



# PREDICTIVE QUALITY ASSURANCE FOR THE SMART FACTORY PLATFORM

It's a threefold success story from msg Plaut: the development of the Predictive Quality Assurance App for the Smart Factory Platform in the Software Development Hub.

## Initial situation

For manufacturing companies, the world is spinning faster and faster: shorter development cycles, increasingly complex production processes and massive competitive pressure make for an extremely challenging market environment.

With the Smart Factory Platform, the manufacturing industry is provided with a marketplace that makes it possible to buy agile individual solutions that can be implemented quickly, thus accelerating the necessary digitisation of processes and making workflows more effective and efficient. For example, a frequent problem in the production line is that errors at the workstations are often not documented or only insufficiently documented, important correlations are therefore not recognisable and resulting information is not transferred to the control loop. The first application to be developed for this platform should therefore be able to digitally record and document errors along the production line and be made available to companies as a ready-made solution on the Azure Marketplace for easy download.

## Challenge

Malfunctions and failures in the production process as well as defects and deficiencies of the produced goods are often still documented manually. Predictive Quality Assurance, however, requires the digitalisation of quality monitoring. For this reason, employees on the shop floor must be able to log and record all relevant data paperlessly using mobile devices with intelligent dialogue-guided input that are suitable for the production environment.

For the development of a suitable app, those functions had to be defined first that could be used to digitally document the faults along the production line. And for the design of the user interface, attention had to be paid to good usability in the production setting, as the best technical solution will not be accepted if it is not convincing in practical use and handling. Both aspects required special industry know-how.

## Realisation in the Software Development Hub

This knowledge was available in the Software Development Hub, and the msg Plaut core team was able to find the best solution through close exchange with colleagues from across the msg Group and various other stakeholders. Thanks to this large pool of technical, product and industry know-how, a first version of the app was developed within just three months.

Best of Both



„The Predictive Quality Assurance App is the result of intensive interaction between stakeholders and the development and industry know-how of our experts. It supports companies in finding and avoiding errors and helps them to increase their OEE in the long term.“

Florian Wurzer,  
Head of Software Development bei msg Plaut

The holistic guidance along the entire innovation process by the SW Development Team ensured that the needs of the manufacturing industry were included in the conception and that the technical implementation could be carried out precisely in accordance with the strategic requirements.

### Solution and customer benefit

The Predictive Quality Assurance App enables discrete manufacturers to digitally record defects along the production line to gain greater visibility into the effectiveness and efficiency of the production process. This means that not only can the defects themselves be

rectified more quickly, but an early warning system can also be implemented to prevent defects from occurring, thus eliminating costly idle times and defective product series from the outset. Since the app's user interface is adapted to the production conditions on the shop floor, it enables a smooth connection with the production line.

Predictive Quality Assurance also allows companies to make data-driven predictions of product- and process-related quality. Only when it is clear why overall equipment effectiveness (OEE) is as it is, can countermeasures be taken in the right place if necessary - or, in the case of a positive development, this knowledge can be used for a sustainable, controlled increase in OEE..

„In msg Plaut's Software Development Hub, our experts are in close contact with colleagues from across the msg Group and with our customers in order to find the best solutions.

A huge pool of know-how is available and the holistic support along the entire digital innovation process guarantees customers that their needs are understood and that the technical implementation of their ‚business needs‘ can be carried out in line with their strategy.“

Florian Wurzer, Head of Software Development bei msg Plaut

Would you like to learn more about our offer? We look forward to hearing from you.



Florian Wurzer  
Head of Software Development  
+43 664 80740 235  
florian.wurzer@msg-plaut.com

msg Plaut Austria GmbH  
Modecenterstraße 17/4/6 | 1110 Vienna  
msg-plaut.at  
office.at@msg-plaut.com

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# PROJECT PROFILE

## Initial situation

- + In the production line, errors at the workstations are often not documented
- + OEE decreases without transparency about the background and interrelationships
- + Production process therefore difficult to optimise

## Challenges

- + Definition of the right functions to digitally record faults along the production line
- + Development of a smart user interface for good usability in everyday production
- + Making the app available as a finished solution on the Azure Marketplace

## Realisation in the Software Development Hub

- + Close and continuous exchange between the core team and colleagues from across the msg Group as well as various stakeholders
- + Large pool of technical, product and industry know-how built up

- + Holistic support along the entire innovation process by the development team
- + Technical implementation precisely tailored to the strategic requirements of the stakeholders

## Solution

- + Mobile app for digital documentation of errors in production
- + Interface adapted to the production conditions in manufacturing
- + Early warning system to avoid errors

## Benefits

- + Rapid creation of transparency about errors in the production process
- + Faster resolution of errors through anticipatory action
- + Avoidance of errors through an early warning system
- + Sustainable increase in OEE

Would you like to learn more about our offer? We look forward to hearing from you.



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Head of Software Development  
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