



# **A BREAKTHROUGH:** **Predictive Maintenance** **in Servo Motors**



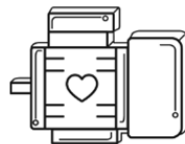
**Σ smart**  
advanced manufacturing

# ORGANISATION PROFILE

## WHO WE ARE?

- Wisersense is an end-to-end smart machine health monitoring solution to control increased maintenance and energy costs. In line with Industry 4.0 and the trend towards digitalization, it offers monitoring, tracking, remote measurement and detection of possible faults much earlier for smart factory and smart city projects. The health of all systems, large and small, in every stage of production, especially motors, compressors, fans, pumps, etc. rotary systems can be monitored. In this way, early detection of problems, improvement in operations and personnel safety, increase in production, decrease in downtime, increase in end product quality, etc. many benefits are provided.

## *Let Your Machines Talk To You!*



**Machine  
Health**



**Process  
Health**



**Asset and Maintenance  
Management**



**Reduced Energy  
Consumption**

# PROPOSAL INTRODUCTION (I)

## OUR VISION:

A New Era in Servo Motor Maintenance aims to revolutionize servo motor technology in press machines, which is at the heart of industrial automation. Our vision is to make production processes more reliable, efficient and sustainable by harnessing the power of predictive and preventive maintenance. With the success of this project, we want to make the machine parks of industrial plants smarter, more durable and more competitive.

## OUR MOTIVATION:

The correct operation of machinery and equipment is one of the cornerstones of modern industry. Our motivation is to ensure that critical components used in industrial processes, such as servo motors, perform at the highest level, thereby increasing the productivity of businesses. Equipped with innovative maintenance strategies and data analytics, this project will not only predict failures in advance, but also extend the lifespan of machines, creating a sustainable production environment. Our

motivation is to contribute to the evolution of the industry to be more reliable, more efficient and more future-ready.

## CONTENT:

- Predictive Maintenance Algorithms: Development of algorithms to predict servo motor failures.
- Optimized Preventive Maintenance: Optimizing preventive maintenance strategies for various conditions.
- Big Data and Machine Learning: Monitoring and improving servo motor performance with big data analytics and machine learning.
- Compliance with Industry Standards: Compliance of the developed maintenance techniques with industry standards.

## PROPOSAL INTRODUCTION (II)

### **Expected outcomes:**

- At the end of the project, we aim to improve the ability to predict future failures by analyzing past performance data of servo motors. In this way, maintenance processes can be carried out in a more effective and planned manner.
- Furthermore, one of the main objectives of the project is to develop preventive maintenance strategies, taking into account the various workloads and conditions that servo motors are exposed to. These strategies will be designed to extend the life of the equipment and minimize unexpected downtime.
- The project aims to monitor and improve the performance of servo motors using big data analytics and machine learning techniques. In this way, another main goal is to minimize operating costs by increasing efficiency in production processes.

**Impacts:** With this technology, which does not yet exist in the market, we anticipate that industrial reliability will increase thanks to our predictive maintenance sensors to be used in servo motors. Accordingly, by minimizing maintenance costs and downtime in all kinds of equipment where servo motors are used, we will ensure the optimization of production and maintenance processes and prevent unnecessary energy expenditures in the industry. With the know-how and product we will obtain within the scope of the project, we will open the doors to a new era in the industry and contribute to the future universe of industrial automation.

**Schedule:** The project is expected to start on September 1, 2024 and at the end of the 2-year period, on October 1, 2026, the final product is expected to be revealed.

## PARTNERS

### OUR CURRENT CONSORTIUM:

No.	PARTNER NAME	TYPE	COUNTRY	ROLE in the PROJECT
01	WiserSense Information Technologies	SME	TR	Technology Provider
02	Türk Otomobil Fabrikası A.Ş. (TOFAŞ)	Large Ind.	TR	End-User

### WE ARE LOOKING FOR:

No.	TYPE	COUNTRY	ROLE in the PROJECT
01	SME	TBD	Technology Provider
02	Large Ind.	TBD	End-User
03	RTO/Academy	TBD	R&D
...	...	...	...

## CONTACT INFO

**BURAK BAĞCI**

Program Manager of WiserSense Information Technologies

Ankara/Turkey

+90 541 209 19 95

**[burak.bagci@wisersense.io](mailto:burak.bagci@wisersense.io)**

<https://wisersense.io/>



