



DUE DILIGENCE & FEASIBILITY STUDY

KATA-ANA
SWEDEN

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Chairman

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INTRODUCTION

This Due Diligence Report Template is designed to result in a short, readable due diligence report.

Our goal is to provide our investors with a full summary report that is readable and comprehensive. It covers all the main areas in diligence and provides the author(s) with a structured approach.

This document contains private and confidential data exclusively for the information of potential investors. No receiver shall disclose the information to any third party without prior consent of Kata-Ana Invest AB.



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COMPANY OVERVIEW

KATA ANA is developing a unique invention: the next generation energy charging and storage system, which is known as an Air Independent Propulsion (AIP) battery. It is aluminum-based, environmentally friendly, recyclable, has no emissions, is safe, much lighter, much cheaper, and up to 20 times more efficient, and better than what is on the market today. The project is based on several inventions and experiments over the past 35 years and the remaining development time is estimated at 1 - 2 years. With this invention, the range of an electric car will be improved from today's 500 km to 7,500 – 9,000 km on one charge.

The company's vision is to develop a product that can be licensed to manufacturers around the world for the manufacture of charging and energy storage systems, to be primarily used in vehicles of various types, on land, at sea and in the air, but also for storing energy in real estate and all applications where energy storage is needed.

First patent was obtained in the USA on January 2, 2024.



PROBLEM / OPPORTUNITY

- To provide the best solution for generating energy and charging aluminum batteries in the market.
- The increased demand of Electric vehicles will require more batteries that last longer and are reliable.
- Lithium-ion batteries are currently the best available option for powering electric vehicles.
- Future development of electric aircraft requires lighter batteries. In such applications, the invention can be very significant
- Storage and for equalizing power peaks in the power grids of energy in properties and industries will increase significantly.
- The ongoing and increasing energy transition to save the climate will require many improvements in how energy is used globally. Here, energy storage will be very important.



SOLUTIONS



The research of 20 years has successfully developed the solution to be able to produce the first efficient rechargeable aluminium batteries.



Our aluminium batteries can hold 20 times more energy than Lithium-ion batteries.



The growth potential for electric car market will be very high and thus, supplying a cheaper and reliable car batteries would be a huge profit.

The growing market for storage of energy in properties, which is combined with solar cells or for power equalization on the power grids will be huge.



The battery is modular, it can be built small or large and fits into all industries where the need for energy storage exists.



PRODUCT OR SERVICE

The first efficient rechargeable aluminum batteries in the market:

Rechargeable aluminum batteries can store, drop, and take in a lot of energy.

Minimum operating temperature: -30 - -50 degrees Celsius

Maximum operating temperature: +50 - +150 degrees Celsius

Operating time: 10-30 years

Rated voltage is approx. 7.5 V and higher

Charging voltage is approx. 10-15 V

Induction is approx. 10-360V

Capacity alternative 1.5-3.4 kWh/kg

Current electricity is 507-1000Ah /2.6 kg/dm³

Energy density / volume: minimum 2100 Wh / litre

Energy density / mass: minimum 1330 Wh / kg

Charging times: 3000 – 10 000

Voltage when battery is kept approx. 0.5 V or 0.0 V discharge energy.

Can be used in all applications; electric cars, electronic items.

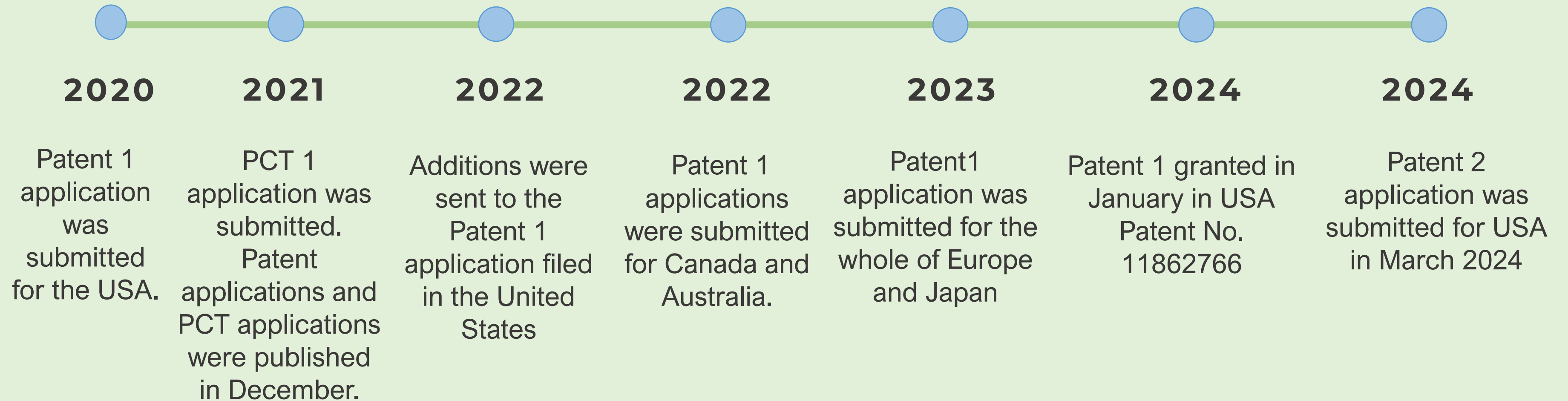


All figures are calculated and approximate



MILESTONES & ROADMAP

Global patent applications in the US, filed 12/06/2020 PARTA1 PCT, P22708PC00.
Global PCT patent applications in Finland filed 11/06/2021 PCT /FI2021 / 050437.
First patent PARTA 1 US granted in the USA 2024-01-02 Patent No. 11862766





Patent strategy

At least two types of patent will be submitted

1. The first patent 1 describes the shell of the method's construction.
2. The second patent 2 describes the chemical function of the method's construction.

Before we submit the patent application no. 2, we would prefer to ally with or bring in some major investor/s as shareholders, with financial muscle, if someone were to steal our technology and start manufacturing without signing a manufacturing license with us. In that case, we must be able to conduct a process in court.



Plan for remaining development work

The goal is to continue the patent application process with additional applications, build a smaller test model for verifications, build prototypes and finally do independent public verifications.

What we need and how we are going to do is:

- Hire a project manager/CEO to work with us as a team.
- Rent clean room about 215 square meters.
- Rent workshop / changing room about 540 square meters.
- Various workbenches and tools must be procured, or an external operator can be hired.
- Mixtures, alloys and, more are purchased from external suppliers.
- Office (already acquired).



BUSINESS MODEL

Euro €0.3-3.0M PER LICENSE

Licensing

The company plan is, in a first step, to sell out ten pre-licenses to larger manufacturers with the expected above price depending on the scope and area.

Euro €400-500 M + ROYALTY

Royalties

Euro 400 - 500 million + royalty will be added for a current license within the successful invention.

1-2 YEARS

Period

Estimated successful outcome of the invention in 1-2 years.



COMPETITORS' LANDSCAPE

Key Product Elements	Lithium Ion Battery	Nickel Metal	Lead acid	Ultracapacitors	Kata-Ana
Unique technology	✗	✗	✓	✗	✓
Unexpensive material	✗	✓	✓	✓	✓
Patent construction with catalyst	✓	✗	✗	✓	✓
Voltage and current increase in pair	✓	✗	✓	✗	✓



COMPS FROM COMPETITORS

The demand for electric vehicles is rapidly growing due to global efforts to reduce emissions and carbon footprint. This has led to a significant increase in demand for batteries, which power EVs. According to Apollo Research Reports, the global electric vehicle battery market was valued at USD 34 billion in 2022 and is expected to reach USD 141.6 billion by 2032¹.

The growing use of solar and wind power is increasing demand for batteries, which store excess energy for times of high demand, making renewable energy more reliable and balancing the grid. As more countries switch to clean energy, battery demand is expected to increase. The global energy storage market is projected to be worth \$435.32 billion by 2030².

ELECTRIC VEHICLE BATTERY TYPE	MARKET VALUATION
Lithium Ion Battery	\$21.5 B
Lead acid	\$ 10.5 B
Nickel Metal	\$1.7 B

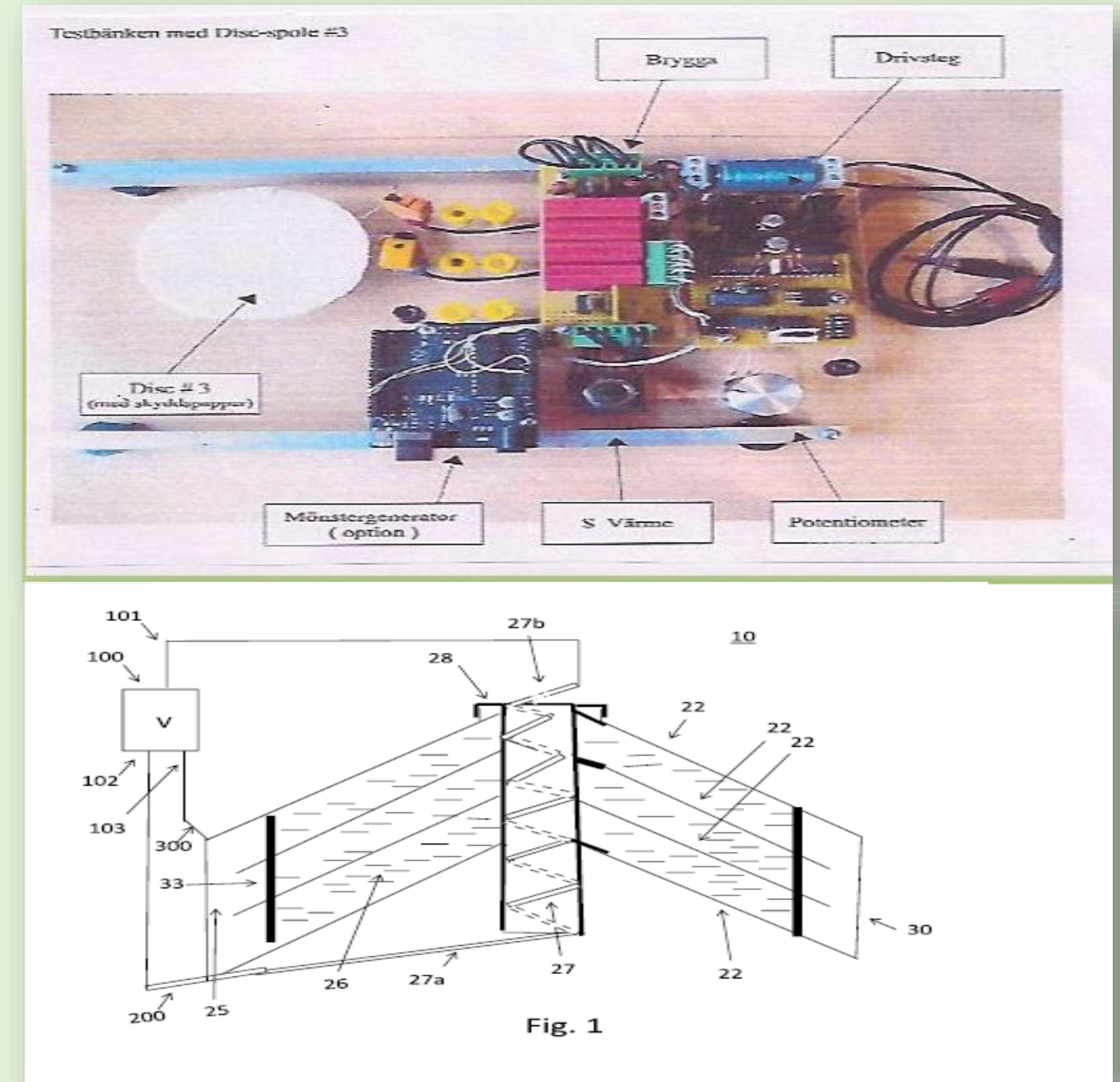
1. [Energy Storage Systems Market Size, Growth, Report 2022-2030 \(precedenceresearch.com\)](https://www.precedenceresearch.com/energy-storage-systems-market-size-growth-report-2022-2030)

2. [Electric Vehicle Battery Market Size Will Reach USD 141 Billion by 2032 \(statzon.com\)](https://www.statzon.com/electric-vehicle-battery-market-size-will-reach-usd-141-billion-by-2032)



COMPETITIVE ADVANTAGES

- Lithium-ion batteries are the best available now in the market but not for long until new technology or innovation comes through.
- There are no rechargeable aluminium batteries on the market at the moment.
- Our Aluminum batteries are estimated to contain twenty times more energy than Lithium-ion batteries.
- No other successful aluminium battery studies other than Cornell University can be found.
- The major expected product advantages are cheaper manufacturing and more efficient function.
- To summarize, the product is aluminum based, environmentally friendlier, recyclable, has no emissions, is safe, much lighter, more efficient, and also much cheaper compared to what is on the market today.





TARGET MARKET

- The market is large and global. Everyone on the planet is and will be more or less dependent on a transition to cleaner technologies for energy use.
- In general, the company's customers are in all areas where energy is to be stored either for shorter or longer time periods.
- The product can be built from very small to very large scales, there are no restrictions on sales areas. It can fit, e.g., in vehicles of all kinds including cars, trucks, construction machinery, agricultural machinery, recreational vehicles, boats, and ships as well as in storage of solar, wind, wave, and thermal energy, and in housing, telephones, and other appliances of various kinds.
- Aircraft and spacecraft



MARKETING PLAN

▣ Licensing Strategy

During the development work, selling 1 pre-license for an amount of Euro 3 Mill. This is then entitled to a manufacturing license, when the development work is completed, which will then be paid with Euro 400 Mill + royalty per kWh.

▣ Licensing Reservation

Sell license reservations for Euro 0.3 Mill. per license reservation, which will then pay with Euro 500 Mil + royalty per kWh per manufacturing license.

▣ Advertisement

Brochures, application notes, or any other technical documentation for the invention.

▣ Conference and Tradeshow

Opportunity to explore new product offerings, a conference hinges upon the exchange of information.

▣ Direct Marketing

Direct communication or distribution to individual customers.



MARKET ANALYSIS & TREND

The global battery market size was valued at USD 107.5 billion in 2022 and is expected to grow at a compound annual growth rate (CAGR) of 15 % from 2023 to 2028.

Legislative support for battery recycling, implementation of hybrid power systems in telecom towers, a need for continuous power supply, and an increase in the construction of data centres are trends that will gain traction in the market.

Several emerging trends are expected to positively impact the global battery industry along with its major segments over the next few years and for a long time to come.

Strict emission norms by the government authorities of developed countries, such as the United States and the United Kingdom, coupled with growing attention towards fuel efficiency, are expected to drive battery demand.

The market growth is attributed to high demand from the automotive application includes rechargeable batteries used in non-rechargeable batteries and electric vehicles.

The market is expected to observe substantial growth on account of technological advancements in terms of enhanced efficiency, cost-effectiveness, and product innovation.

Source

<https://www.precedenceresearch.com/energy-storage-systems-market>



MARKET SIZE

Global Battery Market Report 2022-2032

Source:

<https://www.precedenceresearch.com/battery-market>

\$107.5 Billion

Global Market for Battery 2022

\$262.3 Billion

Estimated Global Market for Battery in 2028

17.5%

The market is projected to reach a revised size of \$262.3 Billion by 2028, growing at a CAGR of 17.5%



SWOT ANALYSIS



STRENGTHS

- Unique technology
- Patent-protected construction
- Small risk

- Capital raising
- High age of the inventor, however, the invention is secured for posterity if something should happen to the inventor.



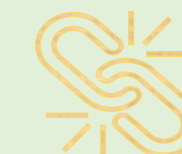
THREATS



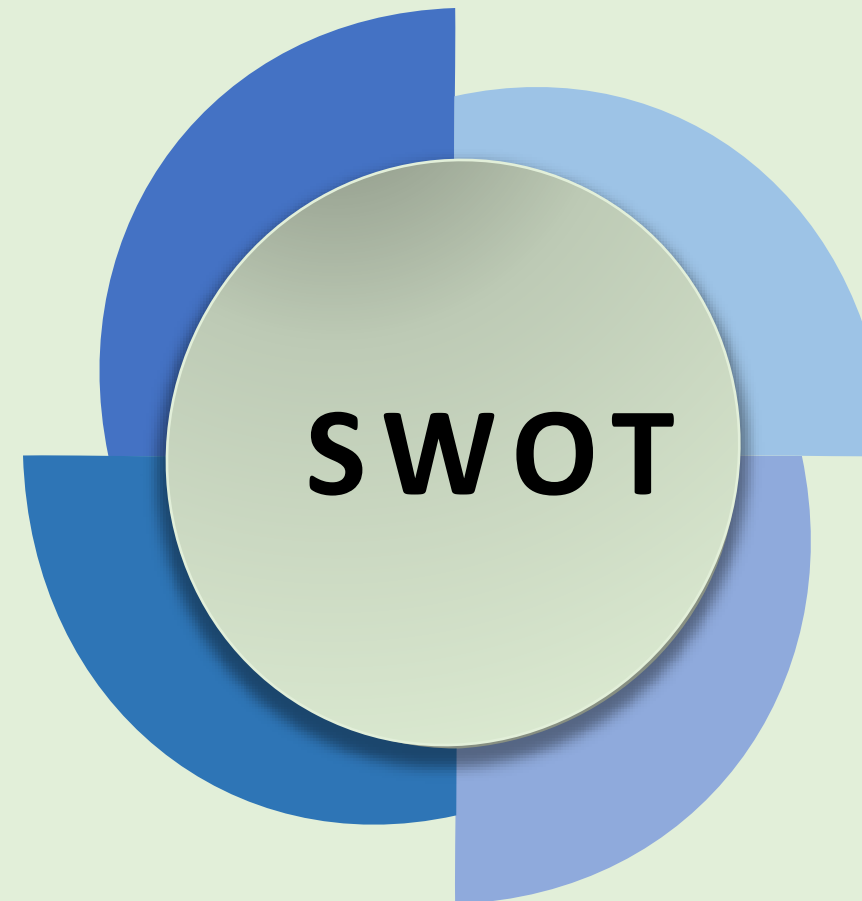
OPPORTUNITIES

- Very large market in all industries
- Global market
- Very profitable exit

- Small company
- Weak finances
- New company



WEAKNESSES





MANAGEMENT TEAM

Ulf Ramström

Chairman



Experienced entrepreneur - Different types of companies - All positions, small / large companies.

Extensive experience - Logistics, Purchasing, Marketing, Sales, Rationalization and structural work, IT, Company management.

Has, i.e., held leading positions in Flextronics and Relacom.

Rainer Partanen






Inventor

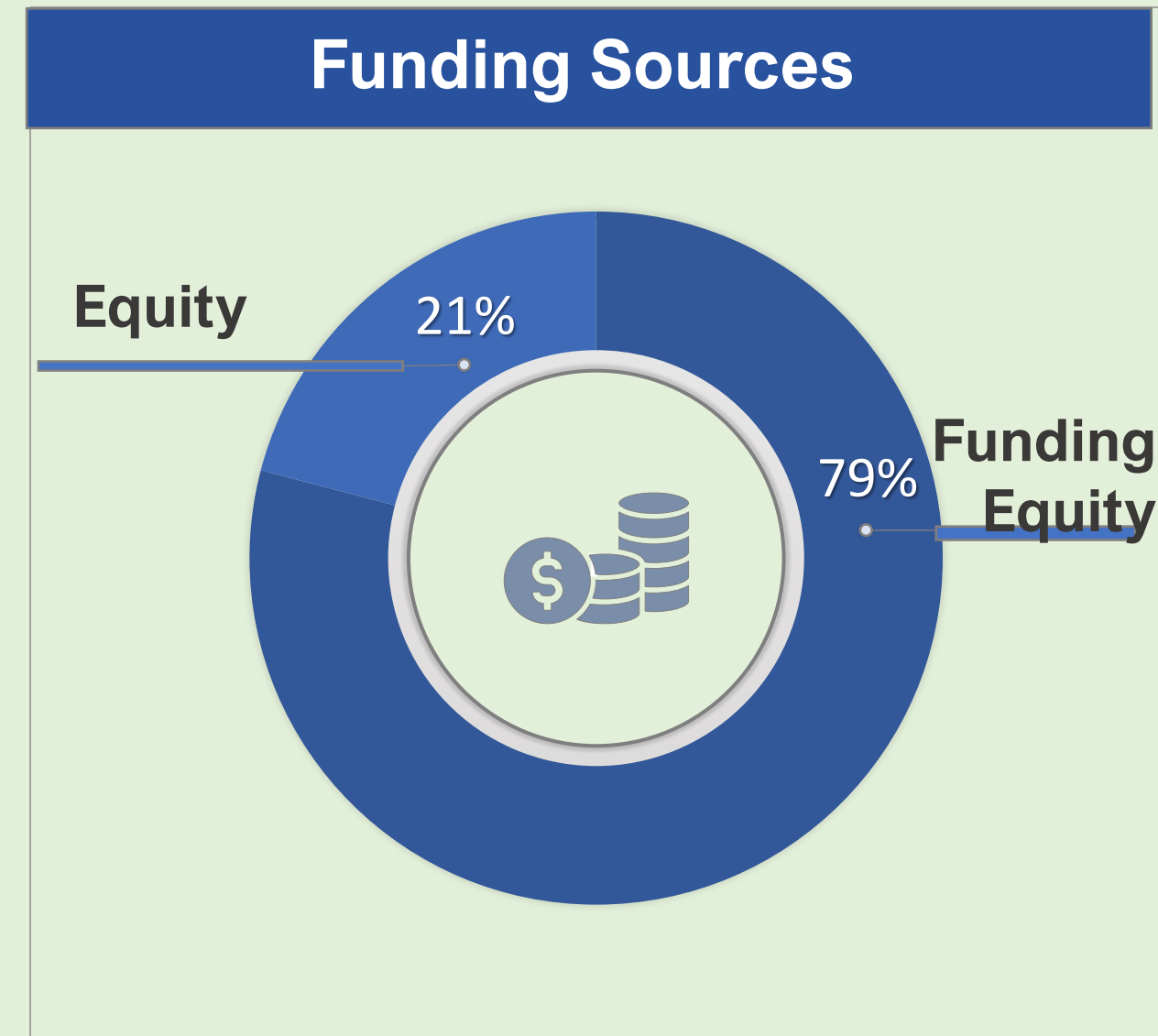


Studied technology, worked with technical sales and with sales in the metal industry until the 1970s, when he began to think about why electric cars are not manufactured to any great extent. Throughout his career, he has previously worked with stainless metals. In 1982, he founded his own company in the metal industry..



CAPITAL STRUCTURE

	CAPITAL	FUNDING
•  Debt	0	0
•  Equity	Euro 1.514 M	Euro 6.6
•  Preferred Stock	0	0
•  Grant	0	0
•  Total	Euro 1.514 M	Euro 6.6 M



The investment amount gives 20 percent of the company with rights to the invention

Highlight – The company currently has more than 60 smaller shareholders with capital invested of €1.514 million as equity investment.



ALTERNATIVE PARTIAL PAYMENT

		PAYMENT		FUNDING	
• €	Funding Equity Payment at once	1	€0.5 M	Build a smaller test model for verifications	
• €	Funding Equity Payment after 3 month	2	€3.6 M	Patent submitting. Build prototypes.	
• €	Funding Equity Payment after 9 month	3	€2.5 M	Build prototypes and finally do independent public verifications.	
• €	Total		€6.6 M		

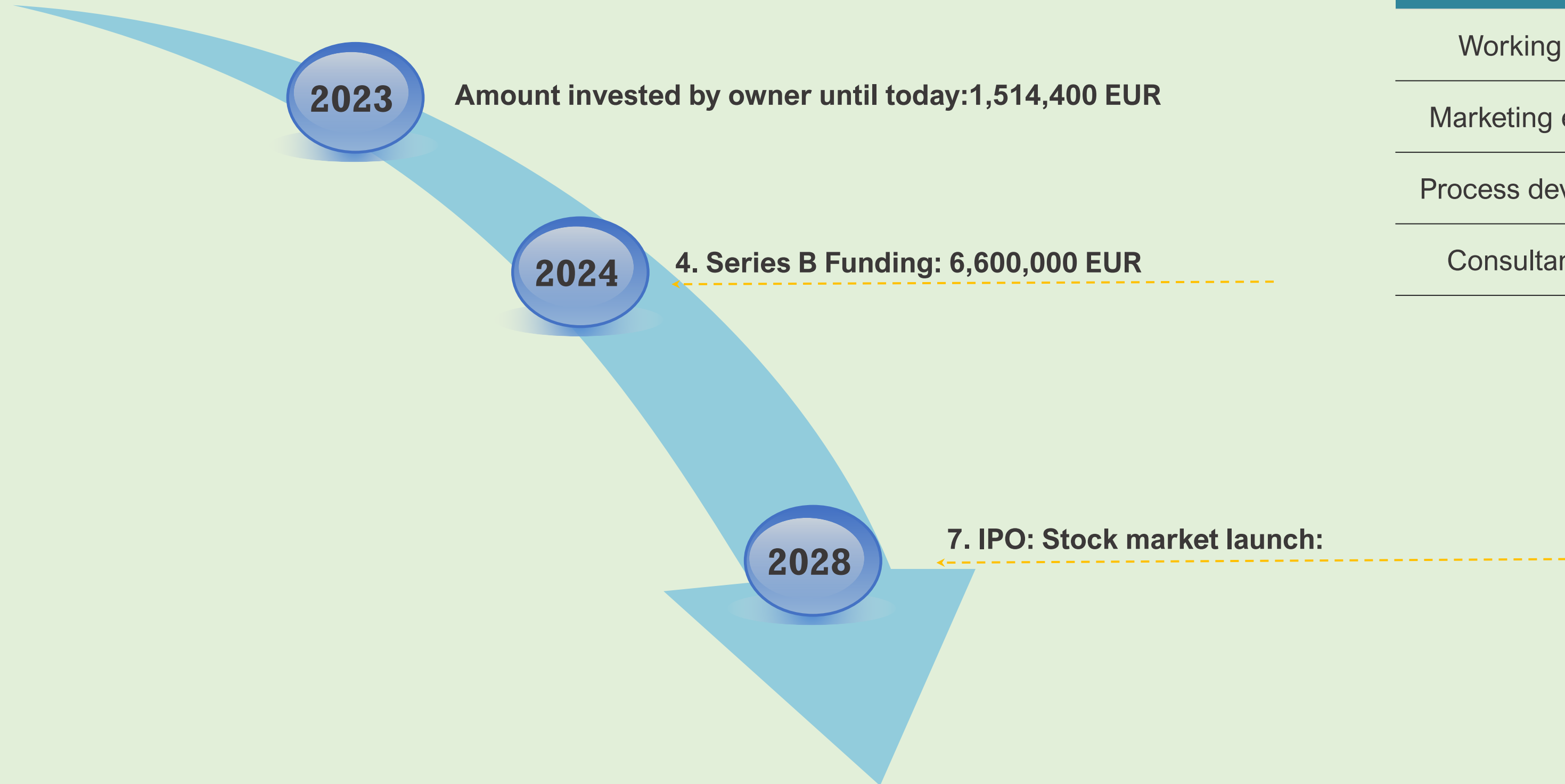


FUNDS AND THEIR USES

FUNDS REQUIREMENT	
Asking amount	€6,600,000
Instrument	Equity
Amount invested by owners so far	€ 1,514,400
USE OF FUNDS	
Premises	€300,000
Capital equipment	€200,000
CEO/Project leader salary	€670,000
Personnel expenses	€670,000
Administration	€330,000
Material and Development expenses	€3,830,000
Consultancy fees	€600,000
Total Use of Funds	€6,600,000



CAPITAL STRUCTURE BREAKDOWN



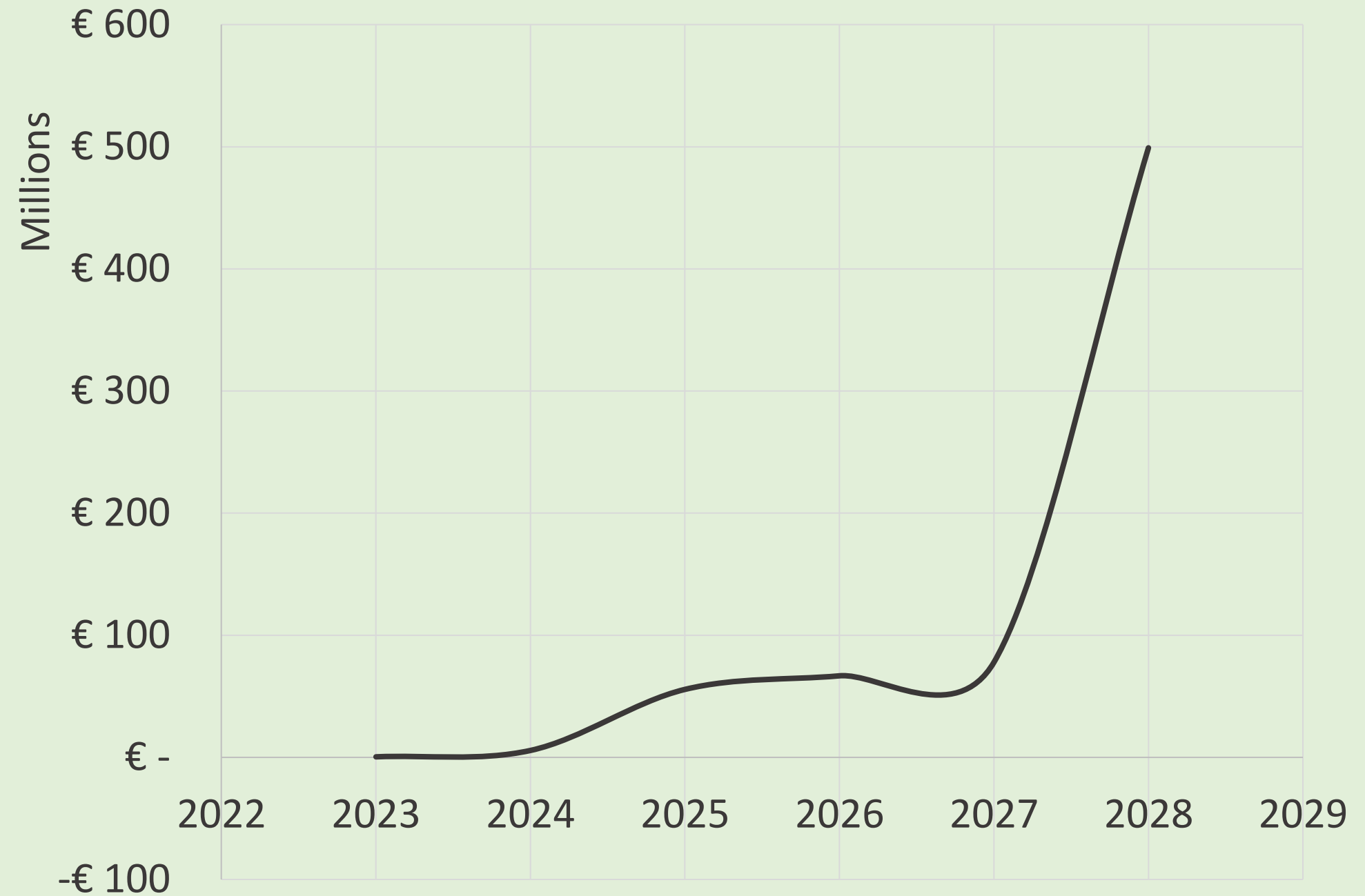
Series B Funding: 6.6 M	
Working capital	4,500,000 €
Marketing expenses	1,000,000€
Process development	500,000 €
Consultancy fees	600,000 €



TRACTION

As the world becomes increasingly reliant on technology, the demand for reliable and efficient sources of power has never been higher. The emergence of new technologies in the field of battery development is opening up exciting possibilities for both individuals and businesses alike.

For potential clients, the benefits of investing in this new battery technology are numerous. Improved energy density, longer lifespan, and faster charging times are just a few of the advantages that come with cutting-edge battery solutions. With the ability to power everything from smartphones and laptops to electric cars and renewable energy systems, this technologies offer a range of possibilities for those looking to reduce their carbon footprint, increase their energy independence, or simply streamline their daily operations.





5 YEARS PROJECTION & KEY METRICS (EUR €'000)

	Year 1	Year 2	Year 3	Year 4	Year 5
Number of License Sold	1 license rsv.	1 man. license 1 – 10 license rsv.	1 man. License License rsv.	1 man. License + royalty	1 man. License + royalty
Revenue	333	5,555	55,555	66,666	77,777
Total Expenses	333	2,778	5,555	6,666	7,777
EBITDA	0	2,777	50,000	60,000	70,000
Net Profit	-39	2,115	39,438	47,351	55,262
Net Cash Flows	6,561	1,481	27,607	33,146	38,683

Year 2 Profit

€ 2,115 K

Revenue growth from Year 2 to Year 5

1400%

Notes:

- Rsv = reservation
- Man = Manufacturing

The above and subsequent amounts are very conservatively based on whether we can capture 0.3% of the global market by the year 2028 (Calculated as 10% royalty in license revenue of customers' turnover).

When our project is fully successful according to the calculations and the global energy transition process continues, the amounts will multiply many times.



RETURN ON INVESTMENT CALCULATIONS(€'000)

NPV & IRR (EUR €'000)

AT Y5

NPV

102,929

IRR

125.67%

AT Y5

Gross Profit Margin %

100.00%

Profit Before Tax Margin %

71.05%

Net Profit Margin %

89.49%

FINANCIAL RATIOS

Y1

Y2

Y3

Y4

Y5

Return on Investment

-10%

61%

245%

245%

245%



EXIT STRATEGY

TARGET EXIT DATE - 2027



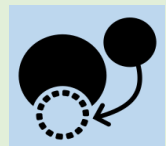
EXPECTED VALUATION AT EXIT

It is expected that the company's valuation appreciates by the multiple of 5.79x of its Y5'S EBITDA.

EBITDA: € 69,600,000

EXPECTED VALUATION AT EXIT= € 402,984,000

The exit strategy is not finalized yet. The company is not aiming to sell shares to third party investors or considering an IPO in the medium future at this stage. The focus at the moment is to setup a well-managed company that can generate added value for the long term.



When the development work results according to the calculations, the invention and the company will increase in value significantly above what we have covered in this information. It may happen that our technology will out-compete all previous battery technology?



ANOTHER WAY OF SEEING DEVELOPMENT OPPORTUNITIES

Total battery market year 2028	Market share	Kata-Ana Revenue
\$262,300 Million	0.3 %	\$ 78 Mill
	1 %	\$ 262 Mill
	5 %	\$ 1,311 Mill
	10 %	\$ 2,623 Mill
	20 %	\$ 5,246 Mill
	etc.	etc.

(Calculated as 10% royalty in license revenue of customers' turnover).



INVESTMENT HIGHLIGHTS

The project is just in time now. With the best result of the project, the market can be global and huge.

The market is worth more than 107 billion USD, maybe much more. The market is growing at least 20 percent per year, maybe more and it will increase in hand with developing of battery technologies.

The growth potential for the electric car market will be very high. The growth potential have also stated for boats, aircrafts, many other vehicles and also in properties.

To store electricity in very less and much more efficient system are necessary for climate change.

All investments are associated with risk, so it is also with this project, however, the potential is very large if everything is fully successful.

Welcome to join us in a very exciting project with very great potential.

Please tell me with what amount you can join us as an investor or
if you are interested in buying a license for manufacturing.

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