e-Governance is an area where there are no precedence or experiences to rely on. Some of the key challenges in designing initiatives include the Computerization of programmes given that the technology keeps growing at Moore’s law’s pace. Designing appropriate business models. Change Management challenges for Internal stakeholders, External stakeholders and Political machinery.

Innovative response of GOK to the challenges – “6-I Model of e-Governance”

Given this context, the Department has developed and implemented a 6 – ‘I’ strategy for e Governance in Karnataka. The elements of these are,

- Creating appropriate Institutional framework.
- Creating necessary core e-infrastructure to enable agencies/ departments to plan and implement initiatives.
- Enabling Internal Business Process Reengineering.
- Designing appropriate Investment (Business) Model.
- Internal Capacity Building.
- Innovations in use of technology for delivering better outcomes for the citizens.

4.1: ‘6- I’ e-Governance Framework

‘6- I’ e-Governance Framework Six- I framework for e-Government, developed by DPAR (e-Governance), Government of Karnataka Institutional Framework for e-Governance: e-Governance has been a core focus of the Government of Karnataka. Realising that the appropriate Institutional Framework is a pre-requisite to translate a vision into reality, the Government has put in place necessary policy and legal framework as well as organizational structure for e-Governance.

‘6- I’ e-Governance Chart

- Institutional Framework.
- Internal Process Reengineering (GPR).
- Internal Capacity Building.
- Innovation.
- Investment Model (Business Model).
- Core Infrastructure.

6- I’ e-Governance Chart

**Legal and Policy Framework:** Policy lays down principles/guidelines that can lead to achievement of a given goal. Policy framework comprises vision statements, guidelines, laws, rules, etc. Some of these elements adopted in Karnataka are: Vision

In terms of vision, e-Governance Department has focused on the goal of creating a single window delivery mechanism for Government Services to the Citizens of the state. The vision guiding the Department is: “To Enhance and Promote the use of IT in the functioning of the Government in order to make the required information available to all Citizens and to provide all Services in an Efficient and hassle-free manner and identified services on an On-line basis”. GoK VISION Core Infrastructure Investment Model (Business Model) Innovation Internal Capacity Building Internal Process Reengineering (GPR) Institutional Framework The Department seeks to enable Government to provide “Any Time, Any Where and Any Device” service to citizens.

Legal Framework: Government has enacted two important pieces of legislation to give teeth to implementation of e-Governance initiatives. These include:

Karnataka Information Technology (Issue of Digital Extracts and Certificates for e-Governance Projects) Rules, 2007: These rules provide for a comprehensive
process for delivery of electronic delivery of e-Governance services to citizens. The rules, among other things, provide for Appointment of departmental document security controllers, departmental digital certificate controllers and e-Governance digital systems controllers and supervise their functioning, Supervise the departmental e-Governance centres and conduct periodical audit of their activities, Notification of e-Governance services, Appointment of e-Governance delivery centres and organizations, Karnataka Transparency in Public Procurement Act, 202: Amendment issued in 2008, making e-procurement a part of this act. Organisational Framework: The importance given to the e- Governance can be ascertained by the fact that a separate Department of DPAR (e-Governance) was created by Government in 23, to plan and leverage the ICT for the benefit of the common man. This is a unique feature, as no other state had a separate Department for e-Governance. Creation of this Department as part of Administrative Reforms stems from the strong conviction of the State that e-Governance is a tool to bring about administrative reforms. Department of e-Governance plays the following roles:

- Creation of Policy framework, setting the vision and guidelines for e-Governance projects.
- Creation of Administrative framework for approval of e-Governance Projects of all the Departments.
- Creation and maintenance of Core e-infrastructure that can be used by Departments for planning and implementing e-Governance initiatives.
- Development and promotion of common standards in designing of the e-Governance projects.

The Department has created two unique institutions to give thrust to planning and implementing e-Governance infrastructure that can be used by all the Government Departments for planning and implementing e-Governance initiatives. These are: Centre for e-Governance: A Society created in 2000 with the mandate of establishing and maintaining the core e-structure such as Networks, Data Centre, core applications and capacity building activities. Directorate of Electronic Delivery of Citizen Services (EDCS): a Government Department mandated with the operations of common citizen
service delivery centres such as Bangalore One & Karnataka One. This institutional structure is unique to Karnataka. Ecosystem for Approval and monitoring of e-Governance Projects: Government of Karnataka has put in place a complete ecosystem for approval and monitoring of the e-Governance Projects in Karnataka.

This includes: Oversight mechanism common to all the Departments:

i. Empowered Committee under the Chairmanship of Chief Secretary to Government, with Principal Secretary (e-Governance) as the Member Secretary: For scrutiny and approval of all the e-Governance Projects in Karnataka.

ii. Annual Action Plan Approval Committee, under the Chairmanship of Principal Secretary (e-Governance) to review and approve annual action plan concerning e-Governance in all the Departments.

iii. Core Committee on e-Governance, under the Chairmanship of Prof. S. Sadagopan and comprising of experts from academia, industry and Government to review the e-Governance status of departments and suggest roadmap. Committees specific to each Department

Project Implementation and Approval Committee under the Chairmanship of respective Secretary ii. Technical Advisory Panel with external experts for technical scrutiny of eGovernance Projects of the respective Departments Core e-Infrastructure: Establishment and maintenance of the core infrastructure to enable Departments to plan and implement e-Governance initiatives.

e-Governance Department through the Centre for e-Governance provides the services of the core infrastructure to all the Departments. These include: Mobile One, KSWAN, KSDC, KSECLAN, Mail Services and SSDG [data year – 2016]

STRATEGIES Internal Process Engineering Government Process Reengineering is one of the critical elements that the e-Governance Department has focused on. The Department has adopted the following approach to enable this: i. Create a common core e-infrastructure platform, such as KSWAN, SDC, etc. to enable bring about GPR.
This includes,

a. Development of application, eg. HRMS, e-Proc, etc.
b. Creation of backend infrastructure for workflow delivery, eg. Govt. Business Centres in Taluks under KSWAN
c. Hosting of centralized application, database, etc. eg. SDC, KSDC
d. Creation of frontends like Bangalore One and Karnataka One
e. Provision of gap-filling IT infrastructure such as computers, printers, scanners, connectivity, etc., to enable workflow automation.

For eg. Provision of computers to DDOs for using HRMS, computers to offices for e-Procurement. II. Working with and facilitating GPR in major departments having high citizen interface, to enable them to deliver citizen services. This ensures maximization of impact of process reengineering. III. Develop and implement core initiatives that bring fundamental changes in working of all Government Departments, eg. HRMS and eProcurement. These in turn create capacity and experience amongst the Government Departments to take up further GPR in respect of their other core services. IV. Create legal framework for delivery of services electronically: Rules have been formulated as early in 2007 to enable the Government Departments to electronically deliver the services. Rules are called the ‘Karnataka Information Technology (Issue of Digital Extracts and Certificates for e-Governance Projects) Rules, 2007. V. Issue of Digital signature certificates: DSCs are issued to the concerned officials of the Government to ensure digital signing of the documents and thus ensure security and accountability.

The above strategy has been successfully implemented. Some of the Departments where Process Reengineering has been done include the following:

i. Revenue Department: Issue of various certificates (38 different certificates) such as Caste, income, living, agriculture, etc., through Nemmadi RDS application

ii. Revenue Department: Societal Security Pensions (5 Services)
iii. E-Procurement: Completed Process Reengineering of procurement process implemented in Departments and agencies

iv. HRMS: Completed Process Reengineering of Employee Paybill generation – implemented across all the Departments.


vi. Survey and Settlement Department: Mojini - preparation and issue of the maps in respect of individual parcels. vii. Registration Department: Electronic registration of the property documents

viii. Transport Department: Issue of Driving Licenses and Registration Certificates

ix. Commercial Tax Department: e-Filing of returns and electronic payments of Tax

x. Food and Civil Supplies: Issue of Ration cards

Initiatives that were listed to go live included:

- Labour department services – with GPR
- Agricultural Department services,
- Right to Information application and appeal,
- Integrated Decision Support System for Monitoring Developmental Programmes of Karnataka,
- Suvarna Arogya Suraksha Yojana – Cashless insurance for the BPL families for 42 identified diseases

o Creation of State Portal and Service Delivery Gateway Karnataka was the only state (till 2012) in India, where GPR had been carried out to the extent outlined above.

It is the only state where more than 50 G2C services are being provided through a reengineered process. This has been done by e-Governance Department.

Investment Model: Designing of an appropriate business model for e-Governance Projects is extremely critical for sustainability, scalability and replicability of initiatives. Investment or Business Model for e Governance Projects varies with the nature of projects. Hence depending on the focus of the project, revenue flows (if any), implementational complexity and financial position of the Government, the business model is decided. e-Governance has broadly two business models:

Transaction based Revenue Sharing Model: This is implemented in the projects where there is a steady stream of revenues and where incentive has to be created to maximize the transactions by the Private Partner. This ensures alignment of business interests of the private partner with the service interest of the Government. Examples of such business model are: B1, eProc, etc.

Capex and Opex on a QGR Model: This model is implemented where there is heavy investment in the beginning itself and involves O
and M, such as core e-infrastructure projects such as networks, data centre. In such projects, Capex is converted into QGR and paid over a period of time. This ensures continued stake for the Partner to maintain the level of services as per the requirement throughout the project period. Examples of such business models are KSWAN, SDC, SECLAN, etc. Business interests are also secured through proper exit management. Depending on the nature of projects, business model is decided. Internal Capacity Building Building the capacity of the Government Departments to conceptualise, plan and implement e Governance initiatives, e-Governance Department has adopted the following approach to ensure capacity building of the Departments by: Organising and facilitating capacity building activities such as workshops, seminars, etc., to create awareness about use of ICT for governance. Designation of Chief Information Officers in each Department to create a focal point for management and implementation of e-Governance initiatives. Training Programmes – specific to projects as well as general and basic skill building programmes both at the central level and in the field. E-Governance Consultancy Support, through Centre for e-Governance: Under this, assistance is extended to the Departments for requirement assessment and preparing e-Governance Project Documents. Consultants are provided the Departments under the NeGP funded Capacity Building Schemes, for the following activities:

a. Process Study (as is and to be)
b. Gap Analysis (Both technical and process)
c. Functional requirement Specification, preparation
d. DPR (Detailed Project Report)
e. RFP preparation, and f. Bid Process Management Consultancy support has been provided to many departments to plan and implement initiatives.

This enabled launch of major initiatives such as Khajane II, Financial Inclusion Programme, UID Enrolment (ongoing), Registration Services, Urban Property Record Project, etc. Innovations Building blocks for realizing the above vision is Citizen Centric Reforms, Administrative Reforms, Creation of Core infrastructure to enable Government process reengineering The Department has conceptualized and
implemented several e-Governance initiatives that have set the agenda for e-Governance at the national level. Many initiatives of the Government of Karnataka have been unique in the country and have set the agenda for national initiatives by Government of India. Karnataka is rated as the leader in e-Readiness amongst all the stats by GoI (NCAER Study, March, 2010). Impact of the initiatives of the Department of e-Governance Initiatives that have been launched by the e-Governance Department have led to a profound change in the landscape of Governance of Karnataka. Some of the key impacts include: Increasing transparency in administration. Improved accountability in administration as well as service delivery. Better delivery of services to the citizens, leading to –

- Reduction in transaction costs.
- Reduction in drudgery in accessing citizen services o Convenience of accessing citizen services under one roof.
- Significant savings to the Government due to improved competition in the e Procurement process.
- High e-readiness of the State to implement e-Governance initiatives.
- Replication of the efforts elsewhere.

4.2: About Centre for e-Governance (CeG)

The Centre for e-Governance is a Society setup by the Department of Administrative Reforms (DPAR), Government of Karnataka, under the Karnataka Societies Registration Act 1960. The area of operation of the society extends to whole of Karnataka State. The Society was established in the year 2006. The Centre for e-Governance is an autonomous and independent body set up for conceptualizing, implementing and monitoring of various e-Governance initiatives in Karnataka.

Projects managed by Centre for e-Governance (CeG) are broadly classified as follows:

4.2.1: Core Infrastructure Projects

These projects namely SDC, KSWAN, SecLAN, M1, Mailing Service and SSDG, etc., act as underlying foundation or pillars on which all the e-Governance projects in
the state can run and operate. Establishment and maintenance of the core infrastructure has enabled Departments to plan and implement the suitable e-Governance initiatives. DPAR (e-Governance) through the Centre for e-Governance provides the services of the core infrastructure to all the Departments.

Projects managed by Centre for e-Governance

4.3: Core Enterprise Applications
The enterprise applications such as HRMS, e-Procurement and Sachivalayavahini that cuts across various Departments, Users, Citizens, etc. are very important and useful services. These applications have abundantly helped in supporting the working of the personnel in Karnataka Government Secretariat in various ways. Eg. Smooth and effective disbursement of salaries to officers and personnel, ensure fair opportunity and transparent tender processing in G2B services and also comfortable and meticulous movement of documents/files and correspondences across the offices, maintenance of attendance, etc.
4.4: Citizen Delivery Services
Offers UID – Aadhaar enrolment to residents of Karnataka State. An ambitious programme of Govt. of India till date, the UID is to ensure accurate identification of beneficiaries for government services in India and avoid duplicate or hoax beneficiaries while delivering the services to citizens. Karnataka is in leading position in terms of the almost achieved complete registration and assigning of Aadhaar numbers.

Capacity Building
- Helps build specific competencies and expertise among Government personnel in implementing and managing e-Governance Projects.
- Supports assisting Government Departments in Planning and implementing e Governance initiatives.

4.5: Organisation Structure
The Centre for e-Governance (CeG) is governed by a Governing Council. The Chief Secretary to Government of Karnataka is the Chairman of the Governing Council. The Principal Secretary, DPAR (e-Governance) is the Chairman of the Society. An Executive Committee chaired by the Principal Secretary (e-Gov) and comprising of senior officers of Government of Karnataka, representatives from academia, NIC, industry provides strategic and operational guidance to the activities of the society. The day to day functions are performed by the Chief Executive Officer.
4.6: Core Objectives

To facilitate rapid and effective use of Information Technology for the benefit of common man

- To conceive, implement and monitor various e-Governance projects in the state in order to achieve the goal of the State Government to take IT to the common man.
- To provide technical support to various Government Departments and entities in their IT projects.
- Web based Centralized Data storage and management
- Citizen centric services of information, services and goods
- To co-ordinate with the Government Departments and entities as well as undertake a few critical projects that are likely to be useful to more than one Department

Vision

"To Enhance and Promote the use of IT in the functioning of the Government in order to make the required information available to all Citizens and to provide all Services in an Efficient and hassle-free manner and identified services on an On-line basis".

Mission
“To empower the masses, both rural and urban, with improved Service Delivery through web presence, public Interaction and transaction thus catering to economic development and resulting in perceivable transformation”.

Government of Karnataka (GoK) is a pioneer in leveraging information and communication technology (ICT) for better governance and is at the forefront of implementation of electronic-Governance (e-Governance) initiatives in the country. The Centre for e-Governance (CeG) is a nodal agency established in the year 2006, under the Societies Registration Act, to steer the e-governance policies and strategies in the state. It is the custodian of the e-governance core infrastructure and basic administrative reform based applications created in the state. In fact, it is unique in the state as it is placed in Department of Personnel & Administrative Reforms (DPAR) which is directly accountable to the Chief Minister of the state. The services of CeG over the years has proved to be immensely contributive in realizing the benefits of IT for common man. True to the ethos of the IT sector that demands autonomous functionality, the CeG spreads open its wings to various innovative projects aiming to empower citizens through the support of e-Governance.

Today, the state can boast of state-of-the-art two Data Centers, MPLS technology based Karnataka State Wide Area Network and core applications such as e-procurement and HRMS groomed under CeG with cent percent performance quality and standards, even setting certain benchmarks.

CeG lead this transforming initiative of the Karnataka Government that aims at helping the government leaders to access high quality global expertise, appropriate technologies, efficient processes and necessary financial resources for designing and implementing transformative projects in the state departments and the citizens and the state will immensely benefit from our initiatives.
The Project

- Creation of a unified State Portal for delivery of services of all departments to citizens
- Creation of a Single Gateway to multiple department services

Key Features

- Single Window to the Citizens and Business for accessing all Government Services
- Online directory of Government offices, service locator etc.
- Offline and Online submission of e-Forms
- Instant acknowledgement
- Time-stamping
- System generated alerts and status updates
- Integration among diverse set of e-Governance applications built on various platforms
- Integration of State Portal with National Portal of India

Expected Outcome

- Easy, anywhere and anytime access to Government Services
- Reduced number of visits of citizens to Govt. offices
- Reduces administrative burden and service fulfillment time & costs for the Government, Citizens & Business
- GO LIVE November, 2011.

Types of Interactions in e-Governance
Evolution of E Governance

Government

G2G
Central Gov.

G2G
Local Gov.

G2B
Business
NGOs

G2C
Citizen
5 Stages of e-Government

1. Emerging Presence
   - Information is limited and basic

2. Enhanced Presence
   - Unidirectional
   - Current and archived information on policies, laws, etc.
   - Search, help functions

3. Interactive Presence
   - Downloadable forms for tax payment, applications for license renewal
   - Audio and video capabilities for public information
   - Ability to directly contact officials

4. Transactional Presence
   - Two-way interaction
   - Payment of taxes
   - Applying for ID’s, birth certificates, passports, licenses, etc.
   - Payments for public services, fees
   - Secure public vendor bids

5. Networked Presence
   - Integration of G2G, G2C & C2G services
   - Participatory, deliberative collective decision-making
   - Two-way open dialogue

---

e-Kranti (NeGP 2.0)

15 Providing Services
9 Providing Services partially
5 Under Implementation
4 Design & Development
11 At Scoping Stage

Core Policies
Bhoomi Project in Karnataka: Online Delivery of Land Records

Bhoomi is a self-sustainable e-Governance project for the computerized delivery of 20 million rural land records to 6.7 million farmers through 177 Government-owned kiosks in the State of Karnataka. It was felt that rural land records are central conduits to delivering better IT-enabled services to citizens because they contain multiple data elements: ownership, tenancy, loans, nature of title, irrigation details, crops grown etc. In addition to providing the proof of title to the land, this land record is used by the farmer for a variety of purposes: from documenting crop loans and legal actions, to securing scholarships for school-children. These records were hitherto maintained manually by 9,000 village officials. Through this project, computerised kiosks are currently offering farmers two critical services - procurement of land records and requests for changes to land title. About 20 million records are now being legally maintained in the digital format. To ensure authenticity of data management, a biometric finger authentication system has been used for the first time in an e-Governance project in India. To make the project self-sustaining and expandable, Bhoomi levies user charges. The need for a project such as Bhoomi was felt for the following reasons: i. In the traditional system, land records were not open for public scrutiny resulting in manipulation and favouritism. ii. The process for applying for transfer of title was cumbersome, time consuming and prone to harassment. iii. There were instances of Government land being illegally transferred in the name of influential persons. iv. It was not possible for the administrators to procure, collate and analyse data from the manually maintained records. v. Land records offered a unique opportunity to make people in the rural areas aware of the benefits of e-Governance. A number of benefits were attached with successful implementation of such projects: for example, the sanction of crop loans, since banks would insist on production of land records; reducing delay in the disposal of court litigation due to non-availability of records etc. 4.2.2.2 To achieve its objectives, certain IT innovations had to be carried out. These included: i. Due to limited exposure of the officials in the use of IT and the critical nature of the data, the project relies on fingerprint biometrics for not only authentication of identity but also at each stage of any transaction relating to updation of data. This multi layered security access looks beyond the obvious danger of
hacking of passwords and ensures accountability at all levels with no scope for repudiation. ii. To ensure that the officials are responsible for the decisions they take on Bhoomi, the original papers connected with the decisions are scanned. To contain frivolous litigation by people claiming that notices seeking possible objections to change of titles were not served on them, the notices are also scanned on to the system. iii. To convince a farmer of the genuineness of a computer interaction, a second computer screen facing him has been provided at the kiosk. Separate touch screen kiosks linked to the database are also available for farmers to independently verify the records in question. iv. In order to protect the data from physical threats like fire or calamities, backing up of data was done by way of online replication. v. Bhoomi software runs on a First in First Out process. 4.2.2.3 During project implementation, all the officials involved were assigned well-defined roles and responsibilities, down to the grass roots level. However, in the initial stages, in spite of elaborate and detailed guidelines, these were not percolating down. This was finally achieved through State level workshops and intensive trainings for bringing about changes in the attitude among departmental staff. Promoting e-Governance – The SMART Way Forward e-Governance: Initiatives in India 27 Source: Based on information furnished by Government of Karnataka and their web-site. 32 33 4.2.1.6 Lessons: i. The scheme failed to address the main problem in case of land records in India, i.e. the land records do not reflect the factual ground reality. Computerisation of existing land records without corroborating it with the actual field position only led to perpetuation of existing loopholes and errors. ii. Complex e-Governance projects have various components all of which need to be implemented for which a holistic approach is needed during implementation. 4.2.2 Bhoomi Project in Karnataka: Online Delivery of Land Records27 4.2.2.1 Bhoomi is a self-sustainable e-Governance project for the computerized delivery of 20 million rural land records to 6.7 million farmers through 177 Government-owned kiosks in the State of Karnataka. It was felt that rural land records are central conduits to delivering better IT-enabled services to citizens because they contain multiple data elements: ownership, tenancy, loans, nature of title, irrigation details, crops grown etc. In addition to providing the proof of title to the land, this land record is used by the farmer for a variety of
purposes: from documenting crop loans and legal actions, to securing scholarships for school-children. These records were hitherto maintained manually by 9,000 village officials. Through this project, computerised kiosks are currently offering farmers two critical services - procurement of land records and requests for changes to land title. About 20 million records are now being legally maintained in the digital format. To ensure authenticity of data management, a biometric finger authentication system has been used for the first time in an e-Governance project in India. To make the project self-sustaining and expandable, Bhoomi levies user charges. The need for a project such as Bhoomi was felt for the following reasons: i. In the traditional system, land records were not open for public scrutiny resulting in manipulation and favouritism. ii. The process for applying for transfer of title was cumbersome, time consuming and prone to harassment. iii. There were instances of Government land being illegally transferred in the name of influential persons. iv. It was not possible for the administrators to procure, collate and analyse data from the manually maintained records. v. Land records offered a unique opportunity to make people in the rural areas aware of the benefits of e-Governance. A number of benefits were attached with successful implementation of such projects: for example, the sanction of crop loans, since banks would insist on production of land records; reducing delay in the disposal of court litigation due to non-availability of records etc. 4.2.2.2 To achieve its objectives, certain IT innovations had to be carried out. These included: i. Due to limited exposure of the officials in the use of IT and the critical nature of the data, the project relies on fingerprint biometrics for not only authentication of identity but also at each stage of any transaction relating to updation of data. This multi layered security access looks beyond the obvious danger of hacking of passwords and ensures accountability at all levels with no scope for repudiation. ii. To ensure that the officials are responsible for the decisions they take on Bhoomi, the original papers connected with the decisions are scanned. To contain frivolous litigation by people claiming that notices seeking possible objections to change of titles were not served on them, the notices are also scanned on to the system. iii. To convince a farmer of the genuineness of a computer interaction, a second computer screen facing him has been provided at the kiosk. Separate touch screen kiosks linked to the database are also
available for farmers to independently verify the records in question. iv. In order to protect the data from physical threats like fire or calamities, backing up of data was done by way of online replication. v. Bhoomi software runs on a First in First Out process.

The Bhoomi project is a noteworthy effort and sets an example for other projects in its approach towards piloting a project, as well as its rolling out and sustenance. It may be mentioned here that manually written Records of Right, Tenancy and Cultivation (RTC) have been declared illegal. Based on the success story of this project and its innovations, the Union Ministry of Communications and Information Technology has announced that Bhoomi would be a national model for computerisation of land records and replicated throughout the country. In fact, Bhoomi now envisages offering some additional services in the future: i. Issue of land records with digital signature ii. Providing connectivity with Bhoomi to courts and banks iii. Scanning of survey sketches/maps and linking them with Bhoomi iv. Decentralisation the issue of land records to Hobli (sub taluk) level on a PPP model along with RDS project.

4.7: Khajane Project in Karnataka

It is a comprehensive online treasury computerization project of the Government of Karnataka. The project has resulted in the computerization of the entire treasury related activities of the State Government and the system has the ability to track every activity right from the approval of the State Budget to the point of rendering accounts to the government. The project was implemented to eliminate systemic deficiencies in the manual treasury system. The aspects of the project which require highlighting are:

A prior study of deficiencies of the system was conducted. The best practices of the treasury system of some other States (Andhra Pradesh, Maharashtra, Tamil Nadu and West Bengal) were studied. • To eliminate redundant processes, systematic re-engineering was done. Processes were adopted to suit computer applications. A procedure manual was brought out. • Staff feedback was obtained. Motivation of staff was accorded high priority. User friendliness of the software, simplification of processes and reduction of drudgery was highlighted. • Software development was
supervised by treasury teams. Software was tested in representative treasury environments. Feedback was utilized in modifying the software. • Training was provided before software roll-out.

4.8: Strategies of Karnataka

The IT initiative of Karnataka aims to provide direct citizen interface, improve human resources and connectivity and improve the efficiency of government officials. IT has been applied in the following areas. 

- **Secretariat Local Area Network (LAN)**
  This Programme envisages computerisation of all secretariat departments. It enables citizens to know the status of their file and the number of days they took to be cleared at various stages. It is a significant step in delivering good governance to the masses.

- **Khajane**
  This Rs. 45 crores project is in an advanced stage of implementation. The system keeps accounts for all payments of the state, which totals to approximately Rs.24,000 crores a year. Besides government payments, the system makes payments to 6 lakh employees, 3 lakh pensioners, 13 lakh aged, widowed and handicapped pensioners. The accounts, available, real time, are stored in data centers in Bangalore and a disaster center in Dharwad. The STP is the network partner. The major benefit of the project is the instantaneous reconciliation of government accounts. In addition the system displays the money spent on all government schemes in every village. This enhances transparency and improves quality. Bhoomi and Nondani Bhoomi is the state's computerized land records project. It aims to cover 60 lakh farmers in 175 taluks. Operational in 12 sub-registration offices in Bangalore, it accounts for about 40 percent of the total revenue. This computerised registration is operating in 48 taluks of the state.

- **Yava.com**
  This programme envisages 225 training centers all over the state run by prestigious firms like Aptech, NIIT, SSI etc. The fees in the center are already reduced. The government gives subsidy of Rs.1500 for a three month course. A maximum subsidy of Rs.4500 is offered for a six month course. The programme aims to train over 1,00,000 rural youths in a year. Over 100 centres are operational at present.

- **E-Lottery**
  The government has floated a tender to set up 10,000 terminals all over the state. Apart from running the electronic lottery the kiosks could be used to disseminate other public information.

- **Mukhya Vahini**
  This is the Chief Ministers
decision support system. Presently it tracks the C.M.S. instructions, the projects sanctioned under the Global Investor meet, the constituency management system, summarized data on major projects in health, housing, and other social sector schemes. Many modules are already in use. Common Entrance Test Karnataka has numerous institutions of higher education and attracts students from other Indian states and countries. Every year the state conducts the common entrance test. Over 1,50,000 students take the exams and around 50 percent are from outside the state. The entire admission process is absolutely transparent. The fact that students from outside the state participate in large number shows their confidence in the local administration. Before computerization, the process attracted many questions from elected representatives and a lot of litigation. Now the system is so transparent that it has rid itself of both. Other Initiatives the Commercial Tax Department tracks goods using check post entries. Information about movement of goods is automatically put in the dealers assessment file. In terms of tax collection per GDP, the state is one of the best in India. The Insurance Department uses computers to track all the government vehicle insurance details. Police salary bills are computerized. The irrigation department has a major project on e-tendering and e-procurement. Silk trading exchange in Karnataka has been computerized since 1985.

4.9: Institutional Framework for e-Governance

E-Governance has been a core focus of the Government of Karnataka. Realising that the appropriate Institutional Framework is a pre-requisite to translate a vision into reality, the Government has put in place necessary policy and legal framework as well as organisational structure for e-Governance.

Legal and Policy Framework

Policy lays down principles/guidelines that can lead to achievement of a given goal. Policy framework comprises vision statements, guidelines, laws, rules etc. Some of these elements adopted in Karnataka are:

Vision
In terms of vision, e-Governance Department has focussed on the goal of creating a single window delivery mechanism for Government Services to the Citizens of the state. The vision guiding the Department is:

“To Enhance and Promote the use of IT in the functioning of the Government in order to make the required information available to all Citizens and to provide all Services in an Efficient and hassle-free manner and identified services on an Online basis”

The Department seeks to enable Government to provide “Any Time, Any Where and Any Device” service to citizens.

Legal Framework: Government has enacted two important pieces of legislation to give teeth to implementation of e Governance initiatives. These include:

Karnataka Information Technology (Issue of Digital Extracts and Certificates for e Governance Projects) Rules, 2007: These rules provide for a comprehensive process for delivery of electronic delivery of e Governance services to citizens. The rules, among other things, provide for Appointment of departmental document security controllers, departmental digital certificate controllers and e-Governance digital systems controllers and supervise their functioning, to supervise the departmental e-Governance centres and conduct periodical audit of their activities, the notification of e-Governance services, appointment of e Governance delivery centres and organisations. And Karnataka Transparency in Public Procurement Act, 2002: Amendment issued in 2008, making e procurement a part of this act.

4.10: Organisational Framework

The importance given to the e Governance can be ascertained by the fact that a separate Department of DPAR (e Governance) was created by Government in 2003, to plan and leverage the ICT for the benefit of the common man. This is a unique feature, as no other State has a separate Department for e Governance. Creation of this Department as part of Administrative Reforms stems from the strong conviction of the State that e governance is a tool to bring about administrative reforms.
Department of e Governance plays the following roles:

- Creation of Policy framework, setting the vision and guidelines for e Governance projects.
- Creation of Administrative framework for approval of e Governance Projects of all the Departments.
- Technical assistance to Departments for taking up e Governance Projects.
- Creation and maintenance of Core- e infrastructure that can be used by Departments for planning and implementing e Governance initiatives.
- and promotion of common standards in designing of the e Governance projects

The Department has created two unique institutions to give thrust to planning and implementing e Governance infrastructure that can be used by all the Government Departments for planning and implementing e Governance initiatives. These are:

Centre for e Governance: A Society created in 2006 with the mandate of establishing and maintaining the core – e infrastructure such as Networks, Data Centre, core applications and capacity building activities.

Directorate of Electronic Delivery of Citizen Services (EDCS): a Government Department mandated with the operations of common citizen service delivery centres such as Bangalore One, Karnataka One and Nemmadi (Atalji Janashnehi Kendra) – Rural citizen service centres.

This institutional structure is unique to Karnataka.

Ecosystem for Approval and monitoring of e Governance Projects:

Government of Karnataka has put in place a complete ecosystem for approval and monitoring of the e Governance Projects in Karnataka.

4.11: Core e - Infrastructure:

“Establishment and maintenance of the core e infrastructure to enable Departments to plan and implement e Governance initiatives”

1. Karnataka State Wide Area Network.
2. State Data Centre.
3. Citizen service Delivery channels- Bangalore One, Nemmadi and Karnataka One.
5. Portal for transactional services- Bangalore One, E procurement etc.
6. Creation of Back offices in all the Taluka Offices.
7. Setting up of Government Cyber Cafes.
8. Core Enterprise level applications for automation of the key functions that are common to all the Government Departments- Human Resource Management, E procurement.
9. Application/s to enable workflow and delivery of services – RDS.
10. Empanelment of the vendors for various IT infrastructure and services.

4.12: Internal Process Engineering

“Government Process Reengineering is one of the critical elements of the E Governance Department”

Create a common core e infrastructure platform

1. Development of application.
2. Creation of backend infrastructure for workflow delivery.
3. Hosting of centralised application, database etc in SDC.
4. Creation of frontends like Nemmadi, Bangalore one and karnataka one.
5. Provision of gap-filling IT infrastructure such as computers, printers, scanners, connectivity etc., to enable workflow automation.
6. Facilitating GPR in major departments having high citizen interface.
7. Develop and implement core initiatives that bring fundamental changes in working of all Government Departments, Eg: HRMS and E procurement.
8. Create legal framework for delivery of services electronically.
4.13: Successful Process Reengineering Projects

1. Revenue Department: *Issue of various certificates (38 different certificates)* such as Caste, income, living, agriculture etc., through Nemmadi RDS application.

2. Revenue Department: *Social Security Pensions (5 Services)*.

3. E Procurement: *Complete Process Reengineering of procurement process – implemented in 103 Departments and agencies*.

4. HRMS: *Completed Process Reengineering of Employee Paybill generation – Implemented across all the Departments*.


7. Survey and Settlement Department: *Mojini – preparation and issue of the maps in respect of individual parcels*.

8. Registration Department: *Electronic registration of the property documents*

9. Transport Department: *Issue of Driving Licences and Registration Certificates*


11. Food and Civil Supplies: *Issue of Ration cards*. 