

e-Governance Roadmap for the State of Mizoram



**An Initiative of Government of Mizoram
Under the National e-Governance Plan
(NeGP)**

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Prepared by

PRICEWATERHOUSECOOPERS 

Table of Contents

1	Background	4
1.1	Objectives of the Study	4
1.2	Scope of Work	4
1.3	Approach to the Study	5
1.4	Key Design Considerations	6
1.4.1	Developmental priorities of the state	6
1.4.2	Alignment with NeGP	6
1.4.3	Right to Information Act	6
2	Mizoram - a brief Profile	7
2.1	Geography & Demography	7
2.2	Resource Profile	9
2.3	State of Human Development	10
2.4	Economy	11
2.5	Physical Infrastructure	12
2.6	State Finances	13
2.7	SWOT ANALYSIS:	14
2.8	Stakeholders' Needs & Expectations:	15
2.9	Synthesis of Needs	17
3	e-Governance Vision	20
4	e-Governance Roadmap	23
4.1	Customers	24
4.2	e-Services	25
4.3	Delivery channel	27
4.3.1	Promote Delivery Channel Shift	30
4.4	E-Governance Infrastructure	31
4.5	People	33
4.5.1	Institutional Structure	33
4.5.2	Role and Responsibilities	35
4.5.3	Training	37
4.6	Processes and Policies	38
4.6.1	Government Reform Process	38
4.6.2	Implementation Policies	39
5	Monitoring and Evaluation	44
5.1	Performance Measures	44
5.2	Data sources	48
6	e-Governance Blueprint	50
7	Implementation Plan	51
8	Next Steps	53
	Annexure I- Service List of the Participating Departments	56
	Annexure II – Services Maturity Growth	65
	Annexure III- Service Prioritization& Phasing Strategy	67
	Annexure IV- e-Governance Champions Training Program	81

Annexure V: e-Governance Electronic Channels Phasing Strategy.....	82
Annexure VI: e-Governance Infrastructure Components	86

List of Tables

Table 1 : Geographic Indicators (Urban/rural Statistics)	7
Table 2 : Demographic Indicators:.....	8
Table 3 : Demographic Indicators (Urban/rural Statistics):	8
Table 4 : Agricultural Statistics	9
Table 5 : Natural Resources	10
Table 6 : Social Indicators (Mortality and Child Health)	10
Table 7 : Economic Statistics	12
Table 8: NSDP & Per Capita Income (At Current Price).....	13
Table 9 : Stakeholder Aspirations.....	17
Table 10 : Customer Expectations and e-Governance opportunities.....	24
Table 11: Characteristics of Transaction and Information Services.....	26
Table 12 : Assessment of present e-Governance Delivery Channels.....	28
Table 13 : eGovernance infrastructure Components.....	31
Table 14 : Phasing Plan for e-Gov Infrastructure Components	33
Table 15 : Roles and Responsibilities Matrix.....	35
Table 16 : Policies for Implementation of e-Governance Roadmap.....	40
Table 17 : Performance Measures.....	44
Table 18 : Illustrative Service Levels	48
Table 19 : Action points for e-Governance Roadmap implementation.....	53
Table 20 : Services of the participating Departments.....	56
Table 21 : Phase I Services	68
Table 22: Phase II Services.....	72
Table 23: Phase III Services	76
Table 24 : e-Governance Delivery Channel Phasing Strategy.....	82
Table 25: e-Gov Delivery Channel Implementation Plan	84

1 Background

Government of India (GoI) has recently approved the National e-Governance Plan (NeGP) that seeks to lay the foundation for the long term growth of e-Governance in the country. NeGP is aimed at improving the quality, accessibility and effectiveness of government services to citizens and businesses with the help of information and communication technology. NeGP is structured on the philosophy of a centralized initiative with decentralized implementation. GoI plays a co-ordination role at the centre with the respective state governments managing the implementation of the planned e-Governance initiatives.

Considering the nature and scale of e-Governance initiatives planned under NeGP, the role of the State Government in managing these initiatives is seen as critical. It is also well recognized that for state to play its role effectively, significant capacities need to be built/upgraded. Thus, for the success of NeGP, it is necessary to build a strategic roadmap and enhance the capacities in the State Government and its nodal agency to enable issues to be dealt with in a competent manner, with a holistic perspective & with speed.

In this context, the Government of Mizoram appointed PricewaterhouseCoopers (PwC) to prepare a comprehensive project proposal covering both e-Governance roadmap and capacity building roadmap for the state of Mizoram. While, the preparation of the e-Governance roadmap is aimed at detailing the strategic priorities of the state and ensuring that they are in alignment with NeGP, the capacity building roadmap details the strategy for achieving the same.

1.1 Objectives of the Study

While, the primary objective of the roadmap is to align the state government plan for e-Governance in line with the national strategy, there are multiple objectives for preparation of the roadmap including:

- Articulate the e-Governance vision for the state of Mizoram
- Understand the state's priorities and develop a strategic approach for achieving the e-Governance vision of the state
- Bring citizen focus in the e-Governance
- Define the immediate action points based upon the state's priorities

1.2 Scope of Work

The scope of work for the assignment has been structured across three key areas relating to:

- 1 Design of e-Governance roadmap for the state of Mizoram that includes:
 - Preparing a blueprint for the state of Mizoram that documents the overall strategy and action plan for development of e-Governance in the State
 - Identify important e-Governance initiatives that are aligned with NeGP
 - Plan for implementing the recommended e-Governance initiatives
- 2 Design of capacity building roadmap for the state of Mizoram that includes:
 - Administrative structure for implementing the e-Governance plan
 - Assessment of the capacity gaps for implementing the e-Governance initiatives
 - Sourcing plan for bridging the capacity gaps

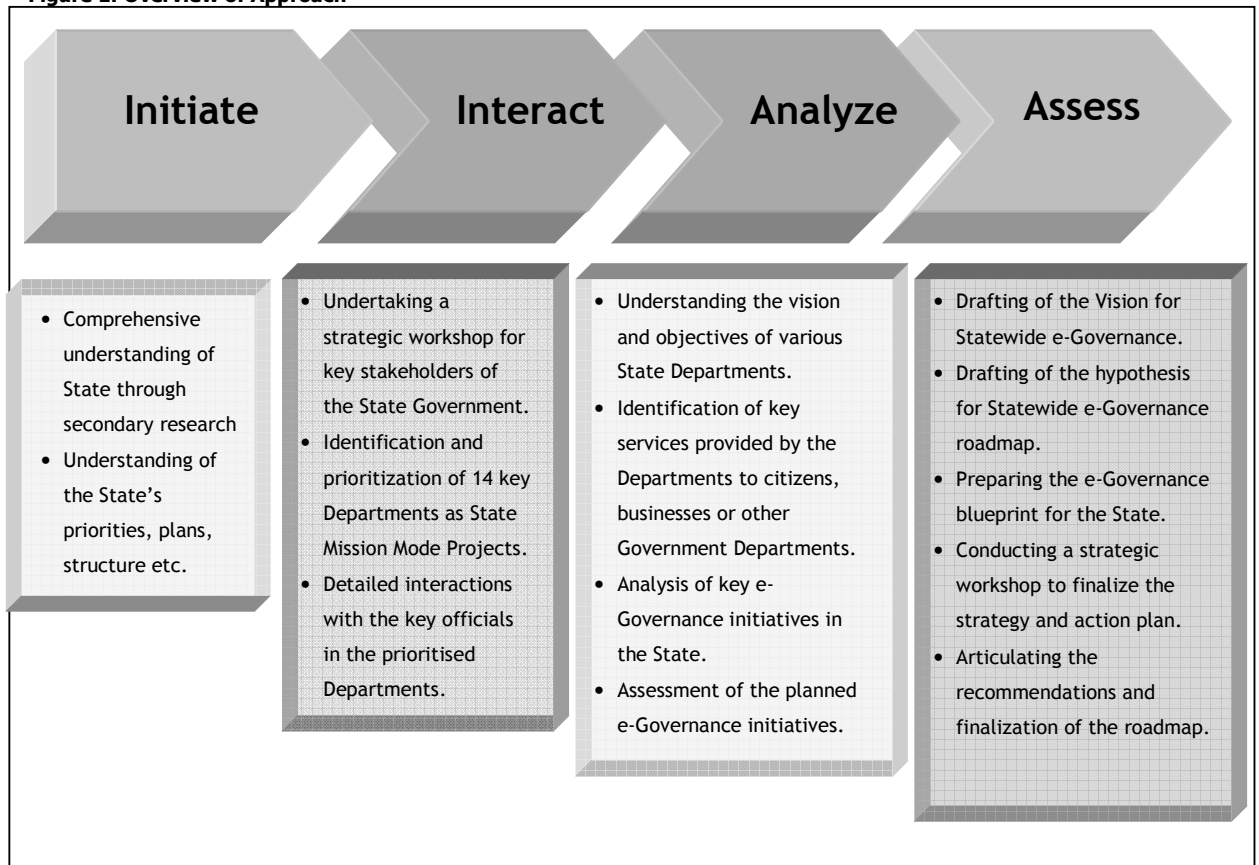
- 3 Detailed Project Report with details of funding requirements for implementation of the capacity building plan:
 - Budget estimate for implementation of the sourcing strategy and bridging the capacity gaps

This report dwells on the first part of the scope of work i.e. the e-Governance roadmap.

1.3 Approach to the Study

The overall approach followed for developing the e-Governance roadmap report as been depicted below in diagram (figure 1).

Figure 1: Overview of Approach



The approach followed for developing the e-Governance roadmap report is as follows:

- Undertaking of a strategic workshop involving the key officials of the state representing various departments. The objective of the workshop was to:
 - Explain the concepts related to e-Governance vision, mission, strategic objectives for the state from the vision of the state
 - Identify and prioritize relevant Departments for participation in the roadmap formulation exercise. The factors utilized by the participants for finalizing the fourteen departments were a) whether the Department had citizen facing services b) the level of interaction needed by the citizen with the Department and c) whether the Department existed in the GoI NeGP identified Mission Mode Projects list.

- Get the acceptance of the department officials on the approach and time lines for the exercise
- Undertaking a structured study through administration of Questionnaire along with detailed interactions with the key officials in the prioritized departments for:
 - Understanding the vision and objectives of the department
 - Key services provided by the department to citizens, businesses or other government departments
 - e-Readiness assessment of the departments covering current and planned e-Governance initiatives, detailed IT infrastructure assessment of the department
 - Assessment of the current capacity within the department
 - Analysis for identifying key e-Governance initiatives
- Drafting of the hypothesis for state-level e-Governance roadmap
- Conducting a strategic workshop to finalize the strategy and action plan
- Articulating the recommendations and finalization of the roadmap
- Preparing the e-Governance blueprint for the State

1.4 Key Design Considerations

The e-Governance roadmap consisting of the vision and strategy for the State have emerged out of a number of “given considerations”. The key considerations and its implications are discussed below:

1.4.1 Developmental priorities of the state

The state government has identified the following sectors as core sectors as part of ensuring comprehensive and sustainable development of the state:

- Rural Economy (Agriculture & Minor Irrigation)
- Social Security and Welfare
- Horticulture and Agriculture related services
- Improved Road network

1.4.2 Alignment with NeGP

NeGP is designed at a national level with a focus on the citizen, service delivery and on undertaking projects on a mission mode. Alignment of state’s plan with that of national level plan is an important consideration.

1.4.3 Right to Information Act

This is a recent legislation passed by Government of India aimed at increasing the accountability of the government officials. The citizen can now demand the requisite information and if denied, can escalate to higher authorities or demand an explanation. This legislation would drive streamlining of processes in all the citizen facing departments. The application of information technology in automation of the processes would greatly facilitate compliance to the legislation.

2 Mizoram - a brief Profile

2.1 Geography & Demography

Mizoram is a beautiful hilly State in the North Eastern parts of India, between 21 degrees 58 minutes north to 24 degrees 35 minutes North latitudes and 92 degrees 15 minutes east to 93 degrees 29 minutes East longitudes. It is one of the seven states in the North East of India. Mizoram occupies an important strategic position having a long international boundary of 722 kilometers with Bangladesh and Myanmar.

Mizoram is the one of the smallest state (ranks 24th in terms of geographical area) in India and has about 0.08% of India's population. It is bounded on the north by Assam and Manipur, west partly by Tripura and partly by Bangladesh and south and east by Myanmar. The total area of Mizoram is estimated to be of 21,087 Sq Km. Nearly 2/3rd of the area is hilly, leaving very little cultivable land. Over 60% of the total area is classified as forest and under the ambit of the Forest Conservation Act. The State is located in the bio-geographic zone of 9B North East Hills and possesses extremely rich bio-diversity. The local flora and fauna bear a very close affinity and resemblance with floral and faunal components of Indo-Malayan and Indo Chinese sub-regions. The State has many rain-fed, non-perennial rivers and streams draining into Bangladesh.

The early inhabitants who occupied these hills were known as Kukis and they migrated to these areas from China to Mizoram through Burma. Other tribes such as New-Kukis and Lushai also migrated thereafter. The 18th and 19th century witnessed many tribal conflicts and the hills were ruled by tribal chieftains. Gradually the British rule spread to this area and the Lushai hills in the area were proclaimed as a District of Assam by the British in 1895 with Aizawl as its capital. They were later declared "Excluded Areas" along with many Assam Districts in 1935. Mizoram was one of the Districts of Assam during Independence and this continued until 1972, after which it was made a Union Territory. Then in February 1987, Mizoram became the 23rd state of India.

Administratively Mizoram is divided into 23 Sub-Divisions covering 8 Districts. The Government operations are handled by the Deputy Commissioners and the Sub-Divisional Officers with their staff. The village level administration is slightly different from the rest of the country. The state has a Village Council in each village and these are reporting to Autonomous District Councils. There are 3 ADCs which function with the help of the 22-Block level bodies and 2036 Village Councils. The following table (Table 1) provides the statistical data on the administration details of the State of Mizoram.

Table 1 : Geographic Indicators (Urban/rural Statistics)

Area (Sq. Km)	21,087	Number of Village Councils	2036
No. of Districts	8		
No. of Blocks	22	No. of Municipal Corporation	Nil
No. of villages	2036	No. of Municipalities	Nil
No. of Households	176,134		
No. of notified towns	22		

Source: Statistical handbook of Mizoram, 2004

Renowned for their hospitality, Mizos are a close-knit society with no class distinction and no discrimination on grounds of sex. The entire society is knitted together by a peculiar code of ethics 'Tlawmngaihna' an untranslatable term meaning on the part of everyone to be hospitable kind,

unselfish and helpful to others. If Mizoram's per capita income were to be taken into account, it is one of the richer State of the Indian Union, with a per capita income of Rs 19,704 (at current prices) in the year 2001-02, at the same time, it has 33.37% of the population living below the poverty level.

The State's Infant Mortality Rate (IMR) of 15.69% (in rural area) and 12.61% (in urban areas) remains among some of the lowest in India. Mizoram is relatively impoverished with regards to railways, telecommunication, literacy, and irrigation coverage.

Table 2 : Demographic Indicators:

States	Population	Density of Population (Per Sq km)	Sex ratio (Females per 1000 males)	%SC Population	%ST Population
Gujarat	50671017	258	920	7.1	14.8
Karnataka	52850562	275	965	16.2	6.6
Kerala	31841374	819	1058	9.8	1.1
Maharashtra	96878627	314	922	10.2	8.9
Orissa	31659736	203	972	16.5	22.1
Mizoram	888573	42	935	0.0	94.5
Punjab	24358999	482	876	28.9	0.0
Mizoram	80176197	904	934	23.0	5.5
All India	1028610328	324	933	16.2	8.2

Source: www.censusindia.net as per 2001 figures

The density of population is the lowest among the states of India. Mizoram has a decent sex ratio of 935. The State has the highest percentage of the population as Scheduled Tribe, in the entire country and also the absence of scheduled caste population in the State is a something that only Nagaland & Mizoram have.

Table 3 : Demographic Indicators (Urban/rural Statistics):

States	Rural Population	No. of Villages	Average Population per village	Urban Population	No. of Towns	Average Population Per Town	Share of urban Population (%)
Mizoram	55223944	28123	1964	20503597	210	97636	27.08
Gujarat	31697615	18544	1709	18899377	242	78097	37.35
Karnataka	34814100	29483	1181	17919858	270	66370	33.98
Kerala	23571484	1364	17281	8267135	159	51995	25.97
Maharashtra	55732513	43722	1275	41019734	378	108518	42.40
Orissa	31210602	51349	608	5496318	138	39828	14.97
Mizoram	562919	2036	276	325676	1	325676	36.65%
Punjab	16043730	12729	1260	8245566	157	52520	33.95
Mizoram	57734690	40793	1415	22486481	375	59964	28.03
ALL INDIA	741660293	638691	1161	285354954	5161	55291	27.78

Source: www.censusindia.net as per 2001 figures

2.2 Resource Profile

Agriculture Resources: Agriculture plays a dominant role in the economy of the State like Mizoram. Agriculture contributed more than 25% to the Net State Domestic Product of the State in 2001-02 (Q) at current prices. It accounts for the employing both directly and indirectly nearly 60% of the total workforce in the State (as per the 2001 Census). However agriculture in Mizoram continues to be characterized by low productivity due to antiquated practices, insufficient capitals, inadequate irrigation facilities and uneconomic size of holdings. Moreover, Jhum or Shifting Cultivation continues to be the principal and prevalent method of Cultivation. Over 35,000 hectares of land which is about 34 per cent of the total cropped area was considered to be under Jhum Cultivation during 2000-01. This method is one of the most under-utilization methods of cultivation resulting in fertile top soil erosion due to large scale destruction of valuable forest vegetation and its natural resources and the yield is also comparatively low. The State has 101.331 thousand hectare of land as net sown land and a mere 11.63 thousand hectares of this land is irrigated. Rice (Jhum) is the principal food crop of the State.

Table 4 : Agricultural Statistics

Name of Crop	2002-2003		2003-2004	
	Area (in Ha)	Production (in MT)	Area (in Ha)	Production (in MT)
Paddy	57067	109205	59196	114630
Maize	7428	14879	10481	20282
Pules	4666	4986	4892	20282
Oil Seeds	7132	5285	7532	4313
Sugarcane	1370	7443	1393	36174

Source: Statistical handbook of Mizoram, 2004

Mizoram has an abundant growth of vegetation. The climatic condition favours the luxuriant growth of vegetation. Roughly speaking, about 85 per cent of the total area of Mizoram is under forest cover of either dense forest or open forest. The forest supports variety of Flora and Fauna. More than 400 medicinal plants have been reported to have exist in Mizoram of which 62 were categorized as new medicinal plants, 22 species of bamboos are also found in the State. Important forest produce of Mizoram mostly in the form of raw-materials are bamboo, timber, firewood and charcoal, sungrass, broomsticks, cane, sand, stone and poles.

The state Government is trying to raise the agricultural productivity, particularly that of food grains by adopting a multi pronged strategy including expansion of the area under assured irrigation, application of recommended doses of fertilizers, use of HYV seeds, and application of modern technology. The varied agro-climatic conditions of the State provide excellent scope for horticulture, cultivation of vegetables, plantation crops, spices, flowers and medicinal herbs. Suitable cropping patterns have to be developed taking into account the agro-climatic conditions of different zones in the State, both for agricultural and horticultural crops. Agro based industries are being set up to absorb unutilized manpower from the agricultural sector and to reduce unemployment, underemployment and disguised unemployment in rural areas.

Natural Resources: The National Forest Policy, 1988 has mandated that 33% of the geographical area should be under forest cover, with 60% coverage in hilly tracts and 20% in plains. Against this, the State has 3,786 sq. Km under dense forest area, 14,552 sq. km as open forest. Moreover, the State earns Rs 1.25 crores from the forest produce. Forests are an important source of non-tax revenue for the State Government.

Table 5 : Natural Resources

States	Total Forest Area (Sq Km)	% Forest Area	Total Livestock ('000)	Poultry ('000)	Production of Egg (Cr.)	Production of Milk ('000 tonnes)
	2001	1999-00	1997	1997	2001-02	2001-02
Gujarat	15152	9.91	19930	7236	37	5862
Karnataka	36991	16.08	28526	21399	202.7	4747
Orissa	48838	37.3	23338	18435	83.7	929
Mizoram	18338	86.9	256.94	1876.25	804	15
Punjab	2432	6.06	9858	11022	334.6	8375
All India	675538	22.55	485385	347611	3906.9	84754

Source: Forest Survey of India 2003 and Statistical Abstract of India

Fisheries and Animal Husbandry: Fishery Sector has been gradually drawing attention as an important area for employment and income generation in the State. Fisheries in Mizoram are only fresh water Fisheries including both culture and capture fisheries. The existing total water area for fish farming is estimated to be 1700 hectares. The total inland fish production during 2000-01 was 2900 M. Tonnes and at present 4700 families of small and marginal fish farmers are engaged in this trade. Fishery resources and potentialities have become more and more obvious with introduction of improved technology and rising interest of the public in the fishing activities.

Next to crop production, animal husbandry is the most important income generating activity in rural households. As per the latest livestock Census (1997) there were 2.56 lakhs livestock in Mizoram. Of these, 1.63 lakhs were pigs, 0.33 lakhs were Cattle. Pigs are maintained by most of the Mizo villagers.

Poultry development in Mizoram has made significant progress over the years and there is vast scope for generation of employment in poultry farming. Animal Husbandry and Dairy Development being two important rural oriented income-generating sectors, offer ample opportunities for steady household income and employment.

2.3 State of Human Development

Mizoram is plagued with low levels of access to health care services, as there are only 54 PHC/ SHC in the State. However, Infant mortality rate (IMR) continues to be one of the lowest in Mizoram among all the states. The specific reasons for the contrast could not be conclusively establishes but may be due to (a) robustness of the locals who can survive in harmony with nature and (b) due to inadequate facilities to report births and deaths in the rural areas.

Table 6 : Social Indicators (Mortality and Child Health)

<i>Indicator</i>	Rural	Urban	Total	India
Population			912970	1028610328
Birth Rate	20.03	23.87	21.93	
Death Rate	4.57	5.58	5.07	
Infant Mortality Rate	15.69	12.61	14.03	
Maternal Death	19	14	33	
Sex Ratio	NA	NA	935	933
Population Growth Rate	NA	NA	28.8%	21.2%

Source: Statistical hand book 2004 (Based on 2003 data)

The overall literacy rate in Mizoram remains as one of the highest in the nation. There is also significant disparity between urban and rural literacy rates, evidently due to better physical and

economic access to education in urban areas. The gender disparity is more prominent in the rural areas as compared to the urban areas. Similarly, between the rural and urban areas, the disparity in literacy rate amongst females is more as compared to males.

Based on the Civil Registration system operated in Mizoram the birth rate was estimated to be 21.38 per thousand in the Year 2000, and a death rate of 4.02 per thousand during 2000 while the infant mortality rate was worked out to be 11.5 per thousand during 2000.

The overall health status of the people of the State has shown improvements in recent times. Besides 7 number of hospitals, the number of Community Health Centre, Primary Health Centres and subsidiary Health Centres up to the end of 2000-01 were 9, 45 and 13 respectively. The Government is working out plans for setting up many more such facilities.

All 911 habitation identified within Mizoram have been provided with at least one source of Water Supply, however efforts are being made to improve and supplement the existing level to a minimum level of 40 liters per capita per day.

Supplementary nutrition programme is being implemented through the network of 21 ICDS project in Mizoram where 79,935 number of malnourish children (0-36 months) have benefited during 2000-01. There were also 1341 number of Anganwadi Centres in Mizoram up to 2000-01 with an enrolment of 1, 50,652 children.

2.4 Economy

The State Economy in terms of Net State Domestic Product (NSDP) registered an annual growth rate of 13.1 per cent at current prices during 1999-2000 as against 11.4 per cent in the preceding Year 1998-99. The Net State Domestic Product at factor cost at current price in 1999-2000 has been estimated at Rs. 1, 28,818 lakhs as against RS. 1, 13,896 in 1998-99.

The per Capita Income (i.e. per capita NSDP at factor cost) at current price during 1999-2000 has been estimated at Rs. 14,909 as against Rs. 13,479 during the previous Year i.e. 1998-99 thus, showing an annual increase of 10.6 per cent. Of the total GSDP of Rs. 107839 lakhs during 2001-02, Primary Sector contributes 22.75 per cent, Secondary sector 15.32 per cent and Tertiary Sector contributes 61.93 per cent. It has been observed that compared to the SDP during 1993-94 contribution of tertiary sector has increased from 54.10 per cent during 1993-94 to 61.93 per cent during 1999-2000 while contribution of primary sector has declined from 29.83 per cent to 22.75 per cent. The contribution of secondary has more or less remained constant through these years.

The contribution of manufacturing sector (both organized and un-organized) is only 1.22 per cent of the total NSDP at current price during 1999-2000. This clearly shows the absence of any big industry and very little small scale Industry. The Industrial Sector is not a major contributor to the State's economy. The contribution of manufacturing sector (both organized and un-organized) at the All India Level is 13.62 per cent of NDP at current prices in 1999-2000. However, the State Government has decided to adopt 'The New Industrial Policy of Mizoram 2000' for accelerated industrial and economic development of the State. As per the policy resolution priority industries have been identified.

The State has been experiencing serious fiscal stress for several years and is currently facing a serious fiscal crisis. The burgeoning non-Plan expenditure arising out of substantial increase in salaries and the widening gap between non-Plan revenue expenditure and receipts have necessitated higher borrowing and higher debt servicing liabilities. The increasing disequilibrium

between revenue receipts and expenditure has become a cause for concern for the Government and needs to be effectively corrected, for the state to be in a position to discharge the social and economic responsibilities.

Table 7 : Economic Statistics

States	Per-capita Consumption of Electricity (KWH)	Rural Electrification (31.03.2003)			No. of Newspapers and Periodicals	T.V - Home Viewers Urban	T.V Home Viewers Rural	ISM and H Doctors per lakh of population	Population per bank('000)	post offices/lakh of population
		2002-2003	Villages Electrified	% of Villages electrified(2001)						
Gujarat	1193	17940	100	764564	2492	15.6	7.8	44.3	14.2	18
Karnataka	611	26767	99	1402209	2854	15.2	12.1	35.6	11.3	19
Kerala	378	1384	100	417640	1944	6.8	11.2	72.1	9.7	16
Maharashtra	848	40351	92	2417075	6415	40.2	22.4	86	15.8	13
Orissa	470	37307	75	74625.0	997.0	4.0	5.5	23.9	16.9	22
Mizoram	154	691	34%	--	132	--	--	--	11.31	47
ALL INDIA	355	---	87	13044	55780	229.3	207.0	67.3	15.9	15

Source: Statistical hand book 2004

2.5 Physical Infrastructure

Road Network: In absence of adequate internal rail linkages, roads are the major means of transportation in the State. The total length of road in the State by the end of 2000-01 was 4046.37 kms. Out of which 2220.30 kms were surfaced road. The un-surfaced roads with 1844.07 kms of road length constituted about 45.4 per cent of the total road length. Out of the total 732 (2001 census) inhabited villages in the state, 360 villages were connected by all weather roads while 342 villages were connected by fair weather roads.

Rural connectivity has been identified as one of the basic minimum services for development of agriculture and the rural economy and the State Government have accorded high priority to this sector. Further, realizing the importance of rural connectivity, the Govt. of India launched Pradhan Mantri Gram Sadak Yojana (PMGSY) in the year 2000. The primary objective of the PMGSY is to provide connectivity to all habitations with a population of 1000 persons and above in three years (2000-03) and to all unconnected habitations with a population of 500 persons and above by end of the plan period, which definitely would help Mizoram achieve satisfactory and competent levels of connectivity.

Railway Network:

The nearest Railway station for Mizos is Silchar in Assam for Railway passengers. There is presently one Railway station in Mizoram but it is serving the state in terms of transportation of goods only.

Electricity

The installed capacity of power during 2000-01 has more or less remained the same compared with that of 1999-2000. The total install capacity during 2000-01 was 34.35 MW. Generation of power in the State has declined to 12.45 MKWH during 2000-01 while the total generated during the previous year (1999-2000) was 18.88 MKWH, the main reason being due to decrease of power generated from diesel stations. The total consumption of electricity during 2000-01 was 137.40 MKWH out of which the largest share of consumption (70.6 %) goes to domestic consumption.

Postal & Telecomm Service

The total number of Post Offices at the end of 2000-01 stood at 397 out of which 329 Post Offices are in the rural areas and 68 in the town areas. Up to the end of 2000-01 there were 62 numbers of Telephone Exchanges in the State, 5 numbers of town / cities have telegraph facilities. The number of working telephone connection up to 2000-01 stands at 37,718 as against 34,615 at the end of 1999-2000.

2.6 State Finances

In the revised Estimates for the Year 2000-01 the total receipt on revenue account are estimated at Rs. 1,08,181.93 Lakhs while the total expenditure on revenue account are worked out to be Rs. 1,07,232.54 Lakhs. There is a surplus of Rs. 2259.39 Lakhs under revenue account. Under Capital account the total receipts are placed at Rs. 16,053.83 Lakhs while an expenditure of Rs. 25,178.13 is provided, leaving a deficit of Rs. 9124.30 Lakhs under capital account. The total deficit on revenue and Capital account together constituted Rs. 6,864.91 Lakhs. Since there is a total deficit of Rs. 3,335.31 under public account the overall deficit for the Year 2000-01 has been estimated at Rs. 10,200.22 Lakhs.

The approved outlay for the Ninth Five Year Plan (1997-2002) Mizoram was Rs. 1618.51 Crores. An outlay of Rs. 401.26 crores was provided for the Annual Plan 2000-01. This was 24.79 per cent of the total outlay of the 9th Five Year Plan and 11.46 per cent higher than the outlay of Rs. 360 crores provided for the Annual Plan 1999-2000. Against the agreed outlay of 401.26 crores for the Annual Plan 2000-01, the actual expenditure at the end of Annual Plan 2000-01 has been worked out to be Rs. 371.93 crores.

Table 8: NSDP & Per Capita Income (At Current Price)

Year	NSDP (Rs in lakhs)	Per Capita Income (in Rs)
1993-94	61809	8318
1994-95	67178	8793
1995-96	85874	10953
1996-97	98293	12210
1997-98	102239	12393
1998-99	113896	13479
1999-2000	128818	14909

The Per-Capita income of the State (factor cost) at current price in 1999-2000 has been estimated at Rs. 14909 as against Rs. 13479 in 1998-99. The State Economy in terms of Net State Domestic Product (NSDP) registered an annual growth rate of 13.1 per cent at current price during 1999 - 2000 as against 11.4 per cent in the preceding year 1998-1999. Gross State Domestic Product (GSDP) also registered an annual growth of 13.1 per cent during 1999-2000 as against 10.9 per

cent in 1998-1999. Per Capita Income at current price also registered an annual growth of 10.6 per cent in 1999-2000 as compared to 8.76 growths in the preceding year 1998-1999. Net State Domestic Product (NSDP) at current price increase from Rs. 1, 13,896 lakhs to Rs.1, 28,818 lakhs in 1999-2000. Gross State Domestic Product (GSDP) at current price also increases from Rs. 124590 lakhs in 1998-99 to Rs. 140939 lakhs in 1999-2000. The Per-capita Income increase from Rs. 13479 to Rs. 14909 during 1998-99 to 1999-2000

2.7 SWOT ANALYSIS:

Strengths

The biggest strength of Mizoram is the close knit, information sharing, highly literate, value based community. At a time when democracies all across the World are trying to evolve to next and more effective stage of governance by the means of localized, decentralized but interlinked decision-making mechanisms, Mizoram starts with advantage of already having a rich legacy of autonomous but interoperable coexistence among various ethnic groups, tribal sets, NGOs and regional collections in a predominantly rural society.

This implies that empowerment of institutions of local governance, as envisaged by Government of India, would require considerably less social reengineering in Mizoram in comparison to most other regions of the Country. This also implies that in terms of attracting active and long-term participation from various external entities in different domains of its economic and social life, Mizoram can grow to be amongst the best in the country.

One more positive feature of the state is the cohesiveness of the Government. The Government has been very stable over the last couple of elections and there is no horse-trading over MLA unlike a few of the other Indian states. Similarly, there has only been one agitation by Class A Government staff and none by students in the recent years which are typical in the region. Even the agitation by Govt. staff was completely peaceful.

Vibrant institutions of democracy (like the Young Mizo Association, Women Self Help Group etc) also contribute to an entity's set-of-strengths as they help in establishing effective mechanisms of checks and balances. In Mizoram's case, regionally and ideologically diverse aspirations mandate that micro perspective be provided to decision making whereas an institutionalized and efficient administrative setup ensures that implementation is done within a predefined macro framework. And this ensures that State's different stakeholders get their share in governance but in well-regulated manner.

Opportunities

Abundant fertile, agricultural resources make a considerable contribution to Mizoram's set-of-strengths and if utilized in an optimized manner (with active participation from the private sector), these resources have the capability to fuel the State's successful transition to the next stage of governance and also aid in the optimization of State's basic infrastructure. The Directorate of Agriculture, GoM has already roped some private players, like the Godrej AgriNet and the Goenkas for investing in agriculture and other related industries.

As agriculture contributes more than 25% to Mizoram's NSDP and provides employment to more than 60% of total workforce in the State, it is necessary that the State Government accords appropriate resources to this sector to facilitate a Growth Rate of at least 4.5% in conformity with all-India Target as set forth by the Tenth Plan

State's unique geographical location, climate and topology make it ideal place for being developed as an attractive tourist destination. The State government should undertake the development of basic infrastructure, like roads, hotels and other tourist facilities, if it wants to be the "Switzerland of the East" (as envisioned by the Hon'ble Chief Minister of Mizoram). The development of tourism as an industry would not only be an onus for the State economy but would also provide literacy to a number of unemployed youth of the State.

Weakness & Threat

Mizoram was a late starter on implementation of the 5-Year plans due to the insurgency problems in the state in the period between 1966-86. Mizoram therefore has some of catching-up to do in quite of few areas. The current state of basic infrastructure is not adequate enough to fulfill the needs and aspirations of Mizoram's citizens and a significant portion of State's population is still not having sufficient access to many of the basic amenities such as education, healthcare, roads, electricity, drinking water, sanitation, etc.

It is important to note that considerable portion of State's population still lives below levels deemed appropriate by various developmental indices/ standards and this is a gap that any future plan for the State has to really focus upon. The need is to focus at earnest upon tackling poverty and food insecurity that is prevailing across the State and other human development issues, which continue to make Mizoram one of less developed States in the Indian Union.

The State has very irregular power supply, with power being almost absent in the rural areas. The State has very few hydro electric projects of its own; as such much of the power for its consumption comes from the Northern Grid; in spite of the huge generating potential inherent in the State.

The State has the highest State debt to State-GDP ratio in the entire country. The ratio which was 81.56% in 2002-03 has risen to 90% in the year 2004-05. The State has to be proactive in bringing down this ratio to moderate levels, and reach a stage wherein it is in a position to finance its own projects and schemes.

Optimization of State's human capital by creating diverse avenues for skill acquisition and enhancement is another subject that needs immediate attention in terms of plan and strategy. There is a definite need for realignment of State's human capital developmental strategies and focus needs to be on creating a self-sustainable socio-economic infrastructure where the manpower is developed keeping in mind the contribution they could bring to the State.

2.8 Stakeholders' Needs & Expectations:

During the process of drafting the vision of the State, needs and expectations of five major stakeholders and process participants were taken into account. These include citizens, businesses, political leadership, government departments and related establishments, and Educational institutions. In the subsequent paragraphs, needs and expectations of these five have been highlighted.

Citizens

Common people of Mizoram require the health services that are high quality, modern and are accessible, available and affordable to all. They want the education to be available to all, contemporary and skill-centric with strong linkages to changing demands of the regional and global economies.

While the Citizens are overall satisfied with the existing performances of the Government, there are a few areas for improvement which cropped up during the interviews. The areas for improvement identified by the citizens are improved healthcare, better roadways across the State, more reliable Power supply and regular Water supply in each village. When asked whether they would be accepting the involvement of Private parties in setting up Power plants or water supply facilities, they accepted that they would be willing to pay for increased involvement of the private sector into the operations of these domains. In terms of ICT benefits, the citizens would like to avail simple day-to-day facilities from the Government through use of ICT since they have to spend considerable time in getting these services from the limited number of Government Offices (at distant places) at present.

Businesses:

The business leaders we met during the study expressed confidence in the present Government overall. They were appreciative of the state's initiative to tap the lucrative floriculture and allied businesses which could create opportunities for the local youth. However, they also felt the need for a more conducive environment for a competitive and vibrant market place in the State.

As per the representatives of various business establishments, State's infrastructure is quite below par when compared to other states in the Country. Improvement and optimization would be quite necessary in road & rail network, energy and power sectors to ensure the growth of State's Industrial Infrastructure so as to enable businessmen a level playing field with their counterparts across the country. For example, ginger is produced in abundance in the state but due to the high expenses in transportation and the risks of loss during transit, the state's businessmen are unable to generate profits from this trade. Another area where the state has strength is the production of handicraft objects which are valued internationally. A few businessmen have started tapping this market and they feel that there is a huge opportunity to scale up very fast in case infrastructure is improved. In the absence of power, the workers perform sub-optimally and productivity is low.

Another common issue raised by the Industry was that while the state was making many new policies and rules, these were not available to the common man. In the absence of information, many were left doing traditional trading business. For example, in case the state could set up adequate training facilities for the young boys and girls, the BPO business could easily be tapped by the Mizo businessmen. Again, in case training was imparted on handicraft and handiwork, business could take up larger orders from international parties.

In terms of ICT, the businessmen would like to see more information posted on the state portal so that transparency could be brought in. Additionally, they would like to see more transactions such as electricity billing, tax collection, etc. being done online to reduce the need for visit to the Government offices.

Political Leadership

The political leadership is also expecting the Government to increase the focus on developmental plans and to reduce the debt burden of the state. It is widely accepted that the use of ICT will help in better book-keeping and information dissemination enabling the citizens to have information on time about the various Government initiatives.

Government Departments

Government Departments and related establishments all across the board would like to have access to contemporary and modern tools and technologies to aid in the process of plan and policy implementation, management and monitoring. As per majority of the respondents, the lack of manpower resources and modern tools to transact the business are hampering the government officers to effectively manage their respective mandates and this is resulting in common citizens not getting the benefits of various plans and policies. As per the Government Officers, it is quite imperative that the State's e-Governance strategy provisions adequately for training on the modern tools and that the Government Officials from within different domains are made capable to select the most appropriate ICT tools and means to transact their respective mandates themselves. On the other hand, a few Officers feel that majority of IT Plans till date have address purely the technological perspective thereby ignoring the issue of better governance and are not derived on the basis of domain-specific needs and aspirations of the individual departments. The officers accepted that process reengineering was an important need to be able to provide improved citizen services.

Educational Institutions

While talking to a few senior faculty members from the Mizoram University, it emerged that Education Institutes are desirous to have a more collaborative role with the Government in finding employment opportunities for their students beyond Government service which is presently coveted. The feeling expressed was that while the citizen understood the benefits of education, the students were not able to make full use of their present skills due to inadequate opportunities within the state. Therefore many of the students discontinued their education at secondary levels and few students were able to pursue post graduate trainings. They felt that there is a need to look into the starting vocational courses at more places to enable students to acquire multi-disciplinary skills to as to find gainful and relevant employment opportunities within the State. It was also felt that certain vocational training programs could introduced to enable the students to get jobs in masonry, carpentry, etc.

2.9 Synthesis of Needs

In order to arrive at the Good Governance Agenda and Targets, it is necessary that needs and requirements of the State are synthesized and evaluated on the basis of the SWOT analysis and the Stakeholders' expectations as described in the sections above.

In the following table, the sector-wise needs for the State have been stated as necessitated by the SWOT and also as aspired by various stakeholders.

Table 9 : Stakeholder Aspirations

Sector	SWOT necessities & Stake holder's aspirations
Health	<ul style="list-style-type: none"> • Improve basic Curative and Preventive health Services • Make health service high-quality, modern, accessible, affordable and available in the rural areas • Ensure co-ordination at inter-program, intra-department and inter- agency levels

Sector	SWOT necessities & Stake holder's aspirations
Education	<ul style="list-style-type: none"> • Take into account localized, contextual conditions during planning • Make education available to all, contemporary and skill-centric with strong linkages to the changing regional and global scenarios • Provide more vocational training such as in preparing handicraft or in masonry/ carpentry/ etc. which would enable more people to get jobs in the state and outside. • Provide training facilities in ICT and BPO areas to enable the youth to get good jobs. • Take industry needs into consideration while finalizing course for various technical and semi-technical courses • Promote education as one of the main Revenue earning sectors
Labour & Employment	<ul style="list-style-type: none"> • Create more work opportunities in different sectors and ensure better work conditions and adequate wages • Reduce unemployment, underemployment and disguised unemployment in the rural areas by modernizing agriculture and setting up of agro-based industries • Extend planning beyond the national perspective to acquire a more localized perspective
Finance & Accounts	<ul style="list-style-type: none"> • Rectify and manage the disequilibrium between revenue receipts and expenditure
Agriculture	<ul style="list-style-type: none"> • Provide training to the farmers to move from Jhum cultivation to normal and / or step farming methods. • Increase productivity by assisting farmers to move to multi-crop farming. • Provide better irrigation, fertilizers, use of HYV seeds and application of modern technology • Encourage horticulture, cultivation of vegetables, plantation crops, spices, flowers and medicinal herbs • Develop agro-based industries • Facilitate a growth-rate of at least 4.5% in conformity with the Tenth Plan • Provision of sufficient information to the farmers for marketing and selling their produce
Rural development	<ul style="list-style-type: none"> • Empower institutions of local governance • Tackle poverty and food insecurity • Revive/ develop village level productive resources
Transport	<ul style="list-style-type: none"> • Expand the reach and network of all operations of Road network

Sector	SWOT necessities & Stake holder's aspirations
	<p>in the State</p> <ul style="list-style-type: none"> • Ensure all weather connectivity to all villages of the State • Stronger public transport
Energy department	<ul style="list-style-type: none"> • Aim at increasing the generation capacity of the State • Provide consumers with reliable and assured supply of power • Provide electricity to all the villages of the State • Encourage private investments in the generation and distribution of electricity • Tap energy from the non conventional sources of energy
Food & Civil Supplies	<ul style="list-style-type: none"> • Overcome the problem of food insecurity
Urban Development	<ul style="list-style-type: none"> • Increase the rate of urbanization to effective levels • Create and empower Urban Local Bodies for development of cities and satellite townships • Encourage private participation
Industrial department	<ul style="list-style-type: none"> • Increase the rate of industrialization • Create a conducive business climate for accelerated investment in industry and infrastructure projects • Optimize the processes to facilitate the end-users
Tourism Department	<ul style="list-style-type: none"> • Ensure the development of infrastructure that would aid in the development of tourism as an important industry for State • Make accessibility easier for the people from other parts of the country and the world

3 e-Governance Vision

Based on the Synthesis of Needs as done in the previous chapter, inputs provided by the respondents during the survey carried out by the PwC team during the study and the discussions that took place during the Apex Committee and other similar meetings, the e-Governance Vision of Mizoram for ensuring Good Governance practices reads as follows:

“To use Information & Communication technology to make available information and government services related to basic needs of common persons accessible to them near their locality throughout their lives through minimum procedural formalities thereby pursuing economic development”

The vision statement clearly articulates the key themes of the government’s e-Governance direction, which are:

- **Information and Government Services** — while the common person may have a variety of needs, many of these could be improved by use of ICT. Delivery of these would require the government to focus on more convenient and reliable options rather than the standard option of citizen making visits to the Government Offices. The services should be measured on the following criteria
 - **Accessibility:** Customers require a reliable access window through e-Governance to all Government information and services. Citizens expect that e-governance initiatives will minimize the time spent on repeated visits to government offices.
 - **Flexibility:** Customer should be able to access the service through a variety of channels of his/her choice.
 - **Quality:** The service should be timely and efficient
 - **Security:** The service and service delivery should be trustworthy, both objectively and in citizen perception.
- **Common Persons-** This is an important focal point for the eGovernance initiatives which the state is likely to take in the next few years. This point establishes that the government’s focus in ICT will be on the **statutory requirements** so as to better serve its citizens in the rural hinterland. At the same time, the fall-outs of there efforts will also be derived by the well-to-do and the business community in the state.
- **Accessible** communicates the clear roles and responsibilities for all departments and staff with respect to delivering each service. This is also one of the requirements of the Right to Information Act, 2005. The citizens should be provided with easier access to information. This would require the transformation of the government making it more transparent, accountable and efficient. Accountability for delivering the various services and information should be clearly defined and communicated internally within the departments and externally to citizens. It would lead to greater participation by people in government by making it easier for those who wish to

contribute. Mechanisms like citizen feedback, grievance handling systems, provision for citizen forums on the web portal and increasing the number and breadth of access channels are some means of attaining this objective

- **Minimum Procedural Formalities** – This indicates the intent of the Government to look at streamlining its procedures such that the number of visits a citizen has to make to the Government office to obtain any one service is reduced. It may necessitate the use of databases extensively so that the data once stored can be reused for the citizen the next time.
- **Economic Development** – The economic development of the state is very essential for the improvement of the general well-being of the citizens. The government wants to improve the standard of living in the state. The government wants to use the e-governance as a tool for generation of rural employment. The welfare measures taken by the government are sustainable in the long run only if they are backed by the economic growth of the region. e-Governance shall be used by government for creating better awareness and delivery of the development schemes. The government aims to project Mizoram as a favored destination— by building an image of Mizoram as a modern state, which is caring for its citizens and also promotion of investor friendly environment, making it an attractive location for people and business. Therefore this is a critical factor influencing the vision of the Government in its eGovernance initiatives.

Objectives

Keeping in mind the above mentioned Vision, the objectives for the e-Governance initiatives can be grouped by the customer segment served:

Government to Citizen (G2C): The e-governance must achieve the following for the citizens:

1. Provide one-stop, easier access to information and services to individuals
2. Reduce the average waiting for the citizens to avail the services.
3. Provide the citizens with a transparent view of the government processes and timely response to applications

Government to Business (G2B): The e-governance must achieve the following for the businesses:

1. Reduce burden on business, provide one-stop access to information on rules and regulations and clearances
2. Reduce the cost of compliance by reducing the instance on the business to report the same data, multiple times to multiple agencies.
3. Providing facility for online reporting and self-certification

Government to Government (G2G): The e-governance must achieve the following for the internal functioning amongst the departments / its interactions with its employees:

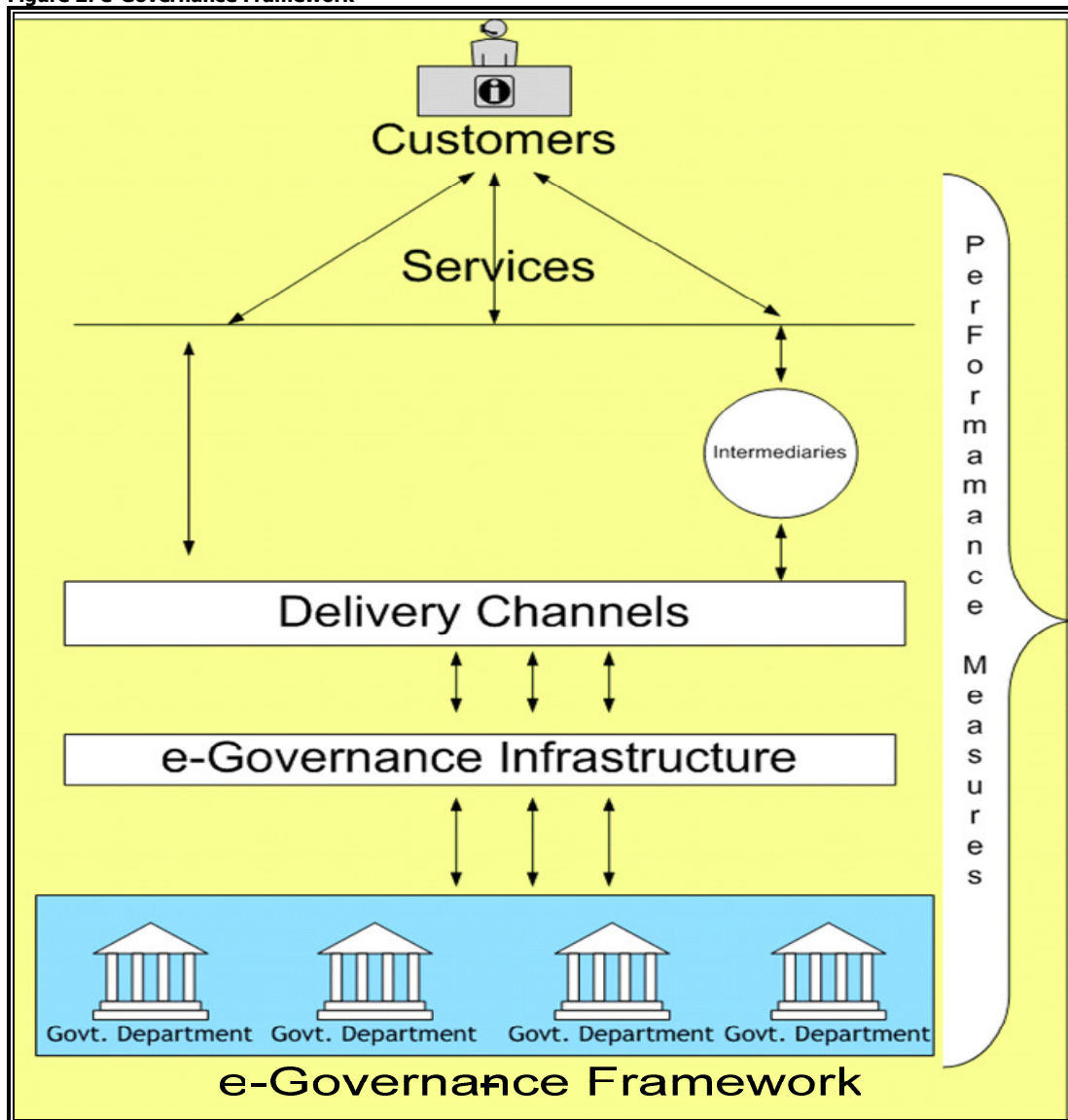
1. Assist the state and local governments to more easily work together to better serve citizens within key lines of business.

2. Provide administrative savings for the government departments
3. Improving the way that information is shared among all levels of government
4. Reduce the non-value added work for the workers in the government department
5. Providing enhanced access to high quality training and competency development for state employees through capacity building across departments

4 e-Governance Roadmap

The realization of the e-governance vision and the objectives requires the development of an e-Governance strategic framework. This framework promotes the delivery of services in an easier, better and efficient manner to the customers. It builds upon the strategic objective of using common building blocks for reducing the cost of development and ultimately provides an enhanced experience for the citizens and businesses doing e-business with the government. The following diagram (figure 2) shows how an architectural model of the vision of the e-enabled government, with the interaction between the various elements and delivering the services to the customers in a joined-up government.

Figure 2: e-Governance Framework



4.1 Customers

The Govt. of Mizoram (GoM) customers can be grouped under the following categories based on the type of the relationship they have with government. These categories are:

- **Citizens:** The citizens are the population of Mizoram including both the residents and tourists. 'Residents' constitute the largest customer segment and the most frequent users of the majority of services of the GoM departments and information. Their relationship with government can be summarized as follows:
 1. Use the government infrastructure in terms of roads, drainage networks, irrigation networks, public parks, etc.
 2. Access the departmental services such as payment of taxes, registration of transactions, issue of various types of certificates, etc.
 3. Report problems and provide suggestions.
- **Businesses:** This refers to the public and private sector organizations that access the services and information from the Government departments. Their relationship with GoM can be summarized as follows:
 1. Use pre-establishment services like registration, licenses, etc.
 2. Use post establishment services like payment of taxes, filing of returns, employee welfare compliance report, etc
- **Employees:** The employees of the GoM are very important customers of the government. They are not only the public face of the government but also access the major services like payroll, benefits, etc.

Based on the discussions with various department and some of the citizens, study of similar initiatives elsewhere, the key customers' expectations from E-Government are summarized in the table (Table 10) below.

Table 10 : Customer Expectations and e-Governance opportunities

Expectations	Delivery strategy
Citizen	
<ul style="list-style-type: none"> – Clear and accurate information about each service and transaction. Customers should be able to use the e-Governance channel to follow-up and track the progress of their transactions conveniently. – Efficient and effective resolution of complaints. Complaints should be resolved promptly and customer must be kept abreast of the progress made in resolving their complaints. – Customer-oriented and transparent service delivery processes. Customers should be shielded from the various GoM internal 	<ul style="list-style-type: none"> – Provide the clear and accurate information about the services to the citizens – Define, inform and measure the performance on the service levels for each service. – Provide to the citizens multiple channels of delivery for each service. – Develop a centralized grievance Redressal system for citizen to register their complaints and follow up on the progress made for its resolution – Build a transparent mechanism for the

Expectations	Delivery strategy
<p>operations and activities involved in delivering a service. Customers should not be required to follow up in inter-departmental communications to expedite the processing of their transactions.</p> <ul style="list-style-type: none"> – Have a voice in the service delivery and ability to voice opinion in the policy formulation. 	<p>citizens to follow and track the progress of the transaction.</p> <ul style="list-style-type: none"> – Build a mechanism for obtaining regular citizen feedback on the service delivery and also understand requirements.
Businesses	
<ul style="list-style-type: none"> – Businesses should no longer be required to provide the same information repeatedly and follow-up transactions across departments. – Faster turnaround times for the services. – Submit similar information to only one government department 	<ul style="list-style-type: none"> – Implement systems for information sharing across the various departments and within the functions in the department. – Reduce the decision making cycle in the government through simplification of the processes. – Promote the acceptance of electronic information from the businesses in the government department
Government Employees	
<ul style="list-style-type: none"> – Reduce the workload of the employees, who need to perform the same task repeatedly. – Provide better opportunities for professional growth 	<ul style="list-style-type: none"> – Undertake Business process reengineering to reduce non value adding activities and hence reduce the work load on the employees. – Develop systems for improving the internal efficiency of the departments – Better system for availing the government benefits for the employees – Undertake regular training program for the employees to upgrade their skills –

4.2 e-Services

Every government department provides a set of services to its identified customer base. The delivery of such services using electronic delivery channels would develop a positive image of the government among the customers and so making the delivery of services customer-friendly is the objective of e-Governance. A comprehensive study of select departments was undertaken and the services offered by the department were identified.

Depending on the type of interaction with the customer, the various department services can be classified into two key categories:

- 1 **Informational Services**, includes those services that solely provide information to customers and do not involve processing of any transactions or documents. For example, information on the beneficiaries under the government's welfare scheme, information on the statues of application. Informational services have relatively simple back-office operations and can be easily e-Governance-enabled.
- 2 **Transactional Services**, includes those services where customers require specific actions to be taken by the department. For example, issue of driving licenses. Transactional services mandate a higher degree of customer interaction and more complex delivery operations than informational services.

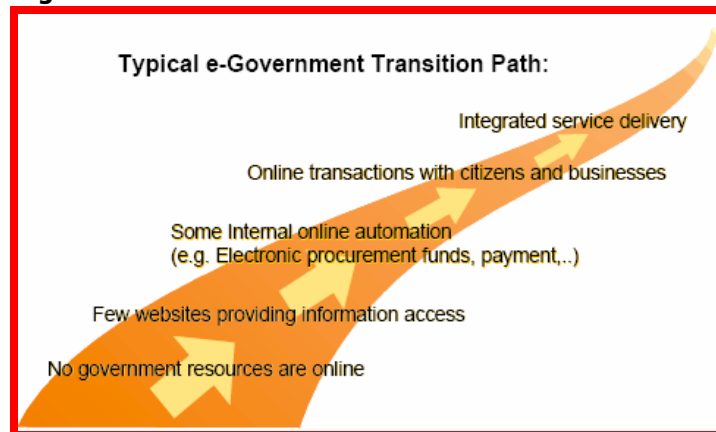
The following table (table 11) compares the characteristics of the informational and the transactional services.

Table 11: Characteristics of Transaction and Information Services

	Information Service	Transaction service
Core Operation	Deliver information to the customers	Request services from the Government department
Information flow	One way: Outbound to customers	Two way: Interactive
Delivery Process	Simple	Simple/Complex
Required Government Investment	Moderate	Moderate/High
Operational Risk	Low	High
Attributes contributing to the e-Government implementation complexity	Degree of System integration, Data Timeliness, Data structure, Data Ownership and Data accuracy	Number of documents, work flows structure, decision cycle and system integration.

The Internet, and its associated technologies and business models, is profoundly affecting the way government, business and people interact with each other. It has been noted that the e-governance service transformation follows a four stage growth model, as shown in the diagram (Figure 3) below.

Figure 3



Investing in the right services based on 'Value Proposition' is a key critical success factor for GoM's future E-Government vision. The move towards e-governance should deliver key and tangible benefits to GoM and its customers.

PwC has used a structured 4-step visioning approach to arrive at GoM's future e-Services roadmap. The services provided by the participating departments are analyzed using the PwC framework 'Service Value Analysis' to arrive at a set of high value services, which need to be e-governance enabled first. The methodology and the results after implementation of the methodology are presented in the Annexure V.

Based on the assessment of the Benefits and visibility impact, it is recommended that GoM undertake the e-Governance enablement of the services in a phased manner. The three phased approach for providing the services has been given in Annexure V.

4.3 Delivery channel

The delivery channels represent the means through which electronic services are delivered to the customers. Identifying what channels to use is a key success factor for any effective E-Government strategy.

GoM has option of six possible delivery channels to use in e-Government. These channels are:

1. **Service Centers:** The services centers can be of two types:
 - a. **Citizen Service Centers (CSC),** where services like Information dissemination, acceptance of service requests and delivery of services are provided to the customers through a citizen service centers as a single point of service delivery. This involves integration of the backend applications of departments with Citizen Service centers. The Citizen Service center have been taken as an electronic channel of delivery as it will be providing the services to the various government department through a single interface using the electronic integration.
 - b. **Department Service Centers,** where the customers can access all the services of the department through facilitation counters. The department service center play an important in certain departments, where the interface and involvement of customers in availing the services is high. E.g. transport department where obtaining a driving license would involve photography, driving test etc. Such services cannot be provided through the common service centers.
2. **Internet;** customers use desktop computers/laptops to connect to government's web site to request services, search for information, make payments, etc.
3. **Phone (Call Center):** Customers can call GoM's hot-lines and emergency center to request services. 'Phone' is considered as an electronic delivery channel due to the potential use of 'Call Center' and 'Interactive Voice Response' technologies.
4. **Mobile Computing;** where customers can request services and information through mobile phones and hand-held digital personal assistants. The department can send to customers regular alerts on SMS.

5. **Kiosk** It is computer based electronic device, where customers can access GoM's web site over the Internet without having to own personal computers. GoM can establish a network of Kiosk machines to cover the state. This network will provide residents with an easy access to GoM's services and information. Some of the kiosks may also have features of the ATM machines to accept payments.

In future Digital TVs, where customers can request services and information through their TV sets can also be used as a delivery channel, but since it is not pervasive in the Indian context, it has not been discussed in details. However, it is essential for the policy makers to note that such a delivery exists for future.

The Table (Table 12) below gives an overview of the current situation assessment with respect to each of the channels in Mizoram

Table 12 : Assessment of present e-Governance Delivery Channels

S. No.	Channel	Current Status	Services offered
1.	(a)Department service Centers	All departments have services delivery channels. However only few of the departments have established Citizen Facilitation counters providing all the citizen services from a single counter.	Provide only the Electricity department s services No other department has electronic service delivery
	(b) Citizen Service Center	Currently the government is pursuing a plan to setup CSC centers in Aizawl and other Districts centers to provide services to citizens. Currently there are 26 Citizen Information Centers in the state.	Information services.
2.	Internet	There is a state portal, which has links to the other departments.	The information about the department and related information is provided on the website but no transactions are possible.
3.	Call Center	None of the departments have helpline service	NA
4.	Mobile Computing	Currently no such delivery channel exist	NA
5.	Kiosk	The Government is exploring options to toll-out the establishment of such kiosks through the state.	NA

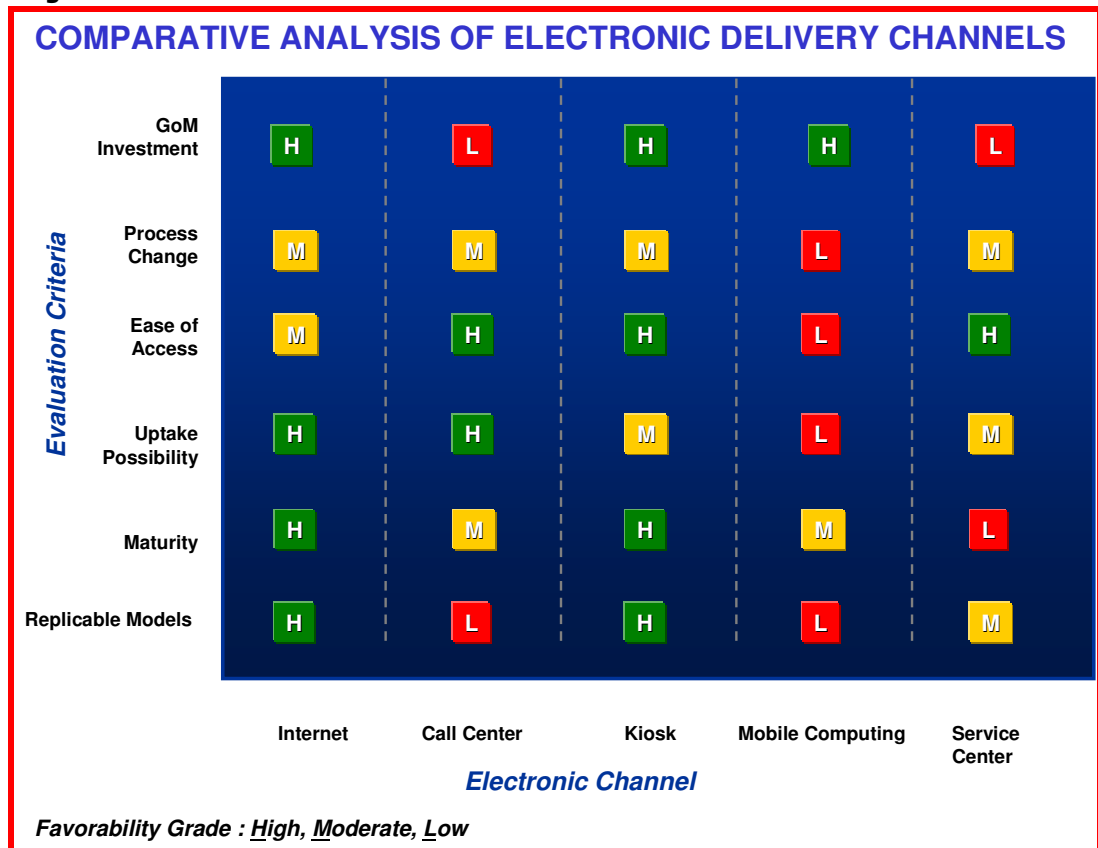
The five different delivery channels were analyzed in terms of required GoM investment, required Customer investment, customer's 'ease of access', customer's 'breadth of access' and maturity of supporting technologies.

An analysis of the delivery channels on six key attributes was made and a favorability grade for each of the channels has been given based on the following parameters:

1. **GoM Investment Required:** Based on the qualitative assessment of the amount of investment to be made by GoM in order to set-up the delivery channel.
2. **Process Change requirement:** Based on the Qualitative assessment of the process changes required to deliver the services through the channel
3. **Ease of access:** Based on the ease of access of the customer, once the channel is set-up. This is based on the customer investment and literacy level required to use the delivery channel.
4. **Uptake possibility:** Based on the customer intimacy and security with the channel
5. **Maturity:** This is based on the availability of mature, stable and proven technologies to support the channel world-wide and within GoM.
6. **Replicable Models:** Based on successful cases across departments and government.

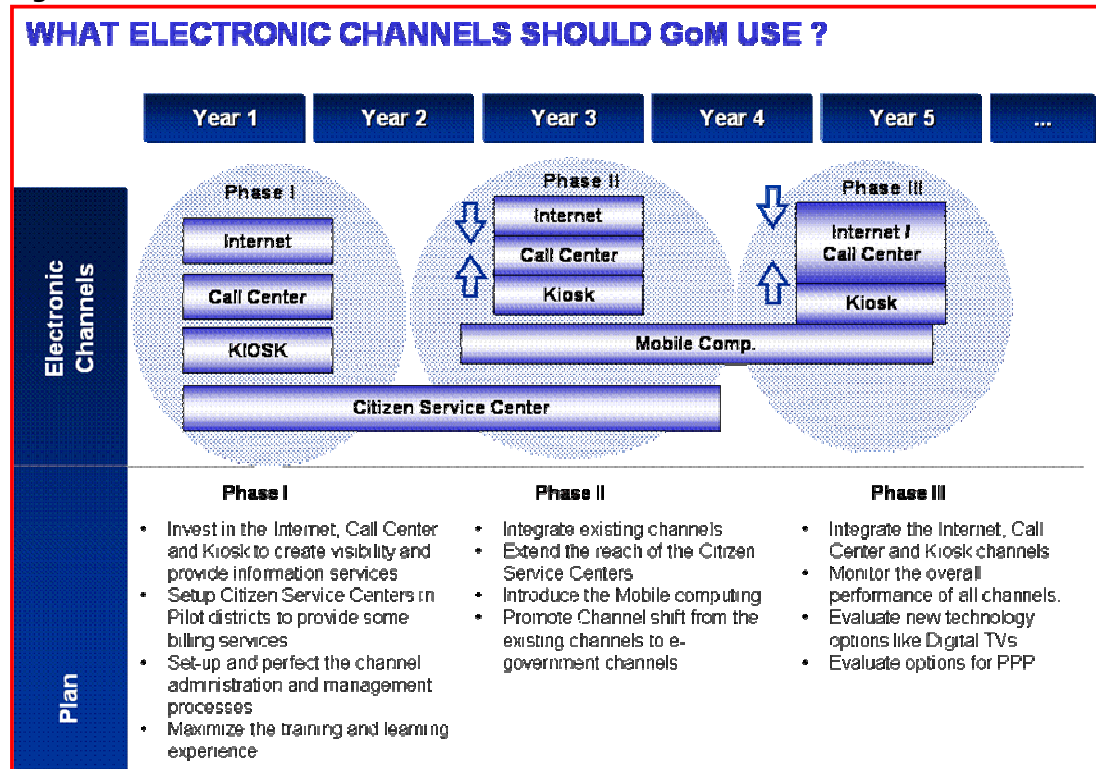
The key findings of our analysis are illustrated in the diagram (figure 4) below.

Figure 4



Based on our analysis, we recommend that GoM follows a phased approach for the implementation of the aforementioned channels as illustrated in diagram (figure 5) below:

Figure 5



The detailed recommendation on the channels has been given in Annexure VII.

4.3.1 Promote Delivery Channel Shift

The creation of the new channels will benefit the government only if the customer uptake in the channels is high. GoM must promote the more effective channels. Globally it has been found that the internet is the most cost effective channel. Government has an obligation to drive traffic towards the more efficient and effective channels. Yet driving traffic to the online channels is not an easy task and the real challenge is how government can migrate users to the low cost channel. A review of channel shift strategies across the private and public sectors reveals that incentives appear to fall into the following broad categories:

- Financial Incentives:** These may include direct financial incentives, or payment flexibility. Some of the examples are: Denmark, where the Government offer rewards for e-filing for SMEs: – some £2-5. In the US, tax refunds are given in 2 weeks if the return is filed electronically, versus 4-6 weeks for paper returns. In Australia, processing of an electronic return takes some 2 weeks, and tax practitioners are given an extra month as incentive to adopt e-filing
- Time Savings-** A key area of benefit, both to government and its customers, is packaging up services to save time. Research indicates that customers would be inclined to use on-line government services more, if they were to save time. For businesses in particular, freeing up organizational capacity is a major potential benefit, creating space for improved productivity.

- **Adding value through information and expertise-** Governments too needs to focus on 'pulling' customers to more efficient channels by making their information more useful and attractive. A properly designed website can provide a wealth of information to the user and also interactive help can be provided to the users to use the online services.
- **Possible compulsion for channel shift-** Sometimes the government also has the option of implementing compulsory channel shift, focusing initially on the more sophisticated audiences of business. Certain activities like the renewal of license, tender buying, can be made compulsory through internet only.

4.4 E-Governance Infrastructure

There are structural components which need to be implemented according to centrally determined standards, thereby saving work for service providers and creating a familiar and trusted experience for users, and delivering the e-government services. PwC has identified the following components for the GoM, the development of these must be governed at the state level. The table (table 13) below gives the list of such components that PwC has identified for GoM. The description of each of these components is given in Annexure X.

Table 13 : eGovernance infrastructure Components

Core State Initiatives: This will include the components, which are core to the e-Governance Roadmap of the state. The development, implementation and maintenance of these components must be monitored at the state level. These components cut across the departmental boundaries and the specific requirements of each department can be easily met	
1.	State Web Portal
2.	State Data Center
3.	State Wide Area Network
4.	Content Management System
5.	Call Center/Central Help Desk
6.	Grievance Redressal System
7.	e-Procurement
8.	Email system
9.	Public Key Infrastructure
10.	Payment Gateway
11.	Authentication Mechanism
12.	Data warehousing and Knowledge Management System
13.	Government Gateway
14.	Middleware Application
15.	Integrated Financial Information System
Common Applications: There is a lot of commonality in the processes followed by various departments such as personnel management, accounting, audit, file management etc. There is commonality even in the processes for service delivery in various departments esp. that of	

registration, renewals, licenses etc. Generic applications can be developed that can be customized to the specific process workflow of the departments thus reducing the overall costs of the e-Governance applications. Such an approach will also lead to standardization of processes and adoption of common standards, which are key enablers for promoting seamless integration. Some of the common applications, which can be developed as a part of the state government initiatives are:

16.	eBilling (Payments/receipts and demand notice)
17.	Registration and renewal of registration of external parties
18.	Intra office correspondence
19.	Office Automation <ul style="list-style-type: none"> ▪ File Tracking System ▪ Work flow management
20.	Document Management System or Electronic Records management
21.	Financial Accounting and Internal Audit Systems
22.	Budgeting and Planning
23.	Management Information Systems
24.	Human Resource Management Systems
25.	Beneficiary Management System

Department Applications: Each department will need to develop application for e-Governance enabling their services. The functionalities of these applications need to be identified based on the service prioritization for e-Governance enabling the departmental service. Such applications shall be covered as part of the e-Governance Roadmap for the department. However, the nodal agency for e-Governance must ensure that the departments undertake projects, which shall lead to providing the high value services to the customers in the initial phase.

The development of these components has to be taken in a phased manner as it is not possible for the state government to undertake all the projects in the first phase due to the limitation of the resources (money, people in terms of project management). The requirement of the e-Governance components are prioritized based on the **criticality** and **feasibility** of the component.

The criticality of the component has been assessed of the following:

- Requirements of the service identified in each Phase and also the Delivery channel strategy
- Fitment of the component in the overall e-Governance roadmap.
- Benefits that the initiative shall provide to the stakeholders, citizens & government
- Improvement in the government efficiency

The feasibility of the component has been assessed based on the

- Cost of the development
- Readiness of the state.

- Risks in the development of the component.
- Amount of changes required in the government

The following table (Table 14) list the implementation plan fro the e-governance components.

Table 14 : Phasing Plan for e-Gov Infrastructure Components

Phase 1 (Year 1)	Phase 2 (Year 2)	Phase III (Year 3)	Phase IV (Year 4& 5)
Core Initiatives			
1. State portal and the guidelines for the development of the department websites 2. State Wide Area Network 3. State Data center 4. Call Center 5. Grievance Redressal System 6. Email system (Standardisation)	1. e-Procurement System 2. Authentication Mechanism 3. Content Management System 4. Payment Gateway	1. Government gateway 2. Public Key Infrastructure	1. Integrated Financial Information System 2. Middelware Application 3. Data warehousing and Knowledge Management System
Common Applications			
1. eBilling (Payments/receipts and demand notice) 2. Registration and Renewal of registration external parties 3. Office Automation System 4. File Tracking System	1. Intra-office Correspondance 2. Accounting and Auditing 3. Document Management System 4. Budgeting and Planing System	1. Office Automation System <ul style="list-style-type: none"> ▪ Workflow Management 2. Human Resource Management System 3. Beneficiary Management System	1. Management Information System

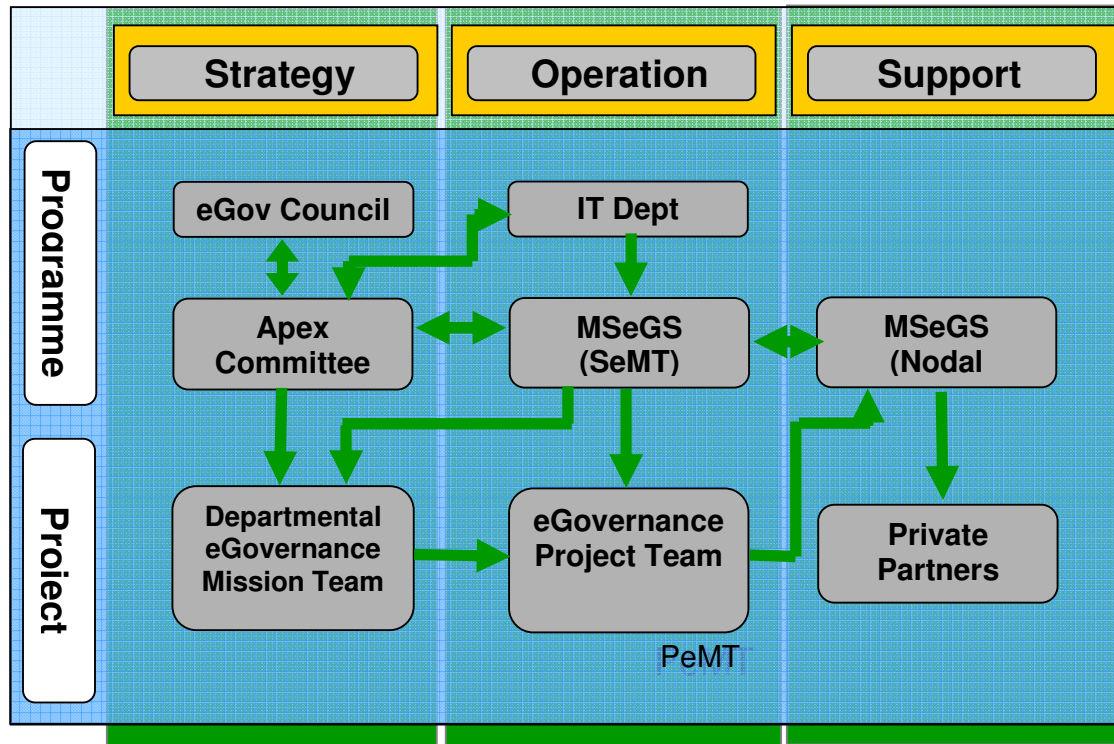
4.5 People

4.5.1 Institutional Structure

For the effective implementation, a supporting institutional framework is necessary with the responsibility for guiding and monitoring the direction of the e-governance activity across the

government. A suggestive institutional framework has been designed, based on the guidelines issued by Department of Information Technology (DIT), GoI. The framework is designed at the programme and project levels for the strategy, operation and support functions. The illustration (figure 6) below provides a conceptual overview of the institutional framework for the state.

Figure 6: e-Governance Institutional Structure



The various bodies in the institutional structure and their role in brief are given herewith.

- GoM has formed Apex Council, which has been established to provide leadership and advice on ICT strategic and governance issues, to the state at a program level. The Apex Council is led by the Chief Minister of the State.
- The Government has formed the Apex Committee, constituting of senior officers of the state government and headed by the Chief Secretary. This committee shall provide the leadership and guidance to the implementation of the State e-Governance Roadmap.
- Department of Planning, Information Technology Cell (ITC), Government of Mizoram would be the coordinating department of the state for all the e-Governance initiatives in the State. This department would be the main agency for the recommending the release of funds under e-Governance Roadmap projects and also monitoring the utilization. The present structure would not be able to provide these services in a timely manner due to the lack of resources. It is essential that the department form a Directorate of Information Technology as a filed level organization, which shall provide support and guidance to departments implementing e-Governance projects. This directorate would be responsible for facilitating funding for all e-Governance initiatives and monitoring of the utilization of funds. In the initial phases, the personnel for the directorate may be drawn from the other agencies.

- The state has selected the **Mizoram State eGovernance Society (MSeGS)** to act as the nodal agency for the program implementation of the State's e-Governance Roadmap. This agency should also house the State e-Governance Mission Team. SeMT would act as the Technical Secretariat supported by dedicated program coordination and monitoring unit for the state Apex Council in implementing the envisaged initiatives under the e-Gov Roadmap. The Head of SeMT would also be responsible for appraising all departmental projects before approval of the State Apex Committee to ensure that they are in line with the various requirements (core policies) of the State with respect to e-Governance Project design and implementation
- At the department level, a core committee (Department e-Governance Mission team) must be formed constituting the key senior officials of that department based on the domain expertise in their respective departments. This team will be led by the Chief Technology Officer who will be responsible for the design and implementation of departmental initiatives in the State. The Chief Secretary has already issued instructions to all the government departments to form the e-Governance Mission team and appoint a nodal officer for e-Governance initiatives. Many of the departments had complied with the directive, while others had initiated the process.

4.5.2 Role and Responsibilities

In line with the institutional structure discussed above, the table (Table 15) below summarizes the roles and responsibilities of the various units of the institutional structure at the programme Level.

Table 15 : Roles and Responsibilities Matrix

Unit	Constituents	Key Role(s)	Key Activities
EGov Council	<ul style="list-style-type: none"> • Chaired by Chief Minister • Ministers for Finance & Revenue • Consists of experts from the Indian IT Industry 	<ul style="list-style-type: none"> • Setting up the IT strategy and plan to provide strategic direction for adoption and promotion of IT in the state of Mizoram • Review the implementation of the plan on a periodic basis 	<ul style="list-style-type: none"> • Envisioning an IT policy for the State of Mizoram • Clearance of major IT projects to be set-up in the state • Clearance of IT plans of government departments • Promote citizen centric projects in e-Governance
Apex Committee	<ul style="list-style-type: none"> • Headed by Chief Secretary • Members: • Commissioner / Secretary, Finance • Commissioner / Secretary, Planning and ICT 	<ul style="list-style-type: none"> • Evaluation of the major IT projects • Implementation of the IT policy • Review the progress of the implementation 	<ul style="list-style-type: none"> • Review the progress of major IT projects in the state • Coordination with central government departments as required • Review of IT plans of Government Departments • Design of citizen-centric projects

Unit	Constituents	Key Role(s)	Key Activities
	<ul style="list-style-type: none"> • Commissioner / Secretary, Personnel and Administrative Reforms • Advisor - Planning • Principal Informatics Officer, ICT Cell • State Informatics Officer (SIO), NIC, Mizoram 		<ul style="list-style-type: none"> • of e-governance • Promotion of development of IT infrastructure in the State • Evolve guidelines for cost-effective implementation of IT projects
State e-Governance Mission Team (SeMT)	<ul style="list-style-type: none"> • Head of SeMT • Programme Coordinator • Project Monitoring and Appraisal • CTO • Finance Manager • Procurement Expert • Legal Reforms Expert • Government Process Reengineering Expert 	<ul style="list-style-type: none"> • Review of the project proposal prepared by the PeMT for adherence to the State e-Governance Roadmap under NeGP 	<ul style="list-style-type: none"> • Review of the project proposal • Assistance with the preparation of project proposals, if required (prior to setting up of PeMT) • Technical Secretariat to the State Apex Committee • Development and implementation of the State Capacity Building Programme including finalization of the Training calendar and courses • Operational coordination with DIT, GoI on NEGP • Support implementation of policy, leadership and Institutional Development programme through DoIT • Financial management • Procurement and contract management under NeGP • Monitoring and Evaluation • Mobilizing funds • Knowledge and Project Management • Quality Assurance and Oversight
Project e-Governance Mission Team	<ul style="list-style-type: none"> • Headed by Commissioner / Secretary of the department 	<ul style="list-style-type: none"> • Project planning and execution • Identification and escalation of issues 	<ul style="list-style-type: none"> • Finalization of the project plan • Finalization of the skill-set requirements and resources plan

Unit	Constituents	Key Role(s)	Key Activities
	<ul style="list-style-type: none"> Project execution team constituted by dedicated e-governance experts identified from department(s) and / or from external sources 	that impact the project delivery	<ul style="list-style-type: none"> Project Management Finalization of the Job description and sources of hiring Hiring and deployment of resources to PeMT
ATI/ MSeGTC	<ul style="list-style-type: none"> Augmented by additional infrastructure Augmented by additional faculty members 	<ul style="list-style-type: none"> Training design Providing training to government officials 	<ul style="list-style-type: none"> Design the state training policy Design and conduct various training programs based on the needs Facilitate establishment of training infrastructure at various locations
Departmental eGovernance Mission Team	<ul style="list-style-type: none"> Headed by Commissioner / Secretary of the department Project supervision team constituting Department and DoP-IT Cell members 	<ul style="list-style-type: none"> Project Supervision and decision taking Identification and escalation of issues that impact the project delivery 	<ul style="list-style-type: none"> Approving of the project plan Approving the skill-set requirements and resources plan Project Supervision

4.5.3 Training

Successful implementation and sustenance of e-Governance Roadmap for the state will depend on support, guidance and direction from the top staff of the various state departments. They will have to be trained with the right skills, knowledge and aptitude, and will have to act as change agents during the implementation of e-Governance Roadmap. They will be acting as catalysts of change in state department and will in carrying out change interventions required at various levels in the organization.

Hence it is felt that there is a need to train officials occupying decision making levels and managerial positions who will be trained as “e-Champions” and will be equipped with the necessary skills to lead the successful implementation of the e-Governance projects in the state. The role envisaged for the e-Champions during implementation of e-Governance would include:

- Playing a pivotal role in Project Management during the implementation of e-Governance Roadmap.
- Provide guidance during implementation of the Change Management program.
- Lead implementation of policies, standards and guidelines for successful and sustainable implementation.

The e-Champions would also be trained in the technology domain to help them guide the department in sustaining the roadmap and in taking up new initiatives required from time to time. Taking into account the long term requirements the e-Champions would also be trained in the following.

- Identification of new opportunities for introducing e-Governance
- Define services and build business models,
- Leading process reform, managing change and
- Project management.

The state must train at least **26 e-Gov Champions** from among the officials of state who have the right aptitude and basic skill sets required for success in e- Government and to make them responsible to implement the e-governance roadmap. A similar program has been initiated by the Department of Personnel and Training to implement a program for developing e-Government Champions in different states and Central Government departments over a period of 3 years. The duration, course content and details of a similar training program undertaken by Department of Personnel and Training are given in Annexure VI.

The implementation of e-governance projects will be creating a totally transformed work environment for employees in all departments and will radically redefine the way services are offered to citizens and businesses. Employees at all levels in department need to be equipped with the necessary skills and abilities to perform in accordance with the changing requirements. The various departments will need to augment the skill set of the existing staff and recruit / outsource additional resources to manage the transition from a manual system to a computerized system.

The changes in the external environment also necessitates that the employees must adapt their skills and abilities to respond effectively at the department level also. The Training requirements for the departments in the scope of study have been given in the reports for the respective departments.

4.6 Processes and Policies

4.6.1 Government Reform Process

The E-Governance Roadmap presented here is with the vision of about better using technology to deliver public services and policy outcomes that have an impact on citizens' daily lives: through greater choice, delivering better public services and benefiting the employees by reducing burdens on front line staff and giving them the tools to improve their efficiency, thereby improving the economy.

However, the overall vision cannot be limited to just about transforming government through technology. It is also about making government transformational through the use of technology – creating and retaining the capacity and capability to innovate and use technology effectively as technology develops. This is the only way in which public services can keep up with a continually changing society.

The implementation of the e-Governance initiatives can be perceived as an opportunity to reform the processes. The existing processes should to be analyzed for simplification / automation with the application of ICT tools, at the same time ensuring that the legislative administrative effectiveness is not compromised.

It is vital that the process redesign, i.e. the critical analysis and radical redesign of workflows and processes within and between governmental departments, is undertaken if we are to achieve breakthrough improvements in performance. While deployment of IT solutions increases the efficiency of operations, it will not necessarily deliver the best results unless the processes are reconfigured appropriately to the demands of the specific circumstances.

Once GoM has achieved the aim of providing the e-Governance enabled government to its customers, the state must take steps towards providing a transformational government. Some of the steps which GoM can undertake to start the process for the transformational government.

- **Approach towards Shared Services** - A new Shared Services approach is needed to release efficiencies across the system and support delivery more focused on customer needs. Technology now makes this far easier than ever before. Shared services provide public service organizations with the opportunity to reduce waste and inefficiency by re-using assets and sharing investments with others. Particular attention should be paid to the following areas:

Payroll, Audit, Vehicle management, facilities management, Secretarial services, office supplies procurement, where improved professionalism, standard systems and processes and effectiveness of these common functions should achieve efficiency gains across the whole government.

- **Integrated Services:** The government structure must be ultimately centered on a customer centric life-cycle approach. The Government Process reengineering provides the improvement in service delivery but to the total government transformation, it may be essential to study the various services provided by different department and club the similar services under one umbrella. Common technology must be leveraged to enable joined-up government. For e.g. : Registration of Property transaction must lead to mutations in the Land Records or Property Tax register, or Building plan approval must lead to the generation of the electricity/water connection application. The applicant must only make the necessary payments and provide specific information on web or kiosks.

The departmental training institutes may be entrusted with the task of conducting BPR workshops and propose specific re-engineering exercise to be undertaken in the department, taking in view the above objectives

4.6.2 Implementation Policies

The importance of policies and frameworks to strategize and set the ball rolling on the e-Governance initiatives needs special emphasis. We need to look at various e-Governance models and follow an iterative process that leverages the participation of the multifarious stakeholders. The policies also need to exploit the positives of existing platforms of governance whilst learning from and scrupulously avoiding the errors of the past. A plausible framework for drafting policies and architecting frameworks to manage the transition to e-Governance needs to be developed.

Essentially, policy and guidelines would need to be drafted that are both specific to the department or the process as well as policies that may be more wide ranging in their scope. The following table (table 16) lists the various policies that GoM needs to draft for the effective.

Table 16 : Policies for Implementation of e-Governance Roadmap

S. No.	Policy	Description
Security		
1.	Access Control	The implementation of IT systems together with the ease also brings the need to frame an access control policy for the information. The rights of the users have to be defined for access, modifying and sharing the information in the system.
2.	Threat Management	Assess threat and vulnerability levels. Threat is defined as the likelihood that an incident will occur. Vulnerability is defined as the extent to which the organization is affected if the threat materializes. Mapping these risks to the service layers provides a clear picture of where vulnerabilities exist, as well as the impact of threats.
3.	Disaster Recovery	IT will be used as a key enabler in providing the services to the citizens, which leads to heavy dependence upon its information processing capabilities in order to support its service delivery. Only through effective advance planning and preparation it can be ensured that critical services and delivery functions and activities will continue in the event of a disaster such as earthquakes, severe storms, flooding or deliberately caused by man (bombings, arson and sabotage).
4.	Business Continuity	<p>Continuity plans should be developed and kept up-to-date for all applications, data and equipment to ensure that critical systems and data could be recovered within a defined and agreed time scale, in the event of an interruption or degradation of service. This would help to prevent loss of data, delay in service, increased costs, loss of credibility and embarrassment to the Government.</p> <p>This policy defines the requirements for the continuity plan. The policy also addresses the requirements for data backup and recovery, which are a subset of the continuity plan and support the plan by providing guidelines for maintenance of data and backups.</p> <p>The policy consist of the following sections:</p> <ul style="list-style-type: none"> ▪ Continuity Planning ▪ Backup and Recovery Procedures
5.	Authentication Policy	The E-government Strategy aims to deliver better services. Central to the effective adoption of e-government by the population at large is the development of trust in the processes. Authentication is central to

	<p>establishing trust. Without a robust and trusted online authentication system, uptake will be limited and the aims of e-government will not be achieved.</p> <p>It is essential that GoM frames authentication framework policy and guidelines establish a common approach to authentication for government departments, agencies and the wider public sector.</p>
6.	<p>Identity Management</p> <p>GoM must create a holistic approach to identity management to enable the public and private sectors to manage risk. The identity management policy must clearly create rational structure for creation of a state identity register or a single identity number for the citizen and business.</p>
<p>Information Management: The GoM needs to move towards managing the information it holds as a resource to benefit citizens and business and to improve the effectiveness and efficiency of government itself.</p>	
7.	<p>Data Digitization Policy</p> <p>Tremendous amount of legacy data is present in each of the departments in the form of paper records. Some of this data is used for records purposes, while some of it may not be essential. The digitization of this data will require lot of investment from the State. It is essential that prior to undertaking the digitization activity, the government forms a policy on data digitization covering:</p> <ol style="list-style-type: none"> Identification of data which need to be digitized Process for digitization and verification of data Financial cost sharing of the digitization, between the department, State government and the customers.
8.	<p>Meta-data Standards</p> <p>One of the obstacles for sharing data across the department and systems is that the data definitions implemented in databases may not been consistent. Data definitions are determined during the data-modeling phase, which occurs early in the application development lifecycle.</p> <p>This will require</p> <ul style="list-style-type: none"> Definition and adoption by government bodies of standards for data entities that are common across the government; for example, citizen name and address. GoM will have to publish these in the interoperability framework and will monitor their adoption Definition and adoption by government bodies of common meanings for common data descriptions, so that information accessed by public servants or the public can be understood and used effectively.

		The way to describe or define data is through metadata. Metadata is "information about data." Metadata is stored in a repository containing detailed descriptions about each data element.
9.	Privacy Management	Data sharing is integral to transforming services and reducing administrative burdens on citizens and businesses. But privacy rights and public trust must be retained
10.	Data Exchange	The data exchange standards and the formats for data exchange need to be established
IT Management		
11.	Technical Architecture Policy	<p>The technical architecture should be planned for the entire state that is in line with the e-Governance strategy. This will help leverage common infrastructure, implement standards, security etc. Once the architecture is finalized, it should be ensured that all the initiatives conform to the state IT architecture.</p> <p>Annexure XIII provides a brief overview of the pros and cons of various types of deployment architecture</p>
12.	Database Design	Policy guidelines for database design should be prepared to ensure scalability, performance etc. Data digitization being the key activity across departments, guidelines on database design would contribute to the initiatives.
13.	Interoperability	There are a variety of technology products available in the market. To avoid getting locked-in to a set of vendors, the government should aim at leveraging on the market dynamics and bargaining power. Ensuring interoperability in all its products is a key requirement in this direction.
14.	Software Acceptance Policy	<p>It is common practice that the application development is outsourced to a third party. The government must formulate a procedure for the testing of the application hence developed on the following:</p> <ul style="list-style-type: none"> • Functionality • Data Security features (based on requirement) • Stress and regression
Public Private Partnership		
15.	Outsourcing Policy	The experience of various State Governments in implementation of a few major IT projects, coupled with the international experiences gathered, indicates that it is possible to make a big leap forward by designing a suitable framework for outsourcing some of the present work from the government to the established private players through various models like concession contracts, Joint Ventures, private

	finance initiative (PFI), partial privatization through partnering with strategic investor etc.
16. PPP Policy	<p>The government needs to focus more on regulatory functions and implementation of welfare schemes. Some of the activities in the government can be outsourced to the private sector so that the technology adoption in the system is faster and this shall promote more employment generation opportunities. The state government needs to formulate a policy on the Public Private Partnership. The following are some of the illustrative areas, which should form a part of the policy:</p> <ul style="list-style-type: none"> ▪ Criteria for outsourcing Services/Activities/processes ▪ Incentives for the Private partner ▪ Capital investment sharing model ▪ Revenue sharing models

The policies will dictate the success of implementation of the e-Governance roadmap and hence GoM must take immediate steps for the formulation of these policies through the SeMT for the design and formalization of the policies mentioned above.

5 Monitoring and Evaluation

It is essential for the government to continuously monitor the progress of the e-governance projects. Monitoring and Evaluation (M&E) provides the link that would enable on a continuous basis to learn from experience and help the GoM to monitor the effectiveness of the e-Governance plan. M&E tracks changes in services provided (outputs) and the desired results (outcomes), providing the basis for accountability in the utilization of funds released under the plan.

Once the E-Governance strategy and vision are identified, performance measures provide a valuable tool to track the progress of the E-Government implementation efforts.

5.1 Performance Measures

It is essential that the final Goals are measured on certain measurable characteristics. As a result of e-Governance roadmap, a set of shared expected outcomes was established:

- Increased citizen/client focus through convenient on-line service delivery and the provision of credible and reliable information;
- Better service quality
- Transformation (or rethinking) of services from the citizen's/client's perspective,

Based on e-Government vision, the following broad characteristics can be identified that will mark the success of the e-government:

Table 17 : Performance Measures

Characteristic	Target 2006	Target 2007	Target 2008	Target 2010
Convenience and Satisfaction <i>Services provided anytime, anyhow, anywhere</i>	<ul style="list-style-type: none"> • People will be able to find details of government services on the Internet. • Downloadable forms and procedures for 50% services in phase 1 to be made available online • Grievance Redressal system 	<ul style="list-style-type: none"> • Most of the services under Phase 1 will be fully or partially delivered electronically (where appropriate). • At least 10% some of the services under Phase 2 will be fully or partially delivered through service centers 	<ul style="list-style-type: none"> • All the services under Phase 1 and 2 will be fully or partially delivered electronically (where appropriate). • At least some of the services under Phase 3 will be fully or partially delivered through 	<ul style="list-style-type: none"> • All the services under the 4 Phases will be fully or partially delivered electronically (where appropriate).

Characteristic	Target 2006	Target 2007	Target 2008	Target 2010
	<p>for most departments and services.</p> <ul style="list-style-type: none"> • At least 10% of the services under Phase I shall be fully or partially delivered electronically. 	<p>(Common or department).</p> <ul style="list-style-type: none"> • The departments will have redesigned the way they deliver services – traditional channels may be used less, in favor of the Internet which will reach most citizens, and often be more convenient for them. 	<p>service centers (Common or department).</p> <ul style="list-style-type: none"> • Service delivery will be more proactive. People will allow departments to use information they hold to 'push' services out to them (e.g. reminding people to meet an obligation, the citizens will get reminders through SMS, email regarding the bill/taxes payments). 	
<p>Integration and Efficiency <i>Services that are integrated, customer-centric and efficient</i></p>	<ul style="list-style-type: none"> • The customer feedback mechanism will have been established. • The departments who have already started off the respective e-Governance initiative before 2006 would have implemented it in at least one location. • The participating departments will have their Detailed Project report ready for the second phase services. • Policies on Data Sharing, 	<ul style="list-style-type: none"> • The participating departments will have started the e-Governance initiatives that they are responsible for. • The departments which started off the respective e-Governance initiatives before 2006 would have rolled out the initiatives throughout the state. • Policies on Information assurance and Outsourcing will be in place. 	<ul style="list-style-type: none"> • Front-office integration will be well developed – many services will have been redesigned and bundled together in ways that meet customers' needs better. 	<ul style="list-style-type: none"> • The back office of government will be widely shared – there will be much less investment in department or service-specific technical, information, and business process infrastructures. Better value for money will be achieved.

Characteristic	Target 2006	Target 2007	Target 2008	Target 2010
	Identity management, Technology standards and architecture and PPP will be in place.			
Participation in government	<ul style="list-style-type: none"> • Government agencies will be making better use of the Internet to inform the public of what is happening in government, and of opportunities to be involved in government processes. • The department will seek the suggestion from the customers through feedback mechanisms 	<ul style="list-style-type: none"> • Agencies will be learning ways to make use of the Internet to consult people about policy development, and service design and delivery. • The department will seek the feedback from citizens in policy formation through the use of online channels 	<ul style="list-style-type: none"> • Service design and delivery will be much more customized and based on interaction with service recipients. 	<ul style="list-style-type: none"> • Online participation will have become the norm for many citizens. Policy processes will have become more open and consultative. • Online participation will be an increasingly important part of policy development and service delivery.

The future E-Government vision requires GoM to establish and maintain an operational framework of three key performance measures:

1. ***Progress Tracking Measures*** to assess the progress achieved in using e-Governance to transform operations and service delivery capability of Government of Mizoram operations. The following quantitative metrics should be monitored:
 - Percentage of customers of each type using E-Government services;
 - Percentage of departmental services transformed into E-Government;
 - Percentage of departmental service information published over e-gov portal;
 - Percentage of transactions of each service executed electronically (including forms entry and enquiry)
2. ***Customer Value Measures*** to assess the advantages and benefits gained by Government of Mizoram's customers through implementation of this roadmap. The following quantitative metrics should be monitored:
 - Reduction in number of visits to department premise for each service;
 - Reduction in number of documents required for submission for each service;
 - Reduction in time and effort required to request a service;
 - Reduction in time and effort required to track pending transactions for each service;
 - Reduction in time and effort required to file in and follow-up on complaints and suggestions;
 - Reduction in time and effort required to obtain information for each service;
3. ***Department value Measures*** to assess the advantages that have accrued to the government departments by provisioning of services and consolidation of their operations. Following metrics should be measured:
 - Reduction in service cost (i.e. average cost of processing a transaction);
 - Percentage of increase in revenue for each service;
 - Total E-Government-enabled revenues achieved; and
 - Total number of transactions executed per staff over a period of time (including application processing and enquiry).

The exact parameters of the analysis for each of the services need to be studied in detail after the implementation of the project and has to be defined separately. This must be done by the e-Governance Project Team.

To ensure that "citizen focus" goes beyond the realm of strategy document, the State must define an outcome policy that focuses on achieving service levels across all the e-

Governance projects to be undertaken within the State. While the service levels to be achieved would have to come from the department after a detailed exercise, the targeted service levels presented below (Table 18) may be considered as a base-line for further evaluation by the departments on a case-by-case basis at the time of implementation of the identified services. The objective of indicating common services and service levels is to provide consistent service levels for all projects that can be agreed as part of the State e-Governance roadmap to be achieved in the long term, where possible.

Table 18 : Illustrative Service Levels

	Category of Service	Benchmarked Service Levels
Information	Information Availability / Dissemination	Online & through service points Updated at least every 7 days Changes uploaded within 1 working day
	Availability of Forms	100% forms available Online & through service centers Changes updated within 1 working day
	Submission of Application	Online & through service centers Changes updated within 1 working day
Delivery of Services	Transaction (w/o verification) (Registration / Certificate / Approvals)	Online, through Payment Gateway <1 working day, through Banks / Service Centers
	Transaction (requiring personal interface / verification of documents)	Through Service Centers < 5 working days
	Transaction (requiring personal interface/ field verifications)	Through Service Centers < 10 working days
Service Centers	Service Centers - Department or Third Party	Online Connectivity (Web Based) 99.9% Uptime Urban Areas, within 5-10 sq.km. Services within 15 minutes
Monitoring	Tracking of Application / Grievance Redressal System (including consideration for Right To Information)	Online, Instant Acknowledgement / Reference No Response Time < 1 working days Redressal of Complaint < 7 working days Monitoring Module

5.2 Data sources

A key element of successful performance measurement is a data collection process that is both easy to implement, and useful for departments and agencies. The following describes these data sources as well as some of the key assessment tools that are being used to assess the progress of the GoM initiatives.

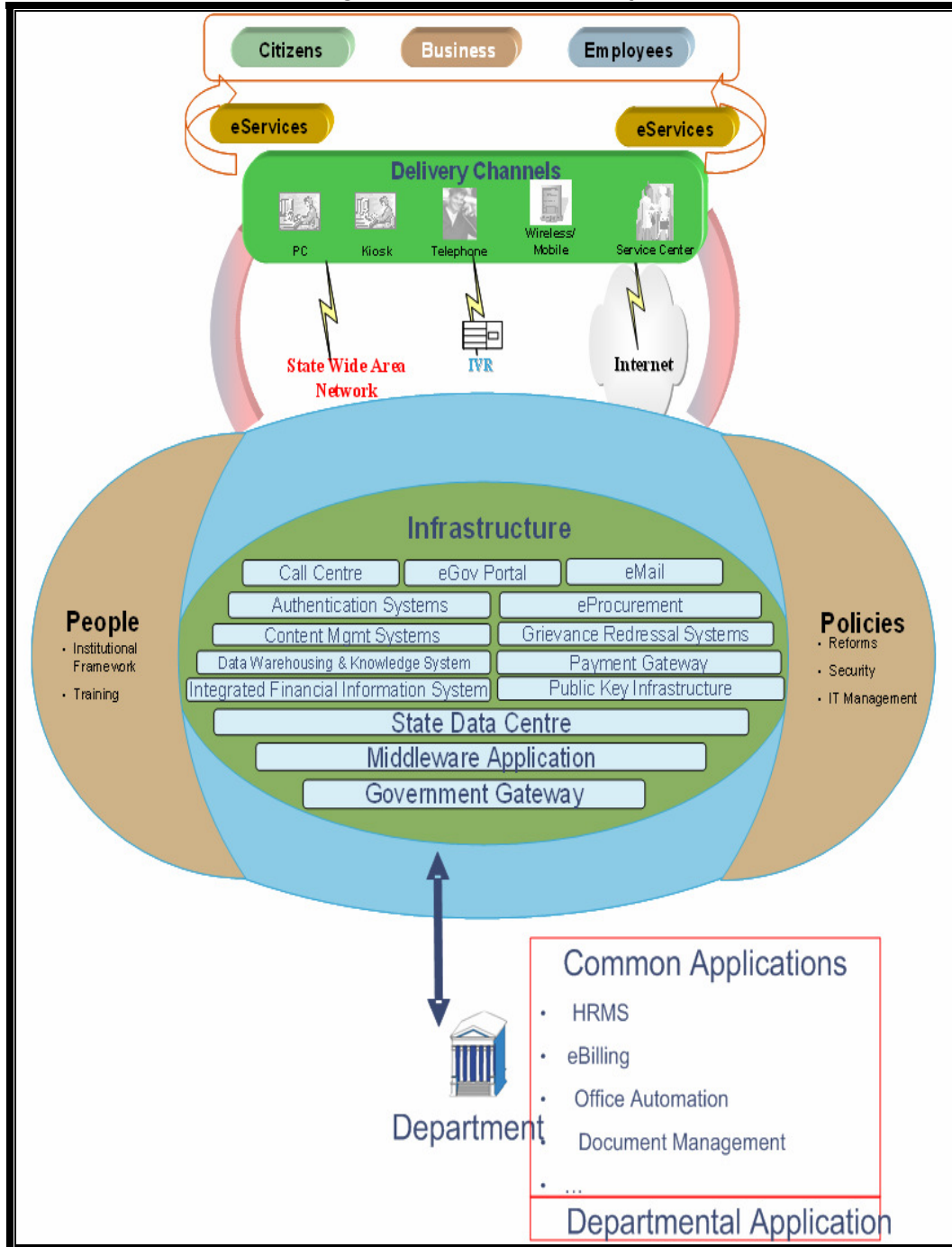
- **Departmental reporting on e-Governance plans and progress** – Departments must provide annual reports on progress to date in developing on-line services and integrated Web sites and portals. For example, in terms of on-line services they must provide information on project milestones and deliverables, take-up, client benefits and satisfaction ratings, partnerships, departmental benefits, infrastructure needs, communications and marketing plans, as well as the implementation of select policies

- **Citizen/client feedback** – The department must continuously seek feedback from the citizens and other customers about their satisfaction levels and expectations.
- **Customer Directors** – Formalize the process of customer feedback through the appointment of **Customer Group Directors**. These people should be taken from the customer societies and the key responsibilities of this group will be to track and communicate performance against customer related target s and to gather customer requirements.

6 e-Governance Blueprint

The following diagram (figure 7) shows the e-Governance Blueprint model of the vision of the e-enabled government, with the interaction between the various elements and delivering the services to the customers in a joined-up government for GoM.

Figure 7: e-Governance Blueprint



7 Implementation Plan

The following 5 year roadmap is suggested for the state based on the recommendation given in above sections. The initiative seen in a particular year mean that these initiatives are kicked off in that year starting from the creation of DPR at the SeMT/ PeMT level or by an external agency.

Component		Year 1	Year 2	Year 3	Year 4	Year 5
Policies, Procedures and Guidelines		All policies under Security	Privacy Management			
		PPP Policy	Interoperability			
		Data Digitization	IT management			
		Meta-data standards	Data Exchange			
		Technical Architecture				
Infrastructure	Networking	SWAN				
	Data Centers	State Data Center				
	Call Center	Call Center				
	Kiosks	Roll-out in the district HQ	Roll out across the state			
	CSC	Pilot of CSC in One District	Roll –out across the state			
	e-mail system	Across all district HQ's of departments	Across the state for intra-department communications			
	Payment gateway	For online payments on state portal				
	PKI			Public Key Infrastructure		
Applications	Core	Grievance Redressal System	e-procurement	Government gateway	Integrated Financial Information	Data warehousing and Knowledge Management

					System	System
			Content Management System		Middelware Application	
	Common	eBilling (Payments/receipts and demand notice)	Beneficiary Management System	Office Automation System Workflow Management	Management Information System	
		Registration and Renewal of registration external parties	Accounting and Auditing			
		Budgeting and Planing System	Document Management System	Human Resource Management System		
		Office Automation System File Tracking System				

8 Next Steps

Based upon the e-governance Roadmap for the State, there have been a number of imperatives that have been identified by the State to be taken over the next six months to a year. These have been presented in the table (Table 19) below:

Table 19 : Action points for e-Governance Roadmap implementation

S. No.	Activity	Responsibility	Action Required	Time Frame from zero date
1.	Finalization of the e-Gov roadmap as well as the Capacity Building Roadmap	State Committee	Apex Formal approval of the policy direction contained in this document including finalization of the prioritization	1 Month
2.	Building of Capacity Building and creation of positions within the SeMT	State Committee, DoP- ITC and MSeGS	Apex Approve the budget plan and submit to DIT, GoI for meeting the funding requirement for hiring of resources in SeMT as detailed in the capacity building report and approve the shortfall through state funding	3 Months
3.	Hiring of Resources and Capacity Building of PeMT in the identified departments to be undertaken under Phase I	State Committee, SeMT and Concerned Department	Apex Resources to be identified and finalized by PIU through the SeMT	1 Month after approval of funding requirement from DIT, GoI (T)
4.	Preparation of detailed financial management and control systems at the SeMT for program and fund management under NeGP	State Committee and DoP- ITC	Apex Detailed operating and monitoring procedures to be prepared, documented and approved	3 Month
5.	Finalization of the policy level initiatives especially the state IT architecture, data protection & privacy	DoP-ITC and SeMT	Constitute an expert committee / consultants to finalize these after	3 months

S. No.	Activity	Responsibility	Action Required	Time Frame from zero date
	policy and technology standards		consultations with the Line departments	
6.	Preparation of detailed guidance notes on areas such as project report preparation, PPP, risk assessment, technology evaluation etc., which can be used by the departments for implementing the various planned e-Governance initiatives	DoP-ITC and SeMT	SeMT to initiate the discussion draft for finalization by the Apex Committee	3 months after the capacity at SeMT has been created
7.	Development of detailed project report for core applications and initiation of core application development (Phase I) and core infrastructure	DoP-ITC, SeMT and PeMT	SeMT to support through project management and appointment of external agencies to support this development	12 months
8.	Detailed Project Report preparation for the implementation of the government services in Phase I	Concerned Departments through PeMT	SeMT to support this initiative until the PeMT is put in place	2 months after the capacity at SeMT has been created
9.	Detailed Project Report preparation for the implementation of the government services in Phase II	Concerned Departments through PeMT	PeMT	1 Month after the Completion of Phase 1
10.	Detailed Project Report preparation for the implementation of the government services in Phase III	Concerned Departments through PeMT	PeMT	1 Month after the Completion of Phase II
11.	Finalization of the Monitoring and Evaluation Plan and Appointment of an independent M&E agency for continuous impact assessment	SeMT and State Apex Committee	Finalization of the M&E Plan	12 Months

ANNEXURES

Annexures

Annexure I- Service List of the Participating Departments**Table 20 : Services of the participating Departments**

S. No.	Services of the Department
Information & Public Relations	
1	Daily issue of Press release and video news item to print media, DDK and Local TV Channels.
2	Act as a watchdog for electronic and print media
3	Maintain communal harmony and integration, coordination with different departments
4	Publication of information about Mizoram in Booklet forms and brochures, thus, marketing Mizoram to the outside world.
5	Annual Publication of the Mizoram Calendar and the Mizoram Diary
6	Issue of Quarterly Mizoram Newsletter
7	Conduction of Press Tours, Aizawl Darshan and Bharat Dharshan
8	Conduction of representatives from the State for participation in the Republic Day parade
9	Conduct & Coverage of VVIPs and the VIPs as and when necessary
10	Conduction of seminars and workshops for media persons in and outside the State.
11	Recording of all important events and chronicles of the State dignitaries with photos, CDs and video tapes
12	Being the Nodal department for the implementation of the Right to Information Act, its responsible for the conduction of training and sensitizing the media and the public
Home Department	
13	Providing information for and the issue of Inner Line Permit
14	Protected Area Permits
15	License for fire arms
16	Indo-Bangladesh Passport
17	Lodging of FIRs
18	Information about missing persons

S. No.	Services of the Department
19	Information about criminals
20	Awareness about Armed Forces
21	Security for the state's citizens
22	Arranging and managing VIP Security
23	Management of Police Personnel
24	Management of Home Guards
25	Carrying out Office Administration
26	Armament Management
27	Vehicle Management
28	Pay & Allowance of Police Personnel
29	Service matters of Personnel
30	Welfare of ex- Servicemen
Transport Department	
31	Issue of Drivers license
32	Issue of Learner License
33	Registration of Two wheelers
34	Registration of Three wheelers
35	Registration of cars/ SUVs/etc.
36	Registration of Heavy Vehicle
37	Issue of Permit
38	Assessment and collection of taxes
39	Inspection & Verification of Vehicles
40	Issuance of Conductor's License
41	Change of Vehicle ownership

S. No.	Services of the Department
42	Provision of Intra-state Bus services
43	Provision of Inter-state Bus services
44	Issuance of Permits for Private Bus operators
45	Issuance of Train Tickets at Aizawl
Taxation Department	
46	Registration of Dealers for Mizoram Sales Tax/ VAT
47	Registration of Dealers for Central Sales Tax
48	Renewal of Registration of dealers
49	Duplicate Registration of dealers
50	Issuance of forms
51	Providing exemption under various schemes related to registration
52	Filing of Returns
53	Amending returns
54	Submission of utilization reports on consumption of various types of forms
55	Dealer Assessment
56	Issuance of forms for different interstate transactions
57	Verification of exempt claims, if necessary
58	Issuance of Transit Pass (at the check post)
59	Inspection / sample checking at the check post
60	Inter-state transactions
61	Issuance of Notices and Circulars related to taxes and levies
Power and Electricity Department	
62	Generation and delivery of Power to citizens
63	Distribution management through SCADA

S. No.	Services of the Department
64	Registration of new Customers
65	Generation of Electricity Bills
66	Fault Detection and repairs
67	Planning & Execution of new projects
68	Monitoring of the existing schemes
69	Collection of Electricity Bills
70	Load Management on the GRID
71	Drawing Power from the NEREB GRID
Agriculture Department	
72	Imparting Training to farmers
73	Monitoring of inputs
74	Monitoring of provision of machinery to farmers
75	Monitoring soil conditions
76	Imparting training on Pest Control
77	Diversification of areas for crops
78	Implementation of beneficiary schemes
79	Extension works
80	Trainer training related to Agriculture
Finance Department	
	TREASURIES AND ACCOUNTS
81	Receiving money from Public for credit to the Govt.
82	Receiving money from Govt. Officers for credit to the Govt.
83	Making payments of claims against Government on Bills / Cheque presented by the drawing and disbursing officers or other authorized person
84	Compilation of monthly expenditure and receipt of the state Govt.'s accounts

S. No.	Services of the Department
85	Closing and passing of Bills/ Cheque for payment
	GENERAL PROVIDEND FUND
86	Maintaining accounts of all subscribers of the fund
87	Issuance of Annual statements
88	Making payments towards PF loans
89	Making deductions from salary towards loan repayments
90	Settlement of claims for GPF final withdrawal
	PENSION AND GROUP INSURANCE SCHEME
91	Fixation of pension entitlement and determination of pension considerations
92	Issuance of pension payment orders
93	Issuance of payments as per GIS
	ENTITLEMENTS
94	Maintaining Service records of all Group "A" and "B" officials
95	Fixation and Authorization of pay and allowance
96	Preparation of pay slips
97	Recording of postings
98	Recording of increments
99	Recording of deputations
100	Recording of promotions
	AUDIT
101	Audit of local bodies
102	Audit of Governmental organizations/ Institutions
	ACCOUNTS AND MONITORING
103	Compilation and preparation of monthly accounts and submission of same to AG, Shillong

S. No.	Services of the Department
Health and Family Welfare Department	
104	Provision of OPD / Healthcare services to citizens
105	Performing diagnostic tests
106	Handling medical emergencies
107	Participation in health camps
108	Training students
109	Managing various complaints
110	Undertaking inspections of food establishments
111	Undertaking inspections of Medical establishments
112	Issuing disability certificate
113	Reimbursements in certain cases\
114	Providing referrals for better health care
115	Issuing death birth certificate
116	Arranging for state owned ambulances to pick-up patients
117	Helping beneficiaries to get money
118	Counseling people
119	Arranging blood donation
120	Blood Bank management
121	Handling donations
122	Carrying out Family planning operations
123	Managing AMC of equipments under it's supervision
124	Producing court evidences
125	Performing VIP duties
126	Undertaking Food sampling

S. No.	Services of the Department
127	Preparing various reports of disease surveillance
General Administration Department	
128	Handling of Establishment and Accounts matters pertaining to offices
129	Allocation and Transaction of Office Administration
130	Hiring of building for office accommodation by Dept.
131	Preparation, Issue and management of Administrative orders of GoM
132	Allotment of site / plots to state Govt. Depts. For Office buildings
133	Reservation of rooms at Mizoram houses for Govt. Staff and citizens
134	Air Travel permissions for Govt. staff
135	Issuance of Inner line permits
136	Allotment of residential accommodation
137	Foreign Travel permission for Govt. Staff
138	Special casual leave for staff
139	Purchase of Govt. Vehicle
140	Purchase of Office equipment for Dept. and Districts
141	Office equipment maintenance
Local Area Development Department	
142	Compilation of data related to VCs
143	Compilation of data related to villages
144	Compilation of BPL List for the state
145	Provision and issue of loans to State Govt. / Private sector employees towards house building / LIC
146	Providing guidelines for Village Councils
147	Carrying out development work
148	Registration of deaths in the state

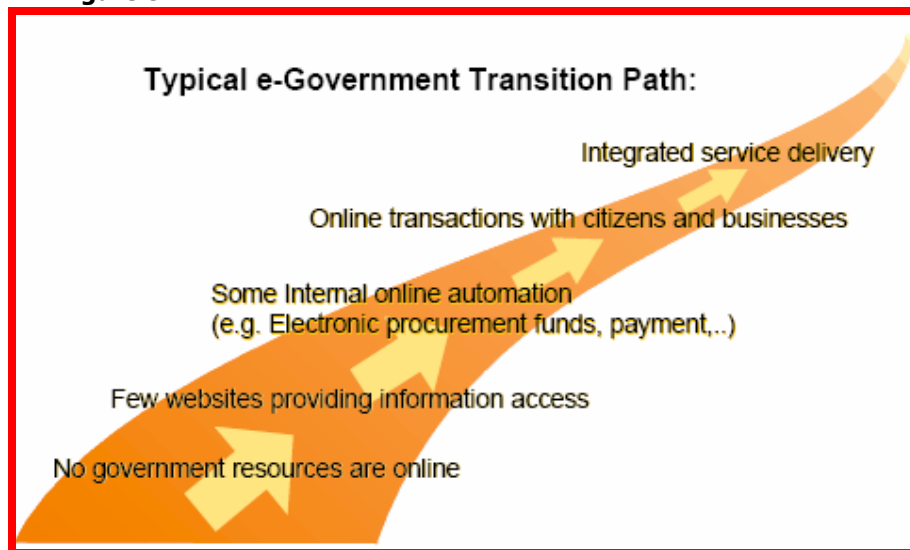
S. No.	Services of the Department
149	Installation and operation of street lights
150	Carry out management of Cemeteries in the state\
151	Collection and clearance of Garbage in certain areas
152	Procurement of goods and services through Tenders
153	Compilation of Finance and accounts for the Department
Food and Civil Supplies Department	
154	Procurement of food grains
155	To ensure the food grains procured are stored properly until they are delivered to the citizen
156	To deliver the foodgrain and other items such as Iodized Salts/ sugar/ Kerosene Oil to the BPL families at subsidized process
157	To deliver food grain / sugar/ Iodized Salt/ Kerosene Oil/ etc. to other families such as APL, AAY & Annapurna
158	To issue and manage Ration Cards in the State
159	Issue of License for shops selling foodstuff
160	Vigilance of the shops selling food stuff
161	To protect consumer rights in conjuncture with the consumer courts
Labour and Employment Department	
162	Registration of Job seekers
163	Intimation of Candidate list to the employers
164	Implementation of Compulsory Notification of Vacancies Act
165	Providing career counseling to students
166	Registration of Trade Unions
167	Implementation of the labour laws in the state
Rural Development Department	
168	Identification and approval of improvement projects

S. No.	Services of the Department
169	Implementation of various state Govt. and central Govt. schemes
170	Monitoring the implementation of projects being implemented across the state by various VCs
171	Allocation and monitoring of funds for projects being executed by the various agencies under the supervision of the Department
172	Registration of Births and Deaths
173	Preparing Report / Returns to funding agencies/ Central Govt.
174	Human resource management

Annexure II – Services Maturity Growth

The Internet, and its associated technologies and business models, is profoundly affecting the way government, business and people interact with each other. It has been noted that the e-governance service transformation follows a four stage growth model, as shown in the diagram (Figure 8) below.

Figure 8



Phase 1 — Web presence

Departments provide a website to deliver basic information to the public.

This phase is represented by departments raising awareness of their purpose and services through a web *presence*. It may simply be information that outlines what the department does, what services it provides and how it operates. It may also include reference to contact points if citizens require further information or wish to conduct avail the services of the department. In this phase, there is very little scope for citizen interaction or two-way communication without resorting to use of traditional channels of service delivery, nor can citizens manipulate information or interact with it in any other way than simply viewing it.

Phase 2 — Interaction

Departments extend the capability of their website so people who used to visit a government office now have online access to critical information, can download forms, and can contact the agency by email etc.

This phase represents the primary development of citizens interacting with government via online facilities. Whilst citizens may still access information and services through traditional channels, such as by phone or in person, phase two represents an environment in which citizens can order and execute services online. They may also manipulate information databases, use search mechanisms and linkages to other related sites. This phase also introduces the beginning of common entry points, like the state government portal, that aim

to remove the need for citizens to understand government structures to access government services, and deliver the first high-volume transactions in limited instances.

Phase 3 — Transaction

The departments add self-service applications to their websites so that people can complete entire transactions or processes online. The web begins to complement other service delivery channels, providing around the clock access independent of users' geographic location. Increasingly, agencies develop services that involve different agency business delivery systems that are seamlessly integrated.

In this phase, citizens are able to equally access government services via many channels (e.g. online, wireless or PDA technologies) of delivery and department begin to reform their business processes such that services can be delivered via a variety of channels as a matter of course. This will increase the convenience factor for citizens and businesses using government services.

Phase 4 — Transformation

The delivery of government services and potentially the operation of government itself are redefined. Information, service delivery and government processes are integrated across traditional boundary lines. Information and services are increasingly customized to the particular needs of individuals and businesses. The identity of individual department matters less to people as information and services are accessed through a single point of contact. E-government reshapes the relationships between government, individuals, and business¹.

This phase is characterized by a seamless interface and integrated service delivery model in which the relationship between citizens, government and business has been transformed. Multiple channels of service delivery co-exist without any channel conflict, whatsoever.

Annexure III- Service Prioritization & Phasing Strategy

Framework for prioritization of services

We have implemented the approach of 'Service Value Analysis' to arrive at service roadmap for the state. We have used a structured 4-step visioning approach to arrive at GoM's future E-Government roadmap. The four steps involved are described in detail below:

- **Step 1: Compile the List of Services** – This step involved compiling the list of services provided by the various participating departments.
- **Step 2: Categorize the Services on the value to the customers and the department--Government-enabled** - This step involved identifying those services that once made E-Government-enabled will deliver the maximum value and benefits to the departments and its customers.

A 'Service Value Questionnaire' was designed by the PwC team and given to the departments. The PwC team also interacted with the department officials to seek the requisite information if not available in the questionnaire format.

The services have been categorized based on the

1. **Department Value Measures**, explores the E-Government impact on the following:
 - Enhancing existing revenues;
 - Setting up new revenue streams;
 - Reducing cost of processing transactions; and
 - Delivering intangible benefits (e.g. boosting the image of the department)
 2. **Customer Value Measures**, explores the E-Government impact on the following:
 - Minimizing the number of customer visits to the department premises;
 - Reducing the time required to request the service;
 - Reducing the time required to deliver a service;
 - Reducing the time spent by the customer to follow-up and track the progress of the requested service; and
 - Provide flexibility to the customer to avail the service from alternate delivery channel
- **Step 3: Sub-categorize the services for based on visibility of the service and complexity in e-Governance enablement of the Service**-This step involved identifying when to implement each of the high value services identified in Step 2 and also prioritize the other services. The implementation priority for each service was defined based on the analysis of the following attributes:
 - **Service Visibility** – describes how significantly and extensively can customers feel and experience the benefits achieved from delivering the service into E-Government. Services of high volume of transactions and a large customer base

would be more visible to the Department customers than other services with a very limited customer base.

- **Service Complexity** – describes how easy the service can be made E-Government-enabled. This depends on a number of factors such as the degree of existing automation, number of external parties involved and the number of customer documents processed. For example, issuing of 'No Objection Certificates' is more difficult to make e-Governance-enabled than providing information about the property tax online.
- **Step 4:** After the categorization of the services, the implementation plan for the E-Governance enablement of the services has been finalized based in the following manner.

Based on our 'Implementation Priority Analysis', and the framework for the growth of e-Governance services as given above we recommend that GoM implements the high-value E-Government services into three distinct Phases as described below:

- **Phase 1 'Raise Visibility':** This Phase of services aims to quickly raise the visibility and image of GoM as an E-Government organization by establishing a professional and effective web presence. Services implemented during this Phase have the following characteristics:
 - Include mostly informational and highly visible transactional services;
 - Require no or minimal input from external parties during the various delivery stage;
 - Confined mostly to a single department within GoM; and
 - Has a high level of automation.

The services included in Phase 1 have been detailed in the table (table 21) below (they are merely listed here and not serialized).

Table 21 : Phase I Services

S. No.	Service name	Delivery Channel	Department
1.	Information on Imparting Training to farmers	Web Portal/CSC/Call Center	Agriculture
2.	To issue and manage Ration Cards in the State	CSC	Food Supplies & Civil
3.	Issue of License for shops selling foodstuff	Department Computerization	Food Supplies & Civil
4.	Vigilance of the shops selling food stuff	CSC/Web Portal/Call Center	Food Supplies & Civil
5.	Allocation and Transaction of Office	Department	General

S. No.	Service name	Delivery Channel	Department
	Administration	Computerization	Administration department
6.	Hiring of building for office accommodation by Dept.	Department Computerization	General Administration department
7.	Allotment of site / plots to state Govt. Depts. For Office buildings	Department Computerization	General Administration department
8.	Reservation of rooms at Mizoram houses	CSC/Web Portal/Call Center	General Administration department
9.	Air Travel permissions	CSC/Web Portal/Call Center	General Administration department
10.	Inner line permits	CSC/Web Portal/Call Center	General Administration department
11.	Allotment of residential accommodation	Department Computerization	General Administration department
12.	Information on Provision of OPD / Healthcare services to citizens	CSC/Web Portal/Kiosk/Call Center	Health & Family Welfare
13.	Information on Performing diagnostic tests	CSC/Web Portal/Kiosk/Call Center	Health & Family Welfare
14.	Blood Bank management	Department Computerization	Health & Family Welfare
15.	Manage AMC of equipments under it's supervision	Department Computerization	Health & Family Welfare
16.	Providing information for and the issue of Inner Line Permit	Web Portal/CSC/Kiosk/Call Center	Home
17.	Protected Area Permits	Web Portal/CSC/Kiosk/	Home

S. No.	Service name	Delivery Channel	Department
		Call Center	
18.	Information about missing persons	Web Portal/CSC/Kiosk/ Call Center	Home
19.	Information about criminals	Web Portal/CSC/Kiosk/ Call Center	Home
20.	Awareness about Armed Forces	Web Portal/CSC/Kiosk/ Call Center	Home
21.	Welfare of ex- Servicemen	CSC/Web Portal/Call Center	Home
22.	Daily issue of Press release and video news item to print media, DDK and Local TV Channels.	CSC/Web Portal/Call Center	Information & Public Relations
23.	Publication of information about Mizoram in Booklet forms and brochures, thus, marketing Mizoram to the outside world.	CSC/Web Portal/Call Center	Information & Public Relations
24.	Annual Publication of the Mizoram Calendar and the Mizoram Diary	CSC/Web Portal/Call Center	Information & Public Relations
25.	Being the Nodal department for the implementation of the Right to Information Act, its responsible for the conduction of training and sensitizing the media and the public	CSC/Web Portal/Call Center	Information & Public Relations
26.	Registration of Job seekers	CSC/Web Portal/Call Center	Labour & Employment
27.	Intimation of Candidate list to the employers	CSC/Web Portal/Call Center	Labour & Employment
28.	Providing career counseling to students	CSC/Web Portal/Call Center	Labour & Employment
29.	Compilation of BPL List for the state	CSC/Web Portal	Local Administration Department
30.	Providing guidelines for Village Councils	CSC/Web	Local Administration

S. No.	Service name	Delivery Channel	Department
		Portal/Call Center	Department
31.	Collection and clearance of Garbage in certain areas	Department Computerization	Local Administration Department
32.	Distribution management through SCADA	Laying OFC Fibles	Power & Electricity
33.	Fault Detection and repairs	Internal computerization	Power & Electricity
34.	Collection of Electricity Bills	CSC/Web Portal	Power & Electricity
35.	Monitoring the implementation of projects being implemented across the state by various VCs	Department Computerization	Rural Development
36.	Fund allocation and monitoring for projects being executed by the various agencies under the supervision of the Department	Department Computerization	Rural Development
37.	Registration of Births and Deaths	CSC	Rural Development
38.	Human resource management	Department Computerization	Rural Development
39.	Registration of Dealers for Mizoram Sales Tax/ VAT	CSC/Web Portal	Taxation
40.	Registration of Dealers for Central Sales Tax	CSC/Web Portal	Taxation
41.	Renewal of Registration	CSC/Web Portal	Taxation
42.	Duplicate Registration	CSC/Web Portal	Taxation
43.	Issuance of forms	CSC	Taxation
44.	Inspection / sample checking at the check post	CSC/Web Portal	Taxation
45.	Assessment and collection of taxes	CSC/Web Portal	Transport
46.	Issuance of Conductor's License	CSC/Web Portal	Transport
47.	Change of Vehicle ownership	CSC/Web Portal	Transport
48.	Provision of Intra-state Bus services	CSC/Web Portal	Transport
49.	Provision of Inter-state Bus services	CSC/Web Portal	Transport
50.	Issuance of Train Tickets at Aizawl	CSC/Web Portal	Transport

S. No.	Service name	Delivery Channel	Department
51.	Issuance of Bus Tickets	CSC/Web Portal	Transport
52.	Receive money from Public for credit to the Govt.	CSC/Kiosk/Web Portal	Treasuries & Accounts
53.	Receive money from Govt. Officers for credit to the Govt.	CSC/Kiosk/Web Portal	Treasuries & Accounts
54.	To make payments of claims against Government on Bills / Cheques presented by the drawing and disbursing officers or other authorized persons	CSC/Kiosk/Web Portal	Treasuries & Accounts
55.	Maintain accounts of all subscribers of the fund	CSC/Kiosk/Web Portal	Treasuries & Accounts
56.	Settlement of claims for GPF final withdrawal	Department Computerization	Treasuries & Accounts
57.	Fixation of pension entitlement and determination of pension considerations	Department Computerization/ CSC	Treasuries & Accounts
58.	Issue of payments as per GIS	CSC/ECS	Treasuries & Accounts

- Phase2 'Build Critical Transactional Services':*** This Phase aims to establish the core critical transactional services required to support the key customer segments. The Phase will focus on foundation services required for effective customer relationship management and common transactional services. Services implemented as a part of this Phase enjoy high visibility and relatively complex delivery operations. Services implemented as a part of this Phase have the following characteristics:
 - Include the interaction part of the transactional services to assist the citizen in initiating the process for transaction services;
 - Serve mostly the residents
 - Has a high volume of annual transactions;
 - Often require input from external parties during the various delivery stage;
 - Often span more than one department; and
 - Has a low level of automation.

The services included in Phase 2 have been detailed in the table (table 22) below.

Table 22: Phase II Services

S. No.	Service name	Delivery Channel	Department
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S. No.	Service name	Delivery Channel	Department
1.	Information on monitoring of soil conditions	Web Portal/CSC/Call Center	Agriculture
2.	Pest Control	Web Portal/CSC/Call Center	Agriculture
3.	Extension works	Web Portal/CSC/Call Center	Agriculture
4.	Procurement of food grains	Department Computerization	Food & Civil Supplies
5.	To ensure the food grains procured are stored properly until they are delivered to the citizen	Department Computerization	Food & Civil Supplies
6.	To deliver the foodgrain and other items such as Iodised Salts/ sugar/ Kerosene Oil to the BPL families at subsidized process	Department Computerization	Food & Civil Supplies
7.	To deliver food grain / sugar/ Iodised Salt/ Kerosene Oil/ etc. to other families such as APL, AAY & Annapurna	Department Computerization	Food & Civil Supplies
8.	Preparation, Issue and management of Administrative orders of GoM	Department Computerization	General Administration department
9.	Handling medical emergencies	Department Computerization	Health & Family Welfare
10.	Participation in health camps	Department Computerization	Health & Family Welfare
11.	Issue disability certificate	CSC	Health & Family Welfare
12.	Reimbursements in certain cases	CSC	Health & Family Welfare
13.	Issue death birth certificate	CSC	Health & Family Welfare
14.	Information on Family planning operations	Department Computerization	Health & Family Welfare
15.	Perform VIP duties	Internal	Health & Family Welfare
16.	Undertake Food sampling	Department	Health & Family

S. No.	Service name	Delivery Channel	Department
		Computerization	Welfare
17.	Prepare various reports of disease surveillance	Department Computerization	Health & Family Welfare
18.	Security for the state's citizens	Internal	Home
19.	Management of Police Personnel	Department Computerization	Home
20.	Management of Home Guards	Department Computerization	Home
21.	Office Administration	Department Computerization	Home
22.	Pay & Allowance of Police Personnel	Department Computerization	Home
23.	Maintain communal harmony and integration, coordination with different departments	Internal Function	Information & Public Relations
24.	Issue of Quarterly Mizoram Newsletter	CSC/Web Portal/Call Center	Information & Public Relations
25.	Registration of Trade Unions	CSC/Web Portal/Call Center	Labour & Employment
26.	Compilation of data related to VCs	Department Computerization	Local Administration Department
27.	Compilation of data related to villages	Department Computerization	Local Administration Department
28.	Provision and issue of loans to State Govt. / Private sector employees towards house building / LIC	Department Computerization	Local Administration Department
29.	Carrying out development work	Department Computerization	Local Administration Department
30.	Registration of deaths in the state	Department Computerization	Local Administration Department
31.	Installation and operation of street lights	Department	Local Administration

S. No.	Service name	Delivery Channel	Department
		Computerization	Department
32.	Procurement of goods and services through Tenders	Department Computerization	Local Administration Department
33.	Compilation of Finance and accounts for the Department	Department Computerization	Local Administration Department
34.	Registration of new Customers	CSC/Web Portal	Power & Electricity
35.	Generation of Electricity Bills	Department Computerization	Power & Electricity
36.	Monitoring of the existing schemes	Department Computerization	Power & Electricity
37.	Load Management	Department Computerization	Power & Electricity
38.	Implementation of various state Govt. and central Govt. schemes	Department Computerization	Rural Development
39.	Providing exemption under various schemes related to registration	Department Computerization	Taxation
40.	Filing of Returns	CSC/Web Portal	Taxation
41.	Dealer Assessment	Department Computerization	Taxation
42.	Issuance of forms for different interstate transactions	CSC	Taxation
43.	Composition of Penalty	Department Computerization	Taxation
44.	Inter-state transactions	Department Computerization	Taxation
45.	Issue of Drivers license	CSC	Transport
46.	Issue of Learner License	CSC	Transport
47.	Registration of Two wheelers	CSC	Transport
48.	Registration of Three wheelers	CSC	Transport
49.	Registration of cars/ SUVs/etc.	CSC	Transport
50.	Registration of Heavy Vehicle	CSC	Transport
51.	Issue of Permit	CSC	Transport

S. No.	Service name	Delivery Channel	Department
52.	Issue Annual statements	CSC/Kiosk/Web Portal	Treasuries & Accounts
53.	Make payments towards PF loans	ECS	Treasuries & Accounts
54.	Make deductions from salary towards loan repayments	Department Computerization	Treasuries & Accounts
55.	Issue of pension payment orders	Department Computerization/CSC	Treasuries & Accounts
56.	Monitoring of inputs	Department Computerization	Agriculture

- *Phase3 "Sustain Value"*; this Phase aims to sustain the value delivered to GoM and its customers through implementing critical transactional services. Services implemented as part of this Phase have the following characteristics:
 - Has less customer visibility;
 - Include mostly transactional services;
 - Serve mostly specific customer segments such as the private sector or the citizens; and
 - Has a moderate volume of annual transactions.

The services included in Phase 2 have been detailed in the table (table 23) below.

Table 23: Phase III Services

S. No.	Service name	Delivery Channel	Department
1.	Monitoring of inputs	Department Computerization	Agriculture
2.	Monitoring of provision of machinery to farmers	Department Computerization	Agriculture
3.	Diversification of areas for crops	Web Portal/CSC/Call Center	Agriculture
4.	Implementation of beneficiary schemes	Web Portal/CSC/Call Center	Agriculture
5.	Trainer training	Web Portal/CSC/Call Center	Agriculture
6.	To protect consumer rights in conjuncture with the consumer courts	Department Computerization	Food & Civil Supplies
7.	Handling of Establishment and	Department	General

S. No.	Service name	Delivery Channel	Department
	Accounts matters pertaining to offices	Computerization	Administration department
8.	Foreign Travel permission	Department Computerization	General Administration department
9.	Special casual leave for staff	Department Computerization	General Administration department
10.	Purchase of Govt. Vehicle	Department Computerization	General Administration department
11.	Purchase of Office equipment for Dept. and Districts	Department Computerization	General Administration department
12.	Office equipment maintenance	Department Computerization	General Administration department
13.	Training students	Department Computerization	Health & Family Welfare
14.	Manage various complaints	Department Computerization	Health & Family Welfare
15.	Undertake inspections	Department Computerization	Health & Family Welfare
16.	Providing referrals for better health care	Department Computerization	Health & Family Welfare
17.	Management of ambulances	Department Computerization	Health & Family Welfare
18.	Help beneficiaries to get money	CSC	Health & Family Welfare
19.	Counseling people	Internal Department Computerization	Health & Family Welfare
20.	Arrange blood donation	Internal Department Computerization	Health & Family Welfare
21.	Handle donations	Internal Department Computerization	Health & Family Welfare

S. No.	Service name	Delivery Channel	Department
22.	Produce court evidences	Department Computerization	Health & Family Welfare
23.	VIP Security	Internal	Home
24.	Armament Management	Department Computerization	Home
25.	Vehicle Management	Department Computerization	Home
26.	Service matters of Personnel	Department Computerization	Home
27.	Act as a watchdog for electronic and print media	Department Computerization	Information & Public Relations
28.	Press Tours, Aizawl Darshan and Bharat Dharshan	CSC/Web Portal/Call Center	Information & Public Relations
29.	representatives from the State for participation in the Republic Day parade	Department Computerization	Information & Public Relations
30.	Conduct & Coverage of VVIPs and the VIPs as and when necessary	Department Computerization	Information & Public Relations
31.	Conduction of seminars and workshops for media persons in and outside the State.	Web Portal	Information & Public Relations
32.	Recording of all important events and chronicles of the State dignitaries with photos, CDs and video tapes	Department Computerization	Information & Public Relations
33.	Implementation of the labour laws in the state	Departmental Computerization	Labour & Employment
34.	Upgradation of Vocational Training Facilities	Departmental Computerization	Labour & Employment
35.	Carry out management of Cemeteries in the state	Department Computerization	Local Administration Department
36.	Generation of Power	Internal	Power & Electricity
37.	Planning & Execution of new projects	Department Computerization	Power & Electricity

S. No.	Service name	Delivery Channel	Department
38.	Drawing Power from the GRID	Department Computerization	Power & Electricity
39.	Identification and approval of improvement projects	Department Computerization	Rural Development
40.	Report / Returns to funding agencies/ Central Govt.	Administrative	Rural Development
41.	Amending returns	CSC	Taxation
42.	Submission of utilization reports on consumption of various types of forms	CSC/Web Portal	Taxation
43.	Verification of exempt claims, if necessary	Department Computerization	Taxation
44.	Issuance of Transit Pass (at the check post)	Department Computerization	Taxation
45.	Notices and Circulars	Department Computerization	Taxation
46.	Inspection & Verification of Vehicles	CSC	Transport
47.	Issuance of Permits for Private Bus operators	CSC	Transport
48.	Compilation of monthly expenditure and receipt of the state Govt.'s accounts	Department Computerization	Treasuries & Accounts
49.	Closing and passing of Bills/ Cheques for payment	Department Computerization	Treasuries & Accounts
50.	Maintain Service records of all Group "A" and "B" officials	Department Computerization/CSC	Treasuries & Accounts
51.	Fixation and Authorisation of pay and allowance	Department Computerization/CSC	Treasuries & Accounts
52.	Preparation of pay slips	Department Computerization/CSC	Treasuries & Accounts
53.	Recording of postings	Department Computerization/CSC	Treasuries & Accounts
54.	Recording of increments	Department Computerization/CSC	Treasuries & Accounts
55.	Recording of deputations	Department Computerization/CSC	Treasuries & Accounts
56.	Recording of promotions	Department	Treasuries &

S. No.	Service name	Delivery Channel	Department
		Computerization/CSC	Accounts
57.	Audit of local bodies	Department Computerization/CSC	Treasuries & Accounts
58.	Audit of Governmental organisations/ Institutions	Department Computerization/CSC	Treasuries & Accounts
59.	Compilation and preparation of monthly accounts and submission of same to AG, Shillong	Department Computerization/CSC	Treasuries & Accounts
60.	License for fire arms	Department Computerization/CSC	Home
61.	Indo-Bangladesh Passport	Department Computerization/CSC	Home
62.	Lodging of FIRs	Department Computerization/CSC	Home
63.	Implementation of Compulsory Notification of Vacancies Act	Department Computerization/CSC	Labour & Employment

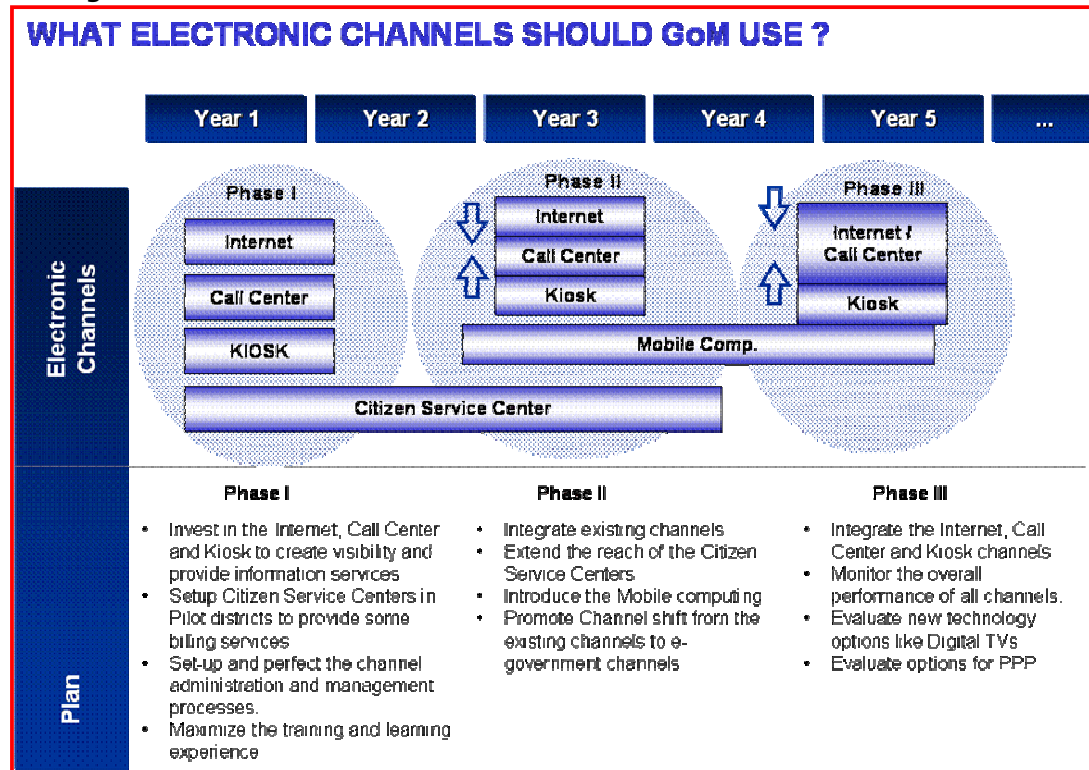
Annexure IV- e-Governance Champions Training Program

Day	Topics	Learning objectives
1	a. Basic Concepts of e-Government b. Conceptualization techniques c. Need for stakeholder consultation & Methodologies d. Examples of Successful e-Gov concepts	a. A clear understanding of the need for vision, mission, specific objectives for an e-Gov initiative b. Capacity to conceptualize an e-Gov Project
2	a. Difference between output and outcome b. Service definition	a. Capacity to identify and define services
3	a. e-Government architecture b. Process reform c. Change Management	b. e-Government Architecture c. Role of BPR, BPR methodologies
4	a. Technology and Standards b. Functional Architecture c. Technology architecture (Basics)	a. Ability to understand Standards, Functional and Technology Architecture b. Change Management strategy c. Roadmap for process reforms
5	a. Request for Proposals (RFP) and Service Level Agreements (SLA) b. Role of Prototype, Proof of Concept(POC), Pilot projects c. Managing e-Government projects d. Security e. Bid evaluation and selection	a. Ability to understand RFPs & SLAs b. Capabilities to manage large and complex e-Government projects

Annexure V: e-Governance Electronic Channels Phasing Strategy

Based on our analysis, we recommend that GoM follows a phased approach for the implementation of the aforementioned channels as illustrated in diagram (figure 9) below:

Figure 9



The following table (Table 24) details the three phases:

Table 24 : e-Governance Delivery Channel Phasing Strategy

Phase	Recommended actions	Rationale
I- Establish Primary Channels	<p>In the first year of the E-Government program, we believe that GoM should focus on the following.</p> <ul style="list-style-type: none"> The state has to pursue enhancing the current portal www.mizoram.nic.in to a single point entry portal with standardized interface where all the departments can publish the information and provide services to the citizens and businesses. Establish a government a call center Implement the establishment of 	<ul style="list-style-type: none"> The Internet, call center and the kiosk can be used as the delivery channel for the dissemination of information. Even though there is low IT penetration in the rural areas, the internet combined with the "CSC" can act as a vehicle for faster delivery of informational services. The citizens and the government have seen the success of CICs kiosk in the various districts. . The Citizen Service centers though provide a good visibility

Phase	Recommended actions	Rationale
	<p>"CSCs" in all districts and link it to the state government portal.</p> <ul style="list-style-type: none"> – Take up establishment of Citizen Service centers in some "pilot Districts" – Focus on the basic and essential capabilities and features of each channel. – Set-up and refine the administration and management processes of the channels. – Improve the service delivery of the existing delivery channels 	<p>impact, would require a large upfront investment by government or PPP partner, backend integration and mature service delivery processes. This also requires some changes to the existing processes. Hence it must be implemented in some pilot districts in the first phase.</p> <ul style="list-style-type: none"> – A small call center with a 50 seat capacity will not require much investment and call center executives can provide the information services available through intranet to all the callers.
Provide Extended Reach	<p>In the following 2 years we believe that GoM should:</p> <ul style="list-style-type: none"> – Integrate the existing Internet and Call Center channel to maximize efficiency and effectiveness. For e.g. the citizens should be able to request a service through the call center and track its progress through the portal. – Extend its reach by deploying a network of Citizen Service centers across the State. – Extend the services of the kiosk to include the interactive services. – Introduce Mobile computing as a new channel. – Extend its reach by amending the existing channels with Mobile Computing capabilities. – Focus on shifting the majority of its work load from the traditional channel(s) (e.g. 'department delivery channels) into E-Government. – Use the existing channels (e.g. 	<ul style="list-style-type: none"> – By the end of the first phase, GoM would have established a large E-Government customer base, especially among businesses and computer-literate customers. – GoM would then be challenged to expand its customer base by reaching out to other customer segments. Specifically, those customers who do not have a ready and easy access to the Internet, either due to financial limitations or lack of computer knowledge.

Phase	Recommended actions	Rationale
	citizen service center) for marketing and advertising the new channels (e.g. mobile computing).	
Establish Secondary Channels	<p>After the successful roll-out of the second phase of the delivery channels, GoM must :</p> <ul style="list-style-type: none"> – Focus on monitoring the overall performance of the various channels in terms of utilization, operational overhead, revenues, etc. – The Government can in this phase start roll-out of the Citizen Service center in the PPP model and can also think about the Digital TV as the new delivery channel. 	

The following table (Table 25) gives the implementation plan for the various channels.

Table 25: e-Gov Delivery Channel Implementation Plan

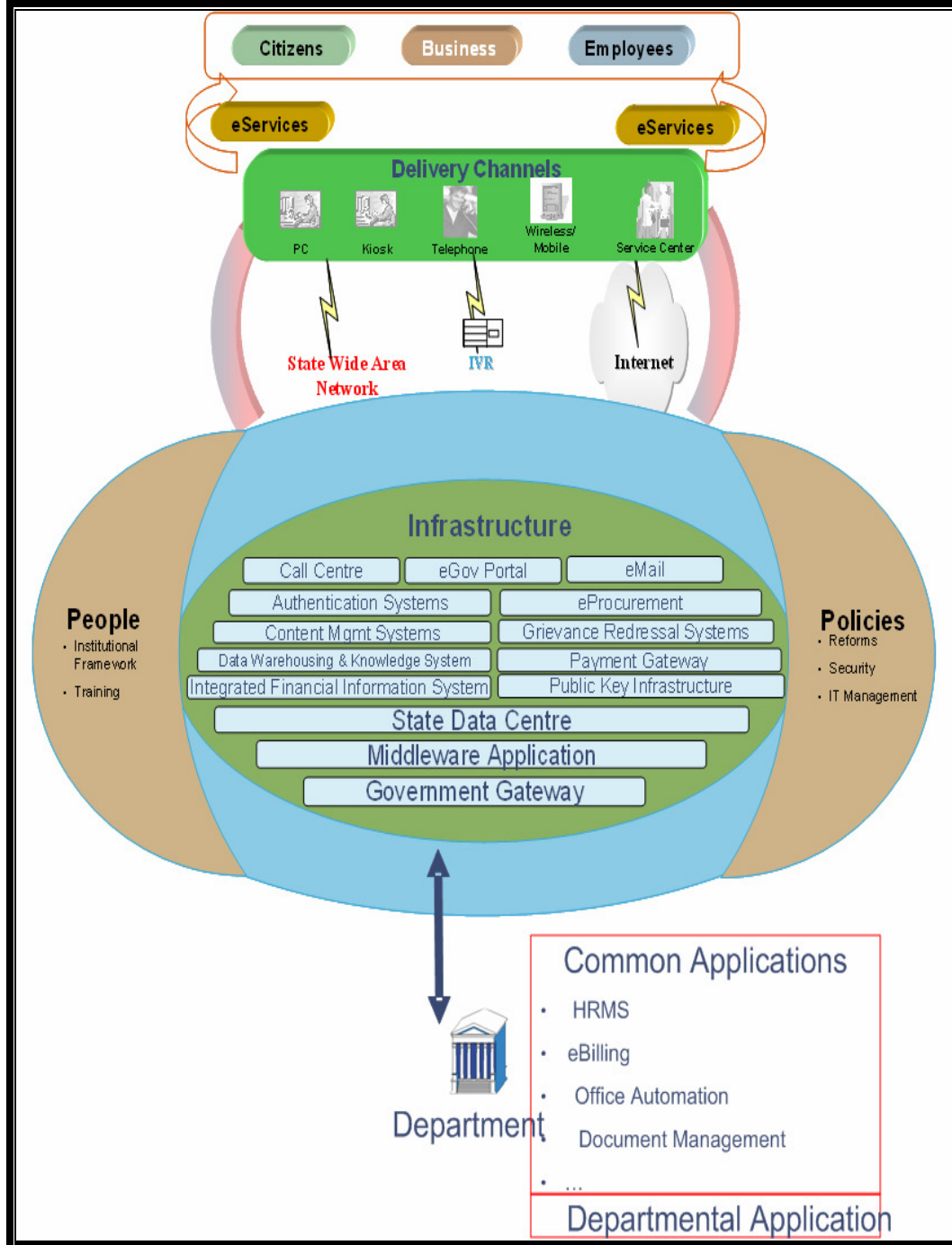
S. No.	Channel	Implementation Plan
1.	Internet	Phase I: The government develops a single portal for the state with links to the various department web sites. The look and feel across various department sites is standardized
		Phase II – The state portal is divided into three separate portals <ul style="list-style-type: none"> • Citizen gateway • Business gateway • Employee gateway. These different gateway have links to various services for the three customer segments and linked to the various department sites
		Phase III: The services at the various gateways are presented in a life-cycle approach instead of department wise listing for e.g. for business , the services begin fro registration of the business in the state to various licenses (in establishment phase) , to filling of regular returns in (operational phase)
2.	Call Center	Phase I: Provide information on various department services and the requirement of forms
		Phase II: The main call center provides services as in phase I. The detailed information on services are provided by either transferring the call to the call center establishment in the department or a establishment for the department established in the main center

		Phase III: The information on all the department services provided through the e-government channel is provided from a centralized call center.
3.	Service Center	Phase I: DOP - ITC identifies Two pilot districts in the state to establish Citizen Service center. The districts are from three categories advanced industrial center, backward industrial center and pre-dominantly agricultural. In the first phase the CSC is established in the advanced districts
		Phase II: The CSCs are established in the remaining 6 districts.
		Phase III: The CSCs are rolled out across the state in a phased manner.
4.	Kiosk	Phase I: The kiosk are established in all the districts headquarters
		Phase II: the kiosks are established in 70% of the block headquarters
		Phase III: the kiosks are established throughout the state.
5.	Mobile Computing	Phase I: Provide the information on standard Queries to the Customers
		Phase II : Provide alerts on Bill payments, returns filling, etc.
		Phase III : Allow customers to request transaction services, make payment, etc.

Annexure VI: e-Governance Infrastructure Components

The following diagram (figure 10) is an illustrative model of the service delivery in an e-governance enabled environment.

Figure 10



There are structural components which need to be implemented according to centrally determined standards, thereby saving work for service providers and creating a familiar and trusted experience for users, and delivering the e-government services.

Core Initiatives: This will include the components, which are core to the e-Governance Roadmap of the state. The development, implementation and maintenance of these components must be monitored at the state level. These components cut across the departmental boundaries and the specific requirements of each department can be easily met

- I. **State Web portal:** A state web portal is the first point of interface of the citizens with the government. The state portal will provide citizens, business, and others with simple, convenient and consistent access to government services. This portal would consist of comprehensive content on the department functions, services and contact points and a breadth of access points linking the portal to the other departmental website for the transactions. However all the information available at the department website must also be available at the state portal. The state portal will be the access point for the high value services identified in the service prioritization framework. It is very essential the state follows a similar layout presentation for all the government portal. The departmental portal must be similar in look and feel to the state portal. The state has a government website in place and many departments also have website. However, this needs to be enhanced to have transactional facilities and have a common look and feel.
- II. **State Data Center:** A data center is simply a facility that provides an extremely reliable environment necessary to keep the computer operations running on 24x7 basis. Data center hosts all the application servers and database servers of a department in a secure, reliable and centralized environment. Since the roll-out of the e-governance initiatives across various departments would involve statewide software development. The management of the servers and the infrastructure at each of the department location would require substantial investment in resources. A State Data Center would provide a centralized location for hosting and managing all the servers and result in substantial cost savings for GoM. With the falling costs of communication, and the State Wide Area Network, a centralized architecture must be used for the deployment of various applications. GoM has initiated the process for setting up of State Data Center
- III. **State Wide Area Network (SWAN):** The State Wide Area Network can act as an information highway for the e-Governance applications in the state of Mizoram and to modernize the telecommunication infrastructure of the government. The State WAN can also provide a Government Secured Intranet for communication with all the government offices and also access to the internet. GoM has started the process for setting up of SWAN.
- IV. **Content Management System (CMS):** The CMS provides the content creation, management and version control capabilities for the content hosted in e-Gov portal. As the uptake of the internet based services increase and the various GoM departments shall provide more and more service online, a requirement for a content management system

which is decentralized shall become necessary so that the concerned department can update data related to their department regularly.

V. Call Center/Central Help Desk: The GoM should aim at establishing a call center with only one toll free number for availing all kinds of government information services and request for information on transaction services.

VI. Grievance Redressal System: Provides a single interface to the public to relay their concerns or grievances effectively and conveniently to government. Citizens being one of the key stakeholders, it is important for government to provide a channel for obtaining feedback on the services delivered and for continual improvement.

VII. E-Procurement: The government is one of the largest buyers of goods and services. It is envisaged that through e-Procurement, the government can achieve a fully integrated purchasing solution providing on-line, real-time ordering and tracking capability to the desktops of the distributed user base across the various government departments.

e-Procurement enables the electronic tender, award, order purchase and payment of products from suppliers to government departments via the Internet. GoM's departments, local bodies, public institutions and businesses will all benefit from e-procurement. The entities can access an expanded supplier base for competitive pricing and product information while aggregating their own purchasing to negotiate prices on the basis of economies of scale. This provides great opportunities for leveraged purchasing and will enable small entities to obtain savings through participation with larger entities. Participants can share potential gains to fund e-government initiatives. The centralized registration system of e-procurement will reduce the burden on suppliers to register with each government department separately.

VIII. E-mail Communication system: Email can be used as an effective medium for the inter-office and intra-office communication. Though some of the departments use the commonly used web-based mailing services, it is limited by internet access. The email-ids must be created for the important functionaries in the department. Since the email system will be common across the departments, the common system can be used across with the standardization in email addresses.

IX. Public Key Infrastructure (PKI): PKI involves increasing levels of security from the capabilities of secure socket layer (SSL) to encryption, to authentication, to digital signatures (from non-binding to legally binding). The technical and administrative infrastructures and associated costs increase with each level of sophistication. As the state moves along the more e-governance enablement path, it will need to provide PKI capabilities required by applications. With the increasing number of applications and services offered over internet, there will be a need to establish a statewide PKI that can be used by department applications requiring authentication, digital signature, confidentiality, and access control. The departments can review the levels of security for the transactions as it may be cost prohibitive to implement PKI across the department transactions.

X. Payment Gateway: Most of the government payment transactions can be classified under the following heads:

- a. Registration renewals
- b. Routine Bill payments
- c. Payment of Taxes
- d. Fine payments
- e. Payment for adhoc services like, government forms, certificates, etc.

The tax payments by business usually are large sum of money and the online payment by credit cards is not the preferred method. It is recommended that GoM must opt to negotiate with the present payment gateway service providers instead of developing its own due to the cost and technology implications. The government must opt for using multiple payment gateway service providers as this will lead to:

- a. Price Competition
- b. Choice to the citizens as any single payment gateway service providers does not support all the banks.

XI. Authentication Mechanism: Effective government online and call centre services will require a widely accepted means for citizens and businesses to authenticate themselves. The essential characteristics of such a system of authentication are

- a. An ability to inspire public confidence that personal data is properly protected, and to give assurance that the risk of impersonation is minimised
- b. Simplicity, transparency and economy to the user
- c. Common systems across government and the wider public sector
- d. Reduction of fraud and of wasteful duplication of effort.

It is essential that GoM frames authentication framework policy and guidelines to establish a common approach to authentication for government departments, agencies and the wider public sector.

XII. Data Warehousing & Knowledge Management System: Transactional systems running on RDBMS platforms capture on-line, operational data. However, the data residing in various government databases cannot be used for generating adhoc queries and reports for developmental planning. There is a strong need for a system that is an orderly and accessible repository of known facts and related data that helps users make more informed, fast decisions through the analysis of key trends and events that affect administration / service to citizens. In this system, the decision makers in the government spend less time finding and accumulating data, and more time in analyzing the information thus leading to better decisions.

XIII. Government Gateway: The GoM Gateway shall be a government services repository and a common infrastructure backbone. It will act as a middleware service that allows the departmental IT systems to be joined up and accessed from the Internet. The Government Gateway provides authentication services so that the customer can be identified and his or her rights of access to information originating in back-end systems rigorously established. It will provide interoperability in support of portal services.

XIV. Collaboration and Middleware Application: As the GoM departments move more on the maturity framework for e-governance, the demand for integrated services shall increase. This will require systems for sharing of data across departmental systems and also workflow management across departments at block, district and state levels. A Middleware application, which shall house the process logic, shall trigger event based processes within the department. For e.g. the approval of building plan shall open the case for application of electricity connection in the plot, or registration of deed shall trigger the Land record updation. This collaboration application shall be developed at the state level and can be based on SOAP architecture.

XV. Integrated Financial Information System (IFIS): The Finance Department is responsible for the financial management of the state. It also has certain directorates under its administrative control viz., Treasuries & Accounts, Pay and Accounts Office, The departments need to provide the information to the finance department on a regular basis and also seek approvals for financial expenses. An integrated Financial information system will reduce the need to exchange data through manual means. Increasing the efficiency in the Finance Department. The objective of IFIS is to:

- Provide efficient transfer, storage and retrieval of information between the applications
- Integrate the internal as well as external entities interacting with the finance department

Through this system the department's plan and expenditure can be put on the website for public information.

Common Applications: There is a lot of commonality in the processes followed by various departments such as personnel management, accounting, audit, file management etc. There is commonality even in the processes for service delivery in various departments esp. that of registration, renewals, licenses etc. Generic applications can be developed that can be customized to the specific process workflow of the departments thus reducing the overall costs of the e-Governance applications. Such an approach will also lead to standardization of processes and adoption of common standards, which are key enablers for promoting seamless integration. Some of the common applications, which can be developed as a part of the state government initiatives, are:

XVI. eBilling (Payments/receipts/Demand notice generation): Various government departments provide utility services and other services on payment of consideration. The citizens, businesses also need to make regulatory payments to the government. An efficient billing system to monitor the receipts and demand shall assist the government in preventing revenue leakages, faster processing at the payments counters and also help the departments to explore other channels for payment acceptance.

XVII. Registration of and Renewals of Registration: The registration of external parties in the department database is a common feature across departments (Trade tax-registration of traders, entertainment tax –registration of businesses providing

entertainment services, municipality-registration of property owners in their jurisdiction). Some of these need to be renewed and others need some modification. A registration module for this requirement can be first step in the digitization of the records and also will reduce a lot of hassle to the customers.

XVIII. Intra-office Communication: The Intra-office communication on the department procedures, information, file noting are fairly standardized across the departments. An electronic system for intra-office communication will prevent the loss of the information in transit, file misplacing etc.

XIX. Office Automation System: The departmental units at various levels need to carry out their routine administrative functions. The objective of the office automation application must be to provide generic office administration support. Work-flow automation and file-tracking system are the key components of the envisioned system. It is envisaged that this application would be generic one that could be customized to suit the specific requirements of various departments. This application can be integrated with electronic records management, human resource management system and other applications as applicable. This system provides critical inputs for decision-making purposes, reducing the red tape and also providing the customers a transparent view of the government processes.

XX. Document Management System/Electronic Records Management: Electronic records management is a key technology underpinning electronic government that will transform the piling paper file management system. The electronic delivery of services to business and the citizen will produce electronic records as evidence of individual transactions; this evidence will need to be retained and maintained over the medium to long term as records which can demonstrate accountability and preserve reliable access. The replacement of manual and paper-based processes with electronic processes in government administration will generate electronic records as evidence in policy-making, casework and service delivery areas. The Government has to design a framework for departments and agencies to implement electronic records management system.

XXI. Accounting and Audit: The finance function of the departments manages the finances at various levels in the department. The accounting function can be automated using a common application for the state. This application can have in-built functions for facilitating the audit of the financial transactions.

XXII. Budgeting, Planning and Monitoring: Each department prepares the annual plan and the performance report reports based on plan adherence. The Planning department monitors the plan for each of the department. It is envisaged that a generic application can be made for the planning process and it can be used by all the departments. Such an application can have the various decision making tools like simulation, what-if analysis for the departments to assist in better planning process. The department progress can also be monitored against the plan and changes to the plan in case of department needs can also be addressed.

XXIII. Management Information System: The information requirement of various government departments for the decision making of implementation of welfare schemes and other policy decision are very huge and a lot of effort is spent on collecting this information. Some of the data elements across departments are similar in nature. An MIS at the department level, with ability for auto-updation is a very important requirement.

XXIV. Human Resource Management: The government of Mizoram is using a common payroll application across all its departments. It is advantageous for the government to develop a common Human Resource Management System for the departments, which can be customized for the department needs.

XXV. Beneficiary Management System: This initiative has significance importance because social welfare being a state subject, the introduction of integrated grants and benefits management system would help GoM achieve one of its key governance objectives. The key objectives of the initiative include:

- a. Improving service to the beneficiary segment
- b. Providing better / complete information about programmes to target segment
- c. Integrated intake of beneficiaries into the welfare programmes
- d. Data capture and analysis support to improve the overall effectiveness of the welfare programmes.
- e. Eliminate bogus beneficiaries