



Synchronised wireless technologies empowering smarter data for Predictive Maintenance 4.0

PdM 4.0 is widely recognised as a potential improvement over the current maintenance practices, but the market is still at early stage.

Uptime improvement as well as other optimisation areas such as cost, life cycle, safety, environment, quality and performance are the main reasons to plan for PdM 4.0.

Despite its huge potential, PdM 4.0 is still in early stage of development.

The availability of data, the budget, the culture and the data security have been identify as the most critical factors.

Many PdM 4.0 solution providers are developing solutions using “Big Data”. Big Data consists of developing values from a large set of data. This approach has demonstrated several limitations:

- Critical failure modes can be detected effectively if their signature is included in the training dataset. In praxis, this condition is difficult to obtain and/or requires that the models are constantly trained.
- The quality of the models depends on the competence of the data scientists.
- Big Data models are often designed for a fleet of assets. Therefore, the models cannot be easily used for other clients/type of assets without in-dept reengineering.

Classic Condition Monitoring is therefore still widely used in Predictive Maintenance. The costs of implementation and its complexity are still a big barrier for further and broader expansion.

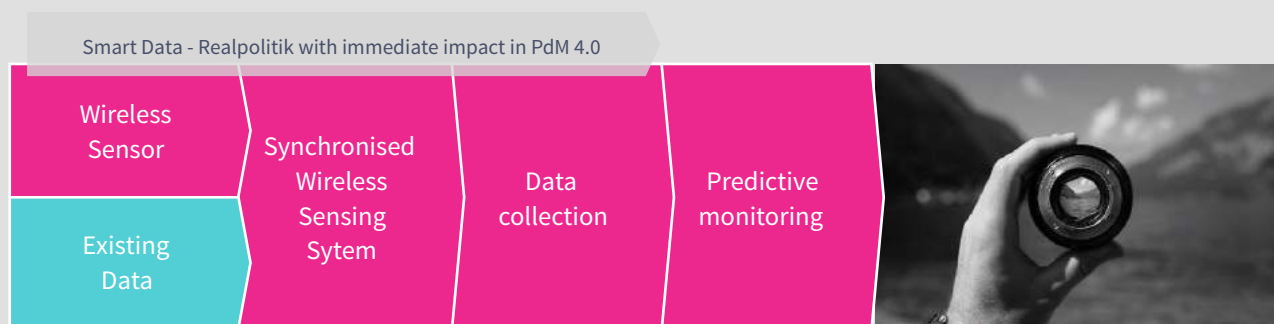
PdM 4.0 OST’s Solution: IoT Smart Data

OST Solution consists of an IoT Smart Data System designed for heavy industry. Our solution provides relevant PdM 4.0 information related to a piece of equipment. Our IoT Smart Data System processes data in a structured and deterministic manner. So, our solution provides **immediate, strong and robust predictive analytics results and grants for short term CAPEX and OPEX reduction.**

Our solution includes a wireless sensing system able to collect data **synchronously** and a cloud platform able to process it with built-in predictive algorithms and to publish the results to 3rd party systems or to our own predictive monitoring platform.

As data is collected synchronously, the multi-parameters correlation is more **robust** ensuring a **better prediction quality.**

Combined with ERP/CMMS data and Big Data Analytics, our IoT Smart Data System is able to open totally new areas of optimisation in the R&D, supply chain, operations and asset performance management.



Products overview

Our solution consists of **LYRA**, **MoonStone** & **VEGAImperium**.

LYRA

LYRA is our synchronised wireless sensing system able to capture data from various sources. As data is captured **synchronously, it can be correlated for more robust and better prediction quality.**

LYRA is actually designed to capture the following sources of data:

- Vibration and temperature with *LYRASens* - Autonomous battery powered sensor designed for low RPM machines
- Digital data with *LYRABus* - Industrial bridge compatible with Modbus RTU / Modbus TCP / Internet IP & OPC UA
- IO-link sensors data with *LYRALink* - Bridge compatible with any IO-link sensor

MoonStone

MoonStone is our cloud-based platform compatible with LYRA. MoonStone allows to:

- configure the sensors and the acquisition modes,
- perform firmware upgrades
- to acquire and expose data to VEGAImperium and 3rd party systems
- to display trending data and FFTs (optional)
- to process data with predictive analytics technology (optional)

VEGAImperium

VEGAImperium is used to develop predictive analytics models and to display real-time data & results in a structured manner.

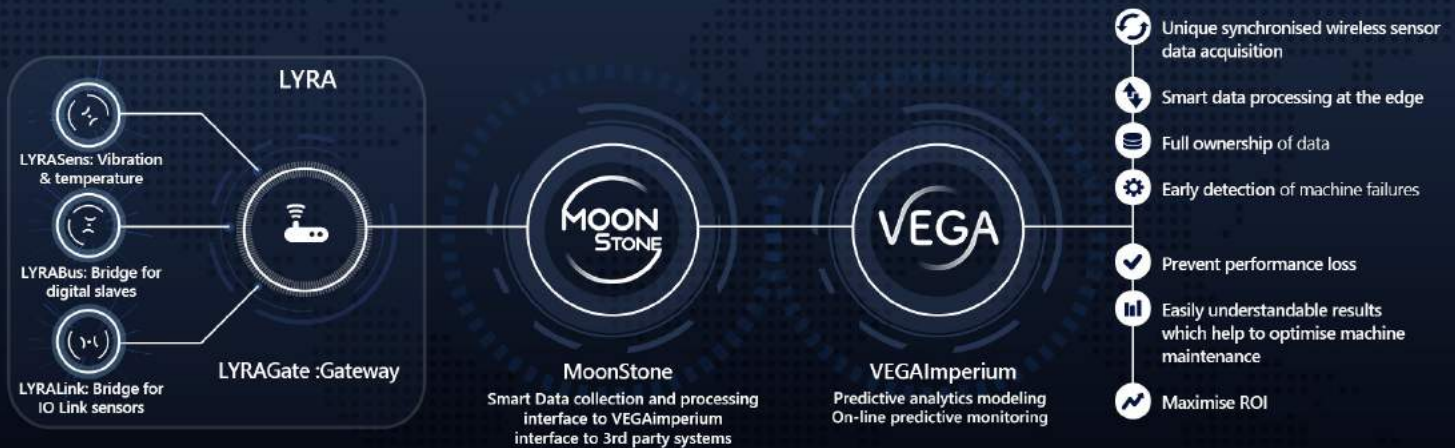
VEGAImperium allows to develop complex models by application experts. No specific knowledge in data science is required.

VEGAImperium is cloud agnostic so that the platform can run on premise or in private or public cloud.

Applications

The application spectrum of LYRA, MoonStone & VEGAImperium is vast. Currently, PdM. 4.0. pilots projects are under development for elevators, evaporators, hydro generators, power transformers, wind turbines,....

An illustration of OST's true end-to-end solution



About us

• Swiss-based company founded in October 2017

• Focus in Smart Data

• Combined expertise in Data Analytics, Sensor technology and Digital Engineering.