Common Challenges

Global Challenges Common for Strategic Markets

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.\(^2\)

82% of asset failures appear random.\(^1\)

Only 18% of assets have an age-related failure pattern.\(^1\)

Source: ARC view. Optimize Asset Performance with industrial IoT Analytics
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

Only 18% of assets have an age-related failure pattern.¹

¹ Source: ARC view. Optimize Asset Performance with industrial IoT Analytics
² 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

USD 36.6 Billion Market 2017¹
USD 16 Billion Market 2017²

Connected Industry
Smart Cities

TAM
USD 400B

SAM
USD 1B

SOM
USD 70M

TAM
USD 50B

SAM
USD 2M

SOM
USD 90K

2018

2026

Source 2: https://www.grandviewresearch.com/industry-analysis/smart-cities-market
CAGR: Compound Annual Growth Rate
TAM, SAM, SOM projected values
### Fragmented Ecosystem

Companies and startups developing globally

<table>
<thead>
<tr>
<th>Company</th>
<th>Application</th>
<th>Assets covered</th>
<th>Clients</th>
<th>Offering</th>
<th>Sensors</th>
<th>Company type</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIGMA Industrial</td>
<td>Maintenance</td>
<td>Efficiency</td>
<td>Analytics</td>
<td>Projections</td>
<td>Rotatory</td>
<td>Other</td>
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<td>Traditional Contractors</td>
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<tr>
<th>Value Proposition Score</th>
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<tbody>
<tr>
<td>15/15</td>
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<td>11/15</td>
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<td>8/15</td>
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<td>7/15</td>
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<td>12/15</td>
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</table>
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

SIGMA Industrial Precision

cuf
acciona
LafargeHolcim
SUEZ
EIC Greenhouse Gas Programme
Co-creation with Cepi

SME / SEGMENT
Railway Segment
Clients
Domestics and Internationals

Cities
- Diputació Barcelona
- Ajuntament de Sant Boi de Llobregat

Industry
- Coty
- Alfibeta Detergents
- Estrella Damm
- Mess
- Imprenta Gómez Servicios Gráficos
- Hunnebeck
- Mettler Toledo

Infrastructures
- Suez
- Sorea
- Aigües de Manresa S.A.
- Agbar
- Comsa Corporación
- IACEL
- Cuf
- Adif

Clients in Spain, Portugal, Germany, Poland, Venezuela and Mexico
SIGMA disrupts the market
Simple Solution for Fast and Massive Implementation
## Business Model

From Hardware + Service combination to 100% Recurrent Service

<table>
<thead>
<tr>
<th>Today</th>
<th>Avg. Price</th>
<th>Avg. Margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor + IoT Dev</td>
<td>€1000</td>
<td>50%</td>
</tr>
<tr>
<td>Recurrent Service</td>
<td>€500</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tomorrow</th>
<th>Avg. Price</th>
<th>Avg. Margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>All included Recurrent Service</td>
<td>€700</td>
<td>64%</td>
</tr>
</tbody>
</table>

### Organic growth through new clients

- **2021:**
  - 60 Sensors
  - 15 clients

- **2025:**
  - 75,000 Sensors
  - 2,500 clients

And increasing sales in existing clients
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 Sarrà**
Business developer

**Adriano Sorci**
Business advisor

**Josep Casals**
Analyst

**Jose Serra**
IoT & Cloud expert

**Rodolfo Aguilar**
Electrical expert
Roadmap

One-shop solution with sensoring + 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

Contract in negotiation with maintenance and construction global corporation

Railway Segment
Time to Scale-up

An experienced Startup with Proven Market Fit

**Market validation already done**

> 4Y startup
> €800K invested$^1$: entrepreneurs + FFF + Loans & Grants$^3$
> €350k accumulated sales and current orders$^2$

**Business in acceleration**

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

**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).

**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

<table>
<thead>
<tr>
<th>Profit &amp; Losses</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Revenue</td>
<td>8,940 €</td>
<td>130.000 €</td>
<td>810.000 €</td>
<td>6,360.000 €</td>
<td>50,780.000 €</td>
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<tr>
<td>Product Revenue</td>
<td>20,859 €</td>
<td>210.000 €</td>
<td>1,160.000 €</td>
<td>8,110.000 €</td>
<td>17,650.000 €</td>
</tr>
<tr>
<td><strong>Total Revenue</strong></td>
<td><strong>29,799 €</strong></td>
<td><strong>340.000 €</strong></td>
<td><strong>1,970.000 €</strong></td>
<td><strong>14,470.000 €</strong></td>
<td><strong>68,430.000 €</strong></td>
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<tr>
<td>Gross Profit</td>
<td>15,000 €</td>
<td>130.000 €</td>
<td>810.000 €</td>
<td>5,690.000 €</td>
<td>43,510.000 €</td>
</tr>
<tr>
<td>Operating Profit</td>
<td>(115.000) €</td>
<td>(1,010.000) €</td>
<td>(1,700.000) €</td>
<td>2,440.000 €</td>
<td>40,260.000 €</td>
</tr>
<tr>
<td>Net Profit</td>
<td>(122.000) €</td>
<td>(1,020.000) €</td>
<td>(1,710.000) €</td>
<td>2,430.000 €</td>
<td>30,300.000 €</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Staff planning</th>
<th>Staff forecast</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
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<tbody>
<tr>
<td>R+D</td>
<td>1,25</td>
<td>4,75</td>
<td>10,25</td>
<td>14</td>
<td>15</td>
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<tr>
<td>Sales</td>
<td>0,7</td>
<td>3,25</td>
<td>8,75</td>
<td>13,25</td>
<td>15</td>
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<tr>
<td>Marketing</td>
<td>0,625</td>
<td>1,25</td>
<td>3,25</td>
<td>4</td>
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<tr>
<td>Operations</td>
<td>0,25</td>
<td>2,25</td>
<td>8,75</td>
<td>12,25</td>
<td>14</td>
<td></td>
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<tr>
<td>Administration</td>
<td>1,25</td>
<td>2,125</td>
<td>6,25</td>
<td>7</td>
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<tr>
<td><strong>Total Avg. Staff EoY</strong></td>
<td><strong>3,575</strong></td>
<td><strong>13,625</strong></td>
<td><strong>37,25</strong></td>
<td><strong>50,5</strong></td>
<td><strong>55</strong></td>
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</tbody>
</table>
We invite you to win with us!

Patricio Saez
CEO

psaez@sigmaindustrialprecision.com
www.sigmaindustrialprecision.com
Great opportunities to improve
in operations, efficiency and waste reduction

From €66 M/Y estimated losses and upwards²

Minimum average loss per failed operation €20K²
Considering 30 trips a year² for 2210³ oil tankers worldwide in 2020
Failure in 5% operations for a total of 3315²

Failure in pump to discharge an 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 random¹

¹ Source: ARC view, Optimize Asset Performance with industrial IoT Analytics
² Source: Calculation done using SIGMA’s client projects
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:

A SHIPS:
1. Pumps
2. Compressors
3. Electric engines
4. Power generators

- Ensure critical operations in docking process
- Increase on board electric infrastructure safety

B DOCK CRANES:
1. Power supply analysis
2. Motors mechanical damage surveillance

- Mechanical & electrical surveillance for cranes’ motors from electrical cabinet
- Reduce maintenance, complexity and costs

C GAS & FUEL STORAGE:
1. Pumps
2. Electric compressors

- Pumps and compressors easy surveillance and protection
- Electrical power supply analysis to ensure safe operation

D SILOS:
1. Conveyors
2. Loading and unloading machines

- Avoid breakdown during loading or unloading operations
- Increase protection for people, easy surveillance in hazardous areas

E CONTAINERS:
1. Power supply
2. Cryogenic systems

- Ensure electrical correct supply
- Immediate alert against problems that can risk the goods
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

## Electric Analysis

<table>
<thead>
<tr>
<th>Technology</th>
<th>Assets covered</th>
<th>Failure detection</th>
<th>How is done</th>
</tr>
</thead>
</table>
| Electric Analysis | Transformer, Wiring, Motor, Pump, VFD, Fan, Generator, Compressor | Mechanical & electric  
  - Electric arch  
  - Energy quality  
  - Mechanical in motors, pumps, etc. | MCSA, motor current signature analysis  
  Leakage current analysis  
  Voltage analysis  
  Power analysis  
  Smart electric protection  
  Electric efficiency |

## Other technologies

### Vibration analysis

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<thead>
<tr>
<th>Technology</th>
<th>Assets covered</th>
<th>Failure detection</th>
<th>How is done</th>
</tr>
</thead>
</table>
| Other technologies | Motor, Pump, Fan, Generator, Compressor | Mechanical  
  - Unbalance  
  - Misalignment  
  - Bearing damage | Vibration sensors installed over motors.  
  Online or data logging |

### Thermal analysis

<table>
<thead>
<tr>
<th>Technology</th>
<th>Assets covered</th>
<th>Failure detection</th>
<th>How is done</th>
</tr>
</thead>
</table>
| Other Technologies | Transformer, Wiring, Generator | Mechanical & electric  
  - Cold points  
  - Hot points  
  - Electric arch  
  - Fluid leaks | Thermal cameras.  
  Online or data logging |
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
SIGMA’s Advantages

Safety
High data encryption level

Affordable
Minimum infrastructure and operative costs

Innovation
Constantly improving & keeping you one step ahead of competition

Flexible
For any machine, no matter age, location or size

Easy
SIGMA manages technological project + deliver information

Sustainable
Helps to enlarge assets’ life and to reduce waste in hardware and energy
Huge market in acceleration

Relevant competitors for Predictive Maintenance

Samotics Overview
- Founded: 2015
- Status: Private
- Employees: 56
- Latest Deal Type: Corporate
- Financing Rounds: 2

Augury Overview
- Founded: 2011
- Status: Private
- Employees: 250
- Latest Deal Amount: $180M
- Investors: 18

Estimated valuation
- Samotics: EUR +100 M
- Augury: EUR +1000 M

Pre-money Valuation
- Samotics: EUR 6M
- Augury: EUR +1000 M

https://pitchbook.com/profiles/company/171330-13#funding
https://pitchbook.com/profiles/company/82952-56
Deep Electrical Analysis can be the Key

Common Solution

Operation & Maintenance
COSTS REDUCTION

Improve
CONTROL & SAFETY

Ensure machines
& infrastructures
EFFICIENCY

Look for a new and better
Competitive SOLUTION

in-depth analysis of
Electricity
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:
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