



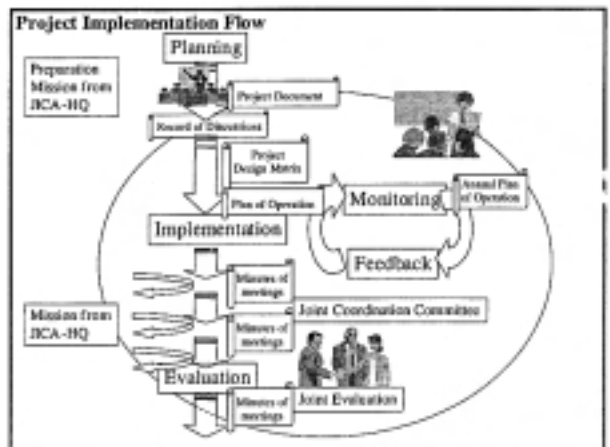
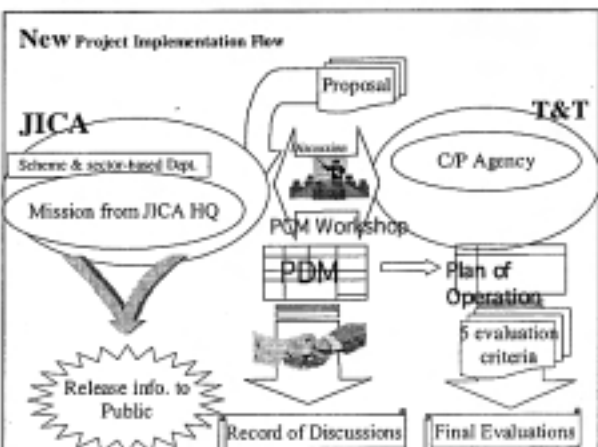
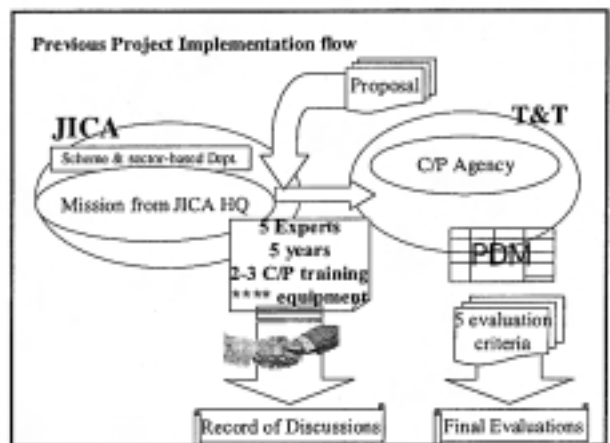
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Safe Driving Project in county A
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? ? ? ?

? Why PCM? ?

? ? ? ?



## What is PCM?

## What is PROJECT ?

¥ Fixed TIME      April 4, 1996-March 31, 2001

¥ Fixed BUDGET      US\$5-6 million

¥ Fixed GOAL      To enhance the technical standard of training personnel and other people concerned in the fisheries sector in the T.T and other regional countries

### Project Cycle



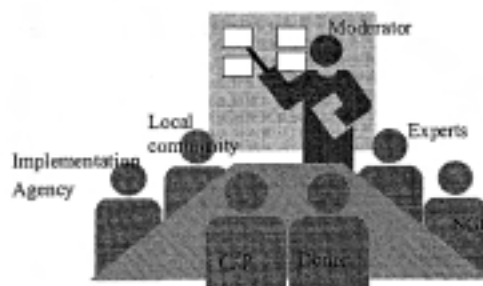
## PCM is...

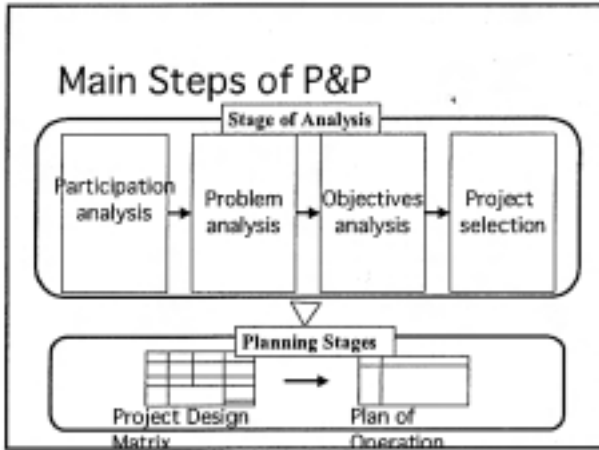
PCM method is a tool for managing the entire cycle of a development project—from formulation and implementation to evaluation—by means of a project format termed the Project Design Matrix (PDM).

## PDM is...

PDM shows the *logical inter-relationships* among the components of a project, such as the Objectives, activities and inputs as well as the important assumptions related to the project.

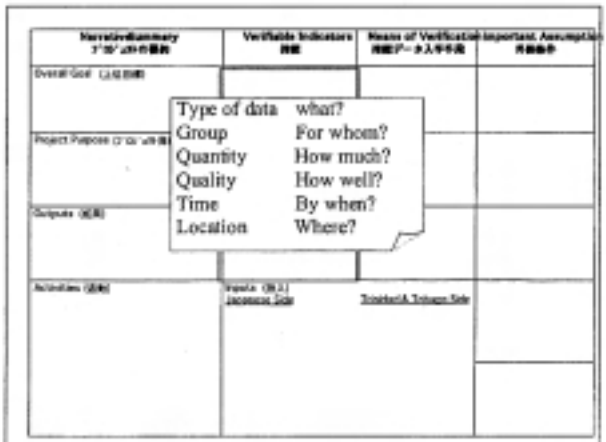
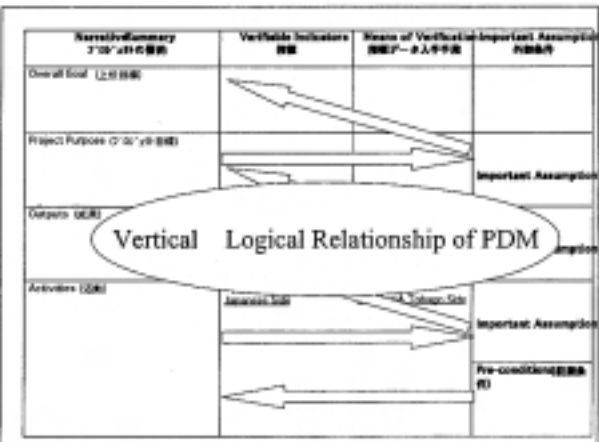
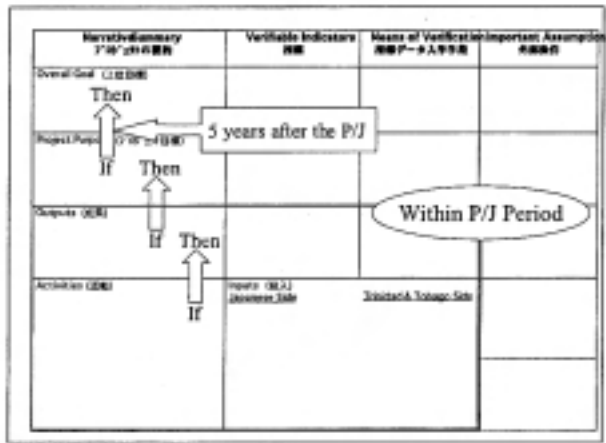
## What is PCM Workshop?

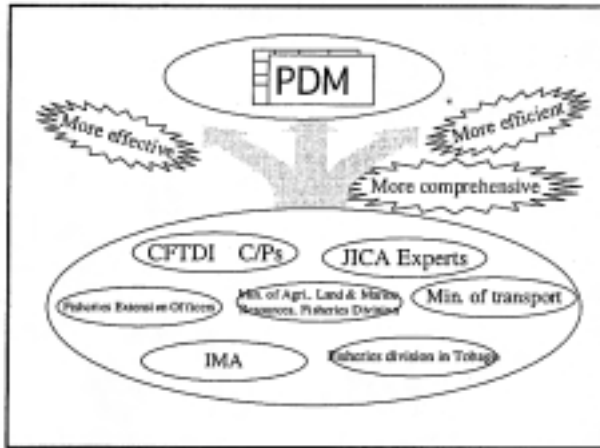




## Case study: Safer driving project in Country A

## Points to comprehend PDM





Thank you very much

# PROJECT DESIGN MATRIX (PDM)

Project name: (Name of the recipient country): \_\_\_\_\_ Duration: \_\_\_\_\_  
 Project area: \_\_\_\_\_ Target group: \_\_\_\_\_ Date: \_\_\_\_\_

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Overall Goal			
Project Purpose			
Outputs			
Activities	Inputs		
			Preconditions

- *Why should this project be implemented? (Overall goal)*
- *What is the objective of the project? (Project purpose)*
- *How can the objective be attained? (Outputs, Activities)*
- *What external factors will be important to attaining the objective? (Important Assumptions)*
- *What must be input to implement the project? (Input)*
- *How can the achievement of objectives be measured (Objectively Verifiable Indicators, Means of Verification)*
- *What conditions have to be satisfied before project implementation? (Preconditions)*

## **CASE: THE PUBLIC BUS CORPORATION OF L CITY**

L City, the capital of Latin American Country A, has one public bus corporation that owns 90 percent of all commercial buses in the country. The remaining 10 percent of the buses belong to three small or medium-sized private companies. Buses are the major means of transportation for the citizens of L City. Over the past ten years, the number of bus accidents has increased dramatically, resulting in continuing traffic problems. Recently, several fatal accidents have occurred, sparking growing distrust of L City's public bus corporation.

The mass media have taken particular interest in this problem, and have criticized the public bus corporation responsible for the accidents. For this reason, the citizens began turning to the safer service offered by private companies, and management of the public bus corporation has deteriorated.

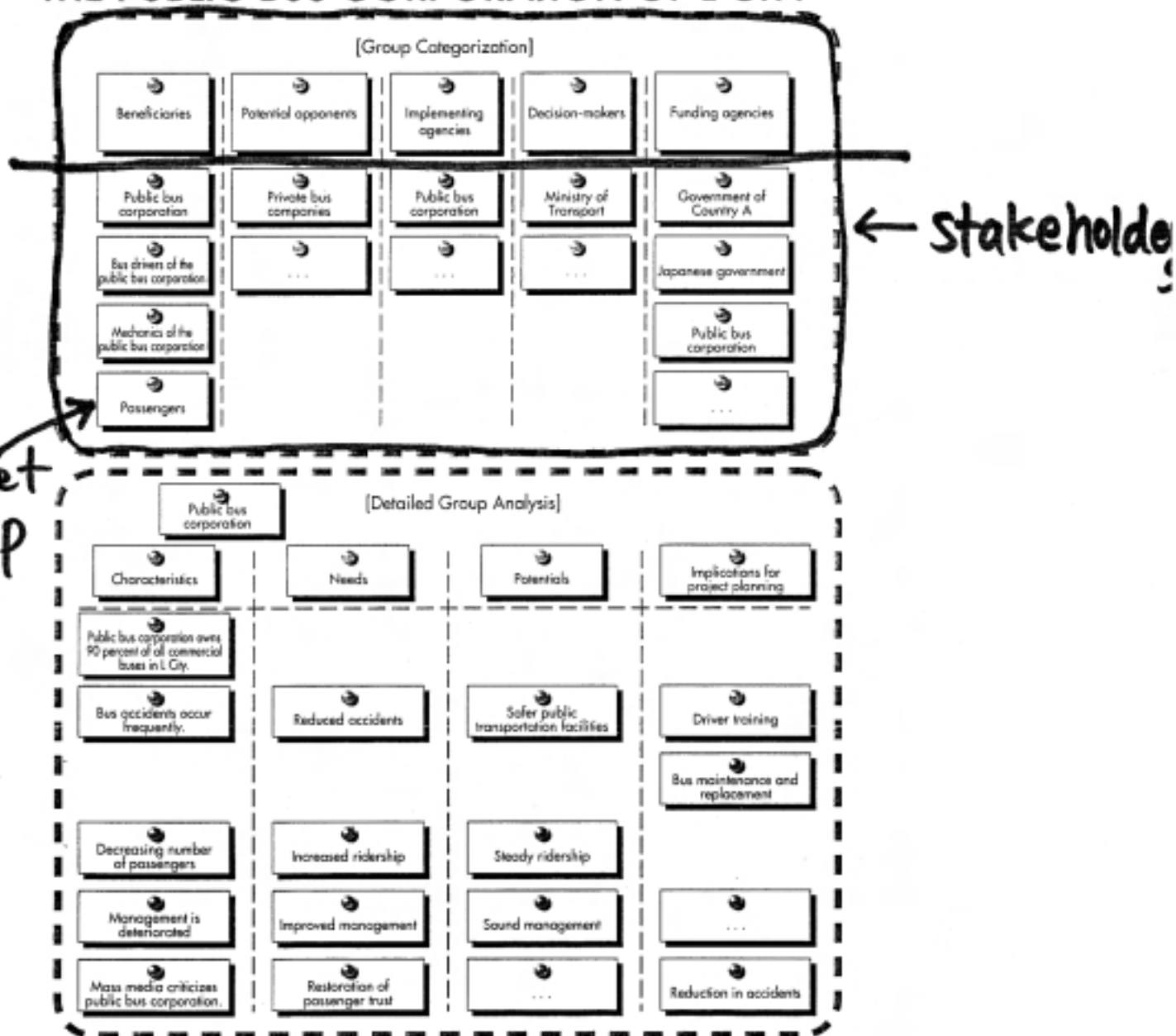
The causes of many of accidents involving the public bus corporation were technical: the buses are old and in poor condition; regular maintenance checks are not carried out; shortages of spare parts and equipment delay repairs; and mechanics are poorly trained. Furthermore, the bus drivers' failure to observe traffic laws — typified by high-speed driving on poor roads and disregard of traffic lights — has contributed to the problem.

The public bus corporation, through Country A's Ministry of Transport, has requested the cooperation of the Japanese government in improving the corporation's service.

Participation Analysis can be conducted in the following manner. At this stage, the statements on the cards need not be in sentence form.

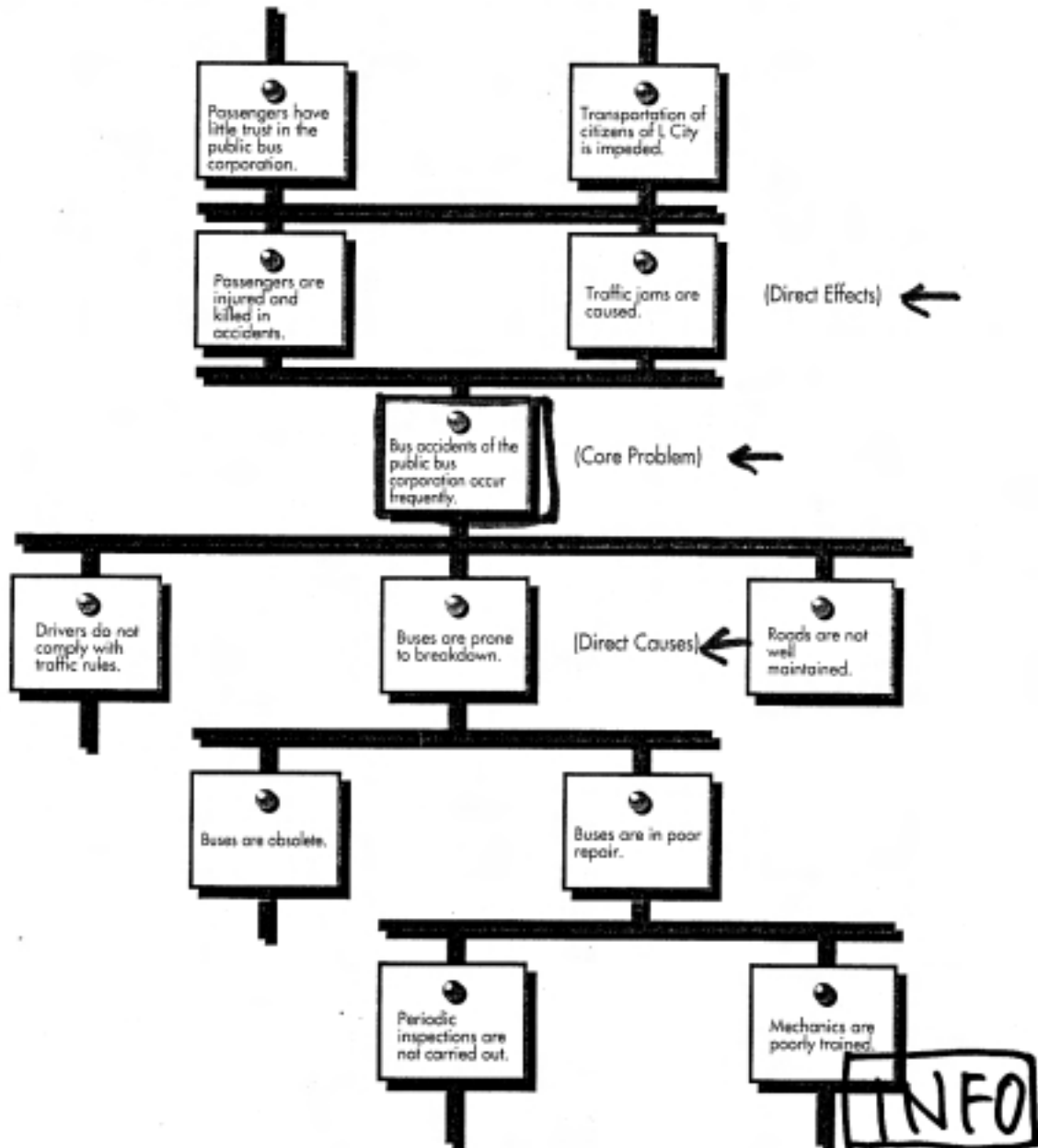
## EXAMPLE

### THE PUBLIC BUS CORPORATION OF L CITY



# EXAMPLE: PROBLEM TREE

## THE PUBLIC BUS CORPORATION OF L CITY





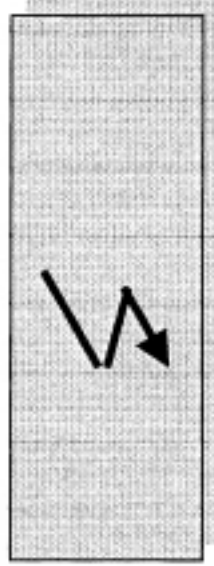
# Traffic Sign Cards



Discussion of this matter is required at a later stage.



Lack of information requires this be investigated further.



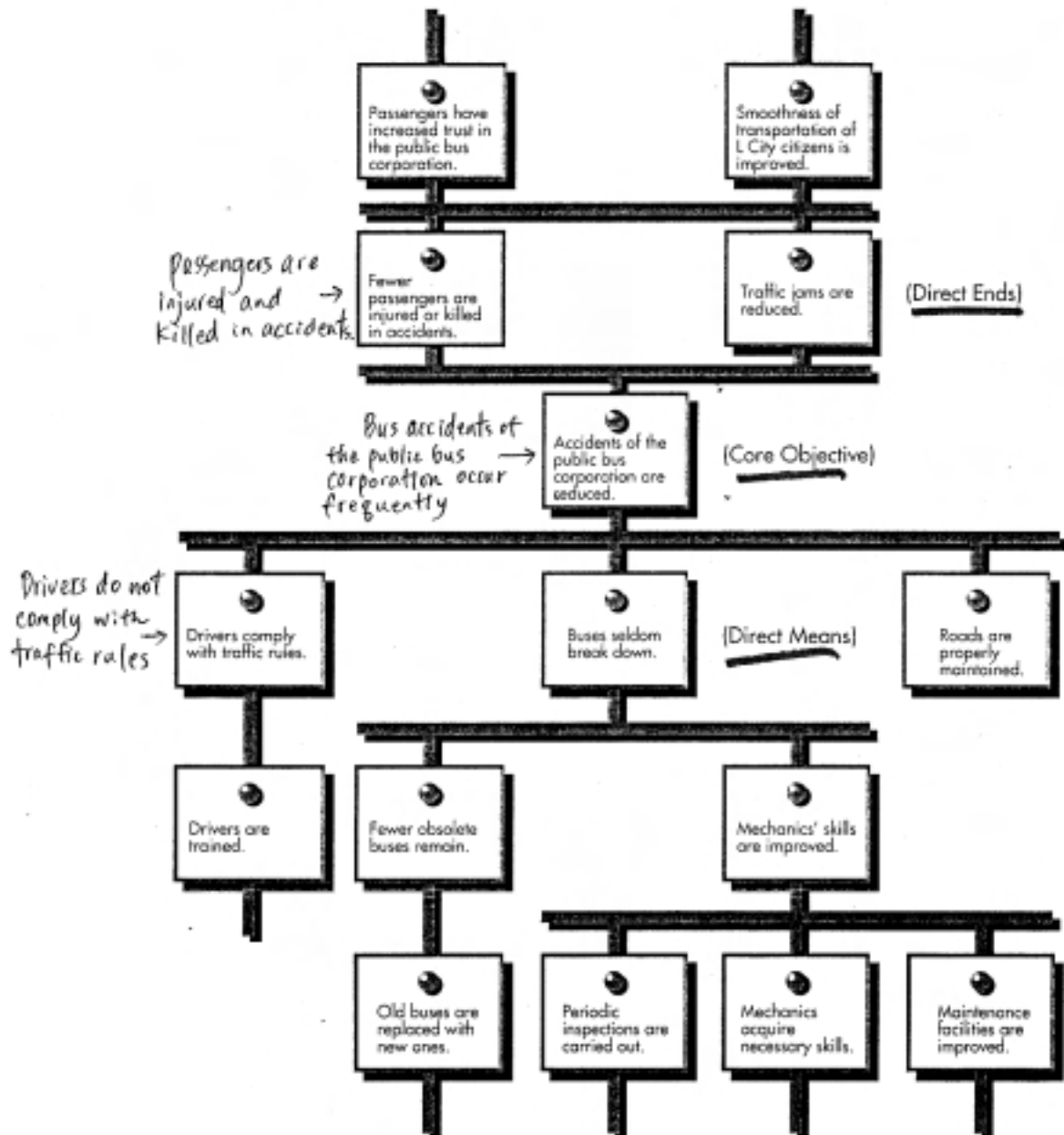
Disagreement, conflict, or controversy exist.



No further discussion or analysis is needed.

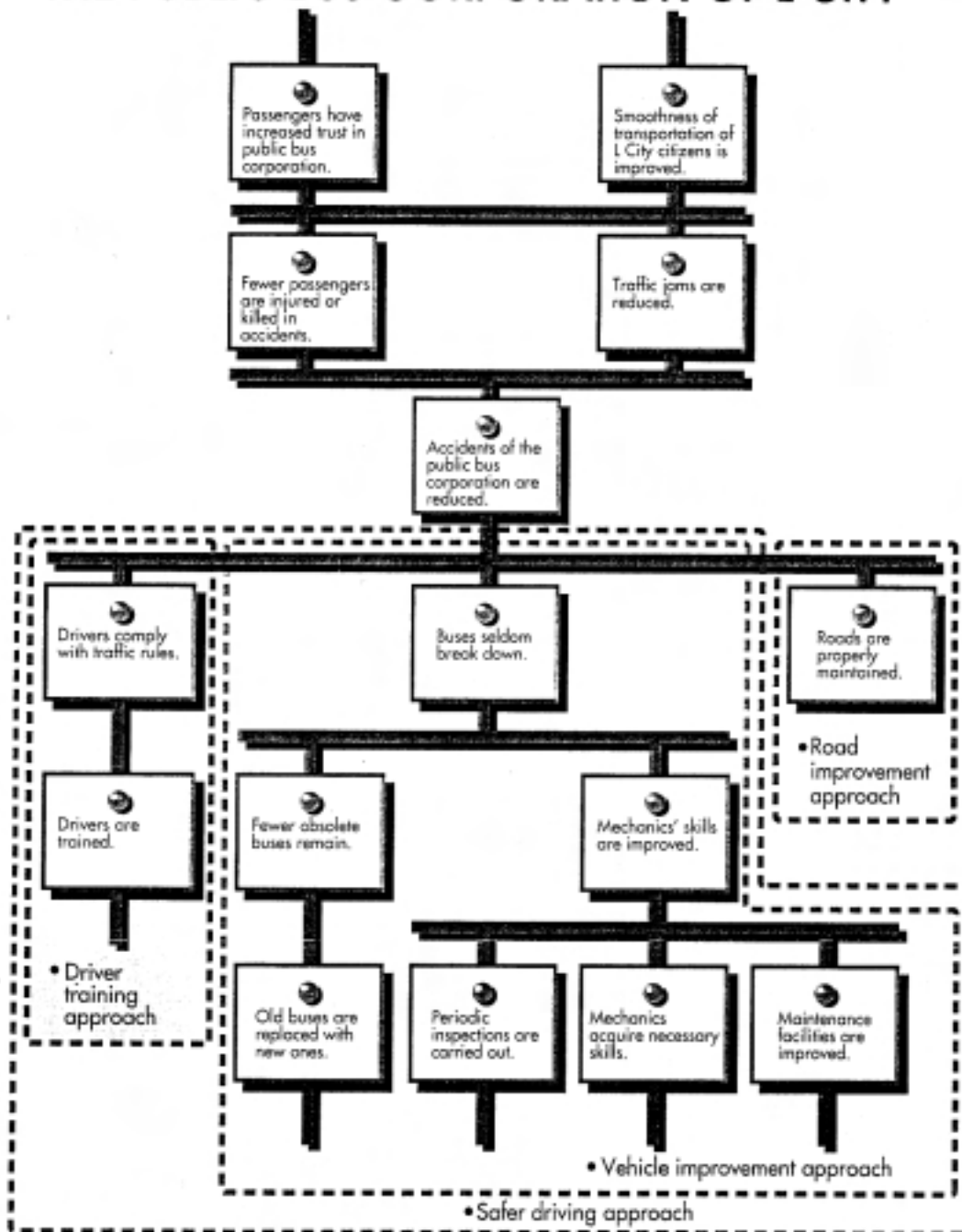
# EXAMPLE: OBJECTIVES TREE

## THE PUBLIC BUS CORPORATION OF L CITY



## EXAMPLE: IDENTIFYING APPROACHES

### THE PUBLIC BUS CORPORATION OF L CITY



## EXAMPLE: PROJECT SELECTION

### THE PUBLIC BUS CORPORATION OF L CITY

From the objectives tree, the following three approaches can be identified:

*Option 1: Driver training approach*

*Option 2: Vehicle improvement approach*

*Option 3: Road improvement approach*

One more approach is also possible by combining approaches 1 and 2.

*Option 4: Safer driving approach*

Choose the selection criteria for comparison, and compare all approaches with each other in relative terms.

	Driver training approach	Vehicle improvement approach	Road improvement approach	Safer driving approach
Cost	Low	High <ul style="list-style-type: none"> <li>• New vehicles</li> <li>• Maintenance equipment</li> </ul>	High <ul style="list-style-type: none"> <li>• Road maintenance equipment</li> </ul>	High <ul style="list-style-type: none"> <li>• New vehicles</li> <li>• Addition of maintenance facilities</li> </ul>
Technology	Appropriate <ul style="list-style-type: none"> <li>• Driver training manual</li> </ul>	Appropriate <ul style="list-style-type: none"> <li>• Periodic maintenance system</li> </ul>	Appropriate	Appropriate <ul style="list-style-type: none"> <li>• Driver training manual</li> <li>• Periodic maintenance system</li> </ul>
Social risk	Low	Low	High <ul style="list-style-type: none"> <li>• Emission due to road expansion</li> </ul>	Low
Possibility of reducing bus accidents	Low	Low	Low	High

**EXAMPLE: IMPORTANT ASSUMPTIONS  
THE PUBLIC BUS CORPORATION OF L CITY**

Project name: Safer driving project in Country A  
Project area: L City

Duration: April 1, 1998 to March 31, 2003  
Target group: Customers of the public bus corporation

Date: June 15, 1997

- ① →
- ③ →
- ② →
- ④ →
- ⑤ →

Normative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<b>Overall Goal</b> 1. Fewer passengers are injured or killed in accidents. 2. Traffic jams in L City are reduced.			<ul style="list-style-type: none"> <li>• The public transportation policy of the Ministry of Transport of Country A remains unchanged regarding the public bus corporation.</li> </ul>
<b>Project Purpose</b> <ul style="list-style-type: none"> <li>• Accidents of the public bus corporation are reduced.</li> </ul>			<ul style="list-style-type: none"> <li>• The total number of vehicles in L City does not increase drastically.</li> </ul>
<b>Outputs</b> 1. Drivers observe traffic rules. 2. Maintenance facilities are better equipped. 3. Mechanics' skills are improved. 4. Buses are properly maintained. 5. Obsolete buses are replaced.			<ul style="list-style-type: none"> <li>• The road maintenance conditions in L City do not worsen.</li> </ul>
<b>Activities</b> 1-1 Specify the rules and penalties that bus drivers should observe. 1-2 Formulate a driver training program. 1-3 Produce teaching materials. 1-4 Train driving instructors. 1-5 Train drivers. 1-6 Check periodically for compliance with important rules. 2-1 Draw up an improvement plan for maintenance facilities. 2-2 Purchase necessary equipments. ..... 3-1 Produce a maintenance manual. 3-2 Specify the technical skills required of mechanics. ..... 4-1 Draw up a periodic maintenance system. 4-2 Conduct periodic maintenance.	Inputs	<ul style="list-style-type: none"> <li>• Trained bus drivers continue working for the public bus corporation.</li> <li>• Trained mechanics continue working for the public bus corporation.</li> <li>• Customs clearance and transport procedures do not become greatly delayed.</li> </ul>	
			<b>Preconditions</b> <ul style="list-style-type: none"> <li>• The labor union of the public bus corporation does not oppose the project.</li> </ul>

## Performance Monitoring



**It is like a dashboard of a car that gives regular “readings”**

Performance Monitoring - 5

## Why do we need a Performance Monitoring System?



- ★ To predict
- ★ To correct courses of action
- ★ To ensure achievement of results
- ★ To document results

## EXAMPLE: OBJECTIVELY VERIFIABLE INDICATORS THE PUBLIC BUS CORPORATION OF L CITY

Project name: Safer driving project in Country A.  
Project area: L City

Duration: April 1, 1998 to March 31, 2003

Target group: Customers of the Public Bus Corporation

Date: June 15, 1997

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<p><b>Overall Goal</b></p> <ol style="list-style-type: none"> <li>1. Fewer passengers are injured or killed in accidents.</li> <li>2. Traffic jams in L City are reduced.</li> </ol>	<ol style="list-style-type: none"> <li>1. The number of passengers injured or killed in accidents involving the public bus corporation falls by 80 percent per annum by the year 2001.</li> <li>2. The time required to clear L City decreases by 8 percent by the year 2006.</li> </ol>		<ul style="list-style-type: none"> <li>• The public transportation policy of the Ministry of Transport of Country A remains unchanged regarding the public bus corporation.</li> </ul>
<p><b>Project Purpose</b></p> <ul style="list-style-type: none"> <li>• Accidents of the public bus corporation are reduced.</li> </ul>	<ul style="list-style-type: none"> <li>• The number of accidents involving the public bus corporation in L City declines by 50 percent by March 2001.</li> </ul>		<ul style="list-style-type: none"> <li>• The total number of vehicles in L City does not increase drastically.</li> </ul>
<p><b>Outputs</b></p> <ol style="list-style-type: none"> <li>1. Drivers observe traffic rules.</li> <li>2. Maintenance facilities are better equipped.</li> <li>3. Mechanics' skills are improved.</li> <li>4. Buses are properly maintained.</li> <li>5. Obsolete buses are replaced.</li> </ol>	<ol style="list-style-type: none"> <li>1. By the year 2001, more than 60 percent of the bus drivers of public bus corporation observe 70 percent of the important driving rules set by the corporation.</li> <li>2-1 The collision rate of the bus maintenance equipment reaches 80 percent by the year 2001.</li> <li>2-2 The number of buses that cannot be repaired due to parts shortage declines by 50 percent by the year 2001.</li> <li>3. 60 percent of the mechanics of the public bus corporation undergo maintenance training by the year 2001.</li> <li>4. The operation rate of buses meeting the standards increases by 30 percent by the year 2001.</li> <li>5. 50 percent of the buses used beyond a prescribed number of years or mileage are replaced every year by 2001.</li> </ol>		<ul style="list-style-type: none"> <li>• The road maintenance conditions in L City do not worsen.</li> </ul>
<p><b>Activities</b></p> <ol style="list-style-type: none"> <li>1-1 Study the rules and policies that bus drivers should observe.</li> <li>1-2 Formulate a driver training program.</li> <li>1-3 Produce teaching materials.</li> <li>1-4 Train driving instructors.</li> <li>1-5 Train drivers.</li> <li>1-6 Check periodically for compliance with important rules.</li> <li>2-1 Draw up an improvement plan for maintenance facilities.</li> <li>2-2 Purchase necessary equipments.</li> <li>.....</li> <li>3-1 Produce a maintenance manual.</li> <li>3-2 Specify the technical skills required of mechanics.</li> <li>.....</li> <li>4-1 Draw up a periodic maintenance system.</li> <li>4-2 Conduct periodic maintenance.</li> <li>.....</li> </ol>	<p><b>Inputs</b></p>		<ul style="list-style-type: none"> <li>• Trained bus drivers continue working for the public bus corporation.</li> <li>• Trained mechanics continue working for the public bus corporation.</li> <li>• Customs clearance and transport procedures do not become greatly delayed.</li> </ul> <p><b>Preconditions</b></p> <ul style="list-style-type: none"> <li>• The labor union of the public bus corporation does not oppose the project.</li> </ul>

## EXAMPLE: MEANS OF VERIFICATION THE PUBLIC BUS CORPORATION OF L CITY

Project name: Safer driving project in Country A  
Project area: L City

Duration: April 1, 1998 to March 31, 2003

Target group: Customers of the Public Bus Corporation

Date: June 15, 1997

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<p><b>Overall Goal</b></p> <ol style="list-style-type: none"> <li>Fewer passengers are injured or killed in accidents.</li> <li>Traffic jams in L City are reduced.</li> </ol>	<ol style="list-style-type: none"> <li>The number of damaged items or killed is reduced involving the public bus corporation by 80 percent or more by the year 2003.</li> <li>The time required to pass L City decreases by 10 percent by the year 2003.</li> </ol>	<ol style="list-style-type: none"> <li>Traffic accident records of the Traffic Department of L City Police</li> <li>Investigation reports of the Traffic Safety Center of L University</li> </ol>	<ul style="list-style-type: none"> <li>The public transportation policy of the Ministry of Transport of Country A remains unchanged regarding the public bus corporation.</li> </ul>
<p><b>Project Purpose</b></p> <ul style="list-style-type: none"> <li>Accidents of the public bus corporation are reduced.</li> </ul>	<ul style="list-style-type: none"> <li>The number of the corporation's accidents in L City declines by 60 percent by March 2003.</li> </ul>	<ul style="list-style-type: none"> <li>Traffic accident records of the Traffic Department of L City Police</li> </ul>	<ul style="list-style-type: none"> <li>The total number of vehicles in L City does not increase drastically.</li> </ul>
<p><b>Outputs</b></p> <ol style="list-style-type: none"> <li>Drivers observe traffic rules.</li> <li>Maintenance facilities are better equipped.</li> <li>Mechanics' skills are improved.</li> <li>Buses are properly maintained.</li> <li>Obsolete buses are replaced.</li> </ol>	<ol style="list-style-type: none"> <li>By the year 2001, more than 60 percent of the bus drivers of public bus corporation observe 70 percent of the important driving rules set by the corporation.             <ol style="list-style-type: none"> <li>The operation rate of the bus maintenance equipment reaches 80 percent by the year 2003.</li> <li>The number of buses that cannot be repaired due to parts shortage declines by 80 percent by the year 2003.</li> <li>80 percent of the mechanics of the public bus corporation undergo maintenance training by the year 2001.</li> <li>The operation rate of buses meeting the standards increases by 30 percent by the year 2003.</li> <li>30 percent of the buses used beyond a prescribed number of years or mileage are replaced every year by the year 2001.</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>Project survey reports on drivers' compliance with traffic rules</li> <li>Project survey reports on the operation rate of bus maintenance equipment             <ol style="list-style-type: none"> <li>Project survey reports on bus repair</li> </ol> </li> <li>Project records of the Final Examination of the mechanic training program</li> <li>Operation records of the public bus corporation</li> <li>Vehicle maintenance records of the project</li> </ol>	<ul style="list-style-type: none"> <li>The road maintenance conditions in L City do not worsen.</li> </ul>
<p><b>Activities</b></p> <ol style="list-style-type: none"> <li>Specify the rules and practices that bus drivers should observe.</li> <li>Formulate a driver training program.</li> <li>Produce teaching materials.</li> <li>Train driving instructors.</li> <li>Train drivers.</li> <li>Check periodically for compliance with important rules.</li> <li>Draw up an improvement plan for maintenance facilities.             <ol style="list-style-type: none"> <li>Purchase necessary equipments.</li> <li>Produce a maintenance manual.</li> <li>Specify the technical skills required of mechanics.</li> </ol> </li> <li>Draw up a periodic maintenance system.             <ol style="list-style-type: none"> <li>Conduct periodic maintenance.</li> </ol> </li> </ol>	<p><b>Inputs</b></p>	<ul style="list-style-type: none"> <li>Trained bus drivers continue working for the public bus corporation.</li> <li>Trained mechanics continue working for the public bus corporation.</li> <li>Customs clearance and transport procedures do not become greatly delayed.</li> </ul>	<p><b>Preconditions</b></p> <ul style="list-style-type: none"> <li>The labor union of the public bus corporation does not oppose the project.</li> </ul>



## EXAMPLE: INPUTS

### THE PUBLIC BUS CORPORATION OF L CITY

Project name: Safer driving project in Country A

Project area: L City

Duration: April 1, 1998 to March 31, 2003

Target group: Customers of the public bus corporation

Date: June 15, 1997

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<p><b>Overall Goal</b></p> <ol style="list-style-type: none"> <li>1. Fewer passengers are injured or killed in accidents.</li> <li>2. Traffic jams in L City are reduced.</li> </ol> <p><b>Project Purpose</b></p> <ul style="list-style-type: none"> <li>• Accidents of the public bus corporation are reduced.</li> </ul>	<ol style="list-style-type: none"> <li>1. The number of passengers injured or killed in accidents of the public bus corporation falls by 80 percent per annum by the year 2001.</li> <li>2. The time required to clear L City decreases by 80 percent by the year 2001.</li> </ol> <ul style="list-style-type: none"> <li>• The number of accidents of the public bus corporation in L City declines by 50 percent by March 2000.</li> </ul>	<ol style="list-style-type: none"> <li>1. Traffic accident records of the Traffic Department of L City Police</li> <li>2. Investigation reports of the Traffic Safety Center at L University</li> </ol> <ul style="list-style-type: none"> <li>• Traffic accident records of the Traffic Department of L City Police</li> </ul>	<ul style="list-style-type: none"> <li>• The public transportation policy of the Ministry of Transport of Country A remains unchanged regarding the public bus corporation.</li> <li>• The total number of vehicles in L City does not increase drastically.</li> </ul>
<p><b>Outputs</b></p> <ol style="list-style-type: none"> <li>1. Drivers observe traffic rules.</li> <li>2. Maintenance facilities are better equipped.</li> <li>3. Mechanics' skills are improved.</li> <li>4. Buses are properly maintained.</li> <li>5. Obsolete buses are replaced.</li> </ol>	<ol style="list-style-type: none"> <li>1. By the year 2001, more than 60 percent of the bus drivers of public bus corporation observe 70 percent of the important driving rules set by the corporation.</li> <li>2-1 The operation rate of the bus maintenance equipment reaches 80 percent by the year 2001.</li> <li>2-2 The number of buses that cannot be repaired due to parts shortages declines by 50 percent by the year 2001.</li> <li>3. 60 percent of the mechanics of the public bus corporation undergo maintenance training by the year 2001.</li> <li>4. The operation rate of buses meeting the standards increases by 30 percent by the year 2000.</li> <li>5. 50 percent of the buses used beyond a prescribed number of years or mileage are replaced every year by 2001.</li> </ol>	<ol style="list-style-type: none"> <li>1. Project survey reports on drivers' compliance with traffic rules</li> <li>2-1 Project survey reports on the operation rate of bus maintenance equipment</li> <li>2-2 Project survey reports on bus repair</li> <li>3. Project records of the Final Examination of the mechanic training program</li> <li>4. Operation records of the public bus corporation</li> <li>5. Vehicle maintenance records of the project</li> </ol>	<ul style="list-style-type: none"> <li>• The road maintenance conditions in L City do not worsen.</li> </ul>
<p><b>Activities</b></p> <ol style="list-style-type: none"> <li>1-1 Specify the rules and practices that bus drivers should observe.</li> <li>1-2 Formulate a driver training program.</li> <li>1-3 Produce teaching materials.</li> <li>1-4 Train driving instructors.</li> <li>1-5 Train drivers.</li> <li>1-6 Check periodically for compliance with important rules.</li> <li>2-1 Draw up an improvement plan for maintenance facilities.</li> <li>2-2 Purchase necessary equipments.</li> <li>-----</li> <li>3-1 Produce a maintenance manual.</li> <li>3-2 Specify the technical skills required of mechanics.</li> <li>-----</li> <li>4-1 Draw up a periodic maintenance system.</li> <li>4-2 Conduct periodic maintenance.</li> <li>-----</li> </ol>	<p><b>Inputs</b></p> <p>Japan</p> <p>Personnel</p> <p>Long-term experts</p> <p>Project leader</p> <p>Project coordinator</p> <p>Driving training</p> <p>Maintenance</p> <p>Short-term experts</p> <p>As required</p> <p>Equipment</p> <p>Buses</p> <p>Maintenance equipment, spare parts</p> <p>XX thousand yen</p> <p>60 M/M</p> <p>60 M/M</p> <p>60 M/M</p> <p>120 M/M</p> <p>XX</p>	<p>Country A</p> <p>Personnel</p> <p>Project manager</p> <p>Project coordinator</p> <p>Driving instructor</p> <p>Maintenance</p> <p>Clerical staff, secretary, etc.</p> <p>Facilities</p> <p>Training facility</p> <p>Maintenance facility</p> <p>Local cost</p> <p>Project implementation and management cost</p> <p>XX dollars</p> <p>60 M/M</p> <p>60 M/M</p> <p>180 M/M</p> <p>120 M/M</p> <p>XX</p>	<ul style="list-style-type: none"> <li>• Trained bus drivers continue working for the public bus corporation.</li> <li>• Trained mechanics continue working for the public bus corporation.</li> <li>• Customs clearance and transport procedures do not become greatly delayed.</li> </ul> <p><b>Preconditions</b></p> <ul style="list-style-type: none"> <li>• The labor union of the public bus corporation does not oppose the project.</li> </ul>

# EXAMPLE: PLAN OF OPERATIONS

## THE PUBLIC BUS CORPORATION OF L CITY

Activities	Expected results	Schedule '98 '99 4 7 10 1 4 7 10 1	Person in charge	Implementer	Equipment	Cost	Remarks														
1-1 Specify the rules and practices that drivers must observe. 1-1-1 List the major traffic regulations that drivers must observe.	Traffic regulations for drivers	<table border="1"> <tr><td>■</td><td>■</td><td>■</td><td>■</td><td>■</td><td>■</td><td>■</td><td>■</td><td>■</td><td>■</td><td>■</td><td>■</td><td>■</td><td>■</td></tr> </table>	■	■	■	■	■	■	■	■	■	■	■	■	■	■	Manager of General Affairs Department	Representative(s) of drivers of the public bus corporation A representative of Traffic Department of L City Police	Traffic regulations, accident record of L City, etc.	Necessary documents	Seek cooperation of L City Police
■	■	■	■	■	■	■	■	■	■	■	■	■	■								
1-2-2 Produce a training curriculum	Training curriculum	<table border="1"> <tr><td>■</td><td>■</td><td>■</td><td>■</td><td>■</td><td>■</td><td>■</td><td>■</td><td>■</td><td>■</td><td>■</td><td>■</td><td>■</td><td>■</td></tr> </table>	■	■	■	■	■	■	■	■	■	■	■	■	■	■	Director and experts in driver training (cooperation)	Two driving instructors One expert in driver training (short-term) One driving school teacher (in charge of large vehicles)	_____	Honorariums	No delay in forming Curriculum Committee
■	■	■	■	■	■	■	■	■	■	■	■	■	■								



## WRITING PROBLEM CARDS

1. Indicate existing problems only, not theoretical or potential ones.
2. Write only one problem per card.
3. Describe the problem in a sentence.
4. Try to avoid expressions such as "No (solution or resource) is available." Instead, describe the conditions resulting from the lack or absence of particular resources.

There is no hospital.

AVOID

People cannot  
receive appropriate  
medical treatment.

PREFER

5. Do not include both the cause and effect of a problem on one card.

Technical skills are  
inadequate and  
vehicles are in poor  
repair.

AVOID

Vehicles are in poor  
repair.

Technical skills are  
inadequate.

PREFER