

The challenges in the Wastewater Treatment Industry

and how WABAG can help your business achieve sustainability

Appropriate wastewater management plays a crucial role in sustainable development.

The current global economic and social context forces companies to rethink their strategies and opt for actions that can minimize the impact of their activities on the environment. In Romania, the groundwater reserves are not only depleted but also highly polluted in many places due to [wastewater discharges](#) and other polluting emissions. Over 50% of the total wastewater originates from commercial activities, and industries play a significant role in the same. Consequently, all the players in the economy are responsible for securing a water cycle, which has minimal impact on the environment.

As far as companies from the industrial sector are concerned, environment-friendly wastewater treatment is one of the most sustainable ways to participate in the development of their communities, contributing to the socio-economic development of the present and future generations, while ensuring sustainable growth of the business. Appropriate wastewater treatment supports the natural processes by bringing used water to a certain level of quality, which later allows either the sustainable recycling or reuse of treated water for within the production process or for service water or returned without impact on the environment.

*“Globally, two million tons of sewage, industrial and agricultural waste is discharged into the world’s waterways.” *)*

Industrial wastewater can be toxic, flammable, corrosive, or reactive, and can have drastic consequences for people and the environment if not handled properly. In terms of environmental impact, industrial wastewater can affect natural ecosystems with serious consequences. They can also cause severe health problems for the public, such as respiratory disorders, skin diseases, or worse.

The new report “Sick water?” - compiled by an interagency collaboration led by UNEP and UN-HABITAT- states, that at least 1.8 million children under five years-old die every year from water related disease, or one every 20 seconds. However, not enough companies are conscious and aware of their environmental footprint and that natural resources are limited, scarce and are depleting alarmingly over time.

*“The wastewater challenge is not only a threat, but a challenge where we can find opportunities for green employment, social well-being and ecological health”. **)*

Main challenges for wastewater treatment plants and their operation

Not only the appropriate treatment process and equipment of wastewater treatment plants are important to ensure environmental-friendly wastewater management but also the professional operational management of these plants.

Many challenges can occur in the operation of wastewater treatment plants due to the operator's lack of experience, shortages of qualified personnel, energy consumption or lack of automation.

Efficient and qualified personnel are essential for the proper operation and maintenance of wastewater treatment plants.

Like many other industries in Romania, wastewater treatment has to deal with staff shortages and an insufficient level of automation. Nevertheless, it is essential to monitor how wastewater is collected, treated, and disposed of, as it contains various contaminants such as heavy metals, pathogens, organics and micropollutants. Improper management of wastewater treatment facilities can cause significant economic problems for industrial companies as well as for people and the environment.

Resource-protective process schemes for wastewater treatment plants make an important contribution to climate protection.

Wastewater treatment plants consume large quantities of energy. Modern and innovative treatment technologies can help to significantly reduce the energy demand, up to achieving energy-neutral plants. As a result, operating costs are minimized which has a positive effect on cash flow and economic success of producing companies. WABAG is an expert in resource-saving treatment plants by promoting sustainable water recycling concepts and closed water cycle systems as well as customized, energy-optimised treatment processes and intelligent automation systems.

Advanced technologies and tailor- made water and wastewater solutions from WABAG

Sustainable solutions and investments in reliable and safe wastewater treatment plants are crucial for any company aiming to minimize its footprint and use natural resources wisely. Increasing the level of automation is one important way to improve efficiency and performance. WABAG Water Services offers a comprehensive range of solutions for industrial wastewater treatment to achieve compliance with regulations, minimize environmental impact and save costs at the same time.

The company's experts offer comprehensive, professional support and advice to identify the most appropriate, sustainable solutions and strategies for efficient and ecological management of wastewater and effluent streams.

WABAG offers suitable treatment concepts based on the inlet wastewater characteristics, ensuring the required effluent characteristics for either conventional discharge or high-performance installations to ensure water recycling and reuse. Tailor-made process schemes are designed for individual customer needs, including both proven technologies as well as combinations with innovative and patented processes such as our BIOPUR® (biofiltration system), FLUOPUR® (MBBR-technology), MARAPUR® (MBR-technology). The wide range of technologies enables WABAG to realize individual concepts for efficient and flexible treatment plants according to the requirements.

WABAG targets to achieve an optimal combination of efficiency and profitability for our customers. Reducing operating costs for wastewater treatment allows our customers further potential for investment in the production facilities.

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About WABAG

[WABAG Water Services SRL](#) is part of WABAG Europe Group. As an internationally respected group, WABAG is a full-service provider specialist. WABAG has comprehensive expertise in the design, construction and operation of water and wastewater treatment plants for municipalities and industry.

The WABAG Group and its subsidiaries are represented by companies and offices in more than 20 countries. Since 1995, WABAG has completed over 1,440 water and wastewater treatment plants worldwide with a permanent workforce of around 1,500 employees. We offer unique technological know-how, innovative, patented technologies, and long-term experience.

Through the conservation and ecological use of the world's most valuable resource, WABAG has made a sustained contribution to an improvement in the quality of life of well over a hundred million people, being one of the world's leading partners for investments in a future worth living.

**) Quote from Achim Steiner, Executive Director, UNEP and Anna Tibaijuka, Executive Director, UN-HABITAT. Source: Sick water? Report compiled by an interagency collaboration led by UNEP and UN-HABITAT, 2021)*

****) Quote from HRH, Prince Willem-Alexander of the Netherlands, Chair UN Secretary-General's Advisory Board on Water and Sanitation. Source: Sick water? Report compiled by an interagency collaboration led by UNEP and UN-HABITAT, 2021)*



Photo: Industrial wastewater treatment plant for the Oil & Gas Industry completed by WABAG in 2018.



Photo: Operation & Maintenance of an industrial effluent treatment plant in Romania by WABAG.