

Planning Process

Roads represent an essential community asset but their financing is often limited and difficult to mobilize. Road development is not an achievement as such, but a medium for services provided to the population. Although it does not directly contribute to overall development, it provides necessary leverage for economic growth and social welfare. Furthermore, roads are essential in the logistics process and condition the efficiency of other transport components (including railways, airports, ports, etc.).

The first decision to be made by Highway Authorities/Government Entities in charge of transport concerns the allocation of resources. There is a balance to be found between:

- Initial investment (construction) / maintenance cost,
- Supply or demand management.

The two corresponding questions are:

- Is it better to allocate money to create new links or to improve maintenance on the existing ones?
- Is it better to handle traffic growth by increasing the capacity of networks or by implementing traffic management schemes?

A strategic planning framework incorporating network analysis is important to optimize the benefits and minimize the costs of road development. Components of such planning should at least include:

- defining the appropriate level of road network including infrastructure and maintenance needs;
- developing medium-term highway program 'projects or activities' consisting of links, sub networks and maintenance;
- establishing clear economic feasibility and the initial PPP potential of program links and highway investment activities.

Management of the Planning Process

To ensure that all the elements of planning complement each other and function effectively, the road and highway administration needs to establish clearly defined processes for carrying out its planning responsibilities. This includes defining a set of tasks; developing a timeline for carrying out these tasks; and assigning responsibility for the tasks to specific people and offices. Established processes include both internal actions (collecting data, conducting analysis, writing plans, etc.) as well as actions that require external contact (public meetings, coordination with other agencies, responding to complaints, etc.) The appropriate managers within the road and highway administration are responsible for communicating the steps of the process to all those involved, and for ensuring that required tasks are completed on time and achieve their objective.

In addition to establishing and following clear processes, a successful administration is continuously assessing and evaluating its processes and their results, and finding ways to improve them. This requires measurement of process performance using categories such as cycle time, waste reduction, product quality, customer satisfaction, timeliness, and accuracy.



Asian Toll Road Development Program, Draft Final Report, PADECO (1999), page I-7.

As a general rule, it is not advisable to use infrastructure investment primarily as an instrument for fine-tuning the economy; investment should basically be planned over the long-term as part of the sector strategy for planning and financing projects and forming master plans or infrastructure development plans.

A highway sector plan is developed within a national infrastructure and transport framework. Highway planning, as for all sectors, consists of a strategic plan covering a comparatively long period of 20-30 years. Establishing and announcing such a plan, with clearly stated objectives for construction and maintenance of networks, is an important step toward assuring the continuity and consistency of policy. Within such a long-term plan it is usual to develop a medium-term plan for the next 5 years which establishes priorities for implementation and expenditure.

Planning helps decide the order of priorities for construction under the prevalent social and economic conditions and to prepare necessary resources for the execution of projects. However, all plans must be flexible to take into account difficulties in implementing some projects or as new priorities and projects are needed.

The following are principles and considerations generally taken into account at the time of establishing or revising a development plan for intercity motorways in selected countries

- Local and national political considerations
- Connecting state, provincial and district capital cities
- Concern for economically underdeveloped areas
- Economic considerations
- Connecting commercial and industrial centers, tourist resorts etc.
- Economic feasibility
- Funding/resource availability
- Enhanced convenience for users
- Estimated traffic volumes by year and traffic type
- Transportation considerations
- Connections with international roads and motorways of neighboring countries
- Supplementary routes to relieve pressure on overused roads, completion of missing links, etc.
- Harmonization with other modes of transportation. (Multi/Inter Modal)
- Harmonization with environmental considerations e.g. climate change

- Other

Other examples are listed in:



Global Toll Road Study, Knowledge Data Base level 2 (draft), MOCJ - EXTEC (2000)

Specific issues concerning toll road programs

A successful PPP program in highways requires, among others, a supportive transport policy framework. Private toll road programs should therefore be integrated within the national, regional, and local transportation policies and programs.



Private Financing of Toll Roads, Fishbein and Babbar, RMC discussion papers series 117, page 21.



Public Private Partnerships in Transport. Estache, Juan and Trujillo. Policy Research Working Paper 4436. 2007.

Example of network planning reform: Indonesia

Historically, network planning has been politically driven, and has suffered from technical inadequacies and poor institutional structure. The Government of Indonesia therefore embarked upon a program of reforms including the following eight initiatives:

- a new arterial and toll road master plan;
- a new regulatory framework, conducive to public-private partnerships;
- a review of the current toll road program (including major perceived risks and financial and technical integrity, as 60% of the existing program has been deemed inappropriate and government intervention is felt to be necessary);
- an enhanced BOT and project implementation system (featuring improved competition, risk allocation, revenue subsidies, and tariff adjustment mechanisms);
- identifying additional potential sources of finance (including alternative finance mechanisms, maximizing equity, improved debt/equity ratios, and identifying competitive debt resources);
- an accountable BOT structure (one that is consistent, fair, and meets regulations);
- the eventual privatization of the public operator Jasa Marga (a new ministry has been established to supervise state-owned enterprises) and/or formation of strategic partnerships (under solicited procedures); and
- operational improvements (including traffic management and surveillance systems, and improved tariff collection and revenue sharing procedures).



Seminar on Asian Toll Road Development in an Era of Financial Crisis, Proceedings of the Seminar, Tokyo International Forum: March 9 - 11, 1999

Interestingly, the above plans were overtaken by the financial crisis that was deeper and lasted longer in Indonesia than elsewhere in Asia. Also in 2000/2001 the ‘big bang’ modality of decentralization was implemented in Indonesia. However, the above principles remain even if the implementation was weak (See Indonesia Case Study).

In fact, the strategic plan had not been implemented by 2008 due to:

- weak project preparation and detailed planning, especially in (i) the slow development of priorities and (ii) weak project due diligence (Module 5 -> Due Diligence and Feasibility Studies).
- Decentralization has confused responsibilities in many instances and PPP knowledge has been weak especially at local government level. Coordination between the various levels of government has also been difficult.
- Ownership and authority of projects are not clearly delineated as to responsibility
- Responsibility for risk assessment remains diffused
- Corruption still impacts decision making, sometimes indirectly through fear of subsequent allegations/prosecution
- Land acquisition and environmental legal and administrative procedures and costs are not clear
- Social and environmental safeguards compliance, especially if multilateral/bilateral agencies are involved can lengthen implementation
- See also Country Case Study for Indonesia.



France, Japan, Italy, Spain: Table in Asian Toll Road Development Program, Draft final report, PADECO (1999), page II-5

The European Union ISPA Program

In the period between 2000 and 2006 the ISPA (Instrument for Structural Policies for Pre-Accession) Program was one of the main EU financial instruments designed to support the pre-accession strategy of candidate countries. The ISPA Program priorities comprise the development of an efficient transport system constituting a substantial part of the pre-accession strategy. For all 10 candidate countries a sum to the amount of 1.04 billion EURO per year was earmarked for the ISPA Program in the pre-accession period. The claim for financing the projects relating exclusively to the field of transport and the environmental protection infrastructure has been apportioned by the Commission among candidate countries according to the size of their population, the area and GDP per capita. Investment funds will be expended following identified priorities in the network construction so that the necessary implementation of the networks will be ensured by 2015. The priorities and the transport strategy of each country must be developed in a national ISPA Transport Strategy paper.