

Mantis

Management of critical knowledge to support maintenance decision making

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Maintenance is no longer a necessary evil that costs what it costs, but an important function that creates additional value in the business process as well as new business models with a stronger service orientation. The target of the project is to apply integrated knowledge-based systems with advanced analytics and self-learning capabilities to support maintenance-related decision-making. The concepts will be validated in pilot/demonstrators from different domains: manufacturing assets, energy production, and vehicle management. The overall concept of MANTIS is to provide a **predictive maintenance service platform architecture** that allows to estimate future performance, to predict imminent failures and to schedule pro-active maintenance and that consists of distributed processing chains that efficiently transform raw data into knowledge while minimizing the need for bandwidth. This chain will include key technologies such as smart sensors capable of local pre-processing, distributed machine learning for data validation and decision-making, as well as cloudbased processing and data availability. To do that, MANTIS will find a way to integrate machine data with information from people and form valuable knowledge for decision support. This is done between production, maintenance, equipment manufacturers and service providers to benefit all and their common objectives. The results of MANTIS can be utilized directly in several industry areas but also applied into different fields of maintenance, like real estate maintenance and maintenance of transportation fleets.