

The Benchmarking Club of the Hungarian Waterworks Association

The International Benchmarking Network for Water and Sanitation Utilities (IBNET) collects performance data within a sector, allowing comparisons between peers as well as analysis of each company's performance. **ANDRAS KIS** looks at the use of IBNET in Hungary and how this survey technique has been used to improve its water and wastewater sectors.

The Benchmarking Club of the Hungarian Waterworks Association was founded in 2007. While water and wastewater service providers had been planning for some time to start the process of benchmarking in Hungary, the impetus came after the first IBNET (International Benchmarking Network for the Water and Wastewater Utilities) benchmarking survey, funded by the Department for International Development (DfID), was successfully completed in 2005, and participating companies could start to compare their performance to that of their peers (see page 8).

The IBNET survey in Hungary was carried out by the Hungarian Environmental Economics Center (MAKK). MAKK collaborated with the Hungarian Waterworks Association in order to identify water and wastewater utilities that would properly represent the diversity of the water and wastewater utility sector in Hungary. The sample included mid-sized and large utilities from all seven regions of Hungary, with a mix of government owned regional and local utilities and privately operated companies.

Water utilities in Hungary have long been contributing data to a wide range of surveys, including mandatory data provision to government agencies, and voluntary participation in industry surveys and Chamber of Commerce data collections. The companies, however, have rarely received structured feedback with analysis of the collected data. The IBNET exercise promised to deliver a report describing the results of the survey, as well as a set of tables and charts for each

participating company showing the performance of the utilities in comparison to the full sample.

Twenty-two companies decided to take part in the survey, while data on two privately operated companies, which refused to participate, were collected from public sources, including their websites and annual reports. MAKK prepared an English language report to accompany the data sent to the World Bank, and produced, in Hungarian, a report and utility-specific tables and charts. The results of the IBNET survey were also presented at the Annual Meeting of Chief Financial Officers of the main water utilities of Hungary.

The feedback from the IBNET survey was appreciated by the participating companies and the Hungarian Waterworks Association. Besides providing useful results, the IBNET benchmarking exercise also serves as an example of how a benchmarking process can be implemented.

Seeing the IBNET survey as a good start, some of the companies wanted to move ahead to gather additional data, some of it rather country-specific, compute additional indicators, and start an actual exchange of best practices. Thus, in early 2007, the Benchmarking Club was founded.

Participating companies

While the Benchmarking Club operates under the aegis of the Hungarian Waterworks Association, membership of the Club is optional to the Association's members. In 2007, 18 companies chose to participate, while additional utilities indicated that they would consider membership after the first year of operation. In early 2008 another two utilities became members.

The Benchmarking Club member utilities provide about 60 percent of all drinking water supplied and collect a little over 25 percent of all wastewater generated in Hungary. There is substantial diversity among members. The smallest utility sells a little more than one million m³ of water annually, while sales at the largest utility exceed 150 million m³ per year. Some of the companies operate in large towns – with or without serving smaller neighboring communities. Others serve smaller settlements, some of them serving settlements with less than 2000 inhabitants per settlement. There is also substantial geographical variation among Club members. Some members serve just one or two larger towns in flat terrain, while others serve dozens or even hundreds of small villages in hilly and mountainous areas. The source of water also varies between companies; some get their water primarily from bank filtered wells, while other use deep strata water or carstic supplies.

The large diversity of conditions under which the companies operate is appealing for understanding the operation of the water and wastewater utility sector of Hungary. Nevertheless, this variety also poses challenges; comparison of performance indicators between companies needs to be done with caution – carefully considering differences in operating conditions.

Rules of operation

The Benchmarking Club has a management board with five members, who are elected for a period of three years and represent member companies. A mixed board of financial experts as well as engineers is preferred. The management board

meets about six times a year, and its main responsibility is to make sure that the Club is operated smoothly and in a professional manner.

The following eight thematic working groups have been set up to define the data to be collected and the performance indicators to be computed: (i) operating conditions; (ii) water service; (iii) wastewater service; (iv) customer relations; (v) human resources; (vi) investments; (vii) corporate management / strategy; and (viii) finance and accounting.

Each working group has four or five members, who are experts of the member companies in the field of interest of the group. The groups also provide whatever theme specific assistance is needed within the Benchmarking Club.

The actual benchmarking process is carried out by independent experts. The Hungarian Waterworks Association decided to contract the same experts who carried out the IBNET survey and who are currently associated with the Regional Centre for Energy Policy Research (REKK) at the Corvinus University of Budapest.

REKK, in cooperation with the thematic working groups, develops the data collection methodology, including an MS Excel-based questionnaire. Each year, the questionnaire is to be reviewed and updated in the Spring, based on experience gained during the previous year. The questionnaires are completed by the utilities during May and June and they are then returned to REKK, where the data received is screened for errors, and inserted into the database. REKK then computes indicators and compiles summary tables of those data for which indicators are not computed, e.g. information on the strategic planning processes applied by the companies. The companies receive the first results of the benchmarking exercise in early Autumn, just in time to use them for their annual planning.

An important rule within the Benchmarking Club is that of the confidentiality of individual utility data. Within the Club only average figures are shared, and the utilities receive only their own individual indicator values, but not those of others.

The main cost for the operation of the Benchmarking Club is the consultant fee paid to REKK. Member utilities pay a Benchmarking Club membership fee to the Hungarian Waterworks Association, which the Association uses to contract the services of REKK. The Association also provides in-kind support by providing the infrastructure needed for Club meetings, and administrative assistance.

Labor Cost as a Ratio of All Costs in 2006

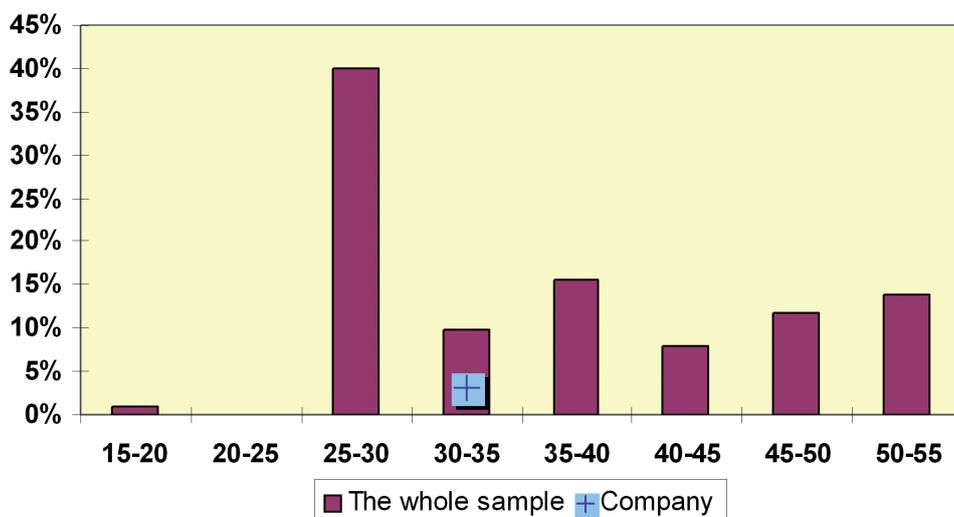


Figure 1: The position of the company compared to the distribution of the indicator values of the whole sample

Annual results

At the end of the annual benchmarking survey, Club members receive a utility-specific document with over two hundred charts and tables, illustrating the relative position of the company in comparison with the other utilities.

During the first year of the Benchmarking Club 150 indicators were computed for two years of data. These indicators were designed by the working groups and the experts of REKK together, partly based on international experience (e.g. IBNET website, International Water Association publications). For financial indicators as of now only nominal values have been computed, but in the future inflation adjusted real values will also be calculated. Indicators on the operation of wastewater treatment plants were computed separately for small, medium and large plants, because of the differences in technologies and economies of scale. While the surveyed data was thoroughly defined in order to ensure consistency across the sample,

the results showed that some of the data need to be further defined, for instance costs relating to maintenance vs. repairs, outstanding revenues, and the number of drinking water samples satisfying specific standards.

For each of the indicators a chart depicts the distribution of the values of the full sample and the company's own value, as illustrated in Figure 1. The document also includes a table with the average and standard deviation figures for all indicators, as well as the company's own indicator values. This feedback enables utility managers to observe the performance of their company in comparison with others, without showing the individual indicators values of the other companies, in line with the data confidentiality rules of the Club.

Companies often prefer to compare themselves to a sub-set of the full sample, namely those utilities that are operating under similar conditions. Therefore utilities are assigned to groups based upon specific criteria, and the indicator values for each of these

Table 1: Unit Operating Cost of Water Service in Selected Groups

Group	Indicator value (HUF/m ³)
Average number of inhabitants per town - below 3000 (small towns)	224
Average number of inhabitants per town - above 3000 (larger towns)	170
Standard deviation of the altitude above sea level of the service area - above 30 metres (relatively hilly area)	237
Standard deviation of the altitude above sea level of the service area - below 30 metres (relatively flat area)	162
Volume of water sold per km of water network (m ³ /km/year) - below 6500 (sparsely populated area)	220
Volume of water sold per km of water network (m ³ /km/year) - above 6500 (densely populated area)	167
Population served with drinking water - less than 85,000 (smaller company)	207
Population served with drinking water - more than 85,000 (larger company)	179
Volume of delivered water - less than 10 million m ³ /year (smaller company)	203
Volume of delivered water - more than 10 million m ³ /year (large company)	180

Note: In March 2008 the US Dollar to Hungarian Forint exchange rate was about 167.

Age Distribution of the Wastewater Network as of 31 December 2006

	Average of the Sample	Company
0-10 years	46.6%	22.2%
11-20 years	26.7%	31.0%
21-30 years	10.8%	2.8%
31-40 years	8.6%	7.1%
41-50 years	5.0%	33.5%
51-100 years	2.2%	3.4%
>100 years	0.1%	0.0%
Total	100.0%	100.0%

groups are computed. The table below includes the average values of selected groups for one of the indicators, the unit operating cost of water service.

Lastly, information was collected about the practice of corporate management and the processes and tools used for strategic planning. This information, by its nature, is not numerical. Thus instead of computing indicators, summary tables were prepared showing, for instance, the number of companies using certain standards, or a list of the strategic objectives set forth by the management.

Another type of output that member companies receive is the distribution of the values of a given type of data. For instance, a company may compare the age composition of its wastewater network to the average age composition of the sample companies, as illustrated in Table 2.

In addition to the company specific documents, an annual report is also compiled and shared among the members of the Club. While this report does not include individual utility data, it contains all the average and standard deviation values, summary tables compiled from the responses of the companies, the methodology used during the benchmarking exercise, and a set of conclusions based on a thorough analysis of the data. This document is available to all the members of the Club, but not to external utilities and organizations.

Companies use the results of the benchmarking exercise in different ways. The most typical way in which companies use the results is to identify areas where performance can be improved, i.e. where other companies with similar operating conditions operate more efficiently or at a lower cost. Benchmarking also provides feedback on the success of strategic initiatives, showing whether these initiatives ensured top performance among companies. One of the utilities mentioned that it used the results from the first year of the Benchmarking Club to justify proposed tariffs when seeking approval from the municipal owners of the utility. Another utility used the results to discuss the potential for cost

reductions with municipal decision makers.

Sharing of best practices

Obtaining information on the relative performance of a company is useful in itself, but knowing which companies are performing better than the rest, and the reasons for their good or superior performance is even more useful. Since company specific data is handled confidentially, a mechanism was devised to identify companies with good or superior performance. For each indicator the three utilities with the best indicator values were identified and were asked if they were willing to disclose their identities. Having no reason to keep good performance confidential, companies will usually agree in this case to reveal their names and indicator values.

After the list of top performers is compiled, it is shared with all member companies so that they can select those companies, the experience of which they would like to learn about, with regard to specific fields of operation. After the feedback from all companies has been compiled, it is the task of the management board of the Benchmarking Club to organize meetings where best practices are shared via presentations and discussions. The first such meeting took place in March 2008. Three topics were presented and discussed: (i) the ratio of electricity costs to the total operating costs of water production; (ii) pipe breaks and other technical problems in the water network; and (iii) cost savings and enhanced biological pollution reduction through improved wastewater treatment techniques.

Sharing of best practices may also take place at the utility itself, especially when newly introduced technologies are presented to the members of the Benchmarking Club.

Future plans

The Benchmarking Club of the Hungarian Waterworks Association had a promising start in 2007. By the end of its first year the Club had a thoroughly designed set of operating rules, a dedicated management board and thematic working groups, which

**Table 2:
Example for a
Distribution Table**

created and refined the benchmarking survey and indicators to be computed. The participating companies received a large set of data and charts illustrating their positions compared to all other water and wastewater utilities within the Club.

In February 2008 member companies adopted the 2008 work plan, which calls for revision and more precise definition of some of the data to be collected, international cooperation, more active exchange of good practices, and initiatives to recruit additional member companies. Some of these items are detailed below.

In many ways 2007 can be viewed as an experimental or pilot year of the Benchmarking Club. The data survey was ambitious, and in the beginning it was unclear whether certain pieces of data could be collected with ease. Now there is a good understanding of the data generating capabilities of the member companies, and the survey can be adjusted and specific data redefined if necessary.

Some of the companies expressed their desire to gain an international perspective regarding their performance. Therefore, in 2008 the indicator values of foreign, especially other Central European utilities will also be computed and used as part of the benchmarking exercise. The necessary data will be gathered from international benchmarking surveys, such as IBNET. There have also been discussions regarding cooperation with other water utility associations in the region, with the aim of establishing a regional benchmarking programme.

One of the strategic goals of the Club, for 2008 and beyond, is to recruit additional members. This goal is partly driven by the desire to improve the statistical significance of results, and to allow for advanced statistical analysis of the dataset, which requires a larger sample size. In addition, once time series of indicators are available, management can gauge the impact of changes in the company's operations, such as organizational or process reforms, new technologies, or acquisitions. A larger membership will also contribute to wider application of prevailing good practices among Hungarian water and wastewater utilities. ●

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