Planning and Budgeting

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Objective

This presentation aims to cover:

- Definition and concepts of utility planning
- Understanding how planning impacts creditworthiness
- Examples of effective planning
- The roadmap to a CIP
Key Messages

- If you don’t know where you are you cannot plan the road ahead

- Must have a vision on where you want to be when

- Must be synchronised with local development plans

- Financial planning as important as physical planning
Outline

- Strategic framework for utility planning
- Situational analysis
- Objectives setting
- Planning process
- Planning and budget
- Bulk water
- Treatment capacity and distribution
- Financial Planning
- Creditworthiness utilities
Strategic Framework for Planning

Situational analysis
• Past trends
• Present status of infrastructure
• Current KPIs

Objectives
• What needs to be done
• Regulatory requirements
• Environmental objectives
• Public health norms
• Meet local development planning and developments

Strategies and Action plans
• Alternative plans
• Cost-Benefit analysis
• Lifecycle cost assessment

Monitoring and Evaluation
• Measuring achievement
• KPI, patterns, and
• Course corrections
The local development plan or equivalent as prepared by the urban and rural authorities must inform the forecasts for demand for water and sewerage services.

Changes in residential commercial and industrial development will precipitate changes in the utility planning and must be monitored constantly.
Situational Analysis

- The national and regional and local development plans
- Past trends
- Present status Quo
- Economic growth
- Climate resilience
- Comparative advantages and priorities of different sources
- The needs and affordability of the community
- The balance between investment for growth and social investments
- Value for money
- Financial position
Clear Objectives

- What is the challenges and what must be done?
- What are public heath prescriptions?
- What are the standards expected, affordable to the community and other users?
- Connection fees versus Consumption fees?
- Tarif and pro poor policies
- Priorities
- What is the legal and regulatory framework?
- Ensuring sustainability and resource protection
- Climate goals
- NRW /reclaimed water /demand management
# Typical objectives of Water and Sanitation Utilities

<table>
<thead>
<tr>
<th>Objective</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Accessibility</td>
<td>Both potable water and a functioning sewage disposal system are easily accessible to as many people as possible</td>
</tr>
<tr>
<td>2. Safety</td>
<td>The water supplied is safe to drink (potable), with appropriate sampling, testing, verification, and reporting systems in place.</td>
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<tr>
<td></td>
<td>Sewage is safely collected and disposed of, protecting the community and the environment.</td>
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<tr>
<td>3. Sufficiency</td>
<td>People get a sufficient quantity of water at an adequate pressure.</td>
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<tr>
<td>4. Reliability</td>
<td>Water is continuously available, with minimum interruptions.</td>
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<tr>
<td>5. Convenience</td>
<td>Water is accessible to the home, school or business and there is easy access to a toilet.</td>
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</tbody>
</table>
## Typical Objectives of Water and Sanitation Utilities

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>6.</td>
<td><strong>Cost-effectiveness</strong>&lt;br&gt;Service is provided cost-effectively, that is, resources are used both effectively and efficiently</td>
</tr>
<tr>
<td>7.</td>
<td><strong>Financial Sustainability</strong>&lt;br&gt;Sufficient revenue and other income is available to operate, maintain and expand the assets to provide service and serviceability. Ideally this income should come from customer revenue although it is reasonable to use other income for growth capital.</td>
</tr>
<tr>
<td>8.</td>
<td><strong>Affordability</strong>&lt;br&gt;Poor households can afford sufficient water to meet at least basic needs</td>
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<tr>
<td>9.</td>
<td><strong>Responsiveness</strong>&lt;br&gt;Utility is responsive to customers – IT IS CUSTOMER FOCUSED</td>
</tr>
<tr>
<td>10.</td>
<td><strong>Transparency</strong>&lt;br&gt;Customers, regulators and other stakeholders have access to information on the utility’s activities, finances and performance</td>
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Strategies and Action Plans

- Option analysis
- Utilisation of a life cycle approach
- Relationship between capital and operational
- Provision for replacement and refurbishment
- Cost benefit and value for money
- Prioritisation
- Funding sources
- Formulating action plans What? When? How? With what?
Monitoring and Evaluation

- Meeting higher level objectives of development
- Meeting community needs
- Cost effectiveness of projects
- Potential new technology and improvements
- Cost saving opportunities
- Adjustment in Standard Operating procedures and planning
Planning Process and Outputs

- National and local Plans
- Community and stakeholder input
- Historical Info
- Estimated Resources
- Data (Population, GPS data, etc.)

Long Term Development Planning (10 to 20 Years)

3 year Development Plan

Annual Budget

Capital Investment Plan
Defining Plans and Budgets (1)

1. **The Local development plan** creates a future vision for a target area, and identifies priority land and infrastructure investments (produced every 5-10-20 years)

2. The utility **long term development plan** Provides a vision and indicates how to provide the services (10 to 20 years)

3. **Three year rolling development plan** is more detailed, analyse options, initiates prefeasibility studies, prioritizes, has a financial assessment, tariff predictions considers potential capital funding sources while considering operational expenditure implications
Defining Plans and Budgets (2)

1. The **Capital Investment Plan** specifies on how the capital budget in the next set of years will be allocated – to which projects and in which amounts (produced every year, covering 3-5 years)

2. The **Capital Budget** (produced yearly) coordinates Capital Improvement Plans with the planned expenditure of funds to acquire land and other assets

3. The annual **Operating Budget** coordinates plans for running day to day operations with the planned income and expenditure of funds.
Discussion Point

The utilities in your region:
1. Follow a long term planning approach?
2. The ministry plans for them
3. Have no planning capacity
4. Is purely reactive on receipt of donor contributions
5. Don’t know
6. Is it possible to assist them with TA
Bringing it together …

Planning for external influences means planning for mitigation of the negative impacts if any.
Utilities that can demonstrate adequate raw water resources and climate resilience planning are more creditworthy.
No raw water ----no sales---- no revenue
Bulk Water Resource Planning

Knowing how much water is available to be drawn

Balancing water withdrawal with water demand through

- Accounting for NRW in water supply: NRW reduced is bulk water resource development cost avoided!
- Knowing natural/ sustainability limits on withdrawal from water sources
- Balancing other uses of (claims on) the water resources

Priority of water use and national/regional policy

Energy costs of choosing a bulk water source

Infrastructure expenditure needed (including lifecycle costs) for choosing bulk water sources
## Treatment Capacity and Distribution Network

- Projections for rising population including informal and economic activity
- Modular approach to treatment
- Network extensions
- Aging infrastructure and proactive maintenance, refurbishment, and replacement
- Increasing NRW
- Planning norms LPCD, quality assurance, pressures
Financial Planning is as Important as the Environmental and Physical planning -Reality 101

Needs

Resources
Financial Planning

1. Maintaining adequate cash flows throughout the year
2. Predicting future expenditure, based on:
   - Yearly forecast of operating expenditure
   - Planned pro active Maintenance
   - Future capital investment needs
3. Predicting revenues based on:
   - Tariff
   - External sources (Tax and Transfers)
4. Using economic projections: connecting inflation with expenditures, and ideally revenues (tariff) as well
5. Providing a rational and therefore reliable basis for tariff determination
6. Providing for essential debt servicing and loan repayments
7. **Building a financial model that incorporates debt financing**
8. **Identifying potential sources**
Examples of Planning in a Well-Run Utility

- Strategic long term planning reflected in current development plans and budgets
- Tariff plans reflecting the actual need for cash-flow
- Proactive repair and maintenance plans
- Capital Investment Plans
- Human resource plans (recruitment and training)
- Lifecycle cost-benefit analysis (multiple financial models) for alternative plans
- Debt management plans – based on financial models and sensitivity analysis conducted based on those
Discussion Point

Utilities in my region
1. Have insufficient data to do a situational analysis
2. Have no strategic plans
3. Operational budget not linked to capital budget
4. No financial planning capacity
5. No dialogue with the community and other stakeholders
6. Have proper strategic planning capacity
7. Don’t know
Creditworthy Utilities: What do they do?

Creditworthy water utilities…

1. Forecast revenue and expenditure.
2. Create bankable projects through effective use of time value of money techniques for lifecycle cost assessment (while Predicting cash-flows).
3. Know the risks and liability, and mechanisms for mitigation of those.
4. Have a clear business planning document as guideline for the utility’s direction.
5. Maintain comparability among peers – by following standard planning, monitoring, and accounting norms.
6. Plan for debt repayment/servicing, linked with current budget as well as future cash flow.
Life-Cycle Costing

1. The Lease vs. Buy comparative analysis is a very simple example of Life-Cycle Costing.

2. More generally, Life-Cycle Costing uses time value of money techniques to create and compare a number of multi-year scenarios, including:
   - Options with different Operations & Maintenance (O&M) cost structures
   - Options with different useful lives
   - Complex cash flows:
     - Uneven cash flows
     - Payments in as well as payments out
     - Periods with no payments
Planning and the Budget Function

Coordinating Capital Investment Planning and Capital Budgeting
Planning and the Budget Function

Linking regional/local development plans, with water utility service delivery plans and budgets is critical to ensure success of the planning and budgeting exercise.

This section therefore aims to improve the understanding of the budget function and of how to coordinate capital investment planning with capital expenditure budgeting, and the impact on operational costs.

*Simply put, planning is an exercise, and the budget is one of the outputs of that exercise eventually incorporated into the business plan.*
Do you Plan and have a Personal Budget?

**Personal Budget**
- Salary
- Wife’s monthly allowance for groceries/fuel/golf fees
- Repairs to House
- Buying a new car
- Mortgage instalments
- Savings to replace TV
- Gifts from rich uncle
- Retirement pension payments
- Life insurance
- Loan to son in law

**Municipal Budget**
- Revenue
- Operation costs
- Maintenance costs
- Capital expenditure
- Loan repayments
- Depreciation
- Transfers from central government
- Long term vision
- Asset insurance
- Non recoverable receivables

What happens if salary is smaller than expenses?
You **borrow** and **work harder** or **reduce** wife’s shopping allowance to balance or go on to bankruptcy.
## Integrating the Long Term plan, Capital Investment Plan, and Capital Expenditure Budget

<table>
<thead>
<tr>
<th>Long term planning</th>
<th>Capital investment Plan</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan resources?</td>
<td>At least a 3 year plan</td>
<td>Operating Budgets with capital expenditure</td>
</tr>
<tr>
<td>At least a 10 year plan</td>
<td>Sets short-term priorities to meet long-term objectives</td>
<td>Provides details about projects needed to fill priorities, and approves funding</td>
</tr>
<tr>
<td>Creates vision and aligns strategies and investment plans</td>
<td>Confirms costs and funding sources</td>
<td>Assigns funding to projects from specific sources</td>
</tr>
<tr>
<td>Gives a high level cost estimate and identifies funding source</td>
<td>Gives a more detailed cost estimate</td>
<td>Gives an in-depth cost estimate and cash flow</td>
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</table>
Creating a Capital Budget

Capital Investment Plans (CIPs) Drive Capital Budgets

1. CIPs should be multi-year (rolling 3 – 5 yrs at a minimum, preferably even longer E.g. 15 yrs.)

2. Annual capital budgets need to include 3 to 5 year forward projections as well.

The capital budget outlines projects, and timing of cash flows for construction, purchase, or other outlays. This covers:

- Providing for monthly cash needs for capital spending
- Managing multiple capital projects that will be underway at any time
The Capital Budgeting Process

The Capital Investment Plan (CIP): Sets Goals & Objectives for Capital Investment

The Capital Budget Plan: Allocates resources based on the Capital Investment Plan

FY 1: Budget Development/Adoption

FY 2: Budget Management/Administration

Budget evaluation

Monitoring

Capital Budget Implementation

Review & approval process

Budget modifications, if needed
The Capital Budgeting Process

**Golden Rule**: Once the Budget Cycle Schedule is set & agreed to by the appointed and elected decision-makers, ALLOW NO DEVIATION!

Deviation from the schedules will de-synchronize capital planning from funding and debt finance. The results will include:

1. Delays of construction starts;
2. Cost increases; and possibly
3. Project cancellations!
Creditworthy water utilities…

1. Prepare multi-year CIP’s that integrate:
   - spatial planning (i.e., recognize the other authorities’ development plans),
   - service delivery planning,
   - climate resilience considerations,
   - lifecycle costing of investments,
   - identification of appropriate asset acquisition methods, and
   - sources & timing of financing for the investments.

2. Use annual Capital Budgets to:
   - implement their CIP,
   - Rationalize the costs of asset acquisition, and
   - maintain or reduce operating expenses while they…
   - deliver services that meet the demand from their customers.
Key Takeaways

- Failing to plan is planning to fail
- Utility planning is largely determined by local development plans
- You must know the status quo
- Financial planning is as important as the physical planning
THANK YOU
The Characteristics of Capital Assets

• Useful economic lives are much longer than one year

• Capital asset categories typically include:
  – Land
  – Waterbodies/ storage structures
  – Buildings
  – Infrastructure
  – Fixed machinery & equipment
  – Trucks and automobiles

• One capital project, for example, a Water Treatment Plant, is likely to include examples from several of the categories
Methods for Acquiring Capital Assets

1. Outright purchase
   – Cash purchase
   – Installment purchase
   – Debt financing
     • Loans
     • Bonds

2. Capital lease – the lease term may be as long as the expected useful economic life, amount for ownership transfer (from lessor to lessee) can be a negotiable parameter of the lease agreement

3. Operating (short-term) lease – the term is shorter than the expected useful economic life of the asset, there is no transfer of ownership from the lessor to the lessee
### Challenges & Action Planning

#### Poor Management of Resources

<table>
<thead>
<tr>
<th>Potential Actions</th>
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<tbody>
<tr>
<td><strong>Action 13.1</strong> Create separate budgets and accounts for operating expenses and capital expenses.</td>
</tr>
<tr>
<td><strong>Action 13.2</strong> Project operating expenditures at least two years ahead (and more if possible) beyond the annually approved budget.</td>
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<tr>
<td><strong>Action 13.3</strong> Formally link service expansion planning to the budgeting projection process to project the impact on revenues and expenditures of services to new residential and commercial development.</td>
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<tr>
<td><strong>Action 13.4</strong> Establish a 5 year rolling budget for capital expenditures.</td>
</tr>
<tr>
<td><strong>Action 13.5</strong> Establish publicly transparent procedures for proposing, reviewing and adopting water utility operating and capital budgets.</td>
</tr>
<tr>
<td><strong>Action 13.6</strong> Establish and maintain a formal Operating Reserve Fund.</td>
</tr>
<tr>
<td><strong>Action 13.7</strong> If the water utility has debt obligations, create and maintain a Debt Service Reserve.</td>
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<tr>
<td><strong>Action 13.8</strong> Have the engineering staff actively participate in the budgeting process.</td>
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</tbody>
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#### 13. BUDGETING problems

- A. Operating & Capital Budgets mixed
- B. Annual Budgeting only
- C. Participation low
- D. Reserves low
Time Value of Money

A dollar received now is worth more than a dollar received a year from now, because it can be invested at some agreed upon rate of return.

AND

Conversely, a dollar promised a year from now should be discounted to reflect the lost return on investment. This discount rate will give us a present value for a payment in the future.
CIP Approval and Implementation

Approval by appointed and elected decision-makers should be based on:

- **TRUST** - in the NUMBERS and the PEOPLE providing the numbers - is the key to timely approval. How can that fundamental trust relationship be developed and maintained?
- Educating the decision makers on how the numbers in the budgets have been developed;
  - So that the costs of political interventions and ambitions are clear and can be paid for
- Frequent, accurate reporting on how the utility is actually performing against the budget;
- Swift diagnosis – and honest portrayal – of performance problems as they arise; and
- A collaborative and participative approach to resolving problems.

Implementation

- **EFFECTIVE IMPLEMENTATION** of budgets requires financially skilled and trustworthy professionals
Four Fundamental Capital Asset Questions:

1. What are capital assets that need to be acquired and when do these assets need to be acquired?

2. What are the methods of acquiring these capital assets?

3. How can we select between different options to accomplish the same goals?

4. How can we track the progress of large capital projects?
Asset Management
Why Asset Management?

Managing well the carefully planned and acquired assets is equally, if not more important, since it feeds back into the planning process as well.
## Components of Asset Management

<table>
<thead>
<tr>
<th>Components</th>
<th>Key Steps</th>
</tr>
</thead>
</table>
| **Strategy, Mission, Goals, and Objectives** | • Determine goals and desired customer level of service based on customer input.  
• Establish clear numeric goals for the target technical level of service or minimum compliance condition for individual assets.  
• Develop appropriate and measurable asset management goals and integrate them with other departmental goals. |
| **Asset Inventory** | • Collect and organize detailed information on assets.  
 o Develop asset hierarchy  
 o Include descriptive information about assets, including age, size, construction materials, location, installation date, condition, and performance in inventory database.  
 o Map assets in Geographic Information System. |
### Components of Asset Management

<table>
<thead>
<tr>
<th>Component</th>
<th>Key Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Asset Condition and Performance</strong></td>
<td>• Assess the physical condition of assets, including updating the assessment based on best practices on frequency of such assessments.</td>
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<tr>
<td></td>
<td>• Identify key information on operation, maintenance, and repair history and the asset’s expected remaining useful life.</td>
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<tr>
<td></td>
<td>• Assess information on the asset’s value, including historical cost, depreciated value, and replacement cost.</td>
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<td></td>
<td>• Evaluate performance of assets and determine risk.</td>
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<tr>
<td></td>
<td>• Identify existing and predicted problems/needs.</td>
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<tr>
<td><strong>Alternatives Evaluation and Risk Assessment</strong></td>
<td>• Consider and prioritize all management options to address existing or predicted needs.</td>
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<tr>
<td></td>
<td>• Analyze lifecycle costs, including installation or construction cost, operating efficiency, and frequency of maintenance and repairs.</td>
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<td></td>
<td>• Evaluate investment alternatives.</td>
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<tr>
<td></td>
<td>• Assess risk to determine criticality of assets to operations considering both the likelihood of asset failure and consequences—in terms of costs and impacts on desired level of service—if asset does fail.</td>
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## Components of Asset Management

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</tr>
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<tr>
<td>Implementation Plan</td>
<td>• As part of a capital renewal strategy, establish repair, rehabilitation, and replacement schedule.</td>
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<td></td>
<td>• Prepare and implement an asset management implementation plan.</td>
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<td></td>
<td>• Develop master plans and capital investment plans.</td>
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<td></td>
<td>◦ Prioritize projects.</td>
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<td></td>
<td>• Integrate asset management needs into annual capital budget.</td>
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<td>• Use a combination of short-, mid-, and long range initiatives to ensure that funds and staff availability are not barriers to successful implementation.</td>
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<tr>
<td>Performance and Monitoring</td>
<td>• Develop appropriate targets and measures to meet identified service level objectives.</td>
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<td></td>
<td>• Monitor and report outcomes to customers and other stakeholders and solicit feedback.</td>
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</table>
Challenges & Action Plan

23. CAPITAL INVESTMENT PLANNING poor
A. Transparency poor
B. Maps & Information inadequate
C. Resilience/Climate Adaptation & Greenhouse Gas Emission not integrated
D. Link to Capital Budget poor
E. Link to Financial Planning poor
F. Strategy poor
G. Community Participation low

Potential Actions

**Action 23.1** Adopt a process of 15 year capital investment planning that allows multiple participants to evaluate the performance of proposed capital projects and PPPs against criteria for meeting the needs of the water utility and customers, including cost-effectiveness, low carbon emissions, and resilience. [A/C]

**Action 23.2** Adopt a process for 15-year capital investment planning that includes evaluating proposals for capital projects, and making the proposals, process and outcomes transparent to local stakeholders. [A]

**Action 23.3** Brief key players, including journalists and other civil society representatives, on capital investment plans and PPPs to ensure maximum feasible public transparency and manage feedback from key players. [A]

**Action 23.4** Based on the vision and strengths and weaknesses identified as a result of the business planning process and the maps and data developed in Action 25.1, prepare a map of the capital investments ensuring that they are either adapted to or not located within the areas of climate change hazards. [GEN]

**Action 23.5** Use a greenhouse gas inventory for capital investment planning by integrating the data from the inventory with the datasets and procedures used to prepare the capital investment plan. [C]

**Action 23.6** Prepare a greenhouse gas inventory with data of sufficient detail to be of use in development planning and capital investment decision-making. [C/GEN]
## Challenges & Action Plan

### Potential Actions

| Action 23.7 | Integrate the greenhouse gas inventory into capital investment planning by *accounting* for current emissions and energy consumption from existing infrastructure, with site-specific but also a universal measures (CO2 equivalent). [C] |
| Action 23.8 | Integrate the greenhouse gas inventory into capital investment planning by *forecasting* increases or decreases to emissions and energy consumption anticipated in plans. [C] |
| Action 23.8 | Develop and update GIS based maps of water assets including information on ageing and repair & maintenance history. [B] |
| Action 23.9 | Integrate the greenhouse gas inventory into capital investment planning by *adopting* a climate smart methodology for capital investment planning which ensures that infrastructure project and PPP designs demonstrate low carbon and climate resilient options. [C] |
| Action 23.10 | Review and adjust current procedures to maximize efficiency in the selection and prioritization of capital investment plan projects in the annual capital budget. [D] |
| Action 23.11 | Use the capital investment planning process to ensure that projects in each annual capital budget are selected for offering a low carbon, adaptive, resilient path for development. [D] |
| Action 23.12 | Design capital investment planning procedures to obtain the full value and realize the full costs of capital investments, and to therefore plan for investments in a fiscally prudent, and creditworthy manner. [E] |
| Action 23.13 | Make a list of funding sources for projects in order of priority for formal approval of the capital investment plan. [E] |
| Action 23.14 | Conduct an assessment of the process and procedures including the use of Information Technology for the preparation capital investment plans and budgets including the use of climate smart planning and budgeting. [GEN] |
| Action 23.15 | Based upon the review, prepare a plan, schedule and budget to incorporate Information Technology into the process of preparing climate smart capital investment plans and budgets. [GEN] |
## Challenges & Action Plan

### Potential Actions

<table>
<thead>
<tr>
<th>Action 23.16</th>
<th>Develop a list of possible Urban Planning, Engineering, and/or Financial Analyst consultants (or alternative resources) with the requisite expertise. [GEN]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action 23.17</td>
<td>Engage with stakeholders in order to develop a capital investment plan, budget and timetable that prioritizes investment in climate adaption, resiliency and mitigation infrastructure projects. [C/F/G]</td>
</tr>
<tr>
<td>Action 23.18</td>
<td>Acquire computers and plotters, Geographic Information System (GIS) software, and Global Positioning System (GPS) software and GPS enabled cameras. [B]</td>
</tr>
<tr>
<td>Action 23.19</td>
<td>Create a digital base map from satellite imaging or property identification to help enrich the process of preparing a physical development plan. [B]</td>
</tr>
<tr>
<td>Action 23.20</td>
<td>Map the physical features such as roads and drainage, water and sewerage, waste lands, housing subdivisions and slum settlements, major employers and areas of formal/informal markets. [B]</td>
</tr>
<tr>
<td>Action 23.21</td>
<td>Map environmental features such as rivers, streams and solid waste landfills; and the potential dangers of disaster. [B]</td>
</tr>
<tr>
<td>Action 23.22</td>
<td>Map the social characteristics such as the basic needs of communities and access to water/wastewater services. [B]</td>
</tr>
<tr>
<td>Action 23.23</td>
<td>Adjust the greenhouse gas inventory methodology to incorporate global protocols and standards. [D]</td>
</tr>
<tr>
<td>Action 23.24</td>
<td>Map the economic characteristics such as major employers, primary products, distribution systems, interconnected business clusters and value chains, financial markets, among others. [B]</td>
</tr>
<tr>
<td>Action 23.25</td>
<td>Conduct visual field research using water utility staff visiting physical locations and adding notes to a printed version of the water utility base map. [B]</td>
</tr>
<tr>
<td>Action 23.26</td>
<td>Perform a global survey of strategies other water utilities have successfully employed in planning; choose and implement the appropriate strategies/policies/initiatives. [F]</td>
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</tbody>
</table>
THE TRICK HOW TO GET IN BALANCE?

Fighting
Engineers vs Finance
Finance vs Politicians

OR

Negotiating
Challenges & Action Plan

Potential Actions

Action 23.27 Hold formal and informal meetings with stakeholders and others to discuss and participate in forming a vision for the future of the water/wastewater services in the locality. [F/G]

Action 23.28 Prepare a five-year rolling project delivery schedule and preliminary cost estimates for a climate-smart capital investment plan. [D]

Action 23.29 Develop a comprehensive approach for resilience to the variety of natural and man-made hazards by amending existing local development plans supported with assessments of threats and vulnerabilities, strategies to overcome vulnerability and meet targets, policies to guide development, and proposals for consideration in current and future capital investment plans. [D]