

Costing toolkit for WASH in healthcare facilities

A user's guide



The University of North Carolina
at Chapel Hill

The Water Institute

Swiss Water & Sanitation Consortium



HELVETAS



SWISSAID



CARITAS



Swiss Red Cross

With support from



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development
and Cooperation SDC



Terre des hommes



solidar
suisse



HEKS
EPER



Fastenaktion
Action de Carême
Azione Quaresimale

Costing overview

Key terms

COSTING

- Determine how much money is required to deliver WASH services
- Identify activities and inputs and calculate their associated costs
- More technical process

How much money is needed to achieve and sustain WASH services?

BUDGETING

- Determine how much money will be allocated over what timeframe
- Identify funders / funding sources
- Create a plan for how to pay
- More political process

Who will pay how much, for what, and when?

Why do budgeting and costing?

Understand the true costs of service provision

- Certain expenses are often overlooked (maintenance, training)

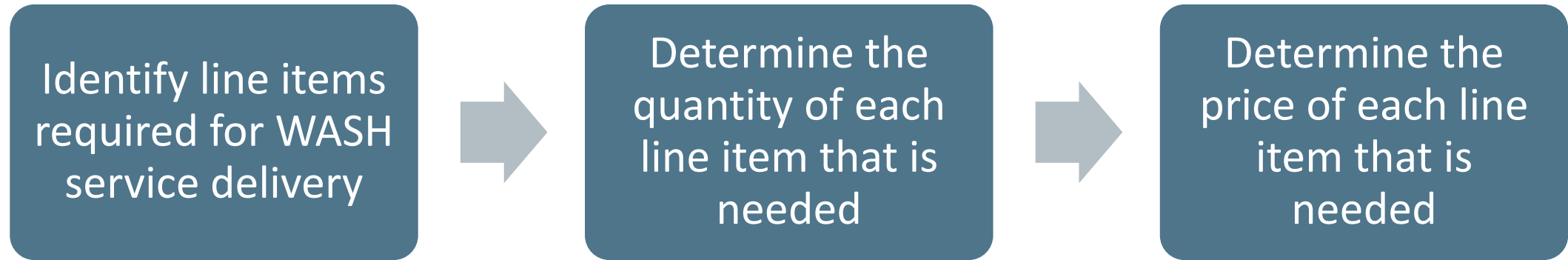
Plan programs

- Evaluate and compare different intervention types (cost-effectiveness)
- Ensure sufficient funding to reach targets / do activities

Inform sustainable investments

- Reach agreements among stakeholders to fund necessary inputs
- Avoid investments with unaffordable operations and maintenance

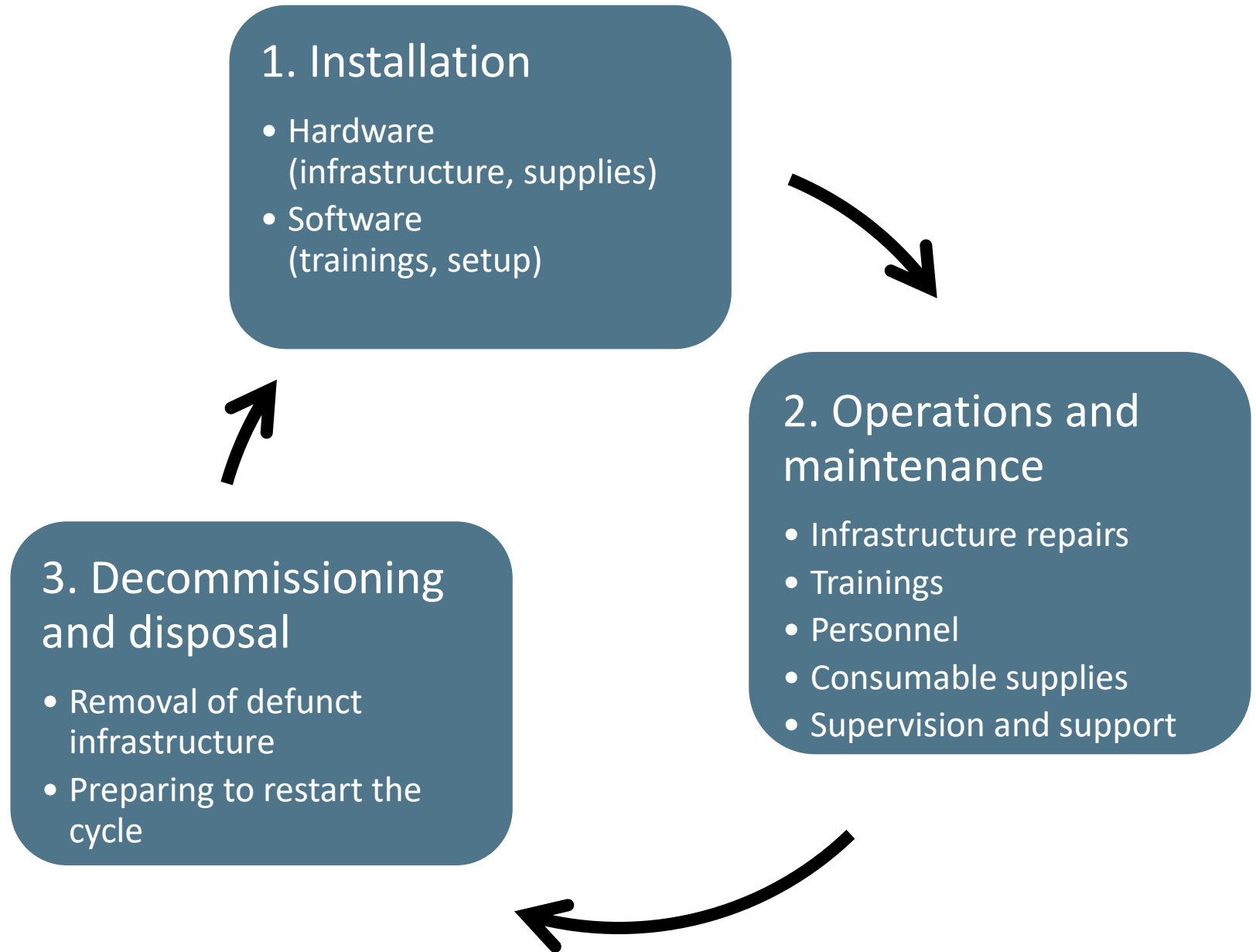
Basic costing process



Total cost = (quantity * unit price)
Repeat and sum for all line items

Data inputs for costing & budgeting

Lifecycle costing considers line items across the entire lifespan of WASH services



Preparing for costing

1

Determine the goal or purpose of costing. Why do you want to collect cost data?

Common purposes include:

- Calculate the costs of services to budget for operation
- Support advocacy efforts and/or policy implementation

2

Identify relevant stakeholders who will receive costs data

Common stakeholders include:

- Healthcare facility administrators, management committees
- Local, regional, and/or national government

Preparing for costing

3

Review any national or local standards for WASH in healthcare facilities

- What is the required or target WASH service level?
- What are the current policies or standards for operations and maintenance?

4

Establish and orient a project team

Include team members (as relevant) for

- Cost data collection
- Policy formulation
- Communication and advocacy

Preparing for costing

5

Orient and sensitize healthcare facility administrators and government officials

- Communication project goals and activities
- Secure approvals and buy-in
- Establish committees/working groups as needed

6

Select target healthcare facilities and train the field team



Tdh Nepal conducting a workshop with local government for healthcare facility costing

Selecting target healthcare facilities for costing

5-10 healthcare facilities or approximately 10% of healthcare facilities in the target area (whichever is larger) is typically sufficient for most costing purposes

If the number and type of healthcare facilities in the target area is diverse, select additional healthcare facilities to achieve a representative sample. Consider the following demographics:

- Public vs. private vs. religious-affiliated
- Type (e.g., hospital vs. clinic)
- Size (number of beds, outpatients)
- Location (urban vs. rural)

Data collection tools

Throughout the costing process, you will use an Excel spreadsheet to record information.

The spreadsheet has pre-filled items required for basic WASH service delivery and performs basic cost calculations automatically.

The spreadsheet can be customized to the project and local context as needed.

The screenshot shows an Excel spreadsheet with the following structure:

	A	B	C	D
1		HEALTHCARE FACILITY INFORMATION		
2		<i>Enter information about the healthcare facility and local currency in yellow cells. Do not modify anything else in this sheet.</i>		
3				
4				
5		Healthcare facility information		
6		Healthcare facility name -		
7		Location (town/province)		
8		Year -		
9		Currency -		
10				
11				
12		Currency conversions		
13		Converted to -		
14		Conversion rate -	1	
15				
16		SUMMARY COST CALCULATIONS ARE DISPLAYED BELOW THIS LINE. DO NOT EDIT.		
17				
18		COSTS IN LOCAL CURRENCY		
19				
20		CAPITAL COSTS	Upfront costs (current)	Upfront costs (upgrading)
21			0	0
22				
23		OPERATIONS AND MAINTENANCE	Current annual costs	Upgrading annual costs
24		Infrastructure O&M	0	0
25		Consumables	0	0
26		Training	0	0
27		Personnel	0	0
28		Support	0	0
29		Total operations and maintenance	0	0
30				
31				

The spreadsheet includes a 'Summary' tab and other tabs like 'Capital', 'Infrastructure O&M', and 'M&M'.

Data collection process

1

Identify stakeholders responsible for WASH service delivery

These are individuals you will consult to determine costs. Relevant individuals may include:

- WASH FIT committees / WASH & IPC management committees
- Administrators, head nurses
- Logistics / procurement officers
- Engineers or WASH officials at the district/regional (especially for infrastructure costs)

Note that WASH provision is sometimes managed by multiple stakeholders (e.g., national government installs WASH infrastructure. Local government operates and maintains). Recruit stakeholders from all relevant levels for data collection.

Data collection process

2

Review the costing spreadsheet with identified stakeholders

- Discuss the level of WASH services currently provided at the healthcare facility
- Identify any needs for upgrades
- Review the suggested line items in the costing spreadsheet. Assess whether they are sufficient to meet the WASH needs of the healthcare facility.
- Revise line items in the spreadsheet to the local context as necessary

Once the line items are finalized, you will move to the next step and collect information about the quantity required and price of each item.

Data collection process

3

Collect quantity and price information. Hold focus groups or interviews with stakeholders to collect information

- Describe the purpose of costing
- Show the participant the costing spreadsheet and review the line items
- Ask the participant to estimate the quantities and prices for each item
- Record information in the costing spreadsheet

You will likely need to consult multiple participants to gather all information. The spreadsheet is a tool to help you record information from every consultation. Save working drafts and revise as necessary.

Data collection process

4

Review preliminary cost information with relevant stakeholders

- Once a preliminary draft of the spreadsheet is complete, discuss it with healthcare facility administrators, local government, and other relevant officials
- Receive any concerns and feedback about data quality



Tdh Nepal collecting costs data through a focus group at a healthcare facility.

Data collection process

5

Respond to feedback, address data quality

- Create a plan to respond to any feedback or data quality concerns
- This will likely include double-checking or correcting data through additional field visits
- Continue to use the costing spreadsheet to record and correct information
- Be sure to archive old versions of the spreadsheet so they may be used for reference

6

Finalize the data. Create a plan with stakeholders for any final data review and certification. Options include:

- Review by healthcare facility administrators, WASH officials, and others
- Certification (e.g., signed letters, declarations of data accuracy)
- Workshops to present final data

Data collection process



Proceed to policy and/or programmatic objectives

- Once data have been prepared and endorsed by relevant stakeholders, they may be incorporated into program planning, policy development, or other activities

Toolkit user guide

OVERVIEW

Costing spreadsheet

Excel-based

Designed to comprehensively calculate the costs of achieving basic WASH service

Customizable to local needs and contexts

AutoSave On Healthcare... N... Last Modified: Just now

File Home Sharing Insert Draw Page Layout Formulas Data Review View Automate

Clipboard Font Alignment Number Conditional Formatting Format as Table Cell Styles Styles Cells Editing Sensitivity

F32 X ✓ fx

1 HEALTHCARE FACILITY INFORMATION

2 Enter information about the healthcare facility and local currency in yellow cells. Do not modify anything else in this sheet.

3 Healthcare facility information

4 Healthcare facility name -

5 Location (town/province)

6 Year -

7 Currency -

8

9

10

11

12 Currency conversions

13 Converted to -

14 Conversion rate - 1

15

16 SUMMARY COST CALCULATIONS ARE DISPLAYED BELOW THIS LINE. DO NOT EDIT.

17

18 COSTS IN LOCAL CURRENCY

19

20 CAPITAL COSTS Upfront costs (current) Upfront costs (upgrading)

21 0 0

22

23 OPERATIONS AND MAINTENANCE Current annual costs Upgrading annual costs

24 Infrastructure O&M 0 0

25 Consumables 0 0

26 Training 0 0

27 Personnel 0 0

28 Support 0 0

29 Total operations and maintenance 0 0

30

31

Summary Capital Infrastructure O&M Mz ... +

Costing categories

Costs are divided into six categories

Cost category	Definition	Example included expenses
Capital	Infrastructure or equipment purchases required to establish or rehabilitate WASH services	Sanitation facilities / toilets Water source and pipe network
Infrastructure O&M	Expenses required to operate or repair and maintain functionality of capital infrastructure and equipment	Breakdown repairs (e.g., clogged pipes) Cleaning of toilets Water testing and treatment
Consumables	Products and supplies that are consumed during normal operation	Handwashing soap Cleaning detergents Cleaning tools (mops, brooms)
Training	Trainings or behavior change activities related to providing WASH services	Annual WASH committee meetings or trainings IPC training
Personnel	Labor costs associated with normal operation of a service, including staff benefits	WASH focal person Support staff
Support	Expenses to strengthen WASH provision but that do not have direct service outputs	Communication Capacity building

Costing categories

Each category is recorded on a separate tab of the spreadsheet.

The summary tab (shown at left) displays the total costs for all categories.

Spreadsheet tabs by cost category



	A	B	C
1	HEALTH FACILITY INFORMATION		
2			
3	<i>Enter information about the healthcare facility and local currency in orange cells. Do not modify anything else in this sheet.</i>		
4			
5	Healthcare facility information		
6		Healthcare facility name -	
7		Location (town/province)	
8		Year -	
9		Currency -	
10			
11			
12	Currency conversions		
13		Converted to -	
14		Conversion rate -	1
15			
16	SUMMARY COST CALCULATIONS ARE DISPLAYED BELOW THIS LINE. DO NOT E		
17			
18	COSTS IN LOCAL CURRENCY		
19			

Summary | Capital | Infrastructure O&M | Maintenance | Consumables | Training

Overview

Data entry tabs look like this.
Click each tab to navigate to it.

Statistics Performance Accessibility Changes Comment Comment Comment Comments Sheet WORKBOOK

Proofing Performance Accessibility Language Changes Comments Notes Pr

A6 $\times$ $\checkmark$ fx Water source

	A	B	C	D	E	F	G	H	I	J	K	L
1												
2												
3	CAPITAL				Current costs					Upgrading costs		
4	Item	Estimated lifespan (years)	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	Remarks	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	Remarks
5	Water											
6	Water source	25			-	-				-	-	
7	Pipe network	25			-	-				-	-	
8	Water tower or reservoir	20			-	-				-	-	
9	Water filtration/treatment systems	10			-	-				-	-	
10	Rainwater harvesting	25			-	-				-	-	
11					-	-				-	-	
12					-	-				-	-	
13					-	-				-	-	
14	Sanitation											
15	Toilets	25			-	-				-	-	
16	Fecal sludge containment (pits, septic tanks)	20			-	-				-	-	
17	Drainage	20			-	-				-	-	
18	Menstrual hygiene (disposal bins)	10			-	-				-	-	
19	Disability accessibility support (handrails)	25			-	-				-	-	
20					-	-				-	-	
21					-	-				-	-	
22					-	-				-	-	
23	Hygiene											
24	Hand washing stations	15			-	-				-	-	
25					-	-				-	-	
26					-	-				-	-	
27					-	-				-	-	

Capital Infrastructure O&M Maintenance Consumables Training Personnel +

On each tab, items are grouped by WASH service



WASH service category

Individual line items



Proofing Performance Accessibility Language Changes Comments					
G17	⌵	:	✕	✓	fx ⌵
	A	B	C	D	
3	CAPITAL				
	Item	Estimated lifespan (years)	Unit cost	Quantity required	Total
4					
5	Water				
6	Water source	25			
7	Pipe network	25			
8	Water tower or reservoir	20			
9	Water filtration/treatment systems	10			
10	Rainwater harvesting	25			
11					
12					
13					

Pre-filled line items can be modified as needed to match the local context

New line items can also be added in blank rows as needed



Proofing Performance Accessibility Language Changes Comments					
G17	✕	✓	fx		
	A	B	C	D	
3	CAPITAL				
	Item	Estimated lifespan (years)	Unit cost	Quantity required	Total
4					
5	Water				
6	Water source	25			
7	Pipe network	25			
8	Water tower or reservoir	20			
9	Water filtration/treatment systems	10			
10	Rainwater harvesting	25			
11					
12					
13					

Overview

Yellow cells are for data entry.

Proofing Performance Accessibility Language Changes Comments

A6 Water source

3	APITAL			Current costs					Upgrading costs			
4	Item	Estimated lifespan (years)	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	Remarks	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	Remarks
5	Water											
6	Water source	25			-	-				-	-	
7	Pipe network	25			-	-				-	-	
8	Water tower or reservoir	20			-	-				-	-	
9	Water filtration/treatment systems	10			-	-				-	-	
10	Rainwater harvesting	25			-	-				-	-	
11					-	-				-	-	
12					-	-				-	-	
13					-	-				-	-	
14	Sanitation											
15	Toilets	25			-	-				-	-	
16	Fecal sludge containment (pits, septic tanks)	20			-	-				-	-	
17	Drainage	20			-	-				-	-	
18	Menstrual hygiene (disposal bins)	10			-	-				-	-	
19	Disability accessibility support (handrails)	25			-	-				-	-	
20					-	-				-	-	
21					-	-				-	-	
22					-	-				-	-	
23	Hygiene											
24	Hand washing stations	15			-	-				-	-	
25					-	-				-	-	
26					-	-				-	-	
27					-	-				-	-	

Capital Infrastructure O&M Maintenance Consumables Training Personnel

Blue cells are formulas. These cells calculate summary costs and should not be edited.

Proofing		Performance		Accessibility		Language		Changes		Comments		Notes		Pr	
A6		Water source													
CAPITAL				Current costs						Upgrading costs					
Item		Estimated lifespan (years)	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	Remarks	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	Remarks			
Water															
Water source		25			-	-				-	-				
Pipe network		25			-	-				-	-				
Water tower or reservoir		20			-	-				-	-				
Water filtration/treatment systems		10			-	-				-	-				
Rainwater harvesting		25			-	-				-	-				
					-	-				-	-				
					-	-				-	-				
Sanitation															
Toilets		25			-	-				-	-				
Fecal sludge containment (pits, septic tanks)		20			-	-				-	-				
Drainage		20			-	-				-	-				
Menstrual hygiene (disposal bins)		10			-	-				-	-				
Disability accessibility support (handrails)		25			-	-				-	-				
					-	-				-	-				
					-	-				-	-				
					-	-				-	-				
Hygiene															
Hand and washing stations		15			-	-				-	-				
					-	-				-	-				
					-	-				-	-				
					-	-				-	-				

Overview

You may enter current costs and upgrading costs separately

Water source											
Current costs						Upgrading costs					
Item	Estimated lifespan (years)	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	Remarks	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	Remarks
Water											
Water source	25			-	-				-	-	
Pipe network	25			-	-				-	-	
Water tower or reservoir	20			-	-				-	-	
Water filtration/treatment systems	10			-	-				-	-	
Rainwater harvesting	25			-	-				-	-	
				-	-				-	-	
				-	-				-	-	
				-	-				-	-	
Sanitation											
Pit latrines	25			-	-				-	-	
Local sludge containment (pits, septic tanks)	20			-	-				-	-	
Rainage	20			-	-				-	-	
Menstrual hygiene (disposal bins)	10			-	-				-	-	
Disability accessibility support (handrails)	25			-	-				-	-	
				-	-				-	-	
				-	-				-	-	
				-	-				-	-	
Hygiene											
Handwashing stations	15			-	-				-	-	
				-	-				-	-	
				-	-				-	-	
				-	-				-	-	

Current costs: Costs associated with WASH item costs NOW.
These costs will display in black text.

Upgrading costs: Costs to upgrade the WASH item to the
desired service level. These costs will display in red text.

	Performance	Accessibility	Language	Changes		Comments		Notes		Pr	
✕ ✓ <i>fx</i> ▾	Water source										
	B	C	D	E	F	G	H	I	J	K	L
				Current costs						Upgrading costs	
	Estimated lifespan (years)	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	Remarks	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	Remarks
	25			-	-				-	-	
	25			-	-				-	-	
	20			-	-				-	-	
	10			-	-				-	-	
	25			-	-				-	-	
				-	-				-	-	

Overview

To begin entering data, navigate the spreadsheet by clicking the different tabs on the bottom.

Proofing

Performance

Accessibility

Language

Changes

Comments

Notes

Pr

A6

Toolkit user guide

BASIC USAGE

Summary tab

CONTENTS OVERVIEW

Summary tab

The summary tab calculates total costs across the entire spreadsheet. **Summary costs populate automatically** as the user enters information into other tabs.

Users can update the healthcare facility demographic information in the **yellow cells**.

Other cells should not be edited. These contain formulas that calculate totals based on other parts of the spreadsheet.

HEALTHCARE FACILITY INFORMATION			
Enter information about the healthcare facility and local currency in yellow cells. Do not modify anything else in this sheet.			
Healthcare facility information			
Healthcare facility name -			
Location (town/province)			
Year -			
Currency -			
Currency conversions			
Converted to -			
Conversion rate -	1		
SUMMARY COST CALCULATIONS ARE DISPLAYED BELOW THIS LINE. DO NOT EDIT.			
COSTS IN LOCAL CURRENCY			
CAPITAL COSTS			
	Upfront costs (current)	Upfront costs (upgrading)	
	0	0	
OPERATIONS AND MAINTENANCE			
	Current annual costs	Upgrading annual costs	
Infrastructure O&M	0	0	
Consumables	0	0	
Training	0	0	
Personnel	0	0	
Support	0	0	
Total operations and maintenance	0	0	

Summary tab – capital costs

Capital costs are presented as:

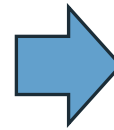
- **Upfront:** Total, one-time investment costs
- **Annualized:** Total costs divided over the expected infrastructure lifespan, plus accounting for factors like interest and inflation

15	SUMMARY COST CALCULATIONS ARE DISPLAYED BELOW THIS LINE. DO NOT EDIT.				
16					
17					
18	COSTS IN LOCAL CURRENCY				
19					
20	CAPITAL COSTS	Upfront costs (current)	Upfront costs (upgrading)	Annualized costs (current)	Annualized costs (upgrading)
21		0	0	0	0
22					
23	OPERATIONS AND MAINTENANCE	Current annual costs	Upgrading annual costs		
24	Infrastructure O&M	0	0		
25	Consumables	0	0		
26	Training	0	0		
27	Personnel	0	0		

Summary tab – O&M costs

Operations and maintenance costs are presented as annual costs.

- O&M costs include everything else that is not capital investments
- Costs are separated into current costs and upgrading costs

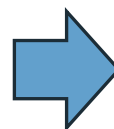


A	B	C	D
SUMMARY COST CALCULATIONS ARE DISPLAYED BELOW THIS LINE. DO NOT EDIT			
COSTS IN LOCAL CURRENCY			
CAPITAL COSTS		Current costs - upfront	Upgrading costs - upfront
		0	0
OPERATIONS AND MAINTENANCE		Current annual costs	Upgrading annual costs
Capital maintenance		0	0
Recurrent training		0	0
Consumables		0	0
Personnel		0	0
Support		0	0
Total operations and maintenance		0	0
Annual costs by WASH category		Current annual cost	Upgrading annual cost
Water		0	0
Sanitation		0	0
Hygiene		0	0
Waste management		0	0
Cleaning		0	0
Other		0	0
COSTS IN CONVERTED CURRENCY			
CAPITAL COSTS		Current costs - upfront	Upgrading costs - upfront

Summary tab – Breakdown by WASH service

The summary tab presents costs broken down by each WASH service.

- WASH service costs are **annual** and include **all capital and O&M costs**
- Costs are separated into current costs and upgrading costs



A	B	C	D
SUMMARY COST CALCULATIONS ARE DISPLAYED BELOW THIS LINE. DO NOT EDIT			
COSTS IN LOCAL CURRENCY			
CAPITAL COSTS		Current costs - upfront	Upgrading costs - upfront
		0	0
OPERATIONS AND MAINTENANCE		Current annual costs	Upgrading annual costs
Capital maintenance		0	0
Recurrent training		0	0
Consumables		0	0
Personnel		0	0
Support		0	0
Total operations and maintenance		0	0
Annual costs by WASH category		Current annual cost	Upgrading annual cost
Water		0	0
Sanitation		0	0
Hygiene		0	0
Waste management		0	0
Cleaning		0	0
Other		0	0
COSTS IN CONVERTED CURRENCY			
CAPITAL COSTS		Current costs - upfront	Upgrading costs - upfront

Summary tab – Currency conversions

The summary tab has a section to convert costs to other currencies. This section appears at the bottom of the page.

- Users must input the conversion rate for the desired currency



A	B	C	D
SUMMARY COST CALCULATIONS ARE DISPLAYED BELOW THIS LINE. DO NOT EDIT			
COSTS IN LOCAL CURRENCY			
CAPITAL COSTS		Current costs - upfront	Upgrading costs - upfront
		0	0
OPERATIONS AND MAINTENANCE		Current annual costs	Upgrading annual costs
Capital maintenance		0	0
Recurrent training		0	0
Consumables		0	0
Personnel		0	0
Support		0	0
Total operations and maintenance		0	0
Annual costs by WASH category		Current annual cost	Upgrading annual cost
Water		0	0
Sanitation		0	0
Hygiene		0	0
Waste management		0	0
Cleaning		0	0
Other		0	0
COSTS IN CONVERTED CURRENCY			
CAPITAL COSTS		Current costs - upfront	Upgrading costs - upfront

Summary tab

ENTERING INFORMATION

Summary tab

Insert healthcare facility information and country's currency in YELLOW cells

For currency, note the currency that you using to report the cost data (e.g., rupees, riels, francs, dollars)

	A	B	C	D
1		HEALTHCARE FACILITY INFORMATION		
2				
3		Enter information about the healthcare facility and local currency in yellow cells. Do not modify anything else in this sheet.		
4				
5		Healthcare facility information		
6		Healthcare facility name -		
7		Location (town/province) -		
8		Year -		
9		Currency -		
10				
11				
12		Currency conversions		
13		Converted to -		
14		Conversion rate -	1	
15				
16		SUMMARY COST CALCULATIONS ARE DISPLAYED BELOW THIS LINE.		



All costs must be entered in the same currency, or the spreadsheet will not total correctly. If you have costs data in different currencies, convert all data to the same currency before entering.

Summary tab

Insert the desired
currency conversion type
and rate

Converted currency

	A	B	C	D
1		HEALTHCARE FACILITY INFORMATION		
2				
3		Enter information about the healthcare facility and local currency in yellow cells. Do not modify anything else in this sheet.		
4				
5		Healthcare facility information		
6		Healthcare facility name -		
7		Location (town/province)		
8		Year -		
9		Currency -		
10				
11				
12		Currency conversions		
13		Converted to -		
14		Conversion rate -	1	
15				
16		SUMMARY COST CALCULATIONS ARE DISPLAYED BELOW THIS LINE.		
17				

The default conversion rate
is set to 1 (i.e., no
conversion).

Currency conversion rates can be found online at
<https://www.oanda.com/currency-converter/>

Capital tab

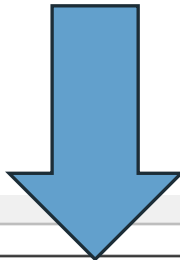
CONTENTS OVERVIEW

Capital tab

The capital tab calculates costs of capital investments (e.g., infrastructure, major equipment).

Suggested items required to deliver basic WASH service are pre-filled in the column A.

The items are divided into sections for water, sanitation, hygiene, etc....



	B	C	D	E	F	
1						
2	CAPITAL					Current
	Item	Estimated lifespan (years)	Unit cost	Quantity/year	Total upfront cost	Equivalent annual cost
3						
4	Water					
5	Water source	25			-	-
6	Pipe network	25			-	-
7	Reservoir / water tower	20			-	-
8	Water treatment system	15			-	-
9					-	-
10					-	-
11					-	-
12	Sanitation					
13	Toilets	25			-	-
14	Fecal sludge containment (pit/septic-tank/)	20			-	-
15	Drainage	20			-	-
16					-	-
17					-	-
18					-	-
19	Hygiene					
20	Hand washing station (Point of care)	15			-	-
21	Hand washing station (Toilets)	15			-	-
22					-	-

< >

Summary

Capital

Infrastructure O&M

Maintenance ...

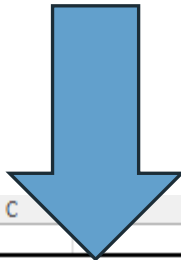
+

:

Capital tab

The user must input three pieces of information for each item

- **Estimated lifespan:** how long will the infrastructure last before it must be replaced?
- **Unit cost:** what is the cost of purchasing one item?
- **Quantity required:** how many items are needed in the healthcare facility?



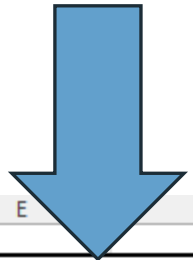
	A	B	C	E	F	
1						
2	CAPITAL					Current
	Item	Estimated lifespan (years)	Unit cost	Quantity/ year	Total upfront cost	Equivalent annual cost
3						
4	Water					
5	Water source	25			-	-
6	Pipe network	25			-	-
7	Reservoir / water tower	20			-	-
8	Water treatment system	15			-	-
9					-	-
10					-	-
11					-	-
12	Sanitation					
13	Toilets	25			-	-
14	Fecal sludge containment (pit/septic-tank/)	20			-	-
15	Drainage	20			-	-
16					-	-
17					-	-
18					-	-
19	Hygiene					
20	Hand washing station (Point of care)	15			-	-
21	Hand washing station (Toilets)	15			-	-
22					-	-

Summary Capital Infrastructure O&M M&M +

Capital tab

Based on user inputs, the spreadsheet automatically calculates:

- **Total upfront cost:** Total, one-time investment costs for the item
- **Equivalent annual cost:** Total costs divided over the expected infrastructure lifespan, plus accounting for factors like interest and inflation



	A	B	C	D	E	F	
1							
2	CAPITAL						Current
	Item	Estimated lifespan (years)	Unit cost	Quantity/year	Total upfront cost	Equivalent annual cost	
3							
4	Water						
5	Water source	25			-	-	
6	Pipe network	25			-	-	
7	Reservoir / water tower	20			-	-	
8	Water treatment system	15			-	-	
9					-	-	
10					-	-	
11					-	-	
12	Sanitation						
13	Toilets	25			-	-	
14	Fecal sludge containment (pit/septic-tank/)	20			-	-	
15	Drainage	20			-	-	
16					-	-	
17					-	-	
18					-	-	
19	Hygiene						
20	Hand washing station (Point of care)	15			-	-	
21	Hand washing station (Toilets)	15			-	-	
22					-	-	

Summary Capital Infrastructure O&M M&M +

Capital tab

Remember that the spreadsheet has a section for current costs and a section for upgrading costs (for items that are needed but not currently available).

Current costs

Upgrading costs

CAPITAL		Current costs					Upgrading costs				
Item	Estimated lifespan (years)	Unit cost	Quantity/ year	Total upfront cost	Equivalent annual cost	Remarks	Unit cost	Quantity/ year	Total upfront cost	Equivalent annual cost	
Water											
Water source	25			-	-				-	-	
Pipe network	25			-	-				-	-	
Reservoir / water tower	20			-	-				-	-	
Water treatment system	15			-	-				-	-	
				-	-				-	-	
				-	-				-	-	
				-	-				-	-	
Sanitation											
Toilets	25			-	-				-	-	

Capital tab

ENTERING INFORMATION

Capital tab

Review lifespan information for each item in YELLOW cells. Edit or insert if necessary.

Estimated lifespan (years):

How long is the item predicted to last?

Some lifespan data is pre-filled but can be edited. If you add or change items, you will need to add new lifespan information.

Proofing

Performance

Accessibility

A6

✕

✓

fx

Water source

	A	B	C	D	
1					
2					
3	CAPITAL				
	Item	Estimated lifespan (years)	Unit cost	Quantity required	Total
4					
5	Water				
6	Water source	25			
7	Pipe network	25			
8	Water tower or reservoir	20			
9	Water filtration/treatment systems	10			
10	Rainwater harvesting	25			
11					
12					
13					
14	Sanitation				
15	Toilets	25			
16	Fecal sludge containment (pits, septic tanks)	20			
17	Drainage	20			

Capital tab

Insert unit cost information
for each item in YELLOW
cells

Unit cost:

How much does one item
cost?

No unit cost information is
pre-filled. You must update
this for every item.

Proofing

Performance

Accessibility

A6

✕

✓

fx

Water source

	A	B	C	D	
1					
2					
3	CAPITAL				
	Item	Estimated lifespan (years)	Unit cost	Quantity required	Total
4					
5	Water				
6	Water source				
7	Pipe network				
8	Water tower or reservoir	20			
9	Water filtration/treatment systems	10			
10	Rainwater harvesting	25			
11					
12					
13					
14	Sanitation				
15	Toilets	25			
16	Fecal sludge containment (pits, septic tanks)	20			
17	Drainage	20			

Capital tab

Insert quantity information
for each item in YELLOW
cells

Quantity required:

How many of these WASH
items does the healthcare
facility need?

No quantity information is
pre-filled. You must update
this for every item.

Proofing

Performance

Accessibility

A6

✕

✓

fx

Water source

	A	B	C	D	
1					
2					
3	CAPITAL				
	Item	Estimated lifespan (years)	Unit cost	Quantity required	Total
4					
5	Water				
6	Water source				
7	Pipe network	25			
8	Water tower or reservoir	20			
9	Water filtration/treatment systems	10			
10	Rainwater harvesting	25			
11					
12					
13					
14	Sanitation				
15	Toilets	25			
16	Fecal sludge containment (pits, septic tanks)	20			
17	Drainage	20			

Capital tab

Unit cost and quantity information can be entered under the “Current cost” columns and the “Upgrading cost” columns. The current costs reflects what the healthcare facility has already purchased. The upgrading cost reflects what is need to reach basic service.

Current costs

Upgrading costs

CAPITAL		Current costs					Upgrading costs				
Item	Estimated lifespan (years)	Unit cost	Quantity/ year	Total upfront cost	Equivalent annual cost	Remarks	Unit cost	Quantity/ year	Total upfront cost	Equivalent annual cost	
Water											
Water source	25			-	-				-	-	
Pipe network	25			-	-				-	-	
Reservoir / water tower	20			-	-				-	-	
Water treatment system	15			-	-				-	-	
				-	-				-	-	
				-	-				-	-	
				-	-				-	-	
Sanitation											
Toilets	25			-	-				-	-	

Infrastructure O&M tab Maintenance tab

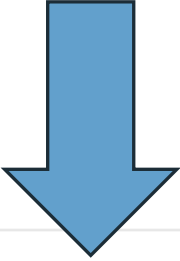
CONTENTS OVERVIEW

O&M tab

The capital tab calculates costs of infrastructure O&M.

The items are divided into sections for water, sanitation, hygiene, etc....

Some basic operations items are pre-filled. Maintenance costs are calculated on a separate tab.



OPERATIONS AND MAINTENANCE				
Item	Frequency/ year	Unit cost - labor	Unit cost - materials	Annual cost
Water				
Maintenance and repairs (***see "Maintenance" sheet)				-
Water quality testing				-
Water system operation				-
				-
				-
				-
Sanitation				
Maintenance and repairs (***see "Maintenance" sheet)				-
Toilet cleaning				-
Pit emptying / desludging				-
				-
				-
				-
Hygiene				
Maintenance and repairs (***see "Maintenance" sheet)				-
				-
				-

< > Summary Capital **Infrastructure O&M** Maintenance Consi ... + :

O&M tab

Maintenance

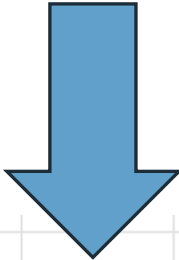
Operations

F12					
	A	B	C	D	E
2					
3	OPERATIONS AND MAINTENANCE				
4	Item	Frequency/ year	Unit cost - labor	Unit cost - materials	Annual cost
5	Water				
6	Maintenance and repairs (**see "Maintenance" sheet)				-
7	Water quality testing				-
8	Water system operation				-
9	Water storage tank cleaning				-
10					-
11					-
12					-

O&M tab (operations)

For operations costs, the user must input three pieces of information for each item

- **Frequency/year:** how many times per year the operations activity is done?
- **Unit cost - labor:** what is the labor cost of the activity?
 - This can be estimated by the time required for the activity and the hourly wage of the personnel performing it
- **Unit cost – materials:** what is the cost of materials/supplies for the activity?



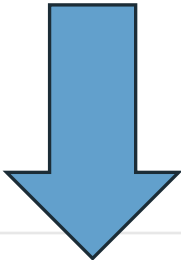
OPERATIONS AND MAINTENANCE				
Item	Frequency/ year	Unit cost - labor	Unit cost - materials	Annual cost
Water				
Maintenance and repairs (**see "Maintenance" sheet)				-
Water quality testing				-
Water system operation				-
				-
				-
Sanitation				
Maintenance and repairs (**see "Maintenance" sheet)				-
Toilet cleaning				-
Pit emptying / desludging				-
				-
				-
Hygiene				
Maintenance and repairs (**see "Maintenance" sheet)				-
				-
				-

Summary Capital Infrastructure O&M Maintenance Consi ... +

O&M tab (operations)

Based on user inputs, the spreadsheet automatically calculates:

- **Annual cost:** The total annual cost for the operations activity



OPERATIONS AND MAINTENANCE				
Item	Frequency/ year	Unit cost - labor	Unit cost - materials	Annual cost
Water				
Maintenance and repairs (**see "Maintenance" sheet)				-
Water quality testing				-
Water system operation				-
				-
				-
Sanitation				
Maintenance and repairs (**see "Maintenance" sheet)				-
Toilet cleaning				-
Pit emptying / desludging				-
				-
				-
				-
Hygiene				
Maintenance and repairs (**see "Maintenance" sheet)				-
				-
				-

Navigation tabs: Summary | Capital | **Infrastructure O&M** | Maintenance | Consi ... +

O&M tab (maintenance)

Maintenance costs are populated from the Maintenance tab.

The row for maintenance costs will remain blank until you enter information into the Maintenance tab.

Data populates here.

OPERATIONS AND MAINTENANCE				
Item	Frequency/ year	Unit cost - labor	Unit cost - materials	Cost
Water				
Maintenance and repairs (**see "Maintenance" sheet)				
Water quality testing				-
Water system operation				-
				-
				-
				-
Sanitation				
Maintenance and repairs (**see "Maintenance" sheet)				-
Toilet cleaning				-
Pit emptying / desludging				-
				-
				-
Hygiene				
Maintenance and repairs (**see "Maintenance" sheet)				-
				-
				-

Data entered on this tab.

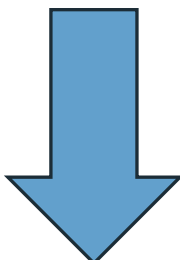
Summary Capital Infrastructure O&M Maintenance Consi ... +

Maintenance tab

The maintenance tab is pre-filled with items.

These items match the infrastructure listed on the capital tab.

If you add infrastructure to the capital costs, be sure to also add it to the maintenance tab, so that O&M can be fully costed.



MAINTENANCE	Functionality				Repair Cost	
	Breakdowns/ year	Repair time (days)	Functional days / year	Functionality (%)	Cost/ breakdown	Annual cost
Water						
Water source			365	1.00		-
Pipe network			365	1.00		-
Reservoir / water tower			365	1.00		-
Water treatment system			365	1.00		-
			365	1.00		-
			365	1.00		-
			365	1.00		-
Sanitation						
Toilets			365	1.00		-
Fecal sludge containment (pit/septic-tank/)			365	1.00		-
Drainage			365	1.00		-
			365	1.00		-
			365	1.00		-
			365	1.00		-
Hygiene						
Hand washing station (Point of care)			365	1.00		-

Maintenance tab

The user must input three pieces of information for each item

- **Breakdowns/year:** approximately how many times per year does the infrastructure break down?
- **Repair time:** what is the average number of days to repair the infrastructure (including wait time)?
- **Cost/breakdown:** what is the average cost per repair?



	Functionality				Repair Cost	
	Breakdowns/ year	Repair time (days)	Functional days / year	Functionality (%)	Cost/ breakdown	Annual cost
MAINTENANCE						
Water						
Water source			365	1.00		-
Pipe network			365	1.00		-
Reservoir / water tower			365	1.00		-
Water treatment system			365	1.00		-
			365	1.00		-
			365	1.00		-
			365	1.00		-
Sanitation						
Toilets			365	1.00		-
Fecal sludge containment (pit/septic-tank/)			365	1.00		-
Drainage			365	1.00		-
			365	1.00		-
			365	1.00		-
			365	1.00		-
Hygiene						
Hand washing station (Point of care)			365	1.00		-

Maintenance tab

Based on user inputs, the spreadsheet automatically calculates:

- **Functionality:** Number of days (%) of the year that the infrastructure is functional
- **Annual cost:** Total annual costs for repairs



	Functionality				Repair Cost	
	Breakdowns/ year	Repair time (days)	Functional days / year	Functionality (%)	Cost/ breakdown	Annual cost
MAINTENANCE						
Water						
Water source			365	1.00		-
Pipe network			365	1.00		-
Reservoir / water tower			365	1.00		-
Water treatment system			365	1.00		-
			365	1.00		-
			365	1.00		-
			365	1.00		-
Sanitation						
Toilets			365	1.00		-
Fecal sludge containment (pit/septic-tank/)			365	1.00		-
Drainage			365	1.00		-
			365	1.00		-
			365	1.00		-
			365	1.00		-
Hygiene						
Hand washing station (Point of care)			365	1.00		-

Summary Capital Infrastructure O&M Maintenance Con: ... +

Infrastructure O&M tab

Maintenance tab

ENTERING INFORMATION

Infrastructure O&M tab

Insert frequency
information for each item in
YELLOW cells

Frequency/year:

How many times per year
the operations activity is
done?

OPERATIONS AND MAINTENANCE				
Item	Frequency/ year	Unit cost - labor	Unit cost - materials	Annual cost
Water				
Maintenance and repairs (***see "Maintenance" sheet)				-
Water quality testing				-
Water system operation				-
				-
				-
				-
Sanitation				
Maintenance and repairs (***see "Maintenance" sheet)				-
Toilet cleaning				-
Pit emptying / desludging				-
				-
				-
				-
Hygiene				
Maintenance and repairs (***see "Maintenance" sheet)				-
				-
				-



< > Summary Capital Infrastructure O&M Maintenance Consi ... + :

Infrastructure O&M tab

Insert unit costs of labor
information for each item in
YELLOW cells

Unit cost - labor:

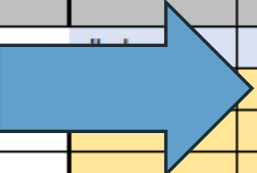
What is the labor cost of the
activity?

This can be estimated by the
time required for the activity
and the hourly wage of the
personnel performing it

OR

Cost of hiring a contractor

OPERATIONS AND MAINTENANCE				
Item	Frequency/ year	Unit cost - labor	Unit cost - materials	Annual cost
Water				
Maintenance and repairs (***see "Maintenance" sheet)				-
Water quality testing				-
Water system operation				-
				-
				-
				-
Sanitation				
Maintenance and repairs (***see "Maintenance" sheet)				-
Toilet cleaning				-
Pit emptying / desludging				-
				-
				-
				-
Hygiene				
Maintenance and repairs (***see "Maintenance" sheet)				-
				-
				-



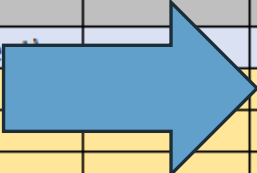
Infrastructure O&M tab

Insert unit cost of materials
information for each item in
YELLOW cells

Unit cost - labor:

What is the cost of
materials/supplies for the
activity?

OPERATIONS AND MAINTENANCE				
Item	Frequency/ year	Unit cost - labor	Unit cost - materials	Annual cost
Water				
Maintenance and repairs (***see "Maintenance" sheet)				-
Water quality testing				-
Water system operation				-
				-
				-
				-
Sanitation				
Maintenance and repairs (***see "Maintenance" sheet)				-
Toilet cleaning				-
Pit emptying / desludging				-
				-
				-
				-
Hygiene				
Maintenance and repairs (***see "Maintenance" sheet)				-
				-
				-



< > Summary Capital Infrastructure O&M Maintenance Consi ... + :

Maintenance tab

Insert breakdown/year
information for each item in
YELLOW cells

Breakdowns/year:

Approximately how many
times per year does the
infrastructure break down?

	A	B	C	D	E	F	G	
		Functionality			Repair Cost			
	MAINTENANCE	Breakdowns/ year	Repair time (days)	Functional days / year	Functionality (%)	Cost/ breakdown	Annual cost	
5	Water							
6	Water source			365	1.00		-	
7	Pipe network			365	1.00		-	
8	Reservoir			365	1.00		-	
9	Water treatment system			365	1.00		-	
10				365	1.00		-	
11				365	1.00		-	
12				365	1.00		-	
13				365	1.00		-	
14	Sanitation							
15	Toilets			365	1.00		-	
16	Fecal sludge containment (pit/septic-tank/)			365	1.00		-	
17	Drainage			365	1.00		-	
18				365	1.00		-	
19				365	1.00		-	
20				365	1.00		-	
21	Hygiene							
22	Hand washing station (Point of care)			365	1.00		-	
23	Hand washing station (Toilets)			365	1.00		-	
24				365	1.00		-	
25				365	1.00		-	
26	Waste management							
27	Waste Pit			365	1.00		-	
28	Placenta Pit			365	1.00		-	

Ready Accessibility: Investigate

Capital Infrastructure O&M Maintenance Consumables T1 +

Display Settings

Maintenance tab

Insert repair time
information for each item in
YELLOW cells

Repair time (days):

What is the average number
of days to repair the
infrastructure (including wait
time)?

	A	B	C	D	E	F	G	
		Functionality			Repair Cost			
	MAINTENANCE	Breakdowns/ year	Repair time (days)	Functional days / year	Functionality (%)	Cost/ breakdown	Annual cost	R
	Water							
	Water source			365	1.00		-	
	Pipe network			365	1.00		-	
	Reservoir / water tower			365	1.00		-	
	Water treatment system			365	1.00		-	
				365	1.00		-	
				365	1.00		-	
				365	1.00		-	
	Sanitation							
	Toilets			365	1.00		-	
	Fecal sludge containment (pit/septic-tank/)			365	1.00		-	
	Drainage			365	1.00		-	
				365	1.00		-	
				365	1.00		-	
				365	1.00		-	
	Hygiene							
	Hand washing station (Point of care)			365	1.00		-	
	Hand washing station (Toilets)			365	1.00		-	
				365	1.00		-	
				365	1.00		-	
	Waste management							
	Waste Pit			365	1.00		-	
	Placenta Pit			365	1.00		-	

< > ... Capital Infrastructure O&M Maintenance Consumables T1 ... + :
 Ready Accessibility: Investigate

Maintenance tab

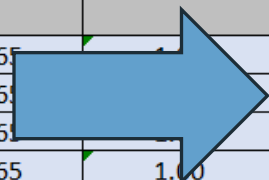
Insert cost/breakdown
information for each item in
YELLOW cells

Cost/breakdown:

What is the average cost per
repair?

Include labor (wages) parts,
materials, etc. and/or
Contractor fees

	A	B	C	D	E	F	G	
		Functionality				Repair Cost		
	MAINTENANCE	Breakdowns/ year	Repair time (days)	Functional days / year	Functionality (%)	Cost/ breakdown	Annual cost	
	Water							
	Water source			365			-	
	Pipe network			365			-	
	Reservoir / water tower			365			-	
	Water treatment system			365	1.00		-	
				365	1.00		-	
				365	1.00		-	
				365	1.00		-	
	Sanitation							
	Toilets			365	1.00		-	
	Fecal sludge containment (pit/septic-tank/)			365	1.00		-	
	Drainage			365	1.00		-	
				365	1.00		-	
				365	1.00		-	
				365	1.00		-	
	Hygiene							
	Hand washing station (Point of care)			365	1.00		-	
	Hand washing station (Toilets)			365	1.00		-	
				365	1.00		-	
				365	1.00		-	
	Waste management							
	Waste Pit			365	1.00		-	
	Placenta Pit			365	1.00		-	



Ready Accessibility: Investigate

Capital Infrastructure O&M Maintenance Consumables T1 +

Display Settings

Reminder!

[illegible]

Information entered on the Maintenance tab will automatically populate onto the Infrastructure O&M tab



Consumables tab

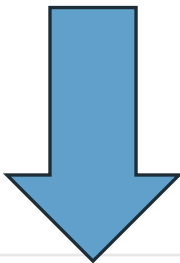
CONTENTS OVERVIEW

Consumables tab

The consumables tab calculates costs of consumable products used for WASH service delivery on an annual basis.

Suggested items required to deliver basic WASH service are pre-filled in the column A.

The items are divided into sections for water, sanitation, hygiene, etc....



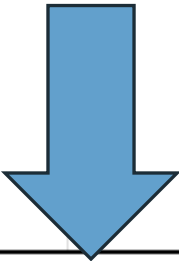
CONSUMABLES				Current
Item	Unit cost	Quantity/ year	Annual cost	
Water				
Water treatment supplies			-	
			-	
			-	
			-	
Sanitation				
Anal cleansing materials (e.g., toilet paper)			-	
			-	
			-	
			-	
Hygiene				
Hand soap			-	
Hand towels / drying materials			-	
Alcohol-based hand rub			-	
			-	
			-	
			-	
Waste management				

< > ... Maintenance **Consumables** Training Personnel Support

Consumables tab

The user must input two pieces of information for each item

- **Unit cost:** what is the cost of purchasing one item?
- **Quantity required:** how many items are needed in the healthcare facility every year?



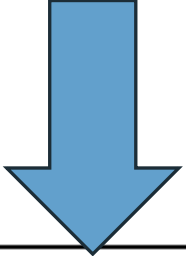
CONSUMABLES		Current	
Item	Unit cost	Quantity/ year	Annual cost
Water			
Water treatment supplies			-
			-
			-
			-
Sanitation			
Anal cleansing materials (e.g., toilet paper)			-
			-
			-
			-
Hygiene			
Hand soap			-
Hand towels / drying materials			-
Alcohol-based hand rub			-
			-
			-
			-
Waste management			

< > ... Maintenance **Consumables** Training Personnel Support

Consumables tab

Based on user inputs, the spreadsheet automatically calculates:

- **Annual cost:** Total annual cost of the consumable item, based on the unit cost and quantities purchased



CONSUMABLES				Current
Item	Unit cost	Quantity/ year	Annual cost	
Water				
Water treatment supplies			-	
			-	
			-	
			-	
Sanitation				
Anal cleansing materials (e.g., toilet paper)			-	
			-	
			-	
			-	
Hygiene				
Hand soap			-	
Hand towels / drying materials			-	
Alcohol-based hand rub			-	
			-	
			-	
			-	
Waste management				

< > ... Maintenance Consumables Training Personnel Support

Ready Accessibility Investigate

Consumables tab

ENTERING INFORMATION

Consumables tab

Insert unit cost information
for each item in YELLOW
cells

Unit cost:

What is the price for one
item?

Note: some items may be
purchased in bulk (e.g., a
case of gloves containing
multiple boxes). Enter the
cost for the unit as
purchased (e.g., the cost of
the case)

2				
3	CONSUMABLES	Current cost		
	Item	Unit cost	Quantity/ year	Annual cost
4				
5	Water			
6	Water treatment sup			-
7				-
8				-
9				-
10	Sanitation			
11	Anal cleansing materials (e.g., toilet paper)			-
12				-
13				-
14				-
15	Hygiene			
16	Hand soap			-
17	Hand towels / drying materials			-
18	Alcohol-based hand rub			-
19				-
20				-
21				-
22	Waste management			
23	Disposable waste containers			-
24	Waste bags			-
25	Fuel for incinerator			-
26				-
27				-

Consumables tab

Insert quantity/year
information for each item in
YELLOW cells

Quantity / year:

How many units are
purchased per year?

Note: Some items may be
purchased in bulk. Enter the
number of bulk units
purchased. The quantity

2				
3	CONSUMABLES	Current cost		
4	Item	Unit cost	Quantity/ year	Annual cost
5	Water			
6	Water treatment supplies			-
7				-
8				-
9				-
10	Sanitation			
11	Anal cleansing materials (e.g., toilet paper)			-
12				-
13				-
14				-
15	Hygiene			
16	Hand soap			-
17	Hand towels / drying materials			-
18	Alcohol-based hand rub			-
19				-
20				-
21				-
22	Waste management			
23	Disposable waste containers			-
24	Waste bags			-
25	Fuel for incinerator			-
26				-
27				-

Training tab

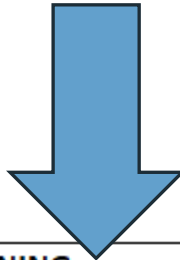
CONTENTS OVERVIEW

Training tab

The training tab calculates costs of WASH-related trainings held on an annual basis.

Suggested trainings required to deliver basic WASH service are pre-filled in the column A.

The items are divided into sections for water, sanitation, hygiene, etc... Some trainings may cover multiple WASH services. These may be recorded under the most relevant WASH service or under “Other.”



2	3	Current cost		
		Frequency/ year	Cost/ training	Annual cost
4	Item			
5	Water			
6				-
7				-
8				-
9	Sanitation			
10				-
11				-
12				-
13	Hygiene			
14	Hand hygiene training			-
15				-
16				-
17	Waste management			
18	Waste handling and segregation training			-
19				-
20				-
21				-
22	Cleaning			
23	Cleaner training			-
24				-
25				-

< > ...

Maintenance

Consumables

Training

Personnel

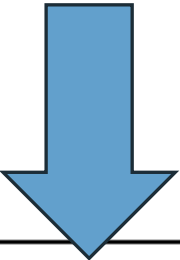
Support

Ready Accessibility: Investigate

Training tab

The user must input two pieces of information for each item

- **Frequency/year:** how many times per year is the training held?
- **Cost/training:** what is the total cost of the training for every occurrence?



2				
3	TRAINING		Current cost	
4	Item	Frequency/ year	Cost/ training	Annual cost
5	Water			
6				-
7				-
8				-
9	Sanitation			
10				-
11				-
12				-
13	Hygiene			
14	Hand hygiene training			-
15				-
16				-
17	Waste management			
18	Waste handling and segregation training			-
19				-
20				-
21				-
22	Cleaning			
23	Cleaner training			-
24				-
25				-

< > ...

Maintenance

Consumables

Training

Personnel

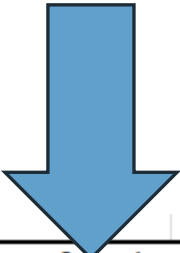
Support

Ready  Accessibility: Investigate

Training tab

Based on user inputs, the spreadsheet automatically calculates:

- **Annual cost:** Total annual cost of the trainings, based on the frequencies and per training costs



2				
3	TRAINING	Current cost		
4	Item	Frequency/ year	Cost/ training	Annual cost
5	Water			
6				-
7				-
8				-
9	Sanitation			
10				-
11				-
12				-
13	Hygiene			
14	Hand hygiene training			-
15				-
16				-
17	Waste management			
18	Waste handling and segregation training			-
19				-
20				-
21				-
22	Cleaning			
23	Cleaner training			-
24				-
25				-

< > ...

Maintenance

Consumables

Training

Personnel

Support

Ready  Accessibility: Investigate

Training tab

ENTERING INFORMATION

Training tab

Insert frequency/year information for each item in YELLOW cells

Frequency/year:

How many times per year does the training occur?

Note: If the training is held less often than once per year, you may enter a fraction. For example, a training that is held once every two years can be entered with the frequency 0.5.

2				
3	TRAINING	Current cost		
4	Item	Frequency/ year	Cost/ training	Annual cost
5	Water			
6				-
7				-
8				-
9	Sanitation			
10				-
11				-
12				-
13	Hygiene			
14	Hand hygiene training			-
15				-
16				-
17	Waste management			
18	Waste handling and segregation training			-
19				-
20				-
21				-
22	Cleaning			
23	Cleaner training			-
24				-
25				-

< > ...

Maintenance

Consumables

Training

Personnel

Support

Ready  Accessibility: Investigate

Training tab

Insert cost/training information for each item in YELLOW cells

Cost/training:

How much does it cost to run a training, including materials, personnel, venue, etc.?

2				
3	TRAINING	Current cost		
4	Item	Frequency/ year	Cost/ training	Annual cost
5	Water			
6				-
7				-
8				-
9	Sanitation			
10				-
11				-
12				-
13	Hygiene			
14	Hand hygiene training			-
15				-
16				-
17	Waste management			
18	Waste handling and segregation training			-
19				-
20				-
21				-
22	Cleaning			
23	Cleaner training			-
24				-
25				-

< > ...

Maintenance

Consumables

Training

Personnel

Support

Ready Accessibility: Investigate

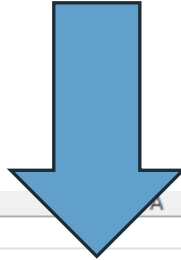
Personnel tab

CONTENTS OVERVIEW

Personnel tab

The personnel tab calculates costs of WASH-related labor on an annual basis.

Many labor costs are already accounted elsewhere in the spreadsheet (e.g., under O&M). However, healthcare facilities may have additional staff that contribute to WASH services. Any additional staff or labor costs that are not accounted for elsewhere may be listed here. Some suggested items are already pre-filled.

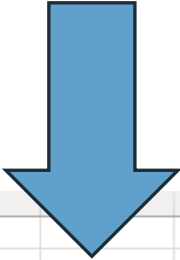


PERSONNEL					
Item	Quantity	Effort % dedicated to WASH	Annual salary	Current cost	
				Annual cost	Rem
Water				-	
				-	
				-	
Sanitation				-	
				-	
				-	
Hygiene				-	
				-	
				-	
Waste management				-	
Driver (waste transportation)				-	
				-	
				-	

Personnel tab

The user must input three pieces of information for each item

- **Quantity:** how many staff members with this job title does the healthcare facility employ?
- **Effort % dedicated to WASH:** what percent of the staff member's duties are related to WASH?
- **Annual salary:** what is the annual salary of the staff member, including benefits?

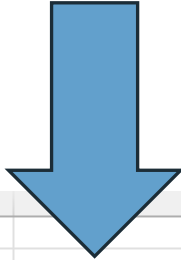


PERSONNEL					
Item	Quantity	Effort % dedicated to WASH	Annual salary	Annual cost	Rem
Water				-	
				-	
				-	
Sanitation				-	
				-	
				-	
Hygiene				-	
				-	
				-	
Waste management				-	
Driver (waste transportation)				-	
				-	
				-	

Personnel tab

Based on user inputs, the spreadsheet automatically calculates:

- **Annual cost:** Total annual cost of the personnel, based on the number of staff members, the proportion of their duties related to WASH, and their salaries



PERSONNEL					
Item	Quantity	Effort % dedicated to WASH	Annual salary	Current cost	
				Annual cost	Rem
Water				-	
				-	
				-	
Sanitation				-	
				-	
				-	
Hygiene				-	
				-	
				-	
Waste management				-	
Driver (waste transportation)				-	
				-	
				-	

Navigation tabs: < > ... Consumables Training **Personnel** Support +

Personnel tab

ENTERING INFORMATION

Personnel tab

Insert quantity
information for each
item in YELLOW cells

Quantity:

How many staff members with
this job title does the
healthcare facility employ?

2					
3	PERSONNEL	Current cost			
	Item		Effort % dedicated to WASH	Annual salary	
4		Quantity			Annual cost
5	Water				Remar
6					-
7					-
8					-
9	Sanitation				
10					-
11					-
12					-
13	Hygiene				
14					-
15					-
16					-
17	Waste management				
18	Driver (waste transportation)				-
19					-
20					-
21					-
22	Cleaning				
23	Cleaner				-
24	Groundskeeper				-
25					-

< > ...

Consumables

Training

Personnel

Support

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Personnel tab

Insert effort %
information for each
item in YELLOW cells

Effort % dedicated to WASH:

What percent of the staff
members duties are related
to WASH?

This information should be
entered as a fraction
between 0 and 1.0 (e.g.,
0.10 represents 10% effort).

2					
3	PERSONNEL	Current cost			
	Item	Quantity	Effort % dedicated to WASH	Annual salary	Annual cost
4					
5	Water				
6					-
7					-
8					-
9	Sanitation				
10					-
11					-
12					-
13	Hygiene				
14					-
15					-
16					-
17	Waste management				
18	Driver (waste transportation)				-
19					-
20					-
21					-
22	Cleaning				
23	Cleaner				-
24	Groundskeeper				-
25					-

< > ...

Consumables

Training

Personnel

Support

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Personnel tab

Insert salary
information for each
item in YELLOW cells

Annual salary:

What is the annual salary of
the staff member?

Include the cost of any staff
benefits.

2					
3	PERSONNEL	Current cost			
4	Item	Quantity	Effort % dedicated to WASH	Annual salary	Annual cost
5	Water				
6					-
7					-
8					-
9	Sanitation				
10					-
11					-
12					-
13	Hygiene				
14					-
15					-
16					-
17	Waste management				
18	Driver (waste transportation)				-
19					-
20					-
21					-
22	Cleaning				
23	Cleaner				-
24	Groundskeeper				-
25					-

< > ...

Consumables

Training

Personnel

Support

+

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Support tab

CONTENTS OVERVIEW

Support tab

The support cost tab is an additional space to document any costs that have not been well captured in other tabs.

SUPPORT					
Item	Unit cost	Quantity/ year	Annual cost	Remarks	Unit c
			-		
			-		
			-		
Waste management					
			-		
			-		
			-		
Cleaning					
			-		
			-		
			-		
Other					
Capacity building			-		
Policy making			-		
Planning			-		
Regulation			-		
Knowledge management			-		
Communication			-		
			-		
			-		
< > ... Maintenance Consumables Training Personnel Support					

Support tab

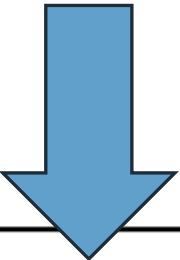
Most items here will be cross-cutting support for all WASH activities. These are listed under the category for “Other”. This tab may be left blank if there are no relevant support costs.

SUPPORT					
Item	Unit cost	Quantity/ year	Annual cost	Remarks	Unit c
			-		
			-		
			-		
Waste management					
			-		
			-		
			-		
Cleaning					
			-		
			-		
			-		
Other					
Capacity building			-		
Policy making			-		
Planning			-		
Regulation			-		
Knowledge management			-		
Communication			-		
			-		
			-		
< > ... Maintenance Consumables Training Personnel Support					

Support tab

The user must input two pieces of information for each item

- **Unit cost:** what is the cost of the support item?
- **Quantity/year:** how many times per year is the cost incurred?



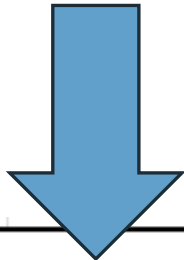
SUPPORT					
Item	Unit cost	Quantity/ year	Annual cost	Remarks	Unit c
			-		
			-		
			-		
Waste management					
			-		
			-		
			-		
Cleaning					
			-		
			-		
			-		
Other					
Capacity building			-		
Policy making			-		
Planning			-		
Regulation			-		
Knowledge management			-		
Communication			-		
			-		
			-		

< > ... Maintenance Consumables Training Personnel **Support**

Support tab

Based on user inputs, the spreadsheet automatically calculates:

- **Annual cost:** Total annual cost of support



SUPPORT					
Item	Unit cost	Quantity/ year	Annual cost	Remarks	Unit c
			-		
			-		
			-		
Waste management					
			-		
			-		
			-		
Cleaning					
			-		
			-		
			-		
Other					
Capacity building			-		
Policy making			-		
Planning			-		
Regulation			-		
Knowledge management			-		
Communication			-		
			-		
			-		

< > ...

Maintenance

Consumables

Training

Personnel

Support

Support tab

ENTERING INFORMATION

Support tab

Insert unit cost and quantity/year information for each item in YELLOW cells

Unit cost:

What is the cost of the support item?

Quantity/year:

How many times per year is the cost incurred?

SUPPORT					
Item	Unit cost	Quantity/ year	Annual cost	Remarks	Unit c
			-		
			-		
			-		
Waste management					
			-		
			-		
			-		
Cleaning					
			-		
			-		
			-		
Other					
Capacity building			-		
Policy making			-		
Planning			-		
Regulation			-		
Knowledge management			-		
Communication			-		
			-		
			-		

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Maintenance

Consumables

Training

Personnel

Support

Many support costs may be overhead items, where a unit cost and quantity is not applicable. In these cases, you may simply enter the unit cost as the total estimated annual amount and the quantity as 1.

Toolkit user guide

ADVANCED FUNCTIONS

Protected vs. Unprotected mode

PROTECTED MODE

The default spreadsheet is “protected.”

This means that formula cells are locked and cannot be edited. Protected mode helps ensure that the user does not accidentally override the formulas, causing errors.

Basic usage can be performed in protected mode

UNPROTECTED MODE

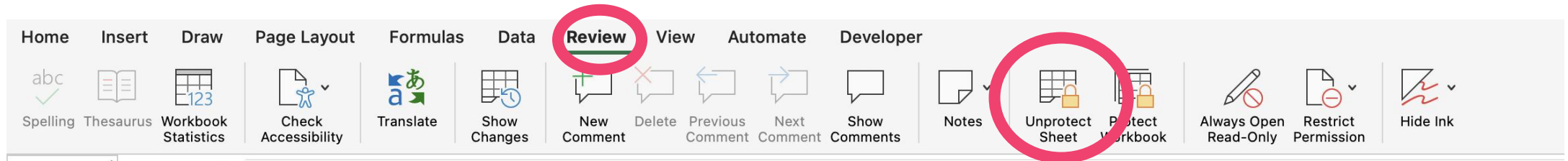
Protected mode can be turned off.

Unprotecting the sheet allows unrestricted access to edit any cells. This allows for more customization but should be done carefully. Avoid changing formula cells and check for errors.

Advanced functions require the user to “unprotect” the spreadsheet.



How to unprotect a sheet



1

Go to “Review” button at the top of Excel screen

2

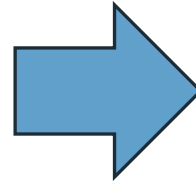
Click “Unprotect Sheet”

Adding items

Each section contains pre-filled items and three blank rows.

You may edit the pre-filled items and enter new items into blank rows.

If you need to add more than three new items, you can add additional blank rows for more items.



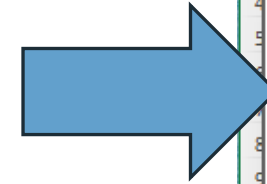
2					
3	CAPITAL				
	Item	Estimated lifespan (years)	Unit cost	Quantity/ year	Total upfront cost
					Equivalent annual cost
4	Water				
5	Water source	25			-
6	Pipe network	25			-
7	Reservoir / water tower	20			-
8	Water treatment system	15			-
9					-
0					-
1					-
2					-
3	Sanitation				
4	Toilets	25			-
5	Fecal sludge containment (pit/septic-tank/)	20			-
6	Drainage	20			-
7					-
8					-
9					-
0	Hygiene				
1	Hand washing station (Point of care)	15			-
2	Hand washing station (Toilets)	15			-
3					-
4					-
5					-
6	Waste management				
7	Waste Pit	5			-
8	Placenta Pit	20			-
9	Waste processing area	25			-
0					-
1					-
	<	>	Summary	Capital	Infrastructure O&M
					Maintenance
					Consur ... +
	Ready 52% Accessibility Investigate				

How to add new items

1

Right-click the cell number for a blank row in the section where you want to add an item.

Click “Copy”



“cell number”



	A	B	C
1			
2			
3	CAPITAL		
4	Item	Estimated lifespan (years)	Unit cost
5		25	
6		25	
7		20	
8		15	
9			
10			
11			
12			
13		25	
14		20	
15		20	
16			
17			
18			
19		15	
20		15	
21			
22			
23			
24			
25			
26			
27		5	
28	Placenta Pit	20	
29	Waste processing area	25	
30			
31			

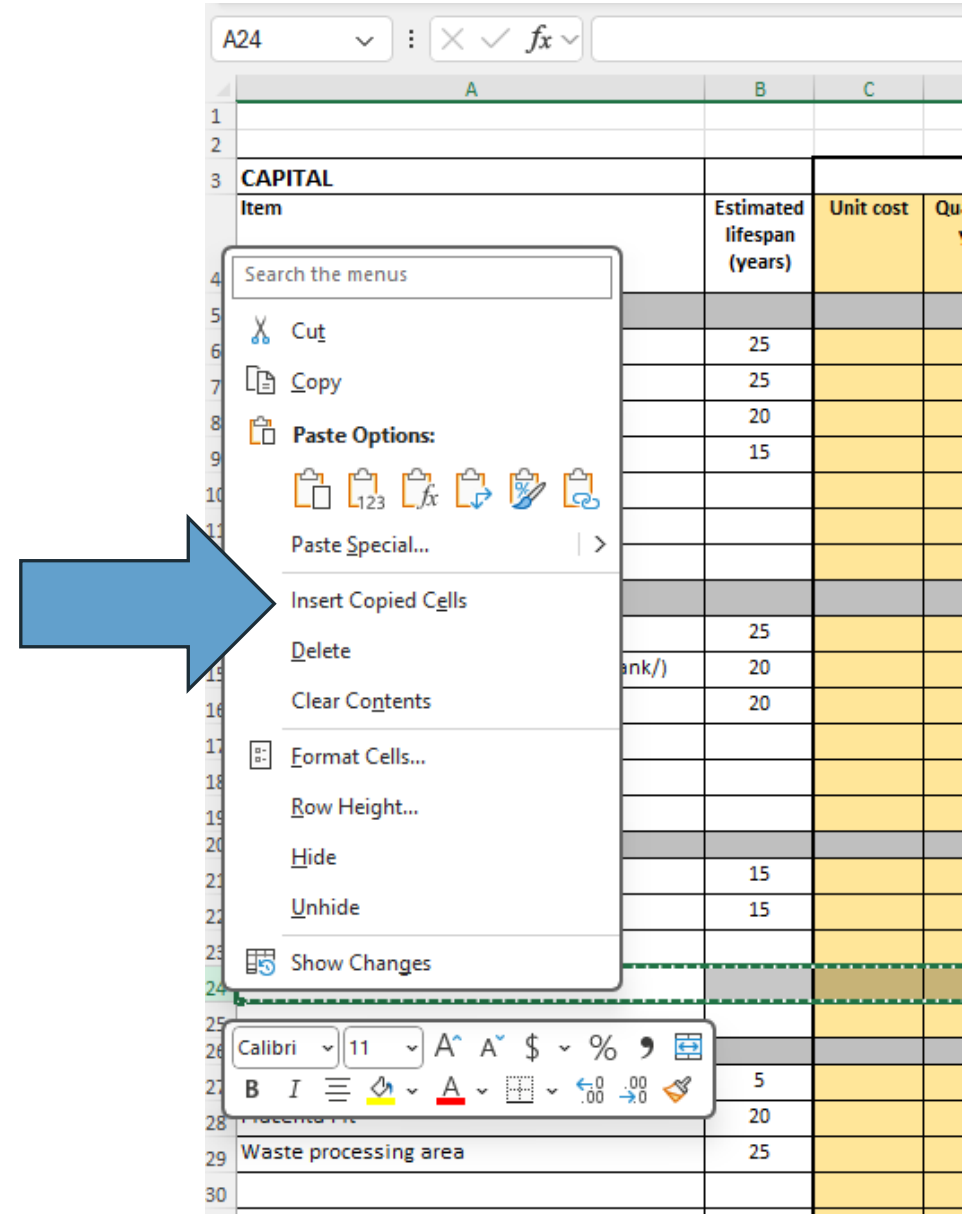
How to add new items

2

Right-click again on the cell number for the blank row in the section where you want to add an item.

Click “Insert Copied Cells”

A new blank row will be added above.



How to add new items

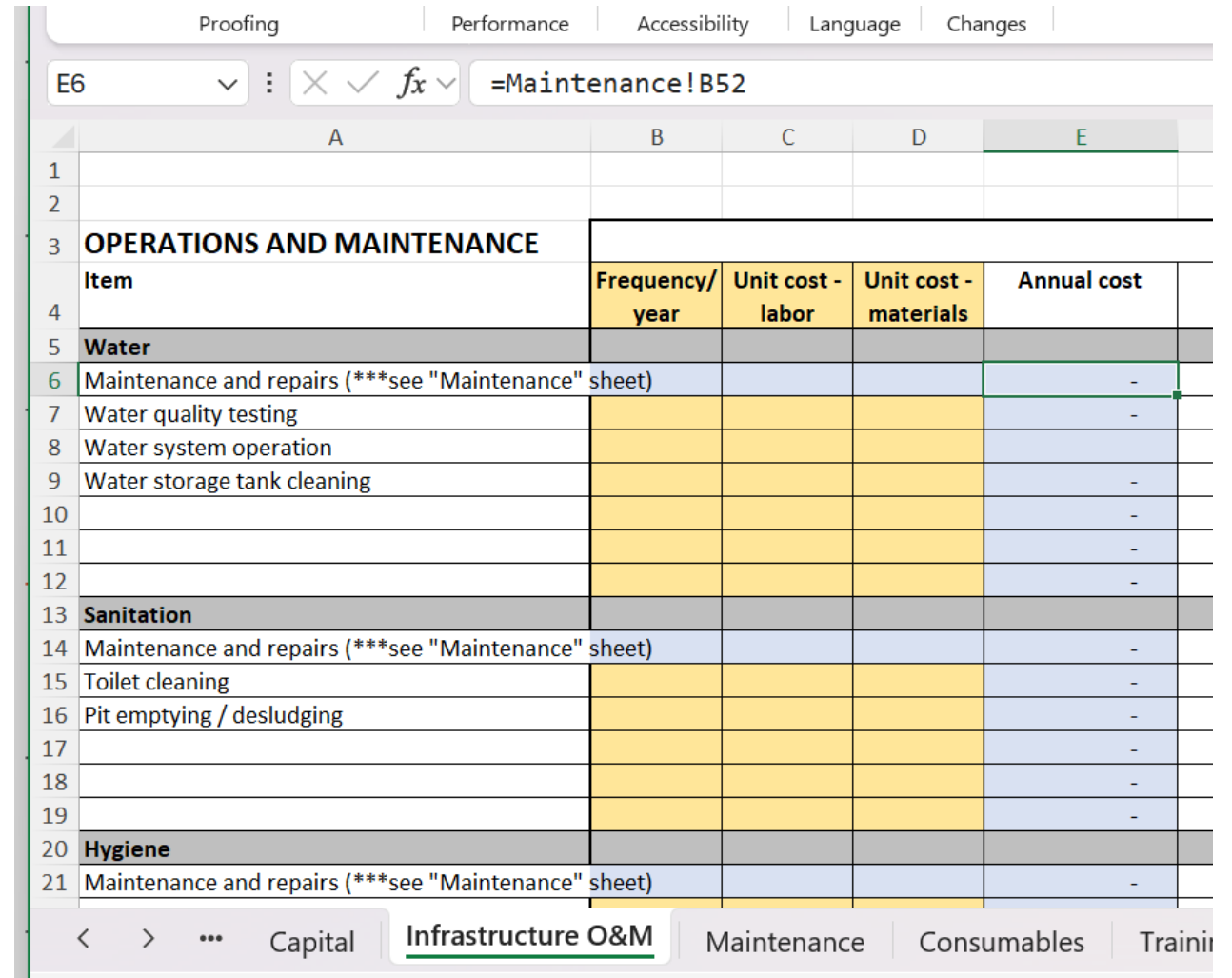


You must use this process to copy an existing blank row

If you do not, then the new row may not be incorporated into the formulas to calculate total costs

Bypassing detailed maintenance calculations

Detailed maintenance cost are recorded on the Maintenance tab. However, this can be bypassed if you do not need or want this level of detail.



Proofing | Performance | Accessibility | Language | Changes

E6 X ✓ fx =Maintenance!B52

	A	B	C	D	E
1					
2					
3	OPERATIONS AND MAINTENANCE				
4	Item	Frequency/ year	Unit cost - labor	Unit cost - materials	Annual cost
5	Water				
6	Maintenance and repairs (**see "Maintenance" sheet)				-
7	Water quality testing				-
8	Water system operation				-
9	Water storage tank cleaning				-
10					-
11					-
12					-
13	Sanitation				
14	Maintenance and repairs (**see "Maintenance" sheet)				-
15	Toilet cleaning				-
16	Pit emptying / desludging				-
17					-
18					-
19					-
20	Hygiene				
21	Maintenance and repairs (**see "Maintenance" sheet)				-

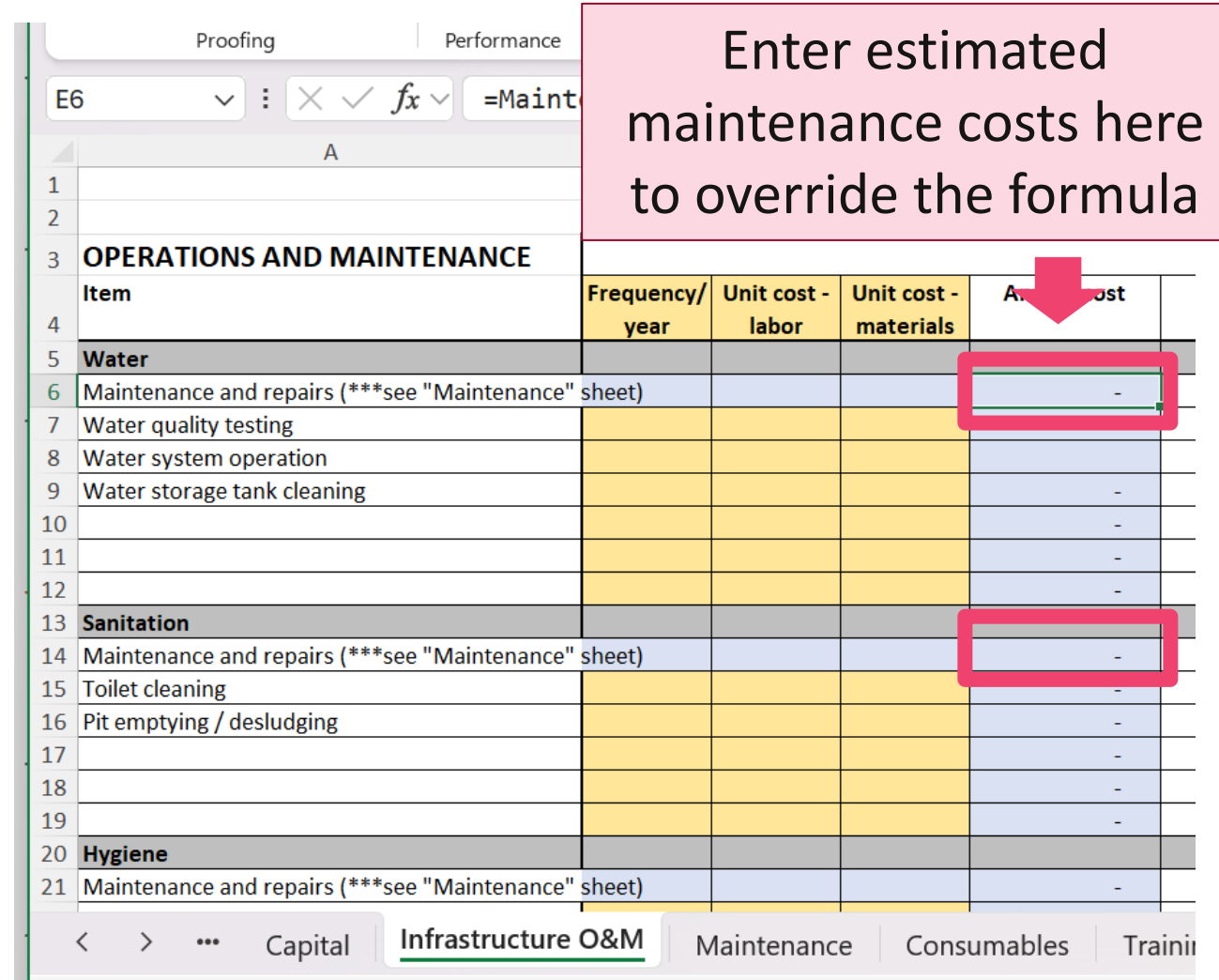
< > ... Capital **Infrastructure O&M** Maintenance Consumables Traini

Bypassing detailed maintenance calculations

To bypass the Maintenance tab, first unprotect the sheet.

Enter an estimated maintenance total for each WASH category directly into Column E.

This will override the existing formula in the cell.



Proofing | Performance

E6 : X ✓ fx =Maint

A

1

2

3 **OPERATIONS AND MAINTENANCE**

Item	Frequency/ year	Unit cost - labor	Unit cost - materials	Annual cost
Water				
Maintenance and repairs (**see "Maintenance" sheet)				-
Water quality testing				
Water system operation				
Water storage tank cleaning				-
				-
				-
				-
Sanitation				
Maintenance and repairs (**see "Maintenance" sheet)				-
Toilet cleaning				-
Pit emptying / desludging				-
				-
				-
				-
Hygiene				
Maintenance and repairs (**see "Maintenance" sheet)				-

< > ... Capital **Infrastructure O&M** Maintenance Consumables Traini

Frequently asked questions

1. The spreadsheet contains items that I do not want to include. Can I delete them?

- You may remove or revise the item name from Column A of any tab. However, do not delete cell or row, or modify any of the blue formula cells, as this will create errors in the calculations for total costs.

2. Different participants have provided different estimates of unit costs for a particular item. What should I do?

- Prices may vary naturally across healthcare facilities. If you are costing in multiple healthcare facilities, each will have its own spreadsheet. You may use different unit costs in different spreadsheets. If the unit price varies within a single healthcare facility, you may use the average value. The spreadsheets can also be used to calculate a range: first enter the lowest unit price and record the total costs; then enter the highest unit price and record the total costs. This gives you the range of probable cost estimates.

3. The healthcare facility WASH program is multi-year. How many years of consumables data do I need to collect?

- The spreadsheet is designed to collect and calculate annual costs. Therefore, data for consumables (and other O&M line items) are entered for only one year. Usually, the most recent year is sufficient. However, if there are demographic trends that may impact expenses (e.g., significant growth in the number of patients), you may want to look at trends over several years and adjust your estimates to account for any change.

4. I have records of capital costs from many years ago. The price of these items has change since. What should I do?

- Cost data should ideally reflect current market prices. Data from older records can be adjusted for inflation using an online calculator (e.g., see <https://www.global-rates.com/en/calculations/inflation-calculator/> for a generic option; there may be more accurate options from the ministry of finance or central bank in your country). You can also triangulate costs by verifying current market rates with other healthcare facilities, government officials, private sector contractors, or others to understand what those capital items would cost today.

Acknowledgements

Acknowledgements

The following organizations contributed to developing this toolkit:

- The Water Institute at the University of North Carolina at Chapel Hill
- The Swiss Water and Sanitation Consortium



The University of North Carolina
at Chapel Hill

The Water Institute

Swiss Water & Sanitation Consortium



With support from



How to cite this document:

The Water Institute at UNC & Swiss Water and Sanitation Consortium. (2025). *Toolkit for costing water, sanitation, and hygiene (WASH) in healthcare facilities*. Chapel Hill, NC, USA.