes in announced programs MAT (Minimum Alternate Tax), labor laws. It is imperative that a harmonious policy structure is created which is implemented uniformly across the country.

(viii) ‘Made in India’ procurement: The combined spend on IT (hardware, software, services and network) related procurement by the Government in India is huge and Government is the largest procurer of IT in India. Apart from services, a significant proportion of the IT assets deployed in projects (hardware, software products) are imported. Indian firms particularly the SME firms who develop products find it difficult to sell to the Government as they lack the sales capacity or they fail to meet the qualifying procurement criteria e.g. annual revenue, number of customer etc. As a result the ‘Made in India’ IT products find it difficult to scale up.

(ix) Lack of research capacity: A key weakness of the Indian IT industry including Government agencies is the lack of original technology development. Majority of IT deployed in India is either imported or IPR resides with non Indian entities. Innovation ecosystems who lead in technology development e.g. Silicon Valley, have demonstrated that a key lever for technology development is the maturity of the post-graduate and doctoral research program. In India, the number of computer science doctoral research programs is very low – both qualitatively and quantitatively.

(x) Declining Global ITES/BPO share: India’s share in global BPO off shoring market has declined due to competition from other emerging countries.
Development of the BPO industry in Tier-II and Tier-III cities, which is feasible under the STP scheme, is important for ensuring long term competitiveness as Tier I locations would gradually lose their competitive edge over the other emerging nations due to high infrastructure cost. Lack of skilled manpower and sustainable supply of talent pool remains a major hurdle especially in tier 2 and 3 cities.

3.6 ITES leading the way:
The Indian Economy has bounced back and is estimated to grow at 8.6 per cent in 2010-11 as compared to 8 per cent in 2009-10. The Indian IT-BPO Industry has also witnessed robust recovery in 2010-11. The revenue aggregate of IT-BPO industry has grown by 19.2 per cent and reach US $ 88.1 billion in 2010-11 as compared to US $ 73.9 billion in 2009-10. The Indian software and services exports including ITES-BPO exports was around US $ 59 billion in 2010-11, as compared to US $ 50 billion in 2009-10, an increase of 18.0 per cent. The IT services exports is estimated to be US $ 33.5 billion in 2010-11 as compared to US $ 27.3 billion in 2009-10, showing a growth of 22.7 per cent. BPO exports is estimated to grow from US $ 12.4 billion in 2009-10 to US $ 14.2 billion in 2010-11, a year-on year (Y-o-Y) growth of 14.5 per cent. IT services contributed 57 per cent of total IT-BPO exports in 2010-11, followed by BPO at 24 per cent and Software products/engineering services at 19 per cent.
The US and the UK remain key markets for Indian IT-ITES exports in 2010-11 accounting for about 61.5 per cent and 17.2 per cent of total IT-BPO exports respectively. Revenue growth from Continental Europe however, has been relatively tepid, as the effects of recession on these geographies have lingered on for a longer time. These regions however, have seen pick up in demand as the year progressed. The share of emerging markets in total exports has increased from 9.4 per cent in 2009-10 to 9.7 per cent in 2010-11. This trend towards a broader geographic market exposure is positive for the industry, not only as de-risking measure but also as a means of accelerating growth by tapping new markets.
The Indian domestic IT market continued to grow in 2010-11. The revenue from the domestic market (IT Services, software products and BPO) went on to grow from US $ 14.2 billion in 2009-10 to US $ 17.1 billion in the year 2010-11, an anticipated growth of about 20.4 per cent. IT services is one of the fastest growing
segment in the Indian domestic IT market. It is driven by localized strategies
designed by service providers.
India remains an integral part of the global sourcing strategy, and registered a
growth rate twice that of other competitors in the global sourcing arena, to account
for approximately 55 per cent of the addressable global sourcing market, up from
51 per cent in 2009. It is estimated that India- based resources account for about
60-70 per cent of the offshore delivery capacities available across the leading
multinational IT-BPO players. This phenomenal growth of the Indian IT-ITES
sector has had a perceptible multiplier effect on the Indian economy as a whole.
The sector has grown to become the biggest employment generator and has
spawned the mushrooming of several ancillary industries such as transportation,
real estate and catering. Consequently, this sector has created a rising class of
young consumers with high disposable incomes, triggered a rise in direct-tax
collections and propelled an increase in consumer spending.
The IT-ITES industry has created career opportunities for the youth, provided
global exposure and offered extensive training and development. Furthermore, the
industry has been a front-runner in bridging the gender divide in the Indian
workforce the IT-BPO industry has played a key role in putting India on the world
map. The industry has attracted more than 10 per cent of total FDI flowing into
India. The industry also led in the development of the Indian organizations as
global multinationals - with over 400 delivery centers (outside India), the industry
has presence in 52 countries, and 200 cities with more than 10 organizations listed
on overseas stock exchanges and more than 400 Fortune 500 customers.
Direct employment within the IT-BPO sector grew by 10.4 per cent to reach 2.5
million in 2010-11 with over 2,40,000 jobs being added during the year. The
indirect employment attributed to the sector is about 9.0 million in 2010-11 as
compared to 8.2 million in 2009-10. The spectacular growth performance in the
ITBPO industry in the last decade has helped the industry contribute substantially
to India's GDP. In 2010-11, the IT-BPO industry's contribution to GDP is
estimated to be 6.4 per cent as compared to 6.2 per cent in 2009-10. The IT-BPO
Industry has enormous potential to grow in the years to come. By the end of fiscal
year 2015, the industry's aggregate revenue is expected to reach US $ 130 billion, a
CAGR of about 14 per cent from the year 2010-11 and contribute about 7 per cent
to India's GDP.
3.6.1 IT & ITES - Road Ahead:
The Indian market for IT products and services will consolidate its growth achieved in 2010 and increase from US$ 19.7 billion in 2010 to US$ 41.2 billion by 2015, according to India Information Technology Report for the third quarter of 2011 by Business Monitor International (BMI). BMI estimates that the Indian market for PCs (including notebooks and accessories) is US$ 8 billion in 2011, higher from US$ 6.8 billion in 2010 while it projects IT services market at around US$ 7.5 billion in 2011 which would further swell to a size of US$ 16.9 billion by 2015. The report has estimated a compounded annual growth rate (CAGR) of 18 per cent for Indian software market over the span of 2011-2015.

3.6.2 Overview of India’s IT and ITES Industry:
The Indian IT and ITES Industry recorded a turnover of US $ 60 billion in 2009, with exports accounting for about US $ 47 billion and contributing to over 70% of industry revenues. The industry has grown at a CAGR of close to 30% between 2004 and 2009. The major segments of the Industry are IT Services, BPO, and Engineering Services, R&D, and Products. Much of the activity is centered on service offerings in Banking, Financial Services, and Insurance (BFSI), Hi-Tech and Telecom, Manufacturing, and Retail. These are also referred to as various ‘industry verticals’ in common parlance. The major market for software and services remains the Americas (primarily USA), accounting for about 60% of revenues. However, recognizing the need to diversify their client base, companies in this industry have increase the share of revenues outside of USA from about 30% in 2004 to about 40% currently. Continental Europe and APAC are likely to see increase in their share of revenues. An important characteristic of large movers has been scalability, which is the ability to ramp up operations quickly and efficiently. Early movers (from 1990s) have been able to establish scale in the last 10 years and have emerged as leading players in the industry.
Table – 3.2: Top IT Companies in India

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<thead>
<tr>
<th>Sr No</th>
<th>Name of IT Company</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Tata Consultancy Services</td>
</tr>
<tr>
<td>2</td>
<td>Infosys Technologies Limited</td>
</tr>
<tr>
<td>3</td>
<td>Wipro Limited</td>
</tr>
<tr>
<td>4</td>
<td>Satyam Computer Services*</td>
</tr>
<tr>
<td>5</td>
<td>HCL Technologies Limited</td>
</tr>
<tr>
<td>6</td>
<td>Tech Mahindra Limited</td>
</tr>
<tr>
<td>7</td>
<td>Patni Computers Systems Limited</td>
</tr>
<tr>
<td>8</td>
<td>i-Flex Solution Limited</td>
</tr>
<tr>
<td>9</td>
<td>L&amp;T Infotech Limited</td>
</tr>
<tr>
<td>10</td>
<td>Polaris Software Lab Limited</td>
</tr>
</tbody>
</table>

*- Now acquired by Tech Mahindra

The industry has been hit by the economic slowdown and clocked only 12% growth over the previous year and achievement of 2010 targets have been deferred by a year. It is expected that the growth will pick up in the future when a reversal occurs. The importance of this industry is underscored by the fact that it contributes to about 3.5% to 4.1% of India’s GDP in terms of net value added and employs close to 2.2 million knowledge professionals. India’s acceptance as a preferred offshoring destination in the world is evidenced by the fact that it was ranked at the top (first place) in AT Kearney’s Global Services Location Index. The IT and ITES Industry has been mainly based in the metros and tier-1 cities in India.

3.7 Initiatives of Government of India:
The government of India is leaving no stone unturned to accelerate growth of IT & ITES sector in the country. Earlier in 2011, the ministry had revealed its intentions to launch E-governance initiatives that would facilitate rolling out mobile governance and electronic service delivery bill. Sufficient funds have also been earmarked to connect Indian villages and classrooms across the country with
knowledge centers wherein the government aims to provide broadband connectivity to all the village panchayats in the second decade of new millennium. The government also wants to increase the IT exports from US$ 59 billion currently to US$ 200 billion by 2020. The projections and focus areas were laid in a draft national policy which also stated that the government will endorse innovation, research and development (R&D) in advanced technologies and application development in areas such as cloud computing, mobile value added services and social media. The policy also aimed at employing additional 10 million skilled people in the information communication technology sector. The sector currently has manpower strength of 2.5 million skilled people.

3.7.1 National e-Governance Plan:
A major initiative of the Government for ushering in e-Governance on national scale, called National e-Governance Plan (NeGP) was approved on 16th May 2006. NeGP consists of 27 Mission Mode Projects (MMPs) encompassing 9 Central MMPs, 11 State MMPs and 7 integrated MMPs that span multiple backend Ministries/Departments. It also includes 8 program support components aimed at creating the right governance and institutional mechanisms, core infrastructure, policies & standards and the necessary legal framework for adoption of e-Governance in the country. It is implemented at the Central, State and Local Government levels.

3.7.2 State Wide Area Networks:
State Wide Area Network (SWAN) is envisaged as the converged backbone network for data, voice and video communications throughout a State/UT and is expected to cater to the information communication requirements of all the Departments. Under this Scheme, technical and financial assistance is being provided to the States/UTs for establishing SWANs to connect all State/UT Headquarters up to the Block level via District/Sub- Divisional Headquarters, in a vertical hierarchical structure with a minimum bandwidth capacity of 2Mbps per link. SWAN is operational in 23 States/UTs.

3.7.3 State Data Centers:
State Data Centre has been identified as one of the important elements of the core infrastructure for supporting e-Governance initiatives under NeGP. Under the SDC Scheme, it is proposed to establish Data Centres in all the States/UTs so that common secure IT infrastructure is created to host State level e-Governance
applications/Data to enable seamless delivery of Government to Government (G2G), Government to Citizen (G2C) and Government to Business (G2B) services duly supported by State Wide Area Network and Common Service Centres established at the village level. Recently 3 SDCs have been made operational. SDCs in 14 States are under implementation. Common Services Centres, The Government has approved the Common Services Centres (CSCs) Scheme for providing support for establishing 100,000 Common Services Centres in 600,000 villages of India. The Scheme envisions CSCs as the front-end delivery points for Government, private and social sector services to rural citizens of India, in an integrated manner. Post recession, number of CSCs rolled out in 31 States of India is 87,594. It has been decided that the Common Services Centres will be suitably repositioned to be a network of Panchayat level Bharat Nirman Common Services Centres, to provide Government services to the citizens in rural areas. Accordingly, the CSCs are to be leveraged for various services for Bharat Nirman and flagship Schemes like NREGA, NRHM and SSA.

3.7.4 Capacity Building Scheme:
In order to provide a mechanism for adequate capacity building and training for end user, a Capacity Building Scheme has been approved from January 2008. This envisions establishment of institutional framework for State Level Strategic decision-making including setting-up of State e-Governance Mission Team. A permanent CB Management Cell (CBMC) has been established. State e-Governance Mission Team has been setup in 27 States/UTs.

3.7.5 e-District:
e-District is a State Mission Mode Project under the National e-Governance Plan. The Project aims to target certain high volume services currently not covered by any MMP under the NeGP and to undertake backend computerization to enable the delivery of these services through Common Services Centres. The Department has approved 16 Pilot e-District projects covering 41 districts. Pilot projects have been launched/ gone live in 18 districts across 6 States. The pilot project is in advance stage of implementation in 8 States.

3.7.6 Skill Development in IT:
Government of India announced the National Skill Development Policy which has set a target of skilling 500 million persons by 2022. The policy also aims at taking the advantage of demographic dividends, i.e. increasing population of working age
group in India. The Department has been listed as a part of the skill development initiative and has been given a target to train 10 million persons by the year 2022 in the domain of Electronics, Information and Communication Technology. The Department has prepared a road map for achieving the set target.

3.7.7 Cyber Law:
The Information Technology Act 2000, a legal framework for transactions carried out electronically, was enacted to facilitate e-Commerce, e-Governance and to deal with computer related offences. The Principal Act was amended through the Information Technology (Amendment) Act, 2008 to include provisions for new forms of cyber crimes like cyber terrorism, identity theft, child pornography, breach of confidentiality and leakage of data by intermediary and e-Commerce frauds. The Rules pertaining to sections 52, 54, 69, 69A and 69B of the Information Technology (Amendment) Act, 2008 have been notified.

3.7.8 Cyber Security:
With the passage of Information Technology (Amendment) Act 2008, Indian Computer Emergency Response Team (ICERT) has been designated as Nodal agency for coordinating all matters related to cyber security and emergency response. It is now assigned with the task of oversight of the Indian cyber space for enhancing cyber protection, enabling security compliance and assurance in Government and critical sectors and facilitating early warning & response as well as information sharing and cooperation. In order to have the optimum uptime and support 24x7 operations of ICERT, initiatives have been taken to setup a Disaster Recovery site at C-DAC, Bengaluru.

3.7.9 National Knowledge Network:
Government had decided to establish a National Knowledge Network (NKN) which will consist of an ultra-high speed Core (multiples of 10Gbps and upwards), and over 1500 nodes covering all universities, research institutions, libraries, laboratories, hospitals and agricultural institutions across the country. In the initial phase, a core Backbone consisting of 18 Points of Presence (PoPs) have been established with 2.5 Gbps capacity. A total of 104 Institutions have been connected to NKN and 15 virtual classrooms have been set up.

3.7.10 Indian Languages Technologies:
To enable wide proliferation of ICT in Indian languages, the Department has taken a major initiative to make available Software tools & fonts in various Indian
languages freely to the general public. Software tools & fonts for 22 constitutionally recognized Indian Languages have been released in public domain for free mass usage. Machine Translation systems from English to 8 Indian languages in the tourism domain with varying efficiency have been developed. Machine Translation Systems for 9 Bidirectional pairs of Indian languages with varying efficiency have been developed.

3.7.11 Free and Open Source Software:
Indian industry/ SMEs can benefit from the liberal licensing norms of Free and Open Source Software (FOSS) which enables software to be freely modified and distributed. GNU/Linux Bharat Operating System Solutions (BOSS) desktop version 4.0 with support for all 22 constitutionally recognized Indian languages and BOSS Advance Server version 1.0 has been released for deployment. 27 BOSS Support Centers have been established across the country.

3.7.12 IT Research Academy:
IT Research Academy (ITRA) is a programme to build a national resource for advancing the quality and quantity of R&D in IT while institutionalizing an academic culture of IT based problem solving and societal development by closely collaborating teams of researchers and institutions having expertise in the different aspects of the chosen research or application problems. The ITRA will focus on strengthening the nation's competitiveness by expanding the R&D base in IT, especially by leveraging the large IT education sector and IT users such as Government, industry and other organizations.

3.7.13 Centre for Development of Advanced Computing:
Centre for Development of Advanced Computing (C-DAC) is the premier R&D organization of the Department for carrying out R&D in IT, Electronics and associated areas. During the year, C-DAC carried out technology developments in the areas of interconnect technologies, system software, Reconfigurable Computing Systems (RCS), Grid middleware and various areas of scientific and engineering applications. C-DAC developed and commissioned High Performance Computing (HPC) facilities at Indian Institute of Science and Education Research (IISER), Pune for promoting supercomputing related domain specific research; Dar-es-salaam Institute for Technology, Tanzania for work in the field of Weather Prediction and National Centre for Medium Range Weather Forecasting (NCMRWF), Noida for high end research in climate modeling.
3.7.14 National Informatics Centre (NIC):
National Informatics Centre (NIC), an attached office of the Department Information Technology, is a premier S&T organization. It has been playing a significant role in using ICT to streamline internal Government functions and facilitating implementation of e-governance. Accordingly, NIC has been engaged in setting up of Internet/Intranet Infrastructure, preparing IT Plans and developing IT enabled Services including G2G, G2B, G2C and G2E portals. A number of major initiatives have been undertaken by NIC for strengthening backend automation and implementation of citizen centric services. E-payment for various Government services, SMS service for sending alerts and updates, e-tendering, e-office, web based counseling for admission into professional courses are some such activities. GePNIC, e-Tendering solution of NIC for various Departments was implemented in a number of States. Cumulatively 48294 tenders worth 66,864.79 Crore in value were processed using GePNIC system.

3.8 Framework and Strategic Plan:
Government of India has approved the outline of a "Performance Monitoring and Evaluation System (PMES) for Government Departments" to measure the performance of the Government by preparing a Results-Framework Document (RFD), which provides a summary of the most important results that a Department/Ministry expects to achieve during the financial year. In accordance with this, the Department prepared RFD for 2009-10 and 2010-11 with a vision entitled 'e-Development of India as the engine for transition into a developed nation and an empowered society' with five core areas namely: e-Government, e-Industry, e-Innovation /R & D, e-Learning and e-Security. The Results with respect to RFD 2009-10 were duly evaluated and the Department achieved an overall composite score of 97.45 per cent indicating excellent performance. In addition to this, the Department has prepared a Strategic Plan for the next five years.

3.9 ITES scenario in Maharashtra State:
The contribution of the IT/ITES industry to the growth and development of India for profit as well as non-profit activities has been phenomenal. IT/ITES industry in India has significantly contributed to the GDP, foreign exchange earnings and
employment generation. The future of IT sector seems quite bright in India. The career opportunities in the information technology sector in India are abundant. Information Technology is a very dynamic and diverse industry. As a result, the IT sector companies are mostly looking for tech-savvy and multi-skilled people. IT skills are required not only for entering the IT sector but also for acquiring jobs in other sectors.

3.10 IT/ITES Employment Trends:
The IT/ITES industry is one of the largest employers in India. Not only the industry offers numerous jobs but also tries to follow diverse employment practices and encourages people with different skill sets, gender, abilities and qualifications to work together. IT industry in India has created employment opportunities in smaller/non-metro cities giving the students a chance to enter this field. Nearly, 33-50% employees of large IT firms belong to non-metro areas. IT industry also encourages differently skilled people by employing and training them. ITES industry provides an opportunity to the non-technical and less qualified people to enter this field. In addition, this filed has helped and is still focusing on women empowerment. The increasing trend of number of women getting employed in this sector exhibits that this sector offers equal opportunities and benefits to women. Indian IT job market has a very high growth rate. This growth has impacted the overall employment ratio resulting in doubling the employment every year. The number of people employed in the IT/ITES sector has increased significantly from 670,000 to 2,572,000 from 2003 to 2010 as per the NASSCOM 2011 report. This sector is expected to grow even more in the coming years.

3.11 Problems Faced by the IT Industry:
Even though demand of engineers is higher than other graduates in India, the IT industry is at times unable to hire talented people. Many engineering graduates do not have in-depth knowledge of the IT field and are unable to meet the industry standards. Sometimes they lack skills such as good communication and soft skills. The graduates need to be more trained in these areas. IT/ITES industry in India has a booming growth and more and more youngsters are attracted towards this field. Over the past few years, the Indian information technology (IT) and IT enabled Services (ITES) industry has been on a steady growth trajectory. The IT industry,
alone, has played a pivotal role in placing India on the world map as a major knowledge-based economy and outsourcing hub. The major sub-segment, that entails Business Process Outsourcing (BPO), is re-inventing itself and experiencing a paradigm shift from being a volume-oriented proposition to a value-oriented proposition by expanding its scope of services and providing substantial high-end solutions in the areas of Data Analytics, Legal Process Outsourcing, etc. The number of internet users in India crossed the 100-million mark in September 2011, growing 13 per cent over last year's figure of 87 million, according to the latest report of the Internet and Mobile Association of India (IAMAI) co-prepared with research firm IMRB. The study anticipates India's internet population to grow to 121 million by December 2011. Further, the country's broadband subscriber base stood at 12.69 million in August 2011, according to data released by the Telecom Regulatory Authority of India (TRAI).

3.12 Competitive Landscape:
After personal computers (PCs) and laptops, tablets are mushrooming as a major competitive avenue wherein vendors are striving hard to launch more affordable devices for the Indian market. Second quarter of 2011 experienced the release of the iPad2 in India in less than 50 days after its US launch while Samsung is scouting for 40 per cent share of the Indian tablet market in 2011. In the enterprise software segment, US giant Oracle claims to cater around 7,000 clients across the Indian government and private sectors; recent wins being Punjab National Bank (PNB) - India's second-largest public sector bank and Hindustan Petroleum Corporation (HPCL) - another Indian public sector organ. Meanwhile, Indian IT companies like Wipro, Infosys, TCS, HCL and Mahindra Satyam are developing their technologies to entail cloud computing applications and solutions for various segments ranging from financial services and banking to manufacturing.

3.12.1 IT & ITES - Key Developments and Investments:
In the new millennium, the computer software and hardware sector received cumulative foreign direct investment (FDI) of US$ 10,787 million, according to the Department of Industrial Policy and Promotion (DIPP):
• Monster India has launched an online campus hiring initiative - 'Monster College' – wherein it will collaborate with educational institutions across India and connect them with over 20,000 employers for campus placements.

• Investor Relations Global Rankings (IRGR), a New York-based organization, has ranked Technology giant Infosys as the country's best company for corporate governance practices, financial disclosure procedures, IR website and online annual report. There were more than 80 companies that registered themselves for the rankings.

• Tower infrastructure company Indus Tower is looking for a partner to provide end-to-end IT solutions and Indian tech-biggins like Infosys, IBM and Wipro are in discussions with the former for the same. The contract, potentially in the range of Rs 2,430-2,916 crore (US$ 500-US$ 600 million), would involve areas such as infrastructure management, application development and other related managed services and would span for 8-10 years. Indus Tower, a joint venture firm between Bharti Group, Idea Cellular and Vodafone Essar, owns 110,000 towers and operates 16 out of the 22 telecom circles.

• Google, with its partner web hosting firm Host Gator, has announced that it will offer free web domain names to small and medium businesses (SMBs) in India in order to boost internet usage in Asia's third largest economy. The company will maintain the websites for a year without any charges and at the end of the first year, users will be asked to pay a nominal fee if they wish to renew their domain name.

• India is shelter to around 8 million SMBs of which about 400,000 have a website and 100,000 have active online presence, said Google. Hence, the market poses a great potential for growth.

### 3.13 Cloud Computing:

The model of cloud computing has attracted attention of organizations of all sizes as the technology offers lower operational costs, scalability and mobility at every level. Indian companies are increasingly adopting 'hybrid cloud' (a mix of private and public cloud) to address their concerns of data privacy as well. Indian businesses and government agencies are expected to create huge demand for guidance in the usage of cloud computing services. There are already more than 50 cloud computing service providers in the Indian market. Meanwhile, Indian
internet services providers (ISPs) and data centre service providers including Bharti Airtel, Sify, Trimax, and NetMagic are investing applications and bandwidth to support new cloud service offerings. NTT Communications Corp plans to invest US$ 1.58 billion in Europe and India over 2011-15 to develop its cloud computing business at a faster pace while AWS, the world's largest cloud-based service provider, that forms about 2 percent of Amazon's revenues, is projected to become the online retail giant's next most-profitable business in India.

3.14 E-Commerce:
The US$ 10 billion Indian e-commerce market is expanding exponentially, it grew 47 per cent from 2011 to reach the present size as rising internet penetration is making customers buy more and more stuff online. Investors are also betting high in the industry; they poured around US$ 200 million into Indian e-commerce start-ups in last couple of years. As a result of such growth, e-retailers, who want to focus on their core functionalities, are expected to outsource bulky back-end operations (such as customer care, order processing, invoice processing, finance and accounts) and emerge as a substantial source of revenue to BPOs.

Retail brands are expected to bring a great transformation in online space. Women's apparel retail brand Biba and tyre brand Bridgestone have become available online recently. IAMAI expects online advertising increased by 30-40 per cent annually on back of increased internet usage by retailers.

3.15 Overview of Maharashtra’s IT and ITES Industry:
Maharashtra IT sector is one of the topnotch sectors in the State with maximum thrust, development and investments:
• 90% of the India IT-BPO industry is concentrated in 7 cities in India, including Mumbai and Pune in Maharashtra
• Maharashtra contributes over 30 per cent of the country's total export of software
• The State houses more than 1,500 software units
• Maharashtra’s IT sector grew at 24% from USD 2.091 billion to USD 8.786 billion from post recession period.
• Pune witnessed the highest IT exports, contributing more than half of the total at around USD 5,228 million, followed by Mumbai at USD 3,346 million in 2008-09
• The STPI units in Nagpur, Nashik, Aurangabad, and Kolhapur also showed noteworthy growth:

Table – 3.3: FDI in Information Technology Sector of Maharashtra:

<table>
<thead>
<tr>
<th>Sector</th>
<th>Total Projects</th>
<th>Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT/ITES</td>
<td>762</td>
<td>12765</td>
</tr>
</tbody>
</table>

3.16 Source of Growth in Maharashtra:

Table – 3.4: IT Companies present in Maharashtra:

<table>
<thead>
<tr>
<th>City</th>
<th>Number of IT / ITES companies registered with STPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mumbai</td>
<td>800</td>
</tr>
<tr>
<td>Pune</td>
<td>471</td>
</tr>
<tr>
<td>Nagpur</td>
<td>72</td>
</tr>
<tr>
<td>Aurangabad</td>
<td>15</td>
</tr>
<tr>
<td>Nashik</td>
<td>11</td>
</tr>
<tr>
<td>Kolhapur</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: STPI

Key Strengths:
• 32 public IT park has been established by MIDC and CIDCO and four are in pipeline, with 4351 units and an investment of INR 18000 crore
• Maharashtra has 425 private IT park, out of which 88 are functional
• The prime IT/ITeS cluster are Greater Mumbai, Pune, Thane and Nashik
• Maharashtra has a strong presence across the value chain owing to its strong skilled manpower, powerful venture capital interest, horizontal and vertical expansion of existing customer base into new markets, cost competitiveness, superior infrastructure and Govt. support. The following sections outline the major segments in the IT and ITES Industry.

3.17 Recent Projects in Maharashtra e-Governance:

• Open Technology Centre (OTC)
• National e-Governance Plan (NeGP)
• Electronics Hardware Manufacturing
• Common Service Centers (CSCs)
- State Data Centers (SDCs)
- Community Information Centres (CIC)
- National Knowledge Network (NKN)
- State Wide Area Networks (SWANs)
- E-complaints System for the police
- Maharashtra offers software products for all industry verticals such as Automotive, Engineering, Automation, Networking and Hardware, Electronics, Energy, Telecom, Oil and Petroleum, Hospitality, Healthcare, Financial Services, Logistics, Retail, e Governance, Education etc.
- The majority of revenue for the State comes from US and Europe
- Aurangabad, Nagpur and Nashik are the emerging IT centers in Maharashtra
- Infosys, Pune complex is the second largest facility worldwide

3.18 IT Services – Segment wise Share:

The IT Services segment is the largest contributor to the IT and ITES Industry, accounting for about 60% of industry revenues. The following are the major segments in the IT Services sector.

Table – 3.5: Major segments in IT Services exports:

<table>
<thead>
<tr>
<th>Segment</th>
<th>IT Services Exports</th>
<th>Contribution (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Oriented</td>
<td>IT Consulting</td>
<td>3</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td>Systems Integration</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Custom Application</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Development</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Network Consulting &amp;</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Integration</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Software Testing</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Outsourcing</td>
<td>Application Management</td>
<td>12</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>IS Outsourcing</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Support &amp; Training</td>
<td>Software Development &amp;</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Support</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hardware Development &amp;</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Support</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IT Education &amp; Training</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

Source: NASSCOM & IMaCS analysis

Customer Application Development & Maintenance contribute ato over 50% of revenues in this space. This is primarily because the activity is viewed as
outsourcable. The industry garners a large chunk of its revenues from IS outsourcing & software support activities. Entrepreneur solution in environmental scanning & competitiveness of IT/ITES industry, Remote Infrastructure Management (RIM), testing services, are expected to fuel growth in this segment. In order to grow, companies are increasingly looking at positioning themselves as end-to-end solution providers. Recent acquisitions by IT companies are primarily meant to acquire either scale or capabilities in niche segments such as IT consulting, telecom and healthcare products. The BFSI, telecom, retail, and manufacturing sectors account for major portion of the IT Services revenues.

3.19 Growth for IT-ITES Industry in Maharashtra:
Based on the assessment of the key challenges and constraints, it was suggested to drive domestic growth, address issues of talent and skill building, ensure India’s competitiveness, incentivize the SMEs and need to play a proactive role by the State Governments so as to provide ease of doing business.

The 12th plan policy approach centre on a five-pronged strategy that include:
(i) Building new markets and expanding the core markets - Access and Outreach
(ii) Accelerating the ecosystem and initiatives for small and start-up companies
(iii) To strengthen infrastructure & eco-system in other cities for regional balanced development of IT-ITES/BPO sector.
(iv) Enabling policy environment that encourages innovation, employment creation, skill development and domestic IT adoption for inclusive growth.
(v) Leveraging India’s demographic dividend through skill development some of the recommendations relating to IT-ITES industry would cut across the other sub-groups of DIT for the twelfth plan and also come under the purview of other Ministries/departments (viz, MHRD, DOC, MEA, MSME).

3.20 IT-ITES Market
3.20.1 Market Creation and awareness
Launching a ‘Communication and Outreach Campaign’ to promote the facts of India as a value added partner creating jobs, fuelling innovation and contributing to source markets. This campaign will have a multi-fold strategy that spans across - Participation in focused trade shows, B2B custom events, Creating relevant
collaterals, CSR initiatives, Advertising and academia partnerships. The objective would be to demonstrate the capabilities of India and opportunities for partnership.

**Stakeholders involved:** DIT, MEA, Department of Commerce, IT Industry Associations

**Components of funding:** Rs 50 crore over the 12th Plan period

**Implementation:** The global economic downturn has created an environment for protectionism in key markets with perceptions being created that jobs are being lost to India. It is important that DIT in partnership with NASSCOM launches a ‘Campaign’ to promote the facts of India as a value added partner creating jobs, fuelling innovation and contributing to these markets. This campaign can also highlight the opportunities in the Indian market and how multinational companies are leveraging these opportunities and contributing to their economies. The implementation of the campaign will be undertaken through predefined agencies approved by a multi-stakeholder Steering Committee.

### 3.20.2 Market Expansion:

Starting a special program for non-English speaking people, this can include language training, student exchange program, bilateral delegations and showcases, multi-lingual website etc. The focus areas to start with could be Japanese, German and Spanish.

**Stakeholders involved:** DIT, MEA, MHRD, IT Industry Association

**Components of funding:** Rs 10 crore over the plan period

**Implementation:** The industry’s exports are largely targeted at the English speaking markets in US and Europe. However, data indicates that the future opportunity for the industry will lie across non-traditional markets wherein key capabilities will include language skills and cultural affinity. For the 12th Plan period, it is recommended that DIT should support diversification and market expansion in Non-English speaking markets by facilitating creation of manpower for foreign language training of IT professionals in Japanese, German and Spanish. DIT will prepare scheme for specialised language training institutes for implementing training on foreign languages. The industry interaction and content development can be done in partnership with MHRD and the industry association.
3.20.3 SME IT Companies in the Markets:

In countries that are of strategic interest to India, DIT, in partnership with industry associations can create a bouquet of offerings which can be leveraged by the government as it creates MOUs, and trade agreements. These offerings could include e-governance solutions, talent development, IT policies, setting up technology parks etc. These services could be offered on a commercial basis and will help India to take leadership in the technology sector and benefit other markets also.

**Stakeholders involved:** DIT, MEA, Ministry of Commerce & Industry, IT Industry Association

**Implementation:** DIT needs to work with different ministries to identify countries that are of strategic interest to India because of their natural resources, geographical position etc. DIT also has signed a number of MOUs in different markets that are not being leveraged enough. DIT in partnership with industry can identify and create a bouquet of best in class, relevant offerings from the industry which will be of benefit to the above countries, and market them to the same.

For example- In countries like Africa, India has recently committed USD5.7 billion to enhance support for institutional capacity building, technical assistance and training programmes for human resource development. The Government can ensure that these programs leverage use of Indian IT products and services.

3.20.4 Competitiveness Measure:

Countries like China, Philippines are emerging as significant competitors for India supported by an enabling policy framework and investment in infrastructure and education.

It is recommended that DIT should support in conducting studies, which can engage global consultants, think tanks and policy makers to evaluate specific measures being taken by these countries and recommend specific initiatives for India to retain and enhance its competitiveness in this sector. Activities could include tracking messaging related to India, unfair practices that can give countries an edge over India, customer surveys, visits and reports on emerging competition.

**Stakeholders involved:** DIT, IT Industry Association, Third party consultants

**Components of funding:** Rs 20 crore over the plan period
**Implementation:** DIT in consultation with the industry association would engage third party consultants for periodic studies - wherein select countries and issues/policies will be tracked.

### 3.20.5 Free Trade, Mobility for skilled workforce in Market:
Labour mobility across borders has become a key concern area for the industry and increasingly emerging as a non-tariff trade barrier. Protectionist bills are being introduced and implemented in key markets. A concerted effort by government and industry is required to fight these protectionist sentiments by providing factual information on the industry, engage with different advocacy groups etc.

**Stakeholders involved:** Department of Information Technology, Ministry of External Affairs, Ministry of Commerce and Industry

**Components of funding:** Rs 20 crore across the plan period

**Implementation:** IT Industry, Industry Associations and DIT to strengthen the current initiative.

Department of Information Technology to work with Ministry of External Affairs and Ministry of Commerce and Industry to develop and promote the concept and creation of a Non Resident Services Visa for technology professionals.

### 3.20.6 Ecosystem for Emerging Companies:
The Software Technology Park scheme has played a stellar role in the growth story of the IT-ITES/BPO sector in the country and helped emerging companies of the past emerge as global leaders. To provide competitive edge to small and start-up companies and to attract investments beyond Metro cities (i.e Tier II & Tier III cities), there is a need for similar enabling environment. In other competing countries incentives & benefits are extended both at Federal level and the State/Province level to attract investment and employment generation in IT-ITES sector. Hence, it is pertinent for the State Governments to provide incentives to IT-ITES companies for creating eco system and a level playing field to compete globally.

At the Central Government level, it is recommended that DIT introduces a non profit linked scheme for small companies, especially in Tier II & Tier III cities (All cities beyond 7 Metros including NCR), which would be linked to investments and employment creation especially in Tier II & Tier III locations, subject to a ceiling.
Stakeholders involved: DIT, STPI

Components of funding: Rs. 5000 crores – estimates will depend on the scope of the Scheme

Implementation: DIT in partnership with STPI can be the facilitator for disbursement of funds and define processes for small organisations that submit audited tax returns and balance sheets can get the necessary reimbursements.

3.20.7 Seed Capital Funding:
While the country has a healthy ecosystem of venture capital and private equity firms, there is lack of seed capital for start-ups in the country. It is recommended that DIT may establish a corpus of Rs 250 crore to energize seed stage / angel funding for IT start-ups in India. As investing directly in start-up firms and managing a portfolio requires competencies and skills, the corpus established by DIT should act as a ‘fund of funds’.

Stakeholders involved: DIT, STPI, State Government, Financial institutions

Components of funding: Rs 1000 crore over the Plan period

Implementation: As a ‘fund of funds’, DIT should provide funds to VC funds which are focused on early stage funding. The funds which take money from DIT should agree to reserve a certain percentage of their corpus for angel funding in start-ups focused on IP development. Other conditions could be that the VC funds who receive funds from DIT should raise matching funds from non-Government sources A TePP for IT scheme can also be looked at to encourage software product innovation.

3.20.8 Market Development Initiatives:
Branding and market development are key areas wherein small and start-up companies are lacking capabilities, funds and channels. It is recommended that DIT should enable a market development scheme for small and start-up companies that will provide grants for participating in international events, research reports that identify white spaces for small companies, facilitating an SMB collaboration program globally, annual awards that recognise the best small companies etc. This would be relevant for both product and start-up companies.

Stakeholders involved: DIT, Ministry Commerce & Industry, IT Industry Association
**Implementation:** DIT in partnership with IT Industry Association can look to set up a focused cell that will enable small companies to leverage and partner in this scheme.

### 3.20.9 Cluster Development:
As cost of real estate increases in the key cities, small companies are unable to find affordable infrastructure. In tier 2 cities, there does not exist clusters of office infrastructure. Similarly for start-ups, there is a need to establish incubators. It is recommended that DIT in partnership with state government should use the current Software Technology Parks infrastructure to provide affordable infrastructure for small companies; establish ‘thematic’ incubators either directly or through a PPP with firms specializing in managing incubators.

**Stakeholders involved:** DIT, STPI, State Governments

**Implementation:** DIT in partnership with industry can conduct a survey to determine infrastructure requirements for small companies and then determine appropriate changes to the current STPI locations.

### 3.20.10 Government Procurement:
All Government related procurement must have a preference for IP assets (software and hardware) which have been ‘made in India’ and IP is owned by Indian registered entities. Large IT firms who execute the large contracts, should be encouraged to use IP owned by Indian registered entities without diluting quality. Special preference or credits should be given if the IP owner is an Indian SME.

**Stakeholders involved:** DIT (E-Gov), Industry, Ministry of Finance

**Components of funding:** NIL

**Implementation:** The tendering process for the government will need to be modified so that firms that collaborate with small companies for IP development are given some credit during evaluation. Large IT firms which bid for e-governance projects and have small Indian firms with IP as their partners in the bidding process should be given extra weight age without compromising on quality.
3.20.11 **Internet and Mobile Value Added Services (VAS):**
Establishing an Internet, Content and Mobile VAS Start-up Initiative- DIT to bring together a coalition of mentors, advisors, funders, major corporations and service providers to deliver strategic and substantive resources to help entrepreneurs start and scale companies. Suggested initial areas of focus areas could be Mobile VAS and Internet focused companies.

**Stakeholders involved:** DIT, DIT’s autonomous bodies, IT Industry Associations, Industry players

**Implementation:** DIT in collaboration with IT Industry Association will lead, evangelize, and promote the development of an Internet, Content and MVAS Start-up initiative where all stakeholders within the system viz. mentors, advisors, funders, companies and service providers will come together to promote entrepreneurship, provide handholding and guidance to budding entrepreneurs.

3.20.12 **New Delivery Centre Development:**
A priority plan is built to strengthen infrastructure and ecosystem in 10 cities wherein some initial activity has started and can emerge as significant locations for the industry. An end to end city development plan will need to be undertaken for these cities.

**Stakeholders involved:** DIT, Ministry of Commerce & Industry (DIPP and DOC), State Government

**Implementation:** Plan development from various aspects, such as macro policy plan and design, skill development, investment and comprehensive coordination, etc. An integrated physical and social infrastructure plan is funded by central and state government.

- Policy support of single windows clearance
- Fast track SEZ development in these states
- Marketing and investment campaign to attract companies
- Provide capital subsidy on all capital investments for organizations setting up in these cities subject to a ceiling

3.20.13 **Support for the Information Technology Investment Regions (ITIRs):**
ITIR (Information Technology Investment Region) is envisaged as a self contained integrated knowledge cluster dedicated to establishment and growth of IT, ITES,
EHM units. While the scheme has been notified by the central government, the onus of implementation is on the states and lack of funds, land etc has resulted in the scheme not moving forward. It is recommended that a dual structure of funding be looked at partially by Central government and partially by the state to enable ITIR development.

**Stakeholders involved:** DIT (E-Infra), State Government

**Implementation:** While, the internal infrastructure cost can be met by the state government, external infrastructure support from Government of India needs to be provided under Viability Gap Funding (VGF) Scheme

### 3.20.14 Access and Connectivity across the Country:

Providing connectivity, along with provisions for access devices, to institutions and learners in the country, extend computer infrastructure and connectivity across the country. Provide access to basic entry-level computer and communication resources for all students and teachers, regardless of location or socioeconomic status

**Stakeholders involved:** DIT (E-GOV), State Governments

**Implementation:** Broadband plan of connecting 250,000 villages to be completed in the plan period.

- CSCs/Post office to be set up in all 600,000 villages; connect panchayats to national broadband infrastructure
- Provide incentives for developing low-cost computing platforms that facilitate technology adoption in rural areas
- In smaller industrial clusters where firms cannot afford anything but basic IT, the local Government agencies in collaboration with cluster associations and technology providers can establish common facilities at the cluster levels under the shared information management services approach. The common infrastructure of the shared service centre can be used by the cluster firms and paid on a usage basis.

### 3.20.15 Building Innovation Infrastructure:

Create MSTQ infrastructure: There is need for Measurement, Standardization, Testing and Quality centers across the country requiring substantial capital
investment. Government should also enable industry to partner with government run test labs to ensure product testing and standardization.

**Stakeholders involved:** DIT, MSME, Central / State Government

**Implementation:** DIT should invest in creating a MSTQ infrastructure for software products across India. While DIT can provide the initial CAPEX for establishing these facilities, they should be self sustainable over a period of time.

- DIT should also provide financial support to SME for achieving accreditation and certifications as these are required to do business in international markets especially in sectors like financial services. This can be capped at 50 percent of the actual cost of the certification.
- For specific clusters like automotive, aerospace, embedded software, test lab infrastructure should be set up in PPP basis.
- Government test labs should be encouraged to partner with industry for co-creation and product development.

3.20.16 Promote Home-Developed Innovation:

Build a strategy on indigenous innovation that should focus on key areas that are of strategic importance to India. In areas where technology products are already being commercially developed, look at a localization and multilingual strategy.

**Stakeholders involved:** DIT (R&D IT), Industry, Ministry of Science and Technology

**Implementation:** DIT to empanel agencies that can identify and create roadmap for building indigenous technology solutions that is of strategic importance to the country

- Review regulations for IP rights, trademark registration and patents
- Incentivize the development of low cost solutions/products for the Indian market
- Develop SMEs for frugal engineering

3.20.17 Nonprofit linked Incentives

As the Direct Tax Code and other reforms envisages a regime of investment-linked incentives. The industry which is services centric and investment in plant and
machinery is limited will not benefit from this. It is recommended that non-profit linked incentives that support the services sector are introduced.

**Stakeholders involved:** DIT, Ministry of Finance,

**Implementation:** To implement the above schemes, DIT will need to create a corpus (which is a certain percentage of the tax paid by the industry). Detailed guidelines and online forms can help the industry to submit necessary documents for reimbursements that are made within a 90 day period.

### 3.21 R&D in Services Sector:

Given the contribution of research and development (R&D) to productivity growth, economic performance and the achievement of social objectives, it is generally agreed that governments have a role in encouraging appropriate R&D levels and expenditures. Considering the changing composition of the Indian economy, there should be schemes/measures in place to define and incentivize R&D in the context of services companies. The schemes can include:

- **Definition of qualifying R&D** - There is need for a clear definition of what constitutes research and development costs qualifying for the tax incentive. DIT to define various levels/intensity of R&D in the IT/ITES industry in collaboration with the industry
- **Review the fiscal incentives offered by OECD countries and introduce provisions for tax credits and tax allowances in line with the same**
- **Introduce an SME tax credit for R&D, which includes external purchases of R&D services (from universities and public research institutes) as well as research conducted by the firm itself**

**Stakeholders involved:** DIT (R&D Group), Industry, Ministry of Science and Technology

**Implementation:** DIT in partnership with industry should look at R&D in IT/ITES sector – build clear guidelines and how the industry can leverage the benefits that exist already, as well as implement schemes defined above.

### 3.22 Inter-Ministerial Collaboration

The industry currently faces a number of issues that are inter-ministerial in nature and do not get resolved. It is recommended that DIT creates a special cell that is
responsible for inter-ministerial collaboration and facilitates closure/recommendations on specific challenges faced by the industry

**Stakeholders involved:** DIT, Ministry of Finance, Ministry of Commerce and Industry, Ministry of External Affairs, IT Industry Association

**Components of funding:** Nil

**Implementation:** The Inter Ministerial Group will review all industry issues on a quarterly basis and determine bottlenecks and recommend solutions.

### 3.23 Capital Subsidy:

(i) High Tech Parks are eligible to financial assistance @50% of fixed capital investment in land, buildings & infrastructure facilities up to a maximum of Rs.25 millions.

(ii) New IT/ITES as well as expansion units investing between Rs.5 crores and Rs 50 crores and employing more than 100 direct workers would be eligible for a capital subsidy of Rs.30 lakhs;

(iii) Higher capital subsidy would be eligible on investment in the range of Rs. 50 crores to Rs. 200 crores and above.

#### 3.23.1 Stamp Duty:

Transfer Duty and Registration Fees 100% reimbursement of stamp duty, transfer duty and Registration fee paid by IT Industry & Communication technology industry companies including start-ups on sale/lease deeds on the first transaction and 50% reimbursement on the 2nd transaction.

#### 3.23.2 Power Tariff:

For the purpose of power tariff, IT maintenance and servicing units and hardware units will be treated as Industrial and not Commercial consumers and electricity tariff as applicable to Industry consumers will be charged. IT/ITES unit will be considered eligible for exemption from statutory power cuts.

#### 3.23.3 Waiver of NOC from Pollution Control Board:

IT/ITES units engaged in provision and production of “IT services and IT Software” will be exempted from seeking no-objection certificate from Pollution Control Board.
3.23.4 Simplification of Labour Laws:
The regulatory regime of labour laws has been simplified to suit the needs of IT/ITES companies. General Permission is granted to all IT/ITES companies to have 24x7 operations/to run in three shifts. The barriers pertaining to employment of women at night have been removed. In particular, the IT/ITES companies will be permitted to self certify compliance of labour laws, maintaining the registers and forms as contemplated under the different Rules and Acts administered by the Department of Labour.

3.23.5 Floor Space Index (FSI):
In order to facilitate adequate availability of floor space to IT/ITES units in the urban area, State Governments would permit more than permissible FSI to IT Parks.

3.23.6 Venture Fund for IT/ITES Companies:
The State Governments have set up venture capital fund for IT/ITES an company which is meant for development of IT services, IT software and IT products.

3.23.7 Patent Filing Cost:
To encourage the filing of patents by IT/ITES companies, costs of filing patent are reimburse up to a maximum of Rs.2 Lakhs per patent awarded per year.

3.24 Special incentives to the Start-up Companies:
Provide support to Start-up companies, which are promoted by budding entrepreneurs with creative ideas such as subsidy on lease rental, power bills, recruitment assistance etc. 25% subsidy on lease rentals upto Rs.5 lakhs per annum maximum upto a period of three years, for the plug-and-play built up office space ranging from 1000 sft to 5000 sft, leased by Start Ups in STPI, IT/multi-purpose SEZs/IT Parks (both Public & Private promoted). 100% reimbursement of stamp duty, transfer duty and Registration fee paid by startup IT Industry & Communication technology industry companies on sale/lease deeds on the first transaction.
150% reimbursement of stamp duty, transfer duty and Registration fee paid by startup IT Industry & Communication technology industry companies on sale/lease deeds on the 2nd transaction.

3.25 Admissibility of Industrial Power category tariff:
25% power subsidy on power bills for a period of 3 years or Rs.30 lakhs whichever is earlier, from the date of commencement of commercial operations. Recruitment Assistance of Rs.2.5 lakhs for recruitment made upto 50 IT professionals within a period of one year.
Reimbursement of patent filing cost to a maximum of Rs.2 Lakhs per patent awarded per annum 50% Exhibition stall rental cost will be reimbursed for participating in the notified national/international exhibitions limited to 9 sq.mts of space.
Special Incentives for setting up IT-ITES Industries in Tier II and Tier III locations Definition: State Governments have specified Tier II and Tier III locations in their respective States for the purpose of availing these incentives.
A subsidy of Rs. 10 lakhs to the first five anchor IT/ITES companies, as identified by the State Government, employing more than 250 employees in IT or 500 employees in ITES in any Tier-II/Tier-III location.