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5 **Abstract**6 The e-Governance (digital government or online government) refers to government's use of
7 information technology to exchange information and services with citizens, businesses, and
8 other arms of government. E-Governance is a process of reform in the way Governments work,
9 share information, engage citizens and deliver services to external and internal clients for the
10 benefit of both government and the clients that they serve. This paper studies the current
11 status of e-governance and future of e-governance in Punjab.12

13 *Index terms*— E-Governance, IT, MMP.14 **1 Introduction**15 -Governance is a process of reforming the Governments work, share information, engage citizens and deliver
16 services to external and internal clients for the benefit of both government and the clients that they serve.
17 Government shares IT like World Wide Web (WWW), Internet and mobile computing to reach out to citizens
18 to improve delivery of services to citizens [1].19 There are many implications of implementing and designing e-governance including impacts on economic,
20 social, and political factors. The Objectives of e-governance is to provide the services to citizens by implementing
21 simple, steady and reliable registration process, by developing consistency in process, by implementing
22 transparency in valuation of properties and automating all the back office functions. The major strengths of the
23 e-government policies are to cover all administrative civic functions, to complete on-line functioning, providing
24 anytime anywhere solution to citizens, to provide user, the internet technology with browser based interfaces, to
25 provide an effective user technology for providing single window solution, to establish a proper workflow across
26 departments, and computerization of municipal corporations [2].27 As population in the cities increase in geometric progression, municipalities still have to extend their services to
28 the citizen in an arithmetic progression. Generally, it is always desired to have smart sized corporation with able
29 system in place. The manual system have their limitation and is not sufficient to meet the requirement. In the
30 context of e-governance, many suitable information Technology Systems and for making appropriate arrangements
31 to maintain the same. As per the orders of the government, the role assigned to the Department of Information
32 Technology is that of a facilitator and the primary responsibility for the implementation, operations, management
33 and use of computer systems, system software, and services rests with the each state Department concerned. The
34 Department is also responsible for developing statewide policies, technical standards and procedures.35 **2 II. Defining e-governance**36 E-Government means different things for different people. Some simply define it as digital governmental
37 information or a way of engaging in digital transactions with customers. For others e-Government simply consists
38 of the creation of a web site where information about political and governmental issues are presented. These
39 narrow ways of defining and conceptualizing e-Government restrict the range of opportunities it offers. One of
40 the reasons why many e-Government initiatives fail is related to the narrow definition and poor understanding of
41 the e-Government concept, processes and functions. E-Government is a multidimensional and complex concept,
42 which requires a broad definition and understanding, in order to be able to design and implement a successful
43 strategy.44 Several dimension and related factors influence the definition of e-Governance. The word "electronic"
45 in the term e-Governance implies technology driven governance. E-Governance is the application of Infor-
46 mation and communication Technology (ICT) for delivering government Services, exchange of information

47 communication transactions, integration various stand-one systems and services between Government-to-citizens
48 (G2C), Government-to-Business (G2B), Government-to-Government(G2G) as well as back office processes and
49 interactions within the entire government frame work.

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

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

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

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

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

75 About Punjab (Land of five rivers) Punjab is located in the northwest of India surrounded by Pakistan on the
76 west, the Indian states of Jammu and Kashmir on the north, Himachal Pradesh on its northeast and Haryana
77 and Rajasthan to its south. It covers a geographical area of 50,362 sq. km which is 1.54 % of country's total
78 geographical area. Punjab state is located between 29° 30' N to 32° 32' N latitude and between 73° 55' E to 76°
79 50' E longitude. Its average elevation is 300 m from the sea level. Chandigarh is the capital of the Punjab.

80 Sikhism is the predominant faith in Punjab. About 60% of the people in the state are Sikhs. The holiest of
81 Sikh shrines, the Sri Harmandir Sahib (or Golden Temple), is in the city of Amritsar. The Sri Akal Takht Sahib
82 which resides within the Golden temple complex is the temporal seat of Sikhs. Of the five Takhts (Temporal
83 Seats of religious authority) of Sikhism, three are in Punjab. These are Sri Akal Takht Sahib, DamdamaSahib
84 and Anandpur Sahib. Anandpur Sahib is where Guru Gobind Singh created the Khalsa in 1699 on the day of
85 Vaisakhi. During major holidays on the(D D D D) G 2012

86 3 Year

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

89 According to India Today [10], Leading magazine in India, Punjab has been awarded best overall state since
90 2003, and has been able to retain the top position every year. It also affords best quality of life to its residents.
91 Punjab has the best infrastructure in all of India [11]. Although it has a huge shortage of electricity due to high
92 demand, all major cities in Punjab benefit from this and have some of the lowest tariffs in India. All of Punjab's
93 villages have been provided electricity and connected to the state electrical power grid since 1974.

94 4 E-governance plan

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

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

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

111 5 Mission mode projects

112 The Government approved the National e-Governance Plan (NeGP) [13], comprising of 27 Mission Mode Projects
113 (10 Central MMPs, 10 State MMPs and 7 Integrated MMPs spanning multiple Ministries/ Departments.) and
114 8 components, on May 18, 2006. The Government has accorded approval to the vision, approach, strategy, key
115 components, implementation methodology, and management structure for NeGP. However, the approval of NeGP
116 does not constitute financial approval(s) for all the Mission Mode Projects (MMPs) and components under it.
117 The existing or ongoing projects in the MMP category, being implemented by various Central Ministries, States,
118 and State Departments would be suitably augmented and enhanced to align with the objectives of NeGP.

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

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

125 6 Mission Mode Projects (MMPs) CENTRAL MMPS STATE 126 MMPS INTEGRATED MMPS

127 ? BANKING ? CENTRAL EXCISE & CUSTOMS ? INCOME TAX (IT) ? INSURANCE ? MCA21 ?
128 NATIONAL CITIZEN DATABASE ? PASSPORT ? IMMIGRATION, VISA AND FOREIGNERS REGISTRA-
129 TION & TRACKING ? PENSION ? E-OFFICE ? AGRICULTURE ? COMMERCIAL TAXES ? E-DISTRICT ?
130 EMPLOYMENT EXCHANGE ? LAND RECORDS ? MUNICIPALITIES ? GRAM PANCHAYATS ? POLICE
131 ? ROAD TRANSPORT ? TREASURIES ? CSC ? E-BIZ ? E-COURTS ? E-PROCUREMENT ? EDI FOR
132 E-TRADE ? NATIONAL E-GOVERNANCE SERVICE DELIVERY GATEWAY ? INDIA PORTAL

133 VI.

134 7 E-governance projects in punjab

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

138 8 MAJOR PROJECTS IN PUNJAB STATE Project Introduc- 139 tion:

140 The National e-Governance Plan (NeGP) of the Govt. of India aims to make all Government services accessible
141 to the common man through common service delivery outlets and ensure efficiency, transparency & reliability of
142 such services at affordable costs to realize the basic needs of the common man. Under this plan, a Government
143 of India sponsored Mission Mode Project (MMP) called 'State Portal, State Service Delivery Gateway (SSDG)
144 and Gap Infrastructure' has been entrusted to Punjab State E-Governance Society (PSEGS) for implementation
145 [14]. For this purpose an administrative approval for the project at an estimated total outlay of Rs.1011.66
146 lakhs was accorded by GOI on 30. 09.2009

147 9 VEHICLE ENQUIRY REQUEST. 5. ONLINE REGISTRA- 148 TION OF COMPLAINTS (E-COMPLAINTS).

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

155 Initiating IT activities with government dilatory procedures cannot yield the desired results. At best it can
156 slightly increase the efficiency of the staff. The citizen friendly system can only be built after Reengineering
157 government processes while keeping citizen convenience as the prime goal of the whole exercise. The government
158 has to redefine and redesign itself at all levels. Today, for example, for every petty service charge, one has to go

13 PAWAN SERVICES

159 to the bank and treasury for making payment before the application form is accepted in some other government
160 office. The government needs to answer many questions such as:

161 ? Why can't the petty fee be accepted at the counter itself and deposited in the treasury by the government
162 office as a composite challan? ? What is the need to visit many branches for a single service? ? Why can't a
163 citizen charter be defined with service delivery time frame depending upon the type of service desired? ? Why
164 can't a control loop be included in each activity so that the delivery mechanism can be checked for quality? ?
165 What is the need for verification again and again?

166 Can't the services be provided on the spot? ? When there is a single government, why to have a number of
167 faces to talk to the citizen?

168 SUWIDHA has been conceived to facilitate citizen by capturing the input at a single point, defining a specified
169 delivery date depending upon the type of service and accepting cash at the counter itself.

170 10 SERVICES

171 The following is the list of front-end citizen services covered under the SUWIDHA PROJECT ?? How SUWIDHA
172 Works?

173 ? The citizen approaches SUWIDHA Queue Counter and gets the Queue Token number. ? He waits for some
174 time till his token number is displayed on the screen. On his turn at SUWIDHA Service Counter, he files his
175 application. ? She/he is issued a receipt cum token number, which specifies the date of delivery of services.
176 Each type of service has a pre-defined delivery time and system automatically calculates the service delivery ?
177 All of payments for etc be made at the SUWIDHA counter. This further saves the inconvenience of the citizen
178 caused to visit either bank or treasury office to deposit such payments. ? The application/case is then sent to
179 the branch for action.

180 ? In between the citizen can track the case with the help of SUWIDHA Token number through Dial CITI
181 (which is IVR based system) or website, wherever implemented. ? In order to ensure the timely delivery, the DC
182 monitors the progress regularly so that citizen does not have to visit the office un-necessarily. ? The delivery of
183 documents/processed case is made on the specified date. The delivery of the documents is also from SUWIDHA
184 Delivery Counter and not from the branch. This way the branches are able to concentrate on the backend work
185 rather than attending to the citizens and this further helps in improving government services and the citizen are
186 freed from inconvenience /harassment.

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

191 11 c) Punjab Wide Area Network (Pawan)

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

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

202 12 Present Status

203 ? GOI has approved the project at a project cost of Rs. 62.23 Crores over a span of five years. ? GOP has
204 received Rs. 12 Crores as a first installment for the project. ? PwC has been appointed as the consultant.

205 ? BSNL has been appointed s the Bandwidth Service provider.

206 ? RFP has been sent to GOI for approval.

207 13 PAWAN Services

208 PAWAN shall cater to the information communication requirements of the entire state government and its
209 departments. PAWAN shall facilitate the following minimum services to its entire user community [16] (2) The
210 Government of Punjab has invested in and implemented many e-Governance initiatives. The experience gained
211 from these initiatives and the active support of government officials at all levels, the State departments are well
212 prepared to support provisioning of services through the CSCs.

213 (Common Services Centers are envisioned as the front-end delivery points for Government, private and social
214 sector services to rural citizens of India. The idea is to develop a platform that can enable Government, private
215 and social sector organizations to integrate their social and commercial goals for the benefit of rural populations
216 in the remotest corners of the country through a combination of IT as well as non-IT services.)**3**

217 CSCs are meant to be the front end delivery points for delivery of G2C and B2C services Objectives: 1. The
218 aim of the Scheme is not merely to roll out IT infrastructure but to build a network of 100,000+ rural businesses
219 across India. To that effect, the CSC Scheme has been designed to create a value proposition for all stakeholders
220 and alignment of their economic interests. 2. But beyond a delivery channel the CSC can play a role of an
221 effective "change agent" that would provide a structured platform for socially inclusive community participation
222 for collective developmental activities. Such change, it is proposed, would be undertaken through three important
223 components: ? A Public

224 **14 e) Punjab Government Personnel Management System**

225 The software has been got prepared in consultation / discussions with various departments of Punjab Government
226 keeping in view that the same will be required by every office for the automation of employee's records. The new
227 computerized system covers the following 6 functions related to Punjab Government employee's information:?
228 Personnel Information System ? Pay Accounting System ? Leave Accounting System ? Loan Accounting system
229 ? General Provident Fund Accounting System ? Pension Accounting System (D D D D) G 2012 Year Present
230 Status of Automation

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

235 Phase II (Implementation in 33 selected departments in all districts) Implementation is under progress for
236 approximately 40,000 employees Phase III (Implementation in remaining department in all districts of Punjab)
237 Implementation in remaining departments in Phase III will start after the completion of Phase II.

238 **15 Benefits of the Project**

239 ? Improvement in utilization of resources ? Provides accurate and timely information at various levels to assist
240 the concerned authorities in effective decision making ? Makes information readily available for the benefit
241 of the employees and the pensioners ? Reduces redundancy of efforts f) E-District in Punjab E-District has
242 been envisaged by Government of Punjab (GoP) as automation of workflow backend digitization, integration of
243 multiple applications of different departments and process reengineering of the participating line departments like
244 Revenue (Certificates, Revenue Court services, licenses, etc), Social Security (pension related services), Food and
245 Civil Supply (PDS), Municipal department (Utilities), etc. This project is of paramount importance to the State
246 as it would help in creating an electronic workflow system for the district administration and help in providing
247 efficient individual department services through COMMON SERVICE CENTERS (CSCs) which would be the
248 primary front end channels as envisaged in the project.

249 **16 Objectives:**

250 ? To provide easy access to government services to common man, especially the people belonging to Scheduled
251 Castes, Scheduled Tribes and women. ? Reengineering of the internal processes of District Administration,
252 Subordinate offices and participating departments to increase functional efficiency.

253 **17 ? IT enabling of internal processes of District**

254 Administration and its subordinate offices to increase operational efficiency ? Creation of IT infrastructure for
255 rolling out e-Governance plan right up to Block levels ? Develop capacities of human resources of Government
256 to operate and maintain IT enabled systems and applications with confidence and provide services to the people
257 effectively and efficiently.

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

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

264 Indicative services planned to be delivered through this MMP include: Future of E-governance in Punjab
265 E-Governance is said to be pill of all ills of Governance. However many e-Governance projects are not succeeding
266 or are facing bottlenecks. There is resistance to change or duplication of efforts in many initiatives. There are
267 local language issues in some cases and lack of planning in others. Lack of infrastructure is a bottleneck and
268 Universal Access is an issue. Lack of Process and Legal Reforms is hindering the projects and lack of technology
269 and architecture is leading to slow implementation in Punjab.

270 There has been a lack of critical examination of process of strategizing; choice of applications; process of design
271 and implementation. Often a supply side view is taken. tool kits) needs to be created to support capacity building.
272 7. There is considerable scope for regional cooperation in sharing telecommunication infrastructure for creating
273 access points, build content and exchange best practices. Moreover regional and cross-border development issues
274 such as natural resources and disaster management, trade and transport, tourism etc are areas where regional

275 e-government cooperation could be of significant mutual benefit. Mechanisms need to be evolved for developing
276 such cooperation.

277 8. The e-Governance application in Punjab needs to build the trust of citizens in the system. It needs to
278 ensure that the data and transactions of the citizen are secure. The information shared by the citizens should also
279 remain safe and the privacy of the citizen needs to be protected. Whenever a citizen gets into any transaction
280 with a Government agency, he shells out lot of personal information, which can be misused by the private sector
281 and anti-social elements. Secured ways of transactions for the Government services are another issue of concern.
282 The identity of citizens requesting services needs to be verified before they access or use the services. Here digital
283 signature will play an important role in delivery of such services. But the infrastructure needed to support
284 them is very expensive and requires constant maintenance. Hence a pertinent need still survives, compelling
285 the authorities to ensure the authenticity in their transactions thereby gaining absolute trust and confidence
286 of the citizen. 9. Cost Benefit Analysis:-Any e-Governance initiative must start with a clear understanding of
287 the various costs involved in the project. We must also look into the Cost-Benefit-Analysis of the project. The
288 investments in a project must look forward to the returns on the investments. Short term and long term plans
289 with expected expenditures, income streams and deadlines may be worked out. The projects that are part of the
290 e-governance initiatives need to be funded either through the Government sector or through the private sector.
291 For the private sector to step into the funding activity their commercial interests needs to be ensured. Also the
292 Government interest of Value Addition in services also needs to be taken care of while transferring the services
293 to private sector. Advertising, sharing of Government information etc could be a few revenue generators for
294 the Government. 10. Clear project objectives need to be set and projects need to be evaluated based on those
295 objectives. The success of the project will depend on how far the stated objectives have been met. Another
296 parameters which may define project success is the sustainability of projects over a long period and return on
297 investments. The projects need to be evaluated as a constant improvement model even while implementation is
298 underway. The interventions may be carried out at each stage of implementation.

299 Bottlenecks and causes of delays should be documented, even though they may be removed later. Staff need
300 to be trained to handle new processes and activities; they have to be given incentives (not necessarily monetary)
301 to prevent the brain drain of skilled people; and they need to feel part of the organization by engaging in the
302 decision making process. Some basic training needs necessary to be provided to community members, in general,
303 in order for them to be able to use new facilities for accessing electronic information and services.

304 A community of professionals (policy makers, project implementers, academics, development practitioners)
305 who can champion the need for pro-poor e-Governance need to be build [17]. The community can be built
306 around a rich web site that provides knowledge resources and promotes an off line dialog within the community.
307 Periodic face-to-face workshops focused on specific tools, policy frameworks can catalyze the process of community
308 building.

309 18 Conclusion

310 E-governance helps to reform the way the Governments work, share information, engage citizens and deliver
311 services to external and internal clients for the benefit of both government and the clients that they serve. The
312 government should try to practice e-government practices through these city centers so that it could be proved
313 beneficial to the people. But connecting and bringing all the city centers on line is a very difficult task to do.
314 But the need of hour for government is to concentrate not only on software and hardware, but to implement this
315 strategy with honesty. Experts states that it better to first create strong administration, to bring all government
316 employees under confidence, only then we can think to bring e-governance, to connect each and every person
317 to this e-Governed world and to provide basic facilities to the citizens while sitting at home. Thus from above
318 discussions we conclude that a long term and a shortterm strategy for E-Governance implementation is the need
319 of the hour. For successful implementation Standards, Infrastructure, Legislations, Strategy all needs to be in
320 place. It also requires establishment of various institutions under the Ministry of Information Technology. It
321 requires a Global Vision and local implementation. And above all it requires e-readiness in the minds of citizens
322 and the Government employees.

323 IX. ^{1 2}

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Figure 1:

Implementation Status and Timelines: A State Project Committee (SPC), comprising of the following members for 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

required M/s KPMG, empanelled by DIT, Govt. of India was appointed as Project Consultant by PSEGS and

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

? 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

Figure 3:

? 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

2012 2. Security Services ? Secure data departmental offices. ? Secure access to
 Year centralized applications transmission between ? Access rule for departments
 to be connected to

34 PAWAN
 ? Access rule for VPN access to departmental network on PAWAN ? Gateway Level Antivirus protection for SNC NOC ?
 XII Perimeter Security for SNC NOC Additional Services ? Help Desk Services for
 Is- incident handling ? Provide departmental network from remote ? Centralized
 sue Network Monitoring System ? Messaging services d) Implementing the
 XI Common Service Centre (Csc) Scheme in Punjab

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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.
 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

Figure 4:

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 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:
 1. To promote participation by relevant stakeholder groups from civil society in formulating e-Government plans and strategies.
 2. 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.
 3. Make application choices that can potentially impact the poor/vulnerable.
 4. 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,

Figure 5:

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Figure 6:

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