Analysis of E-Governance Status and Future of E-Governance in Punjab

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Keywords : E-Governance, IT, MMP.

GJCST-E Classification: J.1

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Strictly as per the compliance and regulations of:

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I. Introduction

E-Governance is a process of reforming the Governments work, share information, engage citizens and deliver services to external and internal clients for the benefit of both government and the clients that they serve. Government shares IT like World Wide Web (WWW), Internet and mobile computing to reach out to citizens to improve delivery of services to citizens [1].

There are many implications of implementing and designing e-governance including impacts on economic, social, and political factors. The Objectives of e-governance is to provide the services to citizens by implementing simple, steady and reliable registration process, by developing consistency in process, by implementing transparency in valuation of properties and automating all the back office functions. The major strengths of the e-government policies are to cover all administrative civic functions, to complete on-line functioning, providing anytime anywhere solution to citizens, to provide user, the internet technology with browser based interfaces, to provide an effective user technology for providing single window solution, to establish a proper workflow across departments, and computerization of municipal corporations [2].

As population in the cities increase in geometric progression, municipalities still have to extend their services to the citizen in an arithmetic progression. Generally, it is always desired to have smart sized corporation with able system in place. The manual system have their limitation and is not sufficient to meet the requirement. In the context of e-governance, many

E-government solution providers provide an Information technology based solution to Municipalities to strengthen their services to citizens, which were not possible till now due to limitation of manual functioning [3].

The perspective change is toward citizen-oriented computerization rather than only back office computerization of existing system. Various modules were designed to help the citizens, like property taxation, water billing and accounting, various permits and licenses, death and birth registration, health scheme monitoring, municipal hospitals, city engineering function, tendering of projects, accounts, budget, auditing, municipal secretary, General administration & Establishment, legal matters, Citizen Facilitation Centre, Information kiosks, corporate websites etc. [4].

The Department of Information Technology (DIT) has been created in October 1998 by merging the Department of Administrative Reforms, Evaluation Wing of Department of General Administration and Computerization Wing of Department of Planning to steer the State of Punjab in the use of information and communication technology (ICT) as an engine of growth With the understanding that ICTs can act as catalyst and enabler for providing real and good governance to all entities, the Department has been promoting innovative and effective use of technology for percolation of benefits of Good Governance to all the strata of society. The functions allocated to DIT under the Allocation of Business Rules, 1994, are as under:

a) *All matters relating to:*

(i) Administrative reorganization and streamlining of administration; (ii) Reports of Administration Reforms Commissions; (iii) Improvement in office procedures and systems; (iv) Indian Institute of Public Administration and (v) Formulation of policies regarding maintenance and retention of records.

b) *Regarding matters relating to Information Technology (IT):*

(i) To formulate policy on the use of Information Technology in the State of Punjab; (ii) To formulate and implement a plan for induction of Information Technology in the Punjab State Administration at all levels, in co-ordination with the concerned Government Departments; and (iii) Give technical advice to all Government Departments regarding, adoption of

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suitable information Technology Systems and for making appropriate arrangements to maintain the same. As per the orders of the government, the role assigned to the Department of Information Technology is that of a facilitator and the primary responsibility for the implementation, operations, management and use of computer systems, system software, and services rests with the each state Department concerned. The Department is also responsible for developing state-wide policies, technical standards and procedures.

II. Defining E-Governance

E-Government means different things for different people. Some simply define it as digital governmental information or a way of engaging in digital transactions with customers. For others e-Government simply consists of the creation of a web site where information about political and governmental issues are presented. These narrow ways of defining and conceptualizing e-Government restrict the range of opportunities it offers. One of the reasons why many e-Government initiatives fail is related to the narrow definition and poor understanding of the e-Government concept, processes and functions. E-Government is a multidimensional and complex concept, which requires a broad definition and understanding, in order to be able to design and implement a successful strategy.

Several dimension and related factors influence the definition of e-Governance. The word "electronic" in the term e-Governance implies technology driven governance. E-Governance is the application of Information and communication Technology (ICT) for delivering government Services, exchange of information communication transactions, integration various stand-one systems and services between Government-to-citizens (G2C), Government-to-Business (G2B), Government-to-Government(G2G) as well as back office processes and interactions within the entire government frame work.

According to the World Bank [5]:- "E-Government refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions."

Thus, the stress here is on use of information technologies in improving citizen-government interactions, cost-cutting and generation of revenue and transparency.

UNESCO defines e-Governance as [6]:- "Governance refers to the exercise of political, economic and administrative authority in the management of a country's affairs, including citizens articulation of their interests and exercise of their legal rights and obligations. E-Governance may be understood as the performance of this governance via the electronic medium in order to facilitate an efficient, speedy and transparent process of disseminating information to the public, and other agencies, and for performing government administration activities." This definition visualizes the use of the electronic medium in the exercise of authority in the management of a country's affairs along with articulation of citizens interests leading to greater transparency and efficiency.

Dr. APJ Abdul Kalam, former President of India, has visualized e-Governance [7] in the Indian context to mean: "A transparent smart e-Governance with seamless access, secure and authentic flow of information crossing the interdepartmental barrier and providing a fair and unbiased service to the citizen."

UNPA & ASPA [8]:- e-Governance is the public sector's use of the most innovative information and communication technologies, like the Internet, to deliver to all citizens improved services, reliable information and greater knowledge in order to facilitate access to the governing process and encourage deeper citizen participation.

Fraga [9]:- e-Government is the transformation of public sector internal and external relationships through net-enabled operations, IT and communications, in order to improve: Government service delivery; Constituency participation; Society.

About Punjab (Land of five rivers) Punjab is located in the northwest of India surrounded by Pakistan on the west, the Indian states of Jammu and Kashmir on the north, Himachal Pradesh on its northeast and Haryana and Rajasthan to its south. It covers a geographical area of 50,362 sq. km which is 1.54 % of country''s total geographical area. Punjab state is located between 29° 30' N to 32° 32' N latitude and between 73° 55' E to 76° 50' E longitude. Its average elevation is 300 m from the sea level. Chandigarh is the capital of the Punjab.

Sikhism is the predominant faith in Punjab. About 60% of the people in the state are Sikhs. The holiest of Sikh shrines, the Sri Harmandir Sahib (or Golden Temple), is in the city of Amritsar. The Sri Akal Takht Sahib which resides within the Golden temple complex is the temporal seat of Sikhs. Of the five Takhts (Temporal Seats of religious authority) of Sikhism, three are in Punjab. These are Sri Akal Takht Sahib, DamdamaSahib and Anandpur Sahib. Anandpur Sahib is where Guru Gobind Singh created the Khalsa in 1699 on the day of Vaisakhi. During major holidays on the

Sikh calendar (suchas Vaisakhi, Hola Mohalla, Gurpurb and Diwali), many Sikhs gather and march in religious processions through virtually every city, town and village in Punjab.

According to India Today [10], Leading magazine in India, Punjab has been awarded best overall state since 2003, and has been able to retain the top position every year. It also affords best quality of life to its residents. Punjab has the best infrastructure in all of India [11]. Although it has a huge shortage of electricity due to high demand, all major cities in Punjab benefit from this and have some of the lowest tariffs in India. All of Punjab's villages have been provided electricity and connected to the state electrical power grid since 1974.

The official census 2011 of Punjab has been conducted by Directorate of Census Operations in Punjab[12]. Enumeration of key persons including Chief Minister of Punjab was also done by officials conducting population census. As per details from Census 2011, Punjab has population of 2.77 Crore, an increase from figure of 2.44 Crore in 2001 census. Total population of Punjab as per 2011 census is 27,704,236 of which male and female are 14,634,819 and 13,069,417 respectively. In 2001, total population was 24,358,999 in which males were 12,985,045 while females were 11,373,954. The total population growth in this decade was 13.73 percent while in previous decade it was 19.76 percent. The population of Punjab forms 2.29 percent of India in 2011. In 2001, the figure was 2.37 percent.

Description	Rural	Urban
Population (%)	62.51%	37.49%
Population Growth	7.58%	25.72%
Sex Ratio	906	872
Average Literacy	72.45%	83.70

Literacy rate in Punjab has seen upward trend and is 76.68 percent as per 2011 population census. Of that, male literacy stands at 81.48 percent while female literacy is at 71.34 percent. In 2001, literacy rate in Punjab stood at 69.65 percent of which male and female were 79.66 percent and 60.53 percent literate respectively. The majority of the people speak Punjabi and very few can read and speak English in Punjab.

III. About Department of Information Technology

In consonance with the national objective of making India a global IT Power and a front runner in the information revolution, the Government of Punjab set up the Department of Information Systems and Administrative Reforms (DISAR) by merging the Department of Administrative Reforms, Evaluation and the Computerization Wing of the Planning department

with effect from 1.11.1998. The new Department of Information Technology (DoIT) has been entrusted with the following responsibilities:

- To formulate the policy on the use of Information Technology in the State.
- To formulate and implement a plan for introduction of Information Technology in the Punjab Administration at all levels, in coordination with the concerned Government Departments.
- To give technical advice to all the Government Departments regarding adoption of suitable information technology systems and for making appropriate arrangements to maintain the same

IV. E-Governance Plan

Over the years, a large number of initiatives have been undertaken by various State Governments and Central Ministries to usher in an era of e-Government. Sustained efforts have been made at multiple levels to improve the delivery of public services and simplify the process of accessing them.

In India, e-Governance has steadily evolved from computerization of Government Departments to initiatives that encapsulate the finer points of Governance, such as citizen centricity, service orientation and transparency. Lessons from previous e-Governance initiatives have played an important role in shaping the progressive e-Governance strategy of the country. Due cognizance has been taken of the notion that to speed up e-Governance implementation across the various arms of Government at National, State, and Local levels, a program approach needs to be adopted, guided by common vision and strategy. This approach has the potential of enabling huge savings in costs through sharing of core and support infrastructure, enabling interoperability through standards, and of presenting a seamless view of Government to citizens.

The National e-Governance Plan (NeGP), takes a holistic view of e-Governance initiatives across the country, integrating them into a collective vision, a shared cause. Around this idea, a massive countrywide infrastructure reaching down to the remotest of villages is evolving, and large-scale digitization of records is taking place to enable easy, reliable access over the internet. The ultimate objective is to bring public services closer home to citizens, as articulated in the Vision Statement of NeGP

V. Mission Mode Projects

The Government approved the National e-Governance Plan (NeGP) [13], comprising of 27 Mission Mode Projects (10 Central MMPs, 10 State MMPs and 7 Integrated MMPs spanning multiple Ministries/ Departments.) and 8 components, on May 18, 2006. The Government has accorded approval to the vision, approach, strategy, key components, implementation

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methodology, and management structure for NeGP. However, the approval of NeGP does not constitute financial approval(s) for all the Mission Mode Projects (MMPs) and components under it. The existing or ongoing projects in the MMP category, being implemented by various Central Ministries, States, and State Departments would be suitably augmented and enhanced to align with the objectives of NeGP.

The concerned Ministry/ Department is entirely responsible for all decisions related to their MMPs. However, decisions impacting NeGP as a whole are taken in consultation with DIT. Additionally, wherever required by the concerned Ministries/ Departments, DIT provides necessary support for project formulation and development.

Every State has the flexibility of identifying up to 5 additional State-specific MMPs (relevant for economic development within the State). In cases where Central Assistance is required, such inclusions are considered on the advice of the concerned Line Ministries/ Departments.

27 Mission Mode Projects (MMPs)

CENTRAL MMPs	STATE MMPs	INTEGRATED MMPs
• BANKING • CENTRAL EXCISE & CUSTOMS • INCOME TAX (IT) • INSURANCE • MCA21 • NATIONAL CITIZEN DATABASE • PASSPORT • IMMIGRATION, VISA AND FOREIGNERS REGISTRATION & TRACKING • PENSION • E-OFFICE	• AGRICULTURE • COMMERCIAL TAXES • E-DISTRICT • EMPLOYMENT EXCHANGE • LAND RECORDS • MUNICIPALITIES • GRAM PANCHAYATS • POLICE • ROAD TRANSPORT • TREASURIES	• CSC • E-BIZ • E-COURTS • E-PROCUREMENT • EDI FOR E-TRADE • NATIONAL E-GOVERNANCE SERVICE DELIVERY GATEWAY • INDIA PORTAL

VI. E-Governance Projects in Punjab

The Department of Information Technology (DoIT) prepares and executes plans in collaboration with the concerned departments to leverage the power of Information & Communication Technology (ICT) as a vehicle for improved governance and service delivery to the citizens in different departments of the State Government.

MAJOR PROJECTS IN PUNJAB STATE

a) Enabling E-Forms through State Portal & Service Delivery Gateway in the State of Punjab

Project Introduction:

The National e- Governance Plan (NeGP) of the Govt. of India aims to make all Government services accessible to the common man through common service delivery outlets and ensure efficiency, transparency & reliability of such services at affordable costs to realize the basic needs of the common man. Under this plan, a Government of India sponsored Mission Mode Project (MMP) called 'State Portal, State Service Delivery Gateway (SSDG) and Gap Infrastructure' has been entrusted to Punjab State E-Governance Society (PSEGS) for implementation [14]. For this purpose an administrative approval for the project at an estimated total outlay of Rs.1011.66 lakhs was accorded by GOI on 30.3.2009 vide which DIT (GOI) contribution is Rs. 505.83 lakhs and the remaining Rs 505.83 lakhs are to be met through Additional Central Assistance (ACA) for NeGP provisions of Planning Department.

Objectives of the Project:

The objectives of the State Portal & SSDG scheme are to ensure the following:

- Providing easy, anywhere and anytime access to Government Services (both Information & Transactional)
- Reducing number of visits of citizens to a Government office / department for availing the services
- Reducing administrative burden and service fulfillment time & costs for the Government, Citizens & Businesses
- Reducing direct interaction of citizen with the Government and encourage 'e'-interaction and efficient communication through portal
- Enhancing perception & image of the Government and its constituent Departments
- Promotion of uniform web interface across Government departments and to build in synergies with the National Portal of India (NPI) using the National Service Delivery Gateway (NSDG).
- Delivery of services through Common Service Centers (CSCs) by leveraging the common infrastructure (SWAN, SDC etc.) and development of the applications and infrastructure required for deployment of State Portal and State Service Delivery Gateway (SSDG) for the State.
- Publishing the static data and all information of the State departments in line with guidelines for necessary integration with NPI.

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Implementation Status and Timelines:

A State Project Committee (SPC), comprising of the following members was constituted for overall project leadership and for overseeing the implementation of project:

1. Principal Secretary, Information Technology-Chairman
2. Director IT- Member Secretary
3. Project Coordinator, DIT, Punjab
4. Representative from NIC Punjab
5. Nodal Officers of the concerned 8 Departments
6. Representatives from DIT, GoI, CDAC as and when required

M/s KPMG, empanelled by DIT, Govt. of India was appointed as Project Consultant by PSEGS and is working on the project since Sept '09 along-with PSEGS. M/s KPMG performed the assessment study of the following eight departments in scope of the project for finalization of departmental services, understanding the process flow and gap infrastructure:

1. Agriculture
2. Rural Development and Panchayat
3. Food and civil supplies
4. Health and family welfare
5. Social Security
6. SC/BC Welfare
7. Local Government
8. Punjab Police

Further, the Functional Requirement Specifications (FRS) and a Request for Proposal (RFP) based on approved FRS was prepared by the consultants for inviting tenders for selection of Implementation Agency for the project. A closed bidding process was initiated by PSEGS in Nov, 2010 for the selection of Implementation Agency for the project and approved RFP was forwarded on 29.11.2010 to the following 6 agencies empanelled by DIT, GOI for submitting their bids.

1. Accenture Services Pvt. Limited
2. Hewlett Packard India Sales Pvt. Limited
3. Infosys Technologies Limited
4. L&T Infotech Limited
5. Tata Consultancy Services Limited
6. Wipro Limited

The project started on 22.12.2011 with the kick-off meeting under the Chairmanship of Chief Secretary, Punjab. Nodal Officers were appointed in all the 7 departments coming under the scope of the project. Since then, M/s Hewlett Packard India Sales Private Limited's team, on-site and off-site, is working in full coordination with the involved departments, Project Consultants, CDAC, NIC, SeMT and DoIT, Punjab for successful and timely completion of the project.

The project is currently expected to go-live in the month of June 2012 and thus making the State Portal and Service Delivery Gateway for the State of Punjab being available for citizen's use.

S. No	Department	Final List of Services
1	Department of Rural Development And Panchayat	1. Issuance of Job Card under NREGS (National Rural Employment Guarantee Act) Scheme 2. Work under NREGS (National Rural Employment Guarantee Scheme)
2	SC/ OBC Welfare	1. Ashirwad to Scheduled Caste, Christian girls and daughters of widows of any caste at the time of their marriages. 2. Merit cum means scholarship to the students belonging to minority communities. 3. Post Matric Scholarship to SC students. 4. Post Matric Scholarship to OBC students. 5. Post Matric Scholarship to Minorities. 6. Pre Matric Scholarship to Minorities. 7. Term loan scheme for SC. 8. Term Loan Scheme for BC. 9. Promotion of education for backward classes.
3	Department of Food and Civil Supplies	1. Issuing Ration Card. 2. Addition, Change and Deletion of name in Ration Card.
4	Local Government Department	1. Issuing Birth Certificate in Urban Areas. 2. Issuing Death Certificate in Urban Areas.
5	Department of Health & Family Welfare	1. Issuing Birth Certificate in Rural Areas. 2. Issuing Death Certificate in Rural Areas. 3. Issuing Disability Certificate.
6	Department of Social Security	1. Old age pension, Widow pension, Dependent children and handicap pension schemes (Urban Areas). 2. Old age pension, Widow pension, Dependent children and handicap pension schemes (Rural Areas). 3. National Family Benefit Scheme.

7	PUNJAB POLICE	1. FOREIGNER'S REGISTRATION/LATE REGISTRATION/VISA EXTENSION IN INDIA.
		2. CHARACTER CERTIFICATE.
		3. POLICE CLEARANCE CERTIFICATE (FOR PERSONS PRESENTLY RESIDING IN INDIA / FOR PERSONS PRESENTLY RESIDING IN FOREIGN COUNTRIES).
		4. VEHICLE ENQUIRY REQUEST.
		5. ONLINE REGISTRATION OF COMPLAINTS (E- COMPLAINTS).

b) Suwidha

About SUWIDHA project:

Governments world over have been criticized for not delivering the services for which they were created. The giant machinery remains at work with virtually no output. In the past, several attempts have been made to improve its efficiency by introducing Information Technology (IT), however, the dividends have been minimal and the plight of the citizen remains the same. The citizen wonders at the very sight of the digital gadgets used in government offices. The computers are planted with great expectations of creating miracles, but the whole effort turns out to be mere hype and internal data processing.

Initiating IT activities with government dilatory procedures cannot yield the desired results. At best it can slightly increase the efficiency of the staff. The citizen friendly system can only be built after Re-engineering government processes while keeping citizen convenience as the prime goal of the whole exercise. The government has to redefine and redesign itself at all levels. Today, for example, for every petty service charge, one has to go to the bank and treasury for making payment before the application form is accepted in some other government office. The government needs to answer many questions such as:

- Why can't the petty fee be accepted at the counter itself and deposited in the treasury by the government office as a composite challan?
- What is the need to visit many branches for a single service?
- Why can't a citizen charter be defined with service delivery time frame depending upon the type of service desired?
- Why can't a control loop be included in each activity so that the delivery mechanism can be checked for quality?
- What is the need for verification again and again? Can't the services be provided on the spot?
- When there is a single government, why to have a number of faces to talk to the citizen?

SUWIDHA has been conceived to facilitate citizen by capturing the input at a single point, defining a specified delivery date depending upon the type of service and accepting cash at the counter itself. Following are the objectives of **SUWIDHA** Project:

- To provide service level convenience to the citizens
- Re-engineering of Government Processes to provide quality & timely services to citizens
- To integrate SUWIDHA Back-end Services (SUBS) with front-end to reduce the time of delivery.
- Linkage with Web based Citizens IT Interface (Web CITI) or Dialup based Citizens IT Interface (Dial CITI) to know the latest information about their service.
- To standardize the processes throughout the state.

Background

The project was initiated in August 2002 at Fatehgarh Sahib. It was inaugurated by Hon'ble Chief Minister of Punjab on 31.10.2002. The project was funded by Government of India, Department of Communication & Information Technology. The project was successfully completed by District Administration with technical support of National Informatics Centre, Punjab State Centre. Based on the success of the pilot, the Government of Punjab decided to implement this project in all districts of Punjab along with SUWIDHA Back-end Services (SUBS) of the Deputy Commissioner Branches in December 2004. The project replication started in all districts with technical support of NIC-District Centers. As of now, the project is being executed in all Deputy Commissioner's offices. All the objectives given above have been achieved successfully. Now the project has been extended to establish State Level Data Centre for SUWIDHA Project.

SERVICES

The following is the list of front-end citizen services covered under the SUWIDHA PROJECT [15]:

1. Issuance and renewal of Bus Passes to Freedom Fighters and Handicapped person
2. Pension to old age, widows, destitute children and disabled persons
3. Issuance and renewal of ID-Cards to freedom fighters
4. Character Verification
5. Issuance of Dependent Certificate to wards of freedom fighters
6. Issuance of Dependent Certificate to Riots/ terrorist victims
7. Attestation of Indemnity bond
8. Attestation and acceptance of Surety bond
9. Issuance of Nationality Certificate
10. Issuance of Birth Certificate
11. Issuance of Death Certificate
12. Attestation of Affidavit
13. Issuance of Unmarried Certificate
14. Issuance and renewal of Driving License
15. Issuance of Copy of a document
16. Passport Services
17. Counter Signing of Documents

18. Arms License Issuance System
19. Issuance of NOC (Petrol pump, marriage palace, Hotel & Restaurant, Cinema etc.)
20. Registration of Vehicle
21. Permission for fairs
22. Issuance & Renewal of Licenses for (Arms Dealers, Cinema, Video Parlour)

How SUWIDHA Works?

- The citizen approaches SUWIDHA Queue Counter and gets the Queue Token number.
- He waits for some time till his token number is displayed on the screen. On his turn at SUWIDHA Service Counter, he files his application.
- She/he is issued a receipt cum token number, which specifies the date of delivery of services. Each type of service has a pre-defined delivery time and system automatically calculates the service delivery date.
- All kind of payments for the fees etc can be made at the SUWIDHA counter. This further saves the inconvenience of the citizen caused to visit either bank or treasury office to deposit such payments.
- The application/case is then sent to the branch for action.
- In between the citizen can track the case with the help of SUWIDHA Token number through Dial CITI (which is IVR based system) or website, wherever implemented.
- In order to ensure the timely delivery, the DC monitors the progress regularly so that citizen does not have to visit the office un-necessarily.
- The delivery of documents/processed case is made on the specified date. The delivery of the documents is also from SUWIDHA Delivery Counter and not from the branch. This way the branches are able to concentrate on the backend work rather than attending to the citizens and this further helps in improving government services and the citizen are freed from inconvenience /harassment.

With this process, all applications received are recorded and monitored against the delivery due date, branch-wise. Computerized print, placement of processes has improved the quality of service. SUWIDHA Software provided the facility of local language (Punjabi) as well. The operators are available on the counters for the prescribed timings so easily accessibility to the citizens.

c) Punjab Wide Area Network (Pawan)

The National e-Governance Plan (NeGP) has identified various Mission Mode Projects, which are to be implemented in a phased manner over the next 3-4 years by the Line Ministries/Departments concerned at the Central and State level, as applicable, in addition to the various other e-Governance initiatives being taken by the respective States and Central Ministries. State Wide Area Network (PAWAN) has been identified as an element of the core infrastructure for supporting these e-Governance initiatives. The Government of Punjab views NeGP as a chance to take its e-Governance vision to greater heights.

The Government of Punjab is establishing the Punjab State Wide Area Network (PAWAN). This Wide Area Network (WAN) is envisaged as the backbone network for data, voice and video communications throughout the State. PAWAN would act as the vehicle for effective implementation of Electronic Governance (e-Governance) acro PAWAN would follow a 3 Tier structure through Point of Presence (POP) across the various levels:

- State Head Quarter or State Network Centre (SNC) - Tier I
- District Head Quarter or District Network Centre (DNC) -Tier II
- Sub Divisional Head Quarter or Sub Division Network Centre (SDNC) and the Block Head Quarters or Block Network Centers (BNC) -Tier III

Departmental offices of Government of Punjab shall be connected to these Points of Presence (POP) of PAWAN as Horizontal Office. PAWAN will be based on open standards, scalable with high capacity network to carry data, video and voice traffic between different offices of the Government of Punjab at the State, District and Block level. PAWAN is also expected to help in the rollout of central applications covered under NeGP through interconnection with the national backbone as envisaged by GoI as part of its PAWAN initiative.

Present Status

- GOI has approved the project at a project cost of Rs. 62.23 Crores over a span of five years.
- GOP has received Rs. 12 Crores as a first installment for the project.
- PwC has been appointed as the consultant.
- BSNL has been appointed s the Bandwidth Service provider.
- RFP has been sent to GOI for approval.

PAWAN Services

PAWAN shall cater to the information communication requirements of the entire state government and its departments. PAWAN shall facilitate the following minimum services to its entire user community [16]:

Core Services

1. Converged Network Services (Data/Voice/video)
   - Seamless end to end connectivity for all government offices across Punjab
   - Inter departmental connectivity at each location
   - Allow horizontal connectivity facilities at each POP of PAWAN

- Dedicated access to applications hosted at State and Central Department.
- Providing Internet access to all PAWAN users through Internet Gateway at SNC
- Voice over IP for government offices through IP Phone
- Point-to-point and point-to-multipoint video conferencing through High quality video equipments & Multimedia PC

2. Security Services
- Secure data transmission between departmental offices.
- Secure access to centralized applications
- Access rule for departments to be connected to PAWAN
- Access rule for VPN access to departmental network on PAWAN
- Gateway Level Antivirus protection for SNC NOC
- Perimeter Security for SNC NOC

Additional Services
- Help Desk Services for incident handling
- Provide VPN access to departmental network from remote sites
- Centralized Network Monitoring System
- Messaging services

d) Implementing the Common Service Centre (Csc) Scheme in Punjab

Background of the Project:

(1) The State of Punjab intends to use Information & Communication Technology (ICT) as a vehicle for effective governance and to empower its citizens, with requisite wherewithal to contribute towards economic growth of the State.

(2) The Government of Punjab has invested in and implemented many e-Governance initiatives. The experience gained from these initiatives and the active support of government officials at all levels, the State departments are well prepared to support provisioning of services through the CSCs.

(3) The State covers a geographical spread of approximately 50,362 sq kms, which includes 12,278 villages. The total population of Punjab is 2, 43, 58, 999, (Census 2001) including 1, 60, 96, 488 heads staying in rural areas

Brief Description about the Project

Common Services Centers are envisioned as the front-end delivery points for Government, private and social sector services to rural citizens of India. The idea is to develop a platform that can enable Government, private and social sector organizations to integrate their social and commercial goals for the benefit of rural populations in the remotest corners of the country through a combination of IT as well as non-IT services.

CSCs are meant to be the front end delivery points for delivery of G2C and B2C services

Objectives:
1. The aim of the Scheme is not merely to roll out IT infrastructure but to build a network of 100,000+ rural businesses across India. To that effect, the CSC Scheme has been designed to create a value proposition for all stakeholders and alignment of their economic interests.
2. But beyond a delivery channel the CSC can play a role of an effective "change agent" that would provide a structured platform for socially inclusive community participation for collective developmental activities. Such change, it is proposed, would be undertaken through three important components:

- A Public Private Partnership (PPP) Framework
- Rural Entrepreneurship and Market Mechanisms
- Government policy and support

Benefits
1. Provide citizen centric services of the State and Central Government in a convenient and efficient manner through the CSCs across rural India.
2. Enhance the accountability, transparency and responsiveness of the Government to citizen's needs.
3. Provide efficient and cost effective methods of service delivery to departments and agencies.
4. Allow private and social sector to collaborate with the Government to offer world-c lass services in rural India.
5. Train village level entrepreneurs in business and IT management skills.
6. Empower the rural citizen through information dissemination and market linkages.

Present Status

According to Administrative Report 2008-09, The RFP for selection of Service Centre Agencies in under approval of Government of India.

e) Punjab Government Personnel Management System

The software has been got prepared in consultation / discussions with various departments of Punjab Government keeping in view that the same will be required by every office for the automation of employee's records. The new computerized system covers the following 6 functions related to Punjab Government employee's information:
- Personnel Information System
- Pay Accounting System
- Leave Accounting System
- Loan Accounting system
- General Provident Fund Accounting System
- Pension Accounting System

Present Status of Automation

Phase I (Implementation at Offices in Chandigarh and Mohali) Data Entry related to service books, leave details, GPF and Loan details of approx. 15,000 employees has been completed. Training to Employees has been completed and Computerized payroll of 54 departments/offices is being generated, data updating/migration is under progress at the remaining 18 locations.

Phase II (Implementation in 33 selected departments in all districts) Implementation is under progress for approximately 40,000 employees

Phase III (Implementation in remaining department in all districts of Punjab) Implementation in remaining departments in Phase III will start after the completion of Phase II.

Benefits of the Project

- Improvement in utilization of resources
- Provides accurate and timely information at various levels to assist the concerned authorities in effective decision making
- Makes information readily available for the benefit of the employees and the pensioners
- Reduces redundancy of efforts

f) *E-District in Punjab*

E-District has been envisaged by Government of Punjab (GoP) as automation of workflow backend digitization, integration of multiple applications of different departments and process reengineering of the participating line departments like Revenue (Certificates, Revenue Court services, licenses, etc), Social Security (pension related services), Food and Civil Supply (PDS), Municipal department (Utilities), etc. This project is of paramount importance to the State as it would help in creating an electronic workflow system for the district administration and help in providing efficient individual department services through COMMON SERVICE CENTERS (CSCs) which would be the primary front end channels as envisaged in the project.

Objectives:

- To provide easy access to government services to common man, especially the people belonging to Scheduled Castes, Scheduled Tribes and women.
- Reengineering of the internal processes of District Administration, Subordinate offices and participating departments to increase functional efficiency.
- IT enabling of internal processes of District Administration and its subordinate offices to increase operational efficiency
- Creation of IT infrastructure for rolling out e-Governance plan right up to Block levels
- Develop capacities of human resources of Government to operate and maintain IT enabled systems and applications with confidence and provide services to the people effectively and efficiently.

Districts are the de facto front-end of government where most Government-to-Consumer or G2C interaction takes place. The e-District project was conceptualized to improve this experience and enhance the efficiencies of the various Departments at the district-level to enable seamless service delivery to the citizen.

Front-ends under the scheme, in the form of citizen facilitation centers, are envisioned to be built at District-, Tehsil-, Sub-division- and Block- levels. Village-level front-ends would be established through GRAM SUWIDHA CENTRE (GSCs) for delivery of services.

Indicative services planned to be delivered through this MMP include:

- Certificates: Creation and distribution of certificates for income, domicile, caste, Birth, Death etc.
- Licenses: Arms Licenses etc.
- Public Distribution System (PDS): Issue of Ration Card, etc.
- Social Welfare Schemes: Disbursement of old-age pensions, family pensions, widow pensions, etc.
- Complaints: Related to unfair prices, absentee teachers, non-availability of doctor, etc.
- RTI: Online filing and receipt of information relating to the Right to Information Act.
- Linking with other e government projects: Registration, Land Records, and Driving Licences, etc.
- Information Dissemination: About government schemes, entitlements, etc.
- Assessment of taxes: Property tax, and other government taxes.
- Utility Payment: Payments relating to electricity, water bills property taxes etc.

VII. Future of E-Governance in Punjab

E-Governance is said to be pill of all ills of Governance. However many e-Governance projects are not succeeding or are facing bottlenecks. There is resistance to change or duplication of efforts in many initiatives. There are local language issues in some cases and lack of planning in others. Lack of infrastructure is a bottleneck and Universal Access is an issue. Lack of Process and Legal Reforms is hindering the projects and lack of technology and architecture is leading to slow implementation in Punjab.

There has been a lack of critical examination of process of strategizing; choice of applications; process of design and implementation. Often a supply side view is taken. Outcome and impact on clients, agencies and society is not assessed.

It emphasizes that the first step towards e-governance is understanding governance. It looks into

Vision and Objectives of various successful countries and suggests guidelines for same. The following points are worth considerable for future of the e-governance in Punjab:

1. State should define as to which sections of the population constitute the vulnerable group that needs to be targeted. Their geographical spread needs to be mapped. Participatory approaches need to be used in developing e-Government programs and plans, so that the needs of the poor are well articulated and can be reflected in the choice of applications and their design.

2. Existing national and State e-Government programs and e-Government projects should be audited in a systematic way to determine the potential and actual impact on poor and the vulnerable. A Tool Kit can be designed for the purpose of carrying out such an audit.

3. Policy makers need to be sensitized to the fact that the digital divide will be further exacerbated unless e-Government specifically focuses on the poor and the vulnerable and that e-Government has the potential to deliver significant benefits to the vulnerable/poor.

4. Capacity needs to be built for e-Government program designers to:
   - To promote participation by relevant stakeholder groups from civil society in formulating e-Government plans and strategies.
   - Define policy frameworks that promote the use of different technologies that are relevant for the poor; provide incentive for creation of appropriate content, and create affordable and convenient access points.
   - Make application choices that can potentially impact the poor/vulnerable.
   - Create partnership with NGOs, media, and Private Sector in implementing pro-poor e-Governance.

5. Capacity needs to be built for project implementers to use participative methods in design and implementation of projects/ applications focused on the poor/vulnerable.

6. A large amount of training material (case studies, tool kits) needs to be created to support capacity building.

7. There is considerable scope for regional cooperation in sharing telecommunication infrastructure for creating access points, build content and exchange best practices. Moreover regional and cross-border development issues such as natural resources and disaster management, trade and transport, tourism etc are areas where regional e-government cooperation could be of significant mutual benefit. Mechanisms need to be evolved for developing such cooperation.

8. The e-Governance application in Punjab needs to build the trust of citizens in the system. It needs to ensure that the data and transactions of the citizen are secure. The information shared by the citizens should also remain safe and the privacy of the citizen needs to be protected. Whenever a citizen gets into any transaction with a Government agency, he shells out lot of personal information, which can be misused by the private sector and anti-social elements. Secured ways of transactions for the Government services are another issue of concern. The identity of citizens requesting services needs to be verified before they access or use the services. Here digital signature will play an important role in delivery of such services. But the infrastructure needed to support them is very expensive and requires constant maintenance. Hence a pertinent need still survives, compelling the authorities to ensure the authenticity in their transactions thereby gaining absolute trust and confidence of the citizen.

9. Cost Benefit Analysis:-Any e-Governance initiative must start with a clear understanding of the various costs involved in the project. We must also look into the Cost-Benefit-Analysis of the project. The investments in a project must look forward to the returns on the investments. Short term and long term plans with expected expenditures, income streams and deadlines may be worked out. The projects that are part of the e-governance initiatives need to be funded either through the Government sector or through the private sector. For the private sector to step into the funding activity their commercial interests needs to be ensured. Also the Government interest of Value Addition in services also needs to be taken care of while transferring the services to private sector. Advertising, sharing of Government information etc could be a few revenue generators for the Government.

10. Clear project objectives need to be set and projects need to be evaluated based on those objectives. The success of the project will depend on how far the stated objectives have been met. Another parameters which may define project success is the sustainability of projects over a long period and return on investments. The projects need to be evaluated as a constant improvement model even while implementation is underway. The interventions may be carried out at each stage of implementation. Bottlenecks and causes of delays should be documented, even though they may be removed later.

11. Raise awareness among public and private organizations - Organize workshops, events, seminars, conferences with the objective of raising awareness about real opportunities and benefits that the ICT revolution can bring. Prepare for long-

term solutions to problems by ensuring the availability of appropriate training programs for future management of technological and business changes.

12. Invest in human development – the success of e-initiatives depends largely on human skills and capabilities. Accordingly, education and training initiatives must be considered as priority actions. Staff need to be trained to handle new processes and activities; they have to be given incentives (not necessarily monetary) to prevent the brain drain of skilled people; and they need to feel part of the organization by engaging in the decision making process. Some basic training needs necessary to be provided to community members, in general, in order for them to be able to use new facilities for accessing electronic information and services.

A community of professionals (policy makers, project implementers, academics, development practitioners) who can champion the need for pro-poor e-Governance need to be build [17]. The community can be built around a rich web site that provides knowledge resources and promotes an off line dialog within the community. Periodic face-to-face workshops focused on specific tools, policy frameworks can catalyze the process of community building. Work with Government agencies and training institutions to design training programs for Policy Makers on topics such as: auditing of National e-Governance Plans, enabling policies for rural telecom access, enabling framework for PPP. Similarly training programs for project managers of pro-poor e-Governance projects on: participatory design, critical success factors, choice of technologies, managing Public Private Partnerships and project management. Training programs for civil society on assessing demand for information and knowledge in rural areas and articulation of the demand.

VIII. Conclusion

E-governance helps to reform the way the Governments work, share information, engage citizens and deliver services to external and internal clients for the benefit of both government and the clients that they serve. The government should try to practice e-government practices through these city centers so that it could be proved beneficial to the people. But connecting and bringing all the city centers on line is a very difficult task to do. But the need of hour for government is to concentrate not only on software and hardware, but to implement this strategy with honesty. Experts states that it better to first create strong administration, to bring all government employees under confidence, only then we can think to bring e-governance, to connect each and every person to this e-Governed world and to provide basic facilities to the citizens while sitting at home. Thus from above

discussions we conclude that a long term and a short-term strategy for E-Governance implementation is the need of the hour. For successful implementation Standards, Infrastructure, Legislations, Strategy all needs to be in place. It also requires establishment of various institutions under the Ministry of Information Technology. It requires a Global Vision and local implementation. And above all it requires e-readiness in the minds of citizens and the Government employees.

IX. Acknowledgments

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