

# **GUIDELINES FOR BOT ROAD PROJECT DEVELOPMENT UNDER PUBLIC-PRIVATE PARTNERSHIP (SUMMARY)**

## 1. Background and Purpose

The types of road development projects that can be feasibly implemented using the BOT method are limited in number.

Transportation infrastructure is characterized by relatively high market risk. Demand for transportation fluctuates widely with socioeconomic changes in the country and the level of services provided by the transportation facility. This makes private companies extremely cautious toward participation in a BOT project.

Several projects have failed right after they were started, partly because real demand fell short of initial projections.

The goal of this guideline is to help ensure the success of future BOT projects.

## 2. The Need for Private Sector Vitality

### Infrastructure Improvement under PPP

A BOT project is not an independent commercial project, even though its developer is a public enterprise. A BOT project is jointly carried out by the public and private sectors.

“Jointly carry out” means that the two sectors closely cooperate in the planning and implementation of a project, instead of performing predetermined jobs independently of each other.

Conventional BOT projects:

“Consigned to private businesses by the government”

BOT projects under the PPP system:

“Carried out through public cooperation with private companies”

## 3. BOT Projects Based On PPP

In the following discussion, BOT projects are evaluated in terms of their ability to function as BOT projects based on PPP (Public-Private-Partnership). The discussion also covers the optimal form of a PPP-based BOT project. Several risk hedges are examined. Risk hedges can help get a project started, as well as help formulate a business plan that appeals to both the public and private sectors.

### Selection of a project

- 1) To qualify as a PPP-based BOT project, a project must have socioeconomic value.
- 2) The BOT must be self-sufficient in the absence of public assistance. If the project does not need public support, it will be put into operation by the private sector.
- 3) If the project cannot function as a private project, it is reexamined to see if help from the public sector, in the form of land or other privileges associated with the

project, will enable the project to succeed. If public support makes the project feasible, it will be put into operation.

- 4) A project that does not qualify as a conventional BOT project may qualify as a PPP-based BOT project if the public sector accepts a greater role to make it feasible.
- 5) If a project is expected to be unprofitable under the BOT method even with substantial public support, the project may be canceled. Or, if the project is considered indispensable, it will be implemented as a purely public project with special public financing.

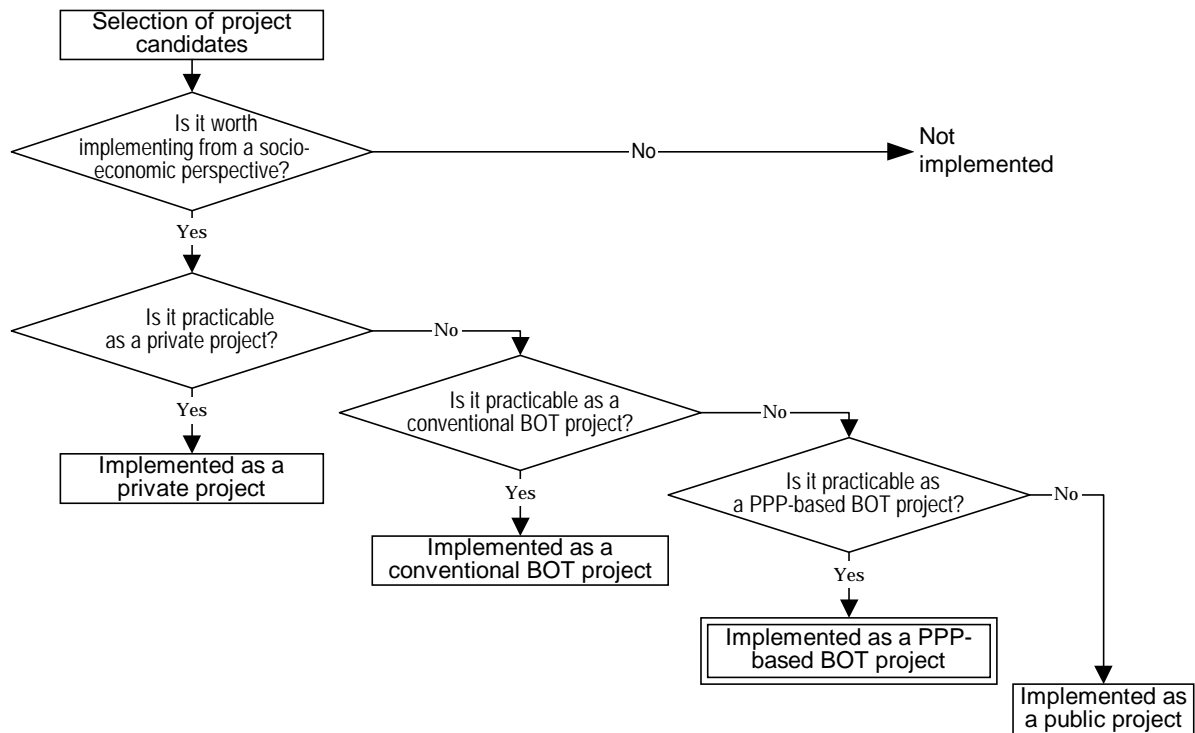


Figure 1. Process of selecting a PPP-based BOT project

### Planning under PPP

When implementing a PPP-based BOT project, the public sector needs to apply the following measures.

- Clarification of the project  
Clearly define the objective of each project and the expected socioeconomic results.
- Improvement in the PPP system  
The public sector must recognize that BOT projects are “projects carried out jointly by the public and private sectors” and should participate in BOT projects to make them successful. The public sector and private enterprise should share and allocate the profits and social benefits, as well as share the risk.

Recognition of competence and role of private sector

Before determining the roles of the government and the private sector in a BOT road project, the government should understand the role and competence of each participant.

### Project analysis

In planning a project on behalf of the government, the public sector should review the opinions and proposals provided by the private sector and reexamine its plan from the perspective of the private sector.

Similarly, a plan compiled by a private participant must be reviewed from the public's point of view.

### Review of necessary measures

The project should be reviewed to determine whether or not it is feasible under appropriate risk management. When necessary, alterations should be made to the project scheme, including alterations of the project itself and to the public support policy.

- Appropriate toll setting

Tolls must be set to a level that ensures the profitability of a project, since a BOT project is a financially independent project in which the private enterprise assumes the demand risk. Particularly in developing nations, the toll set by a private enterprise frequently exceeds the level calculated from a socioeconomic perspective, leading to the failure of the project.

To avoid this problem, tolls should be set to the level calculated from socioeconomic conditions. If there is a discrepancy between this level and the level required by the private-sector participant, some form of compensation should be formulated and implemented under public-private partnership. A toll level is appropriate if it is acceptable to the citizens from a socioeconomic viewpoint.

## 4. Proposal for a PPP-based Project Scheme

A PPP-based BOT project requires an appropriate project scheme. For this purpose, these guidelines propose a hybrid project scheme.

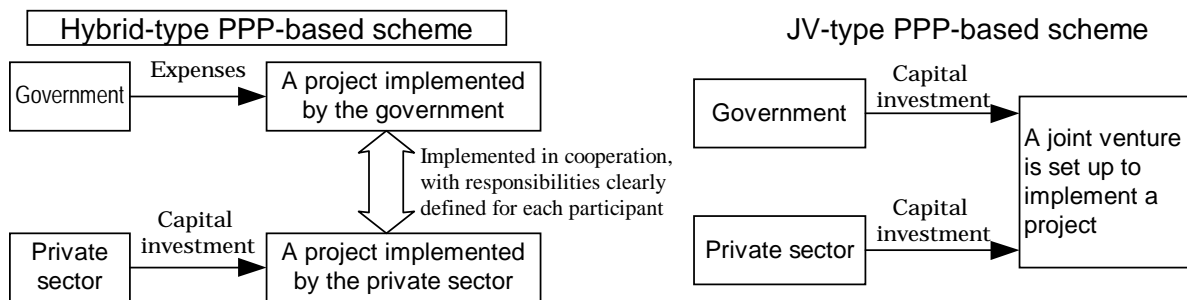


Figure 2. JV-type and hybrid-type schemes

### Hybrid-type Road Implementation

#### (1) Vertical separation

For example, the roadbed is built by the public sector, while the private partner paves the road. The section is then maintained and operated by the private partner. In the construction of an elevated road, the public sector may build the piers, while the private partner builds the road section.

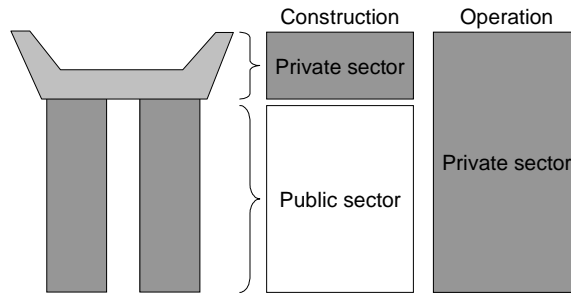


Figure 3. Hybrid project (Type 1) (Vertical separation)

(2) Sectional separation

For example, a bridge and an access road are built by the private partner and the public sector, respectively. The maintenance and operation of the completed road are placed in the hands of the private partner. In another example, the public sector may take charge of the main road, while the private partner is responsible for the interchanges.

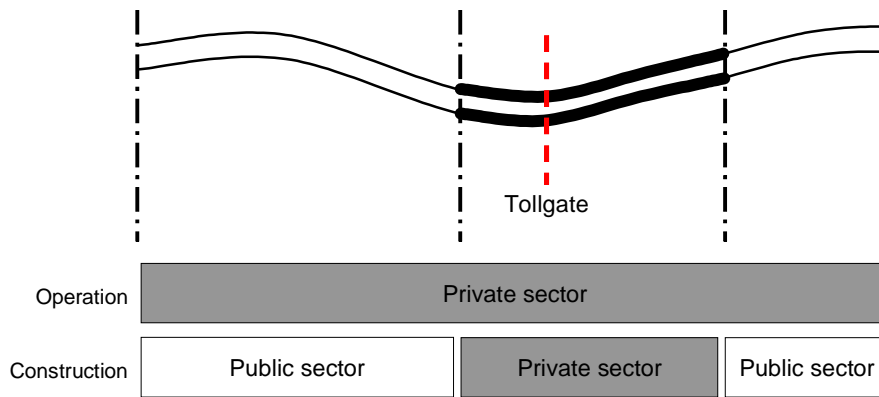


Figure 4. Hybrid project (Type 2) (Section separation)

5. Public Role in the Promotion of BOT Projects

To promote PPP-based BOT projects, the government must not only review the existing BOT project schemes and procedures, but also make the PPP system well known to the public.

In addition, when a BOT project fails to cover its costs with public funding, coordination with an ODA project should be considered.

**Public Role**

Develop a system for participating in BOT projects

National consensus should be formed on public participation in BOT projects. It is essential to institutionalize a concrete framework for such activities.

Establish appropriate project plans

BOT project plans must be designed so that the construction of transportation infrastructures not only conforms to the nation's development programs, including economic development plans, but also guarantees the profitability of the projects. To encourage private participation, demand projections should be based on the

results of market surveys, not on mere expectations.

Incorporate private-sector creativity into specifications

Order specifications should incorporate original ideas from the private sector. These ideas can pertain to the use of vertical spaces, the integrated development of roadside areas, and the construction of road sections.

Reinforce financial resources for road construction

Reinforcing financial resources is critical if the government is to support BOT projects or implement road construction on its own. Financial resources can be effectively built up when beneficiaries bear the financial burden, as is the case with Japan's management system.

Guarantee transparency and fairness in the selection of private BOT participants

To promote private participation and public confidence in BOT projects, the government should guarantee transparency and fairness when selecting BOT participants. Measures should include open competitive bidding and proposal competition.

#### Utilization of Various Financial Resources

PPP-based projects are carried out by private enterprises and the public sector using private and public money. The public sector opts for BOT projects, which are partially funded by the private sector, because the government often lacks sufficient funds. To implement a PPP-based project, the public sector raises funds from various sources, including ODA funds.

To promote PPP-based BOT projects in developing nations, the following forms of assistance should be considered.

Technical Assistance such as M/P and FS

Technical assistance includes the institutionalization of BOT projects, the compilation of specifications for individual BOT projects, and the evaluation of BOT applicants.

Provide funds and loans to governments to build an infrastructure under a joint ODA program and BOT project

If necessary, ODA programs can include constructing open roads that connect to a BOT toll road, developing areas surrounding a BOT site, and constructing road infrastructures related to a planned BOT project. These supportive activities will stabilize the profitability of the BOT project and help gain international trust in the project, which, in turn, will expedite public financing by international banking institutions.

Help introduce new technologies

BOT projects have the goals of introducing advanced technologies owned by private businesses, as well as cutting public expenditures. The ODA program should help developing nations build infrastructures that introduce such technologies as ITS (Intelligent Transport System)