IT Strategies in Government Policies:A Case Study of M.P.(Part-I)

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Abstract— Through this paper we have representation of the IT strategies that were in effect from previous decade; these all strategies got frequent changes as demanded by time to give more effective, impressive and accurate services to the state's people from various government organizations of states. These organization of state are putting their effort positively to place state on growing track through which state could achieve goal of smarter state of India that could make its name in whole world by their more positive effort with new IT models by which all cities and villages of state would be smarter by their effective, secure and paper less working technique with new IT concepts, Madhya Pradesh (M.P.) are the state that are enlighten itself by their more impressive and positive effort to achieve that great goal with new IT strategies. These all strategies help state to free it from crime and unemployment. These all also help to provide smart education, smart health care system, smart electricity supply etc.

Keywords— IT Stategies; New State Government Polices(NSGP); State Education System (SES); Smart Health Care System(SHCS)

I. INTRODUCTION

IT Strategies and various IT projects of any state are now representing the growth rate of any state. All states of India are trying to make its name as smarter state by making its village and city smarter with their sound effort and efficient IT Strategies. These strategies could help states to secure its unique identity by its assistance to achieve two current huge aim of India first digital India and second make in India. Madhya Pradesh (MP) is such growing state that are executing it various governing bodies by various IT projects and by its unique IT strategies. In this paper we have a case study report on MP projects and its IT strategies. Here in this case study following are the main aspects in which various IT project and strategies are now a day playing their role as back bone of execution of governing bodies of MP to achieve digitization of whole MP.

1. Smart Infrastructure and Urbanization.
2. Smart Health Caring System
3. Smart Education and Learning System.
4. Smart Agriculture Revitalization.
5. Smart Government Services and Public Administration
6. Smart Business Establishment.
7. Smart and healthier environment.
8. Smart Tourism System.

These all would affect as main pillar and basic component of digital MP to assist digital India. The IT strategies of MP are working to achieve goal of paper less working in whole governing body of MP that could put a least effort to save our three through which the state could be green and healthier. Growth rate of MP is putting mile stone to other state of India by their effort to gain sound and healthier environment with technically drawn IT structure.

The entire strategies is designed to build Information technology embedded services (ITES) and electronic hardware manufacturing (EHM) as vibrant industry for growth and to provide employment for state people as much as possible in IT sector that are in broad vision of (M.P.) in information technology investment policy (ITIP). So below figure PR 1.1 shows eight aspects to assist digital & smart MP to assist Digital and smart India.

These all aspects are working simultaneously to achieve targets of 100% digital MP by digital locker, Mobile apps, Email Service, E- Auction on click property registration, SMS Through SMS Gate way, virtual class facility, digital caste certification and E- office etc. are arises feature of digital state of digital India. The IT policies embedded with various IT project those are described in this paper by proper vision, performance matrix and action point in execution.
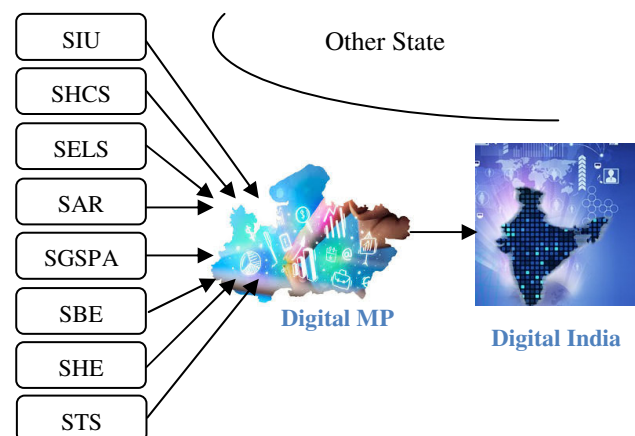

Figure PR 1.1: eight aspects to assist digital & smart MP to assist Digital and smart India

II.   SMART INFRASTRUCTURE AND URBANIZATION (SIU)

The main aim behind SIU is to establish full connectivity among all villages and cities of sate, through roads and communication network. The progress of rural road [12] accessibility were as shown in table 2.1 till launching of Pradhan Mantri Gram Sadak Yojana (PMGSY)
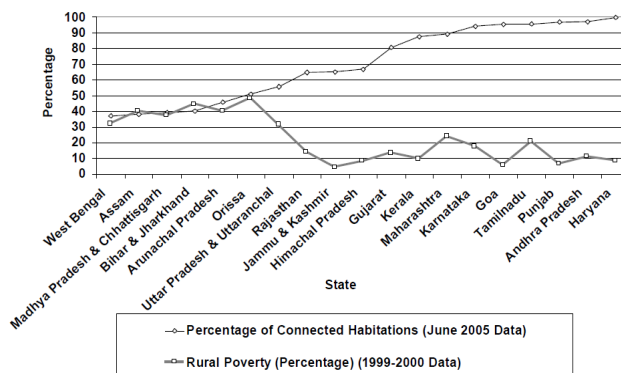
Table 2.1: The progress of rural road accessibility till launching of (PMGSY)

Year	Accessibility with all-weather roads		Average distance of a village from a road
	Percentage of villages with population above 1000	Overall village accessibility	
1990-96	73%	44%	3 km
1996-01	90%	54%	2 km
2001-05	93%	56%	1.5Km
2005-10	95%	59%	1.75Km
2010-15	96%	75%	1Km

The evolved of IT structure describe the road map to form easer transportation with rural area[03], to send various facility of government scheme to them in easier way. In some villages there is still network problem, IT and telecom project are working to establish high connectivity and non failure communication connectivity to them.

2.1 Pradhan Mantri Gram Sadak Yojana(PMGSY):

This policy was launched in the year 2000, as a centrally sponsored Program and a onetime special intervention. The primary objective is to provide connectivity by way of All-weather roads to unconnected habitations with population 1000 and above by 2003 and those with population 500 and above by 2007 in rural areas. In respect of hilly/ desert/ tribal areas, the objective is to link habitations with population 250 and above. Up-gradation of selected rural roads[01][02] to provide full farm to market connectivity is also an objective of the scheme, though not central. The centralized graph 1.1: for Relationship between Connectivity and Rural Poverty [10] is shown below
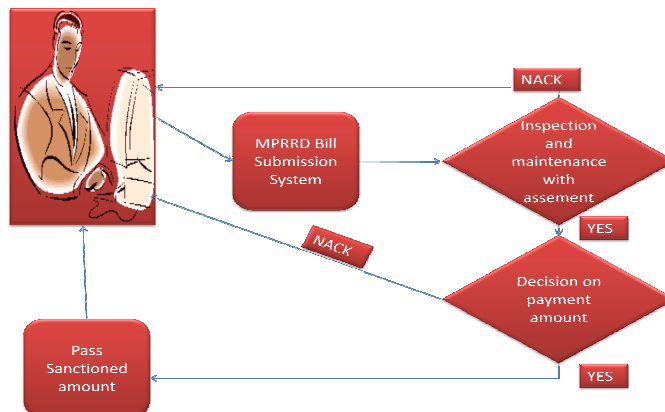

Source: Rural Road Development Plan: Vision 2025

Graph 2.1: Relationship between Connectivity and Rural Poverty

The previous five-year performance of PMGSY contracts maintenance during defect occurred liability period is on payment at pre decide MGSY network in MP; 12191 roads (55455 km) more than 4000 roads (18000 km) have crossed defect liability period rate is committed to maintain all roads even after five years of perform period Requirement of fund for maintain work is increasing continuously.
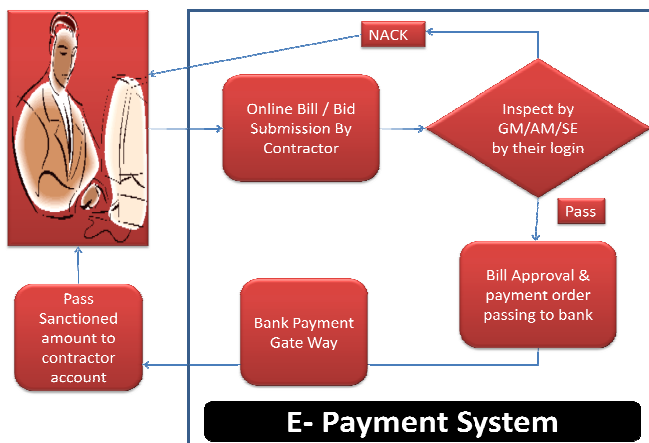
Rural road maintenance:

Maintenance of huge network of PMGSY is much heard challenging job. Involves huge expenditure which is increasing exponential
Effective monitoring of maintenance is required to ensure all weather connectivity to habitations. Maintenance condition of the roads is to be updated regularly a PIU level. Quality in maintenance works Regular payment for maintenance to the contractor is to be ensured. A transparent approach to solve the maintenance related dispute. Bloch Diagram 2.1 and 2.2 represent the previous payment system and current E-payment system that are in execution with its high efficiency of accuracy and security.

Block Diagram 2.1: Previous payment system

New payment model is in execution from July 2014.

Block Diagram 2.2: Existing E-payment payment system:

The comparison of both models is shown in below table 2.2

Table 2.2: Comparative Analysis

Comparative Analysis	
Previous Payment Processing	E-Payment system
1. Contractor need to submit bill manually. 2. Unnecessary piling up of approval requests in case of delay in bill submission. 3. Lack of transparency in financial aspects in the perception of the contractors 4. Require manually updating in database and account. 5. Contactor has to wait to get the status of his submitted bill. 6. Better quality of work is ensured by regular survey that was much time consuming. 7. Manual payment cause delay in clearance.	1. Contractor may submit bill online from anywhere. 2. PIU staff maintains online record routine and payment inspections. 3. Direct payment to the contractors in t accounts. 4. Delay in approval process can be red u to greater extent Greater Transparency in payment process. 5. Contractor can see the status of submitted bills anytime from anywhere. 6. Better quality of works is ensured by photo uploading of going on task. 7. Fully secured process, the payment released using digital signature concerned by GM.

Smart infrastructure and urbanization are one bidder aim among various aim of digitization of smart MP government has following Vision for growing track of digitization.

a. Latest and modern infrastructure of roads and telecom network on world class scale which would be installed in all rural and urban area.
b. All project of this section is working to provide house, water and sewage disposal facilities for all its residential area.
c. Creation of village's full-fledged, self-centered townships with modern amenities.
d. Ensured and improved connectivity between rural and urban areas with world class facilities by rails and roads.
e. The state would arrange easy availability of basic needs like drinking water, electricity.
f. water problem solution by connecting all rivers of India

The Performance matrices and declared roadmap of Smart infrastructure and urbanization (SIU) as described below.

a. Roadmap for next decade all villages and towns would be connected to Urban Areas of state.
b. MP immediately initiated projects for interstate connectivity for river. Also, the laying of water pipelines, tube wells and wells must be accelerated to satisfy the water need.
c. Regarding developmental priorities, consensus-building must be initiated and is to executed urgently at national level
d. State Government regularly take appropriate measures to ensure optimum and effective use of natural resources, and check misuse and losses of them.
e. Adequate generation and supply of power needs has been started after privatization of this sector. These all company should work under the state government body to provide proper services.

Alternate and renewable sources of power generation is the field on which state government are placing their effort to achieve more by planting new resource to generate power.

III. SMART HEALTH CARE SYSTEM (SHCS)

Madhya Pradesh is gaining new mile stone by widespread network of quality medical facilities in all villages and cities. Madhya Pradesh is a State in which every children and every adult would be healthy [11]. The various scheme and free camp are running in state government hospitals to the welfare of state people.

The Vision of MP behind digitization in health care system or smart health care system:

a. To provide a quality health care system that ensures affordability, accessibility & care for states people.
b. High effort to eradicate child malnutrition and to ensure better care of Mother and Child Health.
c. Government health care system encourage and assist adoption of medical insurance policies by masses various mode of advertisement.
d. To educate the masses at ground level (rural area) for health and hygiene

Current status of health facility of the state shown below in table 3.1

Table 3.1: Current status of health facility

	Allopathic			ISM & H		
	No.	Avg. no. of beds	Total beds	No.	Avg. no. of beds	Avg. no. of beds Total
Rural 1. SHC 2. PHC 3. CHC 4. ISM & H	8835 1194 227	2 30	2400 6900	1622	NA	NA
Urban 5. Civil dispensaries 6. Post partum centers 7. Civil hospitals 8. District hospitals 9. ISM & H hospitals 10. Specialized hospitals 11. Disease specific units 12. Teaching hospitals	97 96 57 39 11 90 6	48 214 53 939	2700 7700 600 5600 ---------- 26000	34 9	30	NA

The performance matrices and roadmap for (SHCS), The following basic idea and performance evolution parameterized below.

a. About 76% states people live in rural area state health caring organization are putting their effort to facilitate maternity and child health urgently and the up gradation is in progress.

b. Below poverty line (BPL) population and the people those living in remote areas should have medical insurance facilities, where the state government has taken its initiative with subsidized premium rates for these areas
c. MP Government is increasing the number of healthcare centers in rural areas with proper ensured monitoring of these centers directly.

IV. SMART EDUCATION AND LEARNING SYSTEM.

The Vision of MP behind digitization of education system by smart education [13] and learning system. This section of MP is crossing new mile stone every year by establishing its new infrastructure in each village and cities with cooperative support of public and private sectors. To get 100% literacy rate and highest ratio of school going children in total state population state government are running its education portal through which state government take extra care of this precious system of future generation. The current status of state college and their intake capacity is shown below in table 4.1.

Table 4.1: Current no. of institution &intake capacity

Type of Institution	Number	Intake Capacity
Engineering / Architecture College	217	99262
MCACollege	62	4120
MBACollege	199	21582
B. Pharma/D. Pharma Institutions	100	7360
Polytechnic College	143	27499
Hotel Management and Catering Technology (Degree+ Diploma)	02	180
Industrial Training Institutes (ITIs)	499	61130
Skill Development Centers (SDCs)	135	37200
Total	**1357**	**258333**

Vision point of SELS:

a. Affronting to achieve 100% literacy.
b. Provide quality educational and make it exclusive job oriented (vocational). There is an urgent need to introduce a skill based education system based on abilities of the individual.
c. primary and secondary education compulsory for all (classes of society)

d. proper standardization of the pre-schooling system
e. Proper updating will held as per technology demand.
f. The literacy rate of India and Madhya Pradesh is shown below, in table 4.2 the broad vision with 100% literacy upto each corner of India.

Table 4.2: Literacy Rate: India & Madhya Pradesh: 1981-2015

Year	India				Madhya Pradesh			
	Persons	Male	Female	Gap in literacy	Persons	Male	Female	Gap in literacy
1981	43.6	56.4	29.8	26.6	38.6			
1991	52.2	64.1	36.3	24.8	44.7	58.5	29.4	29.2
2001	64.8	75.3	53.7	21.6	63.7	76.1	50.3	25.8
2011	74.0	82.1	65.5	16.6	70.6	80.5	60.0	20.5
2015	82.0	87.2	72.3	14.2	78.8	84.5	69.0	18.4

The Performance metrics and road map of SELS

a. The policy of 24/7 running of schools is to be implemented by the government education department, for facilitating the universal participation of society for education development in India. 100% children should attend school.
b. The quality of skill development is reinforced. Free education funded by government, 100% literacy, use of psychometric tests, 65% school should use IT, Trainee, coach.
c. Adequate infrastructure and trained person need at all levels.100% school should have basic infrastructural facilities
d. Widespread implementation of value-added capacity building programs of teachers, trainers need to be organized
e. More professionals/NGOs need to be involved in pre schooling system.
f. The system of education must be reformed to such an extent that 50% of top 100 institutes' should be Indian in each segment

V. SMART AGRICULTURE REVITALIZATION

The state with sustainable agriculture practices promoting organic farming, blend of technical and traditional farming practices and highest cultivated land, various farmer help line system are running by state and central government to get high production from agriculture. State and center government has same vision in execution from last decade.

a. A broad vision providing timely and adequate supply of electricity and irrigation facilities at each corner of states.

b. Educate the farmers about modern cultivation methods and advancement in farming practices.
c. Government esurience for easier availability of crops, fertilizers and start-up funds to the farmer.
d. assist cost-based agricultural practices and farming techniques for optimal utilization of land resources
e. Provide increased autonomy to agricultural universities with respect to R&D works.

State	Agriculture (% of total Energy sold)	Agriculture (% of total Revenue)*	Industrial (% of total Energy sold)	Industrial (% of total Revenue)
Madhya Pradesh	30%	12%	31%	39%
Haryana	38%	3%	26%	31%
Rajasthan	39%	18%	26%	39%
Punjab	32%	-	34%	57%
Gujarat	32%	14%	43%	58%
Maharashtra	22%	10%	45%	51%
Tamil Nadu	22%	-	35%	54%

("Performance of State Power Utilities" - PFC)
* *Revenue collected from farmers and does not include subsidy from Government.*

Performance metrics and road map to build agriculture system smarter

a. For increasing agricultural productivity, the government must ensure supply of electricity to farmers whenever they need.
b. The scientific and business community should ensure provision of effective irrigation system to the farmers
c. The farmers should be provided with latest tools & techniques of irrigation and reinforced by training and provision of literature.
d. The financial resources should be allocated through effective network system, so that the influence of middlemen can be minimized and direct dealing can be done.
e. The government needs to take up programs for generating awareness on best agriculture practices, establishment of research centers and education on effective use of water
f. Agricultural policies and practices should be reformed so as to ensure implementation of new trends and technology in farming, capacity-building of trainers and supporting infrastructure

VI.   SMART GOVERNMENT SERVICES AND PUBLIC ADMINISTRATION

Government service and public administration has broad vision and working area of any government and the Madhya Pradesh is the state that running its administration and services with 100% transparency with public, anybody can get information about any department execution by RTI (Right to information), excellent governance has following main component that are shown in below figure 6.1

Figure 6.1: Component of excellent governance.

The Vision with its service and administration:

a. Eradicate corruption at all levels of all department
b. Improvement in law and order situation in the state to earn specific identity in whole world.
c. State government ensure loyalty of citizens towards service to nation
d. Bake room for power decentralization, for security aspects.
e. Brought complete transparency in governing policy and security system to public like police[06] made services.
f. The entire execution of the security and public survey is shown below in figure 6.2.
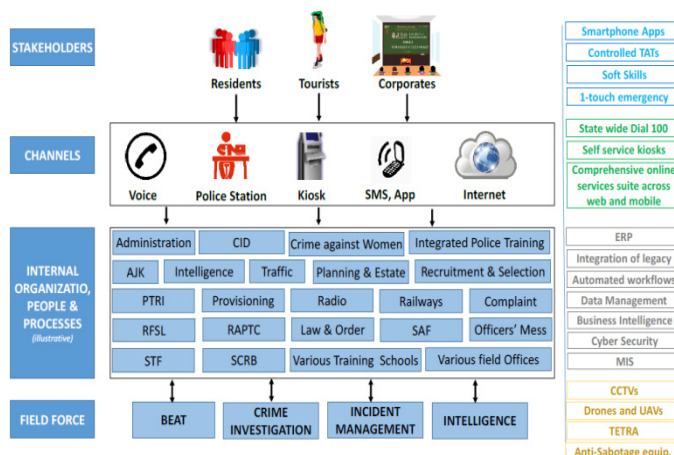

Figure 6.2: governance and administration architecture of state.

Performance metrics and road map for above vision.

a. The vulnerable and exploited groups must be identified and encouraged to learn about their rights and related legislations.
b. The state policy departments made more proactive and supportive by nature
c. Legislation and legislative systems and instruments adequately reinforced
d. All strata of the society must targeted for sustainable development (Inclusive development)
e. Commitment and accountability to implement needs ensured at all levels
f. The various state service projects are shown below in graph of project implementation with respect to time.
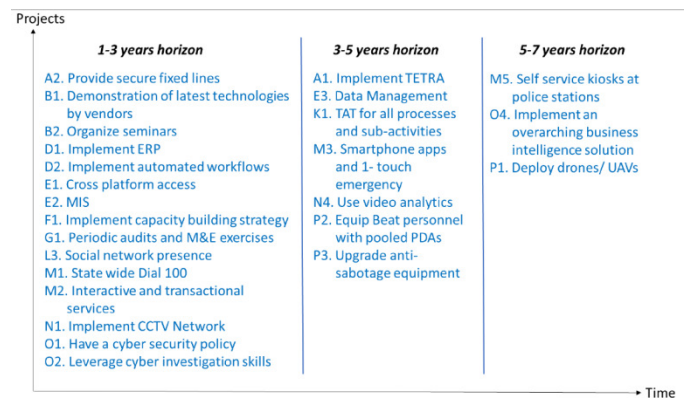

Chart 6.1: State service project implementation with respect to graph.

VII.   SMART BUSINESS ESTABLISHMENT.

Madhya Pradesh growing with highest Sate GDP and highest number of new business projects implementation by following
Vision:

a. Improving and promoting business skills among the state citizens to open the new direction employment.
b. State assist fulfilling the growth requirements of the nation at all stages.
c. state provide financial aid with cooperation of central government for businesses more flexible and adaptability
d. highly motivated to promote and nurture the SSI industry
e. impart ownership to extent in business to the working/labor class

Table 7.1: Performance matrices and Road Map
Financial Performance Of MPLUN(Rs. in crore)

Year	Business	Net profit (after tax & dividend)	Remark
2008-09	1061.74	8.78	Audited
2009-10	874.48	9.28	Audited
2010-11	913.15	7.75	Audited
2011-12	937.32	9.17	Audited
2012-13	1076.83	10.88	Un-audited
2013-14 upto Nov 2013(As per MPR)	821.61	22.05 (Before Tax & Dividend)	Provisional

Total reserves and surplus as on 31-03-2013 Rs 87.01 Cr.

Financial Performane of MPLUN

- 2008-09: 19%
- 2009-10: 15%
- 2010-11: 16%
- 2011-12: 17%
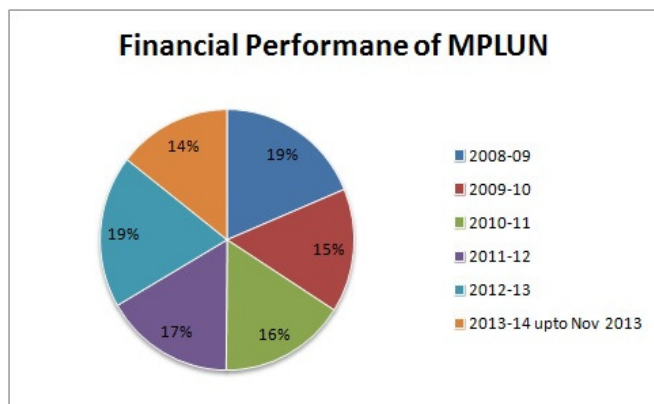- 2012-13: 19%
- 2013-14 upto Nov 2013: 14%

Chart 7.2: Financial Performance

a. The state ensure participation of education institutes for designing and development of work-oriented modules
b. Skill and knowledge up-gradation trainings and workshops made a regular feature in corporate sector
c. avert risks, appropriate scanning and creditworthiness of the client conducted before lending financial aid
d. Added tax benefits and rebates provided to the SSIs for assisting their businesses
e. The state provide at least 10 % of its budget to finance SSI

f. Approaching for a provision for imparting 20% ownership to the worker class

VIII. SMART AND HEALTHY ENVIRONMENT.

Madhya Pradesh has vision of healthy and green environment for this state covering highest forest cover, lowest environment pollution and substantially high ground water levels as compared to presenting growing policies.

Vision:

a. sustainable environment management and conservation for healthy and balanced environment
b. encouraging the steps leading towards a second Green Revolution
c. population control so that pressure on natural resources could be reduced

Performance metrics and road map

a. Appropriate institutions require to be creation of ensure community-based participation and sustaining the environment.
b. Drafting new laws that could pave the way towards achieving environmental sustainability
c. Make widespread use of CNG vehicles and encourage green fuel (e.g electricity driven vehicles)
d. The future cities and towns should be planned to make them green and environment friendly.
e. Water conservation and harvesting (through storage of water) should be made compulsory
f. The concept of nuclear family promoted to control population explosion

IX. SMART TOURISM SYSTEM

The Madhya Pradesh state truism sector divide state tourism [07] place by category as shown below in table- 9.1

Table 9.1: Categorized State Truism Place

S. No.	Category	Places
1.	Cultural Tourism	1.Gwalior 2. Datia 3. Orchha 4. Khajuraho 5. Bhopal 6. Sanchi 7.Mandu 8. Burhanpur 9. Chanderi (Guna) 10.Bhim Betica (Raisen) 11.Bagh Caves (Dhar)
2.	Wild life and Adventurous	1.Pachmarhi 2.Kanha 3. Bandhavgarh 4.Panna 5. Satpura 6. Panchvalli National Park 7.Tighra Lake (Gwalior) 8. Upper Lake, Bhopal Tourism 9. Gandhi Sagar,

		Mandsaur 10.Amarkantak 11.Shivpuri
3.	Commercial Tourism	1.Pachmarhi 2. Khajuraho 3. Bhopal 4.Gwalior 5. lndore 6. Jabalpur 7.Tarnia
4.	Religious Tourism	1.Ujjain 2. Maheshwar 3.Omkareshwar 4.Chitrakoot (Satna) 5. Bhopal 6. Sanchi 7.Orchha 8. Amarkantak

Table 9.1: categorized tourist places of MP

Madhya Pradesh attract many tourist by it natural beauty which with Vision to promote balanced and sustainable tourism that enables socio-economic development and establish Madhya Pradesh as a destination that provides a complete tourism experience.

2. Performance matrices and principles

The great performance could be evaluated by following points of action originating from tourism policy are based on the following principles:

a. Set up such an institutional mechanism to promote private investment as decided by the State Government.
b. Set up an effective regulatory mechanism for sustainable tourism.
c. All measures shall be undertaken to provide reception, assistance, information, amenities, hygiene, security and infrastructure for the tourists.
d. Adopt the principle of "First Conservation Later Tourism" for Cultural Heritage.
e. Making eco-tourism a reason to sensitise masses regarding environmental conservation.
f. Establishing active and coordinated participation of Government departments, voluntary organizations, community and other stakeholders of tourism sector.
g. Appropriate development of tourism based projects through Public Private Partnership (PPP).

Road map

The strategy to achieve the target based on vision statement and guiding principles will be as given below:

a. Clear, transparent guidelines and standard procedures shall be laid down to attract private investment.
b. Conducting research and preparation of necessary database will be undertaken for destination marketing.

c. An appropriate system shall be developed for preparation of authentic statistical database and for obtaining tourist feedback for systemic reforms.
d. Continuous improvement and maintenance of basic infrastructure such as roads, drinking water, power, hygiene, transport, and solid waste management shall be ensured.
e. Rural Tourism will be promoted to market fairs, local cuisine, costumes, products, art, handicraft and heritage.
f. Highest priority shall be accorded to conservation and preservation of natural resources and beauty at eco-tourism destinations.
g. Chain of budget hotels shall be set up at religious tourist destinations.
h. Qualitative training as per tourism [07] industry needs will be imparted to youth so that they get employment opportunities also.
i. All possible efforts will be made to encourage entertainment facilities at tourist destinations.
j. In all sectors of tourism industry, the Human resource will be trained in such a planned manner as to create a "Tourist Friendly" image of the State.

X.   CONCLUSION AND FUTURE VISION

Madhya Pradesh government are putting their effort to assist digital India with its own highly digitized and paper less official and unofficial environment of governing and non governing body execution respectably. The various IT project and IT strategies applied on various state government departments are disclosed by their vision, performance metrics and road map by this survey. The governing and non governing bodies of state where digitization are growing or in effect was considered point of this case study, as future scope of that work. we would disclose the currently applied action point with analytic survey and proposed idea in all sector that could reduce the time and effort to achieve the focused target digital Madhya Pradesh to assist digital India.

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