



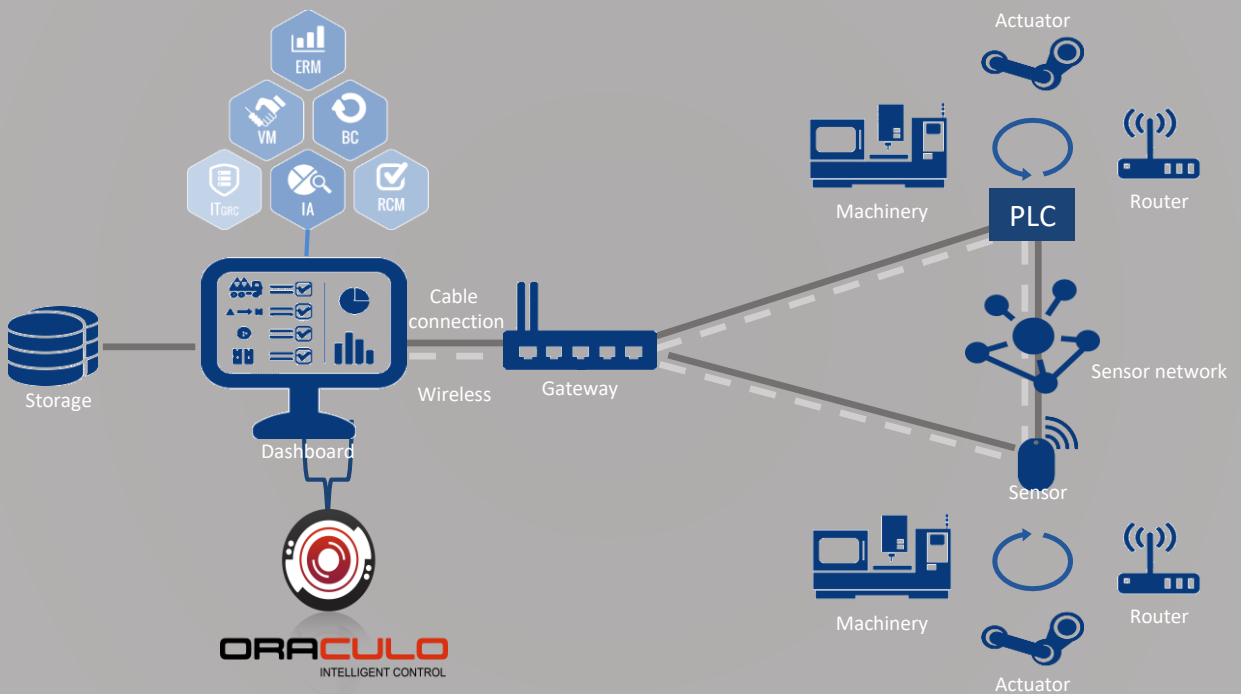
ORACULO
INTELLIGENT CONTROL

The ultimate factory efficiency tool
For any industry, brand or data source

Introducing Oraculo

» Why did we build it and what is the problem we are solving?

Oraculo is the most **versatile and adaptable** factory software system on the market to date. It is able to observe and translate the data generated from factory machines in **real-time**, giving us 100% transparency on the **functionality** of the machine. It is modular in the sense that features of Oraculo can be adapted and used depending on the **client's specific needs** and existing solution.



Oraculo is the perfect software to fill in **any gaps** in the existing factory software solution or to add on any additional required **functionality**. Oraculo can:

- » Speak to any **machine type, brand** or industry,
- » extract any **form of data** required, and
- » integrate with any **existing system**.

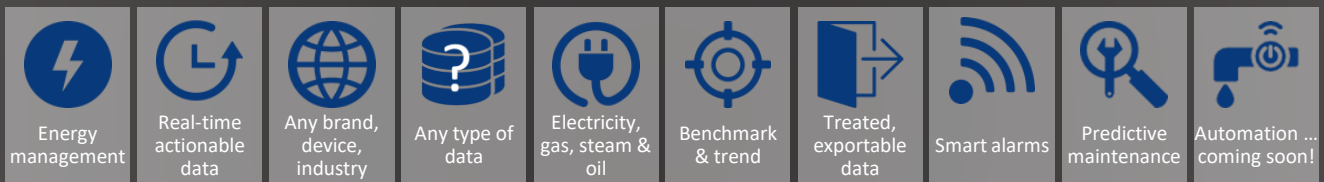
This makes it the perfect solution to augment the system currently used by a factory. Our aim is to **improve**, not necessarily replace, the existing solution.

“Savings through optimization of processes in the production chain”



- › Additionally, Oraculo is a factory resource management solution that enables optimization of the production process in real-time. This includes full energy consumption, production metrics, compressed air flows and oil usage. Further, these costs can now be directly attributed to each unit, rather than allocated as an overhead.
- › Oraculo has generated clear financial benefits to our existing clients by improving overall efficiency in the production line and reducing costs.
- › Oraculo also looks at the value chain outside the factory, by optimising logistics costs and just-in-time inventory metrics.

Overview of functionality and applications



Existing applications include



Overall equipment effectiveness monitoring



Product line and machine specific energy optimisation



Leak detection on gas systems



Per unit energy monitoring and cost allocation



Pattern recognition in energy consumption for predictive maintenance



Data acquisition and exportation into the existing ERP

Oraculo's key features

» What can Oraculo do that makes us so excited about it?

- » Oraculo builds a real-time gateway that translates the programmable logic controller (PLC) generated data into exportable, usable data.
- » Oraculo was designed to respond in real-time so that it can optimise predetermined factory key performance indicators (KPIs).
- » It can also recognise patterns in order to build predictive maintenance capabilities and varying levels of automation.
- » Oraculo can adapt to the existing system, making it the perfect stop gap for any factory looking to become more efficient.

» Real-time exportable data

Our technical team has figured out a way of translating the data from the PLC into a format that is treatable and exportable. Therefore, this data can then be analysed in real-time, giving instant insight. The importance is that we are now able to respond to this information instantly – making Oraculo hyper-dynamic.

01



02

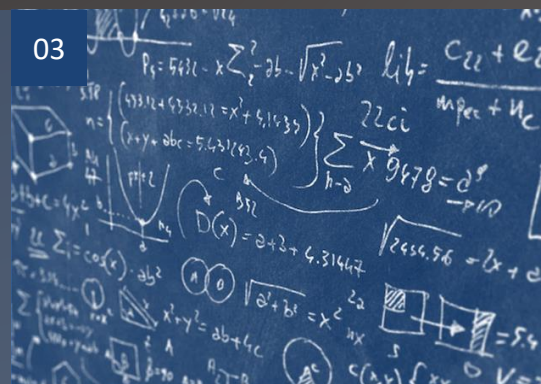
» Adaptable structure

Oraculo was designed to be compliant with any industry, brand, device or data type. We built this system in such a way that we are not limited by the context of the machinery. If the machine generates data, we can extract it and optimise the performance based on that information.

» Flexible performance metrics with learning algorithms

We are not limited on the type of data we can export. Therefore, we can optimise performance based on any factory KPIs – increasing the versatility of Oraculo. Further, we have algorithms in place that track patterns and identify abnormalities.

03





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Internet of Everything

» Easy integration and modularity

Oraculo was designed to augment the existing system in factories – we have the APIs needed to integrate into all major systems. This reduces the risk when adopting our solution. We can also tailor Oraculo such that only a few required features are implemented.

04



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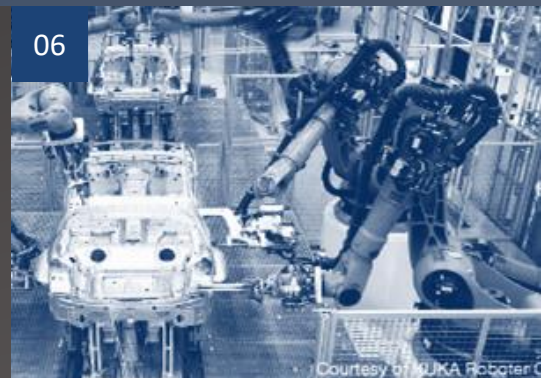
» Full energy optimisation and leak detection

The strength of Oraculo is that we can analyse any form of data. This means that we can optimise all forms of energy usage – oil, gas and electricity. This includes energy used within the production line and taking peak and off peak costs into account.

» Retrofitting and automation possible

We understand that 90% of machines are still not connected at all. This is why we have built capabilities to retrofit machines with the hardware needed to use Oraculo. This is for both usage insights and actuators for automation.

06



Existing clients

» Who is already benefitting from Oraculo?

Oraculo is already working in

6 different industries



Auto parts suppliers for German car manufacturers

- Portugal



Installation and maintenance of electro mechanics

- Spain



Pinta a vida.

Paint, thermal insulation, protection coating

- Portugal



Large scale plastic packaging producers

- Portugal



Agriculture chemical production and logistics company

- Portugal and Spain



Large scale dairy & dairy product suppliers

- Portugal

@ SAPEC Oraculo

reduced cost of energy in the production line by

8.3% in first year



SUIT TALK

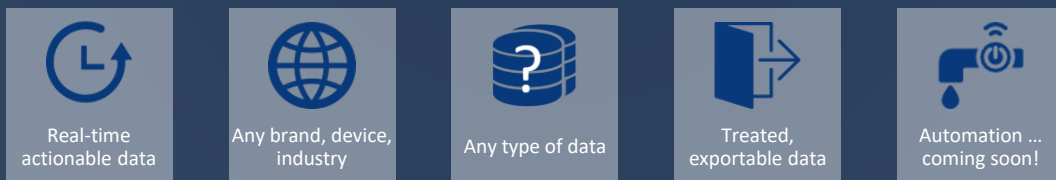
- Oraculo is a system that measures exactly how much energy is being used by each machines to produce each widget. Further, it measures other key metrics needed to optimise and automate production and build predictive maintenance capabilities.



- The immediate benefit is that you can now allocate energy costs directly to the product on a per unit level. The implications beyond that include reduced production and maintenance costs, reduced down time and the ability to accurately measure, benchmark and improve energy costs. The Oraculo system can optimise your production on any metrics you chose. Therefore, you can ensure higher output levels at off-peak cost times to save costs or profitability of each product to push up margins. It is a learning system that will allow diagnostics that allow predictive maintenance, reducing down time of the machines. It will also let the production teams know when there are irregularities. Finally, we can reduce production costs through automation of the system.

TECHY TALK

- Oraculo builds a real time gateway that translates data coming from the PLC of the machine into exportable, actionable data. This is then sent via the TCP/IP network to the Oraculo system that then generates the graphics on the user interface.



- Oraculo has the required algorithms in place to build the know-how for predictive maintenance. Further, we have the software and actuators required to automate the production line based on this real-time information. Our software reads from any machine, any type of data one can take from the machine (energy consumption, temperature, pressure, gas, state etc.) and converts it into to Oraculo format, sending it to the Oraculo platform to be used as needed. Therefore, the operator is able to see graphics in real time, keep record to track or compare machine behaviour, determine overall equipment efficiency (e.g. exact details of where and for how long a machine had an unplanned stop), integrate with other systems and the list continues. The exciting part is that this opens up endless possibilities of machine to machine communication, enabling the dream of the smart factory.



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