

PUBLIC WORKS DEPARTMENT

Government of Uttar Pradesh, India

UTTAR PRADESH STATE ROADS PROJECT Under IBRD Loan No. 4684-IN

**Technical Assistance for Implementation of
Institutional Reforms in the Road Sector of Uttar Pradesh**

**REPORT ON SUGGESTIONS ON ESTABLISHING PWD
UNIT FOR PROJECTS POLICY AND PLANNING
(FINAL)**

Report No. 18

April 2007



LEA International Ltd., Canada

in joint venture with

LEA Associates South Asia Pvt. Ltd., India

in association with

Ministry of Transportation of Ontario, Canada

TABLE OF CONTENT

1.	INTRODUCTION.....	1
	1.1 CONTEXT.....	1
	1.2 IMPORTANCE.....	1
	1.3 REPORT ORIENTATION.....	2
2.	PRESENT SITUATIONAL ASSESSMENT	3
	2.1 EXISTING PWD STRUCTURE.....	3
	2.2 PRESENT PRACTICES AND PROCESS ADOPTED.....	5
3.	ROLE AND FUNCTIONS OF THE UNIT	6
	3.1 ROLE AND OBJECTIVES.....	6
	3.2 FUNCTIONS AND RESPONSIBILITIES.....	6
4.	POSITIONING OF THE UNIT	10
5.	ASSESSMENT OF STAFF MIX	11
6.	STRATEGY FOR IMPLEMENTATION.....	12
7.	POSSIBLE ACTION PLAN	13
8.	PRESENTATION TO PROJECT STEERING COMMITTEE	14

1. INTRODUCTION

1.1 CONTEXT

The Government of Uttar Pradesh (GoUP), Public Works Department (PWD), is implementing Uttar Pradesh State Road Project (UPSRP), with loan assistance from the World Bank. This project is a major milestone in the history of PWD. In order to aid implementation of the said project, PWD has initiated the Technical Assistance for the implementation of reforms in the road sector of Uttar Pradesh as part of the effort on “Institutional Development and Strengthening (IDS) Services” to transform itself to an agency which would be equipped to meet present and future challenges.

Towards this the GoUP and the World Bank have together endorsed IDSP which is currently under implementation. This TA is part of this larger effort. Apart from other things, the mandate of this TA is also to address the Suggestions for Establishing the Projects Policy and Planning Unit¹ is one.

1.2 IMPORTANCE

Uttar Pradesh is one of the aspiring Indian states. Its economy has been growing at an average pace, but there is a need for it to target growth at a much higher rate. With the wealth of resources in the state, it needs to emerge as one of the stronger economies. In this context, it will be important to take note of the following:

1. Continued pivotal role of roads in economic development; and
2. Upward economic mobility of the communities and expectations thereon.

In order to take care of the above, it becomes imperative on part of the PWD to continue functioning as one of the vibrant wings of UP, and keep responding to the changes and challenges. Growing expectations and needs, coupled with population growth and planned economic development, calls for transformation and readiness in a wider perspective.

The PWD realizes the increasingly important role it needs to play with time. Several initiatives are being taken up by the state government. The discussions with officers of the PWD clearly reveal that they would like to gear up in all facets to take on the challenges and responsibilities in the context of emerging scenario in the state. Transformation to achieve higher productivity levels and better decision making process with appropriate scientific tools has been the key concern of the senior officers of the department.

¹ It may be important to arrive at a view should this Unit be termed as Project Policy and Planning Unit or as Policy and Planning Unit. Clarity on this is important towards defining the Role, Functions and Responsibilities of the Unit. In developing this report we considered it to be the later given the importance of this unit in overall context.

Proposal for formation of a lead unit for Projects Policy and Planning² is one of the steps in that direction towards transformation of PWD. It is of paramount importance that the Projects Policy & Planning Unit³ be positioned and fully established to address its role with this broader outlook and vision.

1.3 REPORT ORIENTATION

Chapter 2 describes the present situational assessment on project policy and planning decisions at various levels, in the present organizational setting. Without any specialized staff and adequate tools, it is difficult to ensure the consistency and objectivity of the results. Also, these functions tend to divert PWD's executive officers from what is perceived as their key tasks, namely to manage the implementation and supervision of all the various construction and maintenance projects.

Chapter 3 presents the role, objectives, functions and responsibilities of the conceived Projects Policy and Planning Unit of the PWD.

Chapter 4 of this report suggests an outline of four alternatives in terms of positioning the unit with in the existing organisational setting of the PWD. Any of these four alternatives could very well be fitting in to larger re-organisational efforts and thoughts that are currently underway.

Chapter 5 addresses the issue of staff requirement for the proposed unit.

The strategy for implementation of the unit is presented at Chapter 6, including way forward.

². There is a need to separate planning from operations. Internationally this is a common practice in organizations of this type. Given the implicit advantages and importance, it may in the future become desirable to establish the policy and planning functions as a separate wing reporting to the Principal Secretary.

³. IDS will be assisting PWD with suggestions on the preparations for implementing this new, Project Policy a Planning Unit. The TA looks at ways the Unit can best be established to serve the needs of PWD while also recognizing the constraints. The Focus Group meetings and discussions may in the form of a workshop to deliberate on the functions and responsibilities of the proposed Unit is suggested. Likely participants for this workshop could be the Principal Secretary, E-I-Cs, all CEs and SEs, apart from IDS Cell officers

2. PRESENT SITUATIONAL ASSESSMENT

2.1 EXISTING PWD STRUCTURE

The process of decision making has roots in the organisational structure and responsibilities vested by position. An appreciation of the present structure becomes important and fundamental, in arriving at a framework for the establishment of any new unit.

The structure of UP PWD can be defined as a 4-tier organisation. At the Headquarter level, the responsibility lies with the Engineer-in-Chief (E-I-C), at the Zonal level, it is with the Chief Engineer, at the Circle level, it is the Superintending Engineer and lastly at the Divisional level, the Executive Engineer takes the lead. As shown in the organization chart, **Chart 1**, the PWD is headed by a Principal Secretary at the state level, supported by two secretaries and three Engineers-in-Chief. The functions of the Engineers in Chief of the Department are as under:

- Engineer-in-Chief, **Development and HQs**
- Engineer-in-Chief, **Design and Planning**, and
- Engineer-in-Chief, **Rural Roads**.

The Engineers-in-Chief, in turn, are supported by the Chief Engineers at the zonal level, as well as at specific department level to carry out the day-to-day functions.

2.2 PRESENT PRACTICES AND PROCESS ADOPTED

There is no dedicated unit in PWD towards the policy and planning as of now. In the absence of this Unit most of the decisions in the PWD, related to policy and planning, are being taken by the Principal Secretary supported by Secretaries and Engineers-in-Chief.

Generally major policy and programme level decisions are made at high level in PWD through consultations and discussions. However on annual work programs it is made at various levels but endorsed at high level. There is no document available which clearly reveals what is mandated. It is through interactions with the officers of PWD that the following decision making process, currently in practice, have been understood⁴. To state a few of the processes followed:

- All **Policy level decisions** are presently made by E-I-C, in close interaction with the CE HQ. So far as the matters concerning Establishments are concerned, the prerogative is entirely E-I-C's.
- In case of **Prioritisation of Roads** for implementation, a view is taken by SE, then passed on to the Zonal Chief Engineer for his approval to be finally endorsed by the E-I-C.
- In case of preparation of **Estimates**, all decisions are routed through CE HQ 1 to E-I-C. In this case, the opinions of SE and Zonal Chief Engineer are also taken into consideration.
- For **Renewal**, the policy is decided either by the E-I-C or CE HQ 1. CE HQ 1 is the government recognised representative of the E-I-C. CE HQ 1 always works on behalf of the E-I-C, Development and HOD

However, in most of the above quoted instances, there is no scientific process that is followed for the planning decisions. Senior staff across the organization spend a considerable part of their time on “policy and planning” functions – responding to queries and demands relating to the allocation of resources and the prioritization of work. Many junior staff spend time assembling and forwarding data to support these functions.

PWD does need the resources to analyze these data in an objective, ‘scientific’ manner, as they are now often based on norms and subjective judgments. It is vital that the Policy and Planning unit internalises planning and related functions to overcome the present constraints and practices to better serve the communities, and for taking efficient and effective investment decisions.

⁴ This is not an exhaustive list of the decision making processes, currently being followed in the UP PWD.

3. ROLE AND FUNCTIONS OF THE UNIT

3.1 ROLE AND OBJECTIVES

The roles and objectives of the Project Policy & Planning Unit of Public Works Department may be defined as follows:

- to formulate policies, plans, and programmes for the road sector and to ensure that they are integrated and coordinated with those for the transport sector in general;
- to assume responsibility for coordinating the development of the Road Network Master Plan and for ensuring its compatibility with the overall transport policy.
- to coordinate and develop the strategy for implementing the Road Network Master Plan. This will include the formulation of the various projects to be implemented together with their estimated costs.
- to coordinate and develop project frameworks for implementation
- to coordinate the preparation of the UPPWD annual budget for new construction and maintenance works. This work will be carried out in conjunction with the RMMS Unit, and to be responsible for budget allocation.
- to manage the RMMS Unit which reports to the Policy and Planning Unit and for ensuring that the necessary condition and other surveys are carried out and the RMMS database updated accordingly
- to collect the necessary economic data, such as vehicle operating costs, and costs of maintenance and new construction works.
- to suggest tools and methods for managing the roads as assets;
- to determine the development of the road network using, where applicable, suitable computer programmes as an aid to decision making in the planning of the road network

3.2 FUNCTIONS AND RESPONSIBILITIES

Given the above set mandate and objectives, the Policy and Planning Unit shall provide support to top management in the Department. It shall translate vision and various policies and programmes of the Government into department's strategic plan and annual business plan. The budgeting process with monitoring and performance evaluation of the organization shall be an important function of the Policy and Planning Unit. This shall be the unit which shall ensure that the department is managed as a corporate entity.

Proposed functions and responsibilities of the Unit are described briefly in the following paragraphs, based on IDS TA's preliminary assessment. These details remain to be discussed at focus groups, followed by PWD Management.

3.2.1. Planning

The Policy and Planning Unit shall first of all be responsible for the Department's many planning functions, including:

- **Strategic Planning:** The Strategic planning functions shall be with Policy and Planning Unit, in accordance with National and State's policies/plans. Apart from preparing strategic plans, the Unit shall take the lead in preparing plans such as State Road Policy, Five Year Plan, etc.
- **Corporate Planning:** The Policy and Planning Unit shall define the corporate objectives of the department and help evolve the corporate plan. The Unit shall also help develop corporate functioning methods, as well as requirements or programmes for skills enhancements within the area of corporate planning.
- **Business Planning:** The Unit shall function as a core unit where proposed projects are evaluated and prioritized. This should be in accordance with sound socio-economic principles, and comply with the policies and regulations of the Department and the State. The Unit shall also identify core business functions for the department. Annual Business Plans, consistent with the corporate plan, shall be prepared for each fiscal year.
- **Performance Measurement:** The definition and monitoring of Key Performance Indicators shall be one of the most important functions of the Policy and Planning Unit. For each fiscal year, the department's achievement shall be compiled against the set targets, to result in a performance report for the organization as a whole. Data format and the collection from various divisions for preparing the performance reports shall be implemented and coordinated by the Unit.
- **Annual Report:** For each fiscal year, the Unit shall compile a report on the works undertaken by the Department towards capital construction, development and maintenance, stating reasons for major deviations such as non-utilization of outlays and suggesting ways to overcome possible insufficiencies. Plans for the coming year shall be based on defined objectives and assessed opportunities and constraints.
- **Needs Assessment:** Policy and Planning Unit shall undertake a planning process that enables Roads and Bridges Department to analyse the network needs over time, and to monitor the trade-off between capital construction and maintenance.
- **Resource Identification, Mobilization and Budget Allocation:** The Unit shall coordinate the budgeting process of the Department, and identify alternative resources to meet short falls in the requirement and mobilize them for utilization. The Policy and Planning Unit should be provided with the data to ensure that prioritization can be done on a rational basis. In all, Policy and Planning Unit shall take lead in defining the resource envelope within which service delivery group will operate.
- **Monitoring and Evaluation:** To be able to prepare the annual reports and business plans, and also for its project and policy analysis, the Unit shall keep up-to-date records of all projects and programmes including costs and benefits as well as technical results. The

monitoring and evaluation of projects and programmes shall have to be evaluated by this unit. It is this evaluation which should enable and form base for continuation of existing and formulation of new programmes as per the needs with time.

- **Information Management:** Through the division offices, the unit shall be responsible for the collection and maintenance of the road inventory data necessary in the planning/decision making process.

3.2.2. Policy

- **Advise and Assist in Policy Formulation:** Most of the planning tasks described above must be based on policy, as formulated by Government or PWD, or as may have to be formulated or reassessed from time to time. P&PU will be required to advise on such policy after analysis of relevant options.
- **Analysis and Key Inputs Towards Policy Decisions:** PWD also faces other policy issues from time to time, such as (for example) road classification or maintenance/rehabilitation strategies. Depending on the type of issue as well as on competence and capacity, Policy and Planning Unit may be requested to undertake the necessary analysis.

3.2.3. Representation

Because the head of the Policy and Planning Unit will be responsible for advising the Principal Secretary on policy, on the merits/demerits of particular projects, and on priorities for the annual budget allocations, this could be seen by outside agencies as a key post within the Department.

- **Committees.** The Policy and Planning Unit should represent the Department on various committees with functions relevant to its planning tasks.
- **Coordination.** Most of the work by Policy and Planning Unit, such as the preparation of the annual plans, will require coordination *within* the Department. Some tasks will also require coordination *between* Departments, such as with the Finance Department, the Planning Department and the state Planning Commission.
- **Interaction.** The Policy and Planning Unit will frequently have to interact with other agencies for the purpose of data collection or data exchange including other departments and agencies, local authorities, corporations, etc. For the purpose of planning and benefit monitoring, contacts should also be established with other stakeholders in the road and transport sector, such as transport companies and private road user organisations.

3.2.4. Other Functions and Responsibilities

The mandate of the Policy and Planning Unit should be limited to the area of policy and planning, including closely related functions that are needed for that mandate. This applies to the two functions indicated below, and which are not yet available anywhere else in the organization either.

- The development of a Road Management System is being undertaken. Since planning and monitoring require large volumes of data, the Policy and Planning Unit will probably become

the main user of this system. Also to ensure its security and integrity, TA consultants recommend that Policy and Planning Unit shall be made responsible for the management of the system and its data. The technical maintenance should be delegated to IT specialists.

- The main responsibilities of this Unit would be to review the data available to the Committee, collect additional data as may be required, and prepare recommendations for its decisions. It would be a passive Policy and Planning Unit, not making any decisions or taking any initiatives of its own, but it should improve the decision making process by providing decision support based on scientific analysis.
- **Environmental and Social issues.** PWD has a separate unit dealing with these aspects of the ongoing UPSRP. Further, setting up of the Environmental and Social Development Unit (ESDU) is part of endorsed IDSP. There can be two ways of looking at things and taking view. One is to strengthen the integration of these issues in planning, it is important that a strong coordination be there between the two units and second can be to integrate and/or evolve structure of ESDU in a manner it reports to the planning unit.

4. POSITIONING OF THE UNIT

Following discussions with the IDS Cell it is proposed that the Policy and Planning Unit be located within the PWD as shown in **Figure 1** below

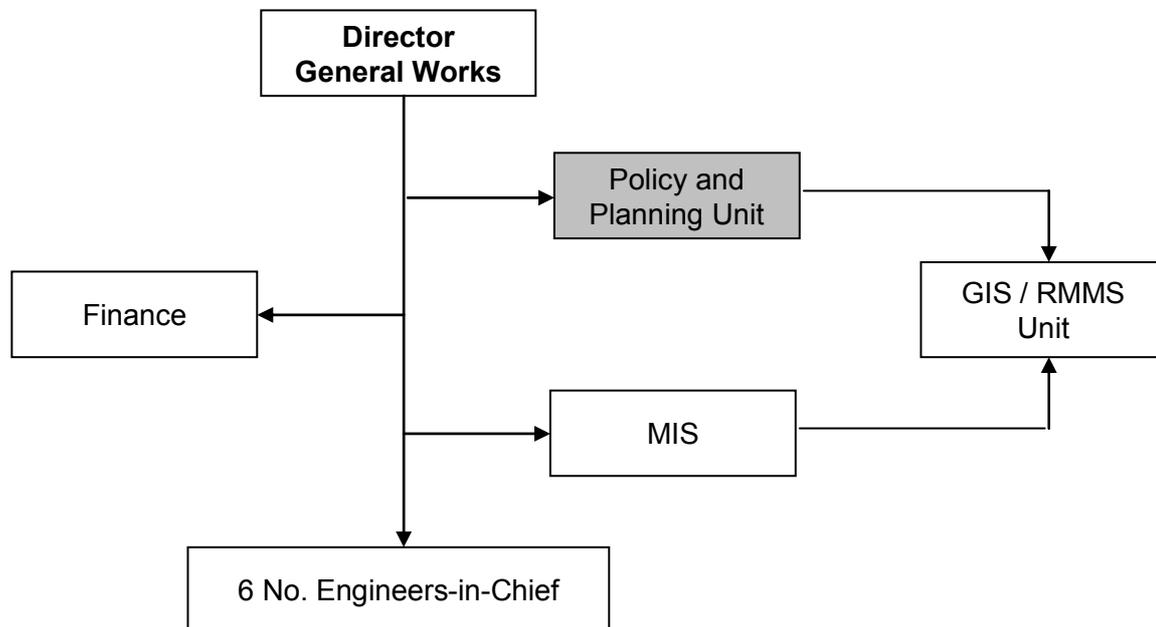


Figure 1: Proposed Location of the Policy and Planning Unit within the PWD

5. ASSESSMENT OF STAFF MIX

The list of functions for Policy and Planning Unit is long and may be attained gradually, as the human resources permit. The functions listed in Chapter 3, cover different areas of specialties needed. The mix, to some extent, will vary by alternative options conceived.

The nature of the work of the Unit requires a thorough understanding of the activities of the Department. This means that it will need experienced professionals/engineers. It will also need skills normally associated with other disciplines than road engineering, particularly in economics, transport planning, information technology and, if possible, also in social sciences. Without any such diversified skill sets the Unit may not be able to provide the wider approach to policy and planning issues of the state

Since part of the work by the Policy and Planning Unit will involve the handling of information and data in different forms, familiarity with basic computer programs and the interest in learning more - is a necessity for at least the majority of its staff.

A proposed, but not exhaustive, list of staff skills required for the Policy and Planning Unit is given at below:

- a) Transport Planners
- b) Transport Economists
- c) Highway Engineers
- d) Sociologists
- e) Legal Specialists
- f) Governance Specialists

6. STRATEGY FOR IMPLEMENTATION

Limitations of staff and funds, as well as the restrictions on new employments, could make the start-up of the Unit difficult. There is a minimum size, however. A very 'soft' start with only about four to six staff would be good idea.

Even if the resources should allow a full-size unit, however, say with 20-22 staff or more, there are reasons to allow for a more gradual development of different functions. The methods to be introduced will be new to most staff, and there is a limit to how many new skills that a person can absorb per month. Also, it may be difficult for PWD to decide now about some of the possible functions. The submission dates for different types of plans – each with a few months of notice – could define the skeleton for the time plan.

It should also be noted, however, that the capacity of the Unit for its different tasks will not only depend on its size, but also on its width. Referring to the proposed staffing in Table 1 the Planners/Economists will definitely be needed to produce a good business plan or corporate plan. The IT specialists will probably be needed to organize the data for Road management System, etc. The staff may have to be recruited in a certain order, for the Unit to become functional at an early stage.

It is essential that the staff selected are given the opportunity to attend specific training course in order to acquire and develop the needed skills. This training must be built into any implementation programme.

7. POSSIBLE ACTION PLAN

The Action Plan sets out some of the initial tasks that could be undertaken by the Policy and Planning Unit. The main emphasis must be on the requirement of the Unit to make a valid and necessary contribution to the operation and management of the PWD right from its inception.

Built into this proposed programme must be training programmes to enhance the capabilities and skills of staff assigned to the Policy and Planning Unit.

Towards the end of the first 6 months, or sooner if deemed necessary, the Policy and Planning Unit must prepare its own work programme and resource requirements, which will include staff, computers, computer programs, etc.

Description of Activities	Months					
	1	2	3	4	5	6
Define the Road Network	█	█	█	█	█	█
Classification of the Road Network	█	█	█	█	█	█
Whether the Roads have a unique Road Number?	█	█	█	█	█	█
Identify Roads that Constitute a Core Road Network	█	█	█	█	█	█
Method of Classification of the Non-Core Roads	█	█	█	█	█	█
Conversant with the Road Network in the State (Orphan Roads)	█	█	█	█	█	█
Information about the Road Network including Structures (Data of Road Inventory etc)	█	█	█	█	█	█
Consider other Policy frameworks of other Road Agencies in India	█	█	█	█	█	█
Which Road Agencies have developed a Policy Framework?	█	█	█	█	█	█
Has the State Government produced a transport policy	█	█	█	█	█	█
Review National Transport Policy	█	█	█	█	█	█
Review State and National Five Year Plans	█	█	█	█	█	█
Road Network Master Plan	█	█	█	█	█	█

Description of Activities	Months					
	1	2	3	4	5	6
Conduct Traffic Volume Counts			█	█	█	█
Origin and Destination Surveys based on need			█		█	█
Traffic Demand Analysis and Forecasting					█	█
Managing and Analysing the data of Condition Survey		█	█	█	█	█
Assess Network Needs			█	█	█	█
Cost Analysis per km for Widening and Strengthening, Routine and Periodic Maintenance			█	█	█	█
Collection and analysing main Economic base data like: GDP and State specific growth rates, key economic sectors and their growth rates, population growth rates, motor vehicle registration growth rates, per capita income etc.	█	█	█	█	█	█
Economic Analysis and Calculate Vehicle Operating Costs				█	█	█
Cost Estimates for New Road Construction				█	█	█
Cost Estimates for Rehabilitation and Maintenance of Roads and Structures				█	█	█

8. PRESENTATION TO PROJECT STEERING COMMITTEE

Report No. 18: Report on Establishing PWD Unit for Projects Policy and Planning

PWD Focus Group - A	
Sri Krishna Kumar Mittal	E-in-C Development and HOD
Sir S.K. Guni	SE World Bank Circle, Faizabad
Sri Govind Prasad Sharma	EE Health System Development Project, Lucknow
Sri Vinod Kumar Bansal	EE, PMGSY Cell, Lucknow
Sri Vasudev T Gulwani	EE RSD- 5, Lucknow
Sri Sanjay Gupta	AE W, B-1, Lucknow
Sri R.P Yadav	AE P.D. Kanpur Nagar
Sri Yogesh Mathur	SE, IDS Cell
Sri Anay Kumar Srivastava	AE, IDS Cell
LEA International Ltd. and LEA Associates South Asia Pvt. Ltd.	
Mr Alan Stanbury	Team Leader
Dr. M. P. Raju	Transport Specialist



Report No. 18: Report on Establishing PWD Unit for Projects Policy and Planning

Following discussions with Focus Groups A and B the decision was made to support the proposal to establish a Policy and Planning Unit within PWD.

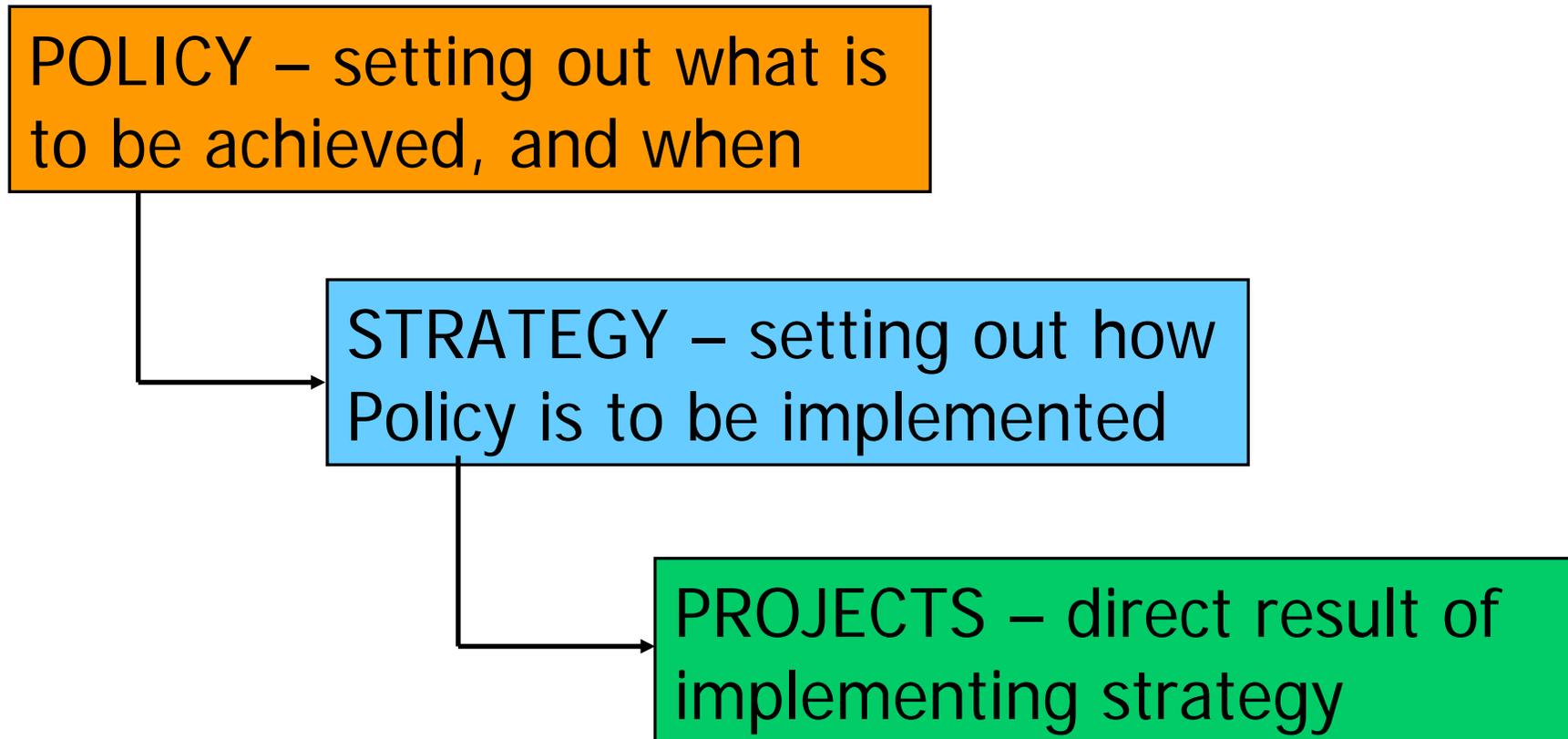
Present Situation: No such Unit exists

PWD decisions relating to Policy and Planning are generally taken by the Principal Secretary supported by the Secretaries and Engineers-in-Chief.

No formal process is in place although senior staff across the organisation spend a considerable part of their time on 'policy and planning' issues



Report No. 18: Report on Establishing PWD Unit for Projects Policy and Planning



**Report No. 18: Report on Establishing PWD Unit for
Projects Policy and Planning**

Role and Objectives of Policy and Planning Unit

- to formulate policies, plans, and programmes for the road sector and to ensure that they are integrated and coordinated with those for the transport sector in general
- to assume responsibility for coordinating the development of the Road Network Master Plan and for ensuring its compatibility with the overall transport policy
- to coordinate and develop the strategy for implementing the Road Network Master Plan. This will include the formulation of the various projects to be implemented together with their estimated costs



Report No. 18: Report on Establishing PWD Unit for Projects Policy and Planning

Role and Objectives of Policy and Planning Unit

- to coordinate and develop project frameworks for implementation
- to coordinate the preparation of the UPPWD annual budget for new construction and maintenance works. This work will be carried out in conjunction with the RMMS Unit, and to be responsible for budget allocation.
- to manage the RMMS Unit which reports to the Policy and Planning Unit and for ensuring that the necessary condition and other surveys are carried out and the RMMS database updated accordingly



**Report No. 18: Report on Establishing PWD Unit for
Projects Policy and Planning**

Role and Objectives of Policy and Planning Unit

- to collect the necessary economic data, such as vehicle operating costs, and costs of maintenance and new construction works
- to suggest tools and methods for managing the roads as assets
- to determine the development of the road network using, where applicable, suitable computer programmes as an aid to decision making in the planning of the road network



**Report No. 18: Report on Establishing PWD Unit for
Projects Policy and Planning**

Functions and Responsibilities

Policy Formulation: Contribute towards preparation of State Transport Policy. Advise PWD of changes in State Government policy priorities, or PWD inspired requests for changes to State policy.

Policy Implementation: Advise PWD with respect to implementation of State Policy. One of the immediate tasks relates to road classification and implications of same



**Report No. 18: Report on Establishing PWD Unit for
Projects Policy and Planning**

Functions and Responsibilities

Strategic Planning: Prepare policy framework for PWD Roads and ensure it is in line with State Policy. Based on policy set strategic framework against which projects are to be prepared

Corporate Planning: Develop corporate plan for PWD showing overall development of road sector, and resource requirements



**Report No. 18: Report on Establishing PWD Unit for
Projects Policy and Planning**

Functions and Responsibilities

Business Planning: Prepare plans for the Zones in line with Policy Framework and Corporate Plan

Performance Measurement: Establish performance indicators against which the Corporate and Business Plans can be monitored and achievement assessed. Included in this aspect is Asset Management and valuation



**Report No. 18: Report on Establishing PWD Unit for
Projects Policy and Planning**

Functions and Responsibilities

Annual Report: Prepare an Annual Report on the work carried out by PWD which should include details regarding Asset Management and value

Needs Assessment: One of the major tasks is to maintain the Road Network Master Plan and to review the needs to develop and expand the existing network.



**Report No. 18: Report on Establishing PWD Unit for
Projects Policy and Planning**

Functions and Responsibilities

Resource Identification, Mobilisation, Budget Allocation:

Prepare prioritised annual budget for maintenance using HDM 4 and other programs as applicable. Once budget has been granted to allocate budget based on prioritised list of roads.

Monitoring and Evaluation: Prepare reports for projects undertaken and to maintain costs for new construction and maintenance work to assist with preparation of annual budget



**Report No. 18: Report on Establishing PWD Unit for
Projects Policy and Planning**

Functions and Responsibilities

Information Management: Responsible for the collection of timely data required for managing the road network, including structures

In time this Unit will be responsible for the operation of Unit embracing GIS and RMMS.



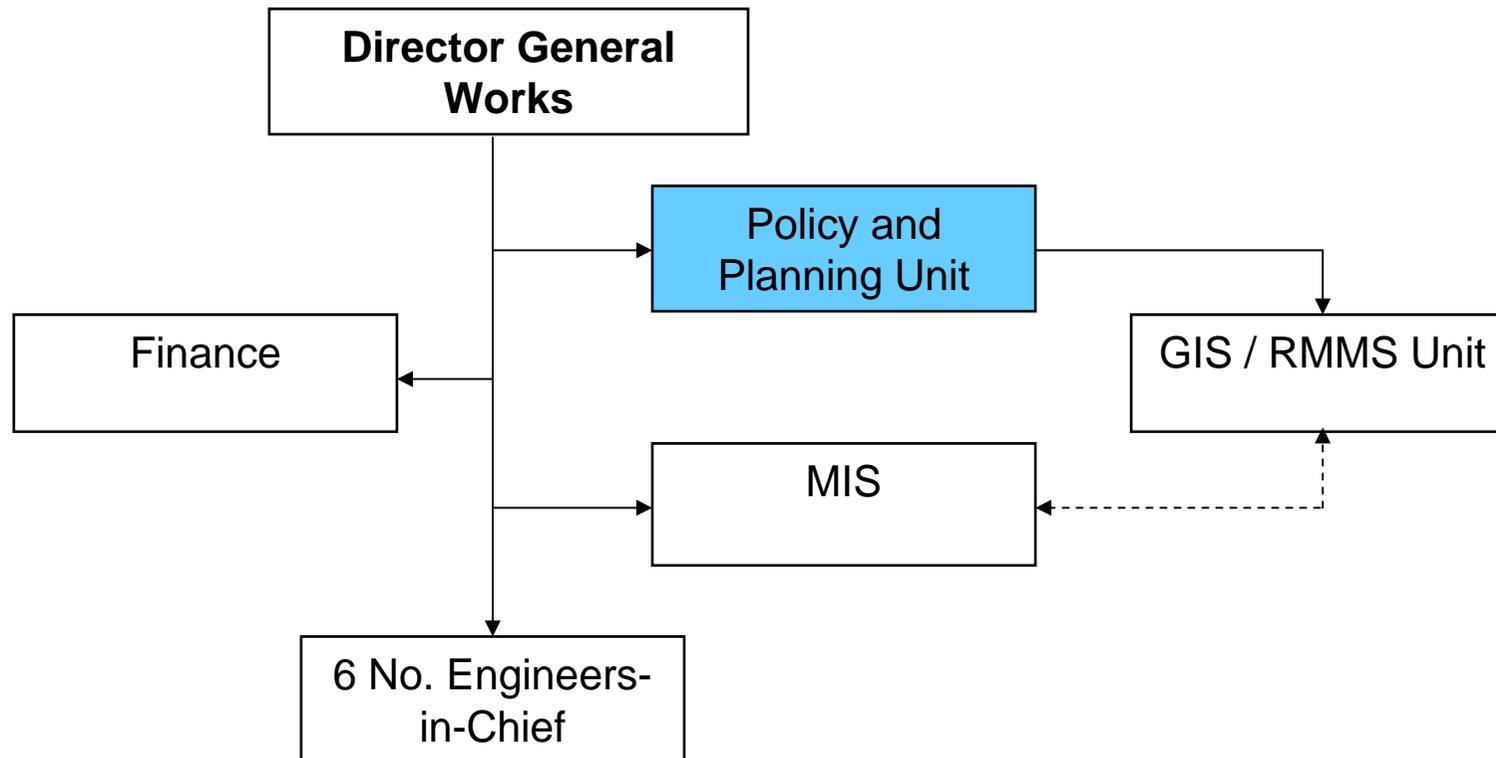
**Report No. 18: Report on Establishing PWD Unit for
Projects Policy and Planning**

A proposed, but not exhaustive, list of staff skills required for the Policy and Planning Unit is given at below:

- a) Transport Planners
- b) Transport Economists
- c) Highway Engineers
- d) Sociologists
- e) Legal Specialists
- f) Governance Specialists



Report No. 18: Report on Establishing PWD Unit for Projects Policy and Planning



Proposed Location of Policy and Planning Unit within PWD based on Revised PWD Organisation Structure



Report No. 18: Report on Establishing PWD Unit for Projects Policy and Planning

Proposed staffing expertise:

- a) Transport Planners
- b) Transport Economists
- c) Highway Engineers
- d) Sociologists
- e) Legal Specialists
- f) Governance Specialists



**Report No. 18: Report on Establishing PWD Unit for
Projects Policy and Planning**

Proposed staffing for establishment of Unit and Initial Work:

In the first instance it is anticipated that an Executive Engineer be appointed as Acting Head of the Unit.

He would be supported by two to four Assistant Engineers. In time these numbers will be increased to keep pace with the anticipated workload.

It is imperative that those appointed have an interest in this work and are willing to be trained so that they can function effectively.

Within the first year the skills of the Highway Engineers serving in this Unit will need to be augmented by Traffic Planners and Transport Economists. The other Specialists may be available elsewhere in the PWD, or their services are outsourced as and when required.



Report No. 18: Report on Establishing PWD Unit for Projects Policy and Planning

Description of Activities	Months					
	1	2	3	4	5	6
Define the Road Network	█	▨	▨	▨	█	█
Classification of the Road Network	█	▨	▨	█	█	█
Whether the Roads have a unique Road Number?	█	▨	▨	█	█	█
Identify Roads that Constitute a Core Road Network	█	█	█	█	█	█
Method of Classification of the Non-Core Roads	█	█	█	█	█	█
Conversant with the Road Network in the State (Orphan Roads)	▨	█	█	█	█	█
Information about the Road Network including Structures (Data of Road Inventory etc)	█	█	█	█	█	█
Consider other Policy frameworks of other Road Agencies in India		▨	█	█	█	▨
Which Road Agencies have developed a Policy Framework?		█	█	█	█	█
Has the State Government produced a transport policy	█	█	█			
Review National Transport Policy	█	█	█	█	█	█
Review State and National Five Year Plans	█	█	█	█	█	█
Road Network Master Plan	▨	█	█	█	█	█

Action Plan for First 6 months



Report No. 18: Report on Establishing PWD Unit for Projects Policy and Planning

Description of Activities	Months					
	1	2	3	4	5	6
Conduct Traffic Volume Counts						
Origin and Destination Surveys based on need						
Traffic Demand Analysis and Forecasting						
Managing and Analysing the data of Condition Survey						
Assess Network Needs						
Cost Analysis per km for Widening and Strengthening, Routine and Periodic Maintenance						
Collection and analysing main Economic base data like: GDP and State specific growth rates, key economic sectors and their growth rates, population growth rates, motor vehicle registration growth rates, per capita income etc.						
Economic Analysis and Calculate Vehicle Operating Costs						
Cost Estimates for New Road Construction						
Cost Estimates for Rehabilitation and Maintenance of Roads and Structures						

Action Plan for First 6 months

