A Guideline for Integrating Community-Based Procurement in the Operation & Maintenance of Basic Services

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Report to the
Water Research Commission

by

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WRC Report No TT 423/09

March 2010

Preface

In South Africa, it is widely recognized that inadequate Operation & Maintenance (O&M) is a common and serious problem in basic services provision. It was estimated that 1,9 million people may revert back to the basic services backlog before 2010 as a consequence of inadequate operation and maintenance[1], reflecting a moving target for addressing the basic water and sanitation backlog (DWAF, 2005).

The backlog in informal settlements and poor rural areas provided with free basic services is particularly acute as there is no link between service charges and levels of operational services. In coming to terms with the scale of O&M requirements to sustain basic services, more municipalities are considering integrating community based procurement to provide inputs for O&M of basic water and sanitation services.

While in South Africa there is general willingness to integrate pro-poor strategies and improve O&M of basic services, the specific challenges obstructing implementation at a local level called for further research. Research was conducted in partnership with four municipalities, spanning across urban to rural case study settings and covering the range of basic services technologies provided, expressly to inform the development of a guideline for integrating community-based procurement in O&M systems.

Contained in a comprehensive report entitled *"Investigation into Unlocking and Integrating Community-based Procurement in Operation & Maintenance of Basic Services"* (Lagardien et al., 2009), key findings from the research culminated in a guideline framework, a structured process and tools for application by municipalities. Key findings underpinning guideline development were drawn from the research, summarized here to explain the basis for the approach set out in the Guideline.

➢ *Rationale for community-based procurement in O&M of basic services:*
- The localized nature of key O&M functions suggest a scale of community-based procurement that warrants investment in aligned local economic development strategies.
- Targeted investment can contribute to creating conditions for the economic viability of basic services provision, other than user charges to the account of poor people.
- National poverty alleviation budgets, such as the Equitable Share and Expanded Public Works Programme (EPWP), are accessible to municipalities for this purpose.
- Integrated Development Plans (IDP) and Water Services Development Plans (WSDP) are mechanisms for municipalities to obtain local development support and special grants from national departments, such as Department of Water Affairs (DWA) and the Department of Labour (DoL).

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[1] A Sustainability Audit of Sanitation Facilities between 1994 and 2003, (DWAF, 2005) found that poor Operation and Maintenance (O&M) is common, and up to 28% of toilets may fail in the short or medium term.

➢ *Identifying O&M tasks and specifying community-based opportunities:*
- Local level and daily functions such as caretaking, minor repairs, local monitoring and reporting are best suited to community-based services provision.
- Arrangements enabling community-based procurement for servicing those people who are not billed include the O&M of shared, rudimentary or emergency types of services.
- Service providers sourced from and based within the community of end-users are best placed to prevent, reduce and respond immediately to breakdowns, and improve communication and credibility at a local level.
- Each level of stakeholder has access to experience and specific details that inform the appropriate assignment of responsibilities into local, joint and municipal tasks.
- Local level insights clarify selection criteria on the basis of skills and experience, and inform protocol processes at the interface between the community and municipality.

➢ *Setting up the interface for local monitoring and support structures:*
- Monitoring and support arrangements must be adapted to fit the requirements for local level O& M tasks and functions to keep assets serviceable.
- While existing monitoring systems are based on reports of specific tasks and some requirements, in general community level intermediaries and end-users inputs are lacking.
- Communication flows function most effectively at the interface between stakeholders through monitoring and reporting in order to continuously inform O&M systems.
- As the flow of responsibilities, supervision and reporting is not immediately evident, it is useful to set out complementary oversight and reporting between the different levels of responsibility.

➢ *Facilitating institutional support for community-based O&M:*
- Disjuncture in collaboration across departments makes it difficult for local authorities to prioritize and integrate O&M into their overall planning and budgeting processes.
- Departments need to be better informed regarding the scale of development opportunities located in fulfilling O&M functions for basic services.
- Information that emanates from operational realities needs to be conveyed upwards to decision-making levels for the institution to plan, support and manage implementation effectively.
- Specific information for the operational requirements of each technology should be collated to convey knowledge of the asset base, staffing and material requirements and typical applications.
- Checklists to inform departments with regard to procurement, training, management and budget requirements can be developed.

This Guideline sets out to provide municipalities with a practical approach to improving their O&M systems for basic water and sanitation services. As an understanding of key tasks, activities and associated procedures for cost effective O&M systems is a prerequisite for municipalities to take up

community-based procurement opportunities, the guideline is based on series of structured activities engaging stakeholders in

- Identifying community-based opportunities in O&M
- Setting up appropriate mechanisms for monitoring implementation
- Integrating institutional support for a community-based approach to O&M.

The guideline is structured as follows:

- Section 1: **Background** outlines the framework of the guideline and a brief overview three stages.
- Section 2: **Introduction to the guideline** provides an introduction of the three stages of the guideline and related tools. In this section the purpose and outcomes of each of the three stages of the guideline are explained; and support tools related to each stage are outlined.
- Section 3: **Guideline application** provides a detail explanation of how to use the guideline; it outlines the sequence of stages and the stepwise use of the guideline.
- The **appendices** provide practical examples of the application of the guideline as a reference for the users of the guideline.

Ultimately application of the Guideline will assist municipalities in planning for O&M systems that will keep basic services assets in a serviceable condition by moving away from seeing basic services delivery as infrastructure projects. Relatively neglected O&M functions will show up as opportunities for direct support of local livelihoods through community based procurement, at the same time improving pro-active and preventative O&M at a local level.

Acknowledgments

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List of Figures and Information Sheets

List of Acronyms

ANDM	Alfred Nzo District Municipality
CB	Community Based
CBO	Community Based Organizations
CLO	Community Liaison Officer
CoCT	City of Cape Town
DPLG	Department of Local Government
DPW	Department of Public Works
DWAF	Department of Water Affairs
EBU	Electronic Bailiff Unit
EHD	eThekwini Health Department
EHP	Environmental Health Practitioner
EPWP	Expanded Public Works Programme
ES	Equitable Share
eWS	eThekwini Water Services
FBS	Free Basic Services
HH	Household
HR	Human Resources
IDP	Integrated Development Plans
IS	Informal Settlement
ISD	Institutional and Social Development
LED	Local Economic Development
M&E	Monitoring and Evaluation
MDG	Millennium Development Goals
MIG	Municipal Infrastructure Grant
NGO	Non Governmental Organisation
O&M	Operation and Maintenance
PSC	Project Steering Committee
SHE	Safety, Health and Environment
SMME	Small Medium and Micro Enterprise
SP	Service Provider
SSP	Small Service Provider
TMC	Technical Management Committee
TRA	Temporary Relocation Area
UDS	Urine Diversion System
VIP	Ventilated Improved Pit
Watsan	Water and Sanitation
WS	Water and Sanitation services
WSA	Water Services Authority
WSDP	Water Services Development Plan
WSH	Water Sanitation and Hygiene
WSP	Water Services Provider
WWTW	Wastewater Treatment Works

1. Background

1.1 Introduction

The Guideline for integrating community-based procurement in O&M systems is based on background research, including a comprehensive literature review and field investigations in four municipal settings that covered a range of basic services technologies. Key findings from the research shaped the t framework and the related tools that comprise this Guideline.

Cross cutting national policies in South Africa are geared towards direct development investments into local livelihoods. Community-based procurement in providing local level Operation and Maintenance (O&M) services may be viewed as a constructive step in development beyond the delivery of basic services infrastructure. While "involvement of the poorest and neediest in O&M" (DFID, R7397) is a recognized vehicle for increasing individual and household capacity to sustain themselves, sufficient information is required to unlock resources. Support for community-based procurement relies on planning that is informed by operational realities.

Aligning with national imperatives, interdepartmental collaboration to integrate programmes may link related poverty reduction initiatives which are endowed with resources, including LED, Health and Social Development initiatives, Skills development and knowledge transfer funds. In order to access and allocate budgets from potential sources such as the Equitable Share and Expanded Public Works Programme, institutional decision-making must be adequately informed.

While O&M tasks will vary in frequency and responsibility according to the technology provided and whether the use of facilities is individual (household) or shared (public), preventative care of facilities is the most obvious opportunity for dramatically improving O&M through community-based procurement. Investment in preventative maintenance routines presents an alternative to relying on expensive, reactive responses to breakdown and crises. This becomes more apparent when responsibility for each specific O&M task required to keep assets in a serviceable condition is firmly linked to the level of stakeholder that operates most efficiently. The difference becomes clear when sorting responsibilities for all the tasks essential for keeping the facility in a serviceable condition in a sequence of stages, as set out in this Guideline.

1.2 Framework of the Guideline

The approach of the Guideline was tested with municipalities, confirming that a structured process will incrementally produce the information needed to inform hitherto neglected aspects of municipal O&M systems. This approach facilitates knowledge sharing, alignment and co-operation at three stakeholder levels.

Guideline framework

Stage 1	Identify CB opportunities **Local Level –** Feedback from the field, Community and field based Operators	• Details of O&M tasks, their frequency and assigned responsibilities • Community based opportunities to contribute to O&M services • Support and materials required for Community-based tasks • Protocol and selection criteria on a local level
Stage 2	**Monitoring implementation - At the Interface -** joint responsibilities Community and Municipality	• Interface for complementary oversight of preventative, reactive and interactive O&M functions • TOR for the interface functions, routines and schedules • Monitoring and reporting links to appropriate supervision of CB opportunities
Stage 3	**Support integration - Municipal level** decision-makers	• Technology Information Sheet to outline O&M requirements • Budget, Procurement, Training and Management checklists to support the uptake of community based opportunities in O&M and inter departmental collaboration

> *Firstly:* **Identify CB opportunities** at **Local level** – **Identify and specify tasks and jobs best suited to local execution and as a means of promoting local development.**

Unbundling of all the specific O&M tasks, their frequency and allocation of responsibility will clarify the appropriate assignment of activities for a particular technology in context. Experience of the use and function of a facility from both municipal and user perspectives is important to distinguishing between community-based and municipal capacities.

> *Secondly:* **Monitoring the implementation at Interface level** – **outline processes related to preventative and reactive O&M, clarify supervision and oversight roles for structure and facilitate uptake and monitoring of CB opportunities.**

Setting up an interface structure to support the flow of communication and interaction needed between levels to oversee and monitor performance and reporting, will also provide for the protocol required to target and monitor community based opportunities.

> *Thirdly:* **Support integration - Institutional Level** - **to collate information that is required to facilitate uptake of community-based O&M processes into planning, policy and resource arrangements and to facilitate interdepartmental collaboration.**

Developing technology information sheets and checklists to communicate O&M approaches will facilitate alignment and collaboration between various departments and inform policies and resource requirements in municipalities.

This approach is to ensure that information based on realities on the ground will be carried from a local level to be taken into account at the interface and on management levels so that institutional decisions and directives are well-informed.

The Guideline is equipped with processes and tools intended to be of practical assistance to in-house operational staff, their managers and planners. The document also contains facilitation guidance and provides examples in the appendix of the application of the guideline and tools in the context of the O&M systems for three technologies (ablution facility, UD toilet and VIP) currently used by local municipalities.

2. Structure of the Guideline

2.1 A Sequence of Stages

The guideline is structured to engage and draw together insights from three different levels of stakeholders: local, interface and institutional. Each of the three stages focuses on collating the details of an aspect of O&M systems within the realm of stakeholder experience. A series of workshops with case study stakeholders confirmed that the 3 Stage Process outlined in the table below will provide an appropriate platform for information sharing, exploration of issues and options and working toward mutually beneficial solutions.

At each level stakeholders will be challenged to work together in a collaborative way to achieve results that are mutually desirable. Continuity and uptake of knowledge from each stage will enable municipalities to move towards integrating community-based procurement into improved O&M systems for basic services. The flow diagram above outlines each stage and level of information collation. The flow of information across levels of stakeholders and an indication of the components of each stage are also illustrated in this diagram.

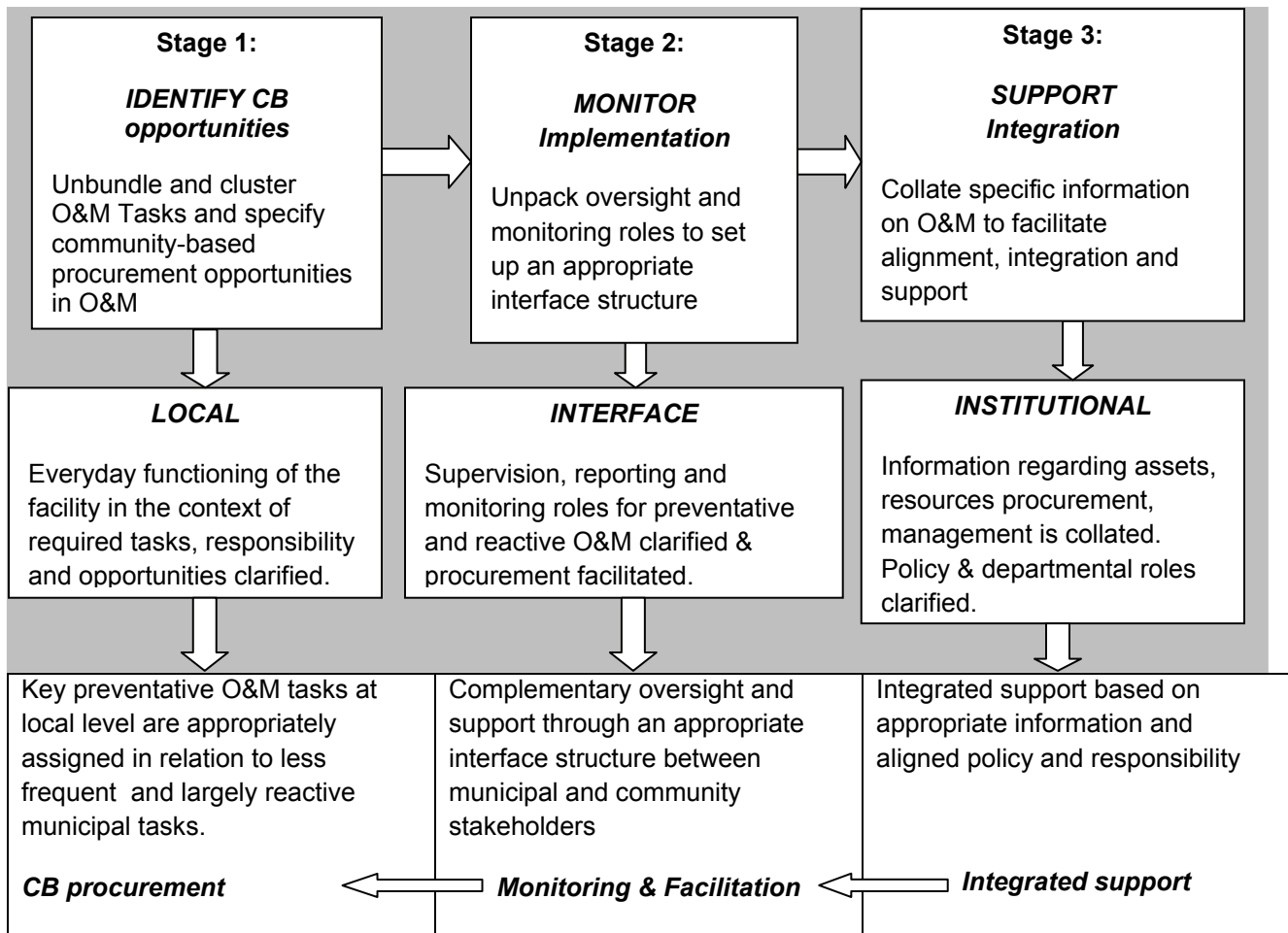| Stage 1: **IDENTIFY CB opportunities** Unbundle and cluster O&M Tasks and specify community-based procurement opportunities in O&M	Stage 2: **MONITOR Implementation** Unpack oversight and monitoring roles to set up an appropriate interface structure	Stage 3: **SUPPORT Integration** Collate specific information on O&M to facilitate alignment, integration and support
LOCAL Everyday functioning of the facility in the context of required tasks, responsibility and opportunities clarified.	**INTERFACE** Supervision, reporting and monitoring roles for preventative and reactive O&M clarified & procurement facilitated.	**INSTITUTIONAL** Information regarding assets, resources procurement, management is collated. Policy & departmental roles clarified.
Key preventative O&M tasks at local level are appropriately assigned in relation to less frequent and largely reactive municipal tasks. **CB procurement**	Complementary oversight and support through an appropriate interface structure between municipal and community stakeholders **Monitoring & Facilitation**	Integrated support based on appropriate information and aligned policy and responsibility **Integrated support**

Figure 2.1: Sequence of stages

2.2 Overview of the stages

2.2.1 Identify CB opportunities (stage 1)

The focus of the **initial stage** is to create the space to collate comprehensive and specific details on each technology with its particular features and user context. Focusing on each specific technology option in its service provision context serves as a basis for collating the details of O&M tasks, activities and support that is required to keep those particular facilities in a working condition.

Insights into improving O&M systems will be gained by starting with local level and operational experience to incorporate knowledge of the daily function and use of facilities in unbundling, collating and organizing of specific O&M details.

> *Operation & Maintenance will not take care of itself: any technology is only as good as its working condition and the daily running of the service. (WSP, 2008)*

Stage 1 will therefore engage those people who have direct experience in the day-to-day operation and maintenance of basic services facilities. Tools for this stage are provided in sequence for progressive application as the information collated in each tool is required to inform the next tool in the sequence. Detailed steps for facilitation guidance are built into each tool.

a) Outcomes of Stage 1

The initial stage will comprise collated information covering:

- Details of O&M tasks, their frequency and assigned responsibilities
- Community-based opportunities to contribute to O&M services
- Skills and materials as support required for Community-based tasks
- Protocol and selection criteria for procuring services

O&M tasks vary in frequency and responsibility according to the technology provided and whether the use of facilities is individual (household) or shared (public). It is therefore important at this stage to encourage local stakeholders to expand on the details of O&M Tasks that may normally be compiled entirely from a municipal perspective.

Unbundling specific O&M tasks and assigning responsibility for these will assist municipalities to understand community-based tasks as real opportunities to improve maintenance. In addition, the scale of local, community-based procurement opportunities to provide O&M services is likely to expand when sufficient detail is collated.

Although community-based opportunities can be effectively identified, those assigned to municipal and joint responsibility are likely also to indicate that:

- The municipal role may be preoccupied with reactive tasks,
- Joint responsibilities rely on improved interaction between municipality and community.

Structured interaction is required between the different community and municipal stakeholder involved in operation and maintenance activities will clarify O&M system and the potential CB opportunities available to improve and sustain service.

> *"The assumption that poor people have the time and motivation to carry out important tasks on a purely voluntary basis is very misguided, especially in urban settlements that lack close-knit community structures found in villages."*
>
> *A Guide to Decision Making: Technology Options for Urban Sanitation in India, WSP, 2008*

b) Overview of steps and tool for identifying CB opportunities:

The first stage comprise of four steps with related tools as set out below:

Stage 1: Identifying CB opportunities…	**Local stakeholder workshop:**
Step 1: Unbundling O&M Tasks and their frequency and assign responsibility	**Tool 1**: O&M tasks: frequency & responsibility
Step 2: Identify Community-based opportunities in O&M	**Tool 2**: Frequency& responsibilities matrix
Step 3: Identify support required to carry out CB O&M services	**Tool 3**: Support for CB tasks
Step 4: Define criteria and selection protocol at a local level	**Tool 4**: Procurement criteria & protocols

2.2.2 Monitor implementation (stage 2)

The focus of this stage is the complementary roles at the interface between the municipality and community to ensure that oversight of O&M activities is adequate. The links for interaction between levels of active stakeholders are clarified and made explicit. A structure that oversees routines, monitoring and reporting will be thus informed by the full range of O&M activities required to keep facilities in a working condition.

Stage 2 will guide municipalities and community representatives to develop an interface structure based on O&M tasks and assigned responsibilities using the tools provided. Details of supervision and reporting will ensure a structure that supports consistent interaction between the municipality and its supervisors, community level service providers, and a community forum that is able to represent user issues.

> *While some initiatives in community management have been successful, rarely can community groups manage services effectively without some form of support from, and coordination with, existing city level management structures. (WSP, 2008)*

Outcomes of Stage 2 will comprise collated information covering:

- O&M matrix aligning activities and complementary oversight responsibility at the interface.
- ToR for supervision and monitoring of all necessary preventative and reactive O&M activities
- Reporting, supervision and monitoring of CB opportunities

Strengthening maintenance on the ground hinges on structured interaction between municipal and local level stakeholders. It follows that effective O&M relies on good communication at the interface.

> *"The careful assignment of roles and responsibilities within partnerships is important, so that roles match each partner's strengths. A willingness to share not only information but decision making within a partnership is also vital if the partnership is to maximise its potential" (WSP 2008)*

a) Overview of steps and tools for monitoring implementation

The second stage comprise three steps and with related tools as set below.

Stage 2: Monitor implementation…	Interface workshop:
Step 5: Align activities for complementary oversight at the interface	**Tool 5**: O&M matrix: activities at the interface
Step 6: Specify and clarify supervision and monitoring functions	**Tool 6**: Terms of references (ToR) for supervision and monitoring functions.
Step 7: Establish reporting and supervision requirements for each CB opportunity	**Tool 6**: Monitoring of CB opportunities

2.2.3 Support integration (stage 3)

This third stage in the structure focuses on conveying information to decision-makers for forward planning within the institution. In the third stage, key decisions, such as the allocation of budgets, are best informed by the operational realities of O&M systems for basic services, rather than applying broad brushstrokes on a contingency basis for lack of adequate information.

Stage 3 will assist municipalities in collating the information needed for planning, and budgeting decisions. Collaboration across relevant departments within the Municipality and inter-departmental inputs are required to complete this stage.

> *Whatever organizations are involved, the municipality has a central role that it cannot give up: to monitor and enforce standards of service delivery, whether the services are delivered in-house or contracted out. (WSP, 2008)*

a) Outcomes of Stage 3

The final stage will comprise collated information covering:

- Technology information sheets to communicate appropriate O&M approaches
- Checklists to identify support required from across relevant departments inputs
- Policies linked to each aspect of O&M requirements
- Budget requirements

Municipal knowledge of its asset base is based on the collation, sharing of key information, which has to be communicated from operational levels up through management. By this Stage, the collated information will serve as knowledge in hand, which may also make apparent that certain important aspects require attention. A common issue serves as a likely example here: that preventative maintenance suffers a shortfall while reactive maintenance draws on seemingly unspecified and limitless budgets.

As adequate support for basic services programmes are framed by de-centralised policies at local government level, the alignment and an associated review of policies is suggested. Institutional decisions are best made, in this context, on the basis of understanding what may help or hinder the improvement of O&M systems on the ground. For this reason, institutional stakeholders are prompted at this Stage to take cognizance of the policies that are relevant to particular checklists, thus linking their decisions to local government alignment with national policy intentions.

b) Overview of steps and tools for supporting integration

The third stage comprises of five steps with related tools as set out below.

Stage 3: Support integration…	Municipal Workshop:
Step 8: Technology and actual LOS inform budgets decisions	**Tool 8**: Technology sheet
Step 9: Budget details cover ongoing O&M including preventative maintenance	**Tool 9**: Procurement checklist
Step 10: Procurement information required by supply chain management is addressed	**Tool 10**: Training checklist
Step 11: Identify training needs that align with appropriate skills	**Tool 11**: Management checklist
Step 12: Establish baseline for organizing collaboration across department	**Tool 12**: Budget checklist

3. Guideline Application

Stakeholders are to be guided through the sequence stages by a facilitator who is well positioned to ensure that collated details required for improved management and planning of O&M systems are taken up by the institution. **A Municipal Facilitator** should therefore be appointed to guide the process.

Selection of the facilitator is pivotal to undertaking the guideline process. For this reason, particular criteria for selecting a facilitator are suggested. The municipal facilitator should be a person with:

- Clear knowledge of the O&M operations of the municipality;
- Capacity to collect and access key relevant information and documents from various departments involved;
- Capacity to convene meetings across the various levels of authority in different departments involved in O&M of facilities;
- Ability to obtain the mandate to obtain information from and convene with department heads

3.1 Role of the Facilitator

The in-house municipal facilitator will plan and prepare beforehand for the application of the guideline in its structured Stages. The key functions of the municipal facilitator are:

3.1.1   Preparing materials and Convening Workshops

Participating stakeholders will require presentations to facilitate the collation of information. Where indicated in the tools, specific information will be obtained by the municipal facilitator, for initiation and each stage, and as specified in the facilitation guidance for each tool. For example: a recent photograph of facilities along with a description of the range of basic services technologies provided by the municipality will assist participants to engage with particular levels of service in context, prior to forming focus groups to focus on particular technology options during workshops.

Preparation of material and input documents for workshops and meetings at each level will also be supplemented by the outputs from each Stage of guideline application. In this way information is fed progressively the next stage and level. A summary of facilitator for each stage is outlined in the table below. Further information on facilitator inputs is provided in the detailed toolkit descriptions.

At each stage the mix of participants is suggested and the formation of focus groups is facilitated to provide specific insights on the different technologies provided, as follows:

Tools are shaped as proformas of tables and checklists to facilitate capturing and uptake to the following stage. The facilitator ensures that stakeholders complete collation during workshops/meetings.

Stage information, preparation & stakeholders

Stage 1: Identify CB opportunities	Inputs	Stakeholders
What Basic Water and Sanitation service level options are provided by the municipality?	Policy/planning documents such as IDP, WSDP	Community User group O&M Operational Staff O&M Supervisors Community Workers
Specific information on the design and operational requirements of the basic services technology provided?	Water Services Environmental Health department reports	
What are the O&M Tasks associated with each type of technology?	Contracts and TOR for service providers	
Stage 2: Monitor implementation		Community/Ward Forum
What are the specific CB jobs for O&M of basic services?	Draft O&M Matrix collated from Stage 1 Information	O&M & district supervisors
What are the activities necessary to support O&M services provision?		LED manager
Who is responsible for monitoring basic services delivery?		Ward Manager
Stage 3: Support integration	Draft Checklists collated from municipal documents and Stage 1 and 2 information	Departmental Managers from Water, Health, Social Development, Training, Budget, Procurement
How many jobs are required in O&M of basic services?		
Which departments have procured CB services for O&M of basic services?		
What Education & Awareness strategies are in place or planned?		
What is the policy and budget framework for O&M of basic services?		

Figure 3.1: View of the stakeholder workshop

The most important principle… is the utilization of findings at different levels and in different ways. When stakeholders are involved in the process that leads to the findings, the likelihood increases that they will use the findings to take corrective action"

Deepa Nayaran, D, (1993-1998) UNDP- World Bank

3.2. How to use the guideline (stage and tools)

3.2.1 Identify CB opportunities (Stage 1)

Participants to be convened for the stage 1 stakeholder workshop are those most familiar with the daily functioning and use of facilities on a local level. Local level participants will generate detailed information based on their experience of daily functioning and use of the facilities. Participants are:

- Local level operators, including municipal officials and service providers,
- Community-based educators and representative users of the facilities.

The initial site visit may readily form part of the local-level liaison called for in convening participants for the first stakeholder workshop. In targeting participants for this workshop, the facilitator will be guided by the question:

What is the level of service on the ground and what specific O&M tasks are required to keep it functional?

a) Facilitation notes

➢ *Prepare Workshop Materials*:

- A baseline of current basic services technologies provided and recent photographs. The Municipal Facilitator should conduct at least one site visit prior to the first workshop. This site visit may readily form part of the local liaison called for in convening participants for the first Stage and workshop.
- Copies for each focus group of a preliminary list of Unbundled O&M Tasks
- Copies of Stage 1 TOOLS for groups to complete in the given sequence.

➢ *Present an initial list of unbundled O&M tasks* associated with the facilities.

➢ *Divide participants into focus groups:* provide for an optimal 4 groups of up to a maximum of 8 persons per group.

➢ *Guide each focus group to collate tools* as completed information sheets.

➢ *Focus Groups* complete tools separately before integrating the information across group outputs. This involves mixing focus groups.

➢ *Record and compile* the workshop outputs with a participant profile.

b) How to use support tools for identifying CB opportunities

To complete this stage, information sheet relevant to each tool should be filled by completing relevant information as per facilitator guidance. Stage 1 tools are designed to collate responses to questions which prompt specific information that is to be provided by the workshop participants.

➢ *Tool 1: Unbundling O&M tasks*

- **Present Level of Service** with **listed unbundled O&M Tasks** that are necessary to keep facilities functioning and in use.
- **Focus Groups review the O&M Tasks lists**, and may add tasks as details that are not adequately covered in the preliminary list in their view.

Question:
- *What are all the specific O&M tasks to ensure facility functioning?*

- **Focus groups fill in the columns** in Information Sheet 1 by:
  - Estimating the optimal frequency of conducting each task
  - Assigning responsibility for each specific task.

Questions:
- *What is the required frequency of each task?*
- *Who is best made responsible for carrying out each O&M Task?*

Information Sheet # 1: Unbundled O&M Tasks, Frequency & Responsibility

Specific O&M Task	Frequency of task					Who?- Assign Responsibility		
	O	A	D	W	M	C	M	C & M

Key: Frequency: **O –** Ongoing; **A -** Ad hoc, **D –** Daily; **W-** Weekly; **M –** Monthly
Responsibility: C – Community; M = Municipality; C&M = Joint responsibility

HINT: Focus groups are best separated into groups with a largely technical or a largely social experience initially. After completing TOOLS 1 and 2 the initial focus groups should be mixed to enable sharing and integration of information from different perspectives.

➢ *Tool 2: Frequency and responsibility matrix*

   Input Documents: Information sheet 1

   Steps:

- **Focus groups refer to their Information sheet 1** to sort and assign all tasks.

- **Focus groups sort** assigned responsibilities for all tasks into three levels in the vertical axis of the matrix: community, Joint or Municipal.

- **Simultaneously organise tasks** according to frequency in the horizontal axis of the matrix.

Questions:
- *Which tasks are Community Based responsibilities and how often is each task to be performed?*
- *Which tasks are either a Municipal or joint responsibility?*

- **Focus groups assign** each cluster of tasks as listed to a role/functionary/job. Name each job in the bottom row of the matrix, reflecting the dominant nature of each group of responsibilities.

Question:
- *What descriptor will name each natural cluster of tasks assigned to community-based, joint or municipal role & function as a job?*

- **Mix groups** to compare focus group outputs. The new groups contain and share both technical and social focus products. Each mixed group then **integrates results.**

Information Sheet # 2: Sorting Responsibilities into Jobs

	Assigned Responsibility		
Frequency	**Community- based**	**Joint**	**Municipality**
Ongoing			
Ad Hoc			
Daily			
Weekly			
Monthly			
Name of each job	*Caretaker/Attendant Security, etc.*	*Educator CLO PSC/ community Rep. etc*	*Supervisor, Maintenance crew, etc.*

➢ *Tool 3: Support for community-based tasks*

Input documents: Information sheets 1 and 2 are used as a reference by participants groups

Steps:

- From Information Sheet #2 each Mixed Group will select the **Community-based Jobs** and insert them into the first column

- **List the O&M Tasks** associated with each particular job below.

Question:
- *Which Community based tasks make up a Community-based Job?*

- **Refer to Information sheets 1 and 2** to check what each task entails.

- In relation to each specific task, note and list:

  - **Equipment** needed to undertake the tasks
  - **Materials** needed to carry out the task

Questions:
- *What equipment is are needed to carry out each task?*
- *What materials are needed to carry out each task?*

Information Sheet # 3: Support required for conducting Tasks

Task cluster = JOB	Support required for conducting Tasks	
	Equipment	**Materials**
CB job		
List Tasks		
CB job		
List Tasks		

HINT: *After completing TOOLS 1 and 2 the initial focus groups should continue be mixed to enable sharing of information from different perspectives. Mixed Groups contain technical and social experience of operation and maintenance on the ground.*

> ➤ *Tool 4: Define criteria and protocol for selection*

Input documents: Information sheet 2 is used as a reference, in order to assist in guiding local protocol for the selection and appointment of individuals for community-based procurement.

Steps:

- • **Identify the skills and experience** needed to carry out the tasks associated with each community-based Job

Question:

- ▪ *What skills and experience should those persons undertaking CB jobs have?*

- • **Identify criteria and other requirements** to guide a suitable profile of persons best suited to the community-based jobs.

Question*:*

- ▪ *Who should be selected to carry out these tasks out a local level?*

- • **Describe a selection process** as related to local level dynamics and protocol and suggest how best to select community-based applicants.

Question*:*
- ▪ *By whom and how should selection be conducted on a local level?*

Information Sheet # 4: Selection Criteria and Local Protocol

Community based Jobs	Skills and Experience	Other criteria (such as place of residence, age, gender etc)	Selecting on a local level
			Who selects and how?

> **HINTS:**
> - • *After completing TOOLS 1 to 4 the Facilitator undertakes to convey collated information sheets as outputs and input documents to the second level Stakeholder Workshop.*
> - • *Municipal representatives who are willing to verify Stage 1 information, and are interested in participating in the second Stakeholder Workshop, should be accommodated as valuable resource persons at the interface.*

3.2.2 Monitoring implementation (stage 2)

Stage 2 tools are prepared by adding to information collated in stage 1 in order to facilitate focus group deliberation to reach adaptations that fit each particular municipality and level of service focus.

A Matrix of O&M Activities and Responsibilities must be drafted by the facilitator for the second stakeholder workshop. Participants will review the matrix based on discussions and reference to stage 1 information sheets.

Stakeholder Workshop

Municipal practitioners (from across departments) and community representatives involved directly or indirectly in oversight roles are to be convened. Stakeholders are to be associated with the O&M across the spectrum of basic service technologies provided currently.

The facilitator will be guided by the question in respect of each technology option: *What management and support is required to keep asset serviceable?*

a) Facilitation notes

➢ *Prepare Workshop Materials*: the facilitator uses the information sheets of stage 1 to prepare Information sheet 5 as an input document by organizing O&M activities as responsibilities at the interface.

➢ *Present Information Sheet 5*, as collated by facilitator.

➢ *Participants will draw on completed Stage 1 Information Sheets* as a basis for cross - checking tables and activities

➢ *Participants will build TOR* for the interface supervision, monitoring and reporting.

> **Questions**
> - *What essential activities are to be structured into the interface to ensure that complementary oversight and support is implemented?*
> - *Do the oversight arrangements cover both preventative and reactive maintenance adequately?*
> - *What are the terms of references for supervision, monitoring and reporting?*
> - *How are CB opportunities monitored?*

b) How to use the support tools to monitor implementation

➢ **Tool 5: O&M matrix: activities at the interface**

The interface between municipalities and communities is associated with a number of key O&M activities that require interaction. An appropriate interface structure will oversee the supervision, reporting and monitoring essential to the O&M system.

Input Documents:

- Stage 1 outputs in information sheets 2, 3 and 4.
- Municipal reports on current basic services projects.

Steps:

- **Prepare O&M Matrix*:***
  The Municipal facilitator who is convening and facilitating this workshop compiles an O&M Matrix based on information sheets 2, 3 and 4. Typical examples of this matrix for both shared/communal and individual household facilities are provided in Table 5a and Table 5b. The matrix clusters preventative, interface and reactive O&M activities (based on frequency and responsibility) as a monitoring tool.

- **Convene a workshop for** officials who supervise or manage operations together with the local community forum responsible for water, sanitation and health matters

- **Present compiled O&M Matrix** showing activities, oversight and monitoring associated with all those functionaries involved in implementing O&M.

- The group **reviews the O&M Matrix** in the context of the functions, jobs and procurement arrangements recommended in stage 1 to confirm supervision and monitoring and oversight arrangements.

Questions:
- *Based on frequency, what are the key local preventative maintenance, monitoring and reporting activities linked to job opportunities that are to be supervised and monitored?*
- *Based on frequency what are the activities of the local oversight committee related to the uptake of CB opportunities and monitoring service delivery.*
- *Based on frequency, what are the key reactive maintenance activities that are to be monitored?*

HINT:

Choices of technology and level of service in context will inform some of the choices to be made by stakeholders for changes to the content of each column in the matrix.

Use the Stage 1 outputs as a reference and to cross check outputs of group work.

Note: Examples of an O&M matrix are provided below in information sheet 5a and 5b to assist the guideline users to understand its application.

Example of Information sheet #5a: O&M Matrix- Shared facility

Frequency	Preventative Maintenance		Interface		Reactive maintenance
	Caretaker	Educator	Supervisor/ Monitor	Community Forum	Municipality
Once off/ Rotational			Appoint and brief as per CF recommendation	Set Procurement Lists Selection Criteria	Set up maintenance crews & stores
Daily	Open, Monitor and Cleaning Check & fix Minor leaks	Liaise with H/h, Schools, institutions User Surveys	Deploy educators Inspection & monitoring Follow up reactive maintenance requests		Attend to reactive maintenance requests
Weekly	Check materials & supplies Requisition materials and supplies	Liaise with Care takers Collate Activity & incident report	Compile weekly checklist for CF Manage of Caretaker & educators Ensure adequate materials & supplies	Liaise with supervisors on follow up to Monthly meeting recommendations	Procure and deliver materials and supplies as requested Meeting with Supervisor Monitor
Monthly	Attend Community forum	Attend Community forum	Prepare report for CF	Meet to review monthly reports & make recommendations	Attend CF meeting
Ad Hoc	Attend training courses as required	Investigate incident & reports Attend Training courses as required	Collate and place reactive maintenance and materials and supply requests Collate incident reports	Liaise with Supervisor on response to incident reports & procurement issues	Liaise with CF re crisis maintenance
Ongoing	Report repairs blockages/full toilets & incidents to Supervisor	Provide Training and Awareness Programmes as required	Organize training and Awareness programmes	Monitor community satisfaction and Service levels Review Process & Budgets	Inspect Facilities and Networks

Example of Information sheet #5b: O&M Matrix - Individual Household facility

Frequency	Preventative Maintenance		Interface		Reactive Maintenance
	Household	Educator	Supervisor	Community Forum	
Once off/ rotational			Set up maintenance crews & stores	Set up Procurement lists & process for selection of providers	
Daily	Clean & monitor facility Attend to minor repairs	Liaise with H/h , Schools, institutions Inspection facilities User Surveys	Deploy educators Inspection & monitoring Follow up reactive maintenance requests		Attend to reactive maintenance requests
Weekly		Collate Activity & incident report	Compile weekly checklist for CF Performance management of Educators & maintenance crews Ensure adequate materials & supplies	Liaise with Supervisors on follow up to monthly meeting recommendations	Meet with Supervisor /Monitor/
Monthly	Inspect facility	Attend Community forum	Prepare report for CF	Meeting to review monthly reports and make recommendations	Attend CF meeting
Ad Hoc	Attend Awareness Programmes as required	Attend Training courses as required	Attend to incidents	Liaise with Supervisor on incident reports & procurement issues	Procure and deliver materials and supplies as requested
Ongoing	Liaise with Educator regarding maintenance requirements	Liaise with Supervisor Provide Training and Awareness Programmes as required	Arrange awareness and training programmes	Monitor community satisfaction and Service levels Review process, price lists and budgets	Inspect Facilities and replace spares (taps, pipes, etc.).

➢ *Tool 6: List terms of reference (TOR) at the interface*

Input documents:

- Information sheet 5 is used as a reference
  - to identify the Terms of Reference for key functions at the interface and
  - identify key elements for routine inspection

Steps:

- Review the middle column (interface) in Information Sheet 5 related to supervision and community forum as complementary oversight
- Confirm and list the ToR and who is to be responsible for Supervision
- Confirm and list the ToR and who is to participate in the Community O&M Forum

Questions:

- *What are the essential supervision and monitoring functions at the interface?*
- *What are the outcomes of the activities that inform terms of references of for each interface role?*

Information Sheet #6: TOR for supervision and monitoring of O&M

Supervision	
Responsible Party	**ToR**
Community Forum monitoring	
Participants	**ToR**

HINT: *The information collated in Information Sheet 5 is an essential tool for establishing TOR for supervisors and community forum participants.*

➤ *Tool 7: Reporting, Monitoring and Performance management*

Input documents:
- Information Sheets 5 and 6 will be used as reference for Specific TOR for all O&M measures and routines,

Steps:

- Review O&M Matrix and identify key activities for which checklists & reports required to ensure effective performance management of CB opportunities
- Complete Table outlining checklists and reports with associated frequency and supervision requirements for each CB opportunity

Questions: *For each CB Job opportunity*
- *What checklists are required to ensure that tasks are performed?*
- *Which reports are required to ensure effective communication and response?*
- *Who is the Supervisor that receives reports or uses checklists?*

Information Sheet #7: Monitoring and Performance Management Information

CB opportunity: …		
Description of checklists or reports required	**Frequency**	**Supervisor**

HINT:

- *Create a sheet for each CB job that has been identified in Stage 1.*

- *Ensure that there is no diversion from information collated previously.*

3.2.3 Supporting integration (stage 3)

Stakeholder Workshop

This stage involves relevant managers and decision makers at the institutional level, who may be suggested by stage 2 stakeholders at the end of stage 2. As inter-departmental officials may be spread across various departments, an in-house Municipal facilitator will be in a position to convene meetings of relevant persons to fit with existing municipal protocol and procedures.

The facilitator will be guided by stakeholders participating in the stage 2 stakeholder workshop with the question: *What departments are responsible for accessing resources and collaborating in inter-departmental planning that is required for O&M systems?*

- *Facilitation notes*

Convening meetings or workshops of those who should be part of the Stage 3 process may draw connecting leads from collated tools of previous Stages: stage 1 (tool 2) and stage 2 (tool 7) will suggest links to each department to establish who should be involved in Stage 3. Apart from the augmented baseline, the Technology Sheet provided is filled in for each technology by the facilitator.

➢ *Prepare Materials*: the facilitator uses information collated in stage 1 and stage 2 Information sheets, as well as adding inputs from available municipal reports and planning documents, to partially fill in the initial checklists.
➢ *Present collated Checklists* to stakeholders.
➢ *Guide the stakeholders* to cross-check and add information to the checklists.

- *How to use the support tools provided for supporting integration*

Stage 3 tools will start with the initial preliminary baseline and draw on information obtained from stage 1 and stage 2 workshops. The level of service descriptor is used as a starting point for collating further knowledge based on municipal experience.

Apart from presenting the baseline of all basic services, a technology sheet is prepared by the facilitator for each technology. Specific policy documents relevant to each checklist are sought by the facilitator at the same time as identifying those officials who are best positioned to fill in the associated checklists at this stage.

Stage 3 tools requiring further information on municipal implementation of policy will be completed in the technology sheet by the facilitator with municipal officials who participate in the final focus sessions.

➢ *Tool 8: Technology sheet*

Input documents:

- Preliminary baseline: level of service (LOS) Profile
- Information sheets from stage 1

Steps:

- Based on the baseline and the information collated in tool 2, request that details are collated in a technology checklist for each option currently provided by the municipality:

  - Describe the Watsan technology; indicate number of units provided and the department responsible for management

  - List the O&M jobs and determine the number that will be deployed per unit.

- Indicate the O&M materials and equipment required.

- Identify frequent problems that may affect the lifespan of the facility.

- Outline the limitations of the technology

Information Sheet 8: Technology checklist

Which policies relate to the Technologies provided?	*List these*

Technology:	
Description of Watsan technology provided	
Which dept is responsible for the provision of facilities?	
Which dept is responsible for O&M of these facilities?	
Number of units in place?	
Staff needed to undertake O&M for this technology?	
What materials and equipment are needed for O&M of this technology?	
What are the recurrent problems with the technology?	
In which category of settlement is the technology is suitable?	

➢ **Tool 9: Procurement checklist**

Input documents:

- Selection criteria (stage 1, information sheet 3) used to inform the selection and appointment process
- Procurement information sheet (stage 1, information sheet 2), used to inform the materials and equipment required for the job.
- Budget checklist used to information the contract and policy and the payment.
- O&M matrix (stage 2, information sheet 4) used to inform to inform the job requirements based activities that constitute a job.

Steps: Knowing the TOR, specify each CB job,

- Collate each CB job requirements (as described in stages 1 & 2)

- Calculate in relation to the current and planned scale of provision*:* How many people are needed to undertake each O&M job?

- Refer to selection and appointment processes (indicated in stages 1& 2)

- Indicate the person or dept involved in the selection and appointment

- Indicate the type of contract and duration

- Indicate the basis of payment and methods

Information Sheet #9: Procurement checklist

What procurement policies are in place for the selection and appointment for jobs in O&M of Watsan facilities?	
What are the policies that are in place to support LED?	
What programmes are aligned to CB procurement as a basis for forward planning and unlocking funds?	

Fill in a sheet for each Community-based job:

CB Job/Opportunity	
What are the job requirements?	
Number to be employed?	
Which dept is responsible for selection and appointment?	
What is the selection and appointment process?	
What type of contract is offered and duration?	
How is performance judged in respect of payment?	

> **HINT:** *The translation of information collated in Stage 1 and 2 will serve as a basis for entering the details into this information sheet, which informs the appropriate departments involved in procurement.*

➢ ***Tool 10: Training checklist***

Input documents:

- Previous stages have collated information that is used to inform the training needed to empower individual undertaking O&M works based on their current skills and knowledge of the Watsan technology.

- Refer to Information Sheet from previous to inform collation (Stage 1, Tool 4 and Stage 2, Tool 5) to complete this checklist

Steps:

- Firstly, initiate the discussion with the policy and funding questions.

- Then, for each Community-based job prepare a training checklist:

  - Indicate the entry level requirements

  - Based on the job requirements, identify the type of training is required to empower the individual appointed to undertake the job

  - Indicate the dept responsible for the specific training required in each case

Information Sheet #10: Training Checklist

What is the current policy guiding training for O&M of Watsan?	
What programmes are aligned to CB training as a basis for forward planning and unlocking funds?	

Fill in a sheet for each Community-based job:

CB Job	
What is the entry requirement?	
What are the experience or skill requirements for the job?	
What training is required in this regard?	
Who's responsible for organizing training?	

> **HINT:** *The translation of information collated in Stage 1 and 2 will serve as a basis for entering the details into this information sheet, which informs the appropriate departments involved with different types of training.*

➢ *Tool 11: Management checklist*

Input documents:

- Stage 2 information is important to inform this checklist.

- The following sheets are required:

  - Information Sheet 5 outlining links between maintenance, supervision and monitoring
  - Information Sheet 6 providing TORs for Supervision & Monitoring Structures
  - Information Sheet 7 outlining inspection and reporting requirements for each CB opportunity

Steps*:*

- Determine and outline responsibility for setting up and liaising with the community O&M forums

- Determine and outline responsibility for coordinating and monitoring preventative maintenance system

- Determine and outline responsibility for coordinating and monitoring reactive maintenance system

- List contacts people in departments identified in checklists

Information Sheet #11: Management Checklist

	Responsibility	Key Performance Indicators
Setting up and liaising with community forums?		
Monitoring and coordinating Preventative maintenance?		
Monitoring and coordinating Preventative maintenance?		
Procurement support?		
Training support?		
Budget?		
Overall responsibility for O&M programme?		

> **HINT:** *Choices of technology and level of service in context will inform deliberation and the information entered by stakeholders into the table.*

➢ *Tool 12: Budget checklist*

Input documents: The preparatory documents needed to complete this tool are:

- The Technology Sheets are used to inform the calculations for questions in this Tool, including the support needed (in term of materials and equipment), the jobs identified, the number of people required, problems that may occur.
- The checklists add other support requirements from the institution.

Steps:

- Indicate the CB requirements

- Indicate the material requirements

- Indicate the support requirements

- Indicate nature of contingency provision

- Describe budget procedure/ funding source and policy

Information Sheet 12: Budget checklist

What are the policies that support adequate budgeting for O&M?	
What programmes and sources for grants are to be unlocked as a basis for forward planning and access to funds?	

Technology:	Number of units:	
CB Procurement opportunities?	Deployment Ratio	Total
Material requirements?	Per unit	Total
Support requirements?		
Indicate type of Contingencies[1] must be budgeted		

> **HINT:** *Choices of technology and level of service in context will inform deliberation and the information entered by stakeholders of to the table.*

3.3 Uptake of Information by the municipality

No watsan technology, however simple, is entirely maintenance-free. Identifying how each of the potential technologies could be operated and sustained is an integral part of the decision-making process. There is no special methodology for doing this; this matter needs proper attention since operation and maintenance will not take care of itself. Any technology is only as good as the operational framework within which it is used. *(WSP, 2008)*

The guideline has been developed facilitate "proper attention" to the O&M requirements of basic services. Application of this guideline will clarify the requirements for keeping municipal assets in a serviceable condition and assist in shifting a common municipal 'crisis management' mode in O&M of basic services. Information produced by applying the guideline tools will provide the detail needed for realizing Community-based procurement for daily care of shared, or public, facilities, minor repairs, materials supply and pit-emptying, amongst other key O&M functions.

The Guideline also provides a platform for partnerships between different levels of stakeholders through the clear formulation of defined responsibilities in setting up O&M systems for basic services. It provides for the alignment of schedules and routines to facilitate appropriate communication and oversight of performance by the municipal and community. As a consequence, Municipalities may reduce the burden on municipal and human resources in constantly reacting to breakdowns, vandalism and frequent blockages by allocating budgets to invest in preventative maintenance while at the same time providing much needed local economic development opportunities in poverty-stricken areas.

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Appendices

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APPENDIX A: APPLICATION OF THE GUIDELINE

Case Study eThekwini municipality

The selection of eThekwini as a case study example of the application of the Guideline is based on the variety of basic services technologies offered by this municipality. eThekwini metro municipality has three sanitation technologies in three different contexts. The opportunity to apply the guideline in three different technology options is relevant to the applicability of the guideline in different contexts, environments and technologies.

1. Sequence of application of the guideline

The application of the guideline went through a progressive process that involved three levels of stake holders. These stakeholders were: local, interface and municipal. At each level of the application of the guideline details of aspects of the O&M systems of the technologies of available were generated and collated.

2. Facilitator Preparation

2.1 Preparation for workshops

In preparation, a background study was undertaken to provide a description of the nature of basic services and assets for which information exists. This description was acquired through:

a) Interviews with key stakeholders in the provision of and maintenance of Watsan services in the municipality with regards current municipal basic services provision arrangements.
b) Collection of and analysis of key policy documents regarding O&M of Watsan services such as WSDP and IDP documents. Other policies relevant to the O&M model undertaken were provided. Such policies are:
   - Sanitation Policy – for the provision and maintenance Water and
   - Sanitation Business plan – for the provision of current levels of service
   - Leaks Repair policy - for individual sanitation and the provision of basic Water and Sanitation
   - Water policy – for tariffication
c) Site visits that included observation of current state of Watsan facilities in different settlements and interviews with the end-users

Figure 1: Interview with the caretakers (CLO's playing an educator role and a local contractor)

Figure 2: Interviews with a VIP sub-contractor

Figure 3: Interviews of the supervisor representing the main Contractor of VIPs emptying programme

Figure 4: Interviews with Pit emptier and supervisor

Key informants for the process were:

- Michael Doorsamy (Municipal Officer in charge of planning & budgeting O&M of ablution facilities)
- Lucky Sibiya (Training and Education Officer)
- Pumzile Toto Mzobe (E.H.P)
- Teddy Gounden (Deputy Director. Councilor Liaison and Consumer Education)

Upon completion of a baseline an appraisal of all technologies available was acquired.

2.2 Facilitator Presentation

An initial presentation of findings was undertaken by the facilitator. The facilitator chose to present the technology options offered by eThekwini municipality including an appraisal of the O&M arrangements in place for the technologies as well as sharing ratios where information was available. What was unclear with regards the O&M arrangements for the facilities was left to be answered during the application of the guideline.

eThekwini provides three technologies for residents of over 500 informal settlements to the eThekwini metro. The range of technologies in eThekwini presented was as follows:

- Ablution facilities
- Urine Diversion (UD)
- Ventilated Improved Pit (VIP)
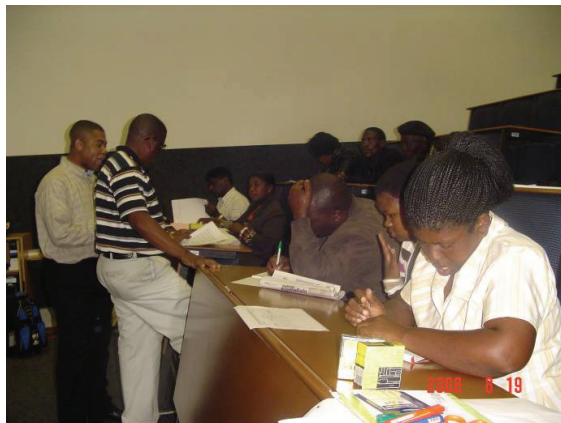
Figure 5: Presentation of baseline findings (eThekwini workshop)

2.2.1 Ablution facility

The ablution facility is a shared facility that houses toilets, urinals for me and showers. Cleaning and care of the facility is undertaken by local volunteers with supervision by the metro's department of Environmental Health.

Typical ablution facilities in eThekwini have:

- Up to 4 toilets
- 1 urinal
- 1 shower for men and 1 for women

Ablution facilities are suited to low and highly densely populated areas. They are commonly places where there is sewerage in place.

Figure 6: external view of an ablution facility in eThekwini

2.2.2 VIP facility

Where VIP toilets and 200 yard tanks are provided (such as in Luganda), the general O&M tasks including emptying of UD and VIP are under the responsibility of the household. The municipality undertake the VIP emptying on 5 years cycle

VIPs are individual toilets that are:

- Lined pit 1,5m deep with a pedestal
- Fitted with masonry top structure
- Fitted with metal sheet roof and vent pipe
- Fitted with metal/wooden door

Figure 7: External view of a VIP facility

The VIP is a basic service that is provided by the municipality in areas where sewer lines and in those areas where the terrain renders it difficult to connect to sewer lines are far.

Due to the previous experience, the failure of local SMMEs to provide a quality services led the municipality's appointment of a managing contractor who in turn was requested to appoint experienced small contractor (regardless of his/her residential location). The small contractor was requested to appoint only local resident to undertake O&M tasks.

The main task of the municipality is information dissemination to beneficiaries. Thereafter contractors undertake O&M.

2.2.3 UD facility

Where UD (Urine Diversion) toilets are provided, the facilities are the responsibility of individual beneficiaries. It is therefore the responsibility of end-users to ensure that their facilities are in a serviceable condition.

Urine diversion is a system that allows the urine to be diverted from the waste into a separate soakaway that is constructed next to the toilet. The waste goes in the vault that is closed to prevent the moisture and water to get inside it.

UD toilets are individual structures that are fitted with:

- A urinal for urine
- Separate toilet bowl for faeces.

It was agreed between the municipality and communities that use UDs at the introduction of UDs in eThekwini that the responsibility of the individual beneficiary.

Figure 8: Opening UD vault for maintenance

O& M Tasks

O&M task lists were prepared by the facilitator based on findings; this comprises a list of unbundled O&M tasks that are necessary to keep facilities functioning and in use.

Appendix B. APPLICATION OF GUIDELINE PER TECHNOLOGY

After the presentation of findings, participants selected one technology (which they use or work with) as a focus to undertake the application of the guideline. The application was undertaken in a sequential manner using tools to allow the collation of specific details of O&M tasks, activities and support arrangements that ensure that facilities are in a serviceable condition.

The application of the guideline was undertaken for all three stages. A focus on the appraisal of each specific technology option was done using steps, tools and a process consistent to all 3 cases studies taking into account that each technology has its own particular features and user context.

Key differences lie in the outputs of the application. Hence the case studies given show both detailed the facilitation and outputs in the first case study and just the outputs for the other two case study technologies. Below are the 3 case studies, specific to the technologies, of the application of the guideline.

B.1 Application of guideline for Ablution Facility

1. Constitution of the focus group

The group of people engaged with direct experience in the day-to-day operation and maintenance ablution facilities were:

- 1 x caretaker,
- 1 x S. E.H.P. (eThekwini Municipality)
- 1 x Municipal Officer (eThekwini Municipality)
- 2 x beneficiaries from Beach Way

Participants confirmed the validity of data collated and presented in the document, and provided additional information pertaining to the O&M of UD facilities.

2. Baseline information

The ablution facility is a shared facility that houses toilets, urinals for me and showers. Cleaning and care of the facility is undertaken by local volunteers with supervision by the metro's department of Environmental Health.

Typical ablution facilities in eThekwini have:

- Up to 4 toilets
- 1 urinal
- 1 shower for men and 1 for women

Ablution facilities are suited to low and highly densely populated areas. They are commonly places where there is sewerage in place.

3. Application of the guideline

3.1 Identify CB opportunities in O&M (stage 1)

3.1.1 Unbundling O&M Tasks and their frequency and assign responsibility (step 1)

a) Facilitation

O&M task lists were prepared by the facilitator based on findings. These task lists formed the basis of discussions regarding the unbundling O&M Tasks, frequency and assign responsibility by stakeholders.

- Participants were presented with listed Unbundled O&M Tasks that are necessary to keep facilities functioning and in use.

- They reviewed the O&M tasks lists, and filled in the provided columns in information sheet 1 and qualify each task by:

  - Estimating the optimal frequency of conducting each task
  - Assigning responsibility for each task.

- Each task was qualified and additional inputs of tasks were considered from the perspective of focus groups.

Figure 9: Mixed group of participants unbundling, assigning frequency and responsibility of O&M tasks of an ablution facility

b) Outputs

Current Level of Service provided the basis for unbundling associated O&M Tasks. Participants outlined:

- Outlined specific O&M tasks necessary to ensure that facilities remained in a serviceable condition
- Outlined the frequency of the tasks identified
- Identified responsibility for carrying out each task

The collation of responses to questions regarding unbundling of O&M associated tasks for the VIP was undertaken as follows:

Information Sheet 1: Unbundled O&M Tasks, Frequency & Responsibility

Specific O&M Task	Frequency of task					Who?- Assign Responsibility		
	O	A	D	W	M	C	M	C & M
Liaison with the community		✓					✓	
Identification of need for sanitation	✓							✓
Collection of complaints		✓					✓	
Unblocking, open channel, toilets, drains and gullies	✓				✓			
Inspection of broken, blocked toilets or burst pipes	✓							✓
Cleaning outside the facility (picking rubbish and cutting grass)			✓			✓		
Fixing major leaks, pipes and blockages		✓					✓	
Education (Use of facilities	✓							✓
Replacing toilets and spares		✓					✓	
Fix major blockages		✓					✓	
Drop off materials (disinfectants)					✓		✓	
Cleaning inside facility			✓			✓		
Unblocking pipes outside the toilet		✓					✓	
Reporting blockages/full toilets		✓				✓		
Specific O&M Task	**Frequency of task**					**Who?- Assign Responsibility**		
						C	M	C&M
Cleaning toilet bowls and urinal			✓			✓		
Checking tidiness of toilets			✓			✓		

Key: Frequency: **O –** Ongoing**; A -** Ad hoc**, D –** Daily**; W-** Weekly**; M –** Monthly

Responsibility: C – Community; M = Municipality; C&M = Joint responsibility

To the provided tasks gathered during the preliminary baseline exercise, participants added the tasks of:

- Monitoring – which was qualified as to be done more frequently if there is more personnel to undertake the task

Of all the tasks identified and confirmed, key tasks central t ensuring that ablution facilities remain in a serviceable condition were identified as:

- Cleaning in/outside
- Inspection (checking tidiness)
- Reporting (breakages, blockages and defaults)
- Fixing minor leaks
- Replacing toilet papers
- Monitoring

Figure 10: Caretaker cleaning inside of the ablution facility with a hosepipe

Ensuring access, as a task needed clarity given comparisons of different operating environments of the technology in the municipality. Given the volunteer status of personnel that attend to the ablution facilities, access varies in two sections of eThekwini.

- In some areas the ablution blocks are accessible only during the day, i.e., till the early hours of the evening.
- In other sections, there is access for 24hours. The individual with the keys and toilet paper does not stay at the facility. Instead, community members can visit the volunteer any time after hours to request access and toilet paper. This is not much of an inconvenience as it is agreed upon by the community as a whole during community meetings.
- In both scenarios, provision is made for the disposal of night soil in the facilities in the morning. That is, for the facilities that are open during day hours only and for those that do not wish to use the 24 hour accessible facilities. There are enough toilet facilities available to allow dedicating one for the disposal of night soil during the morning. The night soil emptying is done on the early hours of the day and the caretaker oversee the emptying process

3.1.2 Identify CB opportunities in O&M (step 2)

a) Facilitation

The main input to the process of identification of community-based opportunities was the completed Information sheet 1.

- Participants drew from information sheet 1 and clustered and cross checked the assigned responsibility and estimated frequency of tasks to show the scope of these functions.

- These were then sorted assigned Responsibility for all tasks into three levels in the vertical axis: Community, Municipal, or Joint responsibilities of the information sheet 2.

- Roles & Functions were named to describe the Tasks listed. The dominant clusters of each group of responsibilities were named in the bottom row of the matrix.

b) Outputs

Tasks listed and clustered were used to identify Roles and functions for jobs identified. This was done through:

- Identifying tasks that are community responsibilities
- Outlining the frequency with which these tasks are undertaken
- Identification of tasks that are either municipal responsibility or joint

These were identified as follows:

Information Sheet 2: Sorting Responsibilities into Jobs

Assigned Responsibility			
Frequency	**Community- based**	**Joint**	**Municipality**
Ongoing	Report incidents and problems Safe keeping of materials and equipment Provide training & Awareness programme	Educating communities	
Ad Hoc	Fixing minor leaks Conduct minor repairs (on taps, toilet seats) Fix minor breakages Investigate incidents and reports		Fix major leaks Fix major breakages Replace spares Unblocking pipes
Daily	Open and close the facility Cleaning in and outside the facility Sweeping the floor Cleaning the toilet bowls and urinal Disinfecting toilet bowl Cleaning hand wash basins Collect solid waste		
Frequency	**Community- based**	**Joint**	**Municipality**
Weekly	Collect materials		Drop off materials
Monthly	Compile requisition		Stock control and job evaluation
Name of each job	Caretaker	Educator	Supervisor and maintenance crew

3.1.3 Identify support required to carry out CB O&M services (step 3)

a) Facilitation

The main input to the process of identification of CB opportunities was the completed Information sheet 2 and references to 1.

- From information sheets 1 and 2 CB Job were selected and applied to information sheet 3.

- For each CB job, O&M Tasks associated with each particular job were listed below the opportunities identified.

- Materials and Equipment were added in reference to support requirements needed to carry out tasks of the CB opportunities identified.

b) Outputs

Support necessary for individuals to undertake O&M tasks were identified by participants. Participants outlined:

- CB jobs emergent from clustered tasks
- The equipment need to undertake tasks that constitute CB opportunities
- Materials needed to undertake the job

These were collated as follows:

Information Sheet 3: Support required for conducting tasks

Task cluster = JOB	Support required for conducting Tasks	
	Equipment	**Materials**
CB job: Caretaker		
List Tasks Open and close the facility Cleaning in and outside the facility Sweeping the floor Cleaning the toilet bowls and urinal Disinfecting toilet bowl Cleaning hand wash basins Collect solid waste Fixing minor leaks Conduct minor repairs (on taps, toilet seats) Fix minor breakages Compile requisition Report incidences and problems Safekeeping of materials and equipment Handing toilet paper Open and close facility	Hard and soft Broom, brush Toilet brushes Mop Shovels Hosepipe Gloves Safety boots, Overalls Refuse bags and bins Disinfectants Spade Wheelbarrow Spanners, screwdrivers etc Safe room at the facility Toilet paper Cleaning buckets	Writing material

CB job: Educator		
list Tasks Educating communities Explain Watsan technology Explain and demonstrate use of facility Conduct health and hygiene education Attend community forum Investigate incidents and reports Providing training and Awareness Programmes	Bicycle or car Flip chart demonstration Workshops	Pamphlets and handouts relevant to the Use and O&M of UD technology Writing material

Defining jobs was tied to the length of time that it took to the frequency with which tasks which were then clustered are to be undertaken, as well as time that it requires to undertake the clusters. The CB opportunities were identified as full time day jobs (8 hours) that are an ongoing process in the O&M of ablution facilities.

Figure 11: O&M work at facilities: Caretaker cleaning ablution facility

3.1.4 Selection Criteria and Local Protocol (step 4)

a) Facilitation

Facilitation of this process the process is based on the outputs collated in information sheet 4, re: CB opportunities required and the clustered tasks that constitute and opportunity.

- Participants identified the skills and experience required to carry out the tasks associated with each CB function.

- For each CB opportunity, a suitable profile of persons in respect of other qualifications and skills.

- Participant informed other requirements related to local level dynamics and protocol and identification of the selection process and criteria (how best to select applicants).

b) Outputs

Participant defined criteria and selection protocol at a local level. These were identified in terms of:

- Skills and experience needed to carry out CB jobs
- Individuals that need to be selected
- How these individuals are selected and by whom they would be selected.

Information Sheet 4: Selection criteria and local protocol

CB Jobs	Skills and experience	Other criteria (such as place of residence, age, gender etc)	Selecting on a local level
Caretaker	Basic innumeracy and literacy Basic plumbing	Gender – Both Age – Responsible person 25 – 60	Community appoints individual. Community meeting is held. Meeting seeks volunteer. Where no one volunteers, meeting picks individual.
CLO (Educator)	Basic innumeracy and literacy Basic plumbing	Gender – Both Age – Responsible person 25 – 60	

- Individual residing within or outside the area (contractor position)
- Local residents (for cleaning jobs)
- Volunteer who shows interest in the matters of water and sanitation

3.2   Monitoring implementation

3.2.1 Activities for complementary oversight at the interface (step 5)

Municipal practitioners (from across department), associated with the O&M across the spectrum of basic service technologies provided currently and community representatives involved directly or indirectly in oversight roles were convened.

Tools for this stage were prepared by adding to information collated in Stage 1 in order to facilitate focus group deliberation to reach adaptations that fit each particular municipality and Level of Service focus.

Collated outputs of stage 1 were put forward as inputs for the second stage that was intended to explore the management and support that is required to keep that asset in a serviceable condition.

Figure 12: Stakeholders at interface level workshop

a) Facilitation

The facilitator who is convening and facilitating compile an O&M Matrix based on Stage 1 Information Sheets 2, 3 and 4 prior to the workshop. The compiled matrix was presented to participants.

From this presentation a:

- A review the O&M Matrix was taken in the context of C/M functions, Jobs and procurement arrangements recommended in stage 1.

- Discussions and adjustments provided Matrix activities, oversight and monitoring for all parties involved in the O&M of context specific technology.

b) Outputs

Complementary oversight to ensure that interaction between levels of active role players was outlined to draw up the interface.

- Activities to ensure oversight and support were identified
- TORs for supervision monitoring and requirements were identified
- Linkages between supervision, monitoring and reporting

Information sheet 5: O&M Matrix - Community ablution facility

Frequency	Preventative Maintenance		Interface		Reactive Maintenance
	Caretaker	Educator (CLO)	Supervisor	Community Forum (Project Steering Committee)	
Once off/ rotational				Set procurement and selection criteria	Set up maintenance crews
Daily	Opening, Monitoring and cleaning Checking and fixing minor leaks	Liaison with h/h, schools, institutions, user survey	Deploy educators Inspection and monitoring Follow up reactive maintenance requests		Attend to reactive maintenance
Weekly	Check materials and supplies Requisition materials and supplies	Liaison with caretakers	Compile Weekly checklist for CF Performance management of caretaker and educators Ensure adequate materials and supplies	Liaise with supervisors on follow up to monthly meeting recommendations	Procure and deliver materials and supplies as requested Meeting with supervisor Monitor
Monthly	Attend community forum	Attend community forum	Prepare report for CF	Review monthly reports and make recommendations	Attend CF
Ad Hoc		Investigate incidents and reports Attend training courses as required	Collate and place reactive maintenance and supply requests Collate incidents reports	Liaise with supervisor on response to incident reports	Liaise with CF re crisis maintenance
Ongoing	Reporting repairs/full toilets and incidents to supervisor	Provide Training and awareness Programmes as requires	Organize training awareness programmes	Monitor community satisfaction and service levels Revise process and budgets	Inspect facilities and networks

Response time reports and the flow of reporting were identified to be of key importance to the continued functioning of and ablution facility.

The following chain is used for reporting and collecting complaints for ablution facility and operates well: Caretaker/User to the Health Practitioner (Telephonic or via requisition) - Health Practitioner to the Maintenance officer.

3.2.2 List of TOR at the interface (step 6)

a) Facilitation

- The middle interface column in Information Sheet 5 (interface) was reviewed in relation to supervision and complementary oversight of activities undertaken by the caretaker and educator (CLO)

- To complete information sheet 6:

  - TORs and responsibility for supervision were confirmed, refined and listed based on activities identified in Information sheet 5 (O&M Matrix – communal ablution facility)

  - This was then followed up with the confirmation of TORs and participation in the community O&M forum in the management and support of O&M activities based on activities identified in Information sheet

b) Outputs

Key monitoring and supervision roles at the interface were identified. The key roles identified were then translated into TORs.

The collation of supervision and monitoring roles at the interface were as follows:

Information sheet 6: TOR at the interface

Supervision	
Responsible party:	**TOR**
EHP	Appointment and briefing as per CF recommendation Deploy educators Inspection and monitoring Follow up reactive maintenance request Compile weekly checklist for CF Performance management of caretaker and educators Ensure adequate materials and supplies Prepare report for CF Collate and place reactive maintenance and materials and supply requests Collate incidents reports Organise training and awareness programmes

Community Forum (Project Steering Committee)	
Participants	**TOR**
EHP, Ward Committees, EWS	Set Procurement lists and selection criteria Liaise with supervisors on follow up to monthly meeting recommendations Liaise with supervisor on response to incident reports and procurement issues Monitor community satisfaction and service levels Review process and budgets

3.2.3 Reporting, Monitoring and Performance Management (step 7)

a) Facilitation

- O&M Matrix (Information sheet 5) was reviewed in view of reporting, monitoring and supervision that need to take place

- Key activities for which checklists & reports are required to ensure effective performance management of CB opportunities were identified.

- Information sheet 7 (Monitoring and Performance Management Information) was completed to outline checklists and reports with associated frequency and supervision requirements for each CB opportunity

b) Outputs

The reporting and monitoring of links between essential O&M functions was completed by:

- Outlining checklists required to ensure that tasks are performed
- Identifying reports required to ensure communication and reporting that is effective.

This was collated as follows:

Information sheet 7: Monitoring and performance information

CB Opportunity: Caretaker		
Description of checklists or reports required	**Frequency**	**Supervisor**
Cleaning and minor repairs	Daily	EHP
Material usage and requirements	Weekly	EHP
Reactive requests and response	Weekly	EHP
Incidents report and user report	Monthly	Committee

The major setback in the performance management system of ablution facilities in eThekwini is that of volunteerism. The caretaker is not formerly appointed by the municipality. It is difficult to monitor a volunteer. Standards and checklists are difficult to put in place as the individual is neither employed by the municipality nor answerable to some other contractor.

3.3 Support Integration

An analysis of the outputs of stage 1 and 2 by the facilitator informed the selection of participants required for workshop. Particular emphasis at the stage was the need for participants form different departments (relevant managers and decision makers at the institutional level) involved in O&M with knowledge and experience required to inform the last phase of the process.

Undertaking Stage 3 drew on information obtained from Stage 1 and stage 2 workshops. Information gathered during the preliminary exercise of outlining the baseline of eThekwini (Level of Service descriptor) was a starting point of the stage.

3.3.1 Technology Sheet (step 8)

This step involved the filling in of a technology sheet based on inputs from the preliminary baseline exercise Information sheet 2. The process involved:

- Revising and reviewing the Preliminary Baseline: LOS Profile and the Roles & Functions collated in Info Sheet 2,

    - Description of the Watsan technology; indication of the number of units provided and planned and the department responsible for management

    - Listing of the O&M jobs and determination of the number that will be deployed per unit.

- Indication of the O&M materials and equipment required

- Identification of frequent problems that may affect the lifespan of the facility.

- Outlining of the limitations of the technology

Information Sheet 8: Technology Sheet

Which policies relate to the Technologies provided?	Guidelines for the design & construction of toilets where basic LOS in appropriate 2001:
	Application of guidelines (context)
	Available Watsan and its acceptance
	WSDP 2004 (Updated as per 03/2007):
	Watsan technologies used
	Levels of service
	Basic Watsan services provided
	eThekwini Basic Watsan Business Plan:
	Level of Watsan provided
	Policies on programme implementation
	EWS Watsan Project Guidelines 2003
	Basic LOS
	Stakeholders involved
	Contractors
	Strategic Framework for Water Services:
	Choice of technology
	Watsan policies (FBS, basic h/h variation, …)
	Legislation framework (Definition of LOS)
	eThekwini Sanitation Policy
	Definition of basic levels of service, technology choice options
	eThekwini Water Policy 2005:
	O&M Policy
	Pamphlets: Operation of UD. Operation of VIP
	eThekwini Metro Local Government Delivery Model:
	O&M responsibility: h/h

Technology: Ablution facility	
Description of Watsan technology provided	Ablution facility. Serves 3,00 people for a ratio of 1 unit to 5 families
Which department is responsible for provision of facilities?	Watsan department
Which department is responsible for the O&M of these facilities?	Watsan Health Procurement Finance
Number of units in?	14 facilities comprising of 10 sanitation ad 10 showers units each 5 showering posts per facility 52 standpipes
Staff needed to undertake O&M for this technology?	Currently 2 per facility (28 in total)
What materials and equipment are needed for O&M?	Refer Information Sheet 3 (Support required for conducting Tasks)
What are the recurrent problems with the technology?	Vandalism Breakages Blockages
In which context the technology is suitable?	In low dense and dense settlements

3.3.2 Procurement checklists (step 9)

a) Facilitation

The filling in of the based on inputs:

- Selection criteria (Information Sheet 3 Stage 1) used to inform the selection and appointment process
- Procurement information sheet (as presented in Information Sheet 2), used to inform the materials and equipment required for the job.
- Budget checklist used to information the contract and policy and the payment.
- O&M matrix (Information Sheet 4 stage 2) used to inform to inform the job requirements based activities that constitute a job.

b) Outputs

Information Sheet 9: Procurement checklists

What procurement policies are in place for the selection and appointment for jobs in O&M of Watsan facilities?	*Not available*
Are there policies in place that support Local Economic Development (LED)?	*Not available*
What programmes are aligned to CB procurement as a basis for forward planning and unlocking funds?	*Not available*

Fill in a sheet for each CB job

CB Job/Opportunity: Caretaker	
What are the job requirements?	Opening, Monitoring and cleaning Checking and fixing minor leaks Check materials and supplies Requisition materials and supplies Attend community forum Reporting repairs/full toilets and incidents to supervisor
Number to be employed?	1 per facility (105 in total)
What is the selection and appointment process?	Community appoints individual. Community meeting is held. Meeting seeks volunteer. Where no one volunteers, meeting picks individual.
What type of contract is offered and duration?	Short term (6-12 month) rotational
How is performance judged in respect of payment?	Completed job as per job requirements (job sheet) in intended criteria. However payment is undefined as caretaker is a volunteer.
Which dept is responsible for selection & appointment?	Community Forum

3.3.3 Training checklist (step 10)

Information sheet 4 was used to inform the training needed to empower individual undertaking O&M works based on their current skills and knowledge of the Watsan technology.

Information Sheet 10: Training checklist

What is the current policy guiding training for O&M of Watsan?	Training manual for Watsan project:: Watsan Technologies Use of infrastructure provided Health and hygiene promotion awareness and education campaign eThekwini Basic Watsan Business Plan: Community participation, education and capacity building Entrepreneurial development
What programmes are aligned to CB training as a basis for forward planning and unlocking funds?	*Not available*

Fill in a sheet for each CB job

CB Job :Caretaker	
What is the entry requirement?	Basic innumeracy and literacy Basic plumbing
What are the experience or skill requirements for the job?	Basic plumbing , fitting, chemical handling
What training is required in this regard?	Basic plumbing , fitting, chemical handling, storekeeping, reporting, requisitioning
Who's responsible for organizing training?	Watsan department

3.3.4 Management checklist (step 11)

The Management checklist was completed; the completion of the checklist was based on:

- Information Sheet 5 to assist in outlining links between maintenance, supervision and monitoring
- Information Sheet 6 to provide TORs for Supervision & Monitoring Structures
- Information Sheet 7 to outline inspection and reporting requirements for each CB opportunity

Information Sheet 11: Management checklist

	Responsibility	Key Performance Indicators
Setting up and liaising with community forums?	Training and Education	*Not available*
Monitoring and coordinating Preventative maintenance?	Environmental health	Report of site visit Caretaker paid per user on visit
Monitoring and coordinating Reactivate maintenance?	*Not available*	Reactive maintenance undertaken. Response on time
Procurement support?	Supply chain	CB procured
Training support?	EWS Training division	*Not available*
Budget?	*Not available*	*Not available*
Overall responsibility for O&M programme?	EWS	

3.3.5 Budget checklist (step 12)

The preparatory documents needed to complete the budget checklist are:

- The technology sheet. This was used to inform about the technology and the support needed (in term of materials and equipment) to complete the job identified, number of people required, problems that may occur.
- Checklists indicating other support requirements were taken into account

Information Sheet 12: Budget checklist

What are the policies that support adequate budgeting for O&M?	Strategic Framework for Water Services: Budget (O&M funding)
What programmes and sources for grants are to be unlocked as a basis for forward planning and access to funds?	*Not available*

Technology: Ablution facility	Number of units: 105 facilities (Unit)	
CB Procurement opportunities?	Deployment Ratio	Total
Caretaker	1 per unit	105 facilities (Unit)
Educator	2 per area	12
Material requirements?	Per unit	Total
Toilet paper	200 rolls (per month)	21 000 rolls for 105 units/ month
Liquid	5 litres (per month)	525 litres for 105 units /month
Jeyes fluid	5 litres (per month)	525 litres for 105 units/ month
Toilet brush	02 (Once off)	210 for 105 units once off
Squeegee	02 (Once off)	210 for 105 units once off
Mop	02 (Once off)	210 for 105 units once off
Soft broom	02 (Once off)	210 for 105 units once off
Hosepipe	01 (Once off)	105 for 105 units once off
Mutton cloth	02 (Once off)	210 for 105 units once off
Dustpan	02 (Once off)	210 for 105 units once off
Hard duty gloves	2 pairs (Once off)	210 for 105 units once off
Stainless steel bucket	10 litres (Once off)	210 for 105 units once off
Hard broom	02 (Once off)	210 for 105 units once off
Support requirements?	Of the materials listed as supplied once off the other materials may be requested to replace old, overused or broken materials. Only the hosepipe is considered as a supply item that is absolutely once off. The rest have to be supported with a contingency budget	
Training on basic O&M works	*Not available*	
Materials and equipment supply	Refer material requirements above	
Indicate type of Contingencies[1] must be budgeted	At least 50% of preventative maintenance budget to be allocated as contingencies for reactive maintenance. Items supplied as part of the start (once off kit) that may be requested by the caretaker	

[1]Contingencies costs involving unforeseen circumstances such as disasters and vandalism etc

The number of educators is limited. This is due to their unpaid role and responsibility (Which is primarily reporting to the EHP).

B.2 Application of guideline for VIP

1. Constitution of the focus group

The Stakeholder Workshop was convened with relevant persons involved directly *at a local level* with O&M activities identified by and with the assistance of Lucky Sibiya (Training and Education Officer) and Pumzile Toto Mzobe (E.H.P).

The group of people engaged with direct experience in the day-to-day operation and maintenance VIPs were:

- 2 x Contractors (G.R.P/S.L.B and Fukamela TRD)

- 3 x Beneficiaries. 1 from Bhekisizwe and 2 from Dassenhoek.

- 1 x Training and Education Officer

2. Baseline information

Where VIP toilets and 200 yard tanks are provided (such as in Luganda), the general O&M tasks including emptying of UD and VIP are under the responsibility of the household. The municipality undertake the VIP emptying on 5 years cycle

VIPs are individual toilets that are:

- Lined pit 1,5m deep with a pedestal
- Fitted with masonry top structure
- Fitted with metal sheet roof and vent pipe
- Fitted with metal/wooden door

3. Application of the guideline

3.1 Identify CB opportunities in O&M (stage 1)

3.1.1 Unbundling O&M Tasks and their frequency and assign responsibility (step 1)

a) Facilitation

There were considerations that had to be taken into account during the facilitation process. Good facilitation was key to producing informative insights in this group. Contractors justified their existence and necessity and therefore ring-fenced opportunities. It was the facilitator's role to ensure that the deliverables were not biased by encouraging realistic and fair discussion amongst stake holders in the group.

b) Outputs

Current Level of Service provided the basis for unbundling associated O&M Tasks. Participants outlined:

- Outlined specific O&M tasks necessary to
- ensure that facilities remained in a serviceable condition
- Outlined the frequency of the tasks identified
- Identified responsibility for carrying out each task

Figure 13: Participants unbundling, assigning frequency and responsibility to O&M tasks for the VIP

The collation of responses to questions regarding unbundling of O&M associated tasks for the VIP was undertaken as follows:

Information Sheet 1: Unbundled O&M Tasks, Frequency & Responsibility

Specific O&M Task	Frequency of task					Who?- Assign Responsibility		
	O	A	D	W	M	C	M	C & M
Visit and explain to the community					√		√	
Liaise with community			√			√		
Collect complaints			√			√		
Report back to the contractor		√				√		
Digging hole		√				√		
Empty pit contents		√				√		
Bury pit content by covering hole		√				√		
Spread lime over pit content emptied		√				√		
Clean toilet cover				√		√		

Key: Frequency: O – Ongoing; A - Ad hoc, D – Daily; W- Weekly; M – Monthly

Responsibility: C – Community; M = Municipality; C&M = Joint responsibility

Figure 14: Pit emptier undertaking the basic task of emptying the pit

- There are Health and Safety implications for community members undertaking O&M tasks. Contractors find themselves the most ideal people to undertake O&M tasks as there are precautions for personnel that are necessary prior to engaging them in emptying.
- Education of users and liaison with communities were identified as the key preventative maintenance of individual household facilities. Contractors identified the example of good education or facilitation in eThekwini as in Molweni where toilets are in good conditions as a result of good visits by the municipality facilitating the appropriate use of the toilets
- Almost all tasks that are related the care of the facility were identified to be best done by the community members

3.1.2 Identify CB opportunities in O&M (step 2)

a) Facilitation

Tasks listed and clustered were used to identify Roles and functions for jobs identified. This was done through:

- Identifying tasks that are community responsibilities
- Outlining the frequency with which these tasks are undertaken
- Identification of tasks that are either municipal responsibility or joint

b) Outputs

These tasks identified as follows:

Information Sheet 2: Sorting Responsibilities into Jobs

Assigned Responsibility			
Frequency	**Community- based**	**Joint**	**Municipality**
Ongoing	Adhoc undertaking of tasks and activities are ongoing		Taking O&M initiative Financing O&M Overseeing Management of contractors
Ad Hoc	Report back to the contractor Digging hole Empty pit contents Bury pit content by covering hole Spread lime over pit content emptied Clean toilet cover	Educating communities	
Daily	Liaise with community Collect complaints		
Weekly			
Monthly		Visit and explain to the community	
Name of each job	Pit emptier Handyman	Educator CLO PSC/ community Rep.	Supervisor, Maintenance crew,

Opportunities were clearly identified in the O&M of VIP facilities. Pit emptier, handyman and educator were the key CB opportunities identified. Important to note however was that, there are Health and Safety implications of pit emptying remained an issue regarding designating the task/job.

3.1.3 Identify support required to carry out CB O&M services (step 3)

a) Facilitation

Support necessary for individuals to undertake O&M tasks were identified by participants. Participants outlined the following:

- Community based jobs emergent from clustered tasks
- The equipment need to undertake tasks that constitute CB opportunities
- Materials needed to undertake the job

b) Outputs

Information outlined was collated as follows:

Information Sheet 3: Support required for conducting Tasks

Task cluster = JOB	Support required for conducting Tasks	
	Equipment	**Materials**
CB job: Pit Emptier List Tasks Empty pits Spray lime Recover pit	Head cap Overall Wheelbarrow Spade/Shovels Hand pick Safety boots Gloves Masks	Writing material
CB job: Handyman list Tasks Fix minor structural damages	Safety boots Overall Building Tools	Writing material
CB job: Educator list Tasks Educate the community: - Community care - Dos/Don'ts - House hold responsibility Liaise with community Collect complaints Conduct health and hygiene education Attend training and awareness programmes Attendance to community forum	Two way radio Bicycle or car	Pamphlets and handouts *relevant to the Use and O&M of VIP technology* Flips chart demonstrations Writing material

Figure 15: Pit emptier clad in protective clothing with basic tools and materials

3.1.4 Selection Criteria and Local Protocol (step 4)

a) Facilitation

Participant defined criteria and selection protocol at a local level. These were identified in terms of:

- Skills and experience needed to carry out CB jobs
- Individuals that need to be selected
- How these individuals are selected and by whom they would be selected

b) Outputs

Pit emptier, handyman and educator were identified as community based opportunities exist in the O&M of VIP facilities

Skills, experience and Education requirements, though identified remained an unresolved matter. For what was seemingly a reason for the creation of opportunities for locals in CB opportunities, No formal education and no formal skills were identified.

However – there were individuals who were in discussions identified as have had been part of the construction of facilities at some point in projects run by the municipality. Their skill and experience acquired during construction phases would be and should be considered as a selection criterion. Other criterion that was put forward with regards selection was:

- Individual residing within or outside the area (contractor position)
- Volunteer who shows interest in the matters of water and sanitation
- The selection process of individuals for all case studies is determined by currently existing local structures (BEC).

Information Sheet 4: Selection Criteria and Local Protocol

CB jobs	Skills and Experience	Other criteria (such as place of residence, age, gender etc)	Selecting on a local level
Pit emptier	No formal education No skills	Gender – Both Age – Responsible person 18 – 60	*Who selects and how?* Individual(s) selected though BEC (community structures). Appointed contractor informs the BEC. BEC in turn nominates through its structures individuals to undertake the responsibilities. Individuals that are selected from the community are selected on a rotational basis.
Handy man	No formal education No skills	Gender – Both Age – Responsible person 18 – 60	
Educator	Formal education Literacy and innumeracy (At least minimum grade 10)	Gender – Both Age – Responsible person 18 – 60	

3.2 Monitoring implementation

3.2.1 Activities for complementary oversight at the interface (step 5)

a) Facilitation

Participants who properly outlined specific requirements for tasks to be carried out as they had properly undertaken:

- Unbundling and

- Assigning responsibility (Distinct roles and responsibilities); had more to elaborate on monitoring and evaluation as they fund linkages.

b) Outputs

Complementary oversight to ensure that interaction between levels of active role players was outlined to draw up the interface.

- Activities to ensure oversight and support were identified
- TORs for supervision monitoring and requirements were identified linkages between supervision, monitoring and reporting

Information sheet 5: O&M Matrix - VIP facility

Frequency	Preventative Maintenance		Interface		Reactive Maintenance	
	Household	Educator	Supervisor/Monitor and Managing contractor	Community Forum (Steering committee)	Pit emptier/Handyman	Municipality
Once off/ rotational				Set procurement lists and selection criteria		Appoint managing contractor Set up maintenance crews
Daily	Clean and monitor facility Attend to minor repairs	Liaise with community Inspect VIP toilets Tasks identified as ongoing below in this table are undertaken on a daily basis were O&M is required	Task allocation and control		Liaise with the client Tasks identified as ongoing below in this table are undertaken on a daily basis were O&M is required	Attend to reactive maintenance
Weekly		Liaison with pit emptiers	Compile weekly checklist for CF Performance management of pit emptier , handymen and educators Ensure adequate supplies and materials	Liaise with client (contractor) and supervisors at monthly meetings recommendations		
Monthly	Inspect facility	Attend community forum	Prepare report for CF	Meet to review monthly reports and make recommendations		

Frequency	Household	Educator	Supervisor/Monitor and Managing contractor	Community Forum (Steering committee)	Pit emptier/Handyman	Municipality
Once off/ rotational						
Ad Hoc	Attend to Awareness Programmes as required	Investigate incidents and reports; Attend training courses as required	Collate incidents		Attend SC meeting; Attend training courses as required; Digging the hole; Empty vault contents; Spray lime and cover hole; Recover the pit (Pit emptier); Remove slab; Fix structure; Recover the pit (handyman)	
Ongoing	Liaise with Educator with regards maintenance requirements	Provide Training and Awareness Programmes; Promote the project; Explain project to the community	Check depth of pit emptied; Check safety standards; Organise training and awareness programmes	Monitor community satisfaction and service levels; Review process and budgeting	Replace pipes and spares; Fix leakages and breakages	Inspect facilities

The Pit emptier/Handyman undertake key reactive maintenance responsibilities.

The municipality plays the role of support of reactive maintenance.

Preventative roles are undertaken by the educator.

It was the perspective of beneficiaries in the group that the current reporting structure works well for VIP O&M requirements.

3.2.2 List of TOR at the interface (step 6)

a) Facilitation

Key monitoring and supervision roles at the interface were identified and then translated into TORs.

b) Outputs

The collation of supervision and monitoring roles at the interface were as follows:

Information Sheet 6: TOR at the Interface

Community Forum (Steering Committee)	
Participants	**TOR**
EHP/Health forum CLO Educator Ward Committee Management contractor	Set up selection criteria and procurement protocol Manage O&M tasks Oversee O&M tasks performed and report to the Consultant and municipality Monthly meeting recommendations Monitor community satisfaction levels

Supervision	
Responsible party	**TOR**
Managing contactor (for senior site foreman)	Appoint subcontractors Oversee work carried out Check depth of pit emptied Ensure work is done according to TOR Ensure safety Report problems to consultant
Senior site foreman (for sub contractor supervisor)	Oversee task allocation and control Overseeing works done Liaise with client (contractor) Collate reports
Supervisor - subcontractor (for sub contractor foreman)	Supervise works Measure the pit depth Ensure assistance of the handyman Oversee work performance
Subcontractor foreman (subcontractor handyman)	Ensure removal of slab Oversee fixing of structure Oversee recovering of pit
Subcontractor foreman (subcontractor cleaner)	Oversee digging hole Oversee empty the vault contents Oversee spraying of lime over hole Collate drafted complaints
Supervisor - subcontractor Senior site foreman – Contactor (for subcontractor CLO)	Oversee promotion of project Oversee explanation of project to the community Oversee inspection of VIP toilets Collate complaints Collate report

3.2.3 Reporting, Monitoring and Performance Management (step 7)

a) Outputs

The reporting and monitoring of links between essential O&M functions was completed by:

- Outlining checklists required to ensure that tasks are performed
- Identifying reports required to ensure communication and reporting that is effective.

This was collated as follows:

Information Sheet 7: TOR at the Interface: Monitoring and Performance management

CB Opportunity:		
Description of checklists or reports required	**Frequency**	**Supervisor**
Sequence of monitoring visits	Monthly	Committee
Reactive requests and response	Daily	CLO
Emptying and digging specs	Daily	Subcontractor foreman
Structure specs	Daily	Subcontractor foreman
Environmental health standards	Daily	SHE rep and Municipal rep
Worksheet	Fortnightly	CLO
Incident report and user report	Monthly	Committee
Certificate of payment	Daily/Monthly	CLO/Municipality

The employment of: SHE representative twice a week and a Municipal representative once a week for monitoring health standards emphasizes the importance of health regulation and monitoring where emptying is an integral part of O&M.

M&E is best monitored by the use of a payment certificate that is used to pay-off contactors for O&M tasks undertaken. Performance management (evaluation of work carried out against payment) is carried out as follows:

Contactors are paid off after:

- The beneficiary is satisfied that the O&M task is completed

- Signed off by:

    - The CLO

    - Foreman

The payment certificate that the CLO and foreman sign is against a checklist of items

3.3 Support Integration

3.3.1 Technology Sheet (step 8)

a) Facilitation

Step 8 involved the filling in of a technology sheet based on inputs from the preliminary baseline exercise Information sheet 2. The process involved:

- Revising and reviewing the Preliminary Baseline: LOS Profile and the Roles & Functions collated in Info Sheet 2,

    - Description of the Watsan technology; indication of the number of units provided and planned and the department responsible for management

    - Listing of the O&M jobs and determination of the number that will be deployed per unit.

- Indication of the O&M materials and equipment required

- Identification of frequent problems that may affect the lifespan of the facility.

- Outlining of the limitations of the technology

b) Outputs

Information Sheet 8: Technology Sheet

Which policies relate to the Technologies provided?	Guidelines for the design & construction of toilets where basic LOS in appropriate 2001:
	Application of guidelines (context)
	Available Watsan and its acceptance
	WSDP 2004 (Updated as per 03/2007):
	Watsan technologies used
	Levels of service
	Basic Watsan services provided
	eThekwini Basic Watsan Business Plan:
	Level of Watsan provided
	Policies on programme implementation
	EWS Watsan Project Guidelines 2003
	Basic LOS
	Stakeholders involved
	Contractors
	Strategic Framework for Water Services:
	Choice of technology
	Watsan policies (FBS, basic h/h variation, …)
	Legislation framework (Definition of LOS)
	eThekwini Sanitation Policy
	Definition of basic levels of service, technology choice options
	eThekwini Water Policy 2005:
	O&M Policy
	Pamphlets:
	Operation of UD. Operation of VIP
	eThekwini Metro Local Government Delivery Model:
	O&M responsibility: h/h

Technology: VIP	
Description of Watsan technology provided	VIP: Lined Pit 1,5m deep Masonry top structure Metal sheet roof Vent pipe Metal/wooden Door Pedestal
Which dept is responsible for the provision of facilities?	Water and Sanitation
Which dept is responsible for O&M of these facilities?	Water and Sanitation
Number of unit s in place?	6000 in place and 15 000 for the next 5 years
Staff needed to undertake O&M for this technology?	Individual contractor has a staff component to 20 people. It takes 4 people to empty a pit One contractor is supposed to empty 10 pits per day
What materials and equipment are needed for O&M of this technology?	Refer Information Sheet 3 (Support required for conducting Tasks)
What are the recurrent problems with the technology?	Foreign objects that make it difficult to empty that are thrown in by users e.g. bottles, cans, batteries Informal (not lined) collapsing Poor construction Cracks on the top structure Theft of doors and tops
In which category of settlement is the technology is suitable?	Where there is no sewer Where the sewer is far or inaccessible e.g. hilltops

3.3.2 Procurement checklists (step 9)

a) Outputs

The following sheet was filled in.

The filling in of the procurement checklist was based on inputs:

- Selection criteria (Information sheet 3 stage 1) used to inform the selection and appointment process
- Procurement information sheet (as presented in information sheet 2), used to inform the materials and equipment required for the job.
- Budget checklist used to information the contract and policy and the payment.
- O&M matrix (Information sheet 4 stage 2) used to inform to inform the job requirements based activities that constitute a job.

Information Sheet 9: Procurement checklists

What procurement policies are in place for the selection and appointment for jobs in O&M of Watsan facilities?	*Not available*
Are there policies in place that support Local Economic Development (LED)?	*Not available*
What programmes are aligned to CB procurement as a basis for forward planning and unlocking funds?	*Not available*

Fill in a sheet for each Community-based job:

CB Job/Opportunity Pit emptier	
What are the job requirements?	No formal education No skills
Number to be employed?	4 people per VIP unit
CB Job/Opportunity Pit emptier	
What is the selection and appointment process?	Individual(s) selected though BEC (community structures). Appointed contractor informs the BEC. BEC in turn nominates through its structures individuals to undertake the responsibilities. Individuals that are selected from the community are selected on a rotational basis.
What type of contract is offered and duration?	Managing contractor : 2 years Subcontractor : 1 year Subcontractor's staff : 1 year
How is performance judged in respect of payment?	Number of VIPs emptied as per requirements
Which dept is responsible for selection and appointment?	Water and sanitation

3.3.3 Training checklist (step 10)

a) Outputs

Information Sheet 4 was used to inform the training needed to empower individual undertaking O&M works based on their current skills and knowledge of the Watsan technology

Information Sheet 10: Training checklist

What is the current policy guiding training for O&M of Watsan?	Training manual for Watsan project:: Watsan Technologies Use of infrastructure provided Health and hygiene promotion awareness and education campaign eThekwini Basic Watsan Business Plan: Community participation, education and capacity building Entrepreneurial development
What programmes are aligned to CB training as a basis for forward planning and unlocking funds?	*Not available*

Fill in a sheet for each Community-based job:

CB Job Pit emptier	
What is the entry requirement?	No requirements
What are the experience or skill requirements for the job?	No requirements
What training is required in this regard?	Basic knowledge of pit emptying. Health and hygiene requirements
Who's responsible for organizing training?	*Not available*

3.3.4 Management checklist (step 11)

a) Outputs

The Management checklist was completed.

The completion of the checklist was based on:

- Information Sheet 5 to assist in outlining links between maintenance, supervision and monitoring
- Information Sheet 6 to provide TORs for Supervision & Monitoring Structures
- Information Sheet 7 to outline inspection and reporting requirements for each CB opportunity

Information Sheet 11: Management checklist

	Responsibility	**Key Performance Indicators**
Setting up and liaising with community forums?	EWS	*Not available*
Monitoring and coordinating Preventative maintenance?	EWS	Number of households emptied per day
Monitoring and coordinating Reactivate maintenance?	EWS	*Not available*
Procurement support?	Finance department	Number of contractors appointed. Meeting demand for O&M
Training support?	Education and training Division in EWS	*Not available*
Budget?	Finance	Availability of funds for: Payment of contractors Supply of tool s and materials Training Contingencies
Overall responsibility for O&M programme?	Watsan - Systems Division	VIPs in the municipality in a serviceable condition End-user satisfaction

3.3.5 Budget checklist (step 12)

a) Outputs

The preparatory documents needed to complete the budget checklist are:

- The technology sheet. This was used to inform about the technology and the support needed (in term of materials and equipment) to complete the job identified, number of people required, problems that may occur.
- Checklists indicating other support requirements were taken into account

Information Sheet 12: Budget checklist

What are the policies that support adequate budgeting for O&M?	Strategic Framework for Water Services: Budget (O&M funding)
What programmes and sources for grants are to be unlocked as a basis for forward planning and access to funds?	*Not available*

Technology: VIP		Number of units: Not documented
CB Procurement opportunities?	Deployment Ratio	Total
Pit emptier	4 per VIP unit to be emptied	Total 12 subcontractors for the municipality. Example of one given subcontractor: Sub contractor has a team of 42 people The 42 people constitute 9 teams of 4 people each 2-4 toilets per day (As sub- contractor has to empty at least 10 per day
Handyman	1 per 2 emptying team	Approx 3 handyman per contactor
Educator	I per site (settlement)	
Material requirements?	Per unit	Total
Head cap	1 per individual	Stocks available are budgeted on the basis of: 4 per team
Overall	1 per individual	4 per team
Wheelbarrow	1 per team	1 per team
Spade/Shovels	3 per team	3 per team
Hand pick	1 per team	1 per team
Safety boots	1 pair per individual	4 per team
Gloves	1 pair per individual	4 per team
Masks	1 per individual	4 per team
Support requirements?		
Education and training	*Not available*	*Not available*
Indicate type of Contingencies[1] must be budgeted	Structure damage during emptying Structure collapse Pit collapse Disinfectant Displacement of pit content	

[1]Contingencies costs involving unforeseen circumstances such as disasters and vandalism, etc.

B.3 Application of guideline for UD toilet

1. Constitution of the focus group

The group of people engaged with direct experience in the day-to-day operation and maintenance UDs were:

- 3 x Beneficiaries one of whom is a Community leader.
- Training and Education Officer (eThekwini Municipality)

Participants confirmed the validity of data collated and presented in the document, and provided additional information pertaining to the O&M of UD facilities.

- Questions, pointers and tools discussed used in the workshop need to take into account sensitive information and the creation of expectations amongst certain group of participants.

2. Baseline information

UD toilets are individual structures that are fitted with:

- A urinal for urine
- Separate toilet bowl for faeces.

It was agreed between the municipality and communities that use UDs at the introduction of UDs in eThekwini that the responsibility of the individual beneficiary.

3. Application of the guideline

3.1 Identify CB opportunities in O&M (stage 1)

3.1.1 Unbundling O&M Tasks and their frequency and assign responsibility (step 1)

a) Outputs

Current Level of Service provided the basis for unbundling associated O&M Tasks. Participants outlined:

- Outlined specific O&M tasks necessary to ensure that facilities remained in a serviceable condition
- Outlined the frequency of the tasks identified
- Identified responsibility for carrying out each task

Figure 16: Unbundling of O&M tasks in COCT workshop

The collation of responses to questions regarding unbundling of O&M associated tasks for the VIP was undertaken as follows:

Information Sheet 1: Unbundled O&M Tasks, Frequency & Responsibility

Specific O&M Task	Frequency of task					Who?- Assign Responsibility		
	O	A	D	W	M	C	M	C & M
Remove toilet content		✔				✔		
Check toilet				✔		✔		
Digging the hole		✔				✔		
Checking leaking cistern					✔		✔	
Assess the state of the toilet			✔			✔		
Replace spares (taps, pipes, etc.)		✔				✔		
Fix leaks (UD urinal pipe)		✔				✔		
Check urine piping system						✔	✔	
Advise households about emptying	✔						✔	
Open the seal		✔				✔		
Visiting household to check toilet					✔		✔	
Cover the hole			✔			✔		

Key: Frequency: **O –** Ongoing**; A -** Ad hoc**, D –** Daily**; W-** Weekly**; M –** Monthly

Responsibility: C – Community; M = Municipality; C&M = Joint responsibility

Almost all tasks that are related the care of the facility were identified to be best done by the community members

Unbundling tasks identified as needed to ensure that facilities in a serviceable condition participants added Additional O&M Tasks. The additional task was:

- Check the roof and the structure

Participants confirmed assertions in the baseline that the general O&M tasks including emptying of UD are under the responsibility of the household.

Figure 17: Internal view of UD facility

Participants emphasised that the key O&M tasks that ensure that the facilities are in a serviceable condition were tasks that related to caring for the facility. These were identified as:

- Fixing leaks
- Checking for leaks & piping system
- Cleaning toilet
- Checking toilet

Ensuring that individual households have the capacity to undertake these tasks and know the importance of the tasks was identified as critical

3.1.2 Identify CB opportunities in O&M (step 2)

a) Outputs

Tasks listed and clustered were used to identify Roles and functions for jobs identified. This was done through:

- Identifying tasks that are community responsibilities
- Outlining the frequency with which these tasks are undertaken
- Identification of tasks that are either municipal responsibility or joint

These were identified as follows:

Information Sheet 2: Sorting Responsibilities into Jobs

Assigned Responsibility			
Frequency	**Community- based**	**Joint**	**Municipality**
Ongoing	Check urine piping system Assess the state of the toilet Checking leaking cistern	Visiting household to check toilet Advise households about emptying Educating communities	Building structures Training of Caretaker (Pit emptier) Providing material and equipment support for O&M activities
Ad Hoc	Replace spares (taps, pipes, etc.) Emptying pits Digging the hole Fix leaks (UD urinal pipe) Open the seal		Monitoring O&M
Daily	Adhoc and ongoing undertaking of tasks and activities is a daily routine	Supervision of tasks undertaken is a daily exercise	Tasks identified as ongoing above are daily task depending on needs of contactors and beneficiaries
Weekly			
Monthly		Visit and explain to the community	
Name of each job	Caretaker (contractor) Pit emptier	*Educator* *CLO* *PSC/ community Rep.*	

The household is responsible for emptying and the municipality to provide only support.

3.1.3 Identify support required to carry out CB O&M services (step 3)

a) Outputs

Support necessary for individuals to undertake O&M tasks were identified by participants. Participants outlined:

- Community based jobs emergent from clustered tasks
- The equipment need to undertake tasks that constitute CB opportunities
- Materials needed to undertake the job

These were collated as follows:

Information Sheet 3: Support required for conducting tasks

Task cluster = JOB	Support required for conducting Tasks	
	Equipment	Materials
CB jobs Pit emptier/handyman (Contactor)		
List Tasks Check urine piping system Assess the state of the toilet Checking leaking cistern Fix leaks (UD urinal pipe) Replace spares (taps, pipes, etc.) Digging the hole Open the seal, Emptying pits	Starter kit provided once off. This starter kit includes; Fitting pipes Wheelbarrow Gloves Plastic bag Rakes Overall Spade	Writing material
CB jobs CLO/Caretaker		
List Tasks Educate the community Liaise with community Collect complaints Conduct health and hygiene education Attend training and awareness programmes Attendance to community forum	Flips chart demonstrations	Pamphlets and handouts relevant to the Use and O&M of UD technology Writing material

The starter kits required by the contractors are supplied once of by municipality at no cost for the contractors. Materials and equipment supplied are priced by the municipality (For starting up), thereafter contractor buys. Contractor buys all supplies at preferential prices from municipality.

Physically challenged householders and old people are given preferential price for emptying (and paid by the municipality).

Further support provided is to caretakers who are selected by the CDC and Trained by municipality as CLO.

Support through education was identified as important to O&M of UDs. As case in point as such is currently where there is inadequate and no ongoing education for the users of UDs.

Figure 18: External view of UD facility

There is a need to train and appoint local facilitators that ensure continuous education of beneficiaries was identified.

These facilitators would:

- Ensure education
- Monitoring role
- Undertake surveys
- Reporting to responsible officials reports from beneficiaries.

The CB caretaker identified works as a contractor and works on ad hoc basis. Income is not synthesized due to sporadic works. Income is not controlled and the rate of payment is fixed by the municipality. In general, caretaker turns down O&M job due to low incentive.

3.1.4 Selection Criteria and Local Protocol (step 4)

a) Outputs

Participant defined criteria and selection protocol at a local level. These were identified in terms of:

- Skills and experience needed to carry out CB jobs
- Individuals that need to be selected
- How these individuals are selected and by whom they would be selected.

Information Sheet 4: Selection Criteria and Local Protocol

Community based JOBs	SKILLS and EXPERIENCE	OTHER CRITERIA (such as place of residence, age, gender etc)	Selecting on a local level
Caretaker (Pit emptier)	No Qualification – should be able to read and write	Gender – Both Age – Responsible person 18 – 60 *Local residents*	*Who selects and how?* *Who selects and how?* Selected by the councilor through the CDC (Community development committee). Appointed by the municipality and trained to become a CLO
CLO (Educator)	No Qualification – should be able to read and write	Gender – Both Age – Responsible person 18 – 60 *Individual residing within or outside the area (contractor position)*	Self made contractor, recognised by the municipality

The caretaker (Pit emptier) and CLO (Educator) were identified as community based opportunities exist in the O&M of UD facilities. Selection protocol, criteria and contractual arrangements were explored by participants.

- Volunteers who show interest in the matters of water and sanitation
- The procurement system does not have a merit for caretaker (in the UD system) due to the incentive method of providing community opportunity for development.
- The caretaker contract should be 6 month or ± 1 year renewable
- No contractual obligations with individuals providing service e.g. Caretaker –
  -No formal contract

  -No work on pay principle

  - No pay slips - no deduction - no benefit

3.3 Monitoring implementation (stage 2)

3.2.1 Activities for complementary oversight at the interface (step 5)

a) Outputs

Complementary oversight to ensure that interaction between levels of active role players was outlined to draw up the interface.

- Activities to ensure oversight and support were identified
- TORs for supervision monitoring and requirements were identified
- Linkages between supervision, monitoring and reporting

Figure 19: Participants at an interface level workshop

Table 1: O&M matrix - UD facility

Frequency	Preventative Maintenance		Interface		Reactive Maintenance	
	Household	Educator (CLO)	Supervisor	Community Forum	Caretaker (Pit emptier)	Municipality
Once off/ rotational				Selection and coalition of section data base		Starter kit provided once off
Daily	Clean and monitor facility; Attend to minor repairs	Tasks identified as ongoing below in this table are undertaken on a daily basis were O&M is required	Task allocation and control		Attend to reactive maintenance requests; Liaise with users; Tasks identified as ongoing below in this table are undertaken on a daily basis were O&M is required	
Weekly		Liaise with the community			Tasks identified as ongoing below in this table are undertaken on a daily basis were O&M is required	Meet with Supervisor /Monitor
Monthly	Inspect facility	Attend community forum	Prepare report for CF	Meet to review monthly reports and make recommendations; Price fixing		
Ad Hoc	Attend to Awareness Programmes as required		Mediation	Mediation	Attend community forum; Replace spares (taps, pipes, etc.; Emptying pits; Digging the hole; Open the seal	
Ongoing	Liaise with Educator /CLO with regards maintenance requirements	Visiting household to check toilet; Advise households about emptying; Educating communities	Collate incidences		Check urine piping system; Assess the state of the toilet; Checking leaking cistern; Fix leaks (UD urinal pipe)	Uptake community forum recommendations

The Caretaker (Pit emptier) undertakes key reactive maintenance responsibilities.

The municipality plays the role of support of reactive maintenance such as training and supply of tools kits that are used for reactive maintenance.

As it is the individual householder's responsibility to ensure that their facilities are in a serviceable condition they play a role in ensuring that O&M is undertaken properly. Preventative roles are undertaken by the educator.

3.2.2 List of TOR at the interface (step 6)

a) Outputs

Key monitoring and supervision roles at the interface were identified. The key roles identified were then translated into TORs.

The collation of supervision and monitoring roles at the interface were as follows:

Information sheet 6: TOR at the interface

TOR for Community Forum	
CLO	Price fixing
Ward committee	Mediation
Municipal rep	Set up selection criteria and procurement protocol
	Oversee O&M tasks performed and report to the municipality
	Monthly meeting recommendations
	Monitor community satisfaction levels

TOR for supervisor	
Supervisor	Oversee work carried out
	Collate reports
CLO /Educator	Liaise with end user
	Collate reports
	Complement overseeing of pit emptying

3.2.3 Reporting, Monitoring and Performance Management (step 7)

a) Outputs

The reporting and monitoring of links between essential O&M functions was completed by:

- Outlining checklists required to ensure that tasks are performed
- Identifying reports required to ensure communication and reporting that is effective.

This was collated as follows:

Information sheet 7: TOR at the interface: Monitoring and Performance

CB Opportunity:		
Description of checklists or reports required	Frequency	Supervisor
Task completed (User satisfaction)	Ongoing	User
Daily report of site visit	Random/once a week	Training and Education Officer
Sequence of monitoring visits	Monthly	Committee
Reactive requests and response	Daily	CLO
Incident report and user report	Monthly	Committee
Environmental health standards	Ongoing	Health Municipal rep

Community level monitoring (the user/beneficiary) was outlined as important for facilities and constitutes an integral part of reporting, Monitoring and Performance management.

Supervision, monitoring and reporting for the UD involves the user pays for service rendered. Key monitoring and evaluation is undertaken by the household. The allows there to be a set payment per job done

3.3 Support Integration (stage 3)

3.3.1 Technology Sheet (step 8)

a) Facilitation

Step 8 involved the filling in of a technology sheet based on inputs from the preliminary baseline exercise Information sheet 2. The process involved:

- Revising and reviewing the Preliminary Baseline: LOS Profile and the Roles & Functions collated in Info Sheet 2,

- Description of the Watsan technology; indication of the number of units provided and planned and the department responsible for management

- Listing of the O&M jobs and determination of the number that will be deployed per unit.

- Indication of the O&M materials and equipment required

- Identification of frequent problems that may affect the lifespan of the facility.

- Outlining of the limitations of the technology

b) Outputs

Information sheet 8: Technology sheet

Which policies relate to the Technologies provided?	Guidelines for the design & construction of toilets where basic LOS in appropriate 2001:
	Application of guidelines (context)
	Available Watsan and its acceptance
	WSDP 2004 (Updated as per 03/2007):
	Watsan technologies used and Levels of service, Basic LOS
	Basic Watsan services provided
	eThekwini Basic Watsan Business Plan:
	Policies on programme implementation
	EWS Watsan Project Guidelines 2003
	Stakeholders involved
	Contractors
	Strategic Framework for Water Services:
	Choice of technology
	Watsan policies (FBS, basic h/h variation, …)
	Legislation framework (Definition of LOS)
	eThekwini Sanitation Policy
	Definition of basic levels of service, technology choice options
	eThekwini Water Policy 2005: O&M Policy
	Pamphlets: Operation of UD and VIP
	eThekwini Metro Local Government Delivery Model: O&M responsibility of h/h

Technology:	
Description of Watsan technology provided	UD toilets are individual structures that are fitted with a urinal and separate toilet bowl
Which dept is responsible for the provision of facilities?	*Not available*
Which dept is responsible for O&M of these facilities?	EWS
Number of unit s in place?	*Not available*
Staff needed to undertake O&M for this technology?	I emptier per UD I CLO per site
What materials and equipment are needed for O&M of this technology?	Refer to Information Sheet 3 (Support required for conducting Tasks)
What are the recurrent problems with the technology?	Misuse of facility e.g. - Use of water in bowel - Throwing foreign objects Lack of proper information dissemination Poor construction
In which category of settlement is the technology is suitable?	In areas where the water table is not too high Low or dense settlements

3.3.2 Procurement checklists (step 9)

a) Facilitation

The following sheet was filled based on inputs from:

- Selection criteria (Information Sheet 3 Stage 1) used to inform the selection and appointment process
- Procurement information sheet (as presented in Information Sheet 2), used to inform the materials and equipment required for the job.
- Budget checklist used to information the contract and policy and the payment.
- O&M matrix (Information Sheet 4 stage 2) used to inform to inform the job requirements based activities that constitute a job.

b) Outputs

Information Sheet 9: Procurement checklists

What procurement policies are in place for the selection and appointment for jobs in O&M of Watsan facilities?	*Not available*
Are there policies in place that support Local Economic Development (LED)?	*Not available*
What programmes are aligned to CB procurement as a basis for forward planning and unlocking funds?	*Not available*

Fill in a sheet for each community-based job:

CB Job/Opportunity Caretaker (Pit emptier)	
What are the job requirements?	No Qualification – should be able to read and write
Number to be employed?	1 per UD (may solicit individual assistance on own terms)
What is the selection and appointment process?	Appointed by household
What type of contract is offered and duration?	*Short term* *The caretaker contract should be 6 month or ± 1 year renewable*
How is performance judged in respect of payment?	User satisfaction of O&M activities determines performance
Which dept is responsible for selection and appointment?	

Selection criteria and appointment and monitoring of the caretaker (Pit emptier) and the CLO differ. The pit emptier operates as an individual and liaises with the user. CLO plays the partial role of monitoring work undertaken by the caretaker (pit emptier)

However the CLO is selected, appointed and supervised through the structure that involve the community forum and the municipality.

A similar process follows the other CB opportunity identified:

What procurement policies are in place for the selection and appointment for jobs in O&M of Watsan facilities?	*Not available*
Are there policies in place that support Local Economic Development (LED)?	*Not available*
What programmes are aligned to CB procurement as a basis for forward planning and unlocking funds?	*Not available*

Fill in a sheet for each Community-based job:

CB Job/Opportunity: Community Liaison Officer (CLO)	
What are the job requirements?	No Qualification – should be able to read and write
Number to be employed?	I1person per site
What is the selection and appointment process?	Local resident Selected by the councilor through the CDC (Community development committee). Appointed by the municipality and trained to become a CLO
What type of contract is offered and duration?	*Short term* *The caretaker contract should be 6 month or ± 1 year renewable*
How is performance judged in respect of payment?	Site visit log Reports Number of VIPs emptied overseen
Which dept is responsible for selection and appointment?	

3.3.3 Training checklist (step 10)

a) Outputs

Information Sheet 4 was used to inform the training needed to empower individual undertaking O&M works based on their current skills and knowledge of the Watsan technology.

Information sheet 10: Training checklist

What is the current policy guiding training for O&M of Watsan?	Training manual for Watsan project: Watsan Technologies Use of infrastructure provided Health and hygiene promotion awareness and education campaign eThekwini Basic Watsan Business Plan: Community participation, education and capacity building Entrepreneurial development
What programmes are aligned to CB training as a basis for forward planning and unlocking funds?	*Not available.*

Fill in a sheet for each Community-based job:

CB Job	
What is the entry requirement?	No Qualification – should be able to read and write
What are the experience or skill requirements for the job?	*Not available.*
What training is required in this regard?	Basic plumbing Pit emptying skills and specs Entrepreneurship Health standards
Who's responsible for organizing training?	EWS (Training and Education department)

3.3.4 Management checklist (step 11)

a) Facilitation

The Management checklist was completed based on:

- Information sheet 5 to assist in outlining links between maintenance, supervision and monitoring;
- Information Sheet 6 to provide TORs for supervision & monitoring structures;
- Information Sheet 7 to outline inspection and reporting requirements for each CB opportunity.

b) Outputs

Monitoring and supervisory roles are unclear at this stage.

The Municipality plays the role of training and setting up contractors. As responsibility for O&M undertaken and payment for O&M undertaken is given more to the individual household, it is the household that ensures key monitoring and supervisory roles.

Information sheet 11: Management checklist

	Responsibility	Key Performance Indicators
Setting up and liaising with community forums?	*Not available*	*Not available*
Monitoring and coordinating Preventative maintenance?	*Not available*	*Report of site visit Caretaker paid per visit – visit = households per day.* Number of households emptied per day
Monitoring and coordinating Reactivate maintenance?	*Not available*	*Not available*
Procurement support?	No specific responsibility assigned	Number of contractors appointed. Meeting demand for O&M
Training support?	EWS training department	Support and training provided Setting up support provided
Budget?	No specific assignment. No fixed budget. Current budget set aside for training and stocking of toolkits	Availability of funds for: Supply of tools and materials Training Contingencies
Overall responsibility for O&M programme?	EWS	UDs in a serviceable condition End-user satisfaction

3.3.5 Budget checklist (step 12)

a) Facilitation

The preparatory documents needed to complete the budget checklist are:

- The technology sheet. This was used to inform about the technology and the support needed (in term of materials and equipment) to complete the job identified, number of people required, problems that may occur.
- Checklists indicating other support requirements were taken into account

b) Outputs

Information sheet 12: Budget checklist

What are the policies that support adequate budgeting for O&M?	Strategic Framework for Water Services: Budget (O&M funding)
What programmes and sources for grants are to be unlocked as a basis for forward planning and access to funds?	*Not available*

Technology: UD		**Number of units:** *Not available.*
CB Procurement opportunities?	Deployment Ratio	Total
Caretaker (Pit Emptier)	1 per UD unit to be emptied	Total number depends on the number of VIPs to be emptied
CLO	I per site (settlement)	
Material requirements?	Per unit	Total
Tool kit: Fitting pipes Wheelbarrow Gloves Plastic bags Rakes Overall Spade	Per Pit emptier	To be stocked in preparation for the training of and deployment of more CB contractors
Pamphlets and handouts relevant to the Use and O&M of UD technology Flips chart demonstrations Writing material	Per CLO/educator	To be stocked for use by CLOs. Constant replenishment for handouts To be constantly updated

Support requirements?		
Training	Per Pit emptier Per CLO/educator	As required by programme
Tool kit	Per contractor	To be stocked in preparation for new trainees. To be stocked to ensure availability when required for purchase by Pit emptiers.
Indicate type of Contingencies[1] must be budgeted	Collapse of top structure during emptying Collapse of the pit Training of more Pit emptiers	*Not available*

[1]Contingencies costs involving unforeseen circumstances such as disasters and vandalism, etc.

Key budget is drawn on to cover the cost of materials and spares provided to the contractor. This is because households directly pay for the emptying of UD vaults.

Unlike the other technologies in eThekwini, there is no budget for the O&M of UDs. There is a need to subsidize the maintenance of UDs as some UD owners cannot afford to maintain their facilities. Those that cannot afford this maintenance as poor as those that use facilities that are allocated OM budgets.The municipality needs to ensure a specific budget for O&M

Appendix C: Lessons learnt from the guideline application

This document shares the experience of guideline application in the context of actual municipal sites of Operation and maintenance of basic services.

Two aspects from which lessons have been drawn are: a) facilitation and b) on application of the guidelines.

1. The facilitation process

The preparatory work undertaken initially aims to present a short and accurate baseline of basic services provided to the first stakeholder workshop at Stage 1. Resourcefulness on the part of the facilitator is required to initiate application with a vivid picture of the reality on the ground, illustrated *in the best manner possible*? *What is that exactly?* Motivated valuable discussions at the first stage.

It is imperative for the facilitator to understand that, for the stakeholder workshops, a balanced diversity of levels of stakeholders produces knowledge based on their experience at different levels.

The role of the facilitator is important to the whole process. Guidance of the process and preparation of materials for stakeholder workshops and meetings was the responsibility of the facilitator. The facilitator of the process is best a municipal official involved in Watsan.

The role of facilitator was vital to the application of the guidelines in terms of preparation for all stages and the collation of information that was gathered at one level and applied to the next. The logical sequence at each stage allowed the delivery of outputs (that collated properly) provided input and grounding for the next level.

Figure 20: Balanced diversity and mix of participants: Some of the beneficiaries of eThekwini's 3 technologies, municipal officials (Training department and EHP), Contractor, caretaker at first stake holder workshop

The sequence applied in the guideline worked well in application in all three case study technologies.

The first stages of the guideline were completed with a relative ease.

The logical and progressive application of the sequence was important to informing a grounded discussion on key requirements for the O&M of basic Watsan and management thereof. However, stage 3 of the guideline requires more interaction between departments and is heavily dependent of the guidelines being properly applied and information collated in stages 1 and 2 tabulated below are the 3 stages of the guideline.

The three stage for unpacking O&M requirements

Stage 1	• Details of O&M tasks, their frequency and assigned responsibilities • Community based opportunities to contribute to O&M services • Support and materials required for Community-based tasks • Protocol and selection criteria on a local level
Stage 2	• Interface for complementary oversight of preventative, reactive and interactive O&M functions • TOR for the interface functions, routines and schedules • Monitoring and reporting links cover preventative and reactive processes
Stage 3	• Information Sheet to outline technology O&M requirements • Budget, Procurement, Training and Management checklists to support the uptake of community based opportunities in O&M and inter departmental collaboration

Clarity of terms needs to be established early by the facilitator. Such clarity was important in all instances for example around the use of terms such as:

- Reactive maintenance and preventative maintenance – a lack of clarity of these led to long winded debates and problem in classification by participants;

- Community based – Where contractors were part of groups, unbundling what the community could and could not do took time due to what may have been perceived as conflict of interests;

- Joint responsibility and complementary oversight covering supervision, monitoring

2. Application of the guidelines

2.1 Identify CB opportunities in O&M (stage 1)

- Unbundling of tasks was easily undertaken by participants. The tasks and frequency with which tasks are undertaken were used adequately to cluster those tasks that constitute CB opportunities.

- Community based (CB) opportunities were clearly emergent for all 3 technologies. However the models for the shared (ablution facilities) and individual (VIP and UD) are different. Therefore the CB opportunities emergent are different from one technology to another.

- The VIP and UD being individual household facilities did not mean that the emergent CB opportunities are similar either. Different opportunities emerged.

- A lack of appropriate procurement and management models reflected on the commitment to Community-based models. Though elements of criterion for the selection of CB were evident, there was a lack of clarity in all models on the specifics of procurement.

- Community structures in all 3 technologies play a role in deciding the selection criteria of the CB labour. However the appointment of CB, duration of appointment and payment of the labour are unclear.

2.2 Monitoring implementation (stage 2)

- O&M of basic services requires attention to the pivotal interface between municipalities and user communities.

- Complementary oversight related to O&M tasks that require structured support for negotiated agreements between technical and user roles were identified in all technologies.

- How complementary oversight emerged in all three technologies however differed. Monitoring of the O&M activities differed from technology to technology. The ablution facility scenario is a particular case of a point of difference since the caretaker operates on a voluntary basis.

- Clearly outlining activities in the O&M matrix (Information sheet 5) had to be outlined clearly in the process. Discussion of TORs and reporting protocols were best defined in the activities identified in the matrix.

- The role of the Community Forum is important in all technologies as well as in outlining specific responsibility for both preventative and reactive O&M activities.

- Who reports to whom and on what in relation to the undertaking of O&M activities were clear was clear for all three technologies. Frequency of reporting could have been better clarified.

- Response time to reports is an important part of O&M that could have been tied to the process and outputs.

2.3 Support Integration (stage 3)

- Stage involves the collation and conveyance of information that is central to decision-making for forward planning and budgeting within the institution.

The steps that are collated to inform:

- Technology and actual Levels of Service inform budgets decisions
- Budgeting details covering ongoing O&M including preventative maintenance
- Procurement information required by supply chain management is addressed
- Identification of training needs that are alignment with appropriate skills
- Establishment of baseline for organizing collaboration across department

- Relevant managers and decision makers at the institutional level are the primary informants of the tools applied at this stage.

- Information that was collated at this stage was drawn from Stages 1 and 2.Other inputs to this stage were and may be added from existing municipal reports and planning documents.

- Key differences in the three technologies lie in institutional arrangements. O&M models undertaken vary for each technology and therefore require different approaches to establishing institutional arrangements. The UD technology has the most discrepancies. Tool 11 (Managements checklist) has key areas that do not have responsibility for or are unexplained. For example:

- There is no monitoring for the coordination of preventative maintenance
- There is no monitoring for the coordination of reactive maintenance
- There are no budgets in place for O&M.