

Institutional Arrangements for Enhancing Public Investment Efficiency in Korea

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C O N T E N T S



- 1. Budget Process and Public Investment Decision**
- 2. Effective Preliminary Feasibility Study**
- 3. Tightened Expenditure Monitoring**
- 4. Performance Management and Evaluation**
- 5. Public-Private Partnership Program**

Part-01

Budget Process and Public Investment Decision



1. Budget Process and Public Investment Decision

Table 1. Major Players in Korea's Budget Process

Players	Roles
Budget Office of the Ministry of Strategy and Finance (MOSF)	<ul style="list-style-type: none"> • Compiles budget bids and prepares the draft budget. • Allocates funds to spending ministries. • Approves the transfers of funds between line items
Treasury Bureau of the MOSF	<ul style="list-style-type: none"> • Releases cash to spending ministries. • Manages the treasury single account held in the Bank of Korea. • Issues treasury bonds and manages assets and liabilities. • Collects ministerial financial reports, prepares the whole-of-government financial reports, and sends them to the BAI. • Produces the government financial statistics.
Tax and Customs Office of the MOSF	<ul style="list-style-type: none"> • In charge of tax policy. • Prepares revenue forecasts. • Oversees the National Tax Service and the Customs Service.
Ministry of Public Administration and Security (MOPAS)	<ul style="list-style-type: none"> • In charge of local government tax and spending policies. • Allocates the Local Shared Taxes (a formula-based block grant to local governments) across local governments. • Coordinates the central government subsidies to local governments. • Approves the borrowing by individual local governments.

1. Budget Process and Public Investment Decision



Players	Roles
Board of Audit and Inspection (BAI)	<ul style="list-style-type: none">• The supreme audit institution in Korea, whose head is nominated by and reports to the President. The National Assembly can also request audits on specific issues to the B.A.I.• Checks the regularity of ministerial activities.• Prepares and tables the financial report to the National Assembly.
National Assembly	<ul style="list-style-type: none">• Deliberates and votes on the budget.• Approves the transfers of funds between programs.• Reviews and approves audit reports.
Line ministries	<ul style="list-style-type: none">• Execute the budget and prepare financial reports.

1. Budget Process and Public Investment Decision

Introduction of MTEF in 2004 for Budgeting

Before MTEF (bottom-up budgeting)

- Budgeting on next single budget year
- Limited medium- to long-term planning function
- MOSF focused on the microscopic spending control



After MTEF (top-down budgeting)

- Budgeting over next 5 year including the current year
- Spending ceilings for sectors and programs
- MOSF focused on the strategic alignment of budget requests with overall policy directions

1. Budget Process and Public Investment Decision

New Initiatives of Public Investment Management

1994

TPCM introduced

1999

PFS introduced

RSF introduced

2003

RSF guidelines developed

2006

RSF strengthened

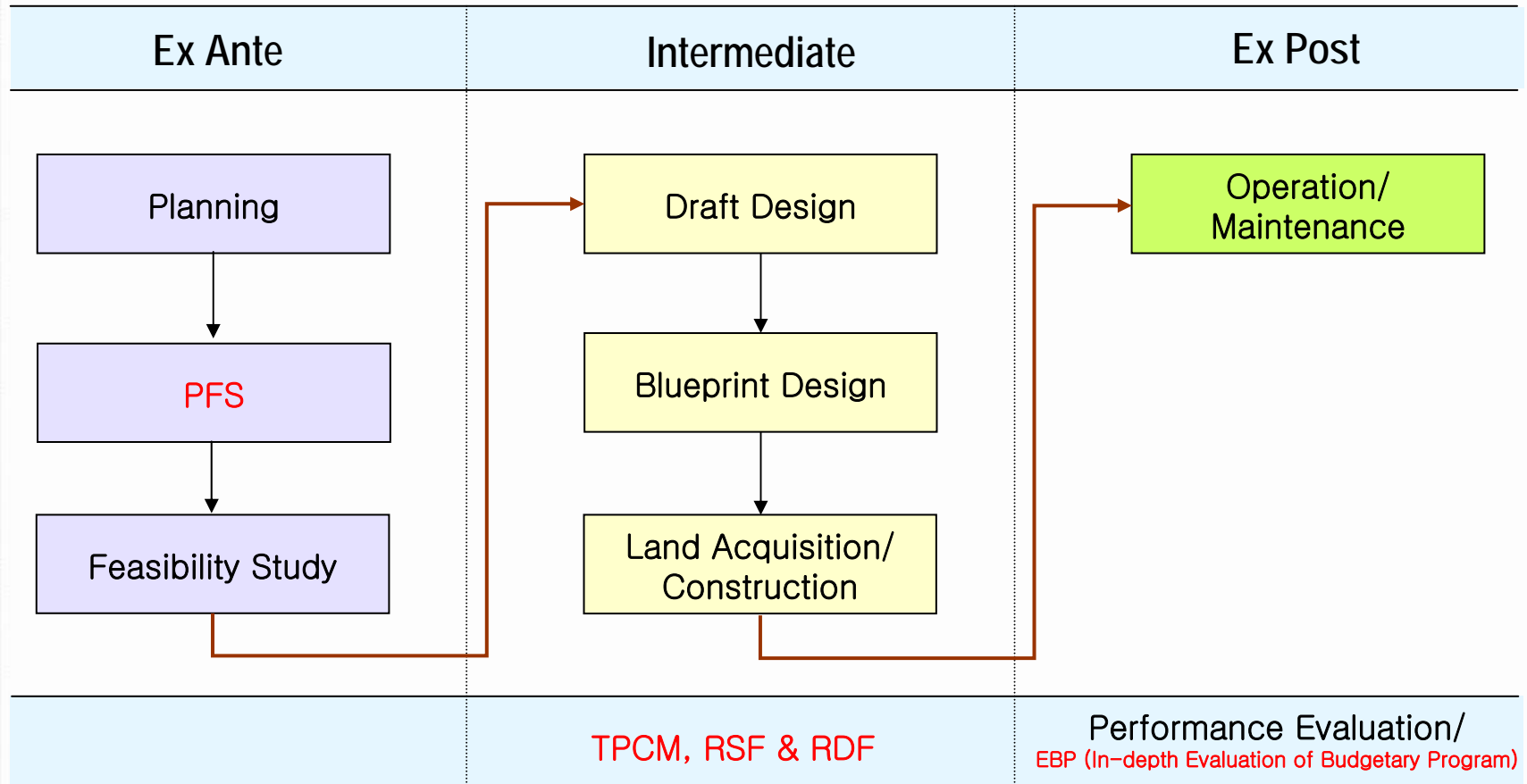
RDF introduced

The National Finance Act legislated

- ✓ TPCM (Total Project Cost Management)
- ✓ PFS (Preliminary Feasibility Study)
- ✓ RSF (Re-assessment Study of Feasibility)
- ✓ RDF (Re-assessment of Demand Forecast)

1. Budget Process and Public Investment Decision

Implementation Process of Public Investment



* Evaluation works in RED characters are owned by budget ministry.

Part-02

**Effective Preliminary Feasibility
Study (PFS)**



2. Effective Preliminary Feasibility Study (PFS)

What is PFS?

- Short and brief evaluation of a project to produce information for budgetary decision
 - Owned by the Ministry of Strategy and Finance (MOSF)
 - Managed by PIMAC
- Meaning of “PRELIMINARY” is two-folded:
 - Provisional; and
 - Preceding a (detailed) feasibility study
- The National Finance Act of 2006 provides the legal framework of PFS.

2. Effective Preliminary Feasibility Study (PFS)

Coverage of PFS?

- All new large-scale projects with total costs amounting to 50 billion Won (\$50 million USD) or more are subject to PFS.
 - Before the NF Act, PFS was centered on infrastructure projects.
 - PFS has expanded to non-infrastructure (e.g. R&D) projects.
- Local government and PPI (Private Participation in Infrastructure) projects are also subject to PFS if central government subsidy exceeds 30 billion Won.
- The following types of projects are exempted from PFS:
 - Typical building projects such as government offices and correctional institutions
 - Legally required facilities such as sewage and waste treatment facility
 - Rehabilitating projects and restoration from natural disaster
 - Military facilities and projects related with national security

2. Effective Preliminary Feasibility Study (PFS)

Flowchart of PFS

Project proposal

Background study

- Review of statement of purpose
- Collect socio-economic, geographic, and technical data
- Brainstorming (Other Alternatives)
- PFS issues raised

Economic analysis

- Demand analysis
- Cost estimation
- Benefit estimation
- Cost-benefit analysis
- Sensitivity analysis
- Financial analysis

Policy analysis

- Consistency with higher-level plan and policy directions
- Project risk (financing and environmental impacts)
- Project-specific evaluation item

Balanced regional development analysis

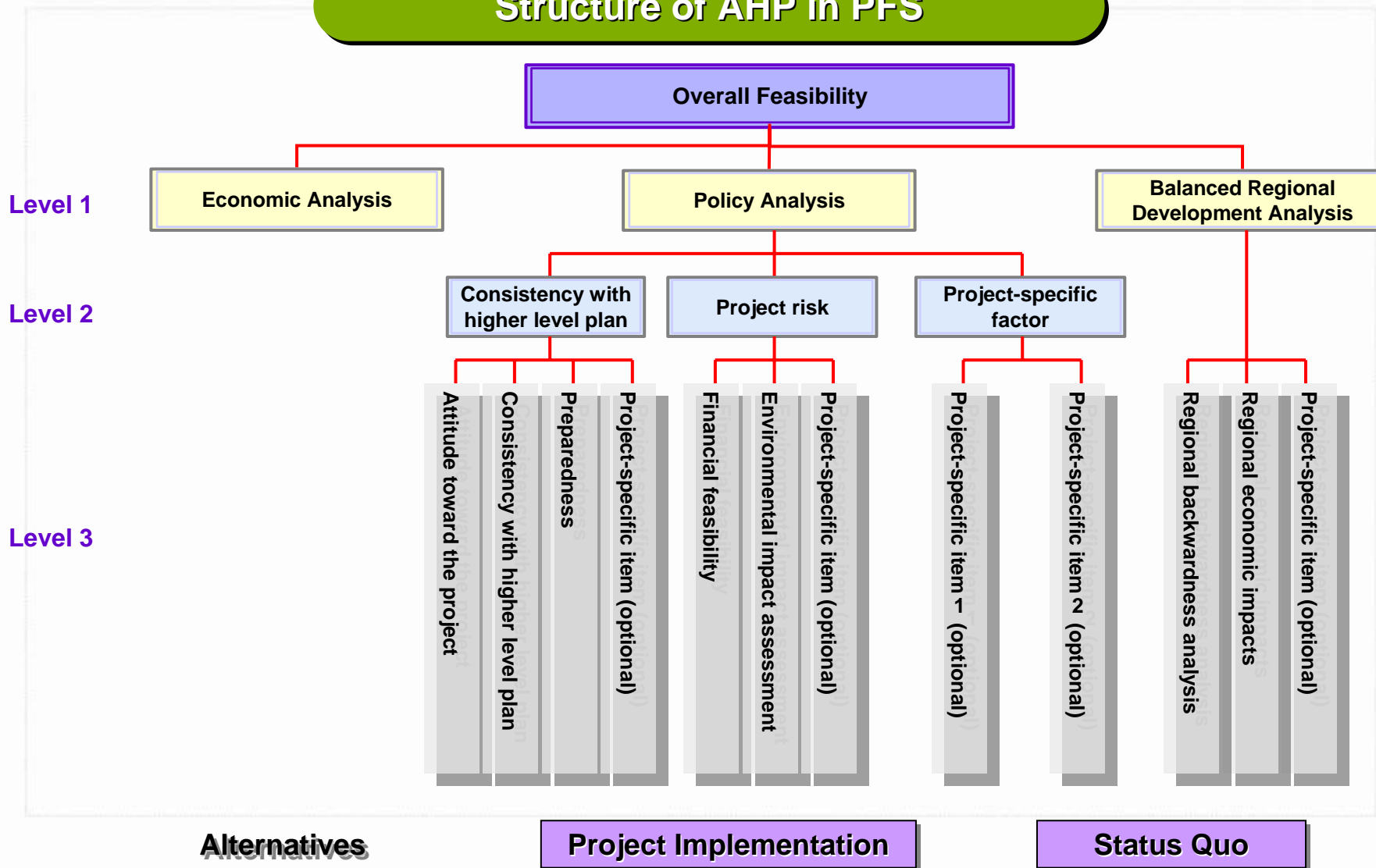
- Regional backwardness index analysis
- Regional economic impacts

Analytic Hierarchy Process

- Overall feasibility
- Prioritization
- Financing and policy suggestion

2. Effective Preliminary Feasibility Study (PFS)

Structure of AHP in PFS



2. Effective Preliminary Feasibility Study (PFS)

AHP (Analytic Hierarchy Process)

- AHP is a multi-criteria decision making technique to combine quantitative and qualitative elements of evaluation into a decision under a hierarchical structure.
 - Structures a complex decision problem into a hierarchy by grouping element of decision
 - Gives weight on each element through pair-wise comparison
 - The consistency of the weighting can be tested
- A group of seven or eight experts are involved in the decision making.
 - PFS team members (PM of KDI, Professors, and Engineers)
 - Advisory committee members (Staffs of PIMAC, and outside advisory members)
- Since 2005, the ranges of AHP weight were set to reflect importance of balanced regional development

Economic Analysis	Policy Analysis	Balanced regional development analysis
40 ~ 60 %	25 ~ 35%	15 ~ 25%

- A project is evaluated as feasible if AHP score is 0.5 points or more out of 1.0 point.

2. Effective Preliminary Feasibility Study (PFS)

Features of PFS

- Well developed evaluation guidelines
 - Detailed description of methodology and procedures of PFS implementation
 - PFS guidelines by sector:
 - Roads, rails, seaports, airports, dams, and cultural facilities
- Multi-disciplinary PFS team
 - Three or more organizations are involved
 - e.g. KDI (Project manager), University professors (Transportation demand analysis), and private Engineering firms (Cost estimation)
- Open review process
 - Open discussion on a mid-term and final PFS reports
 - Reviewed by the MOSF and line ministries, PIMAC, and field specialists from private and public sectors

2. Effective Preliminary Feasibility Study (PFS)

Table 2. Number of PFS by Sector (1999~2007)

(unit: No)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	Sum
Road	11	11	20	9	11	24	11	27	30	154
Railway	2	7	14	8	7	13	6	10	4	71
Seaport	1	5	1	2	3	1	2	5	1	21
Culture & tourism	3	2	5	2	5	2	1	5	-	25
Water resources	1	1	-	5	5	3	3	1	-	19
Others	1	4	1	4	2	12	7	4	10	45
Sum	19	30	41	30	33	55	30	52	45	335

2. Effective Preliminary Feasibility Study (PFS)

Table 3. Proportion of Feasible Projects by Sector (1999~2007)

(unit: %, No)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	Total Projects (A)	Feasible Projects (B)	(B)/(A)
Road	45.5	27.3	30.0	33.3	72.7	87.5	36.4	63.0	63.3	154	86	55.8
Railway	50.0	57.1	35.7	75.0	71.4	53.8	83.3	40.0	25.0	71	38	53.5
Port	100.0	80.0	100.0	50.0	100.0	100.0	100.0	40.0	0.0	21	15	71.4
Culture & Tourism	100.0	0.0	40.0	0.0	0.0	100.0	100.0	40.0	0.0	25	10	40.0
Water Resources	100.0	100.0	0.0	0.0	60.0	66.7	66.7	100.0	0.0	19	10	52.6
Others	100.0	75.0	0.0	75.0	50.0	66.7	71.4	50.0	60.0	45	29	64.4
Average	63.2	50.0	34.1	43.3	60.6	74.5	63.3	53.8	57.8	335	188	56.2

- The allocation of 82 trillion Won for 147 non-feasible projects, or 43.8% of 168 trillion Won for 335 projects had been prevented through PFS.
 - Total government expenditure of 2007 is 238.4 trillion Won, and government expenditure on transport and regional development is 18.4 trillion Won.

Part-03

Tightened Expenditure Monitoring

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3. Tightened Expenditure Monitoring

TPCM (Total Project Cost Management System)

- TPCM is a device that budget ministry monitors expenditure on public investment and checks increase in project cost throughout the project cycle from planning to construction completed.
- Coverage of TPCM
 - Projects whose construction period exceeds two years; and
 - Civil engineering works whose TPC exceeds 50 billion Won (USD 50 million), or architectural projects whose TPC exceeds 20 billion Won (USD 20 million); and
 - Projects implemented by the central government or its agents, or by local governments or private institutions that include central government funding.

3. Tightened Expenditure Monitoring

Principles of TPCM

- Increase in construction size through design modification is not allowed except for inevitable events.
- The construction costs are not arbitrarily inter-changeable between project phases or between construction units.
- The minister in charge of the project is to consult with the Minister of Strategy and Finance about adjusting TPC, if TPC change is inevitable.
- The line ministry is allowed to set construction contingencies for up to 8% of the contract price of a project to cope with inevitable design modification and amendment of the law and so on.

3. Tightened Expenditure Monitoring

RSF (Re-assessment Study of Feasibility)

- The same methodology and implementation procedure as PFS are applied
- Under TPCM, RSF is conducted if:
 - TPC has increased by more than 20 percent (excluding price escalation and increase in land acquisition cost) of the cost endorsed by the MOSF at the previous phase of the project; or
 - the PFS has not been conducted although it falls under the PFS coverage.
- Decision making
 - RSF team makes judgment whether to continue or to stop the project.
 - Compared with PFS, it is emphasized to find alternatives to cut down size and cost of a project.

3. Tightened Expenditure Monitoring

RDF (Re-assessment of Demand Forecast)

- Under TPCM, RDF is to verify the adequacy of demand forecast with latest information available, reflecting changes in project environment.
- RDF can be conducted at any phase throughout the project cycle from planning to construction completed when:
 - a substantial decrease of demand is anticipated due to material changes in the premises on which demand forecast has been made or errors have been found in demand forecast; or
 - more than five years have passed since the latest demand forecast had been conducted.
- When the demand forecast for a project has decreased by 30% or more, the MOSF conduct RSF and decide whether to continue or to stop the project.

3. Tightened Expenditure Monitoring

Table 4. Number of Projects with Substantial Change in TPC

Year	Total projects under TPCM (A)	Increase in TPC by over 20% (B)	Decrease in TPC by over 20% (C)	B/A (%)	C/A (%)
1994	218	-	-	-	-
1995	207	19	2	9.2	1.0
1996	159	19	2	11.9	1.3
1997	189	20	2	10.6	1.1
1998	183	17	2	9.3	1.1
1999	459	15	2	3.3	0.4
2000	483	24	23	5.0	4.8
2001	602	26	13	4.3	2.2
2002	602	10	15	1.7	2.5
2003	667	15	27	2.2	4.0
2004	698	26	20	3.7	2.9

Note: B/A (%) has decreased C/A(%) has increased since 1999.

3. Tightened Expenditure Monitoring

Performance of TPCM

- The amount of requested TPC has dropped significantly after 1999.
 - The request for TPC increase in % of TPC has dropped from 26.4% (1996~1999) to 4.4% (2000~2003)
 - The amount of TPC adjusted in % of TPC has also dropped from 11.1% to 1.0.

Table 5. Amount of TPC change before and after 1999

(unit: %)

	1996~1999	2000~2003
Request for TPC increase in % (A)	26.4	4.4
TPC adjusted in % (B)	11.1	1.0
(B)/(A) (%)	42.1	22.7

3. Tightened Expenditure Monitoring

Performance of RSF

Table 6. Number of RSF by Sector (2003~2007)

(Unit: No)

	2003	2004	2005	2006	2007	Sum
Road	5	3	4	10 (2)	9 (1)	31 (3)
Railway	6 (1)	-	-	1	1 (1)	8 (2)
Port	-	-	-	-	2	2
Buildings (Museums & Tourism)	4	2	2	4	2	14
Water Resources (Dam)	-	-	1	2	1	4
Others	-	-	-	2	-	2
Sum	15 (1)	5	7	19 (2)	15 (2)	61 (5)

The number in parentheses is number of projects that were stopped as a result of RSF.

Part-04

Performance Management and Evaluation



4. Performance Management and Evaluation

Table 7. System of Performance Management and Evaluation

	Performance Monitoring	Program Review	Program Evaluation
Method	<ul style="list-style-type: none"> Establish objectives and indicators and use the results in government budget operation (Prepare performance report) 	<ul style="list-style-type: none"> Provide a check list of projects for review and keep track of which projects are operated properly and which are making progress, etc. 	<ul style="list-style-type: none"> Apply scientific evaluation method on each project to analyze, spot problems, and provide a alternative (Prepare evaluation report)
Main responsible body	<ul style="list-style-type: none"> Each ministry (Budget Division) 	<ul style="list-style-type: none"> Each Ministry (Budget division) and budget authority 	<ul style="list-style-type: none"> Each Ministry (Project Management Division)
Applicable project	<ul style="list-style-type: none"> All policies and programs 	<ul style="list-style-type: none"> Most programs (20~30% of all) 	<ul style="list-style-type: none"> Individual programs and projects
Merits	<ul style="list-style-type: none"> An overall progress report can be achieved but not enough information can be given on individual project basis. 	<ul style="list-style-type: none"> Trade off between Performance Monitoring and Program Evaluation 	<ul style="list-style-type: none"> Detailed information can be given on individual project basis but due to excessive time and cost spent, this method is not suitable for all projects.
Application	<ul style="list-style-type: none"> Used in management of performance of an organization, as reference material for setting budget, and in preparation of performance budget report 	<ul style="list-style-type: none"> Used in improvement of project operating method, and a (deliberation) reference for setting budget 	<ul style="list-style-type: none"> Used in improvement of project operating method.

4. Performance Management and Evaluation

Table 8. Common questions for the SASP

Areas	Common Questions	Phase
Infrastructure	• Have all the conflicting issues been reviewed, adjusted and reflected in the plan?	Planning
	• Has project feasibility been tested for objectivity?	Execution
	• Is the management of TPC adequately performed?	Execution
	• Does the project contribute to national balanced development?	Output
Facility/ Equipment	• Is the time for facility and equipment purchase appropriate?	Planning
	• Has project feasibility been tested for objectivity?	Planning
Other	• Is there a great need to continue the project?	Planning
Investment	• How appropriate is the level of support?	Planning
Loans	• Is the condition of loan reasonable?	Execution
	• Is the return on investment over loan performance favorable?	Execution
Private sector support	• Was the need for supporting project that had been supported continuously for several years reviewed again?	Planning
	• Is the selection of the concessionaire reasonable?	Execution
	• Is the management and supervision of the concessionaire done properly?	Execution
Local authority support	• Have the project conditions for local authority been reviewed?	Planning
	• Is an effort being made to efficiently carry out execution by the authority level?	Execution
	• Does the project contribute to the nation's balanced development?	Output

Source: Ministry of Strategy and Finance (2005b).

4. Performance Management and Evaluation

Program Evaluation at Ex Post

- Performance evaluation (PE) by MLTM
 - Construction projects with TPC of 50 billion Won (\$50 million USD) or more are subject to PE.
 - PE shall be conducted within three years of construction completion.
 - Analyses of PE include:
 - ✓ Cost and time overrun
 - ✓ Comparison of forecasted demand and actual demand and project impacts
 - ✓ Degree of acceptance by local residents
 - ✓ Suggestions for improvements
- EBP (In-depth Evaluation of Budgetary Program) by MOSF
 - No EBP on public investment program has been conducted so far.

Part-05

Public-Private Partnership Program

KDI

Why PPPs?

- Enhancement in Efficiency : Private sector management and innovation can lead to better value-for-money.
 - Advantages of bundling asset creation and service provision.
 - Package deal of DBFO.
 - Delivery on time and on budget.
- Increased Resource : Private financing can support increased infrastructure investment without adding to government borrowing.

Legal Framework of the PPP System

- Hierarchy of legal and administrative framework of PPP System
 - PPP Act
 - PPP Act Enforcement Decrees
 - Annual PPP Plan
 - » PPP Guidelines
- The Legal Status of the PPP Act
 - The PPP Act and the PPP Act Enforcement Decrees are the principal components of the legal framework of PPP
 - The Act is a special Act that precedes other Acts
 - Exempts PPP projects from strict regulation in national property management
 - Allows a SPC to play a role of competent authority

Project Initiation

- **Solicited Projects**
 - A solicited project is that the competent authority identifies a project for private investment and announces a RFP
- **Unsolicited Projects**
 - For an unsolicited project, a private company (project proponent) submits a project proposal, and then the competent authority examines and designates it as a PPP project

Procurement Schemes

- **BTO (Build-Transfer-Operate) Scheme**
 - Both solicited and unsolicited projects are eligible
 - Roads, seaports, and railway projects, etc
 - User-fees, Minimum Revenue Guarantee (MRG) for solicited projects
- **BTL (Build-Transfer-Lease) Scheme**
 - Only solicited projects are eligible
 - School, dormitory, military housing, etc
 - Government payments (Lease rent +operating costs)
 - Low risk-low return

Value for Money (VfM) Test

- What is a VfM Test?
 - Conducting feasibility study and assessing VfM (Value for Money) by comparing PFI against PSC to test if PPP procurement improves the value of tax payer's money
 - ✓ PFI (Private Finance Initiative)
 - ✓ PSC (Public Sector Comparator)
- Why conduct a VfM Test?
 - Article 7, Paragraph 3 of the Enforcement Decree of the PPP Act stipulates the implementation of a VfM Test
 - The Competent Authority uses VfM reports as basic material to make a judgment on whether to move forward with the PPP project proposed by the private proponent
- VfM Test Strengthened by PIMAC in 2005
 - 1st stage : Decision to invest
 - 2nd stage : Decision to implement by PPP
 - 3rd stage : Present a best implementation practice

5. Public-Private Partnership Program

Current Status of PPPs

- Total PPPs investment : US 79.7 billion dollars

(Unit: number (Billion. USD))

Step \ Type	BTO*		BTL**	Total
	National Projects***	Competent Authority Projects		
Under Operation	22(10.6)	75(3.5)	33	130
Under Construction	34(28.2)	12(0.8)	88	134
Preparing to construct	10(5.2)	4(0.2)	45	59
Under Negotiation	15(11.5)	8(0.8)	79	102
Under Review	2(1.7)	3(0.5)	45	50
Subtotal	83(57.2)	102(5.9)	290 (16.6)	475 (79.7)
Total	185(63.1)			

*: as of Jun. 2008, ** : as of Dec. 2007

*** Large-scale projects whose total costs are 200bill. or more are monitored by the PPP Committee organized by the Ministry of Strategy and Finance.

5. Public-Private Partnership Program

Limit of PPP Program Size and Report to the National Assembly

- Controversy on the reporting rule to the National Assembly
 - Argument 1: The present value of government payments should be counted into liabilities, and the government should get approval of PPP contracts from the national assembly in advance
 - Argument 2: The government obligation arising from PPP contract, which is a service contract, does not constitute a liability and does not need an approval from the national assembly
 - The MOSF set the investment ceiling for BTL projects of the fiscal year and report it to the National Assembly with the annual budget
- The Five-year National Fiscal Management Plan (2007-2011) set the limit to the size of PPP program
 - Following the UK practice, the total annual government payment on PPP project should be less than 2% of the total government expenditure
 - The current forecast on PPP project suggests that the figure will reach up to 1.9%

Thank you

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