# Predictive Maintenance Solution

## Instant Digital Transformation of Industrial Plants

The Industrial Internet of Things (IIoT) relies on comprehensive sensor and process data from the field level. At HMI2025, Pepperl+Fuchs, together with Bosch Digital Twins Industries and Syntax, will showcase a joint product that demonstrates how easily aggregated data can be transferred to established cloud platforms such as AWS and MS-Azure.

The Digital Twin Starter Kit from Pepperl+Fuchs will be shown with this model at the trade fair to simulate a real application. The kit consists of powerful sensors, an IO-Link master, a fanless embedded PC, and all other components required for seamless integration of the hardware.

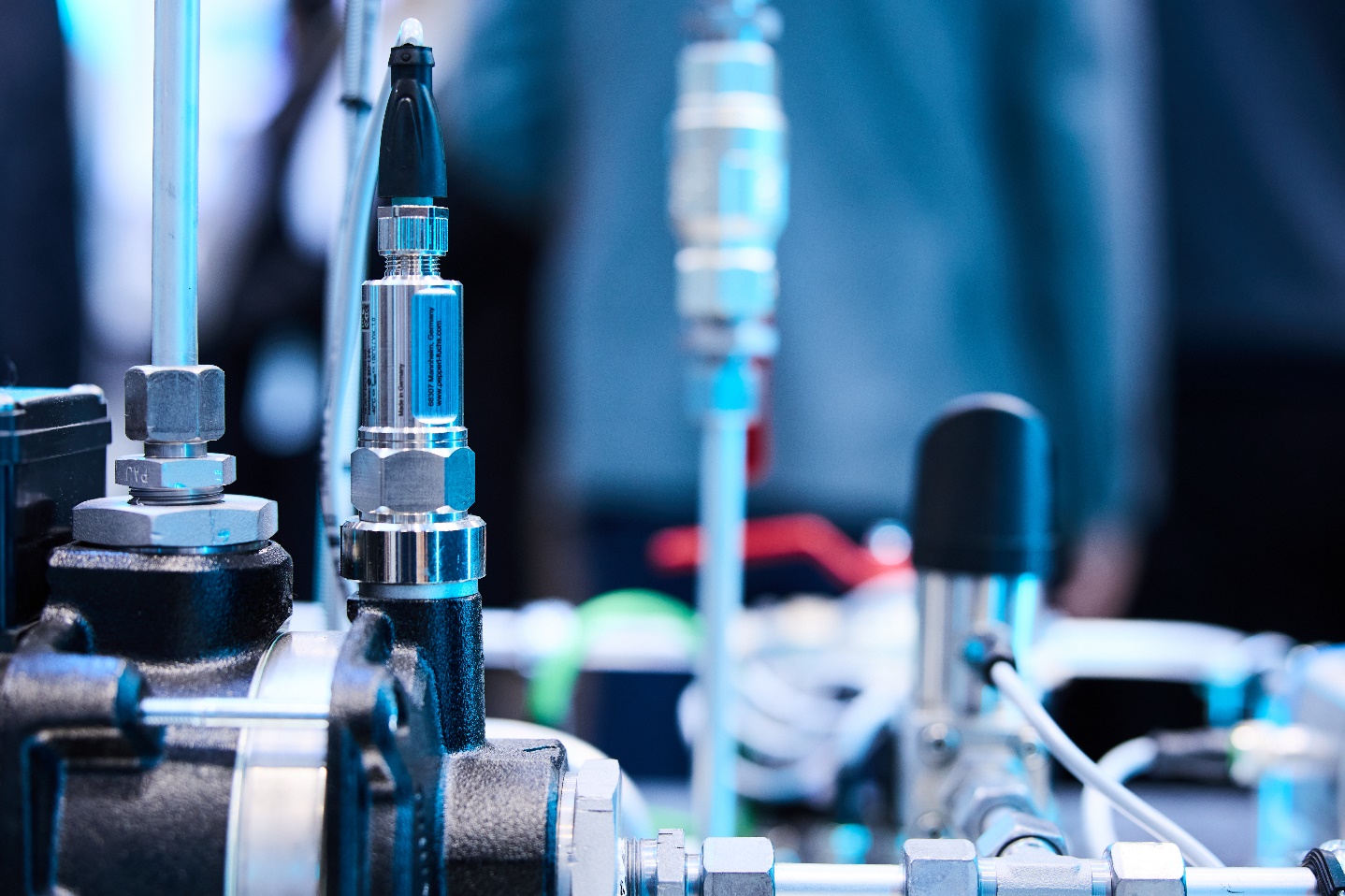
The IO-Link master serves as the interface between the sensors and the embedded PC for preprocessing and aggregating data from the field level, which is then transferred to the Bosch Digital Twin platform, also known as the Intelligence Core. Using a simulation model, the integrated intelligent asset performance management (IAPM) solution performs real-time data analysis.

The use of ML algorithms and AI allows functions such as prediction of potential failures, optimization of maintenance schedules, and recommendation of actions. This ensures preventive interventions for trouble-free operation of the production plant.

The starter kit configures itself automatically after connecting to the internet and powering on. The open platform and open communication standards used guarantee maximum flexibility and individual scalability.



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| **Caption** | The complete starter package |
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| **Caption** | Process sensors for Predictive Maintenance |
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| **Author** | Hans-Günter Busch |
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