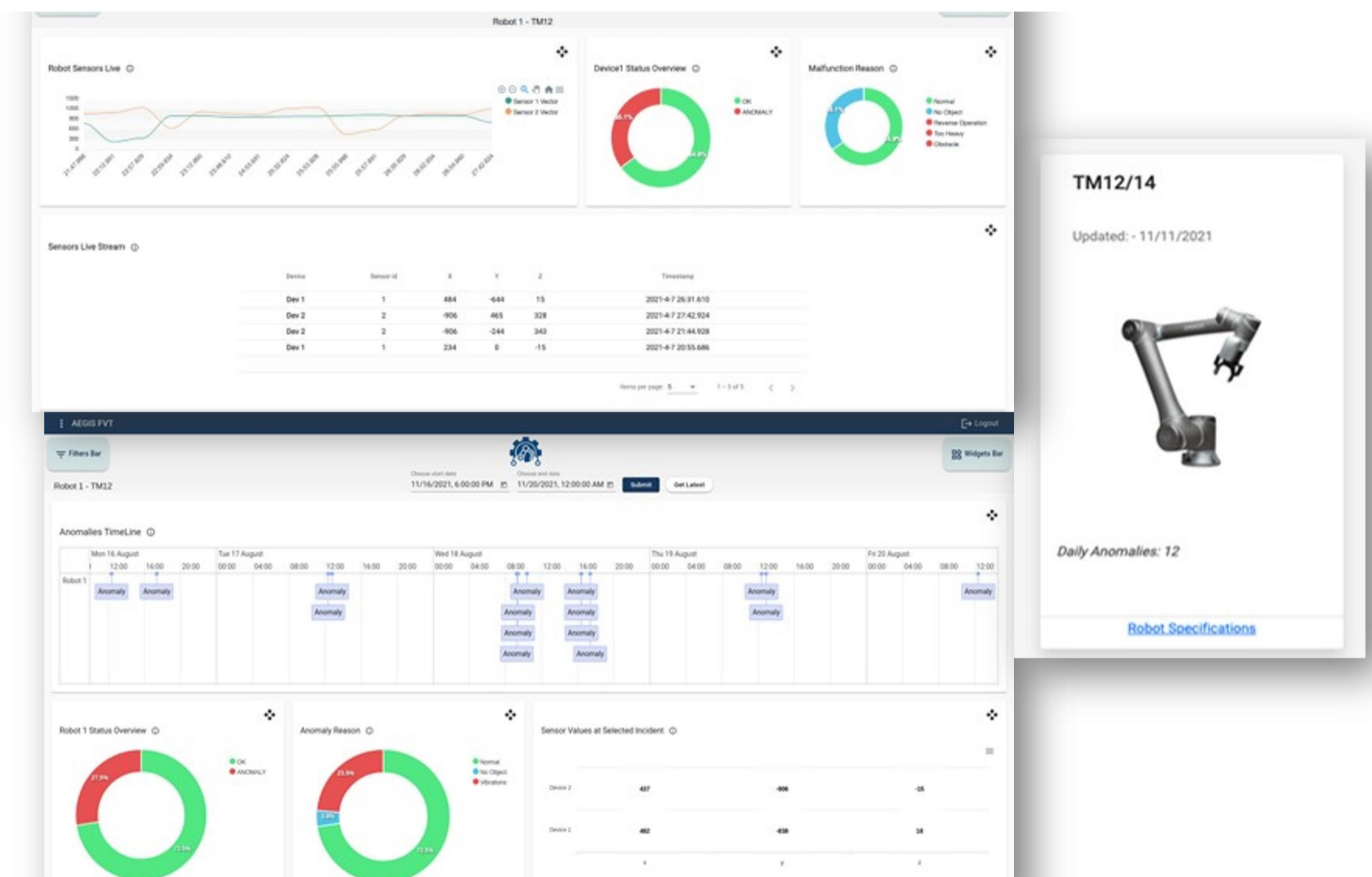


The PROBOTAIN solution

A set of Web-based applications that enable decision makers to consume data insights, towards the health status assessment of robotic systems supporting operations in the manufacturing production environment and sharing context-specific information on certain attributes for the profile management of robotic parts, based on anonymised operational evidence.



Features

The solution monitors real time data streams from IoT sensors attached to mobile and collaborative robotic arms and implements a set of ML-based models to define, detect and predict anomalies that lead to maintenance interventions and visualize them in a business-style dashboard.

Service/Application validation

Evaluation for the needs of supporting the production in the automotive industry, in both a lab environment and in almost real settings at the research testbed of CRF premises, to test cycles of normal operations and simulate anomalies met in collaborative robot business scenarios.

Benefits

Enable the shift to circular manufacturing, by delivering AI assisted predictive maintenance and asset monitoring capabilities, to support the efficiency maximisation in the use and the lifecycle extension of robotic systems in production.



- Situational awareness**
Bottom-up analysis of real time sensor data and health monitoring of industrial robotics
- Maintenance Assessment**
Insights of expected maintenance periods to optimize key business objectives in manufacturing



Improved **uptime** of robotic systems



Forecast on unexpected **anomalies** and failures



Control over **lifetime** of robotic-based assets



Acknowledgment

This work has been performed in the context of the **PROBOTAIN** project, an open call #1 winner of the H2020 MARKET4.0 project (market40.eu), with participation of

- AEGIS IT RESEARCH, <https://aegisresearch.eu/>
- Power Evolution srl, <http://www.reteseven.it/>
- University of Novi Sad Faculty of Sciences, <http://www.ftn.uns.ac.rs/n1386094394/faculty-of-technical-sciences>

The H2020 MARKET4.0 project develops an open multi-sided digital platform for enabling production equipment and service providers to connect and work together with manufacturing companies. The MARKET4.0 platform enables new business, based on value-adding interactions among the production equipment and service providers and their customers while at the same time provides an open and participative infrastructure for these interaction