GUIDELINES FOR PREPARING A BUSINESS PLAN FOR URBAN WATER UTILITY

UN HABITAT
FOR A BETTER URBAN FUTURE

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1. INTRODUCTION:

If Africa is to achieve the MDGs for water and sanitation, it is a matter of vital importance for urban water utilities to extend services to reach the under and un-served part of the urban population. However, the utilities are often constrained by challenges of various natures like inadequate institutional and technical capacity, operational inefficiencies and poor financial performance. Some of the technical challenges include lack of rehabilitation of the network system, absence of leakage control programme, inadequate capacity/ equipment to carry out frequent water resources monitoring. Insufficient enforcement of regulations, overstaffing, limited qualified and trained staff or majority of the workforce being unskilled and limited working facilities are some of the institutional/organizational challenges that many of the utilities are facing. The finance challenges, among others, include high non-revenue water, non-billing of all of the domestic and institutional customers are and lack of revising and adjusting tariff to coup up with ever increasing costs of services and being largely dependant on subsidies from government treasury. Moreover the environmental challenge like climate change that results unpredicted rainfall patters and drought that lead to decrease of the quantity of water bodies and quality deterioration is an exogenous factor that affects the utilities.

These difficulties are compounded by massive operational problems which tend to consume scare human resources in “fire fighting” kind of activities rather than addressing fundamental investment issues that are necessary to improve long term performance. Investment programmes are often badly conceived, focusing on costly new infrastructure, rather than making more efficient use of existing infrastructure and extending services to the poor. Furthermore, financial models to assess the impact of investments on the utility’s financial performance are often not available, leading to poor business planning and long lead times to prepare projects for funding.

This situation could be improved if urban water utilities adopted a more strategic focus in their decision-making with the necessary tools in place for financial forecasting and long-

term planning. A Business Plan for a utility is an output of a strategic planning process that involves the identification and assessment of investment options as well as financial projections, which translate long-term strategies and plans into detailed estimates of costs and cash requirements to meet the investments and operation and maintenance needs. This, among other things, can help as a source of information for potential lenders such as the Regional Development Bank, through showing the water utility's future financial position and sustainability. Moreover, the Business Plan can be used as a source of information/database for project identification, preparation and appraisal.

Under the WAC and LVWATSAN Programmes, UN-HABITAT has been assisting urban water utilities in Africa to improve their strategic business planning as a tool for improved financial performance and investment planning. As part of this initiative this guideline for the Preparation of Business Plan for utilities has been developed. One of the most important features of this guideline is that the key elements of WAC II and LVWATSAN are captured as part of the strategy. These elements include Service provision to the urban poor, Water Demand Management (WDM), Water Quality Monitoring (WQM), Energy Audit, Gender Mainstreaming, and Public Awareness & Education.

The preparation of the guideline will be followed by a training programme for utilities staff on its use and application. There will be a follow up of the implementation through assisting the utilities to develop their own business plans. In this regard, it should also be noted that as the activities under the Global Water Operators Partnership Alliance continue to expand, the knowledge base on best practices in strategic business planning for water utilities will improve and will put UN-HABITAT in an even better position to deliver capacity building programmes to utilities on strategic business planning and other areas.

2. BUSINESS PLANNING PROCESS:

The key to a successful business plan is modifying the approach to the unique needs of the utility while maintaining a focus on overall best business practices.[1]

The main purpose of this guideline is to enable the water utilities to do their business planning. In this line the most important and first step in the preparation of the Business Planning is formulation of a task force that can lead the process. A task force comprising different units within the organization like the technical, management and financial units should be formed. The task force, in addition to the preparation task, will become the catalyst for implementation of the business plan. There is also a need for the task force to develop a communication strategy and plan that addresses how the groups will communicate and how often broader stakeholders will be involved. This communication plan will play an important role throughout the project life.

Once the formation of the task force is completed then we can proceed to the following phases of the business planning process.

3. Phase I: DATA COLLECTION & ANALYSIS:

The first phase of the business planning process is data collection and analysis. The overall objective is to collect, organize and analyze data in order to understand the existing situation of the utility and to lay the ground for future projection. Understanding of the utility's existing situation is one of the fundamental tasks in the business planning process. The potential areas of data collection include, but not limited to, the following:

City/ Town overview

- Location
- Current population & growth rate
- Population served/ coverage (Both water & sanitation)

Policy & Legislation

[1] Mike Freeman, Chris Fabian and Stefanie Mosteller, Water/Wastewater Utilities- Business Planning

- Policy & regulatory system in the Water & Sanitation sector
- Legal & Institutional mandate of the utility

Management structure of the utility

- Organizational chart
- Staffing & training process
- Staff numbers, disaggregated by age, sex education level, skills etc...
- Key personnel (duties & responsibilities)

Financial data

- Revenue collection by type of sources
- Revenue collection efficiency rate
- Tariff structure and rates
- Price of water including payment for connection
- Costs (investment and operation and maintenance)
- Funding sources to cover investment costs
- **Assets**: in which relevant information includes:
    - Different types include water supply, wastewater collection and treatment, buildings, vehicles etc.
    - Measures of size (diameter, length…), material and capacity.
    - An indication of condition or performance, particularly if improvement is needed.
    - Operating or maintenance costs, particularly if these are high, and some reduction is needed.

Technical Data

- Sources of water and capacity
- Current infrastructure/ network system
- Production levels
- Consumption levels and rates (per capita consumption rates by different category of population

- Connections by type (house, yard, public)
- Unaccounted for water levels (classified by physical and administrative losses if possible)

Operational data

- Volumes of water supplied (and sewage and sludge treated), subdivided by type of user and showing water not accounted for separately. These can be compared to the water utility's capacity.
- Pressure and level of continuity of the water supply service
- Summaries of the quality of water supplied (and treated wastewater).
- Number of customers connected to the system
- Responses to request for connections
- Responses to questions and complaints
- Summaries of particular activities, such as repairs made to mains (and sewers)
- Ratio and indicators to illustrate particular points.

Relationship with External Bodies

- Government organizations (policy, legal framework, setting tariff etc)
- Non-government organizations (technical assistance, collaboration)
- Consumers (quality service, tariff)
- Suppliers (provision of raw materials, equipments services)
- Regulators (enforcement of policy and legislation)
- Media (information and awareness raising)
- Financiers (conditions for grants and loans)

The key areas to be assessed with the external bodies identified above include:

- Nature of the relationship between the external body and the water utility,
- The pressure on the water utility that the relationship may give rise to, and
- The response strategy by which the water utility can react to the pressure.

Once the data collection and organization task is completed the next step will be the analysis. The analysis task deals with a through understanding of the problems the enterprise/ utility is facing, either externally driven or internally. It is mainly the critical analysis of the existing situation. This shows where the utility stands today, what are the main factors that are positively or negatively affecting the overall operation of the utility. The overall analysis can be further supported by carrying out a SWOT analysis. The concept and a brief guide how to run the SWOT analysis is highlighted in the next section.

SWOT Analysis

The SWOT analysis is a tool used for getting a quick overview of an organization's strategic position. The analysis consists of an evaluation of relevant factors in the organization environment (internal and external) in order to determine its strengths and weaknesses on the one hand and the availability of external opportunities and threats on the other hand. In doing this, the objective of the organization is to achieve a strategic fit between the organization's internal skills, capabilities and resources with the external opportunities so as to minimize the threats to the organizations. The SWOT Analysis can be carried out under each theme that encompasses the mandate of the utility. Areas of focus can be Institutional Capacity, Technical & Operational Efficiency, Service Delivery and Financial Sustainability. For example the SWOT analysis of the Zanzibar Water and Sewerage Authority, as part of the Strategic Business Plan development process, was carried out in specific priority areas as indicated below.

The current situation analysis in the SBP has been carried out through a strengths, weaknesses, opportunities and threats (SWOT) tool. Participatory and focus group discussions involving key staff of ZAWA and other selected stakeholders were held to map out a more representative SWOT analysis. The priority areas of this analysis were institutional/organizational capacity, water resources management, and quality of services provision, financial sustainability and projects coordination. [2]

[2] National Water & Sewerage Corporation, Zanzibar Water Authority (ZAWA) Strategic Business Plan (2008-2013), June 2008

The key SWOT questions that can guide the development of the overall analysis are shown under each component in the following chart.

Key SWOT Questions:

INTERNAL

Strengths: *What the utility do exceptionally well?* *What advantages does the utility have?* *What valuable assets and resources does the utility have?* *What do the utility's customers identify as its strengths?*	**Weaknesses:** *What could the utility do better?* *What are the utility criticized for or receive complaints about?* *Where are the utility vulnerable?*
Opportunities: *What opportunities does the utility know about but has not addresses?* *Are there emerging trends on which the utility can capitalize?*	**Threats:** *Are weaknesses likely to make the utility critically vulnerable?* *What external roadblocks exists that block the utility's progress?* *Is there significant change coming in water sector?* *Are economic conditions affecting the utility's financial viability?*

POSITIVE **NEGATIVE**

EXTERNAL

The SWOT Analysis will bring out the major challenges faced by the utility, both internally and externally, the internal strengths and external opportunities. Here a sort of analysis and comparison can be carried out. It can be asked that to what extent are the internal strengths of utility and the available opportunities will greatly enhance the feasibility of overcoming the challenges and ensuring that that improves performance and service delivery.

4. Phase II: PLANNING:

A good business plan both defines a business and guides it.[3]

This phase involves the formulation of the actual business plan.

1. Clarify the purpose, vision and utility objectives
2. Create a work plan of activities, initiatives for improvement, targets and performance measures
3. Develop sound assumptions and forecast revenues, operational and capital investment expenses (financial projection)

4.1 PURPOSE, VISION AND OBJECTIVES:

Utility's purpose: 'defines the intention the collective group of employees are there to achieve. The organization was formed or has evolved to provide this useful function.' This generally defines:

- Its customers or market,
- Services or physical products provided,
- Whether or not it is a non-profit making, a profit seeking or a charitable organization

Utility's Vision: 'an idea or concept of imaginative insight to the utility's state of functioning some time in the future.'

Utility objectives: 'expression for a single activity describing the object of effort or ambition to reach a destination.' Objectives are tools which help realize concepts,

[3] Kathy Ver Eecke, Plan for Success: How to Write a Business Plan

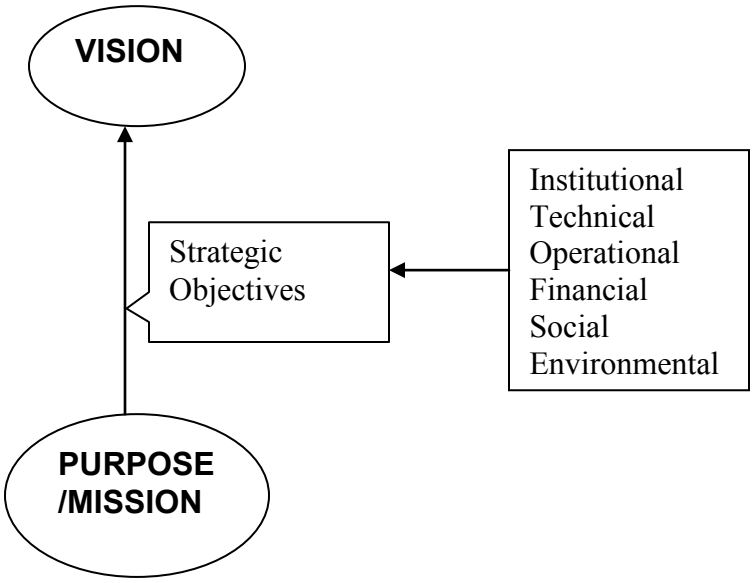
promote the formation of priority activities, assisting to progress toward the utility's vision of the future.

Utility's purpose, vision and objectives combine to describe the enterprise in different time frames:

- The purpose reminds us why the utility was created in the past and why it presently exists.
- The vision describes the direction in which the enterprise is to evolve in future.
- The objectives define the intermediate steps we wish to reach to take us from the present toward the future.

Consider:

- the purpose as the point of origin or where you are today,
- the vision as the direction you wish to head to for the future,
- and the objectives as the guiding rails which take you from the situation you are in today to the future.



Again we can take a practical example of how the mission and vision of Zanzibar Water & Sewerage Authority are reflected in its Strategic Business Plan:

As a result of the situation assessment, ZAWA has formulated a vision, mission, values and goals. The vision of ZAWA is *'to be the best water and sanitation service provider in East Africa'* and the mission is *'to develop and provide potable, adequate, affordable water supply and sanitation services in a sustainable and environmentally friendly manner'*. In this regard, ZAWA's motto states that: '*every drop counts; use water wisely'*. The core values include: teamwork and transparency; customer satisfaction; competent, committed and motivated staff; good governance; environmental sustainability; efficiency and effectiveness; gender sensitivity; corporate social responsibility and networking. [4]

4.2 DEVELOPMENT OF STRATEGIC OBJECTIVES

The strategic objectives should clearly relate to the utility's priorities for achieving the vision. The specific strategic directions to be dealt with under each of the following interdependent component can vary depending on the specific situation of the utility. However, the general focus areas are highlighted as follows.

4.2.1 INSTITUTIONAL STRATEGIC OBJECTIVES

The institutional strategic objective mainly should deal with the restructuring of the organizational set up and implementation of training and capacity building programmes. As a result of the impact of growth and/or new strategic directions, changing or amending the institutional /organizational set up of the utility can be required. The change of the

[4] National Water & Sewerage Corporation, Zanzibar Water Authority (ZAWA) Strategic Business Plan (2008-2013), June 2008

institutional set up, among others, should be accompanied with the training and capacity building programme. The development and implementation of a cost effective and attractive staff rationalization and restructuring and tailor-made training programs should be the focus areas to be considered under this objective. There can be a need to decentralize selected operational functions of the utility together with the improvement of transport and communication systems.

4.2.2 TECHNICAL & OPERATIONAL STRATEGIC OBJECTIVES

The main areas of focus of the technical and operational strategy include developing and maintaining a comprehensive and up to date database, water resource protection, increase the efficiency of production of water, and implementation of planned preventive maintenance of the network system and equipments. Apart from the supply side, the strategy should also give due consideration to Water Demand Management and looking at alternative sources of water like rainwater harvesting for the of domestic and non-domestic purposes in the urban centers.

WDM stresses more on efficient use of water resources, while at the same time solicits for technical solutions on the supply side. As a result, it is now gaining more support as one of the viable policy options to deal with the challenges of limited water resources and other aspects of natural variability.

The specific strategy elements to be addresses under WDM strategy at the city level include, but not limited to, the following:

- The scale-up and expansion of the Unaccounted for Water Program that comprehensively deals with water audits, leakage detection plans, repairing and upgrading of infrastructure (using cost-effective relining and renovation techniques), and water meter management components.

- The scale-up and expansion of the Retrofitting Program both at domestic and industrial levels.

- Introduction of a water reuse program. This activity would identify the major industrial consumers of water, and identify technology transfer opportunities for water reuse and recycling.

- A policy and institutional component to implement WDM in institutions, design of regulatory framework, including the introduction of design standards. It can also include the establishment of a WDM unit at the utility level to ensure guiding principles are carried out, with monitoring and verification oversight.

The growing importance of rainwater harvesting as an element of WDM is essentially seen from its benefit to the badly needed sustainable approach to water resources management. Water sustainability could be defined as "planning for today and the future by considering the hydrologic limits of watersheds, and managing water resources in ways that respect human rights, satisfy economic needs, and support healthy ecosystems".

Currently, development and promotion of the rainwater harvesting alternative has been well recognized in many countries. In fact, given the various constraints in many developing countries, the use of rainwater harvesting would be a realistic alternative to ameliorate the ever-worsening challenges of water shortage/scarcity, from the vantage point of ensuring long-term solutions.

Rainwater harvesting provides a simple, low cost alternative to meet the growing demand for safe water. It requires low capital and operation costs compared to conventional systems in drought prone and mountainous areas. Besides access to safe water, rainwater harvesting yields numerous environmental, social and economic benefits to justify that it can significantly contribute towards poverty alleviation and sustainable development.

Effective promotion of the rainwater alternative and its utilisation, nevertheless, requires facilitation for wider involvement of the public and decision-makers towards conscientious actions at all levels. These, among other things, include knowledge building, strengthening the awareness and skills of professionals and end-users,

consistent emphasis on information availability, accessibility and dissemination as well as integration of rainwater resource management as an important element of integrated water resource management (IWRM) and as a cross-cutting issue for other sector development initiatives.

WAC II Model Rainwater Harvesting Schemes for Elderly People (Ethiopia/Harar)

4.2.3 SOCIAL STRATEGIC OBJECTIVES

The social strategic objectives of the business planning process should take in to account the provision of WATSAN services to the most vulnerable groups of the urban community. Accordingly, the utilities need to give attention to pro-poor and gender focused WATSAN programmes and projects. In addition, utilities are required to convene public awareness raising and school education as part of their overall communication strategy. As part of the social strategic objectives the specific components to be addressed include the following:

Pro-poor Governance and Follow-up Investment

To increase the effectiveness of the water utilities support to achieving MDG for water and sanitation, pro-poor urban water governance and follow-up investment needs to be the core social objective. The goal is to support change in governance, so that low-income peoples are given a voice in collective decision-making that leads to improved access to good quality drinking water and basic sanitation. The approach should be to directly effect policy, regulatory, legal and institutional instruments, and indirectly spur follow-up socio-economic investment in water and basic sanitation to benefit those without access.

Gender Mainstreaming Strategy

The Gender Mainstreaming Strategy Framework is twofold: (i) incorporating gender concerns into all policies, programmes and activities planned in Water and Sanitation for Cities Programmes so that women's and men's needs and priorities are adequately addressed; and (ii) encouraging urban poor both women's and men's specific activities intended to uplift their standard of living and contribute towards addressing the imbalances and inequalities between them within the framework of sustainable water and sanitation services.

The utility business planning strategy should emphasize the roles and needs of women as active participants and beneficiaries of any efforts to improve access to water and sanitation, and to bring about democracy and good governance especially in the participation of women in decision making at the municipal level.

WAC II Gender Mainstreaming Wokshop Burkina Faso/ Ouagadougou

Awareness Raising Program:

The aim is to educate and inform the public about urban water and sanitation issues. The utility can implement this activity at the city level. Capacity must be built at the utility level to implement public awareness campaigns targeted at the efficient and effective use of water resources. Both media and multiple stakeholder groups should be included in a closely co-coordinated and cost effective approach to spread the message. Some of the specific initiatives to be addressed through the strategy include:

- Development of a generic public awareness toolkit and public relations training manual, which can be customised for the respective city.
- Development and implementation of training programs for utility awareness raising staff.
- Commissioning of customer attitude surveys to establish baseline data for development of city-level awareness campaigns, and for programme evaluation purposes.

- Regularly convened public meetings, held in conjunction with other agency/NGO/CBO/communities/local administration meetings, to develop positive synergies between actors.
- Scheduled field trips and visits to community projects.
- National essay writing, poster and photo shoot-back competitions and exhibitions for schoolchildren on water and sanitation issues.
- City water week celebrations including development of drama skits, music compositions and poetry, that highlight water and sanitation issues in cities.

4.2.4 ENVIRONMENTAL STRATEGIC OBJECTIVES

The two basic issues that utilities need to address under the environmental strategic objectives are Urban Catchment Management and Sanitation for the Urban Poor. The excerpts extracted from Water for African Cities programme document is given below:

Urban Catchment Management:

The objective is to protect and secure water resources in the urban catchment, and better co-ordinate water management with upstream/downstream users. The core activities include the development and implementation of strategies, including livelihood programs, which will directly improve the living conditions of the poor.

At the city level, the strategy can be to introduce and expand urban catchment management interventions within the responsible agency. A parallel effort would be the engagement of urban communities in addressing the range of infrastructure and environmental problems they perceive.

The proposed strategic activities include:

- Develop knowledge base for integrated urban catchment management. The information platform should be established and maintained by a research university, or some other regional institution. This would be an overall programme knowledge base, for the use of city managers and activity co-

coordinators. The managers of the knowledge base platform could identify (and address) additional needs, such as co-ordination of research efforts aimed at addressing issue-specific (water quality and quantity, socio-economic development, and environmental) problems in cities. Dependant on hardware resources, an attempt could be made to collate national GIS data themes for use in drainage basin specific or transboundary analyses.

- A policy and institutional component to support national for urban catchment management. It would advocate gender, youth and pro-poor aspects for incorporation into national planning principles and guidelines. Further, it would support urban planning at the local authority level, and thus encourage national governments to decentralize decision-making. The idea would be to identify the underlying institutional framework in place, and assess the capacity to achieve programmatic objectives (the development of national urban catchment management strategy documentation). In addition, it would help cities to find innovative funding mechanisms to support new programs and initiatives for urban catchment management.

- A city-to-city exchange program, both at regional and national level, for the direct dissemination and exchange of experience between city programme co-ordinators. Formal exchange at the regional level, and workshops and training courses at the national level as applicable.

- Pollution control program. The goal would be to help local authorities and pro-poor communities, who are usually located in the less desirable and polluted neighbourhoods, to confront small industry and help them implement appropriate treatment technologies, and participate in pollution prevention and waste minimisation schemes. Other aspects involved include the provision of financing (or loan guarantees) for communities to address infrastructure problems, such as upgrading the capacity and/or technologies of wastewater treatment plants, combined sewer overflows, etc. Land ownership issues need to be first addressed,

to provide the incentives for low-income settlement to invest in such infrastructure.

- Water Quality Monitoring Program. The aim is to build capacity into the city agency responsible for water supply and/or environmental protection. Assistance will be given to establish the monitoring program, including both surface and groundwater sources, and capture the data. This activity will tie in with HABITAT'S community-based environmental management information system (CEMIS), allowing communities to play a role in managing their immediate environment. Funding for monitoring would be secured over time by introducing a raw water charge and an effluent disposal levy on users and polluters.

- An urban planning program, to train urban planners in IWRM and help them incorporate best practices into their planning regimes. For example, rainwater harvesting and groundwater recharge through retention structures in urban areas (domestic and municipal). This would be supported with a micro-credit facility to support pro-poor communities create livelihoods, such as funding the manufacture of rainwater tanks and training the poor in their installation.

- Storm water drainage and erosion control program. The aim is to provide training to prevent sedimentation of waterways and erosion of pathways. By installing infrastructure and improving the environment, local problems in low-income neighborhoods can be solved. For example, low lying areas inundated during annual rains can be drained. Once in place, the focus would be redirected at the city level, with a livelihood program to solve urban catchment problems associated with Storm water drainage and erosion.

- Solid waste management program. Aim is to train the poor to take care of waste collection, land filling, composting, and recycling and reuse of waste products. Following an initial capital investment, this program could generate a revenue stream and provide employment. It would also assist in the mitigation of air and groundwater pollution.

- It will be necessary to co-ordinate/partner with other urban programmes, as well as peri-urban and rural development programmes. It is envisioned that a generic systems-based urban catchment management toolkit could be developed, and this would be refined on a city-specific basis. Throughout the programme, the exchange of city experience and information would be strongly promoted.

Sanitation for the Urban Poor:

The overarching strategy is to equip the poor with sanitation facilities, at the same time providing them with efficient sanitation services. It is perceived that this will enable the maximization of other inter-agency and partner livelihood programs. As such, special attention should be given to active community involvement and ownership in the provision and management of these services.

As the sanitation coverage statistics are overwhelming, one aim is to increase and leverage the funding available for this component. This can entail the forging of partnerships and development of innovative financial mechanisms for the mobilization of local funds. Support can be forthcoming through a thorough capacity building effort, including assistance in the development of institutional frameworks, identification of revenue streams (for cost recovery purposes), training of staff and community leaders, etc. The intent of the strategy should be to provide access to sanitation that is affordable for all, while directly improving the quality aspect of life for the urban poor.

The strategy at the city level would be to build capacity into the local authorities, through assistance with situational analyses and technical training programs (that would sensitize decision-makers of the need to provide sanitation coverage and service to all). This would be supported by a technical program assisting with design and development of sanitation infrastructure, the advent of wide-spread sanitation services (incorporated with the support of cost recovery mechanisms, etc), the provision of institutional guidance in identifying of private sector investment opportunities, and appropriate technology

transfer projects. By incorporating the participatory approach into investment decision-making processes, change will be forthcoming as communities become empowered.

The proposed strategic activities can include:

- Sanitation coverage and service program. The aim is to assist cities and low-income communities in conducting situational analyses, and then focus on providing sanitation facilities and services in public centers and low-income gap areas.
- School building program. The aim is to oversee the construction of water and sanitation facilities in the schools of the cities..
- Municipal sewer infrastructure program. Assistance can be given to cities to develop comprehensive capacity, management, operation and maintenance compliance systems. Subsidies can be considered for communities to connect to the system as it expands.
- Healthy neighborhood and clean environment program, run through the awareness raising component. The aim is to promote the concepts of sanitation, hygiene and environmental protection in the community.
- Policy and regulatory program, run through the governance component.
- Institutional development program, run through the governance component.
- Solid and liquid waste management program, run through the urban catchment management component.

WAC II Urban Sanitation: Garbage Collection (Ghana/ Accra)

Public Sanitation Complex (Ouagadougou)

4.2.5 FINANCIAL STRATEGIC OBJECTIVES

Business Planning supports the transition from financial dependency on government to financial autonomy[5]

The financial strategy of a utility should focus on cost minimization and revenue maximization. More effort should be directed towards saving water resources at the source, in the distribution system as well as at the level of end users. There is also a need to promptly and proactively liaise with the concerned bodies to review and secure timely and justified adjustments in the water tariff. The bill collection task should be supported by customers awareness programme and based on the magnitude the customers should be decentralized with the purpose of bringing the service close to the customers. Apart from the operational matters the financial strategy of the business planning process has also to deal with the investment programme and an overall financial projection model that could translates all the strategies into revenue and costs.

(i) DEVELOPING AN INVESTMENT PROGRAMME

- There may be many investment needs, with limited money available. Or in other words there will be more projects than the water utility can afford to pay for.
- In this case the most important priority projects need to be chosen.
- The process is an investment planning, which is choosing which projects to proceed with, and when.
- Investment planning is a continual process, to be controlled by senior management, carried out by many different people and co-ordinate with the annual accounting cycle.

[5] WRc: Business Planning for Water Utilities Worldwide

(ii) FINANCIAL PROJECTION

A business plan needs to include information about the future financial performance of the water utility. Financial projections translate long-term strategies and plans into detailed estimates of operating revenues and costs, asset investment and cash requirements.

The financial projections:

- Allows the utility manager to review priorities for investment and expenditure in an iterative and consultative way. (can work to achieve an agreed balance between the costs for the plan and the financing available)
- Defines the company's future financial position and sustainability.
- Can help as a source of information for potential investors and lenders

The financial information for a business plan can comprise the following interlinked statements:

- Assumptions sheet (population growth, demand / consumption, capacity /production etc.)
- Water sales sheet
- Tariff analysis sheet
- Income and expenditure sheet
- Balance sheet

(iii) KEY ASSUMPTIONS TO BE CONSIDERED

The following are key areas for which sound assumptions are needed to do the projection:

- Period: the plan period for which projections should be made should be specified. Ten years period looks a reasonable span of life for projection. This period should also coincide with the financial year of the utility.

- Population: A base year population figure is needed. This should be an official figure derived from the population census. If possible disaggregated population data by type of population served through different types services is important. An official population growth rate should be applied to project the population throughout the planning period.
- Population served: take the ratio of population served to that of the total population and establish the rate of coverage throughout the planning period.
- Water Consumption: estimate the current per capita consumption rate by type of population served. Assume the change in the consumption rates during the planning period due to change in the living standard of the population
- Water Supply Coverage: assume the expansion of private connection and public water points to reach the un-served portion of the population.
- Unaccounted for Water: establish the base data and develop on improvement of UfW during the plan period depending of the leakage control strategy of the utility
- Development of Scenarios: carry out the projection under different(high, medium and low) scenarios depending on some of critical parameters like population growth.
- Tariff: establish assumptions on the tariff adjustment periods during the planning period
- Investment fund: establish assumptions on the possible sources of fund (loan, grant etc…) to meet the investment requirements of the utility.
- Repair & Maintenance: develop assumptions on the increase of repair & maintenance costs in relation to the plants age and size.
- Inflation: Apply an annual inflation rate on the cost projection but not revenue projection
- Uncollectible fees & Write-offs: assume a certain percentage per annum
- Consider Employee related assumptions such as:
    - The cost of training new employees
    - The availability of training
    - The stability and staff turnover

- Availability of key personnel on the market to hire.

(A simple and typical financial projection model is given in Annex 1)

5. Phase III: IMPLEMENTATION

The most important step is the implementation of the business plan. The strategic objectives should be realized through implementation of successive annual plans. For practical implementation purposes, specific and discrete activities relating to each of the strategies have to be developed and carried out on an annual basis. The activities shall provide a logical sequence to achieving the five-year strategic goals.

The activities that respectively build into each of the strategies should be identified and their scheduling established so that each successive annual plan concisely incorporates the activities that fall due in that given year.

Internalizing the implementation process of the business plan within the existing organizational set up is the most advisable approach. The management should allocate the responsibility of implementing various activities outlined in the business plan to the respective functional units. In some instances, given the anticipated level of activities during the initial years, it can be prudent for the utility to establish a project implementation unit (PIU) for the successful and timely implementation of projects.

The Monitoring and Evaluation of the implementation of the Business Plan should be based on the annual operational plans as the building blocks. Arising out of the activities in the annual plan, each functional unit of the utility will be required to derive clear milestones and deliverables as well as their respective due dates for the activities for which they take lead responsibility. From the milestones, deliverables and due dates, monitoring sheets for each section/department/team can be prepared. The monitoring sheets will form the basic tool for M&E of the annual operational plan implementation.

ANNEX
SAMPLE BUSINESS PLAN PROJECTION MODEL

Water Demand and Production
Assumptions Table

		Year 1	Year 2	Year 3	…	Year 10
					…	
Total Population	Growth Rate p/a 2.6%	283752	291130	298699	…	366786
Population >20 hrs service per day		2%	3%	4%	…	35%
Population >16 & <20 hrs service per day		5%	7%	11%	…	37%
Population >12 & <16 hrs service per day		7%	10%	13%	…	28%
Population <12 hrs service per day		11%	13%	13%	…	0%
Total Population served		70938	94617	122467	…	366023
Per Capita Water Consumption		26	27	29	…	42
Total Annual Water Consumption l in m3		673202	942812	1281334	…	5658063
Unaccounted for water		53%	43%	37%	…	23%
Total Required Water Production (m3/annuam)		1432344	1654056	2033863	…	7348134
Design capacity (river intake) m3/d-Existing Source		6000	6000	6000	…	6000
Design capacity (spring) m3/d-Existing Source		1500	1500	1500	…	1500
Annual Design Capacity		2737500	2737500	2737500	…	2737500
Full Design Capacity of existing sources lessTotal Required Water Production (m3/annuam)		1305156	1083444	703637	…	-4610634
Operational capacity (river intake)m3/day		2500	2500	2500	…	2500
Operational capacity (spring)m3/day		500	500	500	…	500
Annual Operational Capacity		1095000	1095000	1095000	…	1095000
Operational Capcity of existing source lessTotal Required Water Production (m3/annuam)		-337344	-559056	-938863	…	-6253134

Operating Income/ Revenue Projections Table
Tariff Analysis Table

	Unit	Year 1	Year 2	Year 3	…	Year 10
					…	
Total water sales in m3		471,241	659,968	896,934	…	3,960,644
water sales		471,241	659,968	896,934	…	3,960,644
Tariff rate					…	
kes/m3 (total cost recovery)		313.97	313.97	313.97	…	313.97
kes/m3 (O&Mcost recovery)		168.13	168.13	168.13	…	168.13
Revenue					…	
water sales		147,956,039	207,210,953	281,611,162	…	1,243,527,294
Connection fees		0	0	0	…	0
Meter rental		0	0	0	…	0
Others		0	0	0	…	0
Total revenue (TCR tariff)		147,956,039	207,210,953	281,611,162	…	1,243,527,294
Total Revenue (OMCR tariff)		79228589	110958846.6	150799218	…	665893149.8
Project Costs					…	
Total investment		6,240,000	466,760,000	803,830,000	…	
loan payment					…	
Depreciation					…	
Total O&M		80,356,056	84,373,859	88,592,552	…	130,891,548
Total project costs		86,596,056	551,133,859	892,422,552	…	130,891,548
					…	
Net cash flow		-61,359,983	-343,922,906	-610,811,390	…	1,112,635,746
					…	
PV Revenue (TCR)	$3,479,639,997				…	
PV total costs	$3,479,639,997				…	
	$0				…	
PV Revenue (OMCR)	$1,863,303,242				…	
PV (OMCR)	$1,863,303,242				…	
	$0				…	

		Year 1	Year 2	Year 3	…	Year 10
					…	
Water sales: in KES Per year					…	
water sales (KES)-TCR tariff		147,956,039	207,210,953	281,611,162	…	1,243,527,294
water sales (KES)-OMCR tariff		79,228,589	110,958,847	150,799,218	…	665,893,150
Income from connection fee		0	0	0	…	0
Income from meter rental		0	0	0	…	0
Other income		0	0	0	…	0
Total Income/ Revenue TRC tariff		147,956,039	207,210,953	281,611,162	…	1,243,527,294
Total Income/ Revenue OMRC tariff		79,228,589	110,958,847	150,799,218	…	665,893,150
Tariff rate					…	
Water sales: in KES (TCR)		313.97	313.97	313.97	…	313.97
Water sales: in KES (OMCR)		168.13	168.13	168.13	…	168.13
Connections:					…	
PF	number	20	21	22	…	33
1st band	number	300	345	397	…	1214
2band	number	30	35	40	…	121
3band	number	30	35	41	…	178
4band		9	17	21	…	89
Total Private Connections		369	431	499	…	1602
New Connections		204	62	67	…	219
Consumption per year					…	
Water consumption	m^3/year	673202	942812	1281334	…	5658063
Total Consumption Annual		673202	942812	1281334	…	5658063

Income and Expenditure Statement Table

	Year 1	Year 2	Year 3	…	Year 10
				…	
Income				…	
Total income (TCR tariff)	**147,956,039**	**207,210,953**	**281,611,162**	…	**1,243,527,294**
Total Income (OMCR tariff)	**79,228,589**	**110,958,847**	**150,799,218**	…	**665,893,150**
Expenditure				…	
Operation & Maintenance				…	
Scheme Specific expenes	66,356,056	69,673,859	73,157,552	…	108,087,023
Headquarter expenses	14,000,000	14,700,000	15,435,000	…	22,804,525
Total O & M	**80,356,056**	**84,373,859**	**88,592,552**	…	**130,891,548**
				…	
Operating surplus (TCR Tariff)	67,599,983	122,837,094	193,018,610	…	1,112,635,746
Operating surplus (OMCR Tariff)	-1,127,467	26,584,988	62,206,666	…	535,001,602
Depreciation allowance	0	0	0	…	0
				…	
Net income after depr. (TCR tariff)	**67,599,983**	**122,837,094**	**193,018,610**	…	**1,112,635,746**
Net income after depr. (OMCR tariff)	**-1,127,467**	**26,584,988**	**62,206,666**	…	**535,001,602**
Interest and Debt service	0	0	0	…	0
				…	
Net income after depr & interest (TCR Tariff)	**67,599,983**	**122,837,094**	**193,018,610**	…	**1,112,635,746**
Net income after depr & interest (OMCR Tariff)	**-1,127,467**	**26,584,988**	**62,206,666**	…	**535,001,602**

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