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# Use of Benchmarking For the Improvement of the Operation of the Drinking Water Supply Systems

Radu Stefan Rautu<sup>a</sup>, Gabriel Racoviteanu<sup>b</sup>, Eduard Dinet<sup>b\*</sup>

<sup>a</sup>European Investment Bank, Str. Vasile Lascar 31, Sector 2, București, 020492, Romania

<sup>b</sup>Technical University of Civil Engineering, B-dul Lacul Tei, no. 124, Sector 2, Bucharest, 020396, Romania

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## Abstract

An effective way to identify the main elements that can provide an image about the efficiency of a system is to compare your performance level with that of another similar system. Therefore, water and wastewater systems need a wide and reliable database that can provide such a comparison. The water and wastewater sector has become interested in the implementation of this management technique in the last two decades, in order to improve the performance of the companies in the sector, and also the Romanian operators have started the benchmarking exercise, in order to find ways to improve their own efficiency. The results of the benchmark exercise are presented in the paper, and also first conclusions drawn from the first benchmarking process.

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## 1. Introduction

The provision of reliable water supply services and sufficient service coverage represents a main objective for the public utilities. Although the demand for better quality services from a qualitative perspective is higher, and also covering a larger number of customers is increasing, the level of financing of such services is more and more limited.

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\* Corresponding author. Tel.: + 40-212-086-400; fax: + 40-213-179-090.

E-mail address: [rautu@eib.org](mailto:rautu@eib.org)

For this reason, the utilities worldwide are seeking ways of performance and level of service improvement, at least cost.

One of the main management techniques oriented towards the improvement of delivered product/service quality and increased profitability is benchmarking.

Benchmarking is a management technique designed to help improve performance through systematic research and adaptation of best practices in the marketplace. The water and wastewater sector has become interested in the implementation of this management technique over the past two decades to improve the performance of companies in the sector.

Benchmarking is the process by which an organization compares and improves its performance by learning from the best in a group. The process involves identifying, familiarizing and successfully adopting the methods and processes used by benchmarking partners.

## 2. The Method Used in the Benchmarking Exercise

### 2.1. Methodology

The benchmarking approach used and recommended for benchmarking exercises is that proposed by International Water Association (IWA), respectively performance evaluation and improvement.

Since its publication, IWA's performance indicators have become standard in the water and wastewater field. IWA textbooks for water and wastewater services, presents lists of indicators and variables for calculating these indicators and is a good starting point for designing a performance evaluation system.

The performance evaluation stage determines how efficiently or how well a particular company operates or performs a function, task, or process. This assessment is made through performance indicators that have to be compared with a benchmark (a standard or a target) to get an evaluation. This is called the comparative stage of performance evaluation.

In the performance improvement stage, the best practices of operators with better performance are identified and adapted to improve the performance of a particular company for a particular function or process. This phase requires the participation of several companies or benchmarking partners to bring together additional information that will lead to the identification and adaptation of the best practices.

These two stages are parts of the benchmarking that are defined as "a tool for improving performance through systematic research and adaptation of best practices".

The Performance Indicators System used in Romania is based on the lists in the IWA manuals and is adapted to the needs, conditions and objectives of regional operators in Romania. It contains variables for the company's main functions, namely:

- commercial, containing data on connection to services, counters and consumption;
- financial, with operational data on water, waste water and other activities, tariffs, profit and loss account and balance sheet;
- water and wastewater balances;
- technically-operational, separate for water and wastewater activities;
- investments, from own sources, or from local authorities and EU funds;
- human resources, containing data about company personnel.

The variables and indicators are presented separately for water and wastewater activities. Where possible, IWA parameters are used, and where necessary new parameters (or derived from IWA parameters) are introduced.

### 2.2. Background of the Benchmarking Implementation

The Benchmarking exercise was initiated in Romania with the help of the European Bank for Reconstruction and Development (EBRD) through a program on the provision of technical assistance services and support for the implementation of projects funded through the EU Structural Instruments.

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