

## CASE STUDY

# INNOVATIVE MAINTENANCE STRATEGY AND PROCESS APPROACH FOR R&D FACILITY IMPROVES MATURITY SIGNIFICANTLY

A global company specialized in dairy products decided to move and expand their research and development efforts to a new location. The facility includes a pilot plant and several test kitchens and laboratories which hold more than 2,000 lab devices. MaxGrip was asked to collaborate on a maintenance strategy, implement the maintenance management system and set this location up for continuous asset performance improvement in the following years.

## OBJECTIVE: LEVERAGE INNOVATIVE POWER AND IMPROVEMENT POTENTIAL

The international food and beverage company has more than seventy production locations worldwide. A new Enterprise Asset Management (EAM) system was implemented at all of these plants. Although the Research and Development (R&D) department had a simple asset management system that did not have a proper maintenance module included, they decided to upgrade to the new EAM system.

Despite the challenges that come with the huge upgrade, the company recognized the benefits of maturing the maintenance strategy and processes of the R&D location. Sander Janssen consultant at MaxGrip who worked on the project explains: "Because the facility is not a normal production location it did not have to deal with 'production pressure', meaning that we could take the time to come to robust solutions which delivered better results. I was asked to do the project because MaxGrip and me specifically have broad asset management experience in this company's production locations, which enabled me to think from the end user's perspective and act as a valuable sparring partner for the Head of Technical Services. Together we could transfer our innovations, insights and development knowledge into practical and valuable advice for the production plants to improve their asset performance."

## SUMMARY

### Challenge:

- Defining and logging the new maintenance strategy and processes
- Deploying the new EAM system

### Approach:

- Defining and logging asset management processes
- User-experience role play workshops for system requirements validation
- Asset hierarchy with descriptive codes.
- QR codes on assets, data and information easily accessible through app
- Autonomous Maintenance carried out by operators

### Results:

- Maintenance maturity improved significantly: maintenance performance scan (5-point scale) from 1,7 to 4,2 in three years
- Internal knowledge and experience sharing

## APPROACH: EFFECTIVE INNOVATION

As this was a greenfield location for which an EAM system was new, everything could be done from scratch. When combined with the fact that this is not a normal production location, it made for a fascinating exercise in innovation.

### Defining and Logging Processes for Long-Term Value

The project started out with defining requirements for the EAM system within the framework as defined by the company template. The project team familiarized themselves with the parameters and added their extensive knowledge and experience of asset management from the various user perspectives to get the most out of the asset management system. This was followed by testing the system and validating the setup in workshops with role play to enact the user journey for different roles and disciplines. Sander: "With the user perspective inputs we were able to get a solid starting point for the system set up and processes. During the workshops we kept repeating the same question: if we do this task or set up the process in this way then what is the added value in five years or more? For example, if a failure is detected and it needs to be entered in the system, which fields actually add long-term value to get results and which are just nice for statistics but not valuable for the desired results? This helped with making the system more user-friendly and the process more efficient."

The processes were elaborately described including flow charts and a responsibility matrix (RACI). The process documentation is easily accessible through the system and acts as both a manual and reference guide.

### QR Codes for Assets

The asset hierarchy was built up in a logical way with descriptive codes that clearly denote the place and function of the assets. These descriptive codes became a binding force for all users that dealt with the assets, including Operations and Maintenance teams, as it proved to be easy and efficient to all use the same unique language. Thinking ahead again, the assets were not only given easy unique IDs, but were also marked with a QR Code. "Every asset was labeled with a unique QR Code. When scanning the code with a tablet or smartphone, a wide range of information can be consulted in an app, developed by the client. It includes info on the last NEN certification date, drawings, Standard Operating Procedures (SOP), manuals, calibration results, and owner including the phone number. We are working on adding inspection documents and work instructions as well as images of the assets. The app and QR codes serve as an extra tool that provides easy access to more data than what the EAM alone can offer," explains Sander.



### Autonomous Maintenance

After the initial phase of defining the blueprint for the system, collaborating with IT to adjust the system to the needs of Maintenance and training all users, it was time for go-live. The new system, processes and way of working went live successfully and the next phase was focused on stabilizing the project and creating a continuous improvement loop. In this stage, autonomous maintenance was included. The operators of the pilot plant carry out minor maintenance tasks such as lubrication, sealing and visual inspections of the assets. This freed the maintenance team for more complex maintenance tasks on critical equipment.

## RESULTS: MEASURABLE SUCCESS OF MAINTENANCE PERFORMANCE

Yearly, the maintenance department at the R&D location performed a maintenance performance scan to track progress. The scan takes factors into account, to give a few examples:

- Asset master data
- Organization and competences
- Planning and preparation
- Workflow management
- Maintenance plan and risk control

On a 5-point scale, the location improved its overall score from 1,7 to 4,2 in three years. “Because we track, trace and measure work and progress we get important insights. This is fundamental to cash in on the continuous improvement potential of your asset performance. The scan and connected KPI dashboard help tremendously with internal adoption of what we do here”, says Sander. The R&D facility shares results, innovations, successes and also pitfalls with the company’s production locations.

“At the core, I think that this project shows how to combine innovation with a healthy dose of pragmatism resulting in a solid asset performance improvements. I am already working with another client to see if we can implement the QR codes and asset hierarchy functionality at their new production location.”

**Sander Janssen**, MaxGrip consultant

## ABOUT MAXGRIP

MaxGrip consultants enable organizations in asset-intensive industries to achieve continuous improvements on their asset performance, also using the power of Digital Transformation. MaxGrip embraces APM 4.0 with a maintenance track record of over twenty years in industries like Oil & Gas, Food & Beverages and Utilities & Infrastructure. We operate on all continents and have a global presence with our main offices in the Netherlands (HQ), USA, and Malaysia.

## WOULD YOU LIKE TO KNOW MORE?



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