



**TOTAL QUALITY MAINTENANCE  
IN  
LOCAL GOVERNMENT  
OPERATIONS AND MAINTENANCE**

**TQMn Book 3**

**BLUEPRINT FOR ACTION:  
PARTICIPANT'S WORKBOOK**

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# WELCOME

## **TQMn**

*The Participant's Workbook* is designed to help you make the most of your opportunities for learning about Total Quality Maintenance (TQMn) concepts and strategies during this workshop.\* Central to the workbook design are a series of activities that will help you analyse the data you collected before coming to the workshop and turn them into potential actions that can be taken back on the job. These activities form the core of the workshop experience. We believe individuals learn best when they have a stake in the outcomes of the learning. What better way to assure this than to help you be more effective and efficient in managing the Operations and Maintenance process when you return to your work organization.

*The Participant's Workbook* is also designed to provide you with a place to jot down those "gems of wisdom" you come across in your discussions with staff and other participants. And, we've provided some space for more personal reflections about the O & M world you live in. We believe these will be helpful reminders of the many things you have learned when you pull these notes from the file several months from now.

In other words, we are inviting you to write in this book, to use it as a tool for learning about TQMn. In our interactions with workshop participants in many parts of the world, we have found that many are reluctant to write in documents like this one. To be honest with you, we have sometimes done, or have not done, the same thing. Often participants say they want to "keep their copy clean" so they can make copies and share it with others when they return home. Not a bad idea. If this is the case, we suggest you ask the workshop organizers for an extra copy and then write in this one to your mind's content.

Two final comments before we invite you to "work" in your workbook. First, the workbook is divided into six parts, each reflecting the tasks and learnings we have planned for you during each day of the workshop. Secondly, that "pocket" in the back of the workbook is designed as a place to put your data from the pre-workshop assignment. We think you should have it handy. We expect you to refer to it often in applying the TQMn process to the O & M challenge you researched before departing for this workshop.

\*Refers to Workshop No.1 in the series *Total Quality Maintenance in Local Government. Operations and Maintenance.*

***First day***

***Concept ideas***

Write in the space below any key points or concepts you want to remember or any application ideas that occur to you during the instructor's presentation on problem finding.

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## Operations and Maintenance

### ***Notes on participant team presentations***

As you listen to the presentations of other participant teams, make notes in the space below on important methods and approaches their organizations are using. Pay particular attention to:

- practices, structures, and approaches being used to manage functions similar to the one you have selected for this workshop;
- constraints encountered in managing their O & M functions; and
- the consequences of these constraints on the quality of their O & M efforts.

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### ***Things to remember***

Use the space below to make notes on your reactions and level of satisfaction with today's workshop activities. This is a good time to write down any changes you are considering in your O & M function.

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# PROBLEM FINDING AND ANALYSIS

## **Second Day**

There are some common difficulties experienced by O & M managers in their efforts to solve problems. The first difficulty is mistaking the problem for something else, like a symptom or even a solution. The other difficulty is the presence of constraints—factors inside or outside the organization that stand as barriers to resolving O & M problems; factors that might cause a manager to say, "I could solve this problem if .."

### **Finding the Real Problem**

Using the problem statement you constructed with the help of your workshop colleagues at the end of your presentation, answer the following problem clarification questions.

1. What is the problem -- the real problem?

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2. Why is it a problem?

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3. When and where is it a problem?

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4. Whose problem is it?

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5. What would happen if we did not solve it?

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### **Criteria for problem selection**

Many O & M problems identified by members of your team could qualify for priority attention by the team during the workshop. But time permits working with only one of them. So a choice must be made by the team -- which problem to choose. The following criteria and scale will simplify the task of narrowing the possibilities.

**Instructions**

Enter a brief description of each O & M problem identified by team members in the column on the left side of the figure below. Each problem can be given a rating on the criteria of importance, feasibility, control, and commitment by circling the most appropriate numerical score.

- 5 = Extremely important
- 4 = Very important
- 3 = Important
- 2 = Not very important
- 1 = Unimportant

After circling one number in each column for each of the problem statements, multiply the numbers in each row across and enter the sum in the far right column. The collective individual scores for each problem statement will produce a team score for each of the problem statements.

Problem description	Importance <sup>1</sup>	Feasibility <sup>2</sup>	Control <sup>3</sup>	Commitment	Score
1.	1 2 3 4 5 [ ]x	1 2 3 4 5 [ ]x	1 2 3 4 5 [ ]x	1 2 3 4 5 [ ]x	= [ ]
2.	1 2 3 4 5 [ ]x	1 2 3 4 5 [ ]x	1 2 3 4 5 [ ]x	1 2 3 4 5 [ ]x	= [ ]
3.	1 2 3 4 5 [ ]x	1 2 3 4 5 [ ]x	1 2 3 4 5 [ ]x	1 2 3 4 5 [ ]x	= [ ]
4.	1 2 3 4 5 [ ]x	1 2 3 4 5 [ ]x	1 2 3 4 5 [ ]x	1 2 3 4 5 [ ]x	= [ ]
5.	1 2 3 4 5 [ ]x	1 2 3 4 5 [ ]x	1 2 3 4 5 [ ]x	1 2 3 4 5 [ ]x	= [ ]

<sup>1</sup> Importance: Potential impact on the mission fulfillment of the authority or department.

<sup>2</sup> Feasibility: Capable of being solved with existing technology and available or allocatable resources.

<sup>3</sup> Control: Responsibility for solving the problem falls within the legal, political, and functional jurisdiction of the authority or department.

<sup>4</sup> Commitment: The desirability of finding a solution or the consequences of not doing so are personally challenging and worth a personal time investment.

**Things to remember**

Use the space below to make notes on your reactions and level of satisfaction with today's workshop activities. This is also a good time to write down any changes you are considering in your O & M function.

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## PURPOSE AND COMMITMENTS (The Effectiveness Factors)

### **Third Day**

Effectiveness in managing O & M activities is the result of two important factors:

1. **Purpose** -- being guided by long-term goals and creating a suitable structure of authority, responsibility, and resources, or restructuring, as necessary, to achieve these goals. Goals state what is to be achieved and by when. They provide focus and can galvanize an organization, giving it purpose and a way of measuring its progress. Goals also provide the basis by which new O & M functions are added, existing ones are modified, and non-effective ones eliminated. They can suggest how some O & M functions might be performed more effectively in a totally different way or by some other organization.
2. **Commitments** -- involving those who have a stake in the achievement of O & M objectives in planning and deciding how O & M resources can best be directed. Without the commitment of stakeholders-those who are affected by what you do and can have an influence on whether or not you get to do it-your best laid plans may never become realities.

### **Concept ideas**

Write in the space below any key points or concepts you want to remember or any application ideas that occur to you during the instructor's presentation on TQMn effectiveness.

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### **Goals**

A goal is an expression of something of value for the community to be accomplished through the employment of certain O & M resources under your control. Normally, goals are expressed in the present tense as if they had already been accomplished. For purposes of this workshop, goals are to be achieved in three to five years from the date they are set.

Below are examples of several 36-month O & M goals (*stated in the present tense*) that might be set by the head of a works department in a local authority:

Two-thirds of the unpaved roadways in the central district of the city paved in accordance with published road building standards of the Ministry of Roads and Transportation.

Gravity outfalls installed in the Mawandi and Jebtha districts are adequate to avert flooding in low lying neighbourhoods during rainy periods.

Trolley bins replace open oil drums as containers for the collection of waste in commercial and multi-family housing areas throughout the city.

Stage one of a new 120,000 cu.m. sewer plant, rising mains, and pumping stations complete, eliminating overloading of the Goris plant and providing sewage connections to homes and businesses near the city's south boundary.

Write a goal in the space below to state the condition that will exist when the problem selected by your team no longer exists.

Goal


**Stakeholder Analysis**

Stakeholder analysis is a practice used by managers to identify persons, groups, and organizations that are affected by O & M activities and who can assist in getting the resources needed to implement O & M strategies and programmes. An inventory of stakeholders is a valuable asset for the O & M manager in determining whose help is needed most. Such an inventory usually focuses on separating the "trivial many" from the "vital few" on the theory that 80 percent of the needed support will come from 20 percent of the stakeholders.

What persons, groups, and organizations can you identify as stakeholders relative to O & M goal of your team? Write the names of as many stakeholders as you can in the rectangular spaces in the figure called "All Stakeholder's" (next page). When you have filled the spaces with names of persons, groups, and organizations, select from your inventory of stakeholders the five who can provide the greatest support for the goal, now and in the future. Enter these names in the rectangular spaces on the page marked "The Vital Few."

Finally, when you have selected the five stakeholders who meet your criteria of "the vital few," share them with other team members and think with them of ways to promote and sustain stakeholder commitment to the goal. Make some notes on how this might be done in the space just opposite your "vital few" list.

**All Stakeholders**

**Names of stakeholders**

**Ideas about how to promote or sustain their commitment**

1. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

2. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

5. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### ***The Vital Few Stakeholders***

#### ***Things to remember***

Use the space below to make notes on your reactions and level of satisfaction with today's workshop activities. This is a good time to write down any changes you are considering in your O & M function.

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# STRATEGY PLANNING AND RESOURCE MOBILIZATION

## **Fourth Day**

Strategy planning is at the heart of TQMN. It is a way for managers to make the decisions necessary to keep infrastructure, utility networks, plants, buildings, and equipment in serviceable condition while controlling costs. It can neither be taken for granted, shortcut, nor delegated to subordinates. Like any other form of decision making, strategy planning begins with a clear set of objectives, continues with a realistic but flexible plan for achieving them, and ends with the mobilization of needed resources.

On the other hand, strategy planning is not done by managers working in a vacuum. To ensure success, emphasis is placed on gaining the commitment of stakeholders within and external to the O & M functions. This is done by involving them at the planning stage and encouraging them to support the programme once it is underway.

Of course, plans are only as good as the resources available to carry them out. Consideration must be given to the five resources needed to reach O & M objectives:

- **People** -- O & M employees sufficient in numbers, training and motivation to do the work that is planned;
- **Equipment** -- adequate for the jobs to be done, affordable, easily maintained, and capable of being operated by your employees without significant retraining;
- **Time** -- a surprisingly flexible resource which can work for or against the attainment of objectives depending on how it is used;
- **Contract services** -- possibly a less costly, more efficient alternative to the direct performance of O & M functions with local authority employees and equipment; and
- **Money** -- sufficient funds to carry out the scope of work within the limitations imposed by the other resources.

## **Concept ideas**

Write in the space below any key points or concepts you want to remember or any application ideas that occur to you during the instructor's presentation on strategic planning and resource mobilization.

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## **Planning**

Plans are the roadmaps used by O & M managers to employ the resources of an organization to achieve its purposes. Making plans involves three types of activity:

- Breaking three-to-five-year goals\* down into short-range (one-year) improvement objectives.
- Specifying what approach or strategy will be employed to reach of the objectives agreed upon.
- Ensuring in advance that the resources -- people, equipment, materials, and finances -- are ready at the time they are needed.

## **Short-range objectives**

What do you want to achieve in carrying out the first year of your three to five year goal programme? These are sometimes called "objectives." They describe what will be accomplished or in place by a specific date. A first-year objective related to a three-year road paving goal, for example, might look like this:

Paving work completed within city specifications, under budget, and on schedule for all major roads in the Jebtha district.

The space below is for your use in writing first-year objectives for the O & M goal selected by your team for this workshop. Remember. These objectives should be consistent with and further the intent of your team's O & M goal.

\*See page 9 of this Participant's Workbook for the O & M goal written by your team.

<b>Objective 1</b>

<b>Objective 2</b>

<b>Objective 3</b>

**Strategies**

What is your approach, general plan of action or strategy for carrying out the authority's O & M improvement objectives? Strategies specify actions to be taken unlike objectives that describe results expected. Several strategies may be necessary to achieve each objective. Shown below is a sample strategy aimed at contributing to the attainment of a road improvement objective.

Solicit bids from a short list of pre-approved paving contractors, and rate the bids received on criteria of compliance with standards, time required for completion and cost.

The space below is for your use in writing three alternative strategies for achieving **one** of your team's O & M objectives. Good strategies make efficient use of available resources in achieving an objective without producing unacceptable consequences.

<b>Strategy 1</b>

<b>Strategy 2</b>

<b>Strategy 3</b>

**Which Strategy is Best?**

Further thought will be needed to pick one of these three strategies for actual implementation. The strategy which measures up best to the following criteria would be a good choice. The criteria are:

- The one that can be expected to achieve optimum results in the least time.
- The one that requires the least commitment of scarce resources (people, equipment, materials, money).
- The one most likely to win the support of key stakeholders (the vital few).
- The one that is least risk adverse (prone to unacceptable consequences).

**Action planning**

Action planning is a tedious but essential process for deciding who must do what with whom and by when to implement an O & M strategy. A good starting point for action planning is to develop a series of questions, the answers to which will result in the plan of action you are seeking. These questions should include at least the following five:

1. What are the tasks to be completed? (Strategies are carried out, step by step, with the completion of various tasks. These tasks must be clearly defined and made the responsibility of some interested party.)
2. Who will take or be assigned the primary responsibility for performing each of these tasks? (Someone needs to be in charge.)
3. Who else needs to be involved? (Success with many tasks is directly related to the involvement of stakeholders-those who are affected by and can influence task performance.)
4. What resources will be needed to complete the task? Consider these possibilities:
  - The organization's own people, skills, materials, and equipment.
  - Similar resources which might be obtained from outside the organization by contract.
  - Money from sources inside or outside the organization.
5. When will each task be complete? (Not just how long it will take but a realistic date for completion.)

**Now it is your turn ...**

Using these questions, your O & M preworkshop assignment, and previous entries in this workbook, **prepare an action plan** for each essential task that must be carried out to achieve **one** of your O & M strategies. The format on the next two pages may be helpful to you in preparing your action plan. Blank copies of these pages may be obtained from the instructor for action planning additional strategies.

<b>Action Plan</b>	
<b>A.</b>	The O & M goal is: _____ _____ _____
<b>B.</b>	The objective to be achieved is: _____ _____ _____
<b>C.</b>	The best strategy for achieving this objective is: _____ _____ _____
<b>D.</b>	The tasks required to carry out this strategy are: _____
1.	_____ _____
2.	_____ _____
3.	_____ _____
(Use additional sheets for more tasks)	

Answer these questions about each of the required tasks.

Task # _____
Completing this task will be the primary responsibility of: _____ (be specific)
Others to be involved in completing it are:
1. _____
2. _____

3. \_\_\_\_\_

The time required to complete the task is:

\_\_\_\_\_

(in days, weeks, months)

It should be completed by:

\_\_\_\_\_

(a specific date)

The following resources (stakeholders) will be needed (money, people, materials, equipment, etc.):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### **Benchmarks**

Quality is not easy to measure. Of course, it helps to know what you are looking for. So, you will need some quality standards or "benchmarks" to performance comparisons of various goal related tasks. Benchmarks are descriptions of task performance at its "best" and include such quality indicators as costs incurred, benefits derived, timeliness of accomplishment, and side effects or consequences.

#### **Examples:**

- On no road project does the lowest bid that meets specifications exceed the approved budget.
- The thickness of the road surface is never less than the required 15 cm of hot mix based on physical inspection.
- There is no delay in the start-up of any approved project.
- There are zero injuries or accidents directly attributable to approved road construction.

In the following box, establish some benchmarks for one of the goal-related tasks in your action plan. The benchmarks you establish should describe the best performance possible related to that particular task.

Task \_\_\_\_\_  
\_\_\_\_\_

### **Benchmarks**

1. \_\_\_\_\_  
\_\_\_\_\_
2. \_\_\_\_\_  
\_\_\_\_\_
3. \_\_\_\_\_  
\_\_\_\_\_

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**Resource mobilization**

One of the elements of action planning is to identify the resources: people, equipment, materials, money, time needed to carry out the necessary tasks. Part of the planning process is to consider the availability of the resources needed and to be prepared to make adjustments in the plan if these resources are not available. Here are some examples:

- A large capital investment to replace obsolete or worn out equipment to collect solid waste might lead the O & M manager to consider contracting all or a portion of this function to a private wastehauler.
- The purchase of the latest in sophisticated road maintenance equipment might be passed up for a technology more appropriate to the operator skill and the servicing and repair capabilities of the local authority
- A shortage of funds or lack of sufficient time might force a decision to spread the completion of a task over more than one budget year.

**A resource mobilization checklist**

The following questions are intended to serve you as a checklist to analyse the appropriateness and sufficiency of the resources you plan to use to carry out the various tasks in your action plan. As you read each question, use the space below it to make some notes to yourself.

Can you implement your plan with the present level of O & M funding? If not, how much more can you count on from the council? What other funding sources are available for O & M functions and how can you get access to them?

<b>Notes</b>

- Do you have enough employees with the right technical specializations and are they appropriately trained? If not, is private contract labour available? Might workers be obtained from another local authority on an exchange basis? What other options do you have?

<b>Notes</b>

- Do you have the needed equipment on hand and is it in serviceable condition?

<b>Notes</b>


- If you have to purchase equipment, can you be assured that it will be appropriate to the environment and tasks (i.e., can you afford it; is it quick and inexpensive to service; are spare parts available from local vendors; can your employees operate it without expensive skill training; will it withstand the demands of your work environment)?

<b>Notes</b>

- Are materials you need (e.g., building materials, pipe, fittings, road base materials, chemicals, sealants, etc.) readily available from local suppliers?

<b>Notes</b>

- Is there enough time to do everything you are planning? Have you allowed for contingencies (unexpected breakdowns or delays over which you have little control)? Have you scheduled various tasks in a sequence using the PERT (Programme Evaluation and Review Technique) or a similar work/time planning tool?

<b>Notes</b>

**Things to remember**

Use the space below to make notes on your reactions and level of satisfaction with today's workshop activities. This is a good time to write down any changes you are considering in your O & M function.

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**ORGANIZATION AND IMPLEMENTATION  
(The Efficiency Factors)**

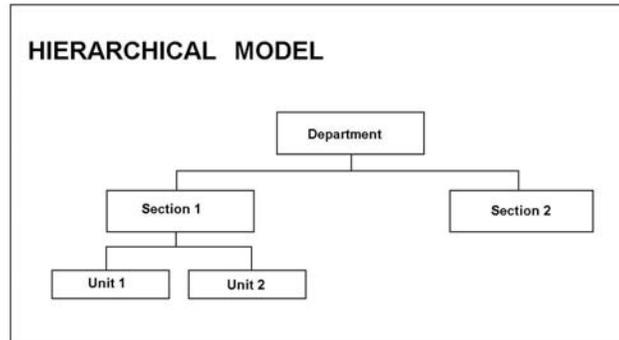
**Fifth day**

As a detailed set of goals and objectives helps to establish the direction of an O & M programme, implementation enables managers to keep the programme on track and moving ahead as planned.

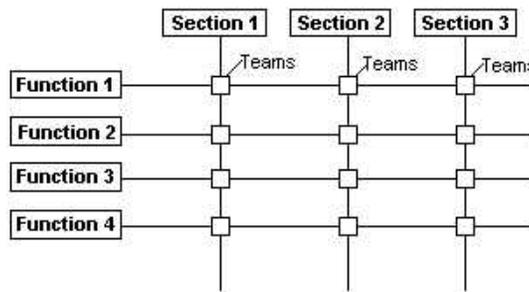
**Appropriate structure**

There is no best way to organize to achieve O & M goals. Most organizations are structured following a traditional model, hierarchical and bureaucratic. While most managers continue to organize O & M tasks like they have been organized in the past, there are more flexible strategies available today for organizing people and tasks to attain O & M goals.

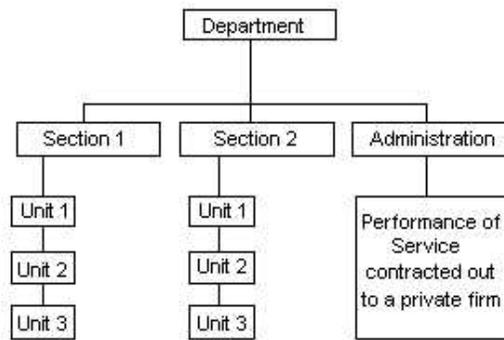
Shown below are several sketches illustrating different ways to organize. They include: traditional hierarchical; cross-functional (becoming more prominent with the advent of the Total Quality Management movement); and semi-privatized (when the performance of some functions or services is contracted out to private firms).



**CROSS FUNCTIONAL MODEL**



## SEMI-PRIVATISED MODEL



Draw in the space below a visual picture -- organization chart, organigram, or other visual representation-of how your O & M functions are **now** organized. The chart should be in sufficient detail (unlike those shown above) to illustrate who does what and where authority and responsibility lie for making decisions.

### ***Current O & M Organization Chart***

In the space below, draw another organizational chart. This time, the chart should reflect how you think your O & M functions should be organized. The chart should show the new organizational relationships-who would do what, and where authority and responsibility would lie for making decisions.

### ***Proposed O & M Organization Chart***

**Constraints to implementation**

Take a moment to review your pre-workshop assignment and identify any rules, regulations, procedures, or work habits that are **not** helpful to the performance of this O & M function. List two or three of the most significant of these implementation constraints in the space below.

<b>Constraint 1</b>

<b>Constraint 2</b>

<b>Constraint 3</b>

**Removing constraints**

There are forces at work in every organization that support change and other forces that resist change. When the forces supporting change are stronger than the resisting forces, change will occur. When they are not, change will not occur. It is generally believed that identifying and reducing the resisting forces (or barriers) to desired changes is the most effective planning tool available to implement change. In the space below:

1. Take one of the implementation constraints you have just identified and list several forces you believe might prevent you and your colleagues from removing, changing, or otherwise lessening its impact on the attainment of your O & M goal.

Constraint \_\_\_\_\_

**Force No. 1** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Force No. 2** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Force No. 3** \_\_\_\_\_

\_\_\_\_\_

- 
2. Draw a circle around one or more of the forces (1-3above) over which you have some influence or control.
  3. List below one effective action you can take to remove or reduce each of the resisting forces you circled.

Number

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Number

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Number

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Continue planning actions to remove constraints to goal attainment for as many of the tasks in your team's action plan as time permits.

**Things to remember**

Use the space below to make notes on your reactions and level of satisfaction with today's workshop activities. This is a good time to write down any changes you are considering in your O & M function.

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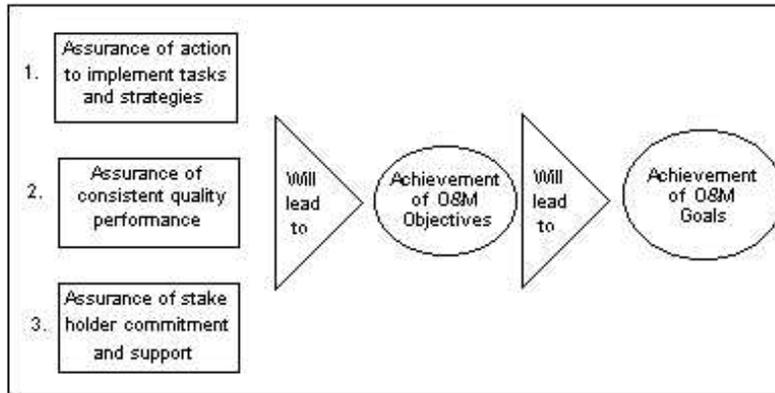
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**EVALUATION AND QUALITY ASSURANCE**

**Sixth Day**

Did you do what you planned to do? How well did you do it? These are Devaluation questions. The first has to do with effectiveness-doing the right things (as planned); the second with efficiency-doing things right (up to high quality standards). Doing the right things the right way with the commitment and support of key stakeholders will provide assurance your agency or department will progress toward its O & M objectives and goals as illustrated below.



Evaluation is the manager's way of measuring progress toward objectives and goals. The key to successful evaluation is:

- Asking the right questions about O & M implementation, quality benchmarks, and stakeholder commitment., and
- Asking the right questions often enough to sustain forward movement and address performance weaknesses before they get out of hand.

**1. Questions about implementation assurance**

<b><i>How will you know your O&amp;M objectives are being/have been met?</i></b>

<b><i>How will you know your O&amp;M objectives are being/have been met within the scheduled time frame?</i></b>

<b><i>How will you know your O&amp;M objectives are being/have been met within budget?</i></b>

**2. Questions about quality assurance**

To help you answer the following questions about assuring the quality performance of tasks, refer to the benchmarks you established earlier in this workbook.

<b><i>How will you measure compliance with established benchmarks?</i></b>

<b><i>What will you do to encourage compliance with established benchmarks (rewards and penalties)?</i></b>

**3. Questions about stakeholder commitment**

To help you answer the following questions about assuring stakeholder commitment and support for your programme, refer to the "vital few" stakeholders you identified earlier in this workbook.

<b><i>What aspects of this O&amp;M programme will stakeholders be ready to support?</i></b>

<b><i>What aspects will they be reluctant to support and why?</i></b>

<b><i>What can you or others do to lessen their reluctance?</i></b>

***What can you do to get more key stakeholders support for this O & M programme?***


## CLOSING ACTIVITY

Finally, we encourage you to take another look at the workshop experience overall from the standpoint of implementation.

- How strong is your commitment to follow through with the programme?
- What obstacles would you expect to encounter personally after returning home?
- What might you do to stay firm with your follow through commitment in the face of these obstacles?
- What help do you need from your O & M team members and others to fulfill this commitment? Are you willing to ask for the help you need?

Use the space below to make some notes to yourself in reply to these questions about commitment.

### ***Notes on personal commitment***

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## END OF WORKSHOP EVALUATION

We have included a workshop evaluation questionnaire in this workbook for you to complete and turn in when directed to do so by your instructor.

### ***End of Workshop Evaluation Questionnaire***

To help the staff and sponsoring organizations determine the level of success achieved by this workshop, we would appreciate your responses to the following questions. Your ideas and comments will be valuable in improving further TQMN training efforts.

A number of the questions are followed by a seven point scale such as:

**NOT AT ALL**                      1 2 3 4 5 6 7                      **TO A GREAT EXTENT**

In these cases, you are requested to respond by circling the number between the two extremes that best reflects your opinion about the enquiry.

Thank you.

### ***Workshop objectives***

1. To what extent did the workshop meet the following learning objectives:
  - 1.1. Increased participant knowledge and understanding about the management of operation and maintenance functions at the local government level.  
**NOT AT ALL**                      1 2 3 4 5 6 7                      **TO A GREAT EXTENT**
  - 1.2. Increased participant skills in team decision making and problem solving based on their O & M responsibilities.  
**NOT AT ALL**                      1 2 3 4 5 6 7                      **TO A GREAT EXTENT**
  - 1.3. Provided an opportunity for participants working in teams, to carry out a detailed examination of one specific O & M function from the experience of their respective local authorities.  
**NOT AT ALL**                      1 2 3 4 5 6 7                      **TO A GREAT EXTENT**
  - 1.4. Assisted participant teams to prepare back-home action plans that will help them improve the management of O & M in their respective organizations.  
**NOT AT ALL**                      1 2 3 4 5 6 7                      **TO A GREAT EXTENT**

### ***Workshop content***

2. How relevant was the workshop to your job responsibilities?  
**NOT AT ALL**                      1 2 3 4 5 6 7                      **TO A GREAT EXTENT**
3. To what extent was the content of the workshop relevant to the needs and practices of your organization?  
**NOT AT ALL**                      1 2 3 4 5 6 7                      **TO A GREAT EXTENT**
4. How helpful will this learning experience be in assisting you and members of your team to improve your organization's operation and maintenance programmes?  
**NOT AT ALL**                      1 2 3 4 5 6 7                      **TO A GREAT EXTENT**
5. How useful were the TQMN model and diagnostic materials in helping your understand better how to address O & M responsibilities in your local government?

NOT AT ALL

1 2 3 4 5 6 7

TO A GREAT EXTENT

**Workshop design and content**

6. How effective were the following training/learning techniques used during the workshop?

6.1. Pre-workshop assignment.

NOT AT ALL  
EFFECTIVE

1 2 3 4 5 6 7

VERY  
EFFECTIVE

6.2. Group discussions.

NOT AT ALL  
EFFECTIVE

1 2 3 4 5 6 7

VERY  
EFFECTIVE

6.3. Training staff inputs.

NOT AT ALL  
EFFECTIVE

1 2 3 4 5 6 7

VERY  
EFFECTIVE

6.4. The presentation and discussion of your O & M situation and how you and your team plan to improve it.

NOT AT ALL  
EFFECTIVE

1 2 3 4 5 6 7

VERY  
EFFECTIVE

7. If you could make one change in the design and conduct of the workshop, what would it be? (Enter your answer in the box below. Be as specific as possible.)


8. Did you have any language problems during the workshop? If so, please describe them in the box below.


**Workshop materials**

9. How useful were the following training materials in achieving the course objectives?

9.1. *Participant's Pre-workshop Assignment*

NOT AT ALL USEFUL

1 2 3 4 5 6 7

VERY USEFUL

9.2. *Reader on Concepts and Strategies with Case Study*

**NOT AT ALL USEFUL**      1 2 3 4 5 6 7      **VERY USEFUL**

9.3. *Blueprint for Action Workbook (used during the workshop)*

**NOT AT ALL USEFUL**      1 2 3 4 5 6 7      **VERY USEFUL**

10. What could be done to make the training materials more useful? (Enter your answer in the box below. Be as specific as possible.)


*End of questionnaire*

## RECONNAISSANCE AND FACT FINDING

### ***First Day***

The first step in carrying out a TQMN programme is reconnaissance and fact finding. A full-blown TQMN programme in your organization would include a complete inventory of all your O & M functions. But this was neither practical or possible as a prerequisite for attending this workshop. So, most of the exercises and activities you will be working on during the week will relate directly to the O & M function on which you gathered data and information before coming to the workshop.

Having said this, we now want to contradict ourselves by reminding you that the first exercise has you looking at the big picture. In other words, considering everything your local government does in the O & M arena. Let us explain. Any comprehensive inventory of O & M should also raise the possibility of pursuing alternatives other than conducting each of these functions with local government personnel, using local government resources.

Sometimes local governments continue to do things they no longer need to do to serve the community, and other times they do things themselves that some body else can do better and cheaper. For example, private sector firms often can be more competitive than their public counterparts in carrying out certain O & M functions. Likewise, community-based groups and non-governmental organizations are also potential alternatives for conducting certain kinds of O & M functions.

The first exercise in the workbook asks you to look at the big picture for a few moments and consider what O & M functions your organization now does with its own resources that might be amenable to one of these three alternative strategies. This exercise is also a way to remind you and others on your team that we often do in local governments some things we do not need to do, or should not be doing at all.