

DANUBE WATER FORUM

UTILITY STRENGTHENING: IMPROVING PERFORMANCE THROUGH DATA COLLECTION

All that was said, shown and discussed: The summary report for those who missed an exciting session that brought insights into data-driven management in real-life utilities.

Focusing on data collection as a way to improve performance, this session was hosted by Elisabeta Poci, SHUKALB, and Christian Hasenleithner, Energie AG Bohemia. They invited representatives from three utilities to report their experiences with data-driven performance improvement.

Impressive effort in Pristina

First to take the stage was Sokol Xhafa, technical CEO of RWC Pristina, Kosovo's largest utility, serving eight municipalities and 145.000 customers with over 3.000 kilometers of water and sewer networks. With his background in engineering, Mr. Xhafa provided deep and impressive insights into the anatomy of the GIS-based asset management implementation program that his company entered in 2019.

To give an idea of the challenges the project had to overcome from day one of phase one, he gave an overview of the company's former data landscape, a maze of systems and databases in a wide variety of formats, partly located in the company and partly stored on the municipal level, that the team had to gather, analyze, reformat for compatibility with the future EMDAS platform, insert and configure.

This would have been a daunting task in itself, but beyond that, infrastructure data needed validation in the field and on-site geo-referencing to create a reliable, widely useable asset register. The company hired additional manpower and started to validate the data in outlying small communities, gathering experience and getting the teams up to speed.

“Wherever we went, we captured and validated as much as possible, not only for project phase one, but also for future purposes,”

says Mr. Xhafa. Eventually, the field teams have closed in on the densely populated urban region of Pristina, where the logistical challenges started multiplying. The work is still under way, while project phase 2, streamlining the company's maintenance operations has already been implemented. Maintenance operations now use a call center as a free-of-charge customer interface, handling customer complaints in a defined, data-driven six stage process from alert to repair/maintenance completed.

A control panel for Novi Sad

Improved performance is the deserved reward for an enormous effort, as the next speaker pointed out with impressive examples. Sanda Nastic, PhD, Head of Business cooperation and International projects at PUC Novi Sad, a utility serving 350.000 customers in 130.000 households and maintaining 1.500 water network kilometers and 1.200 kilometers of sewerage in Serbia's second largest city.

In 2006, the company entered the institutional support program of development bank KfW, introducing management tools and methods like Key Performance Indicators, initially applying the KPI system only on basic processes. Encouraging results led to an expansion of the list of KPI's to cover the whole company structure, including all business activities and all financial indicators.

Today, performance is reported monthly, and controlled on a monthly, quarterly, and annual basis, with KPIs and strategic goals making up a "control panel" as a basis for controlling. Corrective actions are often taken monthly: "Controllers must ensure a consistent, coordinated management system that includes KPIs and quality management with a system of continuous improvement", says Sanda Nastic, invoking the Japanese Kaizen management approach.

There are very good reasons why, once a control panel is installed, a company should never turn its back on it. Ms. Nastic mentions the damage that occurred when the utility failed to track the progress of a City-approved investment program over the year and found out too late that an important deadline would be missed, resulting in a significantly reduced investment budget for the following year. On the other hand, permanent monitoring of data once revealed abnormal petrol consumption of the utility's motor pool, in other words, theft by staff. Sanda Nastic reported:

"We reacted with measures that resulted in significant savings and improved discipline in the utility".

At the end of her presentation, Sanda Nastic mentions that most KPIs are also included in the Utility benchmarking Program list, and therefore available for comparison and discussion: "The exchange of best practices helps utilities to make smarter improvements and to plan more realistically" she says.

Digitalizing in Sofia

Sofia Water's Strategic partnerships and projects Director Lyubomir Filipov fully agrees that systematic data gathering is all-important. "From Opinion Driven to Data Driven Decisions" is the title of his presentation. Serving 1,3 million customers with 4 drinking water treatment plants, 2 wastewater treatment plants, 16 pumping stations and 4.000 kilometers of supply network, Sofia Water plans five years ahead, with the current five-year planning period expiring in 2021.

During this period, the company decided to bury its outdated communication, data handling, KPI monitoring and decision-making culture and digitalized its business processes. “Today, Sofiyska voda is the only Bulgarian water operator that has implemented all the registries and data bases required by the State Regulator, using dedicated software: SCADA systems, GIS, CRM and ERP systems, real time online monitoring, monthly KPI monitoring – it’s all there and up and running”, reports Lyubomir Filipov with a hint of pride.

“You need to know what you want to do with the data.”

In the same breath he warns that even the most generous investment cannot buy success: “Gathering and storing reliable data is a must, but definitely not sufficient: You need to know what you want to do with the data, and how to use it. Structure them to get insights into trends and tendencies. Keep them comparable, both within and outside the organization, according to concepts like the IAWD’s Utility benchmarking program. Think ahead: data we have gathered lately are now the basis of the forecasts that we build our business plan 2022-2026 on. And last not least: Think even farther ahead: AI and predictive analysis based on structured sets of data will be the next game-changers, even in the water sector.”

The session closed with a lively Q&A round, with questions focusing mainly on the financial aspect of big data projects from manpower to licensing, and the use of data in negotiations and regulation. There was general agreement that money is a stumbling block, and, as Sokol Xhafa answered:

“Time, but then again, time is money!”

Lyubomir Filipov looked back at the significant investment his company made in a modern customer relation management system and called convincing the deciders of the project’s value the hardest part: “They always want us to put the money into pipes, nothing else.” An interesting detail that turned up in this context was that in the Pristina case, the software Edams was partly provided as a donation from GIZ and Hydrocomp while the licences are financed from RWC Pristina.

Pioneering is by nature voluntary, and, as Sanda Nastic remarked, for instance Serbia has not even yet created a legal framework for KPI use in public services:

“We do what we do for our own benefit.”

There was also general agreement that these investments are worth the while, not only because they bring better and control and better decisions, but also because modern management methods are an incentive for the digital native generation:

“We have an ageing workforce, and we need the young generation to move the sector forward”,

concluded Elisabeta Poci.