



# SIGMA

Industrial Precision



## Electrical Analysis Experts

Short Investors Deck | IoTWeek Dublin 2022

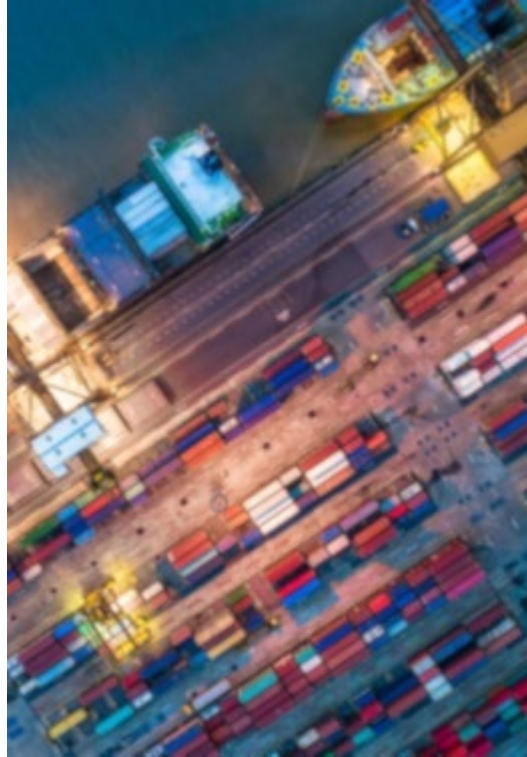
# Common Challenges

Global Challenges Common for Strategic Markets

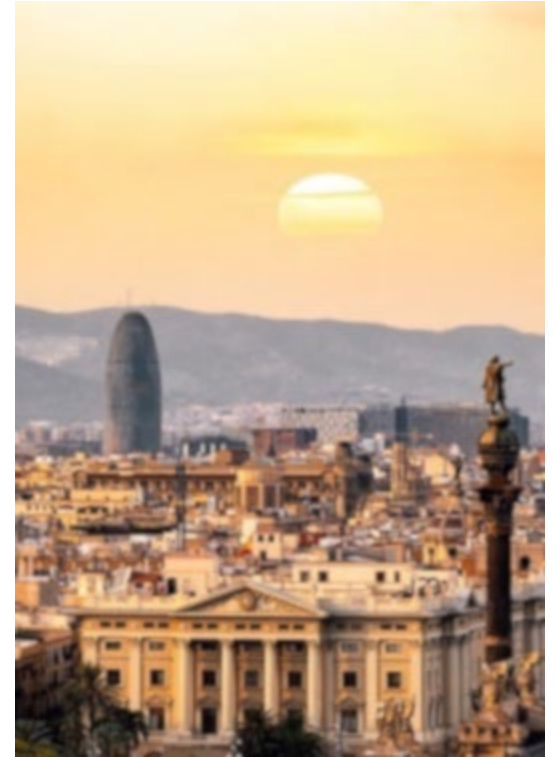
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**Industry**



**Infrastructures**



**Cities**

# Common Challenges

Facts that Confirm the need for New Solutions

## Lack of CONTROL

Global IoT market size  
grew **22%** in 2021

Industrial Control market will grow up to  
**USD350B** in 2026

Source: Enterprise IoT market 2019-2027 Report from  
IoT analytics

## SAFETY is a Must

**3.408** Fatal accidents  
reported by the EU in all  
sectors in 2019

**64.4%** of them happened in:

- Construction
- Transportation & Storage
- Manufacturing & Agriculture
  - Forestry & Fishing

Source: <https://ec.europa.eu/Eurostat>

## Ineffective Maintenance

**40%** of maintenance  
costs are spent on assets  
which are in correct  
operation.<sup>2</sup>

**82%** of asset failures appear random.<sup>1</sup>

Only **18%** of assets have an age-related  
failure pattern.<sup>1</sup>

<sup>1</sup> Source: ARC view. Optimize Asset Performance with  
industrial IoT Analytics

<sup>2</sup> Source: Oniqua Enterprise Analytics, Reducing the Cost  
of Preventive Maintenance.

# Great opportunities to improve

in operations, efficiency and waste reduction



Only UPS Railway maintenance cost for the Spanish High-Speed infrastructure represents approximately **€1M every year**

The major part of the UPS are changed preventively not knowing its real degradation level

**SIGMA** helps to identify which UPS have to be changed and when **saving in average more than 80% substitution costs**<sup>2</sup>

Only **18%** of assets have an age-related failure pattern.<sup>1</sup>

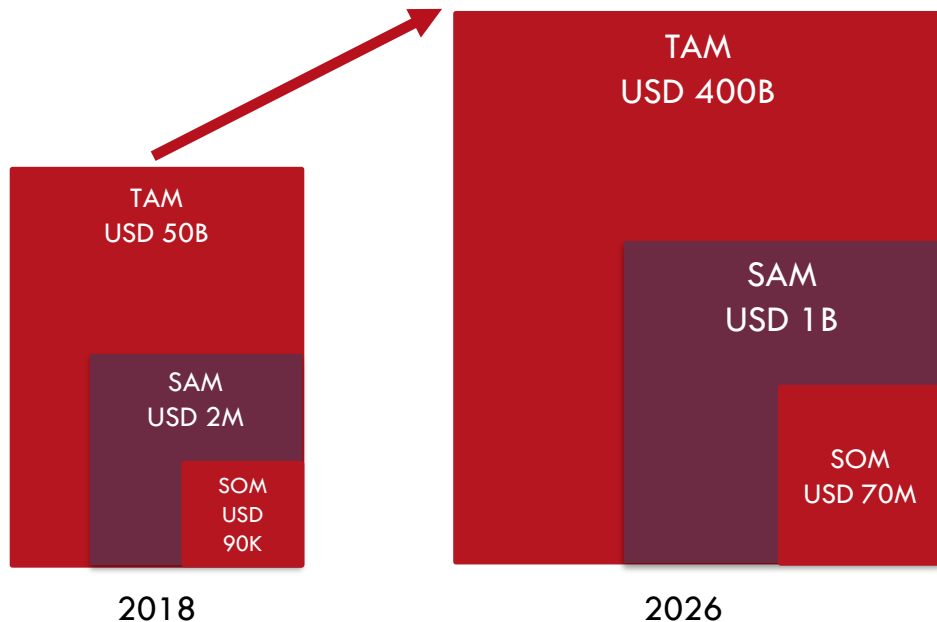
<sup>1</sup> Source: ARC view. Optimize Asset Performance with industrial IoT Analytics

<sup>2</sup> Calculation done using SIGMA's client projects

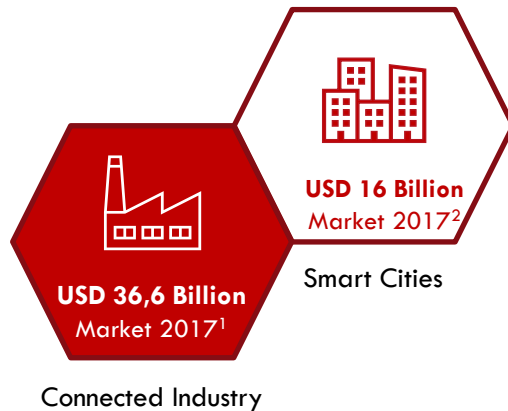
# Global Rising Market

High Opportunities for New Solutions Worldwide

More than **30% CAGR** until 2026



**USD50 Billion market** in 2017



Source 1: Predictive Maintenance Market Report 2019-2024; IoT Analytics

Source 2: <https://www.grandviewsearch.com/industry-analysis/smart-cities-market>

CAGR: Compound Annual Growth Rate

TAM, SAM, SOM projected values

# Fragmented Ecosystem

## Companies and startups developing globally

**SIGMA is more**

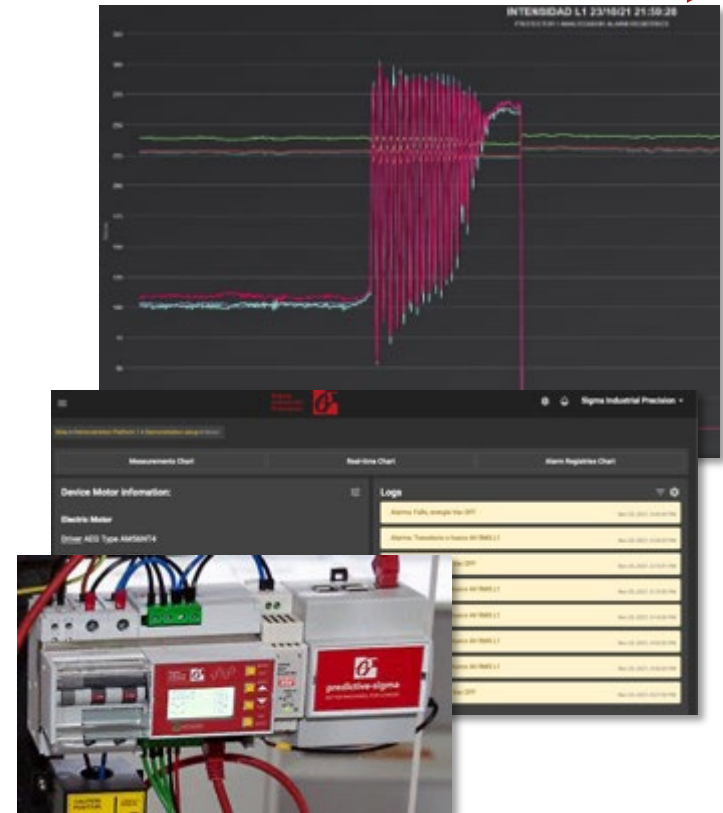
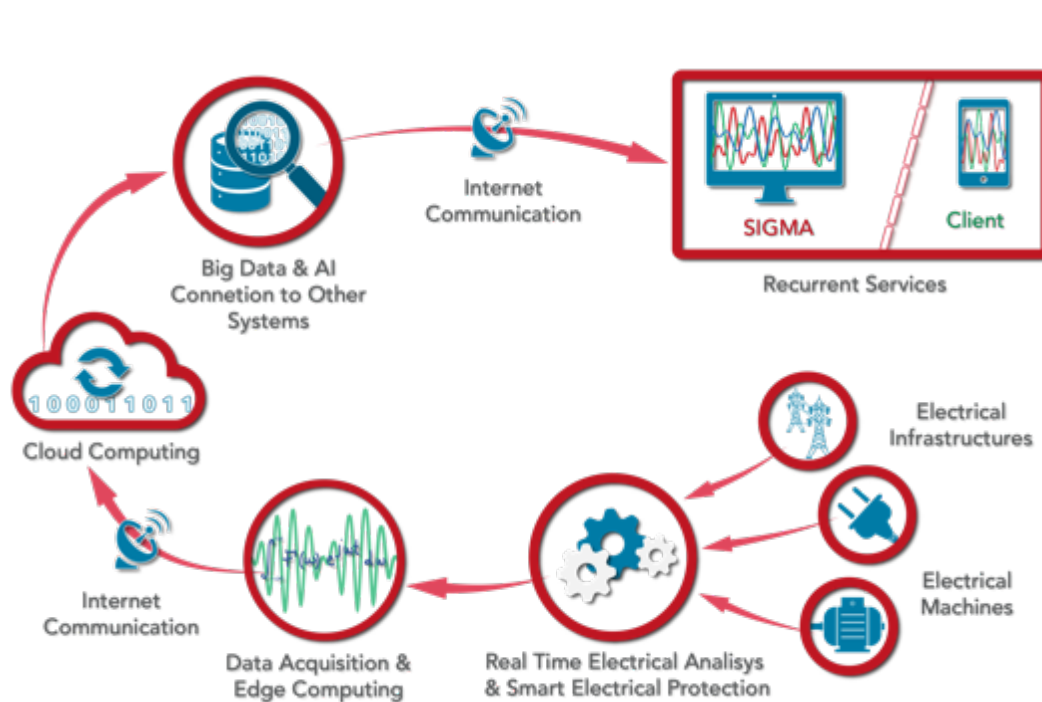
- **Affordable**
- **Flexible**
- **Easy**

**Than other competitors**

[illegible]

# A Complete Solution

From smart electric sensors up to advanced analytics, easy to install and implement



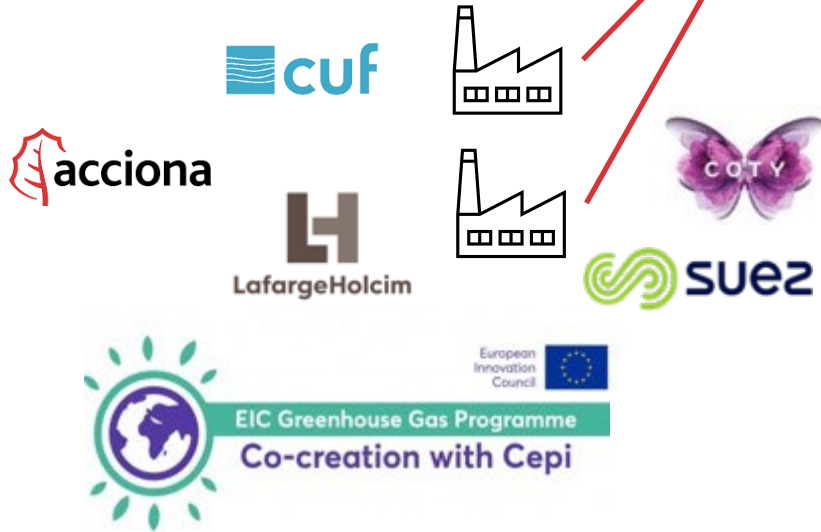
**Easy to install, implement and run**

# Go to market

High speed strategy

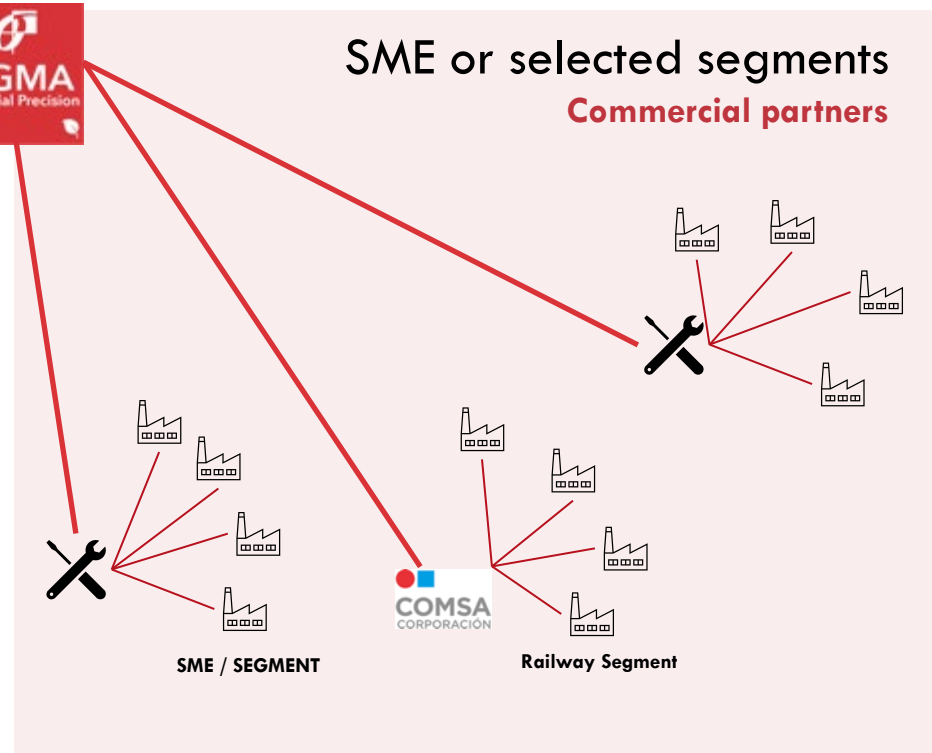
## CORPORATIONS

Direct contact: Open Innovation programs



## SME or selected segments

Commercial partners



# Clients

Domestics and Internationals

## CITIES



## INDUSTRY



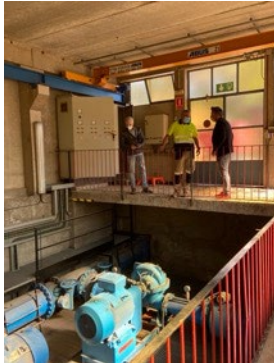
## INFRASTRUCTURES



# SIGMA disrupts the market

Simple Solution for Fast and Massive Implementation

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# Business Model

From Hardware+ Service combination to 100% Recurrent Service

Today	Avg. Price	Avg. Margin
Sensor + IoT Dev	€1000	<b>50%</b>
Recurrent Service	€500	

Tomorrow	Avg. Price	Avg. Margin
All included Recurrent Service	€700	<b>64%</b>

**60**

Sensors  
15 clients  
2021

**Organic growth through new clients  
And increasing sales in existing clients**

**75.000**

Sensors  
2500 clients  
2025

# 3 key founders for a great team

A balanced mix with more than 50 years of combined experience:



**Ramón Serra**  
CTO

Engineer and Master in Robotics & Automation.

PhD candidate in Electrical Engineering.

Responsible for disruptive technology, software creation, development new hardware technologies.



**Patricio Sáez**  
CEO

Industrial Engineer And Executive MBA.

Managing Director



**Carles Paul**  
Scientific Director

Physics and Master in Physics & Applied Mathematics.

PhD candidate in Electrical Engineering.

Mathematical design models Responsible and Technology development based on Big Data & AI.



**Begoña Segarra**  
Marketing Manager



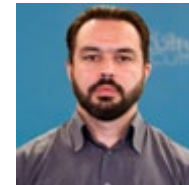
**Claudio Sarra**  
Business developer



**Adriano Sorci**  
Business advisor



**Josep Casals**  
Analyst



**Jose Serra**  
IoT & Cloud expert



**Rodolfo Aguilar**  
Electrical expert

# Roadmap

One-shop solution with sensing + IoT platform + Recurrent Analytics Services

Scalable IoT  
Platform



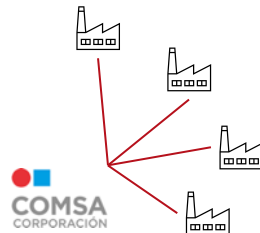
Operating own proven IoT  
platform with scalable  
structure and in continuous  
improvement

Scalable  
Data  
Analytics



Approved €450K  
Budget for AI own algorithms  
development  
Starting project 2022/Q2

Scalable  
Sales



Railway Segment

Contract in negotiation with  
maintenance and construction  
global corporation

# Time to Scale-up

An experienced Startup with Proven Market Fit

## Market validation already done

- > **4Y** startup
- > **€800K** invested<sup>1</sup>: entrepreneurs + FFF + Loans & Grants<sup>3</sup>
- > **€350k** accumulated sales and current orders<sup>2</sup>

## Public funding and validation



This project has received funding from the European Union's **Horizon 2020 research and innovation programme** under grant agreement No **886905**.



This project has indirectly received funding from the European Union's **Horizon 2020 Research and Innovation programme**, via an **Open Call** issued and executed under project **MINE.THE.GAP** (grant agreement No **873149**)



## Business in acceleration

- > **15** clients
- > **60** sensors under surveillance
- > **20** new customers in sales pipeline
- > **90** new sensors in sales pipeline

## International validation



Current leads



Current sales

Note 1: capital, grants and participative loans included

Note 2: added estimated sales from 2017 to December 2021

Note 3: pending to sign €120K grant + €200K soft loan from CDTI

# Investment Opportunity

A great Opportunity with high Potential

## 2.000.000 €

**40% Sales and Marketing**  
**26% General and Administrative**  
**34% Research and Development**

### Profit & Losses

	2021	2022	2023	2024	2025
Service Revenue	8.940 €	130.000 €	810.000 €	6.360.000 €	50.780.000 €
Product Revenue	20.859 €	210.000 €	1.160.000 €	8.110.000 €	17.650.000 €
<b>Total Revenue</b>	<b>29.799 €</b>	<b>340.000 €</b>	<b>1.970.000 €</b>	<b>14.470.000 €</b>	<b>68.430.000 €</b>
Gross Profit	15.000 €	130.000 €	810.000 €	5.690.000 €	43.510.000 €
Operating Profit	(115.000) €	(1.010.000) €	(1.700.000) €	2.440.000 €	40.260.000 €
<b>Net Profit</b>	<b>(122.000) €</b>	<b>(1.020.000) €</b>	<b>(1.710.000) €</b>	<b>2.430.000 €</b>	<b>30.300.000 €</b>

### Staff planning

Staff forecast	2021	2022	2023	2024	2025
R+D	1,25	4,75	10,25	14	15
Sales	0,7	3,25	8,75	13,25	15
Marketing	0,625	1,25	3,25	4	4
Operations	0	2,25	8,75	12,25	14
Administration	1	2,125	6,25	7	7
<b>Total Avg. Staff EoY</b>	<b>3,575</b>	<b>13,625</b>	<b>37,25</b>	<b>50,5</b>	<b>55</b>

# We invite you to win with us!

Patricio Saez  
CEO

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[www.sigmaindustrialprecision.com](http://www.sigmaindustrialprecision.com)



# SIGMA

Industrial Precision



## Electrical Analysis Experts

# Exit Strategy

Corporate Acquisition

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**SIEMENS**



**Schneider**  
Electric



**Rockwell**  
**Automation**

YOKOGAWA

**Honeywell**



**Artesis**



**Samotics**



# Great opportunities to improve

in operations, efficiency and waste reduction

**From €66 M/Y estimated losses and upwards<sup>2</sup>**



Minimum average loss per failed operation €20K<sup>2</sup>

Considering 30 trips a year<sup>2</sup> for 2210<sup>3</sup> oil tankers worldwide in 2020

Failure in 5% operations for a total of 3315<sup>2</sup>

Failure in pump to discharge am Oil Tanker in port

**Pumps that work once in a while in chemical downloading operations, during 20-30 continuous hours**

An unexpected failure of the pump can carry important direct and indirect costs:

- Fines and extra costs for mooring and unmooring operations
- Direct costs in spare parts and pump repairment
- Oil tanker delays for operation and possible losses in following contracts

**82% of asset failures appear random <sup>1</sup>**

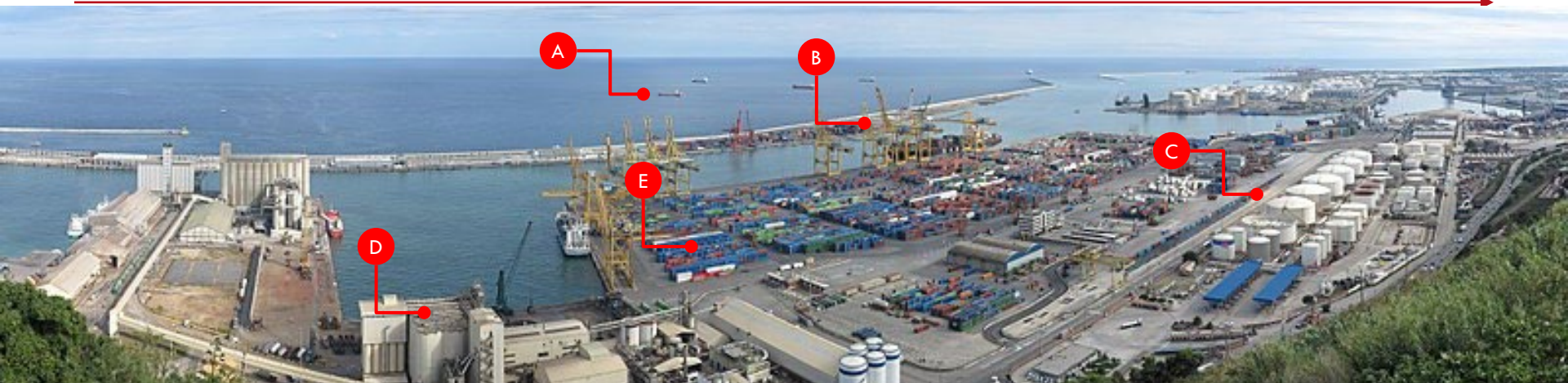
<sup>1</sup> Source: ARC view. Optimize Asset Performance with industrial IoT Analytics

<sup>2</sup> Source: Calculation done using SIGMA's client projects

<sup>3</sup> Source: <https://www.statista.com/statistics/468405/global-oil-tanker-fleet-by-type/>

# Where we can help in Maritime

Example in Barcelona's Port



**Electricity** is  
present  
in all maritime  
operations

- A** **Ships:** electric engines, power generators, pumps, compressors, etc.
- B** **Dock cranes:** power supply analysis, motors mechanical damage surveillance, etc.
- C** **Gas & Fuel Storage:** electric compressors, pumps, etc.
- D** **Silos:** loading and unloading machines, conveyors, etc.
- E** **Containers:** power supply, cryogenic systems, etc.

# Benefits

from an Electrical Automated Surveillance and SIGMA's analysis:

<b>A</b>	<b>SHIPS:</b> <ol style="list-style-type: none"><li>1. Pumps</li><li>2. Compressors</li><li>3. Electric engines</li><li>4. Power generators</li></ol>	}	<ul style="list-style-type: none"><li>➤ <b>Ensure critical operations</b> in docking process</li><li>➤ Increase on board electric infrastructure <b>safety</b></li></ul>
<b>B</b>	<b>DOCK CRANES:</b> <ol style="list-style-type: none"><li>1. Power supply analysis</li><li>2. Motors mechanical damage surveillance</li></ol>	}	<ul style="list-style-type: none"><li>➤ <b>Mechanical &amp; electrical surveillance</b> for cranes' motors from electrical cabinet</li><li>➤ <b>Reduce</b> maintenance, complexity and costs</li></ul>
<b>C</b>	<b>GAS &amp; FUEL STORAGE:</b> <ol style="list-style-type: none"><li>1. Pumps</li><li>2. Electric compressors</li></ol>	}	<ul style="list-style-type: none"><li>➤ Pumps and compressors easy <b>surveillance and protection</b></li><li>➤ Electrical power supply analysis to ensure <b>safe operation</b></li></ul>
<b>D</b>	<b>SILOS:</b> <ol style="list-style-type: none"><li>1. Conveyors</li><li>2. Loading and unloading machines</li></ol>	}	<ul style="list-style-type: none"><li>➤ <b>Avoid breakdown</b> during loading or unloading operations</li><li>➤ Increase <b>protection for people</b>, easy surveillance in hazardous areas</li></ul>
<b>E</b>	<b>CONTAINERS:</b> <ol style="list-style-type: none"><li>1. Power supply</li><li>2. Cryogenic systems</li></ol>	}	<ul style="list-style-type: none"><li>➤ Ensure electrical <b>correct supply</b></li><li>➤ Immediate <b>alert against problems</b> that can risk the goods</li></ul>

# SIGMA disrupts the market

Electricity is everywhere and speaks

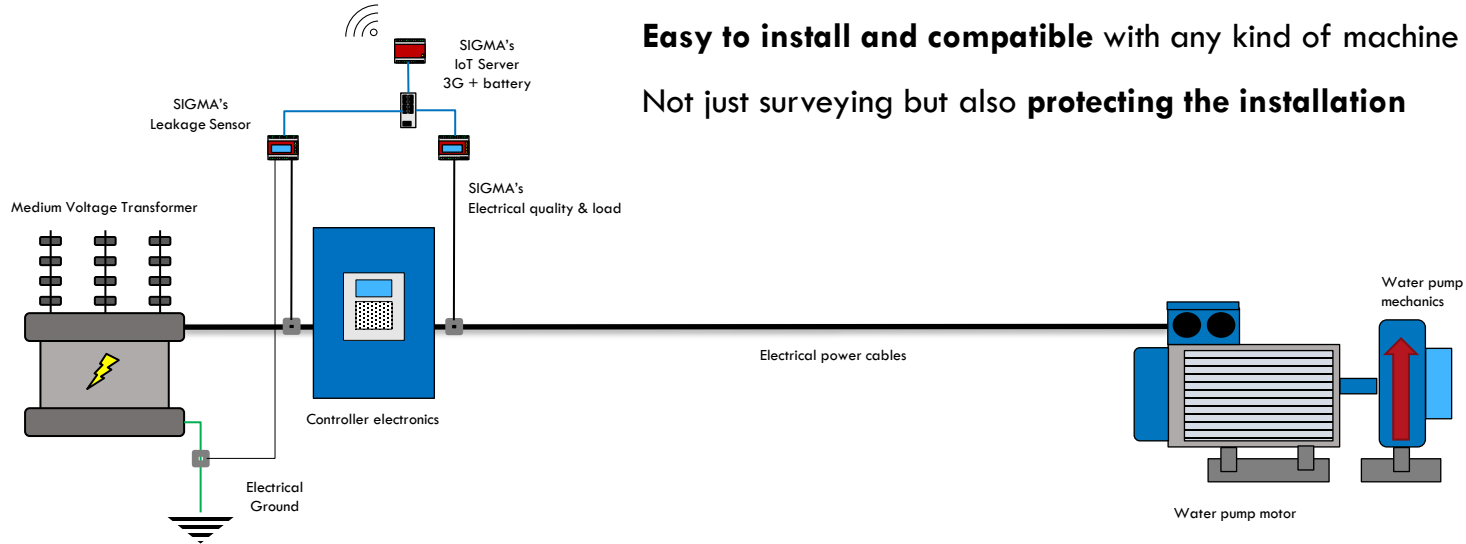


**Complete solution: sensor + IoT + cloud analytics**

**Covering all key assets process with one solution**
























**Easy to install and compatible** with any kind of machine

Not just surveying but also **protecting the installation**



# Why Electrical Analysis

A common component in all operations and infrastructures

Technology	Assets covered	Failure detection	How is done
 <b>Electric Analysis</b>	 Transformer  Wiring  Motor  Pump  VFD  Fan  Generator  Compressor	Mechanical & electric <ul style="list-style-type: none"> <li>• Electric arch</li> <li>• Energy quality</li> <li>• Mechanical in motors, pumps, etc.</li> </ul>	 MCSA, motor current signature analysis  Leakage current analysis  Voltage analysis  Power analysis  Smart electric protection  Electric efficiency
<b>Other technologies</b> <b>Vibration analysis</b>	 Motor  Pump  Fan  Generator  Compressor	Mechanical <ul style="list-style-type: none"> <li>• Unbalance</li> <li>• Misalignment</li> <li>• Bearing damage</li> </ul>	<ul style="list-style-type: none"> <li>• Vibration sensors installed over motors.</li> <li>• Online or data logging</li> </ul>
<b>Other Technologies</b> <b>Thermal analysis</b>	 Transformer  Wiring  Generator	Mechanical & electric <ul style="list-style-type: none"> <li>• Cold points</li> <li>• Hot points</li> <li>• Electric arch</li> <li>• Fluid leaks</li> </ul>	<ul style="list-style-type: none"> <li>• Thermal cameras.</li> <li>• Online or data logging</li> </ul>

# Bringing Value from Day 1

Many benefits oriented to ensure efficiency

1. **Save** costs
2. Increase **Safety**
3. Increase **Productivity**
4. Guarantee optimal **operation**
5. **Identify & Control** critical equipment
6. **Extend** old or new machines **Lifetime**
7. **Identify** technical and electrical problems
8. To make better use of **Staff time**

## **SAFETY:**

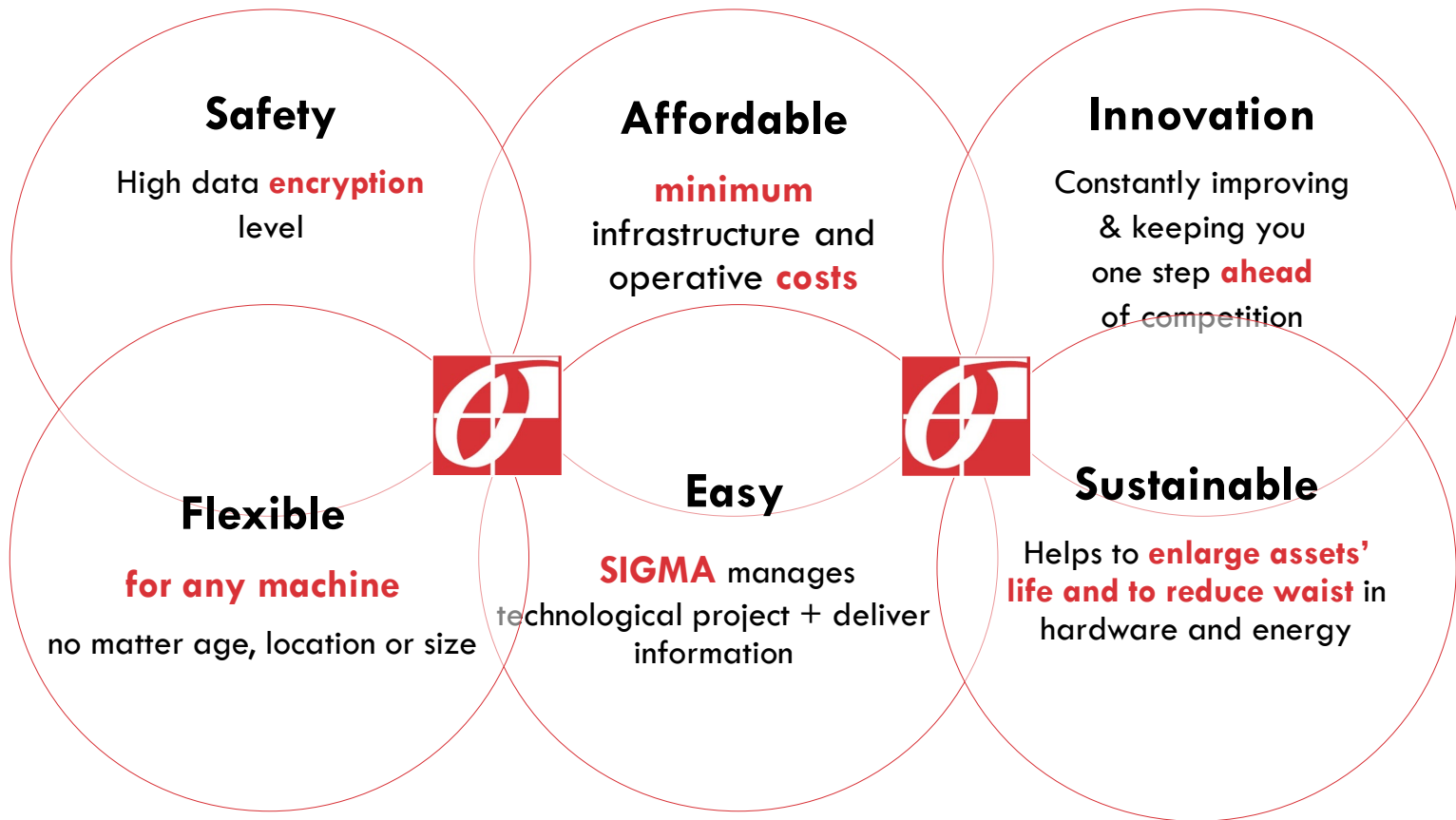
Staff  
Machines  
Infrastructures

## **SAVINGS:**

Electricity  
Maintenance costs  
Unforeseen stops

**E  
F  
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C  
Y**

# SIGMA's Advantages



# Huge market in acceleration

## Relevant competitors for Predictive Maintenance



### Samotics Overview

Founded **2015** | Status **Private** | Employees **56**

Latest Deal Type **Corporate** | Financing Rounds **2**

Estimated valuation  
**EUR +100 M**

<https://pitchbook.com/profiles/company/171330-13#funding>



Founded **2017** | Status **Private** | Employees **9**

Pre-money Valuation  
**EUR 6M**



### Augury Overview

Founded **2011** | Status **Private** | Employees **250**

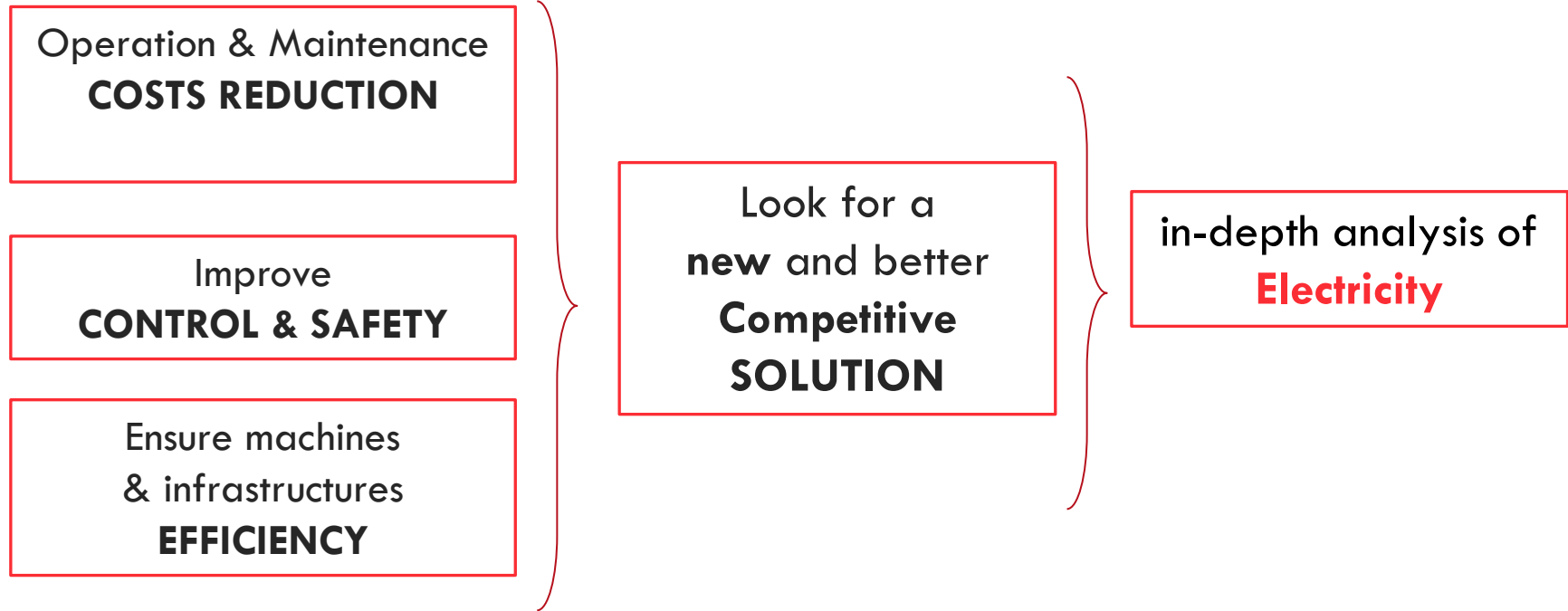
Latest Deal Amount **\$180M** | Investors **18**

Estimated valuation  
**EUR +1000 M**

<https://pitchbook.com/profiles/company/82952-56>

# Common Solution

Deep Electrical Analysis can be the Key



# Electrical Analysis Platform

A complete solution starting in the electrical panel

**SIGMA** gets all **information** required, using our own electrical analysis platform:



With an easy implementation  
in the electrical panel:



# Competitors

## Predictive Maintenance and Energy Surveillance

Our approach is more  
**flexible and scalable**

### SIGMA is relevant for:

 Energy  Predictive Maintenance

#### Flexibility

- By the number of different assets that can be surveilled
- By the different numbers of failures that can be identified
- By the dependence on external resources: software, expert staff, etc.

#### Scalability

- By the cost per asset surveilled
- By the number of enabling technologies integrated
- By the dependence on external resources

