



EDGENIUS



Problem Definition



Unplanned Downtime

Manufacturing operations stop unexpectedly



Main Causes:

- Equipment failure
- Supply chain instability (e.g. chip shortages)
- Cybersecurity incidents
- Energy volatility



Consequence



High costs



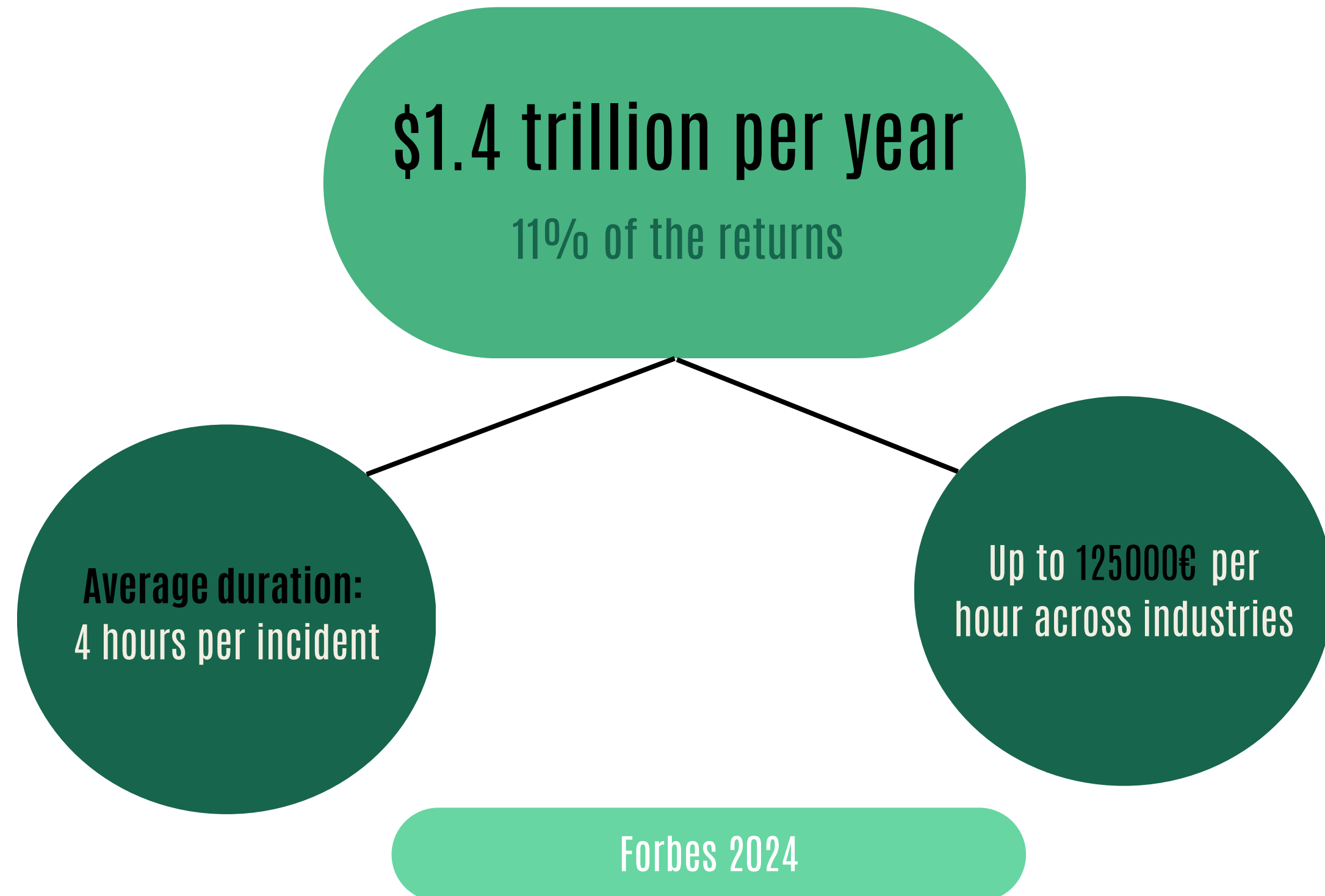
High operational impact

Reality: Financial impact often underestimated

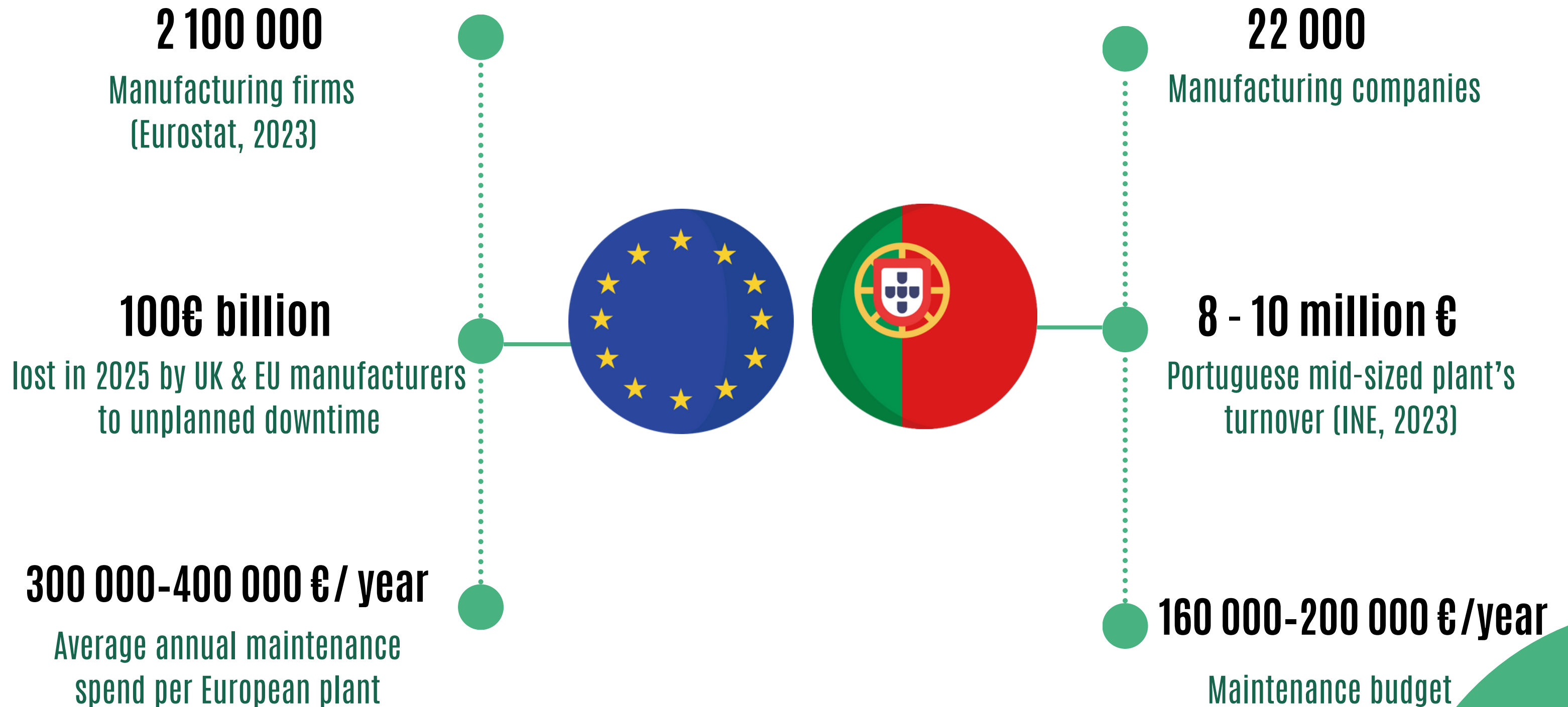


Unplanned Downtime - Scale & Financial Impact

Cost caused to world largest companies by unplanned downtime

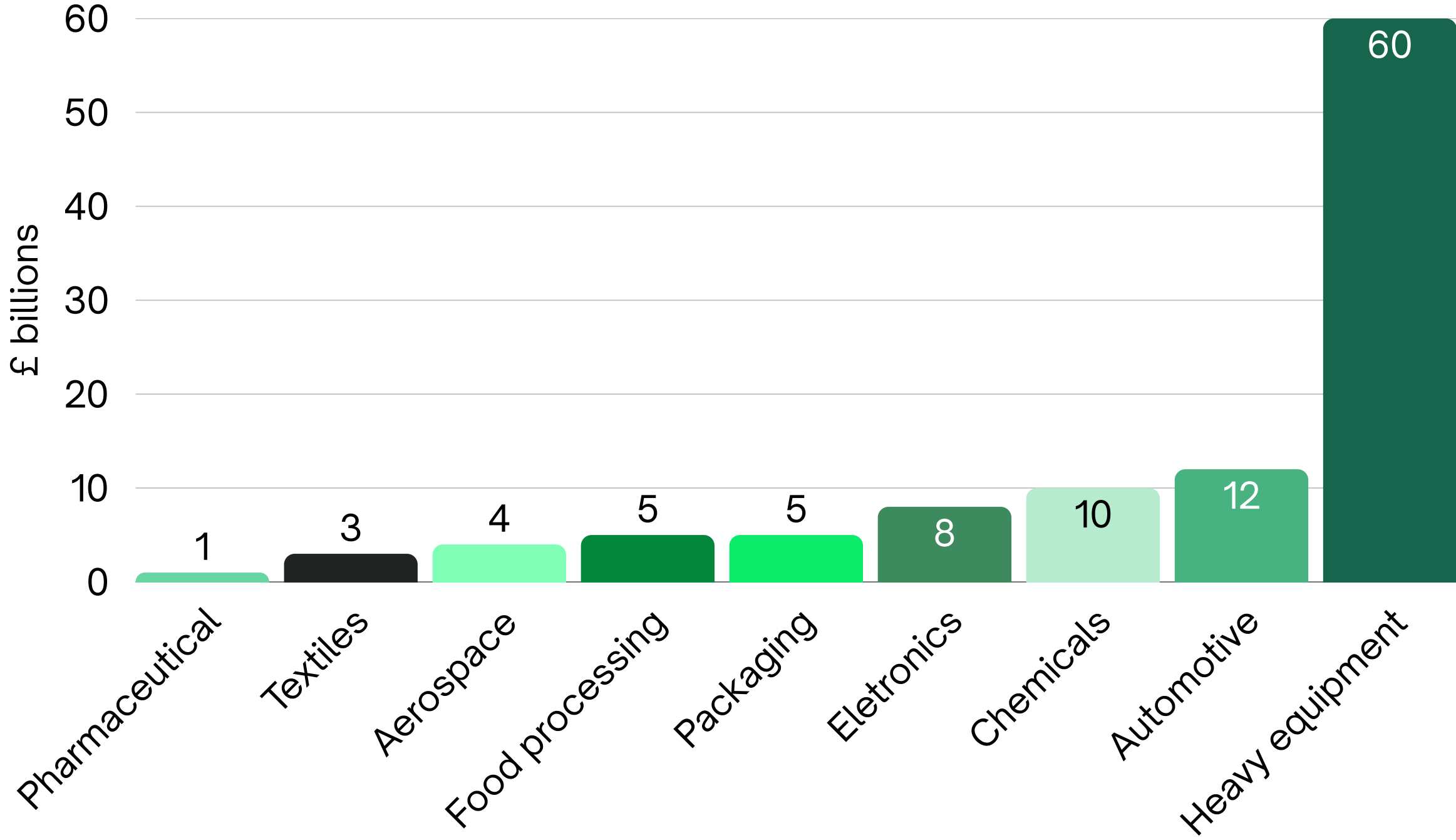


Unplanned Downtime - Scale & Financial Impact

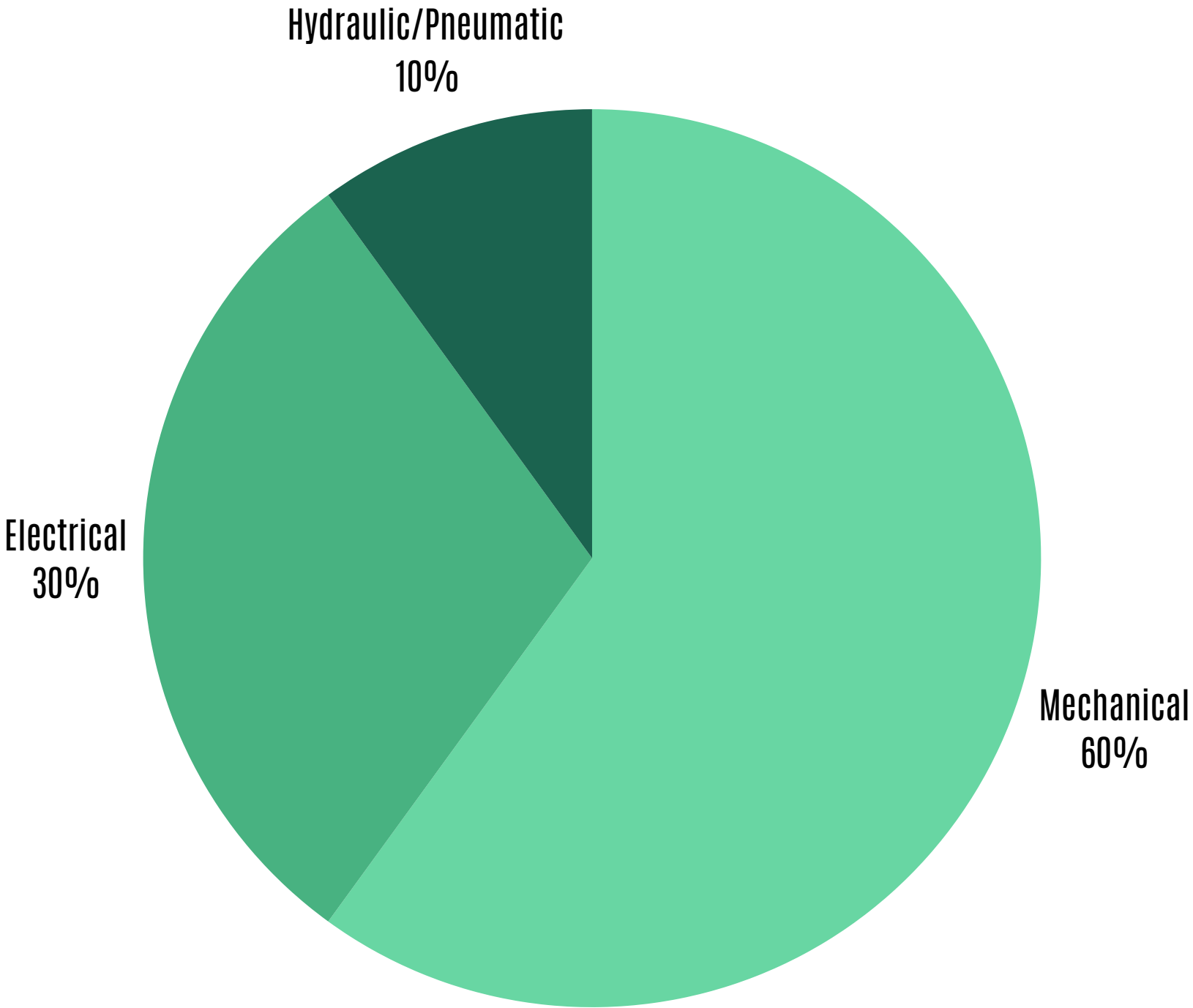


Unplanned Downtime - Sector Breakdown

2025 Projected Financial Impact (EU/UK)



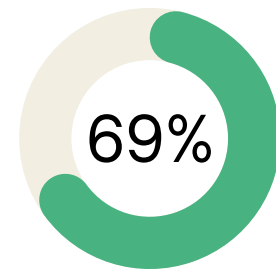
Root Causes of Equipment Failure



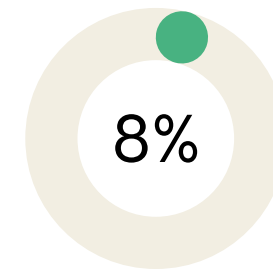
2025 IDS INDATA REPORT



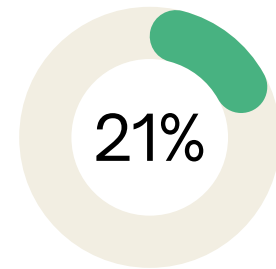
Maintenance Practices



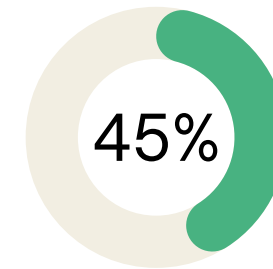
of plants experience at least one unplanned shutdown per month



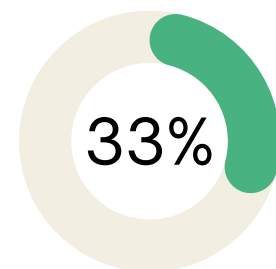
of plants face daily unplanned shutdowns



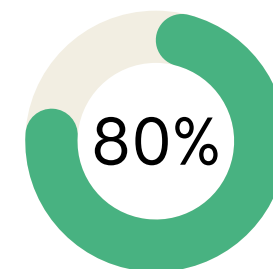
of plants still operate "run-to-fail"



use time-based maintenance

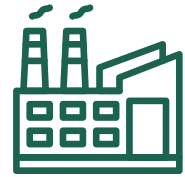


use condition-based maintenance



don't have continuous condition monitoring

Target Customer Segments



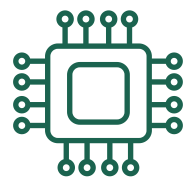
Sector: Manufacturing Plants

Facilities with critical equipment (pumps, motors, compressors) and complex process lines.



Region & Support: Portugal

Local presence facilitates implementation and ongoing support



Digital Maturity: "IoT Starters"

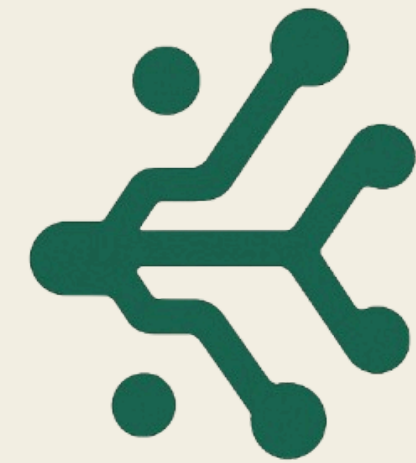
Lack of advanced analytics



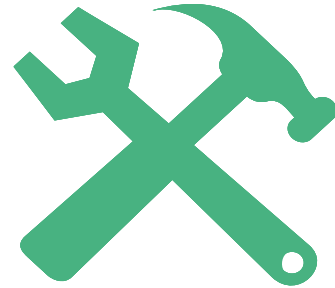
Plant Size: Mid-Sized Portuguese Plants

Annual turnover: €8 million-€10 million

OUR SOLUTION

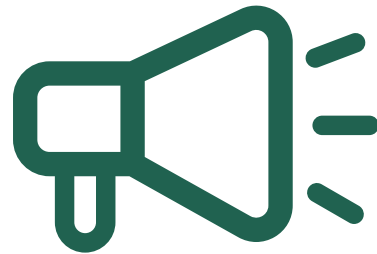


Proposed Solution



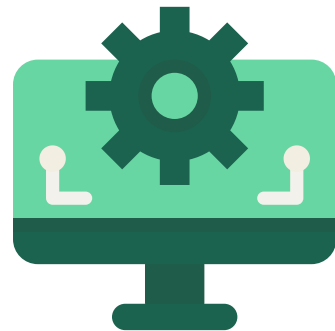
Data Analysis with Edge AI

- Models run on-site, learn from new data, and improve over time.



Worker Alerts

- LED light and buzzer signal when an anomaly is detected.



Dashboard Platform

- Web portal shows real-time alerts, issue causes, and trends.

Value Proposition



REAL-TIME ANALYSIS

- Edge AI analyzes equipment data locally 24/7
-



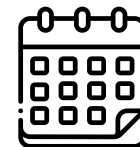
EARLY FAILURE DETECTION

- Flags issues well before breakdowns.
-



REDUCED DOWNTIME

- Proactive alerts reduce unplanned stops.
-



OPTIMIZED SCHEDULES

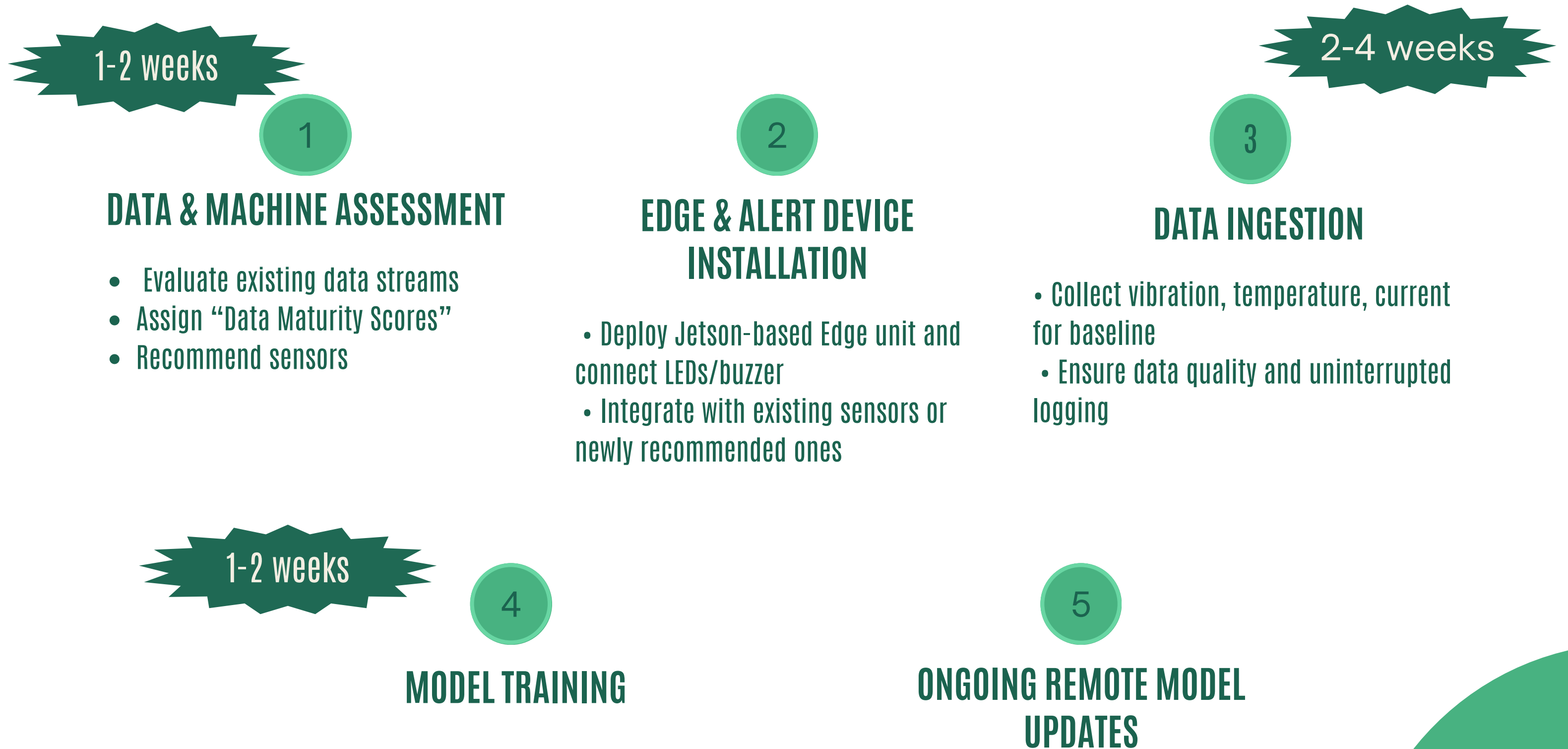
- Insights enable predictable, cost-effective upkeep.
-



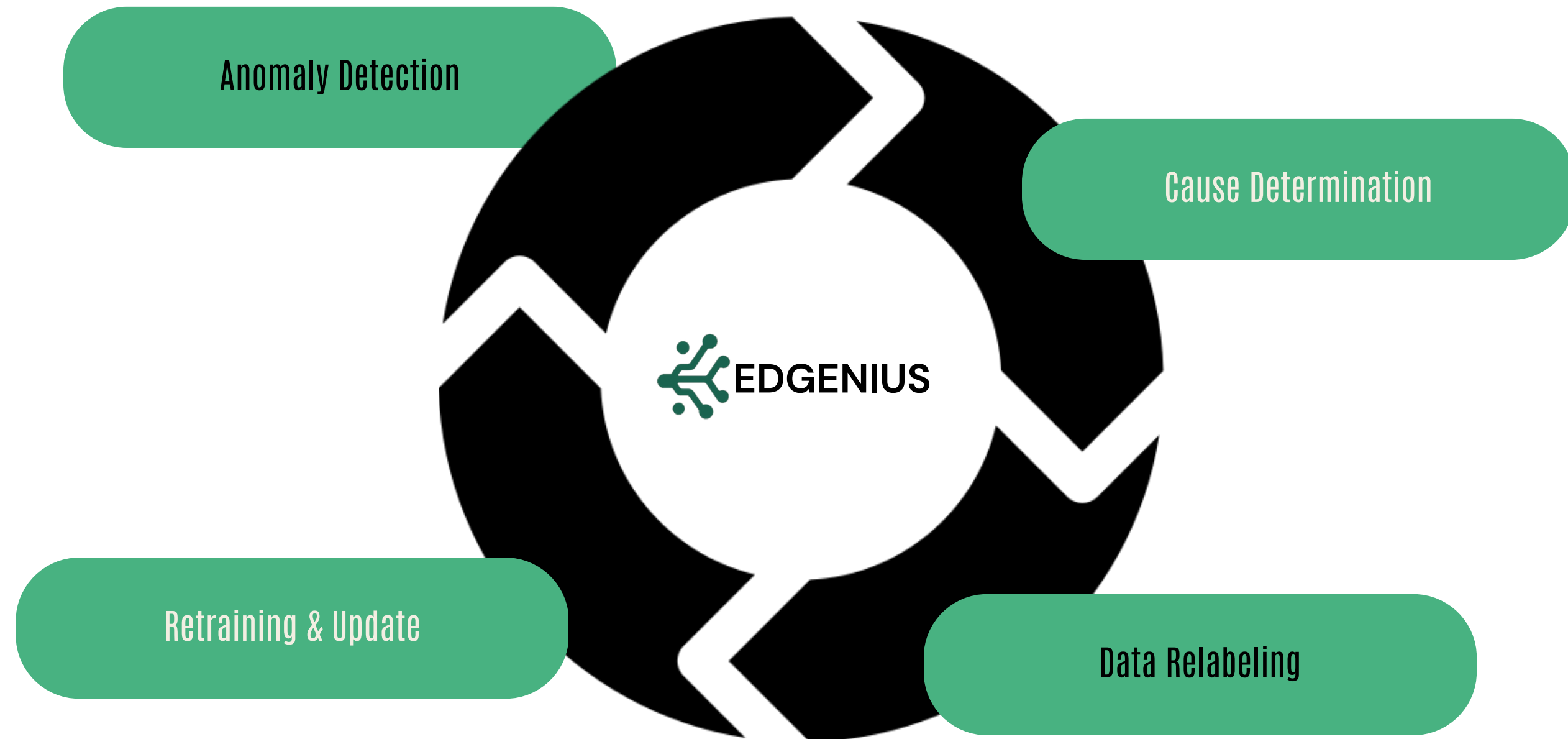
OPTIMIZED CAPEX ALLOCATION

- Data-driven decisions guide where to invest in new assets.

Implementation Process



Iterative Machine learning



Why Edge AI ?



DOESN'T NEED CONTINUOUS INTERNET

- runs offline and uses internet only for remote dashboards and model updates
-



INSTANT RESPONSE

- detects anomalies in real time without relying on a cloud server
-



DATA PRIVACY

- processes everything locally with the possibility of never sending data to the cloud
-

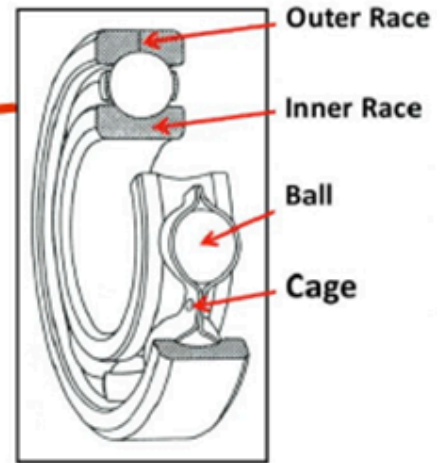
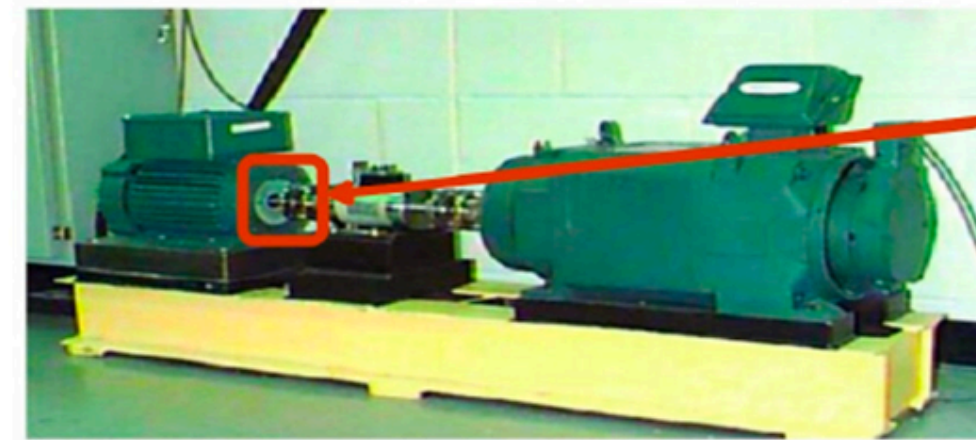
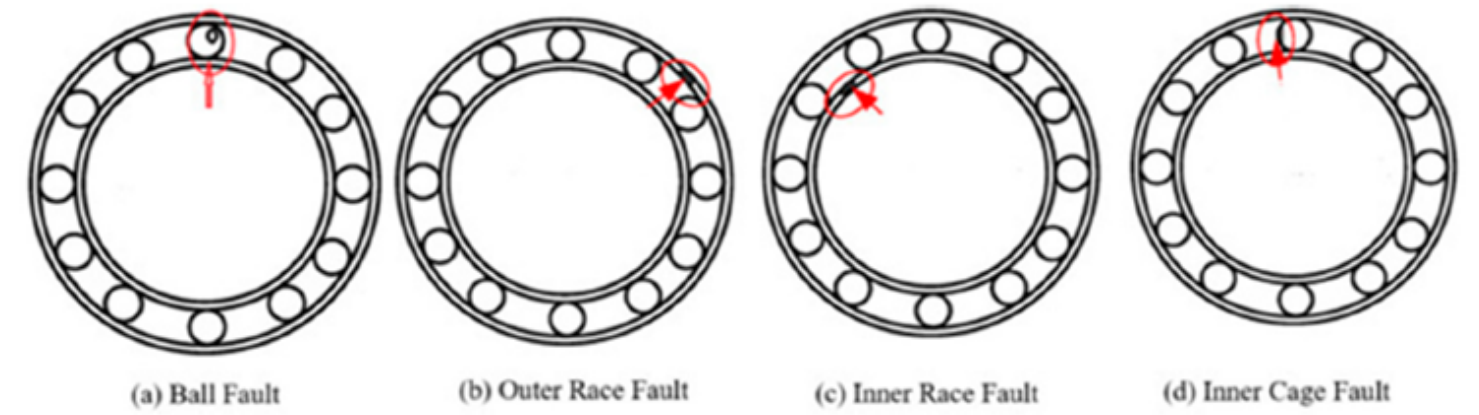


SCALABLE

- each device can monitor multiple machines without overloading a central system with high volumes of data

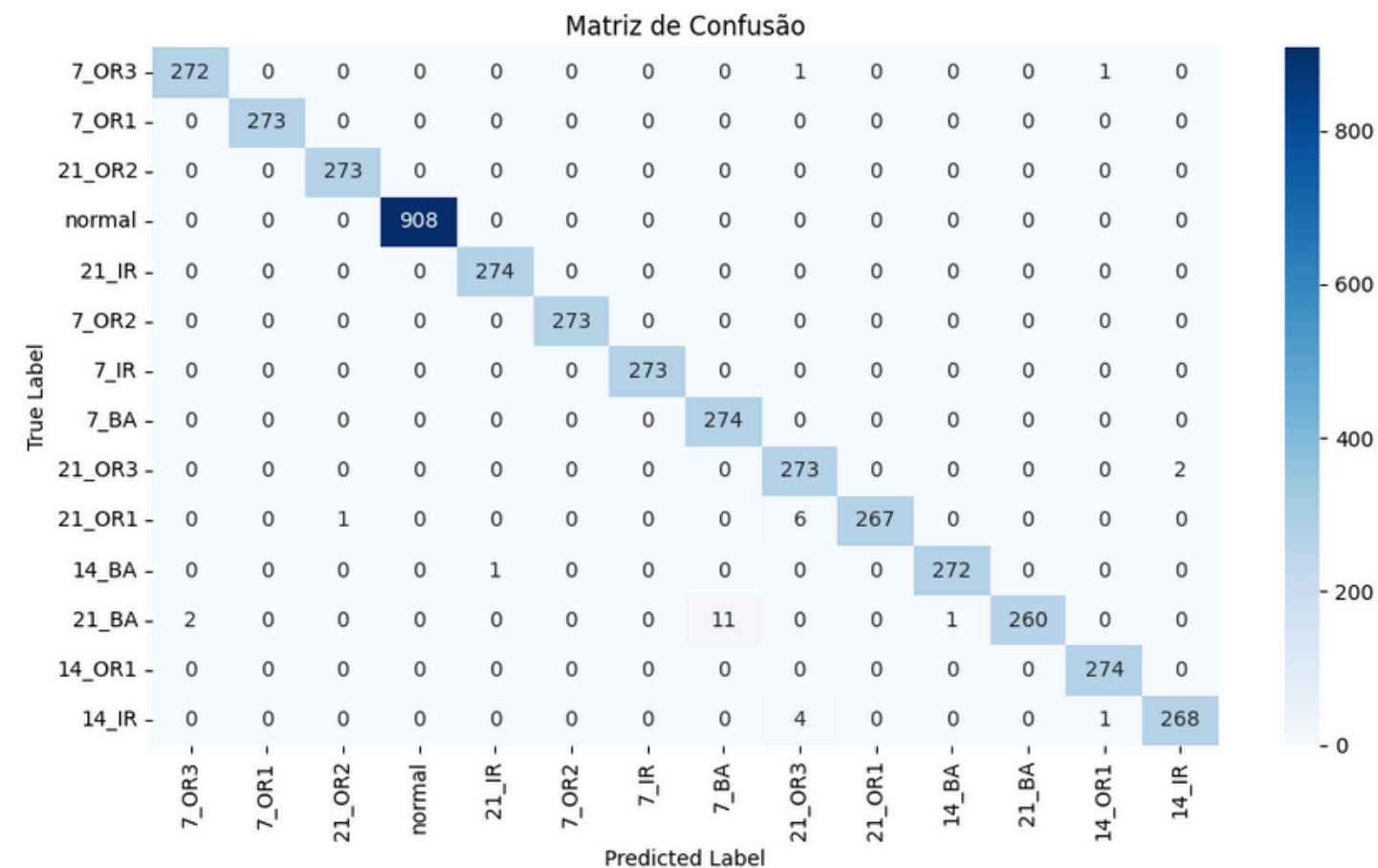
TECHNICAL DEVELOPMENT

- Collected vibration data from motor bearings using accelerometers
- Trained a Convolutional Neural Network (CNN) on that dataset
- CNN detects and labels bearing faults via vibration patterns
- Achieved 99 % accuracy in identifying errors before machine failure



Classification Report:

	precision	recall	f1-score	support
7_OR3	0.99	0.99	0.99	274
7_OR1	1.00	1.00	1.00	273
21_OR2	1.00	1.00	1.00	273
normal	1.00	1.00	1.00	908
21_IR	1.00	1.00	1.00	274
7_OR2	1.00	1.00	1.00	273
7_IR	1.00	1.00	1.00	273
7_BA	0.96	1.00	0.98	274
21_OR3	0.96	0.99	0.98	275
21_OR1	1.00	0.97	0.99	274
14_BA	1.00	1.00	1.00	273
21_BA	1.00	0.95	0.97	274
14_OR1	0.99	1.00	1.00	274
14_IR	0.99	0.98	0.99	273
accuracy			0.99	4465
macro avg	0.99	0.99	0.99	4465
weighted avg	0.99	0.99	0.99	4465



How will we reach our clients?

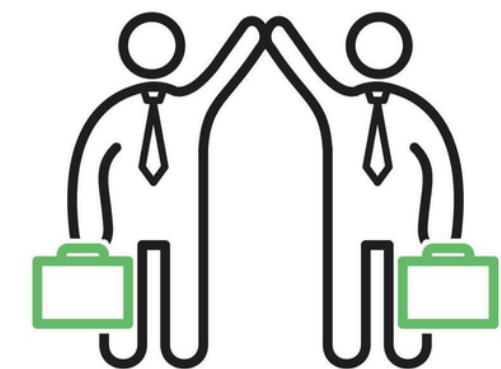
Direct to Customer

- Sell directly to end-users and manage customer relationships, onboarding, and data handling.

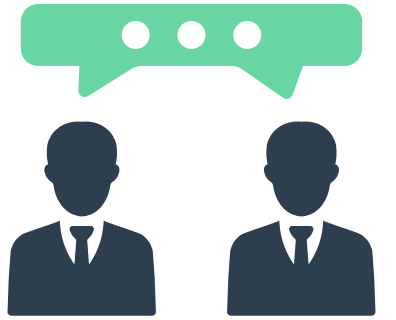


Manage customer relationships:

- Face-to-face visits to create a sense of reliability;
- Continuous engagement with the clients, not just installation



Interviews and feedback



Several interviews were conducted with **technicians, managers, and industry experts** to validate the relevance, feasibility, and market interest in our predictive maintenance solution.

CONCLUSIONS

THERE IS GENUINE INTEREST IN PREDICTIVE MAINTENANCE, ESPECIALLY FOR CRITICAL MACHINES.

THE FIXED MONTHLY FEE MODEL IS ATTRACTIVE BECAUSE IT LOWERS FINANCIAL BARRIERS.

INTEGRATION WITH EXISTING SYSTEMS (LIKE SCADA) IS A KEY FACTOR FOR ADOPTION.

ONGOING SUPPORT AND LIVE DEMOS BUILD CUSTOMER TRUST.

INVOLVING COMPLIANCE AND SENSOR EXPERTS EARLY HELPS PREVENT FUTURE ISSUES.

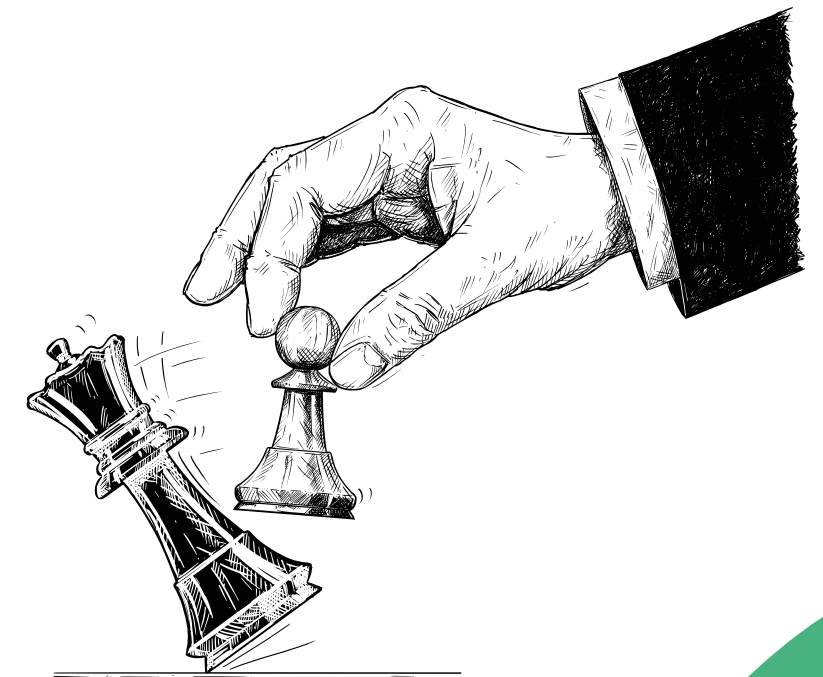
Competition & Competitive Advantage

Key Competitors:

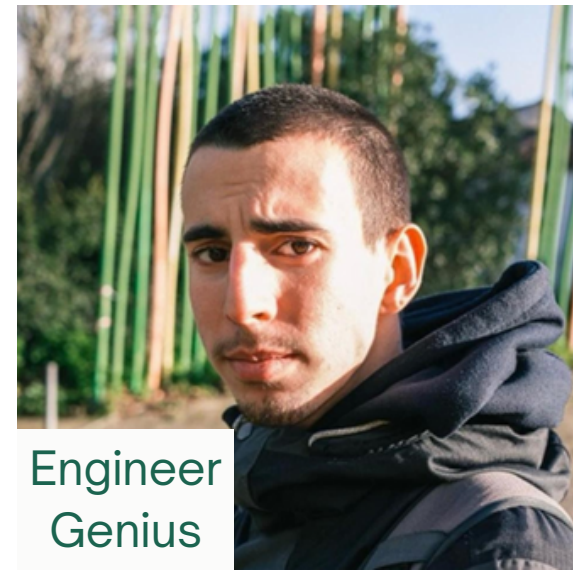
- **Siemens MindSphere** – cloud-based predictive maintenance with considerable latency
- **GE Digital Predix** – broad IoT suite; costly and complex for mid-market
- **IBM Maximo Asset Management** – hybrid on-prem/cloud; steep learning curve

Sustainable Competitive Advantages:

- **Edge-First Architecture** – real-time anomaly detection without cloud latency
- **Highly Customizable Models** – adaptable to any machine
- **Transparent, Flat-Rate Pricing** – €1,000/month with no per-device fees or surprises
- **Rapid, Low-Cost Integration** – minimal hardware



TEAM MEMBERS



João Silveira

Control, AI and
Robotics



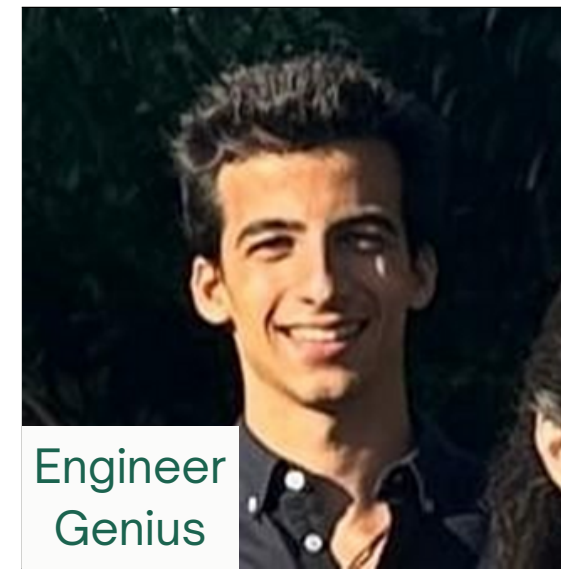
Manuel Silva

Control, AI and
Robotics



David Peixoto

Control, AI and
Robotics



Diogo Matias

Network and
Communications



Tomás Esteves

Control, AI and
Robotics



Tomás Garrido

Telecommunications

Financial Structure

General

Company Name	EdGenius
Currency	EUR
Area unit	m2

Revenue

Customer acquisition cost (CAC)	750	EUR
Percentage of paying users (PPU)	100%	
Monthly average revenue per user (ARPU)	0	EUR
Monthly average revenue per paying user (ARPPU)	1000	EUR
First asset sale per paying user (ASPPU)	1000	EUR
Periodic next asset sales per paying user (PASPPU)	0	EUR
Periodicity of next asset sales	1	months
Monthly Churn Rate (CR)	3%	
Direct asset sales	100%	
Channel margin for indirect asset sales	0%	

COGS - Costs of Goods Sold

Monthly direct costs per active user	0	EUR
Monthly direct costs per paying user	100	EUR
Asset sale gross margin	50%	

SG&A - Selling, General & Administrative costs

Average Monthly Employee Cost	2000	EUR
Area for 5 employees	30	m2
Monthly office rent with services	20	EUR/m2
Monthly professional services (accounts, law, etc.)	250	EUR/10empl
Monthly tech support and software licenses	40	EUR/empl
Monthly insurance	60	EUR/empl
Monthly communications	15	EUR/empl
Monthly IP costs	50	EUR

Capex

Furniture for 5 employees	2000	EUR
Servers, printers and network equip for 10 empl	1500	EUR
Computer for new employee	900	EUR
Mobile phone for new employee	150	EUR

Valuation

Revenue multiplier	6	x
Expected IRR	15%	

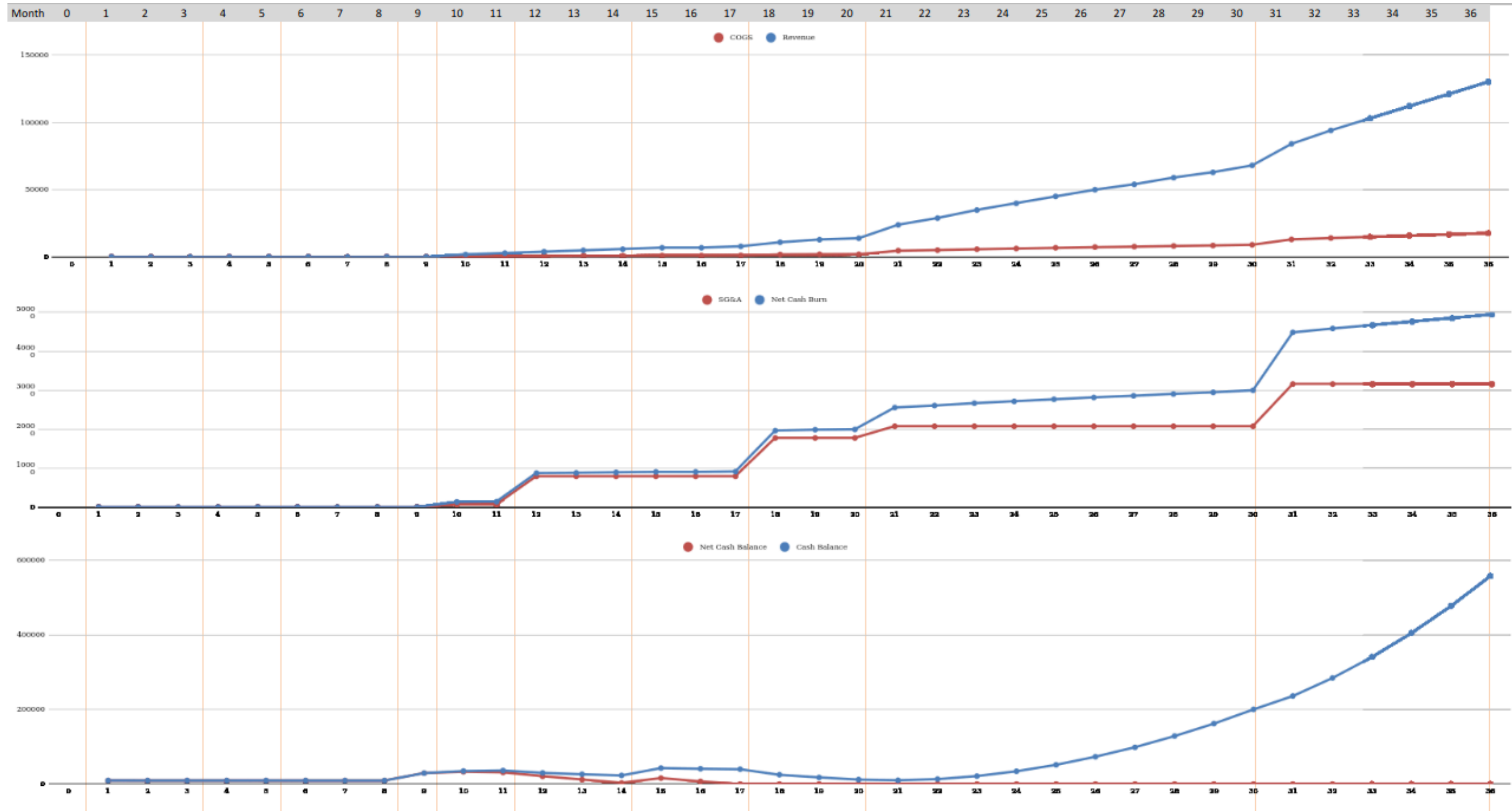
Financial Structure

M	Milestone	Staff	Mkt/m	Add. Serv.	Add. Capex	Invest
0	Start	0	0			10000
3	MVP Ready	0	0			0
5	Private Beta Launch	0	0			0
8	Public Beta Launch	0	0			20000
9	V1.0 Launch	0	750			5000
11	1K revenue/month	3	750			5000
14	100% growth rate/month	3	750			22000
17	Hire VP marketing	7	1500			0
20	10K revenue/month	7	4500			0
30	50K revenue/month	10	9000			0
36	3-Year checkpoint	10	9000			0

	Year	0	1	2	3
Revenue			9000	199000	983000
COGS			2100	33900	141500
Gross Profit			6900	165100	841500
Gross Margin			77%	83%	86%
SG&A			10045	176610	314730
EBITDA	0	-3145	-11510	526770	
Free cashflow	0	-43145	-33510	526770	
Exit Value	0	54000	119400	589800	
Investment		40000	22000	0	
Free Cashflow+Exit	0	10855	116040	642477	

Results	
	Month <input type="text" value="36"/>
	Ending Cash Balance 558115 EUR
Totals	
Investment	62000 EUR
Marketing	109500 EUR
New Users	146
Revenue	1191000 EUR
Metrics	
CAC	750 EUR
Average revenue per user (ARPU)	8158 EUR
Churn	3%
Estimated Exit Value (in year 3)	5898000 EUR

Financial Structure



Future Milestones:

- 1st Year:
 - Ready MVP (in 3 months)
 - First Pilot Contracts (in 6 months)
 - Launch to Public (in 9 months)
- 2nd Year:
 - Finalize Sensor Partnerships (by month 20)
 - Onboard 20 Clients (by month 15)
 - Reach €10 K/month MRR (by month 18)
- 3rd Year:
 - Reach €50 K/month revenue (by month 30)
 - Reach 100 clients (by month 36)



62k€ for 11%
equity

Thank you!

video