CHAPTER -2

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2.1. INTRODUCTION

Kerala, one of the federal states of India, is a region known for its high levels of achievements in education, healthcare and social justice. Kerala, known far and wide as ‘God’s own Country’, is a unique state that achieved many distinctions of all-round improvements in the social sector. Despite low per-capita income, the state’s achievements in literacy, education, health, etc. are comparable to some of the developed countries. In line with global trends, the government of Kerala formulated an Information Technology (IT) policy in the year 1998. The policy aims at increased application of IT in all walks of life, encasing the IT industry base, creating a robust state information infrastructure and creating human resources for IT.

In the context of developing countries, IT is seen as one of the most significant forces of modernization. Kerala has all the intrinsic advantages that can foster the growth of IT for social and economic development, including, advanced levels of literacy, education and healthcare, an excellent telecommunications network reaching all towns and villages, educated women, availability of world class IT professionals and IT infrastructures and three international airports. Prior to 1995, the state did not make any serious attempt for the promotion of IT, probably due to the widespread misconception in the minds of the trade unions and common people that the application of IT may result in loss of employment. However, the growth of IT in nearby states and all over the world along with the lucrative jobs obtained by Keralites outside the state were eye openers and the potential of IT in creating large scale employment was realized by the state, albeit a little late. Once the mindsets of the people started to
change, the Government of Kerala stepped up its intervention by announcing a comprehensive IT policy in April 1998 and established a new IT department for promotion of IT. Today, Kerala is where the search for a perfect IT destination ends.

2.2. GROWTH OF IT SECTOR IN KERALA

Information Technology (IT) is the world's fastest growing economic activity. The IT industry has been found to be ideal for Kerala in terms of its potential to generate opportunities and employment with little pressure on land, environment and other resources. This is one of the most people-friendly and environment-friendly industries of modern times. The Government of Kerala realized the significance and enormous potential of this sector in the economic development of the State and will facilitate the creation of a sound IT production base through conscious efforts and policy initiatives. For Kerala, IT is not only as a tool for improving governance and creating more jobs, but more significantly, as a means to greatly enhance the standard of living of the people. Use of IT in enhancing the delivery of Government services leads to a very responsive and transparent administration facilitating the empowerment of the people and satisfying their right of information.

The Policy Statement addresses components such as, “Increased application of Information Technology in all walks of life, enhancing the IT industry base so as to make Kerala a very fertile location for ventures in Information Technology, Creating a robust State Information Infrastructure, and Human Resource Development for Information Technology”. The government initiatives also include removal of hassles in the regulatory environment, making it pro-active and sensitive to the needs of the industry, incentives and concessions for IT ventures, special package for financing IT ventures, promoting Kerala as a location for IT investments etc. To promote the use of IT, government have spelt out mission targets covering PC penetration, internet hooking to all schools and colleges, Internet kiosks in every Panchayat ward, and Modernization and integration of Government functions using Information Technology. Kerala has also succeeded in strengthening the TECHNOPARK and setting up of
Software Technology Parks and Software Complexes in major cities in the State. A High Power Committee under the leadership of the Chief Minister is co-coordinating and directing the strategies to achieve rapid penetration and use of IT in all sectors.

The establishment of a sound State Information Infrastructure with a communication backbone, switches, nodes, access networks and data warehouses are underway. The state now has an Information Infrastructure that can effectively handle the traffic for several years to come. It is also strengthening data warehousing for promoting trade, commerce and tourism and for enhancing delivery of Government services, its transparency and empowerment of the people.

Human Resource Development is a very critical aspect in the development of Information Technology. The Government has taken steps for consolidating and strengthening the core competence of the state on the human resources front to propel the development of IT industry. The Government plans to establish an Institute of Information Technology, introducing Information Technology as a specialized branch of study, development of Centre’s of Excellence in Information Technology, creating a fund for upgradation of training/educational infrastructure and introduction of a system for accreditation.

IT is transforming resource-based economies to knowledge-based economies. Information services, products and production processes are evolving rapidly. Knowledge engineering is replacing pure data and information oriented engineering. The application and impact of Information Technology is so pervasive that it is affecting issues as diverse as balance of payment, skill development, design competence, mass media reach, industrial competitiveness, publication, communication, transportation, health, financial infrastructure, industrial productivity and managerial efficiency. With its appropriate use the governance of the State can be made highly effective and citizen-friendly, contributing to the standard of living of the people. Internet is becoming widespread and popular and electronic commerce is going to be
the way the world will do business in future. Entirely new ways will evolve by which future Governments will function.

According to NASSCOM president Som Mittal, “The state is slated for a 50 percentage rise in IT exports during the financial year 2013-14. The IT turnover of Kerala touched $1 billion last year. This portends bright future for the industry. Kerala is witnessing a rapid growth with around 500 companies operational and 80,000 direct employees. SMAC (Social, Mobility, Analytics and Cloud) is also emerging as the in-thing in IT offering Indian companies ample opportunities to widen their horizons”. And the government was keen on infrastructure development and skill enhancement in the IT sector. The state government is now working on setting up innovation zones in the state and here the emphasis would be given to the hardware industry because this is a sector where the country is relying heavily on imports. Innumerable jobs will be created for technical professionals in this segment.

2.3. IT INDUSTRY IN KERALA – PRESENT SCENARIO

IT sector is creating greater employment than any other sector in the state. With about 40,000 direct employments in TECHNOPARK and INFOPARK, and indirect employment of about 200,000 (IT is well-accepted to have multiplier of 1:4), the number of jobs created due to IT in the last decade is around 2.5 lakhs. This would be higher than any other sector in the state. Moreover, there is potential for still higher number of jobs. It is possible to scale up the IT development to the next level. Government plans to increase the number of IT Parks to 10 locations over the next 3 years. Since such scaling would require huge financial resources, the strategy is to do this jointly with private participation. To do this, Government of Kerala has created a dedicated company, entitled, Kerala State IT Infrastructure Ltd.,(KSITIL) exclusively for the development of IT infrastructure.

The business model for the company is to acquire land, create value addition to providing basic infrastructure like electricity, water, and road, obtain SEZ status and such other Government approvals that may be required and then allot lands to private
developers for development of either IT SEZs or IT Parks. Revenue so generated is reinvested in projects it promotes as company’s share capital. The company is currently in the process of acquiring land for the following projects: phase 3 expansions of the TECHNOPARK, TECHNOCITY at Thiruvananthapuram, CYBERPARK at Kozhikode, INFO PARK expansion at Kochi. Further new sites for acquisition are under consideration for development of IT Parks.

The strategy to increase IT infrastructure in Kerala is coincidentally happening at a time when the overall global economy is going through a severe turbulence. The economic downturn provides an opportunity to develop the proposed economic infrastructure so that when the next growing phase of the cyclic IT industry comes, Kerala is ready with world class IT infrastructure. Besides, economic pressures would force IT companies to look at cost cutting measures, which could make Kerala an attractive destination compared to bigger metro destinations. Another scheme being implemented by KSITIL is the Techno lodge scheme which proposes to promote setting up of rural IT Parks thereby promoting development of IT in smaller towns also. This scheme aims to acquire Government lands and buildings, which are suitable for transfer to KSITIL for setting up of IT Parks.

Cities in Kerala especially Thiruvananthapuram and Kochi have been rated as the next booming metros and challenging IT locations in India. It is also predicted by NASSCOM that the tier two cities such as Thiruvananthapuram, Kochi etc. offering quality life with good infrastructure and educational institutions will attract more IT/ITeS businesses than existing leading locations. Both Thiruvananthapuram and Kochi are in the process of building modern IT Parks. The third phase expansion of TECHNOPARK and TECHNOCITY in Thiruvananthapuram, the expansion of INFOPARK, Kochi and the SMART CITY with private participation are underway. IT majors such as Tata Consultancy Services, Infosys Technologies, Wipro Technologies, etc., have already acquired land in these cities and are in the process of constructing their own campuses. The State Government is also in the process of setting up a ‘hub and spoke’ model IT development by developing TECHNOPARK in Thiruvananthapuram, INFOPARK in Kochi and CYBERPARK in Kozhikode as the
hubs and other district locations as the Spokes. Activities for setting up IT Parks in Kollam, Cherthala, Ambalapuzha, Koratty, Kozhikode, Kannur and Kasaragod have already commenced.

The State has made substantial progress in Information and Communication Technology (ICT) sector in terms of investments, infrastructure development and employment generated in ICT sector through focused initiatives of the IT Department. A significant stride in the IT sector during the past year has been its conscious march towards building quality infrastructure and providing quality manpower required by the Industry. Following are some of the major ICT and e-governance initiatives of the State that promises delivery of services in a more simple, efficient, accountable, responsive and transparent manner.

2.3.1 Kerala State IT Mission

Kerala State Information Technology Mission (KSITM) is an autonomous nodal IT implementation agency for Department of Information Technology, Government of Kerala which provides managerial support to various initiatives of the Department. Many of the government services in the state have already been transformed into the e-mode and the contribution of the Kerala State IT Mission, in this regard, cannot be left unnoticed. The KSITM has envisaged a wider scope for the e-factors in the day-to-day lives of Keralites and it is keen on implementing many citizens –friendly, IT-enabled projects. Ever since its inception, KSITM has undertaken a robust promotional campaign to hard to sell in Kerala as the emerging IT/ ITeS destination in the country. This is achieved through the participation in IT events and road shows, business meets, release of advertisements and by publishing publicity materials.

2.3.2 AKSHAYA

Kerala is one of the first states in India which realized that people should be made computer-literate and they should have easy access to computers, and the benefits of ICT revolution have to reach them. The scope and scale of operation of Akshaya is
multifaceted, which involves coordination of project activities in 1223 local bodies in fourteen districts, dealing with more than 3000 e-centers and 64 lakh trainees in the State. Akshaya e-pay is an online system for collecting various utility bills. Akshaya is targeting to make at least one member of every family computer-literate and the e-literacy training is being carried out successfully. E-payment, e-learning, and e-business etc., are the priority sectors of services through Akshaya e-centers.

2.3.3. FRIENDS

FRIENDS, is a single window delivery of Government services which simplifies interaction between the citizens and the departments. It is now operational in all 14 Districts serving 35 lakh families in the State. The counters are equipped to handle 1000 types of bills in various combinations, originating from various departments. Government aims to widen the services in accordance with larger e-governance road map of the State wide Area Network and to develop- as a Centralized system with “Any Payment - Any Centre” concept.

2.3.4. SEVANA

With view to disseminate increased application of IT to the rural people SEVANA is started in association with library council. The project envisages converting about 400 libraries in rural areas into IT dissemination centers by providing free Internet connections so that they can function as rural information centers. It provides information on various government schemes, programs, general information on local bodies, and links to important web-sites, and other important facts relevant to the rural population. The center became a point of convergences for villagers seeking information services and an entry into the world of computers and computer literacy. Training for Internet awareness is also being organized in these centers.
2.3.5. **PEARL**

PERAL aims at providing a transparent, efficient and vibrant public interface thereby bringing in efficiency and motivation at the Sub Registry office level. This in turn will help to dispense the manual routine of filing, searching, accounting, reporting etc., reduce corruption, and get reliable response.

2.3.6. **Local Language Computing**

Availability of computing tools and digital content for the Local language, ‘Malayalam’ is essential to bring benefits of Information Technology to more people. KSITM is spearheading the research and development projects in Malayalam language computing. The Centre for Linguistic Computing Kerala (Click) is jointly set up by KSITM and C-DIT. It will provide a platform for enabling the use of Malayalam on operating systems with the help of Unicode.

2.3.7. **ICT for Underprivileged**

KSITM, in line with government policy of digital inclusion, has been implementing special programmers for under-privileged sections in the society. Under this scheme KSITM was primarily focusing on helping visually challenged and then moved to the mentally challenged and backward communities. INSIGHT programmer has been launched to use ICT to help differently-able people to participate in emerging Knowledge Society.

2.3.8. **Kerala State Wide Area Network (KSWAN)**

Kerala State Wide Area Network (KSWAN) is envisaged to be the core common network infrastructure for e-Governance, over which all the above applications would run. The State Information Infrastructure (SII), connecting Thiruvananthapuram, Kochi and Kozhikode will act as its backbone. It is extended to all the 14 districts and to the 152 Block Headquarters. The network will bring into its ambit about 1660 remote
offices of Government Departments, and ultimately connecting all the Government offices in future using point-- Multipoint Wireless Systems.

2.3.9. KSWAN – Kerala Secretariat Wide Area Network

Digitalization of Secretariat & Directorate level activities by connecting the Secretariat, Public office and Vikas Bhavan under a WAN is the prime aim of the project. Secretariat being the main administrative centre, its computerization is the basic need for the state-level e-governance activities. So it is selected for pilot implementation. The functioning of the application software through the networked computer system will enable the electronic file flow.

2.3.10. Citizen Call Centre

The Citizen Call Centre, set up in the State Capital provides information on transactions pertaining to various Government departments, which are required by common citizens, over a local call from anywhere in Kerala. Call centre is envisaged to enable the Government to Citizen (G2C) interface for the quick delivery of critical information on Government schemes, programs, entitlements, welfare benefits etc. CCC is equipped with full-fledged database having details of more than 2000 Government processes with speedy access provisions.

2.3.11. Video Conferencing (VC)

The Video Conferencing project is envisaged for connecting all District Collectorates, Kerala House New Delhi, Secretariat, Public Office, Vikas Bhavan, Advocate General’s Office and Kerala State IT Mission to organize immediate online conferences and discussion, saving time and expenses and recording the conferences etc. The Chief Minister of Kerala is also promoting a VC program called Sutharya Keralam whereby he forthwith disposes complaints from general public.
2.3.12. IT @ School

This project is a major scheme imparting computer education to high school students for the qualitative improvement in the conventional learning systems and to equip teachers to use computers as an educational tool. The project was implemented in all State high schools and effective training to teachers has also been given.

2.3.13. E – Krishi

Market driven agricultural initiative through IT enabled Agri Business Centers addresses the existing gap in agriculture information flow and transaction management. The project envisages facilitating and enabling farmers and other stakeholders to interact with Agricultural Service Providers in the private, government and non-government sectors. The project will provide a web-based solution enabling the small and medium farmers.

2.3.14. M-Governance

The Kerala M-Governance system is integrated to a mobile application which is so designed to include all the services and departments under Kerala Government. The application works in offline mode. The objective of the project is to integrate the advancements in mobile technology with various Government departments to create cost effective, efficient and round the clock government information systems.

2.3.15. Department Projects in E-Governance

**SMART** Move Project: Implemented by the Motor Vehicles Department offers fast processing for many citizen friendly facilities.

**TRIMS** (Treasury Information System): Streamlines working of all 187 treasuries in the State. All activities from bill submission to payment and accounting are automated.

**Thozhil:** Aims at the total computerization of Employment Exchanges.
SWIFT: One point solution for issue of all the 25 certificates from Taluk Offices.

AIMS: (Agriculture Information Management System) Agriculture resources are monitored using AIMS networked 1500 offices spread across the State.

2.4. KERALA AIMS TO BE THE BIGGEST IT HUB

The State government recently linked a memorandum of understanding (MoU) with Cognizant, a NASDAQ-listed, US headquartered provider of information technology, consulting, and business process outsourcing services to lease out 15 acres of land in Kochi INFOPARK Phase II. Cognizant’s new campus in INFOPARK Phase II, when fully completed, will have a built-up area of 1.6 million Sq.Ft, and a capacity to accommodate around 12,000 professionals. Cognizant will chip in Rs 250 crore for the first phase and it will consist of a 5.5 lakh sq. ft. software development block meant to house over 4,000 professionals. With big IT names like TCS, Infosys, Wipro, Oracle, HCL, Cognizant and Cap Gemini setting up offices in the state, it is very obvious that Kerala is becoming a hot IT destination and an investment friendly state. Today, Kerala is on the brim of the next phase of IT growth and the government assures all support to all companies who will play a key role in the development of the state as a leading IT hub of the country.

2.5. HUMAN RESOURCE DEVELOPMENT FOR IT /ITeS

Human resource constitutes the single most important resource and the critical factors that determine the growth and development of the IT industry. It is noteworthy that Kerala is blessed with “world class” human resources and they have played an important role in the development of IT industry in Kerala. The Government is seized of the urgency for consolidating and strengthening the core competence of the state on the human resources front to propel the development of IT industry. In order to sustain the growth of ICT industry, regular supply of fresh stock of human resources with varied skills, experience and exposure is needed. Sensing the
need of the hour, the governments have already taken steps by incorporating ICT in the school curriculum. Further, the ITeS Habitat in Kochi and world class training facilities in IIITM-K offer variety of quality training programs to the students. Currently, there are 4545 ICT training institutes in the State.

Kerala has always been the producer of fine skilled human resources for many industries around the world. Government has realized the importance HR in IT industries and has come up with many initiatives. 11 percent of the national IT pool is skilled human resources from Kerala. Government has taken steps to establish Government-Industry-Academia task force to identify knowledge partners to develop content for the new curriculum and to develop IIITMK at Thiruvananthapuram with more departments and infrastructure to create a pool of Hi-tech human capital, which in turn will enable the growth of IT industry in the state. Kerala also have plans to establish an ICT Academy with unified syllabus and standards to enhance the employability skills, communication skills and technological skills with Industry participation. It is also planning to introduce a Grading system for Quality Accreditation.

2.6. IT PARKS IN KERALA

TECHNOPARK in Thiruvananthapuram, INFOPARK in Kochi, CYBER PARK in Kozhikode are the three IT Parks promoted by the Government of Kerala. All these Parks have world-class facilities and excellent growth prospects. They operate in Hub and Spoke model and continue to construct more built up space. Considering the growing demand of IT space from IT industry for starting operations from the State, the government is pioneering the development of IT/ITeS Special Economic Zones (SEZs), IT Townships and IT Parks in the state of Kerala. The parks also offer the option for private developers established in India and abroad to construct more built up space. Further, In order to increase the availability of IT infrastructure government is promoting IT Parks in the Private Sector outside the government owned IT Parks. Following are the major IT parks in Kerala.
Table 3. IT Parks in Kerala

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<tr>
<th>MAJOR IT PARKS</th>
<th>PRIVATE IT PARKS</th>
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<tr>
<td>TECHNOPARK</td>
<td>SMART CITY - KOCHI</td>
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<tr>
<td>INFOPARK</td>
<td>L&amp;T PARK</td>
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<tr>
<td>CYBERPARK</td>
<td>LEELA PARK</td>
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<tr>
<td>ITES HABITAT CENTRE</td>
<td>BRIGADE PARK</td>
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<td>RURAL IT PARKS/TECHNO-LODGES</td>
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Figure 3. IT Parks in Kerala
The major factor for IT growth is availability of talented human resources. IT professionals prefer locations that provide good quality of life and infrastructure. Employees in all IT Parks prefer to do “walk to work” instead of hours of commute. The need for commercial amenities such as malls, budget apartments, schools, guesthouse, star and budget hotels, multiplexes, entertainment centers, hospitals, sports and recreation centers, day care centers, working women’s hostel, restaurants, boat clubs, etc inside IT Park arises from this concept. Therefore, it is permitted to use Up to 30 percent of the land in Government owned IT Park for creating commercial amenities, to make the location an attractive destination for IT community.

2.6.1. TECHNOPARK

TECHNOPARK, Thrivananthapuram, an autonomous society promoted by the Government of Kerala, is India's first technology Park and among the three largest IT Parks in India today. In July 1990, the Government of Kerala conceptualized TECHNOPARK as a facility to foster the development of high-technology industries in the state. Its stated mission was to "Provide, Viably, Superior Environment and Services with Assured Quality of Service to Make Technology Businesses Intrinsically Competitive and Successful, and Promote Regional Development through Synergistic Linkages between Industry, Government and Academia, based on Continuous Improvement and Innovation". After its dedication in 1995, it has been growing steadily both in size and employee strength. It is the first and/or only IT Park in India having ISO 9001, ISO 14001, OHSAS 18001 and CMMI Level 4 certification. Today, it is the largest IT Park in India.

TECHNOPARK is spread over 330 acres, and about 4 million sq. of built-up space, and hosts over 285 IT and ITeS companies, including CMMI Level 5, Level 3 and several ISO 9000 certified companies, employing over 40,000 IT Professionals. It provides world class, robust and fail safe physical, power and data com infrastructure, yet low cost enabling environment for IT industry. The select list of companies working at TECHNOPARK include TCL, Infosys, Mckinsey & Co., Ernst & Young

A spectrum of unique Business Value-Adds helped it to provide a holistic enabling environment to make knowledge industry intrinsically competitive and successful, TECHNOPARK Software Engineering Competency Centre (TSECC) in association with IBM, TECHNOPARK Business Incubation Centre (T-BIC), incubating successful knowledge enterprises. It also hosts two prominent educational and research institutes viz., The Indian Institute of Information Technology and Management–Kerala (IIITM–K) and The Asian School of Business (ASB). TECHNOPARK has come to be the single largest source of employment in Kerala, with over 30,000 people working directly in the facility itself. Quality environs, international standard infrastructure, a comprehensive umbrella of support services, a significant cost advantage, and easy access to excellent human resources and remarkable ease of starting up make it India's most promising IT destination.

The culture at TECHNOPARK is cosmopolitan and diverse and in keeping with its motto ‘Harmony at Work’. It is one of the greenest IT Parks in the world, housing companies and people from around the world. This makes for a diverse multi-cultural community, working in harmony. The club in the campus of Phase I provide diverse facilities including a gym, a massage parlor, a swimming pool and courts for volleyball, badminton, and table tennis. It also has a restaurant and provides tour operators for organizing recreational travel of employees and their families besides organizing events as discos, cultural competitions, and other events. The TECHNOPARK Adventure Club holds activities like parasailing, rock climbing, rappelling, trekking and camping, paragliding camps and corporate training camps.
2.6.2. INFOPARK, Kochi

INFOPARK has ambitious plans to become one of the major IT Park clusters in the country. Ever since its inception in 2004, INFOPARK is well known among the IT/ITeS investors for its potential and is currently expanding to new locations in Cherthala and Koratty. INFOPARK is an IT Park situated in Kakkanad, in the city of Kochi, India. INFOPARK Phase I is spread over a 101 acre campus with more than 3,200,000 sq. ft. of built up area, housing over 80 companies which employ around 17,000 professionals. The Park is currently in expansion mode and is adding another 160 acres as part of the Phase II expansion. The notable companies in the Park include TCS, Cognizant, Wipro, Ernst & Young, Arbitron, Etisalat DB Telecom, IBS Software Services, UST Global, EXL Service, Orion India Systems and Xerox ACS to name a few. The software exports from INFOPARK touched Rs 900 crores in 2010-2011 with a YoY growth of 40 percent. The Park is built on the 'Hub and Spoke model' and acts as the hub to the spokes located at Thrissur, Cherthala and Ambalappuzha.

2.6.3. CYBERPARK, Kozhikode

CYBERPARK, 3rd IT Hub of Kerala is in the process of setting up IT Parks at Kozhikode, at the SEZs approved at Kannur and Kasaragode. It is planned in the lines of TECHNOPARK and INFOPARK to build, operate and manage IT Parks for the promotion and development of investment in IT and ITeS industries in Malabar region.

2.6.4. SMART CITY, Kochi

Smart City Kochi is an IT Special Economic Zone under construction in Kochi, Kerala in India. It is a joint venture between Government of Kerala (16 percent share) and TECOM - a subsidiary of Dubai Holding - Investments (84 percent share). This project envisions minimum 8.8 million sq. ft. of built up space out of which at least 6.21 million sq. ft. will be specifically for IT/ITeS/allied services. The project is expected to create over 90,000 direct jobs. Smart City Kochi is one of the first two projects of Smart
City's vision to build a large network of knowledge-based industry townships across the world. The project is coming up next to INFOPARK, the biggest IT Park in Kochi. The presence of INFOPARK, Smart City, KINFRA Park, etc., makes the region a very important center for IT/ITeS in the state of Kerala. The VSNL’s communication gateway, and the two submarine cables, has their landing points at the gateway. Smart City will be directly linked to the gigabyte router of VSNL, which provides the Park with 100 percent uptime data connectivity. Other major bandwidth providers such as BSNL, Reliance, Bharti Airtel and Power Grid Corporation are also present in the Park.

2.7. SOCIAL OUTSOURCING OF IT SERVICES

Social outsourcing, like any outsourcing, required a conjunction of demand and supply. Demand was provided in Kerala as a result of the state's IT strategy which aimed at the development of IT sector, computerization of government activities, and widening of IT skills bases of the state. This was supported by specific decisions, like mandated computerization within local councils. Kerala faced an internal supply constraint, both a lack of staff with IT skills capable of supporting the planned computerization and training programs, and a retention problem. External outsourcing was considered as a solution to such supply problems. However, the government opted to create IT-oriented social enterprises under the Kudumbashree (self-help groups) initiative. Starting with just one or two pilot enterprises in 1999, this approach fairly quickly developed a standard business model. Government offered support to a group of (typically ten) unemployed women from below-poverty-line households nominated or occasionally invited from the self-help groups. They are encouraged to invest US$30, and a government grant of ten times the total amount of the group's investment, and helps secure a matching amount as a bank loan. The women thus typically register their cooperative enterprise with starting capital of roughly US$6,000 of which only half must be repaid. Hundreds of these IT social enterprises have been created since 1999. They operate in three main areas viz. IT training, Data entry and digitization and PC assembly and maintenance.
2.8. ACHIEVEMENTS AND MILESTONES

The recent NASSCOM research on leading IT/ITeS destinations ranked Kochi & Thiruvananthapuram as a top notch ITeS destination with potential of challenging metros like Bangalore, Mumbai and New Delhi. World class skilled manpower with 100 percent literacy and a very high level of e-literacy aided by Government led projects such as AKSHAYA, Friends and Step ensures a ready manpower resource for ITeS/BPO sector. The core competencies of Kerala which makes it one of the most promising destinations for IT/ITeS investment includes 100 percent digital telephone exchanges, 98 percent of telephone exchanges connected by OFC to the National Internet Backbone, OFC backbones throughout the state, Highest telephone density, Lowest Power Tariff in the country, Highest Human Development Index, housing the First WiFi district in the country, 'SEA-ME-WE-3' and 'SAFE' submarine cable landings (1 of the 2 states in India to have two submarine cable landings), 15 GBps bandwidth support, VSNL's primary international gateway in Kochi handles around two third of the country's data traffic.

2.9. CONCLUSION

The government of Kerala is unleashing a unified IT brand initiative, to drive the state towards the status of a holistic and preferred IT destination in India. Kerala’s lead over the other states in India achievement in IT sector is significant and the state has all potential to capture a sizable market share. Despite heavy investment on building up infrastructure, the growth of IT industries is not commensurate with the potential of the state. The growth of software experts and domestic IT sector will definitely provide more employment opportunities. Kerala holds a distinct cutting edge over its competitors in IT industry as it has an impressive world class English speaking manpower and the requisite infrastructure facilities. Kerala IT, with its hub-and-spoke model of building IT centers, has really succeeded in bringing the benefits of IT to every citizen in the state.
The overall achievement in IT sector is significant for a state that has only a major per-capita income. Having a strong e-Governance infrastructure is a key enabler for the ICT industry to flourish and Kerala is one among the early adopters and ranked as leader state in e-governance. Despite the financial constraints, the state has made significant achievements in E-governance.

The growing infrastructure, cost of living, safety, and the availability of skilled personnel still remains to be best reasons for growth of IT industry in the state. Kerala is offering a place that is family-friendly, with a good education and medical infrastructure, and a professional environment that is gearing for growth. Kerala has the world class IT infrastructure facilities housing companies from all over the world. The state is implementing novel concepts like Certified Private IT Parks, IT townships and Innovations Zones etc., to give a thrust to the development of the sector. Kerala is in a state of economic transformation and the state look forward to nonlinear growth in the IT sector through intellectual property creation.

The government initiatives to make Kerala a totally investor friendly state by developing sound infrastructure coupled with a pro-active IT policy that is aimed at laying the red carpet to all companies makes it one of the best IT destinations in the world. Continued and improved access to citizen services by the government will also be of immense help. Kerala has always been a forerunner among the Indian states and already achieved unique distinction as a preferred IT/ITeS investment destination and also a leader in E-Governance. It is a state that just keeps getting better with IT.