BLIND FAILURE PREDICTION FOR IIOT-ENABLED EQUIPMENT
THE PROBLEM

The cost of downtime in the industry is constantly raising due to just-in-time strategies and to the shift in business models towards selling hours of availability instead of selling Capex-based equipment.

OUR MISSION

TOWARDS ZERO DEFECTS AND ZERO DOWNTIME; with powerful and performant failure prediction models to maximize equipment availability and production quality while optimizing maintenance costs.

THE LIMITS OF CURRENT APPROACHES

- Traditional monitoring approaches are limited to certain types of data and do not address complex systems. Weak or transitory signals that reveal potential defects are often unseen.

- Simulations-based solutions, such as Digital wins, are time consuming and costly. Moreover, these approaches are limited when it comes to simulating defects.

- Generic Artificial Intelligence-based solutions do not exploit the specificities of industrial time series and the lack of industrial historical data is limiting their performance.

FAILURE PREDICTION IN FACTORIES COULD
REDUCE MAINTENANCE COST BY 10 TO 40% BY
FOSTERING BETTER MAINTENANCE. IT ALSO
REDUCES DOWNTIME BY 50%, AND LOWERS
CAPITAL INVESTMENT BY 3 TO 5% BY
EXTENDING MACHINE LIFE.

McKinsey 2015
Our technology was born in the labs of the French National Research Centre (CNRS). It combines Artificial Intelligence with principles of Automation and Control Theory to bring unique solutions for processing of Industrial Time Series.

**OUR INNOVATION**

- **Automatic Extraction of Machine Health Indicators**
- **Prediction of Defects, End-of-Life, Remaining Useful Life**

**AMIRAL TECHNOLOGIES**

**WINNER OF PRESTIGIOUS AWARDS**

- Digital Industry Program
- Digital Industry Award
- TechTour Contest Final Winner
- i-Lab
- Top 500 DeepTech Startup

**USE CASES**

- Failure prediction
- Detection of wear phenomena
- Prediction of end-of-life
- Non-Destructive Testing
- Prescriptive Maintenance
- Quality Monitoring
**OUR DIFFERENTIATORS**

**VERSATILITY**
Any type of Industrial Time Series: electric, vibration, pressure, temperature, humidity, speed, power, torque, etc. as well as discrete (process) data.

**SUPERVISED AND UNSUPERVISED LEARNING**
When no historical data is available, our solutions learn over machines in a normal working condition.

**AGILITY**
We identify and validate the predictive solution in a few days, saving months of simulations or studies of the equipment’s mechanics.

**PERFORMANCE**
Up to 95 to 100% detection of defects measured over real data*.  
*performance is specific to each use cases.

**YOUR INDUSTRIAL FIELD**
Transport  Manufacturing  Energy

**YOUR OBJECTIVES**
• **Reduce** maintenance and inspection costs.  
• **Reduce** equipment or production downtime.  
• **Monitor and enhance** production quality.
YOUR BENEFITS WITH AMIRAL TECHNOLOGIES

- Benefit from a strong industrial expertise, with a specific focus on Industrial Time Series.
- Adapt the predictive solution to your specific equipment through supervised and unsupervised learning.
- Ensure ROI on digitisation by exploiting PLC and IoT captured data.

ENGAGEMENT MODEL

- You
  - Your Problem Statement
  - Your Data
- Us
  - Your Predictive Solution
  - Your Estimated Gain

Deployment Project
- Operational Use
- Return Over Investment
- Technical Support

DEPLOYMENT OPTIONS

- Embedded in the equipment
- At the Edge of the factory
- In your standard or proprietary IoT platform
- Hosted in Amiral Technologies’ cloud
WHY CHOOSE AMIRAL TECHNOLOGIES?

YOU HAVE AN INDUSTRIAL PLANT
Maximise your equipment availability and reduce production downtime.

YOU ARE AN EQUIPMENT PROVIDER
Optimise your after-sales maintenance costs and offer a value-added service to your customers.

YOU ARE AN EDITOR OF AN IoT PLATFORM
Add targeted and performant industrial solutions to your catalogue of services.

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