Network of Associations
of Local Authorities
of South East Europe

NALAS

# Asset Management-Business Planning

# Decision Support Tool

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Implemented by:

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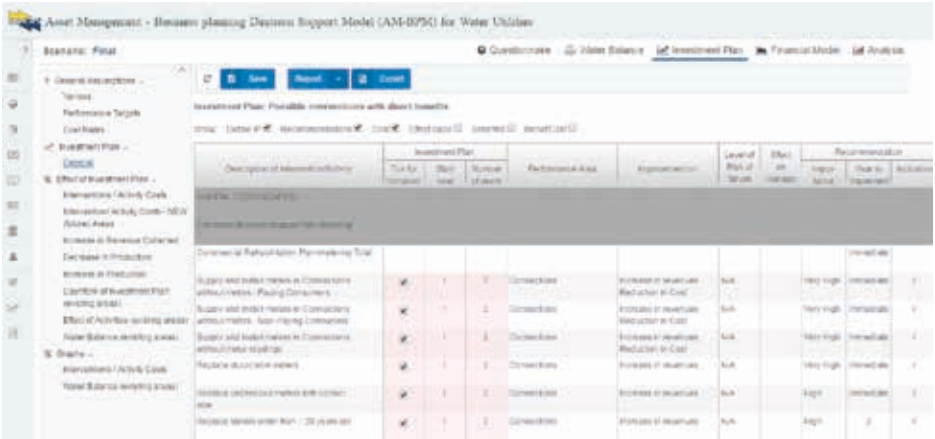
**The tool enables Municipalities analyse and bring strategic decisions for sustainable management of water services. It will help to assess the performance and sustainability of Utility's operation, including ability to repay loans for implementing Investment Plan for carrying out effective Integrated Asset Management.**

Public utility assets in South-Eastern European (SEE) countries are managed by Public Utilities (PU) owned by local government/ Municipalities. Management of all aspects of providing water supply and wastewater services is deeply influenced by the Municipal authorities.

Water Utilities are experiencing greater than ever pressure to improve their overall efficiency and cost-effectiveness. The industry is being regulated at an increasing tempo, while at the same time, funding is becoming more difficult to access. Water Utilities are left with little choice – as a minimum they will have to improve the quality and reliability of the water they supply; more likely they will be required to become less dependent on external funding and eventually self-sufficient and economically viable.

This is not an easy task with many Water Utilities having an infrastructure that has suffered from years of neglect and abuse, with supply systems that have been allowed to deteriorate due to an acute shortage of funds, inefficient over-regulation and/ or mismanagement.

To help overcoming this, a Business Planning Decision Support Tool was developed to enable Municipalities assess the performance and sustainability of Utility's operation, including ability to repay loans for implementing Investment Plan for carrying out effective Integrated Asset Management.



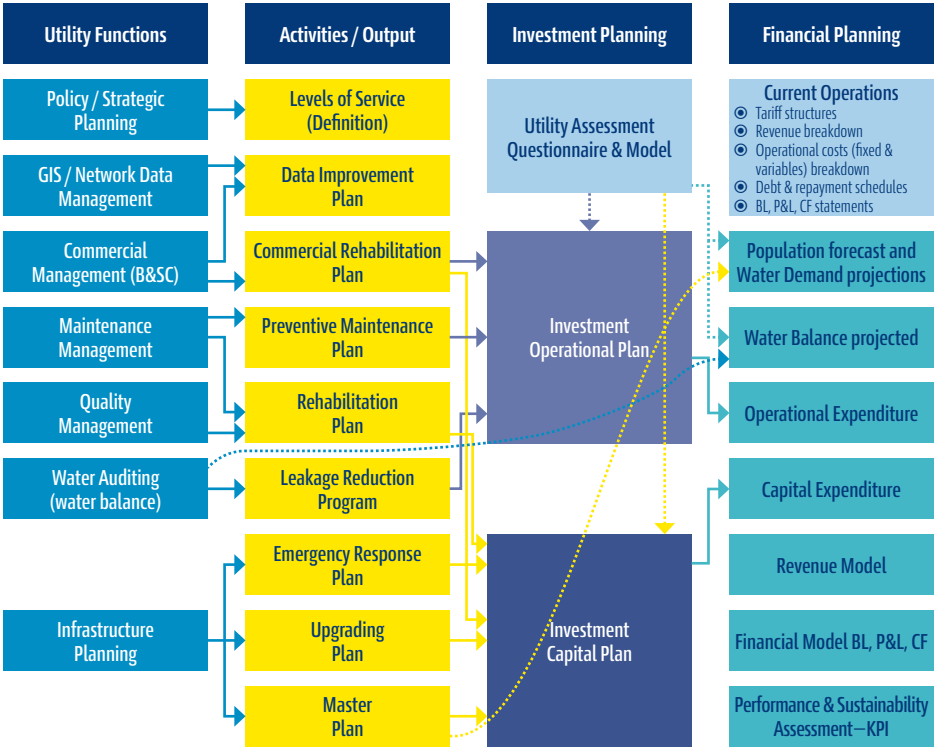
# Business Planning as a Decision Support Tool

Various activities, as part of integrated asset management, need to be carried out in the Utility that will provide information for proposed interventions to form part of the Investment Plan. Deciding which of these interventions should be included in the Investment Plan depends on both the risk of service failure and the cost effectiveness of such interventions.

To carry out the proposed Investment Plan the Utility will require funding and to be able to raise such funding it should be able to formulate a detailed Business Plan that will convince funding institutions that the Utility's operation is/ will become sustainable and will be able to repay its debts. Such a Business Plan will require input on:

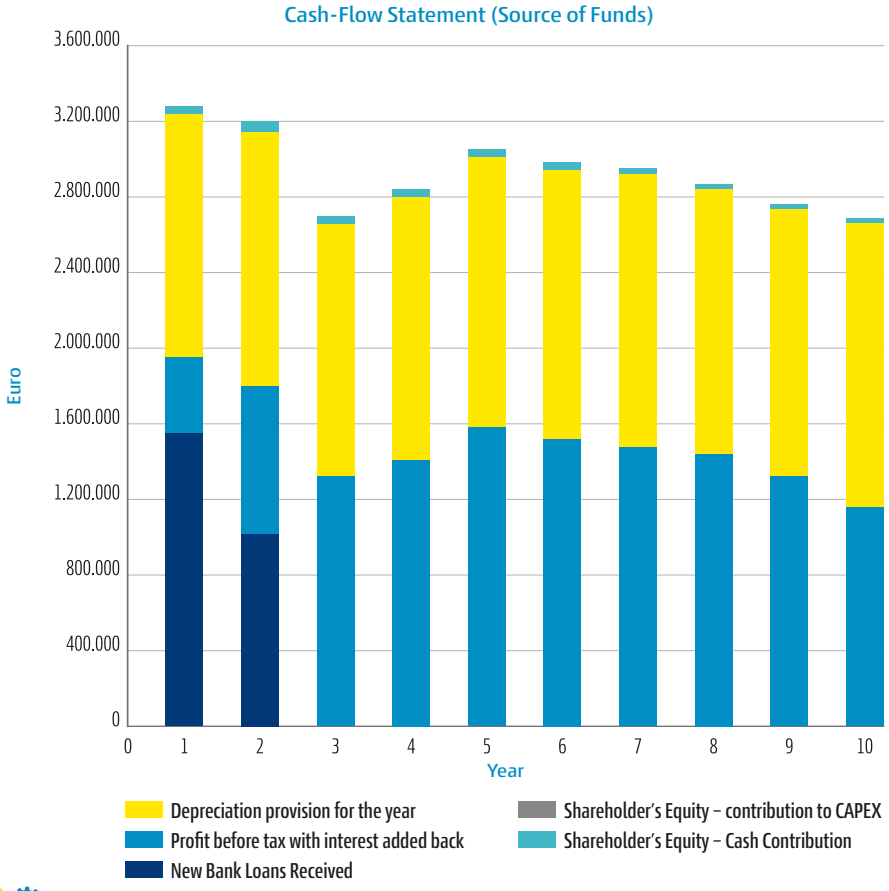
- Current operations (tariff structures, revenue breakdown, operational costs (fixed & variables) breakdown, Debts & repayment schedules, Financial Statements),
- Proposed Investment Plan
- Other Utility operations such as water auditing and demand forecasting.

The diagram below illustrates the overall process. The left blocks represent Utility functions, activities and output of the Integrated Asset Management Process, whilst the right blocks show the main components of the Business Planning process and model.



## Benefits from using the Model

1. Enables informed decision-making process, transparency and accountability in defining local priorities for improvement of water supply services.
2. Evaluates the current status of the AM programs in the Utility and provides a basis for Integrated Asset Management planning.
3. Enforces a clear and documented strategy for managing municipal assets from design to disposal at end of assets' useful life.
4. Institutes a monitored mechanism for investment plans related to defined levels of service.
5. Links investment plans to long term funding requirements.
6. Provides meaningful Financial Reporting.



## Model Overview

The Asset Management Business Planning Model has different steps that allow the choice of combining various alternatives/ options that ensure the desired results both in terms of reliability of service and performance and financial viability. The main steps are described below.

## Summary of Features

- **Web based** and user friendly User Administrator and Training Manuals.
- Scenario Manager maintains **history of business planning models** with the ability to provide reports with comparisons with the previous datasets.
- Extensive **data validation** before processing.
- **Data Confidence grading scheme** in accordance with the IWA PI system (data reliability & data accuracy).
- **Sensitivity analysis** through (i) tariff structure Scenarios, (ii) Required achievable Performance Target scenarios and (iii) inclusion of Investment Plan interventions.
- **Performance indicators**, grouped per regional or national level.
- The solution supports **multiple languages** and alphabets. Translation is possible using any of the software translation tools.
- **Extensive Reporting** including queries, templates and Numerical Reports.

## Utility Assessment Questionnaire & Model

An Utility Assessment is conducted prior to carrying out all the described activities to provide supplementary information to the Investment Plan and the Financial Model.

The Utility Assessment questionnaire accepts input on various town planning, commercial and technical macro indicators, such as number of properties, number of metered private connections, percentage debt recovery, fixed production costs and length of transmission & distribution networks.

## Water/Revenue Balance

The outcome of the analysis is a water and revenue balance and a set of performance indicators that are used as a basis to calculate expected performance improvements after certain activities have been performed. Such activities are estimated in terms of cost and benefit resulting to the Utility and must be in line with the inputs used in the Investment Plan. The output of the Water/Revenue Balance model includes:

1. **Water and revenue balance** of the Utility.
2. **Assessment of the current status of the Utility** from institutional and distribution perspective – covering both the commercial and technical functions.
3. **Overview of realistic and achievable performance targets** in line with accepted industry standards and acknowledged management and engineering practices.
4. **Remedial scenarios** that outline the possible and desired courses of action in order to achieve the performance objectives as defined.
5. **Proposed infrastructure interventions** and institutional improvement programs in accordance with the recommended remedial scenarios.

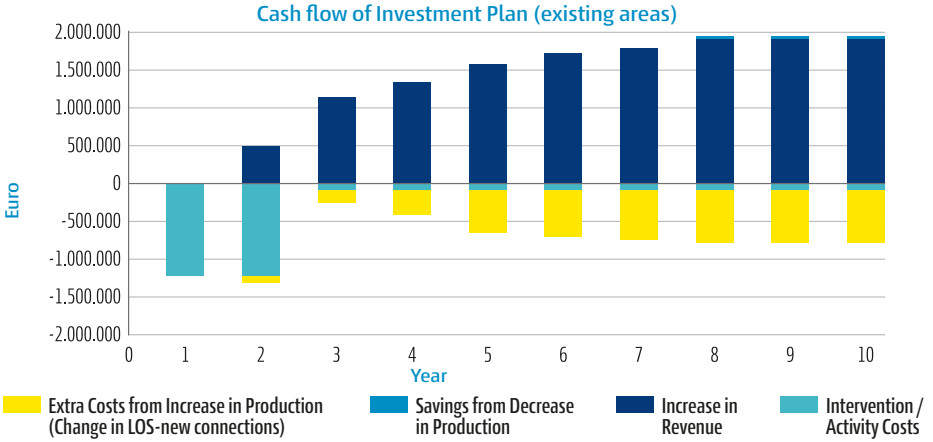
## Investment Plan (IP) & Model

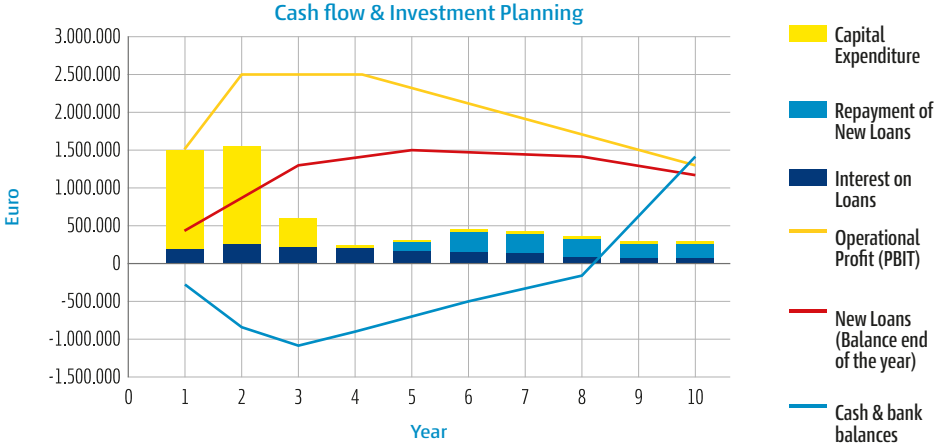
The objective of the IP & model is to come up with an Investment Plan that will ensure a desired level of service in a cost-effective manner, to carry out interventions in the system that will improve reliability of service, performance of service delivery and performance of the Utility.

The Investment Plan receives recommended interventions from the activities of:

- Data Improvement Analysis;
- Rehabilitation Plan;
- Maintenance Plan;
- Commercial Rehabilitation Plan;
- Leakage Reduction Program;
- Upgrading Plan;
- Emergency Response Plan; and
- Master Plan.

For each activity, the cost of carrying it out is estimated by the model using user defined cost rates. Based on the different variables an importance rating is deduced in terms of priority of inclusion in the Investment Plan.



## Financial Plan & Model

The Financial Plan and Model project costs and revenues and present full financial statements and key performance indicators (KPI) for the Utility over the planning period which is usually the period required to repay capital loans. It also serves as a decision support tool to assist in compiling the Investment Plan in such a manner that sustainability of Utility's operations are ensured. The Financial Plan and Model have the following components:

1. Revenue Model & Forecasting, per consumer category that includes Debt recovery ratio projections, Assumed tariff structure increase Scenarios, Revenue calculations and Sensitivity analysis on tariff structure Scenarios and performance targets;

2. Financial Model & Forecasting including: Funding and debt repayment assumptions and calculation and Building up Financial model (Profit and Loss, Balance sheet and Cash flow statements);

3. Performance & Sustainability Assessment – KPI: A summary of Utility's performance (present and projected) based on suitable Key Performance Indicators (KPI).

| Shareholders input and Return | Unit | Amount |
|---|---|---|
| **Contribution** | | |
| Shareholders Equity Contribution—for CAPEX | BAM | 0 |
| Shareholders Equity Contribution—for Cash flow | BAM | 0 |
| **Other Indicators** | | |
| Pay-back period (all CAPEX) | years | 3.67 |
| IRR (Internal rate of return) | % | 0.92 |
| Project NPV | BAM | 13.661.953 |
| **Loans** | **Unit** | **Amount** |
| Total Loans Given | BAM | 0 |
| Repayment Period (from commencement of project) | years | 0 |
| Average DSCR—during capital repayment period | | |
| **Utility Performance** | **Unit** | **Amount** |
| Net Present Value of PAT (Profit after tax) | BAM | 3.783.171 |

| Performance | Current | 3 years | 5 years | 10 years |
|---|---|---|---|---|
| **Liquidity ratios** | | | | |
| Current (liquidity) Ratio | 102.67% | 104.12% | 103.93% | 101.69% |
| **Leverage ratios** | | | | |
| Gearing Ratio | 124.51% | 85.29% | 50.44% | 3.64% |
| Interest as a % of Revenue | 2.37% | 1.57% | 1.05% | 0.13% |
| **Profitability ratios** | | | | |
| EBIDT/Revenue | 23.99% | 31.22% | 31.81% | 27.01% |
| PBT/Revenue | 3.98% | 13.28% | 15.29% | 11.56% |
| PAT/Revenue | 2.87% | 9.56% | 11.01% | 8.32% |
| **Operating ratios** | | | | |
| Operation Revenue/ Expenses | 135.50% | 151.83% | 154.54% | 143.86% |
| PBIT/Revenue | 6.35% | 14.85% | 16.34% | 11.69% |

The Asset Management Business Planning Model (AM-BPM) is developed within the project "Asset management for water and sanitation sector in South-East Europe". The project is funded by the German Ministry of Economic Development and Cooperation (BMZ) and the Government of Switzerland and is implemented by GIZ (ORF MMS) and the Network of Associations of Local Authorities of South-East Europe (NALAS).

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