



## CASE STUDY

# CLUSTERED MAINTENANCE AT WATERNET: A FUTURE-PROOF MAINTENANCE APPROACH THAT WORKS

Waternet is the Dutch water cycle company responsible for the water cycle of the municipality of Amsterdam and part of the provinces of North-Holland and Utrecht. In addition to sewage treatment and surface water management, Waternet also provides sewage and drinking water in the area. This provides a large portfolio of assets. Together with MaxGrip, Waternet developed 'Clustered Maintenance' to be able to do smarter maintenance and thus better anticipate those challenges.

### **CHALLENGE: WORKING SMARTER**

The water company's maintenance organization copes with challenges such as the aging of its technical staff, digitalization and increasing pressure on the assets due to climate change, among other things. The organization was looking for a way to meet all of these challenges. The solution needed to fit in with other processes which were running in parallel: standardizing the maintenance process, digitalization with the implementation of a new Enterprise Asset Management (EAM) system and contract management. In addition, the organization wanted to place more emphasis on preventive maintenance, obtain a higher first time right percentage and minimal disruption to the production process.

## APPROACH: CLUSTERED MAINTENANCE

Together with Waternet, we developed Clustered Maintenance. Basically, this approach is a series of mini turnarounds that are scheduled at set times. A predefined part of a sewage treatment plant or a complete production line is clustered in a three-week block. By planning fixed blocks, more attention is paid to preventive maintenance. Malfunctions are also prioritized in this process; if it can wait, breakdowns will only be resolved 'in the block' by the maintenance team. Clustered Maintenance, therefore, provides structure and clarity to the maintenance organization. To implement Clustered Maintenance, we worked with Waternet on:

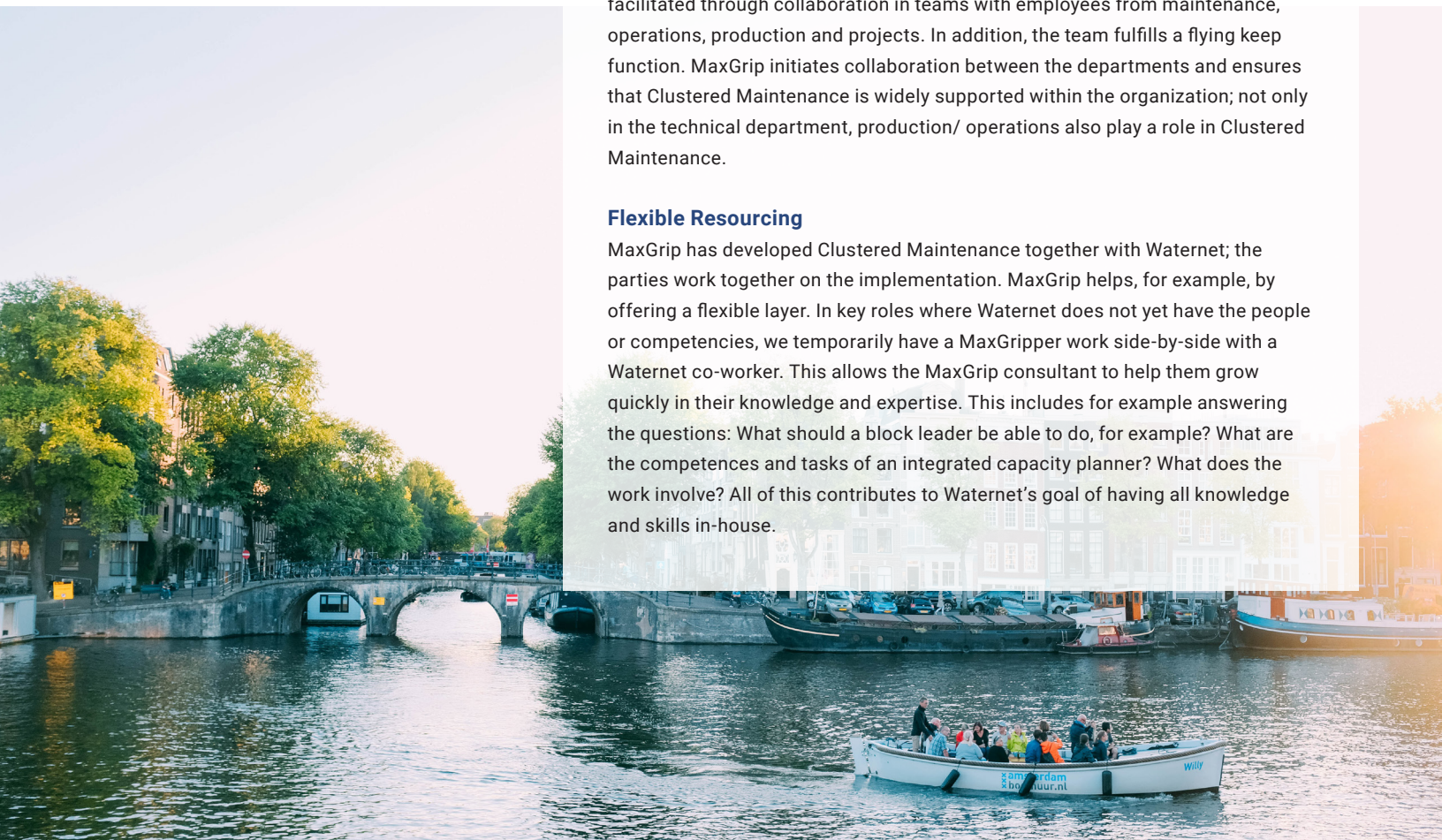
1. Checking and optimizing current maintenance concepts;
2. Mapping the available capacity;
3. Developing work processes (team meetings, checklists, formats, etc.);
4. Making maintenance cluster-proof: implement adjustments such as the separation between plannable and non-plannable maintenance;
5. Clustering Maintenance concepts per location and per asset;
6. Drawing up maintenance planning appropriate to Clustered Maintenance;
7. Assisting Waternet's organization in the execution of Clustered Maintenance; focus on getting and keeping the PDCA loop going.

### Organizational change

In order to have Clustered Maintenance adopted internally, a lot of attention is paid to organizational change. Clustered Maintenance involves working in multi-disciplinary teams that work flexibly across the locations. Knowledge is better facilitated through collaboration in teams with employees from maintenance, operations, production and projects. In addition, the team fulfills a flying keep function. MaxGrip initiates collaboration between the departments and ensures that Clustered Maintenance is widely supported within the organization; not only in the technical department, production/ operations also play a role in Clustered Maintenance.

### Flexible Resourcing

MaxGrip has developed Clustered Maintenance together with Waternet; the parties work together on the implementation. MaxGrip helps, for example, by offering a flexible layer. In key roles where Waternet does not yet have the people or competencies, we temporarily have a MaxGripper work side-by-side with a Waternet co-worker. This allows the MaxGrip consultant to help them grow quickly in their knowledge and expertise. This includes for example answering the questions: What should a block leader be able to do, for example? What are the competences and tasks of an integrated capacity planner? What does the work involve? All of this contributes to Waternet's goal of having all knowledge and skills in-house.



## THE RESULTS

## LESS FAILURES

The project of Clustered Maintenance is ongoing. This way of working is known as a best practice among water companies in the Netherlands. So far the achievements are:

- The execution of the yearly Preventive Maintenance scope has increased from 70 to 95%;
- 10% cost savings on contractors and the maintenance scope is executed with less manpower;
- Ratio preventive/ corrective maintenance has changed from 50/50 to a healthier 70/30;
- Increased process performance - compliance with licensing requirements;
- Employer of Choice: diversified work in different parts of the organization.

Ambitions are high at the water company. To achieve an even higher efficiency across departments, Waternet will keep working on standardizing this way of working. As part of organizational change they will also keep paying attention to involvement and maintaining focus of all important stakeholders, which can partly be achieved by communicating continuously.

“MaxGrip has a lot of knowledge of the maintenance process and they have a lot of experience in the culture aspect, how to implement and how to take the people along.”

*Henri Broekhuijsen,  
Manager Maintenance,  
Waternet*



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