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a participatory planning tool manual

Vagnby, Bo Hellisen

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MANUAL

Logical Framework Approach

A Participatory Planning Tool

Bo Vagnby

Department of Planning and Development

Aalborg University

September 2000

Manual for Logical Framework Approach
A Participatory Planning Tool

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Preface

Why this manual?

The Narrow View

Projects and project proposals are often quite specific and clear as far as financial- and personnel input and expected physical results are concerned. But a thorough assessment of the overall context and objectives, the target groups and the external factors which determine success or failure is frequently lacking.

Such deficiencies in planning may be reflected in inadequate monitoring and evaluation systems. During implementation there is often too much emphasis on visible or physical results, and too little on policy issues and the effects of the project.

As a result, plans and projects often develop in unintended directions, and fail to respond to the needs of the intended beneficiaries. Or, projects may have unforeseen negative results which could have been avoided with more systematic planning.

The Broad View

Development is a process of change. Change processes have some basic common features:
- A broader context in which we act;
- A problem area or present situation which we want to change;
- An objective, or a vision of the future, that we want to achieve;
- Choices about where and how we intend to move, through time; and
- Actions we want to be implemented.

The Logical Framework Approach (LFA) has been developed in response to some of these problems and challenges.

The Logical Framework Approach is a tool for managing development processes. As such, it can be used simply to structure and create an overview of complex projects on a single sheet of paper. Or, LFA can be used to foster commitment to transparent, structured, participatory and flexible development processes. Finally, LFA can be used as a framework for designing change processes, monitoring progress and evaluating impact.

So far we have been using the terms *development* or *change process*. They underline a process view of change. However, the terms "project" or "programme" are much more frequently used. During the rest of this manual we will for convenience mainly use the term "project" for all kind of development processes, including broader programmes. In this context, a project is understood to be a set of planned undertakings designed to achieve a certain specific objective with given resources and within a specified period of time.

This manual provides some information necessary for learning and using the LFA tool in connection with project planning and management.

LFA is a method for process-oriented project planning making us examine the key elements of a project systematically. The logical framework uses a standardized terminology and helps reduce conceptual misunderstandings, and it brings to light any disagreements on major project components which might exist between the different actors involved in the preparation and planning of the project.

LFA is useful in all stages of the project cycle. This can be in major revisions of a project, or it can be in a short discussion of a specific solution to a problem, where LFA focuses attention on the important areas to be considered in decision making.

The Logical Framework Approach is a particularly strong communication tool in the early stages of the project cycle.

Target group

The LFA-manual was originally developed for students of International Technology Planning as part of their training in project analysis and planning. However, on several occasions, students pointed out that the method was also useful when planning projects in different contexts. When the curriculum for the Master of Science in Planning was revised, it was therefore decided to include the LFA-method in the course on Project Appraisal and Project Evaluation. Also, since Danish local authorities are increasingly implementing projects financed through specific funding arrangements, such as the Ministry of Transport´s demonstration projects or European Union projects, it is believed that knowledge of LFA among Danish planners is likely to have beneficial results in terms of improved designs in relation to such projects and programmes.

Does LFA have limitations?

The Logical Framework Approach should not be considered a tool for making long-term plans which do not need revisions and modifications.

It is important to recognize the limitations of the LFA. It is a general analytical tool, and not the only tool available for good project management through the project cycle. Important other tools are for example cost-benefit analysis, time planning, environmental impact assessment, SWOT-analysis etc.

The LFA should be looked upon as a servant of good project and programme design. It must not become a straightjacket. Targets and objectives shall therefore be reviewed and revised as the circumstances of projects change.

The user should be aware that process- or people-oriented projects always contain a multitude of circumstances and possibilities. The LFA, if applied too rigidly, can promote the idea that social change can be planned and implemented in the form of precise and determined inputs and outputs. This is not so.

Acknowledgement

Bo Vagnby
September 2000

READING ADVICE

When you start reading about the various planning steps in Section 2 (page 14), then have a look at the examples of the respective steps in Annex I (pp. 42-53).

Section 1: Introduction

LFA AND ITS USE

The Logical Framework Approach is based on the "Logical Framework" method, which is a way of structuring the main elements in a project, highlighting logical linkages between intended inputs, planned activities and expected results.

LFA was first introduced in the beginning of the 1970es by the United States Agency for International Development (USAID). Today it is used by many international development agencies, and it is increasingly being used as a planning tool in a number of other fields in both developing and industrialised countries.

Since it was first conceived, 3 phases can be distinguished:

- **First Phase**
  Initially, it was a tool for **a standardized presentation of projects.** The purpose of having such a tool was to ease the decision-making procedure for those approving the projects. LFA was descriptive in nature.

- **Second Phase**
  In the 1970es, LFA became a tool for **improved design of projects.** The purpose changed: Better initial design was expected to lead to **more successful projects.** LFA became **analytical** in nature.

- **Third Phase**
  In the 1980es and early 90es, LFA expanded to become a tool for **improved design, implementation and management of projects.** By including certain participatory aspects, LFA was seen as a means to overcome both analytical and communicative shortcomings in the "normal" launching and implementation of projects by (donor) organisations. LFA **maintained the analytical focus, but communication aspects entered.** Simultaneously, LFA stiffened in many organisations to a prescriptive, formal requirement of using a certain vocabulary and a certain presentation form. In practice, LFA has sometime become an instrument for narrowing perceptions, closing options and legitimizing options already made.

Applied properly, LFA can serve to achieve:

- **Commitment**
  Successful development depends not only on the commitment of the direct actors, but also of persons, groups and institutions with interests in the outcome of the development process.

- **Transparency**
  Both for those directly involved and those interested in the process, transparency serves to reduce fear, keep track of the process and to deal with real conflicts instead of apparent conflicts.

- **Structure**
  LFA offers structure to the design of the development process, as well as to the implementation, monitoring and evaluation of the process.

- **Participation**
  Participation can, if managed properly, create and maintain commitment, decrease resistance to change, build alliances and stimulate initiative, energy and creativity.

- **Flexibility**
  Flexibility is a means of adapting the changing context that always surrounds development processes. The LFA establishes a framework that can easily be revised to cope with new opportunities and threats.

The Logical Framework Approach is an analytical tool for process and objectives-oriented project planning and management.

The key words are:

- Process oriented

- Objectives oriented

- Target group oriented

- Participatory

THE PROS AND CONS OF LFA

The advantages of using LFA are:

- It ensures that fundamental questions are asked and weaknesses are analysed, in order to provide decision makers with better and more relevant information.
- It guides systematic and logical analysis of the inter-related key elements which constitute a well-designed project.
- It improves planning by highlighting linkages between project elements and external factors.
- It provides a better basis for systematic monitoring and analysis of the effects of projects.
- It facilitates common understanding and better communication between decision-makers, managers and other parties involved in the project.
- Management and administration benefit from standardized procedures for collecting and assessing information.
- The use of LFA and systematic monitoring ensures continuity when original staff are replaced.
- Use of the LFA format makes it easier to undertake both sectoral studies and comparative studies in general.

The limitations of LFA are:

- Rigidity in project administration may arise when objectives and external factors specified at the outset are over-emphasized. This can be avoided by regular project reviews where the key elements can be re-evaluated and adjusted.
- LFA is a general analytic tool. It is policy-neutral on questions of income distribution, employment opportunities, access to resources, local participation, cost and feasibility of strategies and technology, or effects on the environment.
- LFA is therefore only one of several tools to be used during project preparation, implementation and evaluation, and it does not replace target-group analysis, cost-benefit analysis, time planning, impact analysis etc.
- The full benefits of utilizing LFA can be achieved only through systematic training of all parties involved and methodological follow-up.

Using LFA helps:

Clarify the **context** of a project

clarify the **purpose** of, and the justification for, a project

identify **information** requirements

clearly define the **key elements** of a project

Analyse the project's **setting** at an early stage

facilitate **communication** between all parties involved

identify how the success or failure of the project should be **measured**

CONCEPTS USED IN LFA

The purpose of **development projects** is to introduce change whose results are desired within the project environment and society at large. We assume that there is general agreement about the improved situation before project planning takes place. This will make it possible to agree upon the **immediate objective** and the **development** (overall) **objective** of the project.

No development project exist in a social vacuum. It is important that the desired future situation is described in such a way that it is possible to check at a later stage to what extent the project has been successful in relation to its objectives, major stakeholders and the **target groups.**

A development project is based on its **input** of resources, the implementation of certain **activities**, and will result in a number of **outputs** which are expected to contribute to the desired objectives. Inputs, activities and outputs are elements of a project; they are not in themselves a measure of success or failure.

The extent to which a project is going to succeed or not depends both upon a number of factors that can be controlled by the project management, as well as upon a number of **external factors** beyond the control of management. During planning and implementation it is extremely important to identify, monitor and analyse external factors, since these may cause the project to fail even if it is implemented as planned.

THE DEVELOPMENT PROCESS

In the Logical Framework Approach a project is seen as a causally linked series of events. These are described at the levels mentioned above: Inputs, activities, outputs, immediate objective and development objective. Since it is not certain that these events will actually happen, the process is seen as a sequence of development hypotheses that can be analysed and described.

```
┌──────────────────┐      ┌──────────────────┐
│ Development      │ ───> │ External         │
│ objective        │      │ factors          │
└──────────────────┘      └──────────────────┘

┌──────────────────┐      ┌──────────────────┐
│ Immediate        │ ───> │ External         │
│ objective        │      │ factors          │
└──────────────────┘      └──────────────────┘

┌──────────────────┐      ┌──────────────────┐
│ Outputs          │ ───> │ External         │
│                  │      │ factors          │
└──────────────────┘      └──────────────────┘

┌──────────────────┐      ┌──────────────────┐
│ Activities       │ ───> │ External         │
│                  │      │ factors          │
└──────────────────┘      └──────────────────┘

┌──────────────────┐      ┌──────────────────┐
│ Inputs           │ ───> │ Pre-             │
│                  │      │ conditions       │
└──────────────────┘      └──────────────────┘
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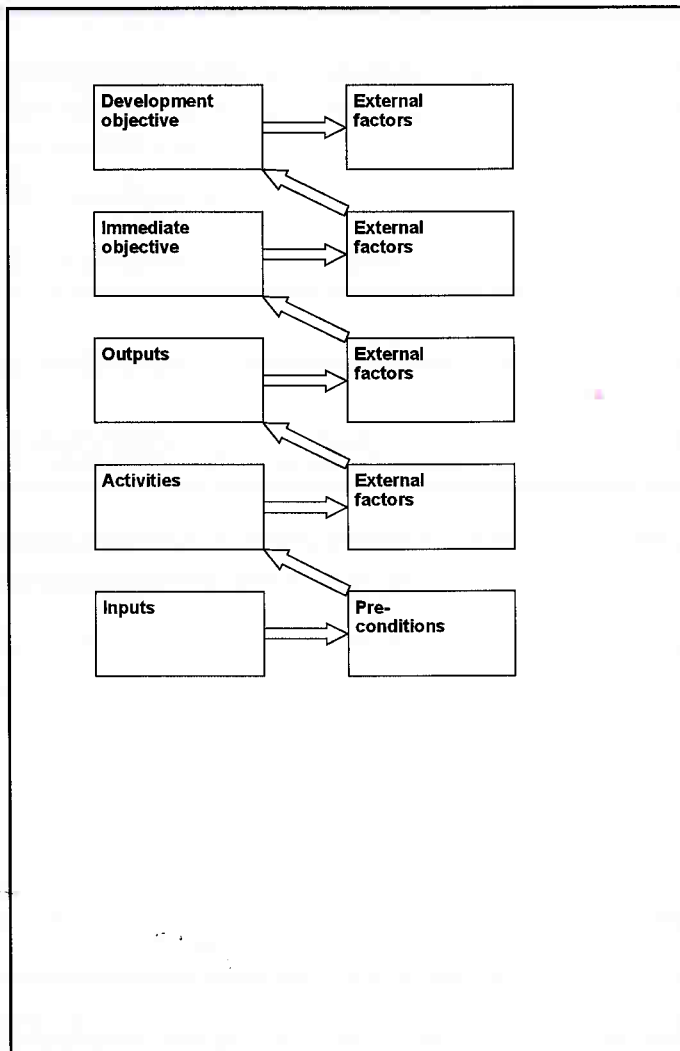
We assume that:

- if the inputs are available, then the activities will take place.

- if the activities take place, then the outputs will be produced.

- if the outputs are produced, then the immediate objective will be achieved.

- in the long run this will contribute to the fulfilment of the development objective.

While the certainty of the earlier hypotheses may be high, since the results are largely under the management of the project team, it diminishes at the higher levels.

The uncertainties of the process are explained by external factors (relevant preconditions or assumptions) at each level. These external factors are outside the direct control of the project, but have to be fulfilled for the development process to succeed.

The development process is summarized in a matrix consisting of the above basic elements: the Project Matrix (PM).

THE BASIC ELEMENTS OF THE
PROJECT MATRIX (PM)

Development objective	External factors
Immediate objective	External factors
Outputs	External factors
Activities	External factors
Inputs	Pre-conditions
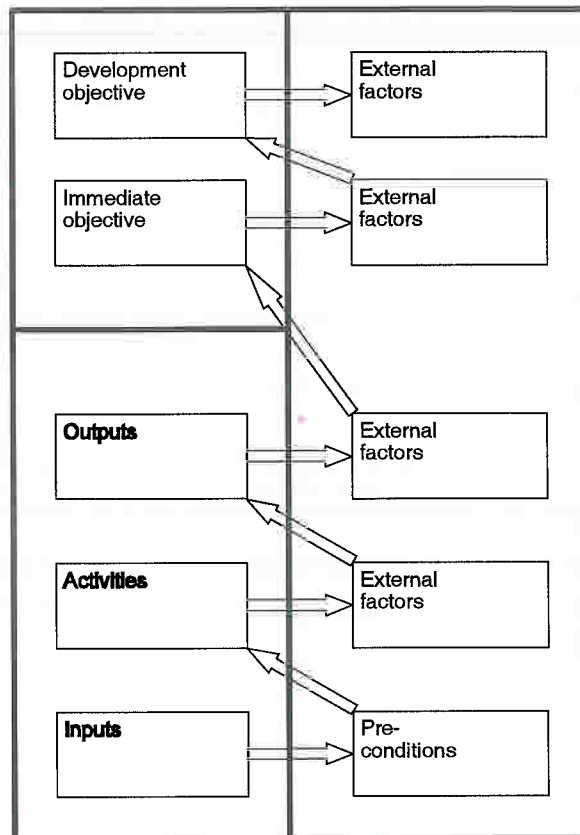
THE PROJECT AND ITS CONTEXT

LFA analyses the project in its wider context, as can be seen from the following Project Matrix.

There is an important horizontal division between the project itself (bottom left box) and its objectives (top left box). The project is what the project administration **should be able to guarantee**, while the objectives are **out of the immediate reach** of the project administration. It is anticipated that the project will significantly contribute to the realization of the objectives.

There is also an important vertical division between elements **directly influenced** by the project (left boxes), and external factors **outside the control** of the project administration (right box). The latter are factors which we expect will significantly influence the success or failure of the project.

Identifying key external factors at an early stage will help in the selection of an appropriate project strategy. Monitoring both the fulfilment of objectives and the external factors during the life of the project and acting on the information will increase the probability of success.

```
+---------------------+---------------------+
|  THE                |                     |
|  OBJECTIVES         |                     |
|                     |                     |
|                     |                     |
+---------------------+  THE PROJECT        |
|                     |  ENVIRONMENT        |
|                     |                     |
|                     |                     |
|                     |                     |
|  THE                |                     |
|  PROJECT            |                     |
|                     |                     |
|                     |                     |
+---------------------+---------------------+
```
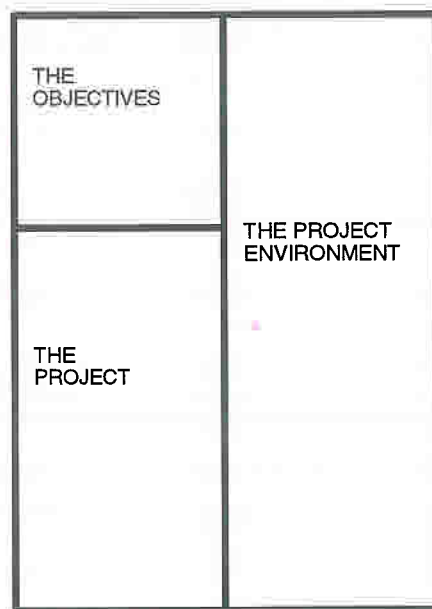
The context of a project is all the elements or factors in the situation that:

- we will depart from
- we will act in
- we can influence
- we are influenced by.

It is important for project success to focus on the context, or external factors outside management´s direct control, because:

- It clarifies the frontier between the project and the context.
- It clarifies the support we can expect from others and the resistance we may meet.
- It gives diverse project participants a shared view of the threats and opportunities we may meet as the project goes on.
- It clarifies underlying values of participants, and the policy concerns they represent on behalf of their community, organisation or government.

THE PROJECT MATRIX GIVES AN OVERVIEW OF THE PROJECT, ITS OBJECTIVES AND ITS ENVIRONMENT

THE ELEMENTS OF THE PROJECT MATRIX

An actual PM may contain elements additional to those on page 9. Usually a column for indicators is added to the development objective, the immediate objective and the outputs. The indicators specify how the achievement of objectives should be measured.

Development objective	Indicators	External factors
Immediate objective	Indicators	External factors
Outputs	Indicators	External factors
Activities		External factors
Inputs		
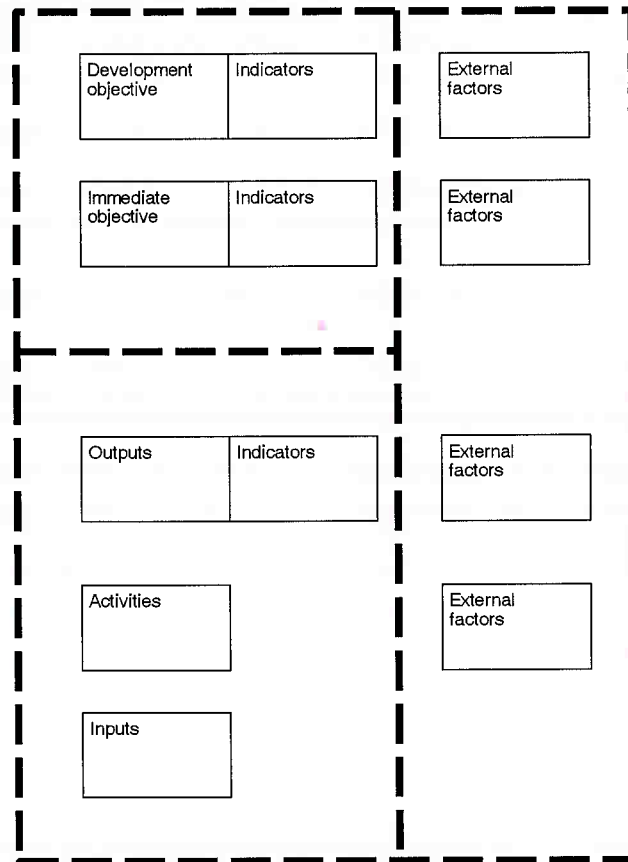
The PM is a one-page summary of the project design. It can be reduced from a 5x3 to a 4x3 matrix by moving the input box to the space under the indicators. Each element in the PM is described on the next page.

1. DEVELOPMENT OBJECTIVE	1. INDICATORS	1. EXTERNAL FACTORS
The higher-level objective to-wards which the project is expected to contribute. (Mention target groups)	Measures (direct or indirect) to verify to what extent the development objective is fulfilled. Means of verification (quantitative or qualitative) should be specified.	Important events, conditions or decisions necessary for sustaining objectives in the long run. NB: External factors are often called assumptions in project management.
2. IMMEDIATE OBJECTIVE The effect which is expected to be achieved as the result of the project. (Mention target groups)	2. INDICATORS Measures (direct or indirect) which verify to what extent the immediate objective is fulfilled. Means of verification (quantitative or qualitative) should be specified.	2. EXTERNAL FACTORS Important events, conditions or decisions outside the control of the project which must prevail for the development objective to be attained.
3. OUTPUTS The results that the project management should be able to guarantee. (Mention target groups)	3. INDICATORS Measures (direct or indirect) which verify to what extent the outputs are produced. Means of verification (quantitative or qualitative) should be specified.	3. EXTERNAL FACTORS Important events, conditions or decisions outside the control of the project management, necessary for the achievement of the immediate objective.
4. ACTIVITIES The activities that have to be undertaken by the project in order to produce the outputs.	5. INPUTS Goods and services necessary to undertake the activities. (Popularly referred to as 3 x M: Manpower, money and materials)	4. EXTERNAL FACTORS Important events, conditions or decisions outside the control of the project management necessary for the production of the outputs.

Section 2: Planning with LFA

LFA STEP BY STEP

An LFA workshop focuses on key aspects of a complex existing situation.

The comprehensiveness of the planning exercise will be determined by the

- amount of information available
- complexity of the problems to be handled
- number and capability of the participants

The *analysis* is conducted in four consecutive steps, identifying the most direct and essential causal relationships, followed by three *planning* steps where the project is designed.

ANALYSING THE SITUATION

1. Context and stakeholder analysis

2. Problem analysis

3. Objectives analysis

4. Alternatives analysis

DESIGNING THE PROJECT

5. Project elements

6. External factors

7. Indicators

STEP 1: CONTEXT AND STAKEHOLDER ANALYSIS

Lack of knowledge about the people affected by development projects has proved to be a common cause of project problems.

As the first step, therefore, a picture of the interest groups, the individuals and institutions involved has to be developed.

A fundamental requirement of all development projects is that the objectives reflect the needs of the society and the interest groups, and not merely the internal needs of institutions.

STAKEHOLDER MAPPING

1. **Write down** important persons, groups and institutions affected by the problem environment.

2. **Identify** their main interest in relation to the focus question

3. **Categorize** them, e.g. interest groups, individuals, organizations, authorities, etc.

4. **Discuss** whose interests and views are to be given priority when analysing the problems. Specify gender or ethnicity if necessary.

STAKEHOLDER POLICY CONCERNS

In some circumstances, it may be necessary to clarify which relevant guiding policies stakeholders must relate to in their own organisational framework. The policy concern analysis can be seen as a special, detailed segment of the stakeholder analysis, serving to clarify the "luggage" of actors participating directly in, or being affected by, the LFA-process. Policy concerns that positively or negatively could be taken into account could for example be: environmental sustainability, economic or fiscal policies, regulatory frameworks etc.

LOOKING AT SOME OF THE GROUPS

A more detailed analysis may have to be made of a selection of the groups identified.

The participants in the LFA workshop should decide on the criteria to be used in this analysis. A suggestion is given in the following box.

Once the criteria are established, the main characteristics of the individual groups should be identified accordingly.

ESTABLISHING A PLANNING PERSPECTIVE

It is important that workshop participants are able to agree on whose interests and views are to be given priority when the analysis of problems is carried out (step 2). Relevant issues to have in mind are:

- Which groups are most in need of assistance?
- Which interest groups should be supported?
- What conflicts would occur by supporting given interest groups and what measures can be taken to avoid such conflicts?

TAKE A CLOSER LOOK AT SOME OF THE ACTORS

5. **Select** the most important groups.

6. Make a more **detailed analysis** of these groups, e.g. in terms of

   a. Problems:

   The **main problems** affecting or facing the group (economic, environmental, social, cultural, etc.)

   b. Interests:

   The **main needs** and interests as seen from the group's point of view (policy concerns, subsidies etc)

   c. Potential:

   The **strengths** and **weaknesses** of the group

   d. Linkages:

   Main **conflicts** of interests, patterns of **cooperation** or **dependency** with other groups.

SET PRIORITIES

7. Decide whose interests and views are to be **given priority** when the analysis of problems is carried out (see step 2).

STEP 2: PROBLEM ANALYSIS

GENERAL

On the basis of available information, the existing situation is analysed: i.e. the major problems and barriers are identified and the main causal relationships between these are visualized in a

Problem Tree. In this step we work to create an image of reality that represents the main obstacles or negative elements in the situation, and the relationships between these elements.

The work with the Problem Focus Area aims at opening perspectives. Therefore, when formulating a problem, be careful of the words "lack of ..", e.g.:

"Lack of trained personnel"

This would point to one solution: appointment of more staff. Using words like "lack of" points to absent or perhaps unrealistic solutions.

An alternative formulation like:

"High turn-over of trained personnel",

has a different effect. It could open a discussion about alternatives to remedy the situation, i.e. better personnel management, provision of adequate housing, improved salary conditions, etc..

FORMULATE PROBLEMS

1. Identify **existing** problems - not possible, imagined or future ones

2. A problem is not the absence of a solution - but an existing **negative state**

Example:

No urban renewal activity	2,400 dwellings without sanitary installations
WRONG	RIGHT

3. Write only one problem per card.

IDENTIFYING A STARTING POINT

Write down a suggestion for an **initial focus question** as a starting point, which you consider the central point of the overall problem (to be done by each participant or each group).

The theme guiding the discussion and selection of the focal problem should be based on the **interests** and **problems** of the stakeholders involved (who are the "problem owners"?).

Clarify the meaning of the problems, and cluster related problems.

Discuss each proposal and try to agree on **one** focal problem.

If agreement cannot be reached, then:

- arrange the proposed problems in a problem tree, according to the causal relations between them,
- try again to agree on the focal problem on the basis of the overview achieved in this way.

If you have several problem clusters, draw a picture of their interrelationship. This can, but need not to be a cause-effect relationship.

SELECT A STARTING POINT

1. Identify **major** existing problems, based upon available information (brainstorming)

2. Select one **focal** problem or problem area for the analysis

DEVELOP THE PROBLEM TREE

3. Identify **substantial** and **direct causes** of the focal problem

4. Identify **substantial** and **direct effects** of the focal problem

5. Construct a problem tree showing the **cause** and **effect** relationships between the problems

6. Review the problem tree, verify its **validity** and **completeness**, and make necessary adjustments.

DEVELOPING THE PROBLEM TREE

1. Start building the problem tree by selecting the focal problem. Then place the **substantial** and **direct** causes of the focal problem parallel to each other underneath it.

```
                    ┌─────────────────┐
                    │ High turn-over of │
                    │   trained staff   │
                    └─────────────────┘
                             │
        ┌────────────────────┼────────────────────┐
┌───────────────┐   ┌───────────────┐   ┌───────────────┐
│ Poor personnel │   │               │   │               │
│  management    │   │ Lack of housing │   │  Low salaries  │
└───────────────┘   └───────────────┘   └───────────────┘
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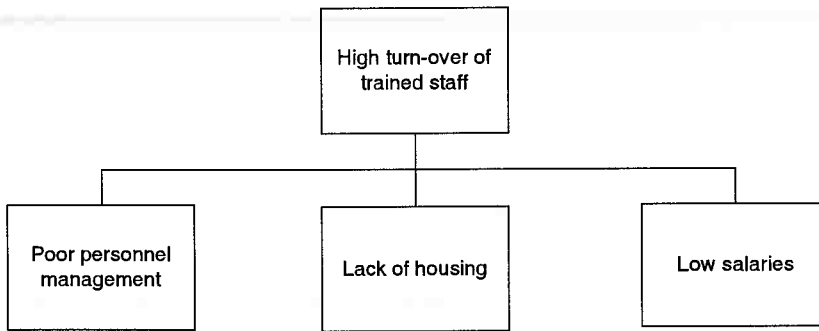
2. Place the causes of the direct causes identified in step 1 underneath.

```
                    ┌─────────────────┐
                    │ High turn-over of │
                    │   trained staff   │
                    └─────────────────┘
                             │
        ┌────────────────────┼────────────────────┐
┌───────────────┐   ┌───────────────┐   ┌───────────────┐
│ Poor personnel │   │               │   │               │       ┌──┐
│  management    │   │ Lack of housing │   │  Low salaries  │      │  │
└───────────────┘   └───────────────┘   └───────────────┘      │Ca│
     │                    │                                      │us│
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│Unclear││Unclear│ │      │ │      │                             └─▽┘
│lines of││ job  │ │      │ │      │
│command ││descrip│ │      │ │      │
└──────┘└──────┘  └──────┘ └──────┘
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19
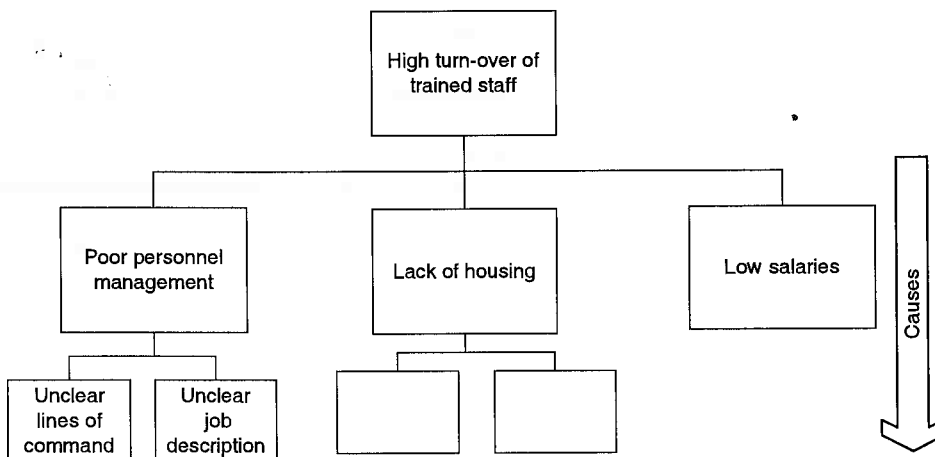
3. Determine the **substantial** and **direct** effects of the causes identified in step 1 and 2 and place parallel above the focal problem.

```
┌──────────────┐   ┌──────────────┐   ┌──────────────┐        ▲
│  Low morale  │   │Quality of    │   │Increased     │        │
│ among staff  │   │services      │   │health        │        │  Effects
│              │   │declining     │   │risks         │        │
└──────┬───────┘   └──────┬───────┘   └──────┬───────┘        │
       └──────────────────┼──────────────────┘
                   ┌───────┴──────┐
                   │High turn-over │
                   │of trained staff│
                   └───────┬──────┘
       ┌──────────────────┼──────────────────┐
┌──────┴───────┐   ┌──────┴───────┐   ┌──────┴───────┐        │
│Poor personnel│   │Lack of housing│  │ Low salaries │        │  Causes
│ management   │   │              │   │              │        │
└──┬────────┬──┘   └──┬────────┬──┘   └──────────────┘        ▼
┌──┴──┐  ┌──┴──┐   ┌──┴──┐  ┌──┴──┐
│Unclear│ │Unclear│ │     │  │     │
│lines of│ │job    │ │     │  │     │
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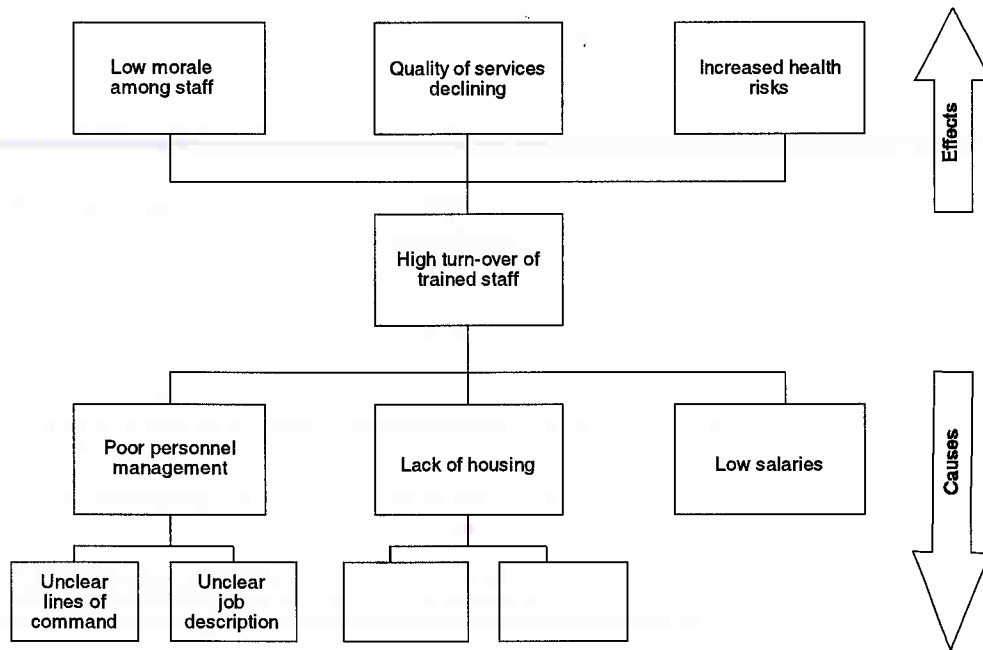
4. Causes and effects are further developed along the same principle to form the **problem tree.**

5. The problem analysis can be concluded when the participants are satisfied that all essential information has been included in the network in order to explain the main cause-effect relationships characterizing the problem.

THE PROBLEM TREE

```
┌──────────┐      ┌──────────┐
│          │      │          │
└────┬─────┘      └────┬─────┘
     │                 │
   ┌─┴─────────────────┴─┐
   │                     │
┌──┴───────┐      ┌──────┴───┐
│          │      │          │
└────┬─────┘      └────┬─────┘
     └─────────┬───────┘
            ┌──┴───────┐
            │ Focal    │
            │ problem  │
            └──┬───────┘
     ┌─────────┼─────────────┐
┌────┴────┐ ┌──┴─────┐ ┌─────┴────┐
│         │ │        │ │          │
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         ┌──────┴──────┐
     ┌───┴────┐   ┌────┴─────┐
     │        │   │          │
     └────────┘   └──────────┘
```

Effects

＋

Causes
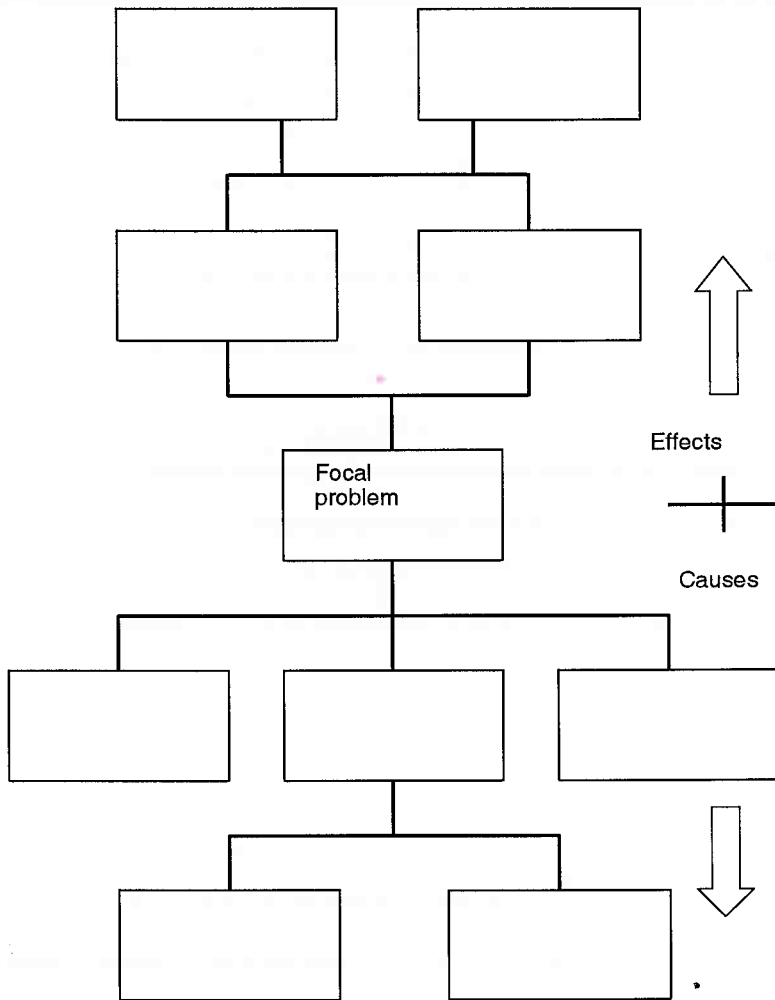
STEP 3: OBJECTIVES ANALYSIS

FOCUS ON OBJECTIVES

In the objectives analysis the problem tree is transformed into a tree of objectives (creating images of a desired or improved future situation) and analysed. Such images or visions are expressed as positive objectives, and interrelated with other aims and goals.

Working with alternative visions or scenarios of the future allows us to keep our options open. At this stage we do not need to choose, we are exploring alternatives.

The final choice of objective will depend on relevant factors in the context, policy concerns, resources available, barriers we expect to encounter etc.

Objectives can vary in scope and specificity:

- An objective can indicate the direction we want to move in, without specifying how far we intend to go, e.g. *"The health situation improved"*. Such **directional objectives** serve for longer-term objectives (often called **development objectives** in LFA) or for dialogue and discussion in the early stages of the project cycle.

- An objective can be **S-M-A-R-T**: Specific, Measurable, Accurate, Realistic and Time bound, eg: *" The health status of children in Kotido District improved by extending immunisation of under-fives to 90% by end of 2004".*

    The image of the future that is expected to prevail when the project is concluded, is in the LFA called an **immediate objective**. Immediate objectives should ultimately be SMART.

From a project management viewpoint, projects are most manageable with one clear immediate objective. The reason is of course, that several objectives may lead to internal conflicts about priorities and resources, and loss of sense of direction. However, this is often impossible or inconvenient.

If a project is proposed to have several objectives, the relevant considerations are:
- Are the objectives **compatible?**
- Are they **complementary**
- Are the objectives at **the same level** in the objectives tree?

An alternative to several objectives is to split up projects in sub-projects when outputs, activities and resources can be, in managerial terms, clearly split between sub-projects (often also called components). The sub-projects would then have the same immediate objective.

HOW TO FORMULATE OBJECTIVES

Objectives are identified and formulated through:

- Brainstorming: The point of departure is the initial focus question; and/or:
- Changing identified problems from negative situations ("Poor personnel management") to a positive condition ("Personnel management improved"); and/or
- Identifying means to overcome barriers hindering the achievement of objectives.

Similar to the work process in the Problem Focus Area, it is convenient to identify and discuss relationships between objectives. This can lead to a hierarchy of objectives.

In these hierarchies, we identify assumed means-end relationships (corresponding to the cause-effect relationships we identified in the problem tree), i.e. "Improved personnel management" can become a means to the end: "Turn-over of trained staff reduced". The lower in the hierarchy an objective is placed, the more limited in scope it will be.

It is difficult to formulate objectives. Four issues deserve attention:

1. Objectives are future situations, _not_ activities:
Language invites formulations such as:

> " the objective is to strengthen the environmental authority...",

or
> "The objective is to reduce pollution".

But "to strengthen..." or "to reduce pollution" are actually processes, and not end-situations. It may seem a formality to change the wording to "the environmental authority strengthened" and "pollution reduced". The most important is not whether the wording is changed, but whether the participants are discussing the goal or objective the wish to achieve, or whether they are discussing the process leading to the objective.

2. Objectives should be at one level only:
Often, objectives are formulated like:
> "Reduced infant mortality in Como through safe supply of water"

or

"Reduced pollution of Lake Como by decreased discharge from industry"

Both these formulations include means-end relationships, or objectives on different levels. Safe supply of water is a means to reduce infant mortality, decreased industrial discharge is a means to reduced pollution of the lake.

3. Changes of wording are significant:
The wording of an objective can have significant consequences for the identification of the necessary means to achieve the objective:

> *"Safe water to households in the Como area".*

This formulation would not allow a specific identification of necessary means. It is a directional objective.

> *"Supply of safe water (average consumption 30 litres pr capita per day) to 2200 households in Como by June 2005",*

could be achieved without bothering about the capacity of the water company to maintain the supply and network

> *"Financially and technically sustainable, uninterrupted supply of safe water (average consumption 30 litres pr capita per day) of 2200 households in Como by June 2005, and capacity to expand network by 300 connections annually thereafter",*

would take the project a step further, since it implies that the water company has surplus funds for new investments and technical capacity to implement network extensions.

The objective could also include a vision on how the water utility is managed:

> *"The Como Water Utility, by June 1999, is autonomous, with a Board with a majority of water consumers; is financially and technically sustainable; supplies uninterrupted safe water (average consumption 30 litres pr capita per day) of 2200 households in the Como area by June 1999; has capacity to expand the network by 300 connections annually thereafter; and conducts regular campaigns for appropriate water use as part of its regular operations".*

The last formulation may appear very detailed. However, the examples should demonstrate that a formulation such as: "Safe water to households in Como" can be fine for the initial overview of relations between objectives, but not for stating more explicitly the desired or expected future situation.

4. Ownership of objectives:

Objectives are somebody's vision of the future. Some stakeholders or actors affected by the objectives may be enthusiastic, others may be indifferent, some may passively oppose and some may try their best to obstruct the achievement of an objective.

A neutral objective, without owners, such as:

> *"Reduced pollution of Lake Como",*

does not indicate who is taking ownership of, or is really interested in and willing to fight for the objective.

In the early design stages of the project cycle, it does not necessarily create any trouble if the "ownership" is not clearly placed. But when implementation is due, it must be possible to define a person, a group or an institution who takes ownership of the objective, and has commitment to achieve it. In other words, identification of "ownership" is the key to *sustainability* in overall terms.

DEVELOPING THE OBJECTIVES TREE

In the objectives analysis, the problem tree is transformed into a tree of objectives (an improved future situation) and analysed.

Working from the top downwards, all problems are reworded, making them into **objectives** (positive statements).

- The focal problem is similarly transformed into an objective
- difficulties in rewording may be solved by going back to the original problem statement.

If the statements make no sense after being reworded from problems, write a replacement objective, or leave the problem unchanged.

Check that meeting objectives at one level are sufficient to achieve the objective at the next level.

> Problems: *"If cause A, then effect B"*
> Objectives: *"Means X in order to achieve end Y"*

Caution: Every cause-effect relationship does not automatically become a means-end relationship. This depends on the rewording.

Working from the bottom upwards, ensure that cause-effect relationships have become means-ends relationships.

Finally, draw lines to indicate the means-ends relationships in the objectives tree.

DEVELOP THE OBJECTIVES TREE

1. Reformulate all elements in the problem tree into **positive**, desirable conditions.

2. Review the resulting means-ends relationships to assure validity and completeness of the objective tree.

3. If necessary:
    Revise statements

    Delete objectives which appear unrealistic or unnecessary

    Add new objectives where necessary

4. Draw connecting **lines** to indicate the means-ends relationships.

Objective

Ends

Means
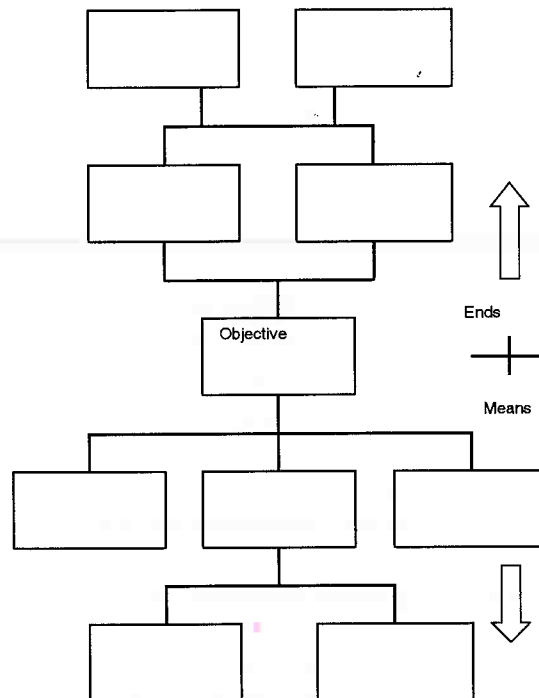
STEP 4: ALTERNATIVES ANALYSIS

SELECTING THE ALTERNATIVES

The purpose of the alternatives analysis is to identify possible alternative options, assess their feasibility and choose and agree upon **one** project strategy.

Possible, related means-ends branches in the objectives tree are identified and marked (see page 29). These means-end branches constitute the alternative solutions.

Alternative options are marked or numbered, e.g. "physical development approach", "production approach", "income approach", "training approach", etc.

Referring to the results from the context and stakeholder analysis (step 1), the planning group should discuss the alternative options in the light of which interest groups would be affected by them and in which ways.

IDENTIFY ALTERNATIVE OPTIONS

1. Identify differing "means-ends" ladders, as possible alternative options or project components.

2. Eliminate objectives which are obviously not desirable or achievable.

3. Assess which alternative in your opinion represents an optimal project strategy by using criteria such as:

    - resources available
    - probability of achieving objectives
    - political feasibility
    - environmental considerations
    - cost-benefit ratio
    - social risks
    - sustainability
    - time horizon
    - etc.

4. Discuss the implications for affected groups.

5. Make an assessment of the **feasibility** of the different alternatives (see annex 4b).

The strategy analysis involves identification of different possible strategies to achieve the project objective, and choice of project strategy.

In the diagram of objectives (objective tree), the different clusters of objectives of the same type are called strategies. One or more of them will be chosen as the strategy for implementation. The most pertinent and feasible strategy is selected on the basis of a number of criteria, for example those mentioned in the "Alternative Options" box above. The criteria should be used to weigh the alternative strategies
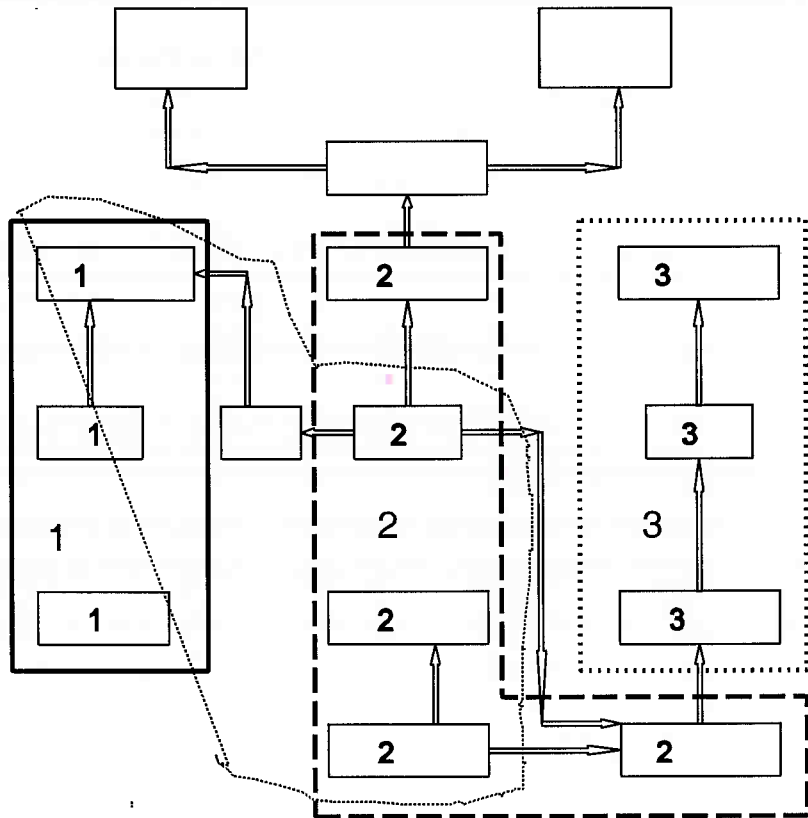
STEP 5: IDENTIFY MAIN PROJECT ELEMENTS

In the previous planning steps we focussed on actors, identified problems, developed objectives and assessed alternatives. In other words, we were designing options. In preparing the Project Matrix (PM), where we put the project together, we are designing action.

The logical framework is a set of related concepts that describe in an operational way in matrix form the most important aspects of an operation, and it is a graphic presentation of the substance of the operation.

In this step we collect elements from the previous steps, and add new elements, with a view to implementation. The level of detail must be adapted to answer the questions:

- What decisions have to be taken, and by whom?
- What results do we need to produce for this purpose?

THE OVERALL PROJECT LOGIC

The logical framework is based on a *vertical* and a *horizontal* logic. Vertically, it describes the relationship between activities, outputs (results) immediate objective (project purpose) and overall objectives. Horizontally, it illustrates the external factors (assumptions) that influence implementation and indicators relevant for measuring the strategy underlying the project.

Project Elements	Indicators	Assumptions
1. Development Objective	for Development Objective	from immediate objective to development objective
2. Immediate Objective	for Immediate objective	from outputs (results) to immediate objective
3. Outputs (results)	for Outputs (results)	from activities to outputs
4. Activities	5. Input	Preconditions

- ***"We know why we are acting":***
  This is the **development objective** of the project, or the wider, long-term goal or purpose. Values, mission objectives, and general policy concerns can enter when defining the development objective.

- ***"We know where we want to get to":***
  The **immediate objective** is the specific "next station", the specific situation we want to achieve, and which contributes to the fulfilment of the development objective.

- **"We know what we want to produce":**
  We must now define what tangible, specific **outputs** are necessary to achieve the immediate objective.

- **"We know how we are going to produce the outputs":**
  To become operational, we must define the necessary and sufficient **activities.**

- **"We know what we need in order to perform":**
  To perform the activities, we need resources to **input.** These must also be defined.

Once the project strategy has been chosen, the main project elements are derived from the objectives tree and transferred into the first vertical column of the project matrix (PM) (see page 13).

DESIGN THE PROJECT MATRIX

- Start at the top and work downwards

- Decide on one development objective and one immediate objective

- If necessary, reformulate the wording from the objectives tree to make them more accurate

- The **development objective** describes the anticipated long term objective towards which the project will contribute (project justification)

- The **immediate objective** describes the intended effects of the project (project purpose) for the direct beneficiaries as a precisely stated future condition

NOTE: Ideally, there should be **only one** immediate objective

The **outputs** are expressed as objectives which the project management must achieve and sustain within the life of the project. Their combined impact should be sufficient to achieve the immediate objective.

NOTE: While the project management should be able to guarantee the project outputs, the immediate objective is beyond their immediate control.

Activities are expressed as processes. Avoid detailing activities and list only those which are necessary to achieve the outputs listed. Indicate the basic structure and strategy of the project.

All outputs should be numbered. Each activity should be numbered relating it to the corresponding output.

Main **inputs** are expressed in terms of funds, personnel and goods.

DEFINE THE MAIN PROJECT ELEMENTS:

1. Development objective

2. Immediate objective

3. Outputs

4. Activities

5. Inputs

STEP 6: EXTERNAL FACTORS (ASSUMPTIONS)

When we are designing our plan of action by linking the project elements in a logical structure, we are not acting in a controlled context. Therefore, the hypothesis that we can achieve our objectives depends on certain assumptions about the context both as preconditions (assumptions about the situation before we start acting) and at different levels during the implementation of the project. Thus the project logic becomes a bit more complex:

- If inputs are available and preconditions are fulfilled, then the activities can be undertaken.
- If the activities are completed, and if certain assumptions about the context remain valid, the outputs can be produced.
- If the outputs can be produced, and if certain assumptions about the context remain valid, then the immediate objective can be achieved.
- If the immediate objective is achieved, and if certain assumptions about the context remain valid, then the project will contribute to the achievement of the development objective.

Critical assumptions or external factors are included in the project design to enable assessment and monitoring of important external factors. When we talk of assumptions, we distinguish between 3 types:

- Assumptions, which - to the best of our judgement - will **prevail**, but, which - if they contrary to expectations should fail - would have **serious** consequences for the project's ability to produce outputs or achieve objectives.

- Assumptions for which the risk that they may **not prevail** is deemed fairly high, but which would **not** imply **serious** consequences if they fail.

- Finally, assumptions for which the risk is that they will **not prevail** is high and where consequences are **serious** if they fail are so-called killer assumptions.

    By definition, a killer assumption should not and cannot appear in a project presentation, since the identification of such an assumption must lead to the modification or abandonment of the project. This does not mean that we do not come across killer assumptions in the analytical stage, but we will have to relate to them at that juncture.

> External factors (assumptions) are conditions that must exist if the project is to succeed but which are outside the direct control of the project management.

- Start from the bottom and work upwards.

- Examine whether the inputs are sufficient to undertake the anticipated activities or whether additional events must also take place outside the project (external factors).

- Some external factors can be derived from elements in the objectives tree which were not incorporated into the project.

- Identify external factors at each level in the PM up to the development objective level.

- Starting from the bottom, verify at all levels that the proposals follow logically from each other and are complete. Each level must contain the necessary and sufficient conditions for the next level above (see page 37).

- Make sure that external factors are described in such operational detail (with indicators if possible) that they can be monitored.

Examples of external factors (*some with reference in this manual, p. 20*)

- *Salaries increased by 3 % p.a. in 2000-2004*
- Local institutions collaborate in planning activities
- *New job descriptions worked out and approved for key staff*
- *Provision of better housing facilities for supervisory staff*
- Increases in cost of public transport does not lead to reduced number of passengers
- The proposed plan will be approved by the Ministry of Environment before end of 2002
- The number of ferry passengers will remain the same as in 1998
- Charges for crossing Storebælt and Øresund will not be reduced.

IDENTIFY IMPORTANT ASSUMPTIONS AND EXTERNAL FACTORS

External factors:

1. can be derived from the objectives tree

2. are worded as positive conditions (see objectives)

3. are linked to the different levels in the Project Matrix

4. are weighted according to importance and probability

CHECKING THE EXTERNAL FACTORS

The significance of the external factors should be assessed in order to indicate the chances of project success.

Go through the list of external factors one by one at each level of the PM and check its importance and probability, as shown on page 36.

External factors which are either very likely to occur or not very important for the outcome of the project should be deleted.

If it is determined that an external factor is both very important for the outcome but not likely to occur, then it is a **killing** factor ("killer assumption"). If *killer assumptions* are found, the project must either be changed to avoid these factors, or the project must be abandoned.

Development objective		External factors
Immediate objective		External factors
Outputs		External factors
Activities		External factors
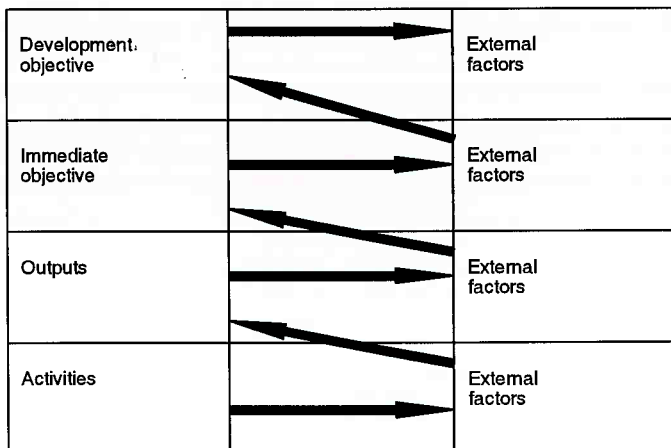
Each level in the PM must contain the necessary and sufficient conditions for the next level above.

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CHECK THE SIGNIFICANCE OF THE EXTERNAL FACTORS

1. Eliminate the obvious factors which are:

* Not important for the outcome

* Very likely to occur

2. Assess the probability of occurrence for the remaining factors:

a. Quite likely but not certain

Include the factor into the PM and make sure to:

- monitor it

- report changes

- if possible influence it

b. Not likely to occur (killing factor!)

Redesign the project

c. If this not possible:

Reject the project proposal

STEP 7: INDICATORS

GENERAL

Indicators are specified in the second column in the Project Matrix (see p. 13).

The details of the indicators determine how we can measure to what extent the objectives have been achieved at different times. Measurements can be:

- Quantitative, e.g. kilometres of rehabilitated roads
- Qualitative, e.g. health system functioning effectively
- Behavioural, e.g. increased utilization of health services.

Qualitative indicators should be made measurable as far as possible.

Direct indicators may need to be supplemented by additional indirect (proxy) indicators.

Example of direct and indirect (proxy) indicators:

PURPOSE	DIRECT INDICATOR	INDIRECT INDICATOR
Increased income of small farmers	Crop sales	Purchase of typical consumer items Tin roof on houses

Several indicators are better than one. Single indicators seldom convey a comprehensive picture of change.

Indicators define the performance standard to be reached in order to achieve the development objective, the immediate objective and the outputs.

Indicators should be SMART and specify:

- quantity   - how much?
- quality   - how well?
- time   - by when?
- location   - where?

Indicators focus on **important characteristics** of an **objective** and provide a basis for monitoring and evaluation.

VERIFIABLE INDICATORS

A project with directional objectives and loosely described outputs cannot be monitored and evaluated for progress and impact compared to planned progress and impact.

But even "SMART" objectives and results may be difficult to monitor. Take the objective.

> *"The Como Water Utility, by June 1999, is autonomous, with a Board with a majority of water consumers; is financially and technically sustainable; supplies uninterrupted safe water (average consumption 30 litres pr capita per day) of 2200 households in the Como area by June 1999; has capacity to expand the network by 300 connections annually thereafter; and conducts regular campaigns for appropriate water use as part of its regular operations".*

Part of the objective may be fairly easy to verify (the existence of a Board, for example). But other parts - like technical sustainability - may be difficult, since it is not clear precisely what it means and how it can be determined whether this technical sustainability has been achieved or not.

This is where indicators serve. They are agreements or understandings made before the project starts on how to verify the achievement of objectives and results. They are *indicative* - to verify uninterrupted supply of water it would not make sense to monitor water supply 24 hours a day, 365 days a year. Instead, the reporting system of the Water Utility would be checked for possible breakdowns of supply.

A set of indicators for the above mentioned objective could be:

For autonomy and Board composition:
- *Board Meeting Minutes reflect composition of Board; annual budgets, tariffs, investment and operation plans are approved at Board level.* •

For financial sustainability:
- *1999 audited accounts show positive net profit after depreciation, disregarding possible extra incomes or other a-typical elements.*

For technical sustainability:
- *Sample performance observation of 2 work shifts, 2 planned pump maintenance jobs and the installation of 2 new connections, confirm adequate adherence to the standards described in the Operations and Maintenance Manuals of the Water Utility.*

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For uninterrupted water supply to 2200 households, and capacity to expand the network:

- *Records confirm min. 2200 households connected, with min. 200 added in 1998, and average consumption of 120-150 l per day per connection, and stock of tubes. Valves and water meters for min. 200 additional connections.*

For successful campaigns on water use:

- *60% of people from 40 connected new households can, when interviewed, state main content of at least two messages regarding proper water use advocated by the Water Utility during the last year.*

It may seem quite elaborate to prepare verifiable indicators in this level of detail. And in practice, it is often also not done. But if it is not done properly, there will be no yardsticks enabling us to learn how far we got. For a project worth maybe 20 million DKK, it represents a small effort to become measurable so that outsiders can check what is going on.

There are good arguments for introducing the concept of verifiable indicators in LFA. Firstly, indicators have been used in engineering projects for a long time (performance of work according to concrete specifications). Secondly, environmental planners have used indicators for e.g. reduction of emissions for a considerable time. Thirdly, it is considered sound professional practice that this well known and well reputed practice is introduced in relation to projects in socio-economic areas in order to do away with some of the non-committal objectives we come across in many publicly financed projects.

FORMULATING THE INDICATOR

A good indicator is:

- **Substantial**, i.e. it reflects an essential aspect of an objective in precise terms.

- **Independent**, at the different levels. Since development and immediate objectives will be different, and each indicator is expected to reflect evidence of achievement, the same indicator cannot normally be used for more than one objective.

- **Factual.** Each indicator should reflect fact rather than subjective impression. It should have the same meaning for project supporters and to informed sceptics.

- **Plausible**, i.e. the changes recorded can be directly attributed to the project.

- Based on **obtainable** data. Indicators should draw upon data that is readily available or that can be collected with reasonable extra effort as part of the administration of the project.

The measures provided by indicators should ideally be accurate enough to make the indicator objectively verifiable. An indicator is "objectively verifiable" when different persons using the same measuring process independently of one another obtain the same measurements.

In the early planning stages, indicators are just guiding values with which to analyse the project concept. These guiding values must be reviewed again when the project becomes operational, and where necessary replaced by project-specific indicators.

FORMULATE THE INDICATOR

Objective: Improved Urban Renewal Process

1. **Identify indicator:**
   - e.g. reduction in number of complaints

2. **Specify target group:**
   - tenants and owners

3. **Quantify:**
   - 150 flats in 24 properties

4. **Set quality:**
   - less than 10% complaints

5. **Specify time frame:**
   - between October 1999 and April 2001

6. **Set location:**
   - Vestbyen, Aalborg

Combine: 150 flats (in 24 properties) in Aalborg Vestby renovated between October 1999 and April 2001 without more than 15 families complaining about the time involved and the information received from the Urban Renewal Company.

CHECKING THE MEANS OF VERIFICATION

When indicators are formulated, the sources of information necessary to use them should be specified, i.e.:

- what information is to be made available
- in what form; and

- who should provide the information.

Sources **outside** the project should be assessed for accessibility, reliability and relevance.

Formulating indicators should include specifying their means of verification. In many cases it may be useful to add a column for "means of verification" to the Project Matrix.

CHECK THE USEFULNESS OF THE INDICATOR

1. Is the information **available** from existing sources (statistics, records, etc.)?

2. Is the information **reliable** and up-to-date?

3. Is **special data-gathering** required?

4. If so, do the **benefits** justify the **costs?**

5. Is any **base-line information** required?

Avoid **costly** and/or **unreliable** indicators.

ANNEX 1

USING THE LFA AS A PLANNING TOOL

AN EXAMPLE

THE PROBLEM

The starting point for the LFA workshop is a description of the situation to be analysed, for instance a feasibility study, a pre-appraisal report, or a compilation of information prepared for the workshop.

In order to illustrate the use of the method described in section 2 of this manual, we shall use the following very simple example:

Dar es Salaam has several bus companies. During the last years the frequency of bus accidents have gone up significantly. This has caused much delay and inconvenience for the passengers. There have also been several serious accidents in which passengers have been killed.

The newspapers have taken a particular interest in the problem, and some of the companies that have had more than their share of bad publicity have registered a reduction in the number of passengers.

Much of the problem is technical: the buses are old, and are in bad condition because of a persistent lack of spare parts.

But the human factor is also important: many accidents have been caused by high-speed driving on bad roads.

One of the companies is now organizing an LFA workshop to decide what to do about the problem.

1 a. CONTEXT ANALYSIS

On the basis of the available information, the following groups can be identified.

INSTITUTIONS	INTEREST GROUPS	OTHERS
Bus company	Passengers	General public
Mass media	Drivers	
	Owners	

1 b. STAKEHOLDER ANALYSIS

The workshop decides to take a closer look at two of the groups: the passengers and the bus company.

	BUS COMPANY	PASSENGERS
PROBLEMS	Economic losses caused by buses out of service	Delays caused by accidents
	Economic losses caused by payments to victims	Sufferings for victims and their families
	Reduced number of passengers	
INTERESTS	Economically viable operations	Safe, convenient and cheap transport
POTENTIALS	Able to directly influence the problem	Boycott (the only way to influence the problem)
LINKAGES	Dependent upon passenger cooperation	Can choose other bus companies if necessary

The workshop decides to give priority to the passengers' interests in the subsequent analysis.

2. PROBLEM ANALYSIS

The workshop decides that the high number of accidents should be considered the focal problem. The following problem tree of substantive and direct causes and effects is made.

```
┌──────────────────┐   ┌──────────────────┐
│ Economic losses  │   │ Loss of          │
│ for passengers   │   │ confidence in bus│
│                  │   │ company          │
└──────────────────┘   └──────────────────┘

      ┌──────────────────┐   ┌──────────────────┐
      │ Passengers are   │   │ People arrive too│
      │ hurt or killed   │   │ late             │
      └──────────────────┘   └──────────────────┘

              ┌──────────────────┐
              │ Frequent bus     │
              │ accidents        │
              └──────────────────┘

┌──────────────┐   ┌──────────────────┐   ┌──────────────────┐
│ Drivers are not│ │ Bad condition of │   │ Bad condition of │
│ careful enough │ │ vehicles         │   │ roads            │
└──────────────┘   └──────────────────┘   └──────────────────┘

          ┌──────────────────┐   ┌──────────────────┐
          │ Vehicles are too │   │ Insufficient     │
          │ old              │   │ maintenance      │
          └──────────────────┘   └──────────────────┘
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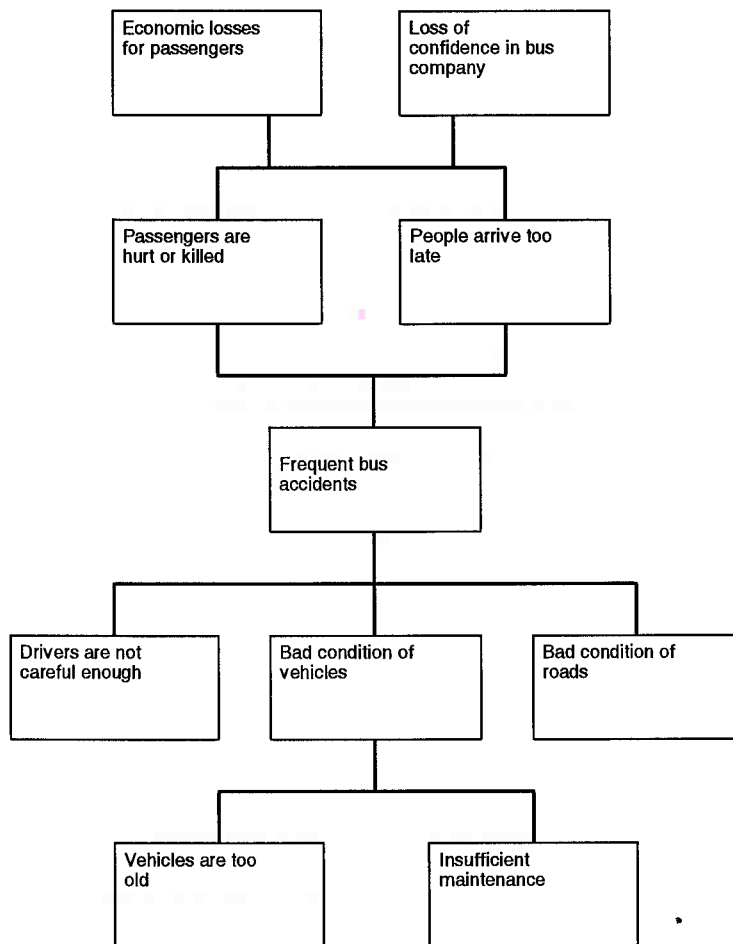
3. OBJECTIVES ANALYSIS

The problems are reformulated as positive statements. The workshop decides to add "training of drivers" as a means to make drivers more responsible.

```
┌─────────────────┐     ┌─────────────────┐
│ Passengers'     │     │ Passenger       │
│ economic losses │     │ confidence is   │
│ are reduced     │     │ restored        │
└─────────────────┘     └─────────────────┘

┌─────────────────┐     ┌─────────────────┐
│ Few passengers  │     │ Passsengers     │
│ hurt or killed  │     │ arrive on time  │
└─────────────────┘     └─────────────────┘

        ┌─────────────────┐
        │ Frequency of    │
        │ accidents       │
        │ considerably    │
        │ reduced         │
        └─────────────────┘

┌─────────────┐  ┌─────────────────┐  ┌─────────────────┐
│ Drivers drive│  │ Vehicles are kept│  │ Road conditions │
│ carefully and│  │ in good condition│  │ are improved    │
│ responsibly  │  │                 │  │                 │
└─────────────┘  └─────────────────┘  └─────────────────┘

┌─────────────┐  ┌─────────────────┐  ┌─────────────────┐
│ Drivers are │  │ Old vehicles are│  │ Vehicles are    │
│ better trained│ │ replaced        │  │ maintained      │
│             │  │                 │  │ regularly       │
└─────────────┘  └─────────────────┘  └─────────────────┘
```

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4 a. ALTERNATIVES ANALYSIS

First, objectives that cannot be achieved should be eliminated. The workshop decides that improved road conditions are entirely outside the reach of any of the bus companies.

```
┌─────────────────┐   ┌─────────────────┐
│ Passengers'     │   │ Passenger       │
│ economic losses │   │ confidence is   │
│ are reduced     │   │ restored        │
└─────────────────┘   └─────────────────┘

┌─────────────────┐   ┌─────────────────┐
│ Few passengers  │   │ Passsengers     │
│ hurt or killed  │   │ arrive on time  │
└─────────────────┘   └─────────────────┘

        ┌─────────────────┐
        │ Frequency of    │
        │ accidents       │
        │ considerably    │
        │ reduced         │
        └─────────────────┘

┌──────────────┐  ┌──────────────┐  ┌──────────────┐
│ Drivers drive│  │ Vehicles are │  │ Road         │
│ carefully and│  │ kept in good │  │ conditions   │
│ responsibly  │  │ condition    │  │ are improved │
└──────────────┘  └──────────────┘  └──────────────┘

┌──────────────┐  ┌──────────────┐  ┌──────────────┐
│ Drivers are  │  │ Old vehicles │  │ Vehicles are │
│ better       │  │ are replaced │  │ maintained   │
│ trained      │  │              │  │ regularly    │
└──────────────┘  └──────────────┘  └──────────────┘
```

OPTION 1   OPTION 2

Bearing in
mind the results of the participation analysis, alternative options are identified from the objectives tree. In this case there are two obvious alternatives:

> Option 1: Better drivers
> Option 2: Better buses

4 b. ALTERNATIVES ANALYSIS CONTINUED (FEASIBILITY ANALYSIS)

The workshop must agree which criteria should be used to assess the viability of the different options. The result is shown below in the left column. The three alternatives are then analysed with the following result:

	OPTION 1 BETTER DRIVERS	OPTION 2 BETTER BUSES	OPTION 3 1 + 2 COMBINED
COST	Low	High	High
CHANCE OF SUCCESS	Low	Low	High
COST/BENEFIT	High	Low	High
TIME HORIZON	Short	Long	Long
SOCIAL RISK	**Small**	**Small**	**Small**

Option 1 is limited to a training programme. The chance of success is low if the buses are still in bad condition.

Option 2 is more expensive, and there is no guarantee that the result will be positive unless the drivers also improve.

A third option would be to combine option 1 and option 2. It would probably be the most expensive alternative, but has a higher probability of success.

The result is that option 3 is chosen as the project strategy.

5. DEFINING THE MAIN PROJECT ELEMENTS

The main project elements are listed in the left column of the Project Matrix. Some of the elements can be derived from the objectives tree.

Note that the outputs are the results that can be guaranteed by the project, while the immediate objective is outside the direct reach of the project.

1. DEVELOPMENT OBJECTIVE 1. High service level for bus passengers		
2. IMMEDIATE OBJECTIVE 2. Frequency of bus accidents reduced		
3. OUTPUTS 1. Drivers trained 2. "n" new buses operational 3. Maintenance workshop equipped 4. Maintenance routines established		
4. ACTIVITIES 1. Undertake training programme 2. Procure buses 3. Procure tools and spare parts 4. Develop maintenance routines	**5. INPUTS** 1. Bus instructor x months 2. Funds for buses 3. Funds for tools and spare parts 4. Maintenance instructor y months	

6. DETERMINING THE EXTERNAL FACTORS

Some of the external factors can also be derived from the objectives tree. In this limited example there is only one such factor listed namely "improved roads" which we assume is necessary in order to reduce the frequency of bus accidents.

		EXTERNAL FACTORS
1. DEVELOPMENT OBJECTIVE		
1. High service level for bus passengers		Passengers continue using bus company
2. IMMEDIATE OBJECTIVE		EXTERNAL FACTORS
2. Frequency of bus accidents reduced		Road conditions are improved
3. OUTPUTS		EXTERNAL FACTORS
1. Drivers trained		Trained drivers remain with the bus company
2. "n" new buses operational		
3. Maintenance workshop equipped		
4. Maintenance routines established		
4. ACTIVITIES	**5. INPUTS**	EXTERNAL FACTORS
1. Undertake training programme	1. Bus instructor x months	Tools and spare parts supplied and cleared in time
2. Procure buses	2. Funds for buses	
3. Procure tools and spare parts	3. Funds for tools and spare parts	
4. Develop maintenance routines	4. Maintenance instructor y months	

7. ESTABLISHING THE INDICATORS

The indicators specify how to verify the attainment of objectives and outputs. Some indicators can be derived from the objectives tree.

An indicator of the immediate objective specifies how much the frequency of accidents should be reduced and by when. It will then be possible to verify whether the immediate objective has been achieved or not.

1. DEVELOPMENT OBJECTIVE	INDICATORS	EXTERNAL FACTORS
1. High service level for bus passengers	90% of departures with less than 5 minutes delay	Passengers continue using bus company
	Company's market share on the increase	
2. IMMEDIATE OBJECTIVE	INDICATORS	EXTERNAL FACTORS
2. Frequency of bus accidents reduced	Less than x accidents annually after 12 months	Road conditions are improved
	Less than y serious injuries after 12 months	
3. OUTPUTS	INDICATORS	EXTERNAL FACTORS
1. Drivers trained	Indicator 1: From existing 120 drivers at least 60% trained in year 1 and 40% in year 2. Of the trained drivers, all register qualitative improvement in driving facilities, style and adherence to traffic rules. To be verified according to criteria set and agreed with Traffic Dept. and surveyed sporadically through checks and road controls.	Trained drivers remain with the bus company
2. "n" new buses operational		
3. Maintenance workshop equipped		
4. Maintenance routines established		
	Indicator 2: Complaints against trained bus drivers (driving ability, style and observation of traffic rules) is less than 20% of present levels (30 complaints/day) by middle of year 2.	
4. ACTIVITIES	5. INPUTS	EXTERNAL FACTORS
1. Undertake training programme	1. Bus instructor x months	Tools and spare parts supplied and cleared in time
2. Procure buses	2. Funds for buses	
3. Procure tools and spare parts	3. Funds for tools and spare parts	
4. Develop maintenance routines	4. Maintenance instructor y months	

8. LARGER PROGRAMMES

Programmes, as well as projects should ideally have only one immediate objective. This will help clarify priorities and responsibilities and thereby improve management. However, it is a "golden rule" that programmes should **not** have more than three immediate objectives as this tends to make the programme unmanageable.

Larger programmes which operate for instance in several different sectors could be seen as a set of sub-projects. Each of the programme outputs would constitute the immediate objectives of the different projects.

In such cases it should be assured that the programme outputs (or immediate objectives) are not conflicting. The trade-off between competing objectives should be spelled out and an order of priority established.

Programme PM

Programme objective

Programme outputs

Project   PMs
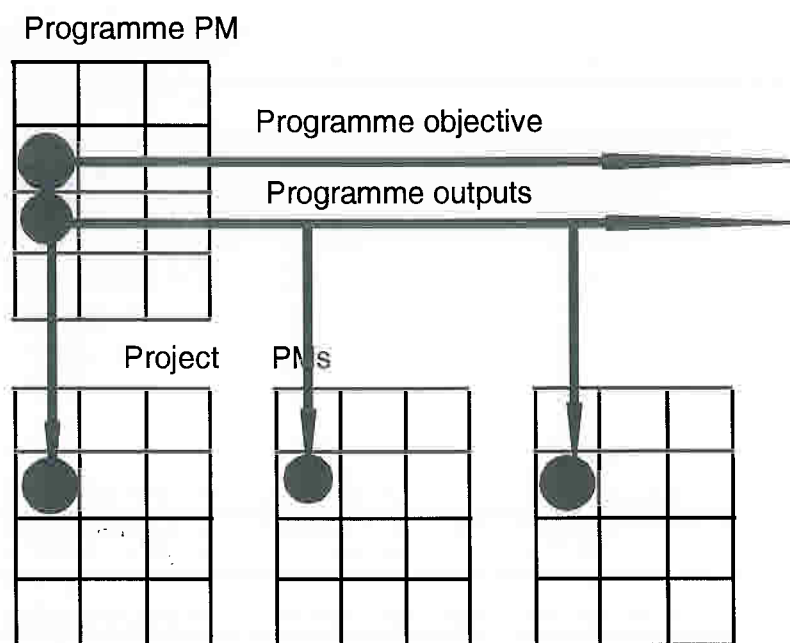
ANNEX 2

DEFINITIONS

LOGICAL FRAMEWORK APPROACH
DEFINITIONS

ACTIVITY (AKTIVITET)

Action taken or work performed within a project in order to transform inputs (funds, materials, manpower) into outputs (organizations, buildings, etc.).

APPRAISAL (VURDERING)

Overall assessment of the relevance, feasibility and sustainability of a project prior to making a decision on whether to undertake it.

ASSUMPTIONS (ANTAGELSE)

Event, condition or decision which is necessary for project success, but which are largely or completely beyond the control of the project management. Also called "external factor".

BENEFICIARIES (MÅLGRUPPE)

The intended target group of a project.

CONTEXT (KONTEKST)

The relevant factors (persons, institutions, physical, social and cultural), and the assumed relation between factors, in which a project is defined and implemented

DEVELOPMENT OBJECTIVE (UDVIKLINGSMÅL)

The wider or longer-term objective that a project is intended to contribute to, but not achieve, and which explains the reason why it is implemented

EFFECTIVENESS (MÅLOPNÅELSE)

A measure of the extent to which a project or programme achieve its objectives.

EFFICIENCY (EFFEKTIVITET)

The "productivity" (speed, cost, quality) of the implementation process (the work of the project), or how economically inputs are converted into outputs.

EVALUATION (EVALUERING)

A systematic and independent examination of a project in order to determine its efficiency, effectiveness, impact and sustainability (including the relevance of its objectives), with a view to drawing lessons that may be more widely applicable

EXTERNAL FACTOR (EKSTERN FAKTOR)

See: Assumptions

GOAL (MÅL)

See: Objective.

IMMEDIATE OBJECTIVE (PROJEKT MÅL)

The immediate reason for a project. The future situation expected to prevail when the project is completed.

IMPACT . (VIRKNING)

The positive and negative changes produced by a project, directly or indirectly, intended or unintended.

INDICATOR (INDIKATOR)

In the context of LFA, an indicator is a specific, measurable and operational measurement of performance allowing monitoring of output and objective achievements.

INPUT   (RESSOURCEINDSATS/INDSATSMIDLER)

Human, material and financial resources, under the control of the project management, which are necessary to undertake the activities of the project.

LOGICAL FRAMEWORK APPROACH (LFA)

Management tool which facilitates planning, execution and evaluation of a project.

In this context, LFA also means:

- a format for presentation to funding and partner authorities: project ideas, pre-appraisal reports, project documents, progress reports, etc.

- a summary of the project in the form of a matrix that remains valid during project implementation but can be modified.

- a sequence of analytical tools which is used in an external/internal workshop situation.

MONITORING   (MONITORERING)

Continuous or periodic surveillance of the implementation of a project to ensure that inputs, activities, outputs and external factors are proceeding according to plan. In LFA, the monitoring will use verifiable indicators as milestones or benchmarks.

OUTPUT   (RESULTAT)

Results of the activities of a project. The production of outputs are, under given assumptions about the context, under the control of the project management.

OBJECTIVE   (MÅL)

A vision or image of a future situation. Goal, target, aim, purpose, end are other terms frequently used.

PROGRAMME   (PROGRAM)

A group of related projects, services or interventions directed toward the attainment of specific (usually similar or related) objectives.

PROJECT   (PROJEKT)

A planned undertaking designed to achieve certain specific objectives within a given budget and within a specified period of time.

PROJECT MATRIX (PM)   (PROJEKT MATRICE)

A summary of a project design which identifies the key elements, external factors and expected consequences of completing the project successfully.

PURPOSE   (HENSIGT)

See: Immediate objective

RELEVANCE   (RELEVANS)

The degree to which the rationale and objectives of a project are, or remain, pertinent, significant or worthwhile, in relation to the identified priority needs and concerns.

RESULT   (RESULTAT)

See: Output

SUSTAINABILITY   (BÆREDYGTIGHED)

The extent to which it is possible to pursue the objective after the project assistance is over.

TARGET GROUP   (MÅLGRUPPE)

The specific group for whose benefit the project or programme is undertaken; closely related to **impact** and **relevance.**