Hubgrade
by VEOLIA

KLAIPEDA, LITHUANIA

CASE STUDY I Municipal

WATER TECHNOLOGIES

VEOLIA

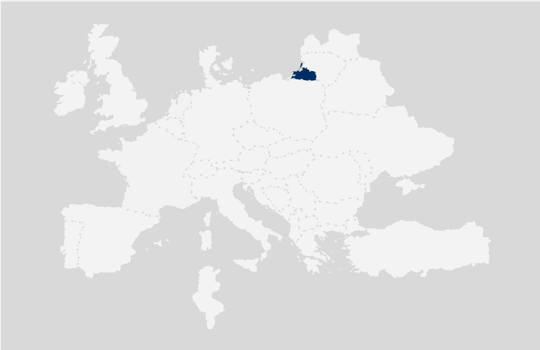
| The challenges

- Klaipedos Vanduo aimed to **reduce operational costs** (OPEX) and **improve effluent performance**.
- They wanted to **increase WWTP operations during wet weather** situations.
- To reduce risks, they sought a company with a **Performance Guarantee Contract** to ensure expected results are achieved.

| The solution

- In 2019, Klaipėdos Vanduo awarded a contract to Hubgrade for **real-time optimization of process performance** at the Klaipėda WWTP.
- Hubgrade Wastewater Plant Performance has **digital optimization expertise** in various fields, including wastewater treatment and real-time optimization.
- The implementation of Hubgrade Wastewater Performance Plant (HWP) resulted in the following benefits:
    - **Ensured compliant effluent** despite increased BOD/TN loading.
    - **Reduced environmental impact** by reducing tot-N in the effluent.
    - Significantly **reduced operational expenses** for energy and chemical consumption.
    - Significantly reduced the **Carbon Footprint** of the utility.

> *Innovative digital solutions, like Hubgrade Performance, are a sustainable, cost-effective way for us to continuously improve our WWTP operational processes. An intelligent use of real-time data from our entire system reduced our operational expenses and effluent concentrations.*
>
> ***Kristina Bereišienė**, Head of Wastewater Treatment Service*



Klaipeda, Lithuania

| The client

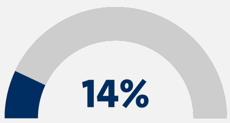
- 350,000 PE (people equivalent)
- Located on the Baltic Sea, next to UNESCO World Heritage Site
- Main Lithuanian seaport, 3rd largest city in the country
- The plant was near its maximum capacity and over the past 2 years, the effluent quality was extremely close to the permit of 10 mg/l tot-N.

Key Figures

M^3 treated per day: 432,000

180k€
saved per year on energy and external carbon dosing

2180T
CO_2-eq saved per year on electricity, external carbon, transportation, and effluent charge



reduction of Total-N in effluent