Toolkit for Enterprises Managing Rural Water Supply Systems

Tools for establishing and strengthening enterprises managing rural water services in Ethiopia

WaterAid

AGUA CONSULT

This toolkit was prepared by WaterAid Ethiopia in collaboration with Aguaconsult. It is designed to support the establishment and continuous improvement of enterprises managing rural water services in Ethiopia, and is meant to complement existing guidelines and operations manuals. The content draws on WaterAid's experience building the capacity of water boards, and from field visits to the Hetosa Woreda Drinking Water Board and the Shebel New Life Safe Drinking Water User Association in Amhara in December 2018. Development of this toolkit would not have been possible without the support of WaterAid Ethiopia and the time generously made by these water enterprises to provide input.

Toolkit for Enterprises Managing Rural Water Supply Systems

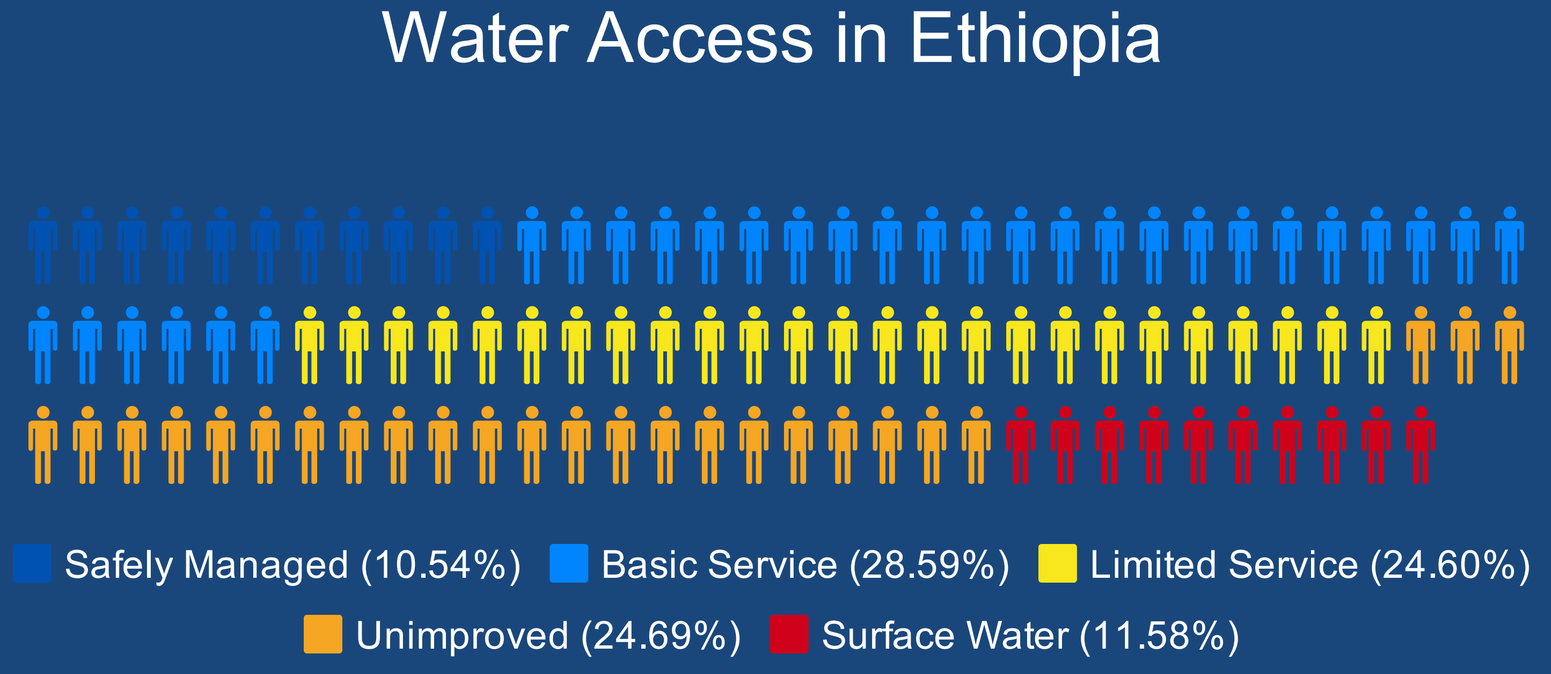
Duncan McNicholl
WaterAid Ethiopia and Aguaconsult

February 2019

CONTENTS

Background

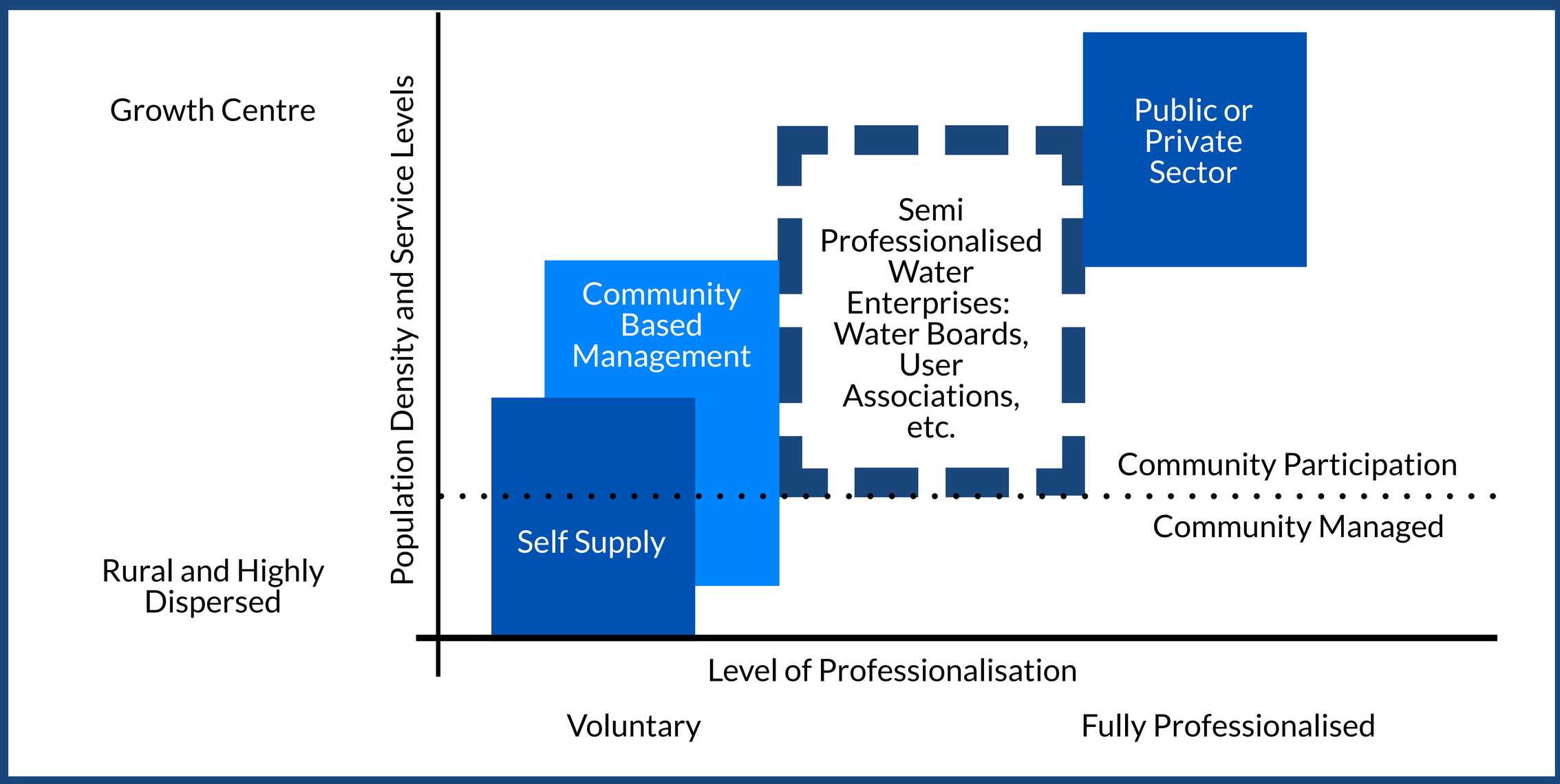
Ethiopia achieved the Millenium Development Goal for water access and now aims to achieve the Sustainable Development Goal of universal safe water access by 2030. The challenge is considerable, both to expand the development of new infrastructure, and to effectively sustain service levels where infrastructure already exists.



Source: Joint Monitoring Programme 2015 - www.washdata.org

There currently exists a strong precedent for both community managed infrastructure (WASHCOs) and for established utilities. Middle ground between these options is emerging in the form of Water Boards, User Associations, and other enterprises that embody professional management practices beyond the typical capacity of voluntary community management. Increasing the professionalism of management units - referred to throughout this toolkit as 'enterprises' - is likely to be critical to the future of sustainable water service delivery in Ethiopia.

The question is: how? Although guidelines and suggested management structures are recommended in existing government resources, details about who does what and when necessarily differ with context. Local management units – whether they be water boards, user associations, micro enterprises or other – must each go through the process of establishing roles and responsibilities, monitoring performance, addressing challenges, and improving over time. This toolkit is designed to help enterprises think through how they will operate in their context.



Source: Adapted from Rural Public Utility O&M Implementation Manual - One WASH National Program

Why Water Enterprises?

Community management has been central to the development of rural water supply because of its intent to promote local ownership as a key to long-term sustainability of infrastructure. This arrangement puts communities at the centre of management responsibility, which includes financial management, planning, and maintenance roles. Evidence in Ethiopia and elsewhere, however, indicates that community based management may be inappropriate for handling the complexity that comes with larger piped water schemes. This is especially true for multi-village service areas. Recognition of these challenges has created a need to develop alternatives to community management that can handle larger scale operations.

The establishment of rural water enterprises has the potential to meet this need by creating stronger systems for professional management through a business-orientated approach. Enterprises, as professional management units, have the ability to establish performance incentives and enforce accountability through formalised systems that have the potential to improve the sustainability of more complex infrastructure. Unlike voluntary community groups, professional enterprises have greater authority and accountability to set and meet service performance standards. For these reasons, developing enterprises such as rural public utilities, water boards, and other professional management units has become a priority under the One WASH National Programme.

Key Undertakings to Professionalise Rural Water Management Under the One WASH National Programme

- Professionalize complex multi village water management within a systems approach.
- Shift from community management to community participation for complex multi village water schemes - while other modes of implementation will remain in place where appropriate and successful (CMP, Self-Supply, NGO, Woreda).
- Formally recognise and support Rural Public Utility management for complex large multi village schemes in legislation and National Water Policy, including the option for delegation of functions to private sector providers.
- Contextualise rural public utility formation for each Region including special needs for pastoralist areas under the One WASH National Programme.
- Clarify roles and responsibilities of rural public utility service providers in an Implementation Manual including accountability to existing sector institutions.

Despite the potential of professional rural water enterprises, they do have limitations and may not be the most appropriate model in every context. For this reason, the One WASH National Programme also recognises that other management models, such as self-supply, may be more appropriate in certain places. A brief summary of key advantages and disadvantages of the rural enterprise model is presented below.

Advantages

- Potential to access new funding sources
- Better sustainability of large infrastructure systems
- Greater potential to recover capital costs
- Improved economies of scale
- Ability to invest in expanding water access
- Stronger ability and incentive to respond to water user needs

Disadvantages

- More complicated management arrangement that requires investment to establish and sustain
- Less suitable for areas with low population densities
- Pressure to expand services to economically viable scale may create strain on available water resources

Toolkit Overview

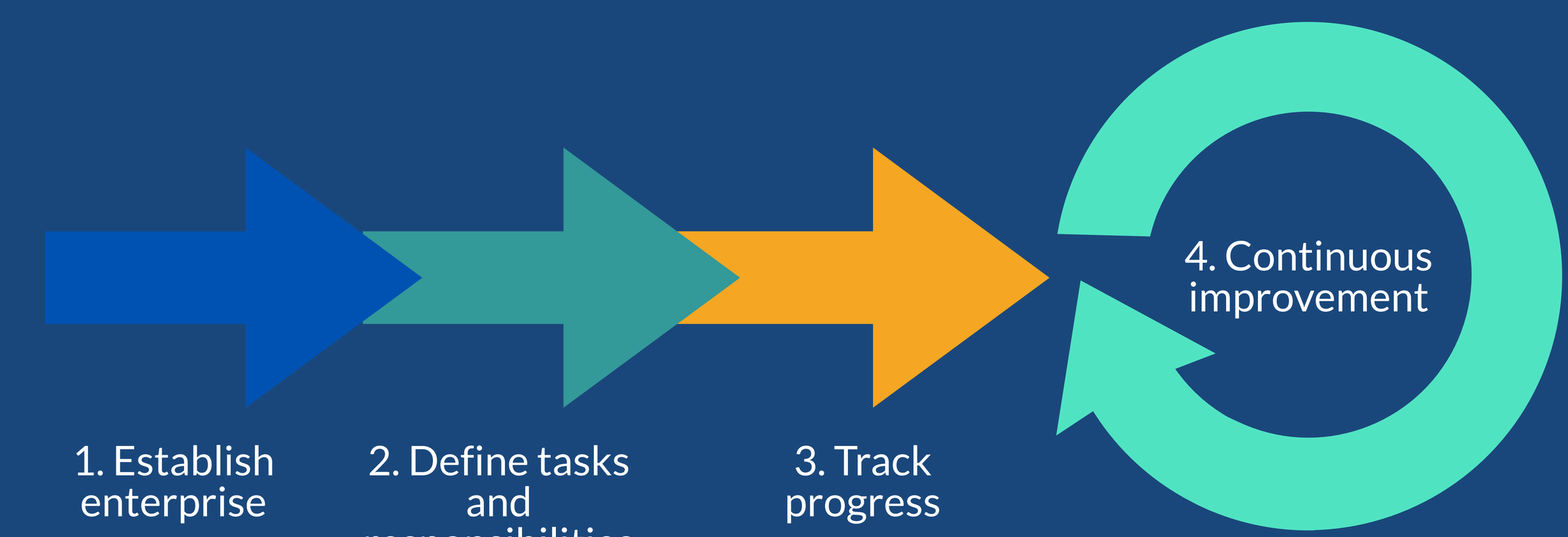
This toolkit is designed as a set of resources that can be drawn on to help establish, track, and improve performance of enterprises managing WASH services in Ethiopia. The toolkit is laid out in four parts:

1. **Establishing an enterprise** - The toolkit begins with considerations around the purpose of an enterprise, how it is structured, establishing membership, registration, and developing norms an procedures.

2. **Defining tasks and responsibilities** - Clear tasks and responsibilities are at the heart of a functional enterprise. This section explores tariffs, business planning, capacity building, asset management, and many of the other roles that will need to be managed.

3. **Tracking progress** - With the enterprise established and tasks clearly defined, the enterprise then needs to monitor performance to evaluate progress and adjust its practices as necessary. This section looks at Key Performance Indicators (KPIs) .

4. **Continuous improvement** - Even the most carefully developed enterprises will encounter challenges. Recognising areas for improvement, developing potential solutions, and adapting to change are all essential parts of effective management, and the final section of the toolkit explores a practical method for putting the idea of continuous improvement into action.



Purpose

This toolkit outlines the functions that an effective management unit needs to perform, questions for it to consider within its own context, and a recommended process for assessing and improving performance over time. The toolkit is intended to complement existing government guidelines and recommendations, and additional resources are reference throughout the toolkit.

Intended Audience

The toolkit is designed for members of the enterprise to use either on their own, or with support from other actors such as government or NGOs. It is not intended to be completed on behalf of the enterprise as a template that suggests one correct solution. Enterprise members are encouraged to revisit concepts in this toolkit as needed.

How to Use the Toolkit

Users should feel free to draw on any section of the toolkit that is helpful. A process is suggested for first-time users, and afterwards readers should feel free to revisit specific sections as needed. It is recommended that every part of the toolkit is considered at some point.

Part I

Establishing an Enterprise

What is an Enterprise?

An enterprise is a legally recognised professional management unit that aims to sustainably deliver quality water services. Enterprises can be called by different names, but their core function is the same: to manage water services. A successful enterprise needs to include diverse representation, be accountable, and ensure that revenues meet costs so that the system can keep functioning.

Examples of enterprises include:

- Water Boards
- Water User Associations
- Water Service Providers
- Private Companies

Each enterprise is shaped by its mission, structure, and context, and each one is therefore a bit different. Considering the scope of what the enterprise needs to achieve will help to determine its structure and operating procedures.

Key Considerations

What is the scope of the enterprise?

What assets are being managed?

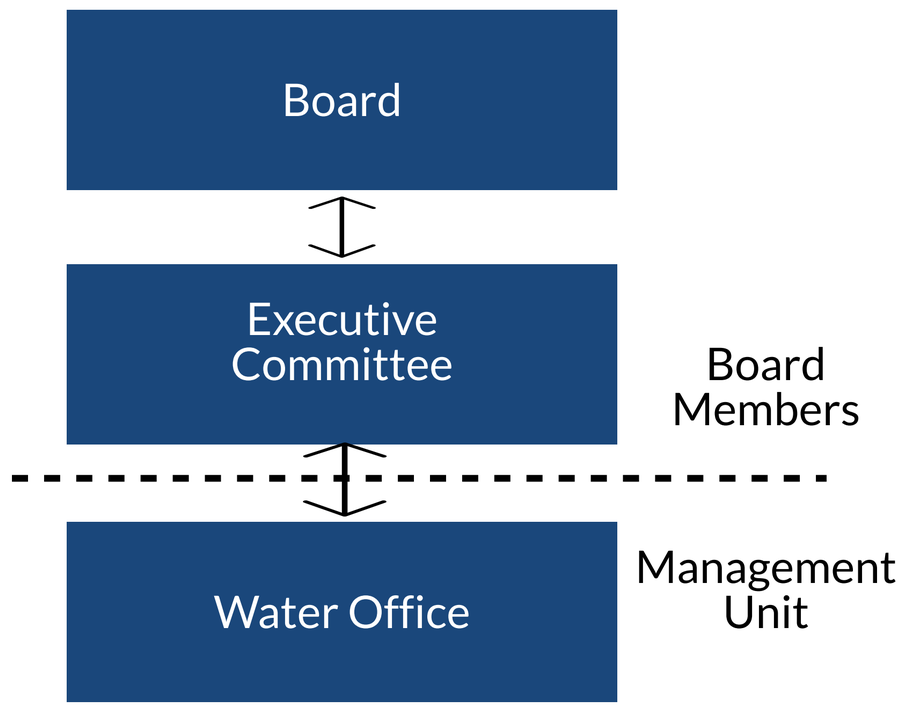
What management structures are currently in place (e.g. existing WASHCOs)?

Key aspects of an enterprise:

- it is a legally recognised entity;
- it has a clear management structure with roles, responsibilities, and accountability mechanisms;
- it has defined financial procedures with audited records; and
- it has a clearly defined mandate and work scope.

Enterprises commonly have at least two components: the board and the management unit. The management unit reports to the board. The board provides oversight of the enterprise, helps to address conflicts that arise, and has authority to hire and fire management unit staff as required according to the human resource manual. This separation of duties creates accountability by ensuring that those managing day-to-day operations are different from those providing oversight.

Large boards with many members may establish an Executive Committee that meets more frequently to handle operational issues, and oversees the hired staff who have been appointed to run the water supply system.



Source: Adapted from MENGISTU, B. ... et al, 2018. Making water services last: a community-based management model for service sustainability in Ethiopia. Iroceedings of the 41st WEDC International Conference, Nakuru, Kenya, 9-13 July 2018, Paper 2959, 6 pp.

More Resources

Enterprises work within a broader management framework for service delivery. The exact structure of an enterprise and how it interacts with other stakeholders may be different in different contexts. Some of these frameworks are defined in the Management Models for Piped Water Supply publication from WaterAid:

https://washmatters.wateraid.org/publications/management-models-for-piped-water-supply

Establishing Board Membership

As described earlier, the board is the overarching authority that governs how the enterprise functions. The board has the authority to hire and fire operators, managers, and other technical specialists that operate water services in the day-to-day while serving as buffer against political interference. Determining board membership is therefore the first priority when establishing an enterprise for water service management. A board typically consists of 5-9 people.

Suggested Board Membership

- Elected and delegated representatives of WASHCOs
- Representative(s) of the Regional Water Bureau
- Representative of the Woreda Water Office(s)
- Representative of the Woreda Administration
- Representative(s) from Regional/Zonal Health or Education Office
- Representative from Regional/Zonal Finance & Economic Development Office
- Representative of Local Businessess
- Utility Manager (Managing Director) and Secretary as non-voting member

Adapted from *Rural Public Utility O&M Implementation Manual* p. 33

Key Considerations

Is the size of the board appropriate for the scope of the enterprise? Should a smaller Executive Committee be formed to handle more frequent management activities?

Is the board gender balanced?

Are the interests of key stakeholders affected by the water service represented?

Do members have sufficient capacity to provide effective oversight for the enterprise?

Board Membership in Practice

Drawing on local expertise in Hetosa - Board membership in Hetosa benefits from the presence of retired local professionals who have technical ability, existing income through pensions, and extra time to contribute to management of the enterprise. They have both the commitment to serve their community and the ability to contribute professional skills. Thanks to the contribution from these local professionals, the enterprise is serving a population of over 250,000 people.

Selecting a Board

The following is a general process for selecting a board. Local government should be consulted and will likely be able to assist with the process. In some cases board membership may be obvious; in others, an election might be necessary when there are several eligible candidates.

Step 1

Begin by gathering nominations. Consider the suggested board membership and solicit additional nominations from WASHCOs. In addition to stakeholder roles, consider the skills and competencies that members will ideally have.

Step 2

Appoint members or hold elections. WASHCO representatives and key government officials are likely automatically included in the board, and additional members are included through the voting process.

Step 3

Establish roles and responsibilities within the board. Depending on the size of the board, an Executive Committee may be established to handle frequently recurring tasks. Members need to determine who holds key positions such as chair and secretary, and to begin establishing working norms.

Establishing Norms and Procedures

The next step after determining board membership is to begin establishing norms and procedures. Government guidelines can serve as a starting point, and the board can adapt recommendations to suit the local context.

Articulating vision and mission statements

Vision and mission statements provide guidance for what the enterprise aims to achieve. Future decisions can be weighed against how well different options achieve the vision and mission, and the statements can provide common ground for members to collaborate around.

A **vision statement** highlights the purpose of the enterprise. What is it working towards? What is the ideal future that members envision coming from their work?

Vision statement example: *Reliable water access for all members of the community.*

A **mission statement** articulates how the enterprise helps to achieve the vision. What role does the enterprise play? What standards will the enterprise hold itself to?

Mission statement example: *The enterprise will work to serve its different customer bases with reliable and high quality water supplies to ensure that service continues both now and into the future.*

Exercise

Brainstorm as a board what vision and mission statements best capture the goals of the enterprise. This is a great opportunity to build common understanding and a shared sense of commitment. Post the vision and mission statements somewhere clearly visible.

Tip

There is no 'correct' vision or mission. The main purpose is shared intent that can guide future collaboration.

Performance Agreements

A performance agreement between the Board and the Management Unit should be established to clearly outline expectations of how both the Management Unit and Board will function. A performance agreement should, at minimum, include:

Exercise

1. Draft a performance agreement between the Board and the Management Unit.

2. Drawing on the overall performance agreement, develop performance agreements for all employees of the Management Unit.

- Obligations of the Management Unit
- Obligations of the Board
- Monitoring, Review & Management
- Incentive Structures
- Planning Processes
- Deliverables Schedule

Establishing an Executive Committee

Boards that include many members may wish to establish an 'Executive Committee' that can handle recurring tasks related to ongoing management. Such a structure might help the Board to function more efficiently, particularly if frequently convening all board members is infeasible. Executive Committee members should be selected based on their skill sets and availability. They may then become the main link between the Board and the Management Unit for managing performance agreements.

Registration and Legal Structures

The enterprise will need to register as a legal entity with the appropriate authorities. Apart from being a requirement, registration can have several benefits for rural water enterprises. Advantages include:

- providing a legal basis for managing liability and accountability;
- small enterprises may be able to access certain benefits such as government support services;
- establishing an entity that can develop a credit rating and potentially access financing; and
- creating a structure and systems that can continue to exist despite potential personnel changes.

Details of the registration process may differ slightly depending on the jurisdiction, but all enterprises will likely need to complete a similar process:

1. **Check enterprise name.**
   Ensure that the chosen name is available and valid for registration.
2. **Submit documents for authentication.**
   Supporting documentation can include membership, bylaws (discussed below), and any other requirements stipulated by local authorities.
3. **Sign documents.**
   Enterprise representatives will need to sign off on relevant forms.
4. **Register with the commercial registry.**
   Further details available through the additional resources provided below.
5. **Obtain a business license.**
   Issued by the concerned government body.
6. **Make a company seal.**
7. **Register with the Inland Revenue Authority.**
   Additional details available through the FIRA website.

Tip

Be sure to check with local authorities for details on the registration process. Rules and regulations can differ by jurisdiction, and are likely to be updated over time. Make sure you are working with the latest information.

More Resources

Federal Inland Revenue Authority: www.ethiomarket.com/fira/

Commercial Registration and Business Licensing Proclamation No.**980/2016**
Available through: www.mot.gov.et

Bylaws and Governance

The enterprise will also need to develop rules for how it operates and is governed. These commonly appear in the form of bylaws. Recommended bylaws are available from government offices, and these are a good starting point. The board can then consider which bylaws are appropriate for that context, or how they might be adapted.

Tip

Bylaws can evolve over time - not everything needs to be perfect at the beginning. Ensure that a clear process exists for revisiting and updating bylaws as necessary.

Bylaws to consider:

- Commitments around annual general meetings
- Reporting frequency
- Process for adding or amending bylaws
- Accountability process between board and the Management Unit

Key Considerations

What rules and regulations will help the enterprise to achieve its goals?

How might articulating a rule or regulation as a bylaw help the enterprise with enforcement?

Part II

Defining Tasks and Responsibilities

In This Section

Most enterprises will need to perform similar tasks in order to effectively manage water services. This is the heart of the enterprise, regardless of how it is structured. Standard tasks include:

- Business planning
- Financial modelling
- Water resources and demand
- Tariff setting
- Revenue collection
- Financial management and administration
- Asset management
- Customer service
- Capacity building
- Technical operations

Additional tasks can be added as needed. For example, depending on the context, a specific task concerning source management could be added, possibly with additional staff being allocated to this task. As with everything in this toolkit, these suggested tasks are recommendations based on common practice, and they can be adjusted as necessary to suit different contexts.

Business Planning

Objective

The enterprise has a clear idea of how the different parts of the operation fit together to produce a viable and quality service.

This section presents a tool called **The Business Model Canvas**. It is a visual way of understanding how different components of the enterprise fit together to provide a quality and sustainable service for water users. Enterprises can use it to map out how the enterprise currently functions, or to envision alternatives for future business models.

The Business Model Canvas provides an alternative to conventional business plans by being visual, engaging, and easy to share. The template is presented on the next page.

Parts of the Business Model

Value proposition - What is the value that the enterprise provides to customers? Water access may seem obvious, but perhaps there are more specific values. Improved water quality might be one value proposition. Other examples might include convenience, safety, or the opportunity to generate income that depends on reliable water access.

Customer segments - Who are the customers accessing the value that the enterprise provides? There is probably more than one customer group. Examples might include households, businesses, schools, or others. These customers might need to be served differently because of their different needs.

Customer relationships - This section considers how the enterprise relates to customers. How does the enterprise interact with the different customer segments?

Channels - Channels describe how the value created by the enterprise is delivered to customers. For a piped scheme, water can be delivered through kiosks, private connections, or possibly delivered through other means. Considering different channels for service delivery might identify new options for serving different customer segments.

Key Partners - No enterprise is able to do everything itself. Who does the enterprise need to maintain relationships with in order to deliver its services? Partners likely include certain government offices and suppliers of spare parts or other materials.

Key Activities - These describe the main tasks that the enterprise needs to do in order to deliver the service. The other sections of this toolkit consider the key activities of a water enterprise in more detail.

Key Resources - This considers what is needed to deliver the service. Some of these resources, such as human resources, may be available within the enterprise, whereas others, such as new pumps or pipes, might need to be sourced from Key Partners. Access to financial resources, such as loans or credit, might also be required.

Revenue Streams - Tariffs are an obvious revenue stream, but there may be more than one type of tariff and this may not be the only revenue source. How does the enterprise earn money, and perhaps these revenue streams differ depending on the Customer Segment.

Cost Structure - What are the main expenses of the enterprise? What are the fixed costs, and what are the costs that depend on how much water is produced (the unit costs)?

More Resources

Business model canvas explained: www.youtube.com/watch?v=QoAOzMTLP5s

More on the Business Model Canvas: www.strategyzer.com

The Business Model Canvas

Designed for:	Designed by:	Date:	Version:

Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
	Key Resources		**Channels**	

Cost Structure	Revenue Streams

DESIGNED BY: Strategyzer AG
The makers of Business Model Generation and Strategyzer

Strategyzer
strategyzer.com

Financial Modelling

Objective

The enterprise has a clear understanding of costs, revenues, and the scale needed to break even.

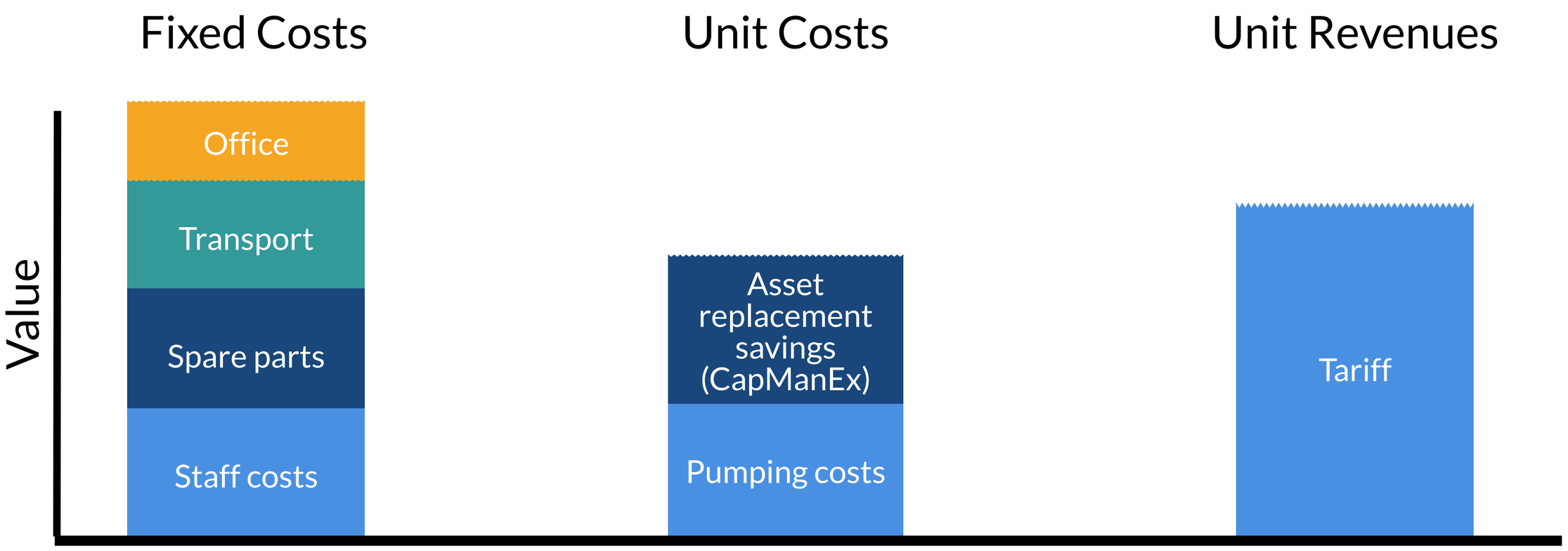
A basic financial model consists of three key parts:

- Fixed costs
- Unit costs
- Unit revenues

The purpose of the financial model is to understand how big the enterprise needs to be in order to break even. At the break even point, costs equal revenues. If unit costs are higher than unit revenues, however, the enterprise will *never* break even.

Key Considerations

Financial models are only as good as that data used. To the extent possible, make sure that all costs are included, all assumptions are clearly stated, and that the model uses quality data.



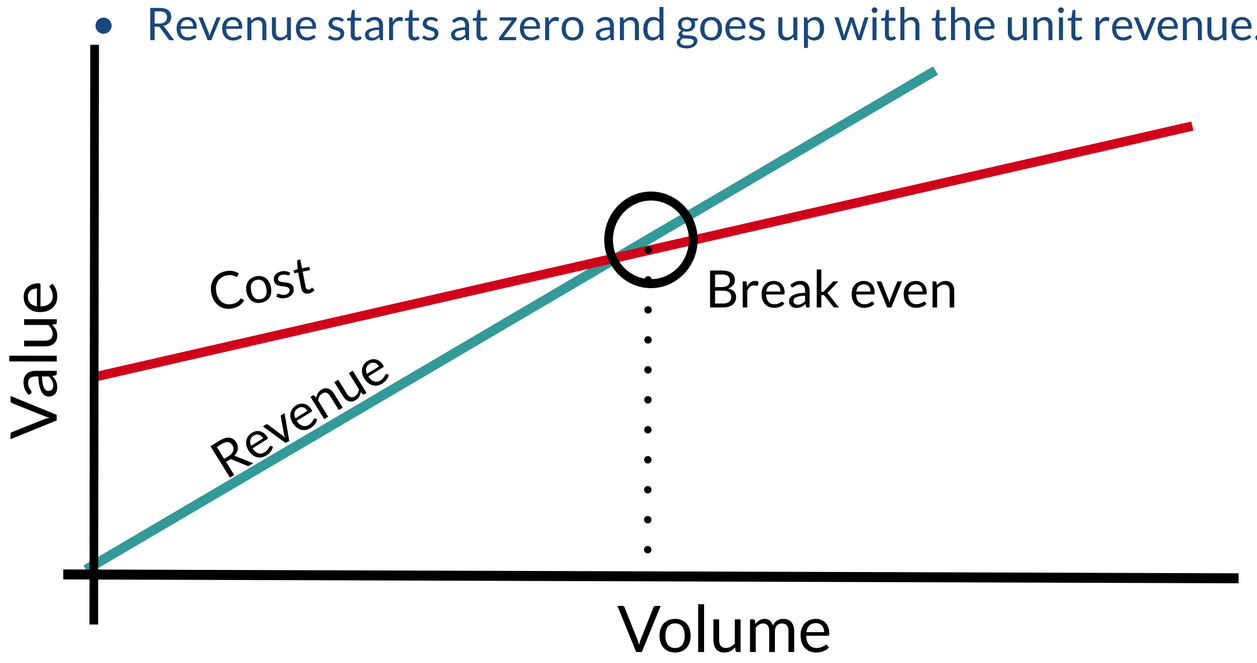
Fixed costs do not depend on the size of the enterprise. A caretaker, for example, may be paid the same salary regardless of how many customers are served.

Unit costs depend on the number of customers served or the volume of water produced. The enterprise can also account for the cost needed to save for long-term asset replacement.

Unit revenue is the amount of money earned per customer or per unit of water sold. A tariff, the fee charged to users, is a good example of a unit revenue. Note that there might be different tariffs for different customers, or other revenue streams entirely.

Combining the three creates the financial model.

- The initial cost is the fixed cost.
- The cost goes up by the unit cost.
- Revenue starts at zero and goes up with the unit revenue.



Exercise

1. Create a list of fixed costs, unit costs, and unit revenues.

2. Calculate the break even point for the enterprise. How big does the enterprise need to be in order to be sustainable?

More Resources

WASHCost and IRC have produced some excellent cost calculator resources:
https://www.ircwash.org/projects/life-cycle-costing-tools

Water Resources and Demand

Objective

The enterprise understands the availability of water resources and how these affect the ability to meet consumer demand.

The growth of water enterprises is constrained by the availability of water resources. The previous section on financial modelling considers the economics of how much water needs to be sold to produce the needed revenue to break-even. It does not, however, consider whether there is enough naturally occurring water to produce that volume.

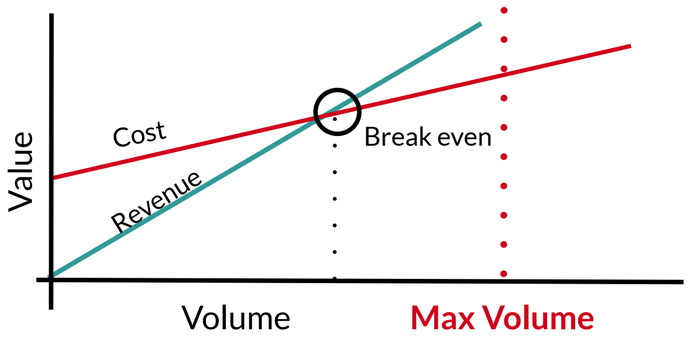
Successful enterprises need to clearly recognise and responsibly manage the tension between the need to sell water for revenue and the need to conserve water resources to meet demand. Simply put, a scheme that depletes water resources faster than they can regenerate will fail. Enterprises need to do three things to manage this challenge: quantify the availability of water resources; monitor and manage water resource accessibility; and design services to need less water than is available.

Key Considerations

What is the maximum amount of water that the enterprise can reliably deliver to customers?

What will happen if the available amount of water reduces?

Quantifying Water Resources



There is a maximum amount of water that can be produced. This amount is constrained by the availability of water resources, and the capacity of the distribution system. System capacity can be increased by investing in infrastructure; increasing access to water resources may be more difficult. Rigorous assessments are needed to quantify both system capacity and water resource availability. Pump tests can help to determine the yield of an aquifer, and technical specifications can provide the design system capacity.

Monitoring and Managing Resources

The maximum volume is an estimate that needs to be tested and updated over time. Both the availability of water resources and the system capacity can change. Enterprises need to monitor the available water supply and possibly take action if the availability of water is decreasing. Activities may include groundwater monitoring and source protection efforts.

Designing Service Levels

Different customer segments may have different tariffs. The key issue for enterprises is to make sure that the total amount of water being supplied is less than that maximum amount available. This may a particular issue for commercial water connections that use larger amounts of water and pay less per unit volume than household users.

Exercise

1. Quantify the available water resources and the system capacity to determine the maximum volume of water that can be reliably produced.

2. Develop systems for monitoring and updating the estimated maximum volume.

3. Assess whether user demand is likely to exceed the maximum volume. Develop strategies for meeting customer needs with available resources.

Tariff Setting

Objective

The enterprise has a clear tariff structure that is both pro-poor and allows the enterprise to recover operating costs.

The enterprise needs a clear tariff structure to define what users pay for the service. A good tariff structure:

- reflects the unit revenues needed to break even
- guarantees access to the most vulnerable (pro-poor)
- is aligned with government regulations

Tariff Reflects Break Even Unit Revenue

The enterprise needs to first know its unit costs before it can determine the unit revenue needed to break even. The financial modelling section looked at this in more detail. The tariff needs to be greater than the unit cost of providing the service, otherwise the enterprise will lose money and never break even, regardless of how big it is.

Pro-Poor Tariff Structure

Tariffs can be tiered so that the price depends on the volume of water used. A certain amount of water, such as 20L, could be guaranteed to everyone at little or no cost, with those using larger volumes paying more. This pro-poor structure, sometimes referred to as a 'lifeline' tariff, can be used to both ensure equitable water access while still covering operating costs of the enterprise.

Aligns with Government Regulations

Water is a public good and therefore involves public regulation. Consultation with government is essential to make sure that the tariff structure adheres to regulations and is endorsed by local authorities - typically either the Regional Water Bureau or an Independent Sector Regulator. An approved tariff structure helps to legitimise the collection of revenue from users.

Exercise

Consider the different tiers of tariffs. How might it make sense to charge different tariffs based on user type or usage? Identify the different categories and decide on the appropriate tariff for each segment.

Below are examples of different customer segments where different tariffs might be appropriate. An enterprise can have more or fewer tariff tiers depending on the context. Drawing on the business model canvas, first consider the different customer segments, then consider the tariff that applies to each.

Key Consideration

Pricing for the most vulnerable groups is recommended not to exceed 5% of income.

Kiosk

This tariff applies to people collecting water from kiosks managed by caretakers. A typical tariff structure might be 20L free per person per day, and a flat rate per 20L after that.

Household

Piped water on premises is different than kiosk access and might require its own tariff. Households might pay a basic price for a set volume, and a higher price if they exceed a certain water usage threshold.

Business

A business with a piped connection might have a different tariff structure from others. It might be charged a higher price above certain volumes.

More Resources

For more on tariff setting see:

'National Tariff Guideline for (Urban) Water Utilities

Revenue Collection

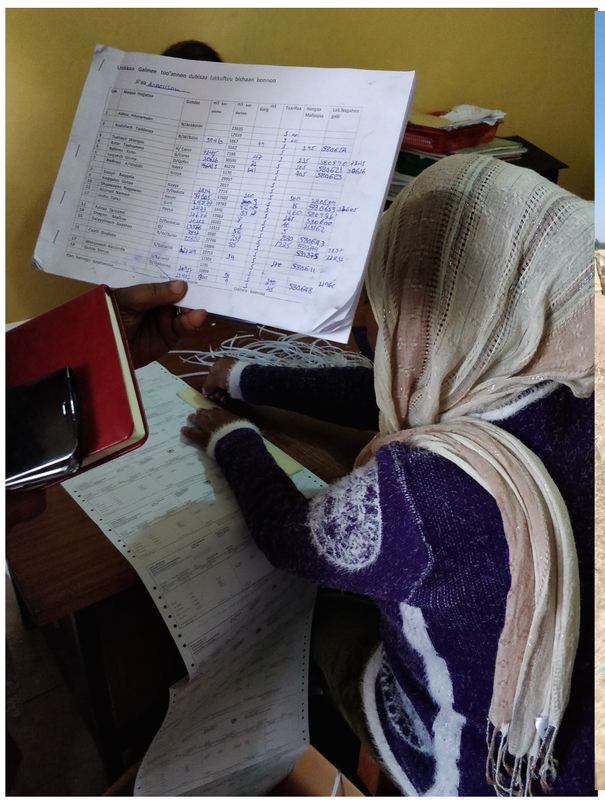
Objective

The enterprise has a clear strategy for collecting revenue that is efficient, transparent, and creates employment.

Once the tariff structure has been set, the enterprise needs a system for collecting revenue from users. Different revenue collection strategies might be needed to reflect the different tariff structures that the enterprise has decided on.

Revenue Collection in Action

Revenue collection in Hetosa uses a computerised billing system to invoice users with piped connections. Users collecting water from kiosks pay a caretaker instead, and the caretaker handles the monthly invoice issued by the enterprise. The enterprise might need to do more than one activity to collect revenue from different customer segments.



Exercise

1. List the different revenue streams that the enterprise has.

2. Identify how the revenue will be collected, and who will be responsible.

Below are examples of potential revenue streams and possible actions required. Revenue collection does not have to be complicated and it does not have to rely on specific technologies. The enterprise can develop a system that works for its context. What matters is that revenue is collected consistently and efficiently, and that begins with having a clear understanding of the activities required and the persons responsible.

Revenue Stream	Action Required	Person(s) Responsible
Tariffs from water kiosks	• Read meter to check water usage • Monthly invoice to caretakers	• Technician to read meter • Billing department to issue invoice and collect revenue
Tariffs from businesses	• Read meter to check water usage and determine price based on usage • Monthly invoice to businesses.	• Technician to read meter • Billing department to issue invoice and collect revenue
.....	.....	.....

Key Considerations

How much of owed revenue does the enterprise have to collect to cover costs? Can the enterprise function if, for example, 10% of revenue is unable to be collected?

What revenue streams exist in addition to tariffs? Are there transfers, taxes, or one-off incomes such as connection fees that also need to be managed?

Financial Management and Admin

Objective

The enterprise has clear roles, responsibilities, and segregation of duties to effectively manage finances and administration.

In addition to revenue collection systems, other financial and administrative tasks need to be performed within the enterprise. Common financial and administrative tasks include:

- paying salaries;
- reconciling accounts;
- paying invoices;
- authorising payments;
- procurement of goods and services;
- auditing of records; and
- human resource management.

This list is only an example. The full set of financial and administrative responsibilities depends on both the context and size of the enterprise. The key for any successful enterprise is to identify the full scope of responsibilities, and to ensure that clear roles are defined so that all critical functions are performed consistently.

Exercise

1. List the different financial management and administrative duties that the enterprise needs to fulfil.

2. Clearly define who is responsible for each activity and on what timeline.

Task	Person(s) Responsible	Timeline
Reconciling accounts	• Admin officer performs reconciliation. • Manager check reconciliation.	Monthly
Preparing annual audit	• Board to select auditor. • External auditor to produce audit report.	Annual
Processing payroll	• Admin officer to prepare payroll payment. • Manager to authorise payment	Monthly
.....	.....	.....

Key Considerations

Duties should be divided to ensure that the same people are not both authorising payments, handling money, and reconciling accounts. Segregating duties helps to minimise the potential for fraud.

Asset Management

Objective

The enterprise has a system for tracking and maintaining or replacing assets as needed.

Sound asset management is critical to the long-term success of the enterprise. The enterprise is directly responsible for the ongoing maintenance (OpEx) and likely for the eventual capital maintenance expenditure (CapManEx) to renew, replace, or rehabilitate the infrastructure. The costs of these activities should be considered in the financial model, and this section of the toolkit looks at the system for tracking what assets the enterprise has, and the schedule for their maintenance . The system does not have to use custom software; a simple MS Excel spreadsheet can be used for asset management. An example is provided in the additional resources at the bottom of this page.

#1 Planning

Stages of Asset Management

The planning stage begins with identifying existing assets and assessing their potential to meet service delivery needs. At minimum, this includes an up-to-date database of what assets exist and their condition. The enterprise might also plan for future expansion of services, which might require acquiring new assets.

Key outputs: Strategic plan & Asset registry

#2 Acquisition

After defining needs, potential options, and their costs, the enterprise might decide to expand its services by acquiring new assets. These can include extending water distribution lines, adding new water sources, or perhaps investing in storage or treatment facilities. The costs, risks and benefits of expansion need to be considered carefully.

Key outputs: Cost-benefit analysis of expansion options

#3 O&M

Operation and maintenance of assets is critical to ensure that assets function properly and can serve for their full designed lifespan. Each asset requires a clear maintenance plan with roles, responsibilities, and timelines. Remember that other assets such as computers, vehicles, or other equipment require maintenance and management in addition to the water supply infrastructure itself.

Key outputs: Asset maintenance schedule

#4 Rehabilitation

All assets have a finite service life and will eventually need to be replaced or rehabilitated. The asset registry should clearly indicate the expected lifespan of each asset so that the enterprise can schedule and budget for replacement as needed.

Key outputs: Asset rehabilitation plan

Exercise

1. Develop a database of all assets managed by the enterprise.

2. Determine a maintenance schedule for each asset, and a timeline for its eventual replacement or rehabilitation.

More Resources

The Asset Registry Assessment Tool available from IRC:
https://www.ircwash.org/tools/irc-costing-and-budgeting-tools

Customer Service

Objective

The enterprise understands and responds to the needs of those accessing the water service.

A successful water enterprise is about more than simply delivering a service; it is about meeting the needs of the communities that the enterprise serves. Understanding the customer experience is essential so that the enterprise can adapt and improve its services over time.

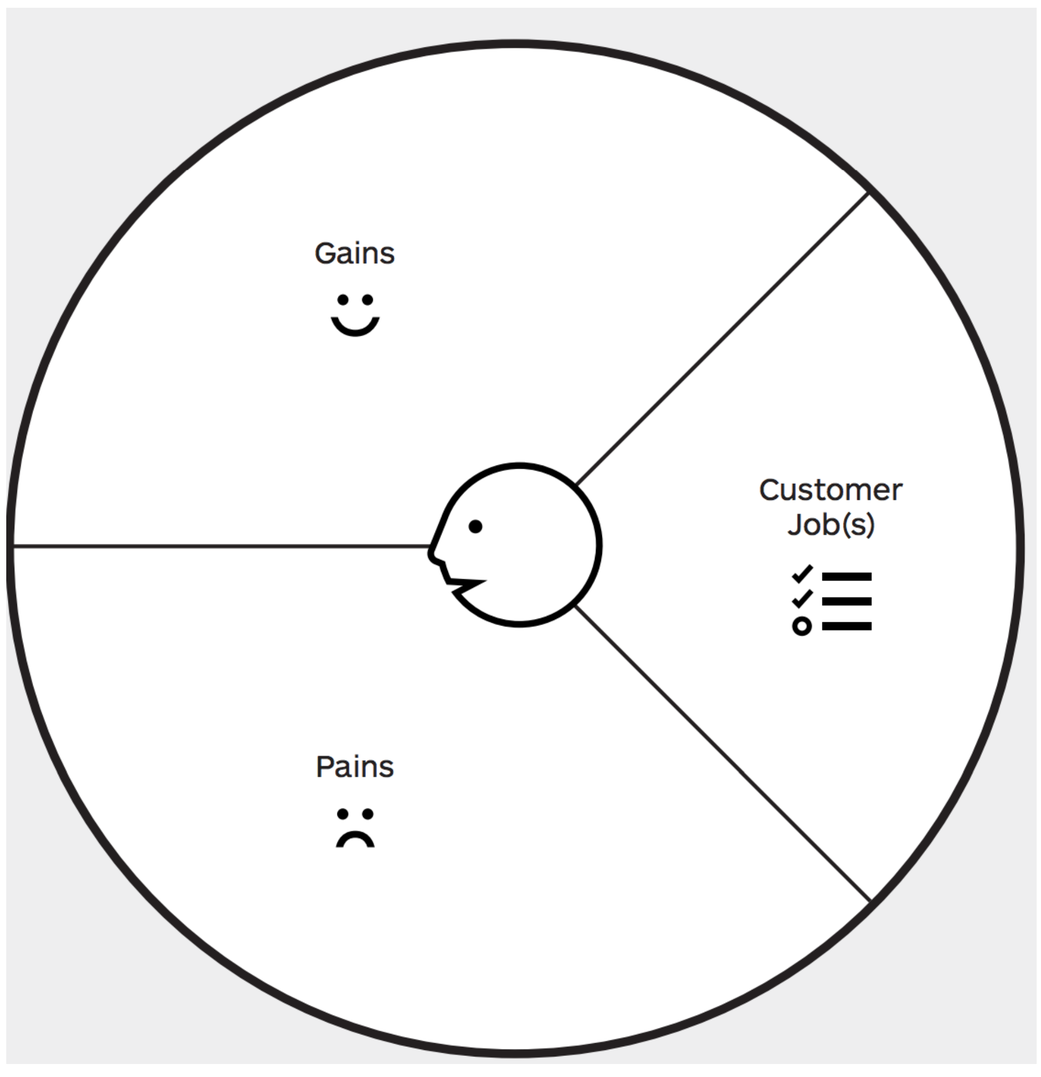
Understanding Customer Needs with the 'Customer Profile' Tool

The 'Customer Profile' Tool is a framework related to the Business Model Canvas that was presented earlier in this toolkit. The Customer Profile focuses directly on the needs of the customer, and each customer segment should be considered separately. For example, there might be a customer profile for a brickmaker, for a rural household, and another for a livestock owner. By reflecting on the needs of each customer, the enterprise can consider how the services it provides meets those needs to improve peoples' lives.

Customer jobs - What is the customer trying to do? Perhaps the customer is fetching water for cooking or cleaning. Perhaps the customer is trying to provide water for livestock. Perhaps the customer is a business that is trying to do something else entirely. Understanding the jobs that the customer is trying to do helps to consider how the service that the enterprise provides helps the customer to succeed.

Pains - What challenges does the customer face? What problems do they wish would go away?

Gains - What benefits would the customer might like to have? Convenience? Affordability? Better health?



Exercise

1. Draw the Customer Profile on a piece of flip chart paper. Create one Customer Profile for each customer segment that the enterprise serves.

2. Either on post-it notes or directly on the flip chart, write in the customer jobs, the pains, and the gains that define the customer. How does the enterprise meet customer needs? How might the enterprise improve the service it offers?

Key Considerations

How can the enterprise get feedback from customers? What channels exist to capture this information so that the enterprise knows what it is doing well and where it can improve?
Active channels - Surveys, public meetings, interviews.
Passive channels - Toll free phone line, suggestion box

More Resources

Find out more about the Customer Profile at:
https://strategyzer.com/

Capacity Building

Objective

The enterprise understands the capacities that it needs to function effectively and has a capacity building plan.

Both hard and soft skills are required to run a successful enterprise. This section outlines some of the capacities that an enterprise might want to develop amongst its membership. Which capacities are prioritised is up to the enterprise, and depends on context as this is likely to change over time as the enterprise grows. What is most important is that the importance of capacity building is clearly recognised, and that the enterprise has developed a plan to invest in building its capacity over time. Below are a few examples of possible capacity building opportunities for both hard and soft skills, as well as a list of stakeholders that might provide capacity building support.

Hard Skills

- Financial management
- Auditing
- Asset management
- Information technology systems
- Strategic business planning
- Unaccounted for water and leakage management
- Operation and maintenance
- Data management
- Water safety and quality

Soft Skills

- Communications and constructive feedback
- Customer relations
- Leadership
- Teambuilding
- Problem solving
- Risk management
- Good governance
- Conflict resolution
- Managing accountability

Potential Support Providers

- Regional and Zonal WR Bureaus
- Utility Associations
- Ethiopia Water Technology Institute
- Ethiopian Management Institute
- Local Universities
- Local Consultants
- NGOs
- Vocational Training Centres
- Peer training and mentorship from other Enterprises

Key Considerations

What new capacities might the enterprise need to develop for the future? Thinking beyond the immediate tasks and challenges, are there capacities that the enterprise can invest in now to either pursue future opportunities or to mitigate future risks?

Exercise

1. Identify which capacities the enterprise should prioritise developing.

2. Develop a 'capacity building plan' that defines what capacities should be built and how this will happen. Support partners may be better able to assist an enterprise with clearly defined capacity building goals.

Technical Operations

Objective

Systems exist to ensure that water service continues uninterrupted including routine maintenance and breakdown response procedures.

Every enterprise needs a clear set of roles and responsibilities dedicated to managing technical operations. At minimum, this should include plans for routine maintenance, responding to major breakdowns, and source protection. Schemes that involve pumping systems and other technologies such as generators or solar systems will require additional day-to-day operations, and possibly dedicated staff to fulfil these roles. This section is designed to have enterprises consider the technical operations that are required, and to assign clear responsibilities on an agreed schedule.

Key Considerations

The technical work required will depend on the size of the scheme and the technology used. Technical operations can be simplified by opting for simpler technologies.

Source Protection in Hetosa

The gravity fed scheme in Hetosa is fed from a natural spring, and the enterprise has taken both technical and social steps to protect this vital source. The source is fenced and surrounded by trees that put minimal strain on groundwater resources, and the nearby kiosk provides water for community members and livestock free of charge. Free water access encourages the community to help protect the water source.

Exercise

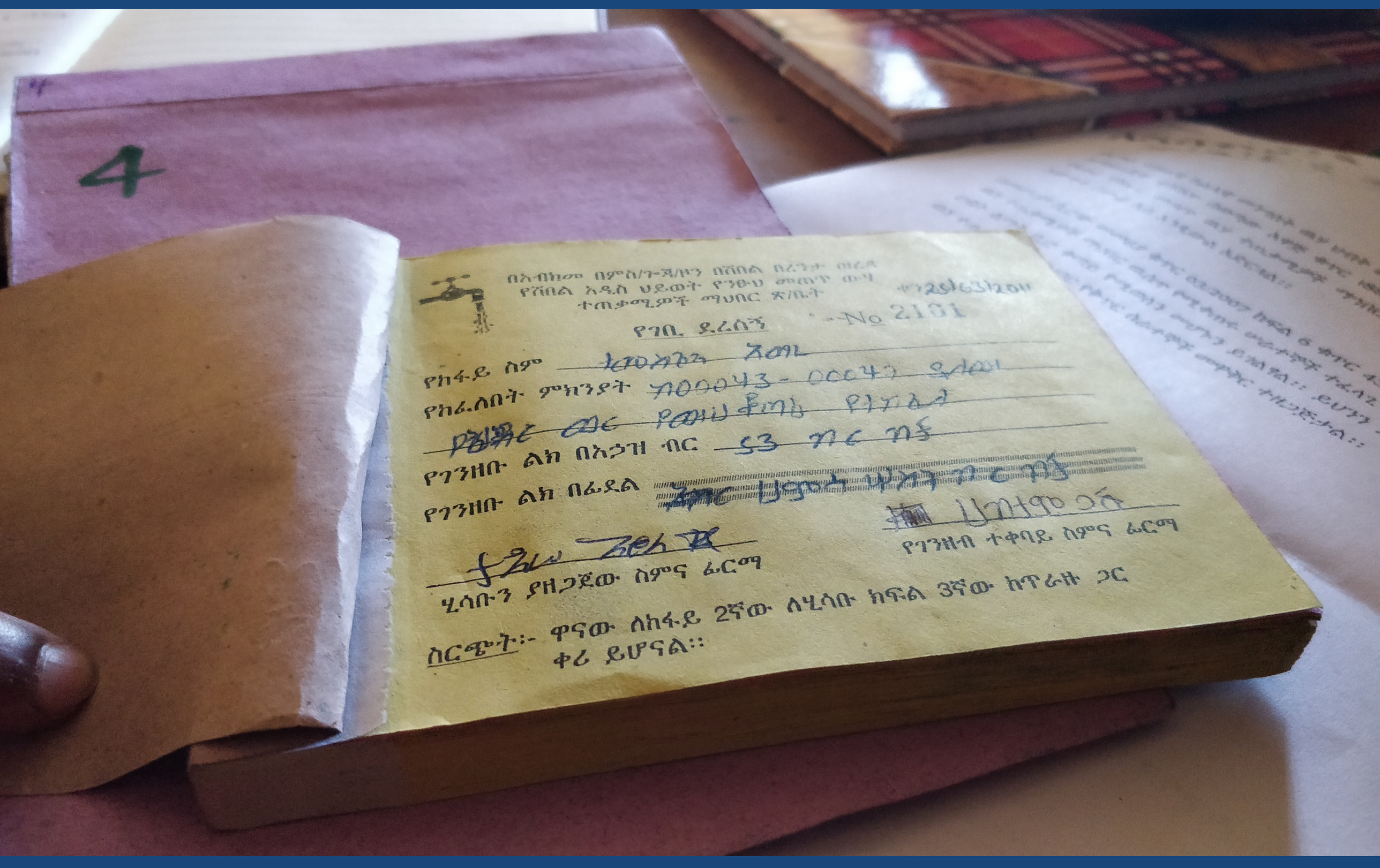
1. List the different responsibilities that the enterprise needs to fulfil. A few are suggested below.

2. Clearly define who is responsible for each activity and on what timeline.

Task	Person(s) Responsible	Timeline
Routine maintenance checks	• WASHCOs to report issues. • Technicians to check key infrastructure routinely.	Monthly
Repairing burst pipes	• WASHCOs to identify issues and pay for repairs. • Technicians to oversee maintenance activities.	Ongoing
Minimising Non-Revenue Water	• Manager to identify areas of high water use and compare usage to billing records.	Monthly
Source protection	• Security guards or other local caretakers to restrict people and livestock from accessing the water source	Ongoing
.....	.....	.....

Part III

Tracking Progress



In This Section

Now that the enterprise has considered the different tasks and responsibilities, this section explores how the enterprise can define what it will monitor over time. Consolidating lists of responsibilities and defining Key Performance Indicators (KPIs) allows the enterprise to check on progress and make adjustments as necessary.

This section consists of three parts:

1. The roles and responsibilities matrix.

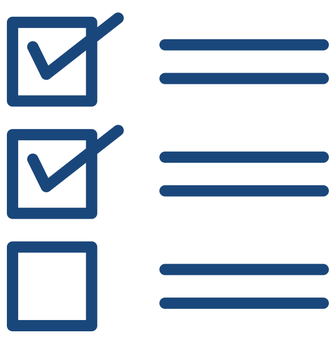
2. Key Performance Indicators.

3. Recommended KPIs.

These sections consider whether stakeholders are performing their roles as expected, and how the enterprise is performing from a quantitative perspective.

Roles and Responsibilities Matrix

The toolkit has so far explored the different tasks that the enterprise needs to manage, and has suggested practical exercises for considering what needs to be done and who will do it. All of the tasks and responsibilities can be combined from the exercises in this section to define what each stakeholder is responsible for. Having a clearly defined roles and responsibilities matrix will make it easier to revisit how the enterprise and its partners are performing in the future.



Below are examples of stakeholders involved in the enterprise and some of their likely responsibilities. This is not a complete list; other stakeholders and their responsibilities may need to be added if they also play important roles. Enterprises should complete a table like the one below, and revisit it periodically to assess to what extent roles and responsibilities are being fulfilled as expected, as these may change over time.

Stakeholder	Responsibilities
Enterprise board	• Hold regular meetings • Review enterprise performance • Direct capacity building priorities • Hire and fire enterprise staff • etc. ...
Enterprise staff	• Manage day-to-day operations • Maintain financial and technical records • Respond to technical issues • Monitor water resource availability • etc. ...
Woreda Govenment	• Provide capacity support to the board and enterprise staff • Participate in review meetings and provide feedback • Assist in tariff setting as appropriate • etc. ...
Regional/Zonal Government	• Provide guidelines on establishing bylaws and tariffs • Provide capacity support as required • Support water resource management • etc. ...
WASHCOs	• Hold the enterprise board and staff accountable to delivering a quality service • Manage small-scale repairs within that community • Manage tariff collection and kiosk caretaker remuneration as appropriate • etc. ...
Users	• Pay for water services according to the agreed tariff • Provide feedback on service quality and any arising issues • etc. ...

Other stakeholders might be relevant depending on context. These stakeholders should be recognised and included in the stakeholder list with their responsibilities clearly defined. Additional stakeholders may include:

- Civil Society Organisations (CSOs);
- Microfinance institutions; and
- Capacity support providers, amongst others.

Key Performance Indicators

"What gets measured gets managed."

-Peter Drucker

Many indicators can help an enterprise to understand how it is performing. It can be tempting to include as many indicators as possible, but tracking indicators also takes time and resources. Enterprises should aim for a balance of indicators that are easily tracked and that can provide information for the enterprise to act on.

Key performance indicator (KPI) categories:

- Financial performance
- Technical performance
- Organisational performance

#1 Financial Performance

Financial performance KPIs should give an immediate indication of the financial health of the enterprise. Simply put: is the enterprise earning or losing money? Key indicators therefore include costs and revenues, and the enterprise might want to disaggregate these indicators to inform specific management decisions.

Recommended KPIs:

- Total revenue
- Total costs
- Revenue collection rate (%)

#2 Technical Performance

Technical performance considers how the scheme itself is operating. Specific KPIs will depend on the nature of the infrastructure being managed, but some general KPIs are likely to be common across most enterprises.

Recommended KPIs:

- Total volume of water produced and volume of water available
- Number of taps and connections
- Number of people served
- Continuity of piped water supply (hours per day)

#3 Organisational Performance

The enterprise may also want to track indicators related to its internal functioning and relationships with other stakeholders. These indicators can be simple yes or no answers rather than quantitative values.

Recommended KPIs:

- Regular meeting held?
- Performance report shared with government partners?
- Employee safety

Exercise

1. Develop a list of Key Performance Indicators that can be easily tracked by the enterprise and used to inform management decisions.

2. Develop a system for regularly updating KPI data in a Performance Management Dashboard.

Key Considerations

How do the KPIs of the enterprise align with government recommendations and other indicators that government or other regulators are tracking?

More Resources

The One WASH Rural Public Utility O&M Implementation Manual provides a list of recommended KPIs.

Recommended KPIs

Suggested Key Performance Indicators (KPIs) and their corresponding performance benchmarks are provided in the table below. These indicators can be weighted and combined to produce an overall performance score for the enterprise. Suggested weightings are provided in the Rural Public Utility O&M Implementation Manual.

Overall, KPIs should provide an assessment of the attributes of an effectively managed enterprise. These attributes include:

- Product Quality
- Customer Satisfaction
- Employee and Leadership Development
- Operational Optimisation
- Financial Viability
- Infrastructure Stability
- Operational Resiliency
- Community Sustainability
- Water Resource Adequacy
- Stakeholder Understanding and Support

Key Performance Indicator	Performance Benchmark
Proportion of population served with water (%) - Percentage of total population in area	100%
Average hours of water supply (hours) - Total in 24hr period	24 hours
Water quality compliance (%) - Proportion of tests meeting standard	≥98%
Metering ratio (%) - Percentage of connections with operating water meters	100%
Non-Revenue Water (%) - Proportion of water sold compared to the amount produced	≤20%
Revenue collection efficiency (%) - Percentage of bills collected	≥95%
Working ratio (%) - Proportion of operational expenses to operational revenue	≤67%
Operating ratio (%) - Proportion of all expenses (excluding debt) to operational revenue	≤100%
Personnel expenditure (%) - Ratio of personnel expenditure to total revenue	≤30%
Staffing level (number of people) - Number of staff per 1000 water connections	≤5.0
Customer satisfaction (number of complaints) - Number of complaints per 1000 water connections	0

Key Considerations

How will the data for KPIs be tracked? What resources and systems are needed? Performance benchmarks are only as helpful as the ability to reliably measure performance levels.

Part IV

Continuous Improvement

The Continuous Improvement Process

All enterprises will encounter challenges, and adopting a process of continuous improvement is perhaps the most important part of establishing and maintaining a successful enterprise. It is difficult to foresee all issues at the outset, and difficult to know whether plans will work as intended. Continuously assessing performance and finding opportunities to improve will help enterprises to overcome challenges as they arise, regardless of whether or not they could have been foreseen.

The continuous improvement process follows three steps.

Key Consideration

The initial design of an enterprise is less important than its ability to continuously improve. An enterprise that can learn and adapt will eventually find a way to succeed.

Step 1

Assess what is going well and what could improve. What challenges should be prioritised?

Step 2

Develop ideas for addressing the priority challenges. What solutions could the enterprise pilot?

Step 3

Evaluate the ideas to identify the ones that are easiest to implement and most likely to make a big difference. Develop an action plan.

Exercise

After identifying what challenges to address and developing possible solutions, evaluate each option for its potential impact, confidence that it will work, and level of effort or cost required. The solutions that have the biggest impact with the lowest cost and highest likelihood of success should be prioritised.

Potential Solution	Impact How much of a difference could the idea make? From 1 (low) to 10 (high).	Confidence How likely is the idea to succeed? From 1 (low) to 10 (high).	Effort How hard will it be to implement? From 1 (hard) to 10 (easy).	Total Sum of Impact, Confidence, and Effort scores.
Provide free water for the community next to the source to encourage source protection	8	8	6	8 + 8 + 6 = **22**
.....	.....	.....	.....	.....

The highest ranking solutions can then be put into an action plan. Be sure that the action, timeline, and person responsible are all clearly identified. The action plan might need to define indicators as well to monitor whether the solution is having the desired effect.

Additional Resources

Government of Ethiopia Resources

The Government of Ethiopia continues to develop resources nationally, and additional resources and support can be found from Regional, Zonal, and Woreda governments. Many of these resources were designed for urban utilities, but some of the concepts can directly translate to any water service enterprise. Local authorities should be consulted for additional support and guidance when developing and improving enterprises. Available resources include:

- National Guideline for Utility Categorization
- Operation and Maintenance Manual for Urban Water Utilities
- Rural Public Utility O&M Implementation Manual for Multi Village Water Supply Schemes
- Water Supply and Sewerage Services Organization Structure
- Urban Water Utility Standard Procedure
- Water Utility Tariff Setting Guideline
- National WASH Implementation Framework
- Human Resource Management Training Manual (from the Ethiopian Management Institute)

WaterAid Resources

WaterAid has developed an extensive set of resources, including specific examples and training modules from the 20 Towns WASH Capacity Building Project that can be made available upon request. Resources include:

- Report on Professionalized Rural Service Areas (PRSA) for Water and Sanitation
- Water Policy and Strategy
- Town Water Supply and Sewerage Enterprise Board Guideline
- Business Planning and Concepts (including example business plans)
- Plumbing and Pipe Laying
- Leakage Detection and Control
- Water Quality Surveillance
- Financial Management and Accounting
- Asset Management Guide for Water Supply and Sewerage Enterprises in Ethiopia
- Water Safety Plan and Water Quality
- GIS and Networking
- Human Resources Management
- Key Performance Indicators (KPI) Definition and Methods of Calculation
- Performance Agreement for Hawassa Town

WaterAid has also produced a publication on Management Models for Piped Water Supply that discusses different management options and the broader contexts that enterprises work within:
https://washmatters.wateraid.org/publications/management-models-for-piped-water-supply

WaterAid and Aguaconsult

February 2019