

XDM software tested in municipality of Goes, the Netherlands

Risk-based maintenance by using existing data

Xylem carries out the maintenance of wastewater pumping stations on a contract basis for a large number of municipalities in the Netherlands. With the maintenance contracts in place, Xylem is in regular contact with the associated technical people to share new solutions and insights. When the new module for 'risk-based maintenance' of the XDM software package was launched on the market, Goes was one of the first municipalities in the Netherlands invited to participate in the pilot testing.

The municipality of Goes and Xylem have been working closely together for many years, among other things, jointly managing the small and main pumping stations via a main post. Marco Priem is supervisor for the municipality and comments: "We have an excellent collaboration, we know exactly what we can expect from Xylem, and from their side they have great insights in our 'installed base'. So when Xylem asked us if we wanted to test a new module in XDM, it was a no-brainer. We would love to!"

XDM in a nutshell

XDM is a software package in which various data from a specific installation can be collected and stored in an orderly manner. Not only parts of lists and contracts, but also fault reports, photos, work orders and so on. The collated data provides insight to support efficient decision making on where and when maintenance may be required now and into the future.

This data is used by the new maintenance module developed on a 'risk-based maintenance' concept, the basis for reliably predicting maintenance needs. The module distinguishes itself from other 'condition based maintenance' systems because no additional data systems are required. All the necessary data can be extracted from the XDM software alone, without the need for a complex infrastructure or different communication protocols.

LOCATION:	Van Hertumweg, Goes, the Netherlands
END-USER:	Municipality of Goes
APPLICATION:	Wastewater pumping stations
PRODUCT:	XDM (Module risk-based maintenance)
COMPLETION:	Since 2019



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"Calculations from Xylem have shown that savings of up to 25% can be achieved."

Matrix

The term 'risk-based' means that municipalities can assess their risk and priorities by filling in a matrix. Figure 1 shows an example of such a matrix, where all the attention points of the wastewater pumping station in Van Hertumweg, Goes are included. These can be general factors such as 'safety and the environment', but also special requirements for those installations that are located in a protected area of nature or in the immediate vicinity of a national monument. This analysis provides a risk profile to the operator with insight to prioritise maintenance and alleviate location-based risks.

Finally, the risks are embedded by giving each installation a profile 'low', 'medium' or 'high'. An installation with a low profile (green) is less likely to require maintenance while a high profile (red) is a critical asset with a higher maintenance requirement.

Getting Started

Marco Priem: "Because we have been working with XDM for many years, we already had all the data needed to feed the module in advance. This, in combination with the matrix we have filled out, gives us a powerful tool to determine and carry out the necessary maintenance based on risk. Calculations from Xylem have shown that savings of up to 25% can be achieved. In addition to that, the use of this module will lead to fewer disruptions, improved customer experience, help us maintain a good reputation and lower risks of environmental damage. Filling in the matrix is a bit of work initially, but we benefit from that later."

		Risks		Priority		Condition		Geographical		Mileage		Planning		Visual inspection	
High	Low	Very Low	Very High	Very Low	Very High	Very Low	Very High	Very Low	Very High	Very Low	Very High	Very Low	Very High	Very Low	Very High
General site															
Dense residential area															
Water body / Polder															
Directly next to a river															
Directly next to a lake															
Directly next to a canal															
Directly next to a highway															
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