

Digital Intelligent Assistant for Predictive Maintenance

January 2020

CHALLENGE



- Maintenance is information-intensive
- Prediction requires data science and PDM software skills
- Skills are expensive

SOLUTION



- Voice-enabled digital intelligent assistant
- Fast & intuitive interaction with PDM software

BENEFITS



- Reduce time to access information
- Reduce skill floor for PDM application

517k€ EIT Funding

Concept development
March 2020

First version
May 2020

Final version
December 2020

Extension goal 1
June 2021

Extension goal 2
December 2021

MAIN PROJECT RESULTS

5



LEARNING NUGGETS
CREATED IN 2020

6

TASKS
SUPPORTED



~2M€
FOLLOW-UP
GRANTS ENABLED

“EIT allowed us to assemble the solution and test it with industry,,



STEFAN WELLSANDT

Scientific Researcher @ BIBA

MAIN PRODUCT

DIAMOND project

AIM: Assisting workers in operation and planning tasks of predictive maintenance



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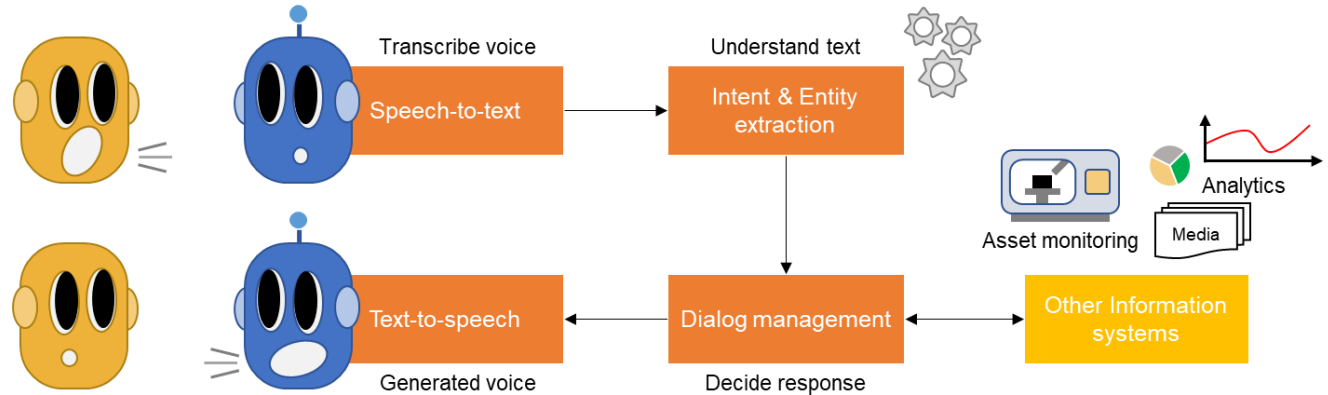
DIGITAL INTELLIGENT ASSISTANT FOR PREDICTIVE MAINTENANCE

WORKING PRINCIPLE OF THE ASSISTANT

The assistant transcribes the workers voice and tries to make sense of the generated text. It extracts the users intentions and entities based on training data.

Once the meaning is clear, the assistant decides how to respond. It uses other information systems, such as ERP, MES and PdM software to access context information.

A response typically contains text that a computer-generated voice will utter. For complex information, such as tables and drawings, the assistant uses a screen.



UPTIME PLATFORM

The assistant can access the PdM platform UPTIME to control predictions and other analysis processes.

ASSISTED TASKS

- Detect outliers in historic data
- Check if a value is an outlier
- Predict maintenance-related values
- Root-cause analysis

FLEXIBLE ARCHITECTURE

The assistant uses function modules that developers can quickly replace to respond to client needs. Modules include proprietary software and Open Source Software to grant maximum flexibility.

A scalable data integration solution provides developers with a powerful tool to integrate new information systems. This is critical because most of the assistant's capabilities depend on external systems and their fast integration is a key business challenge.

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