



# ISMO-MILANO

May 29<sup>th</sup>, 2025

[WWW.ERREDUEGAS.IT](http://WWW.ERREDUEGAS.IT)



# SPEAKERS



**ENRICO D'ANGELO**  
FOUNDER



**FRANCESCA BARONTINI**  
CHIEF EXECUTIVE OFFICER



**ELIANA BOLLINO**  
INVESTOR RELATIONS OFFICER & ESG  
DEPT.





# INDEX

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- **BUSINESS FOCUS**
- **KEY SUCCESS FACTORS**
- **MARKET OVERVIEW**
- **FY2024 FINANCIAL PERFORMANCE**
- **STRATEGIC INITIATIVE**
- **APPENDIX**





# EXECUTIVE SUMMARY

A high-tech industrial company in the gas generation sector worldwide (nitrogen, oxygen and hydrogen) using both alkaline and pem technology. Thanks to its extensive experience, scaling up to large electrolyzer for the energy transition

With over 20 years of experience and a track record of satisfied clients, ErreDue is a preferred partner in the large H2 plants that will develop over the next 5-10 years.

The company is building a new advanced plant that increases production capacity by 10 times, is signing commercial partnership outside Italy

BACKLOG \*  
€ 22,5 M

## TOTAL BACKLOG €22.5 M

- High growth of backlog with €22.5M.
- The 80% is referred to FY 2025
- Composed by :
  - ✓ €15.9M sales of generator,
  - ✓ €6.6M recurring revenues long term rental and service

EBITDA Margin  
> 30%

CASH  
CONVERSION  
< 50%





# BUSINESS FOCUS

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# THREE BUSINESS UNITS, ONE GOAL



## ENERGY TRANSITION

Transportation  
Power Generation and Storage  
Residential and Commercial Heating  
Renewable Energy Integration



## INDUSTRIAL APPLICATION

Agriculture and Fertilizers  
Food and Beverage Industry  
Pharmaceuticals and Healthcare  
Electronics, Manufacturing, Laser cutting  
Environmental and Waste Management



## LABORATORY LINE

Gas Carrier  
Laboratory instruments



# HYDROGEN



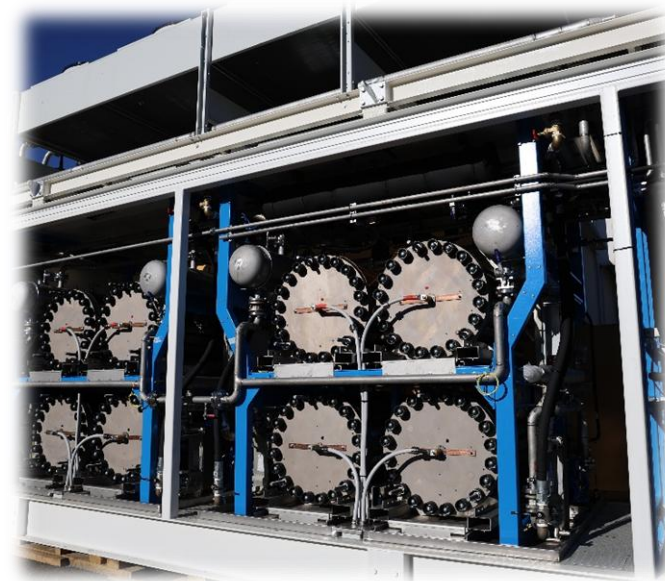
LAB



TRADITIONAL BUSINESS



ENERGY TRANSITION



# OTHER GASES



LAB



LAB

TRADITIONAL BUSINESS



TRADITIONAL BUSINESS



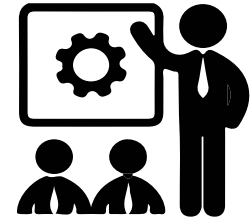
A photograph of a laboratory with several scientists in white lab coats working at different stations. The lab is filled with various pieces of scientific equipment, including gas cylinders (blue and green), a large white machine labeled 'Tracera', a yellow notebook, and a black machine with a 'CAUTION' label. The background shows more lab equipment and shelves with binders.

# KEY SUCCESS FACTORS

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# KEY SUCCESS FACTORS



## CUSTOMIZATION

FULL SYSTEM  
OFFERING  
CUSTOMIZED FOR  
DIVERSIFIED  
END-MARKET  
APPLICATIONS



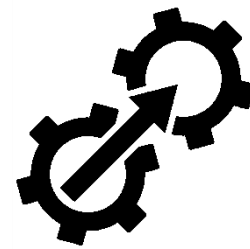
## RELIABILITY

WHITE SPACE IN PILOT  
PROJECTS FOR H2  
PLANT TO ACHIEVE NET  
ZERO EMISSION



## SCALABILITY

ON-SITE GAS  
GENERATION  
SCALABILITY ACROSS  
MULTIPLE  
END-MARKETS

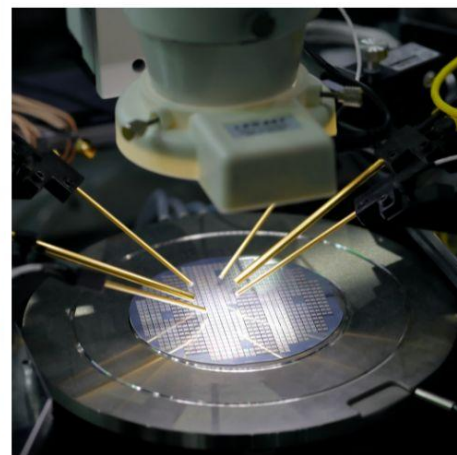
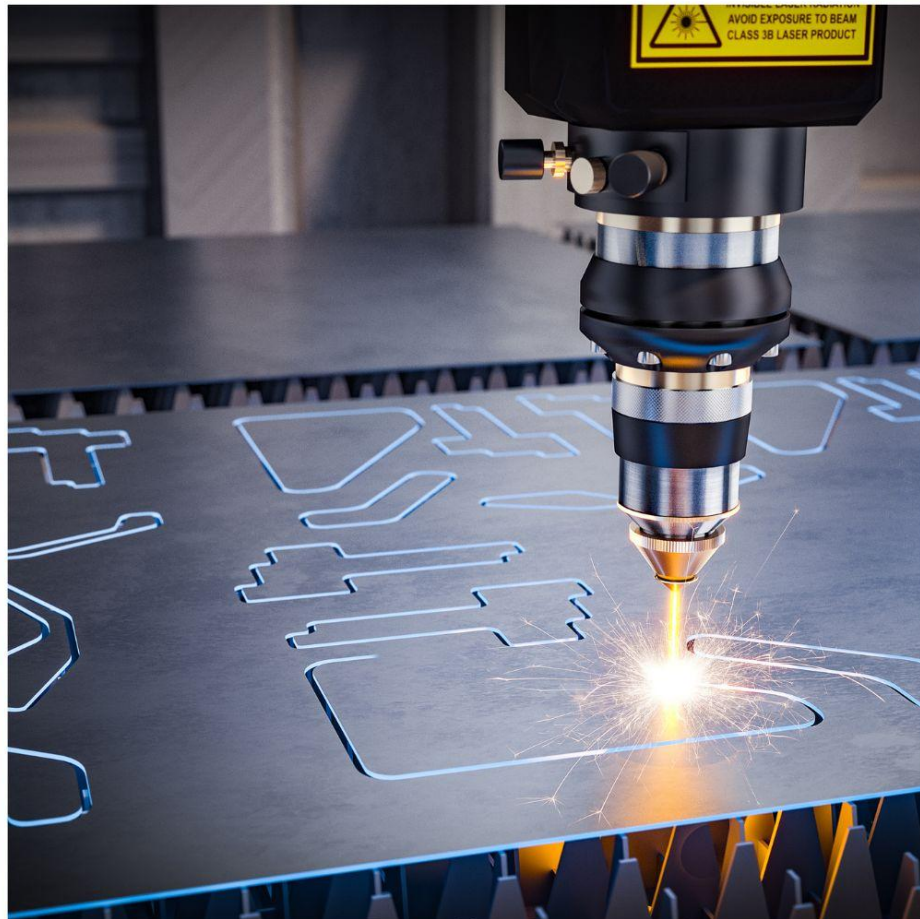
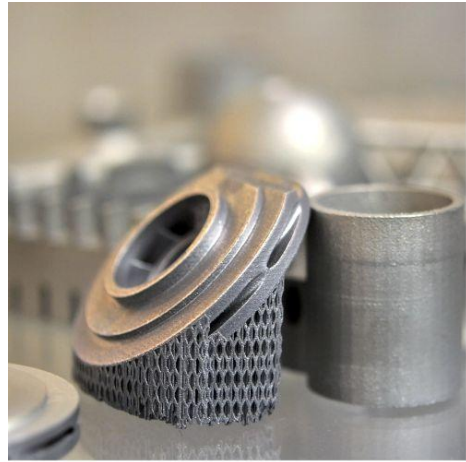


## VERTICALLY INTEGRATED BUSINESS MODEL

EVERY  
TECHNOLOGICAL  
COMPONENTS IS  
RESEARCHED,  
DESIGNED, PRODUCED  
AND ASSEMBLED IN-  
HOUSE

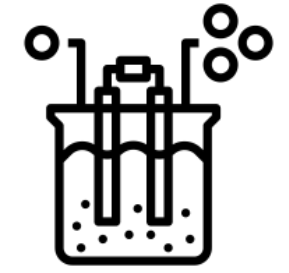






## AN INCOMPARABLE TRACK RECORD

EXTENSIVE EXPERIENCE  
COVERING DECADES,  
OVER 20 YEARS OF  
EXPERIENCE



## TECHNOLOGY LEADE

AWE AND PEM  
TECH, RELIABLE AND  
PROVEN PERFORMANCE  
GUARANTEES  
REVOLUTIONARY  
NEXT-GENERATION  
SOLUTIONS LEADERSHIP IN  
COST AND SCALE



## INDUSTRY LEADER

MARKET-LEADING  
LARGE-SCALE  
MANUFACTURING  
CAPABILITIES



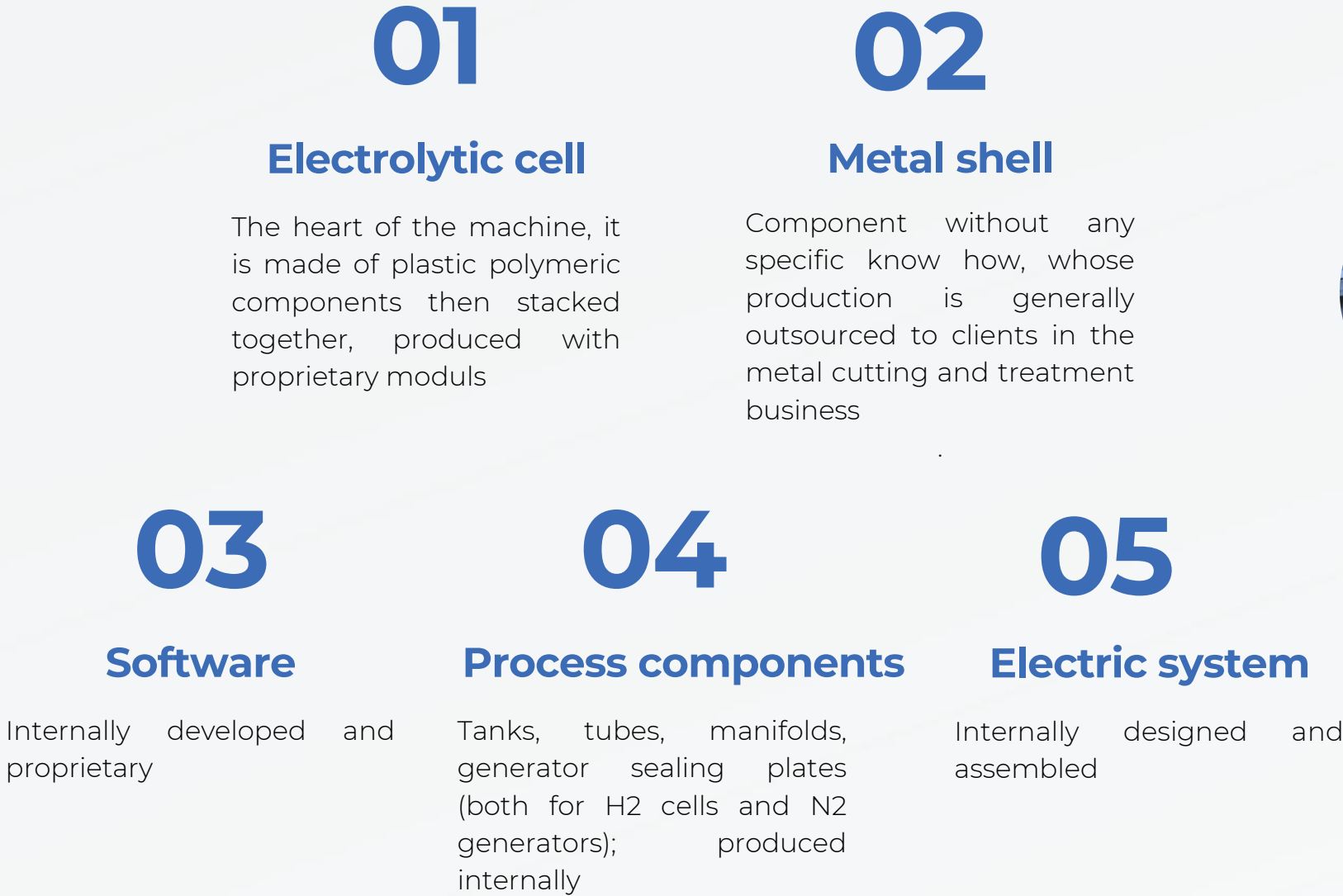
## COMMITMENT TO SUSTAINABILITY

SOLUTIONS ALIGNED WITH  
GLOBAL SUSTAINABILITY  
GOALS DEDICATED TO  
REDUCING CARBON  
FOOTPRINT ACROSS  
OPERATIONS



# VERTICALLY INTEGRATED BUSINESS MODEL

All design and production know how is internal. ErreDue's production department is capable of producing in a short time, gas generators of different sizes and related accessories.





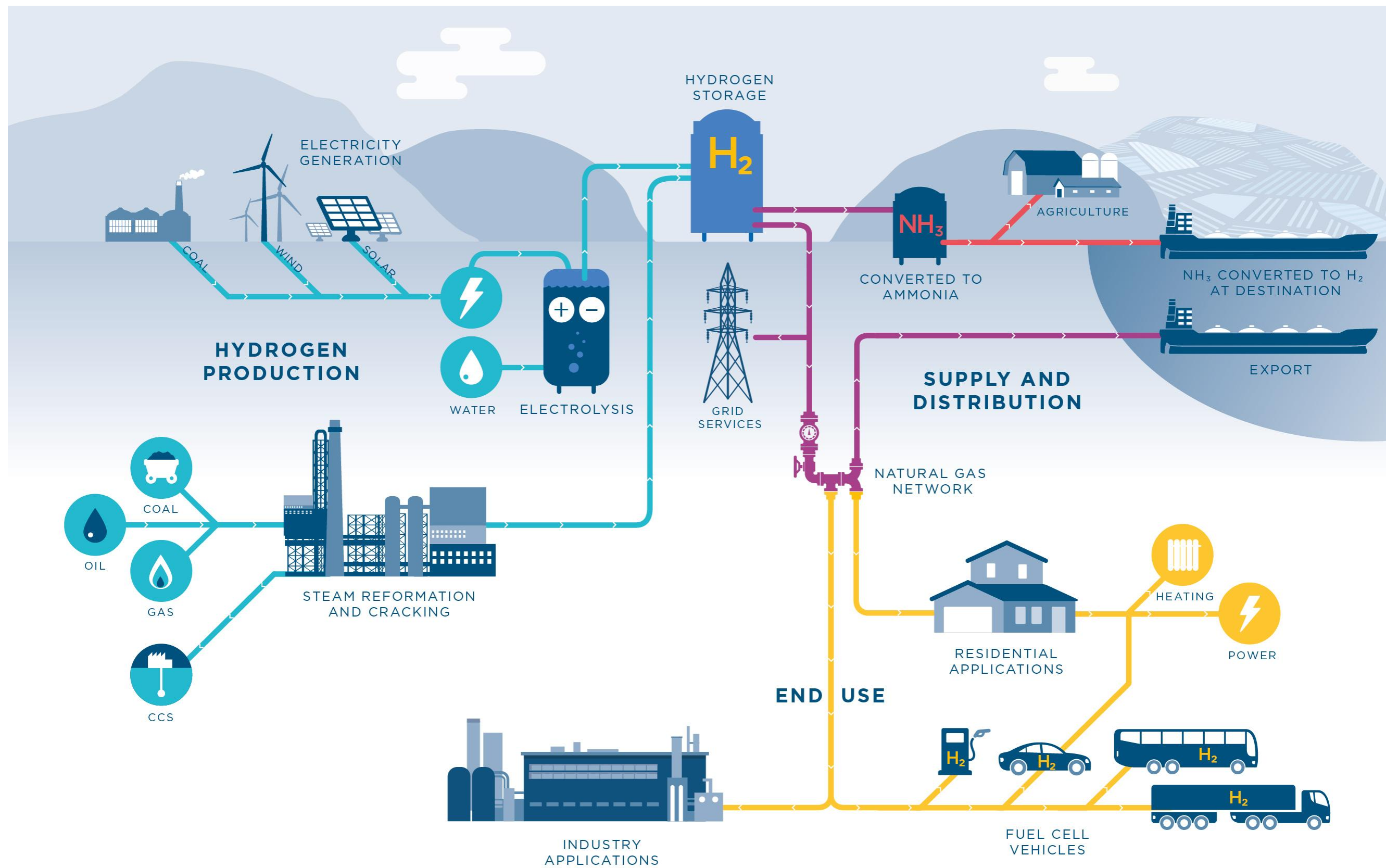


# MARKET OVERVIEW

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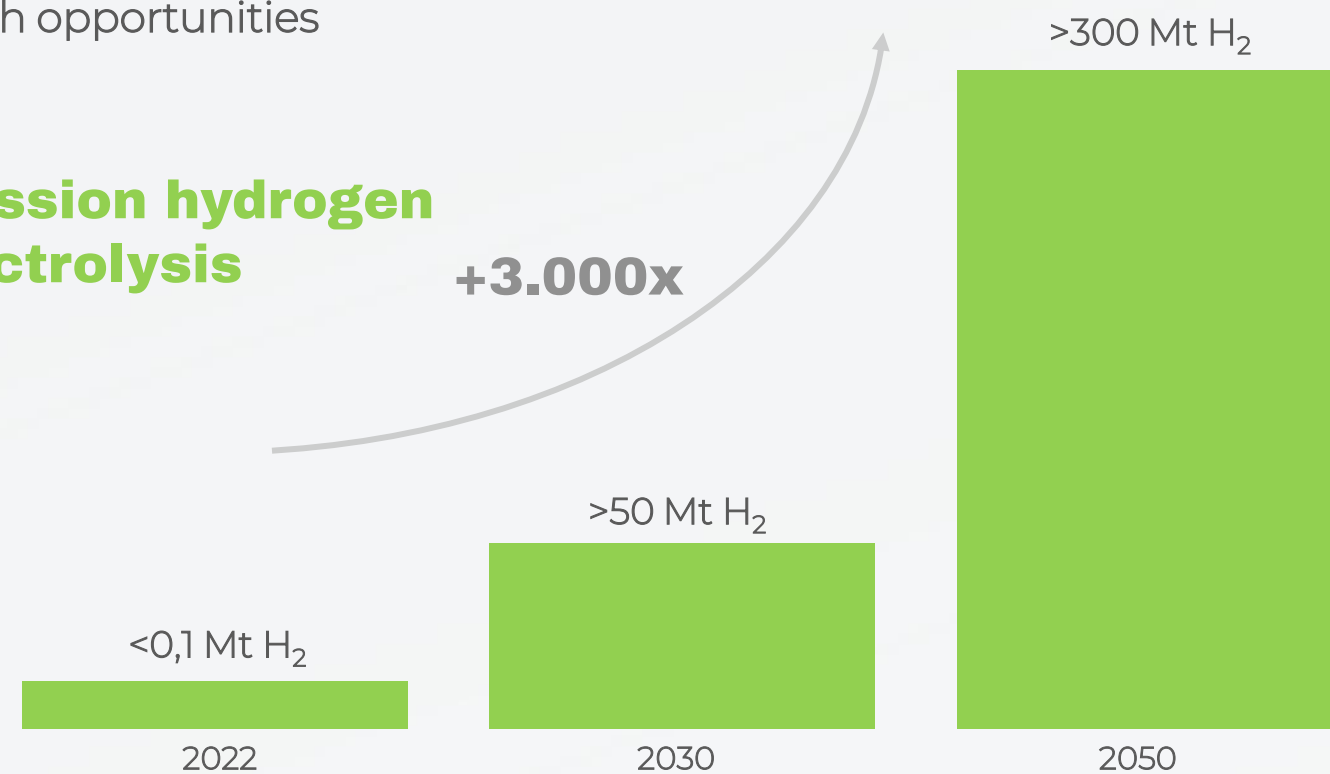
# ENERGY TRANSITION



# MARKET OVERVIEW ENERGY TRANSITION

The surging global demand for low-emission hydrogen opens up significant growth opportunities

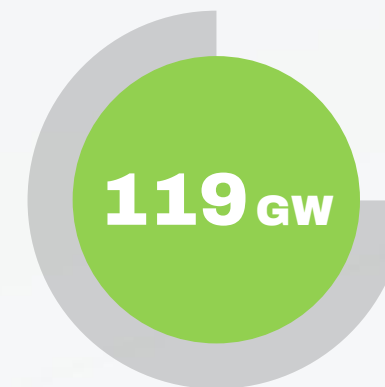
**Low-emission hydrogen from electrolysis**



+3.000x



Government funding for hydrogen in 2023, **+46% vs 2022**



**Formalized 2030 targets** of countries' net-zero strategies

Source(s): IEA, Global Hydrogen Review 2023, chapter 3; IEA, Net Zero Roadmap, 2023 Update, Figure 3.23

## ERREDUE STRATEGIC POSITIONING

- Broader vision of the hydrogen market, which extends beyond the energy transition to embrace industries' decarbonization
- By establishing itself in the niche of 1-5 MW plants within the broader electrolyzer market, ErreDue could benefit from the proliferation of larger facilities, which would drive growth across the entire market



# ERREDUE PIPELINE H2 PROJECTS

27MW

39MW





- 
- LASER
  - CUTTING
  - HEAT TREATMENTS
  - WELDING
  - ENOLOGYS
  - SINTERING
  - PACKAGING
  - NAVY
  - JEWELLERY

# TRADITIONAL BUSINESS

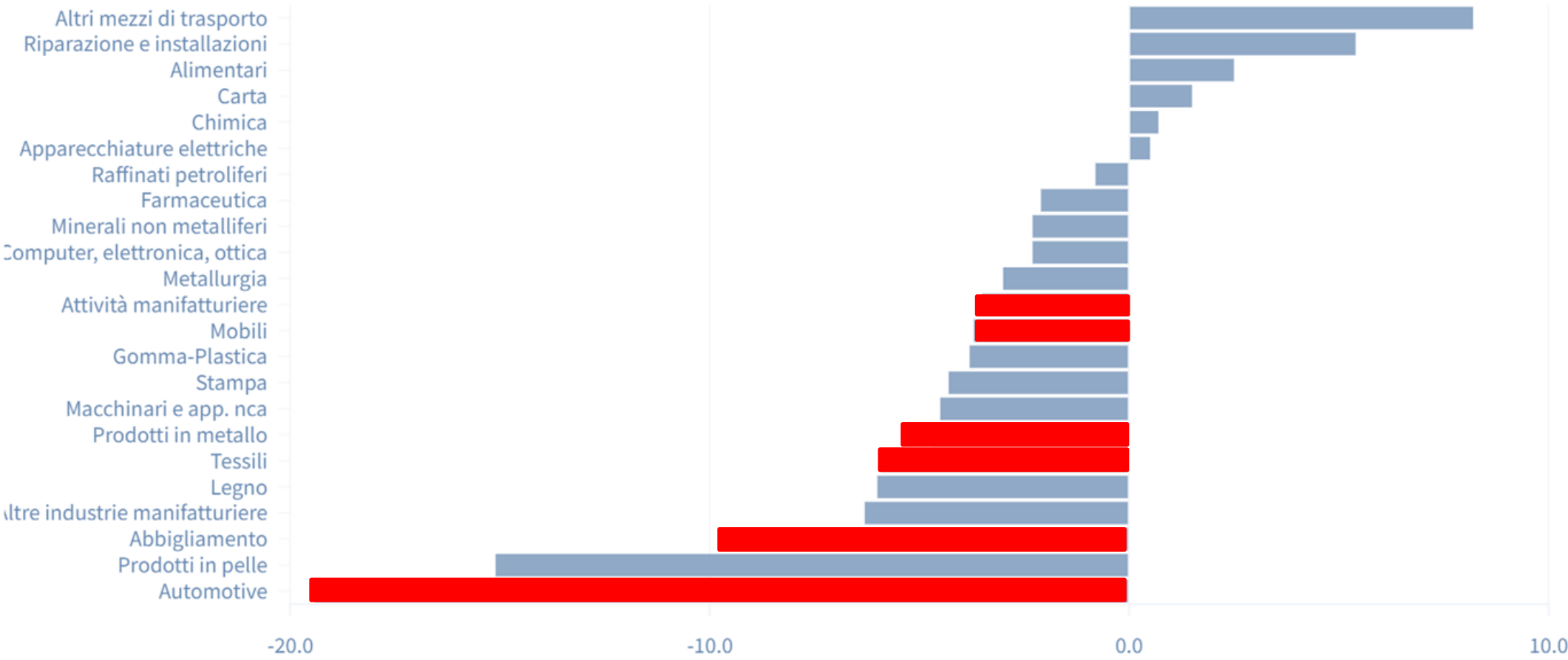


# MARKET OVERVIEW TRADITIONAL BUSINESS



Dinamiche settoriali eterogenee nella produzione industriale  
(Italia, var % 2023-2024\*)

1 of 1



\*Primi 9 mesi di ciascun anno.  
Fonte: elaborazioni CSC su dati Istat.



In the first nine months of 2024, Italian industrial production saw a decline of -3.3% compared to the same period in 2023. This downturn was primarily driven by a significant drop in Q1 (-1.4% on a cyclically adjusted basis), with a gradual easing through late spring (-0.9% in Q2). Despite some improvement, Q3 data still showed negative growth, registering an additional decline of -0.6%.



# ERREDUE COMPETITIVE ADVANTAGE AND VISION



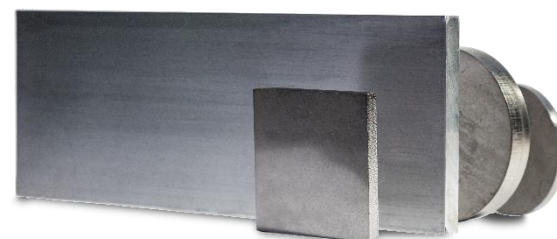
## LOW POWER CONSUPTION \*

COMPETITOR		ERREDUE
$\approx 1,2 \text{ kW/m}^3$	VS	$\approx 0,50 \text{ kW/m}^3$

## THANKS TO

The air/nitrogen ratio of 3:1

MAXIMUM BRILLIANCE WITH  
ONLY ONE PROCESSING



\*O<sub>2</sub><5ppm

In order to have a stronger presence in our traditional business, we have a number of initiatives in place, which are as follows:

- Recruitment of a new business developer to promote Erredue's presence in foreign markets
- Strategic partnership with complementary company
- Expansion of our product portfolio with the addition of a new technology

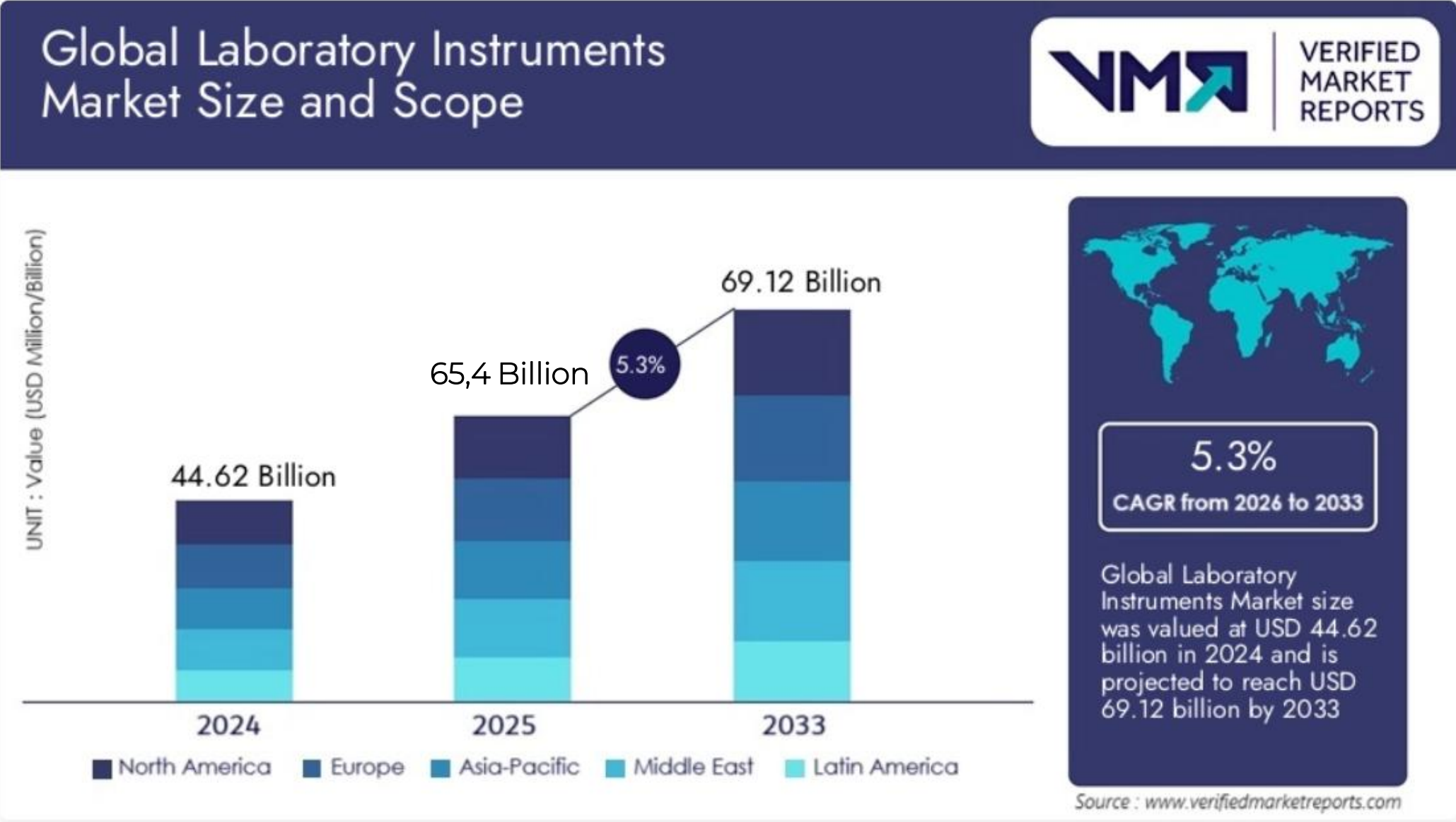


# LABORATORY LINE

- GAS CHROMATOGRAPHY
- GAS CHROMATOGRAPHY/MASS SPECTROMETRY
- LIQUID CHROMATOGRAPHY/MASS SPECTROMETRY
- HIGH PERFORMANCE LIQUID CHROMATOGRAPHY
- TOTAL ORGANIC CARBON ANALYSIS



# MARKET OVERVIEW LABORATORY LINE



Emerging Markets: Developing countries are investing in healthcare infrastructure, creating a demand for laboratory instruments. For example, the Indian medical devices market grew from \$2.02 billion in 2009 to \$3.9 billion in 2015, with a CAGR of 15.8%.Point-of-Care Testing: There is a growing trend towards decentralized testing, which requires portable and intuitive instruments, opening new avenues for market expansion.

## VISION

Erredue has signed a partnership agreement with a specialist sales consultant to develop the laboratory market. The growth strategy began with the rebranding of the division and will continue with a deep analysis of the benchmark target following the goal to become one of the keyplayer of the laboratory sector



A background image of a laboratory. In the foreground, a male scientist in a white lab coat is working at a bench with various pieces of equipment, including a large white machine labeled 'Tracer' and a blue gas cylinder. In the background, another scientist is visible near a yellow cabinet and a large piece of equipment. The scene is brightly lit and shows a professional research environment.

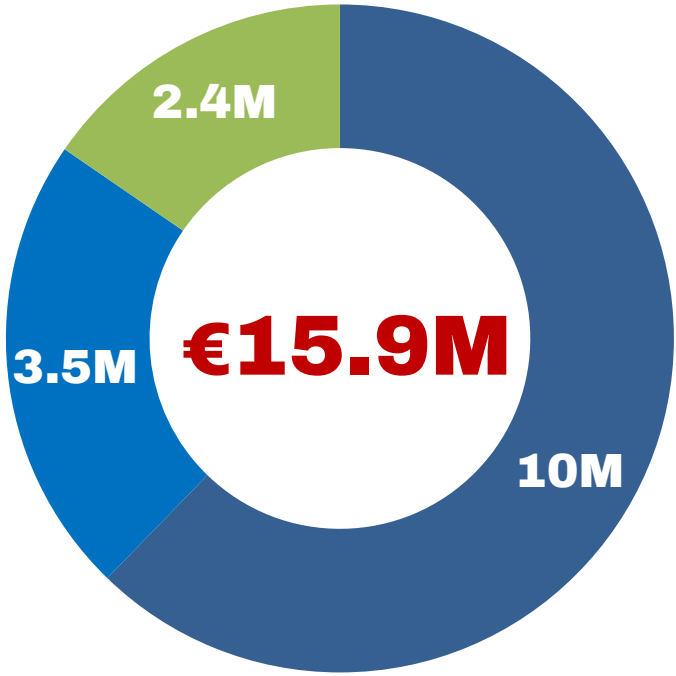
# FY2024 FINANCIAL PERFORMANCE

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# REVENUES BREAKDOWN FY2024

RENTALS OF  
GENERATORS  
+6.5% VS FY23

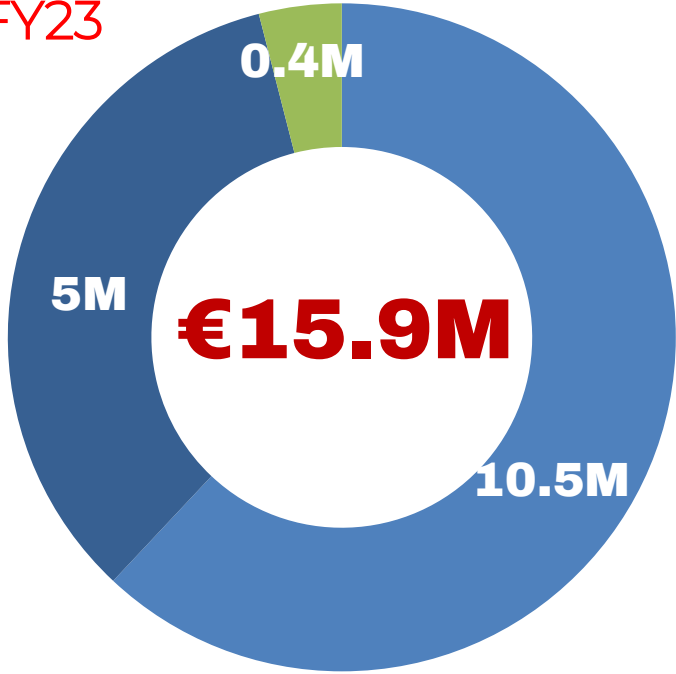


SERVICE E  
SPARE PARTS  
+4% VS FY23

SALES OF  
GENERATORS  
-8.2% VS FY23

REVENUES  
BREAKDOWN BY  
CONTRACTS  
FY2024

OTHER  
PRODUCTS  
+45% VS FY23



ENERGY  
TRANSITION  
+26% VS 1H23

TRADITIONAL  
BUSINESS  
-37% VS FY23

REVENUES  
BREAKDOWN BY  
PRODUCTS  
FY2024



# RECURRING REVENUES

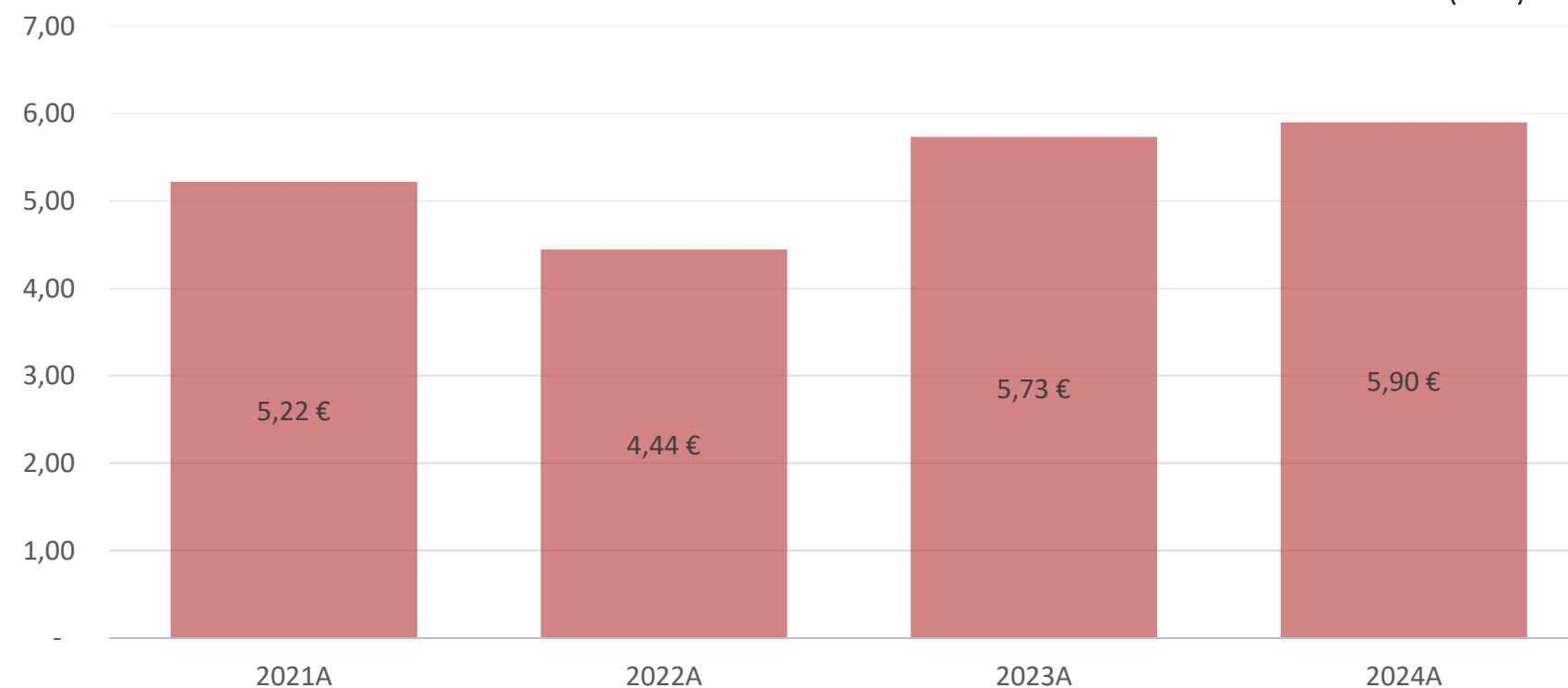
## Long Term Rental

- The rental of the plant breaks down the wall of diffidence regarding new technology and its introduction in a production line
- Rental contracts often have an average term of 65 months and are indexed to inflation
- At the end of the contract, the generators still have a value (even if fully depreciated); they can be bought back or rented again by the same customer or sold to a third party with a capital gain.

## After Market

- Highly specialised Technical Department takes care of clients along all the journey, from plant design to installation, and keeps following it in the after market.
- Generators can only and exclusively be maintained by ErreDue technicians, using only and exclusively components developed in-house.
- Erredue, in addition to revenues linked to sales, guarantees recurring revenues linked to maintenance contracts, both ordinary and extraordinary.

(€M)



**2.6 YEARS  
AVERAGE  
PAYBACK TIME**

On the investment  
on internal  
construction cost  
( capitalized)

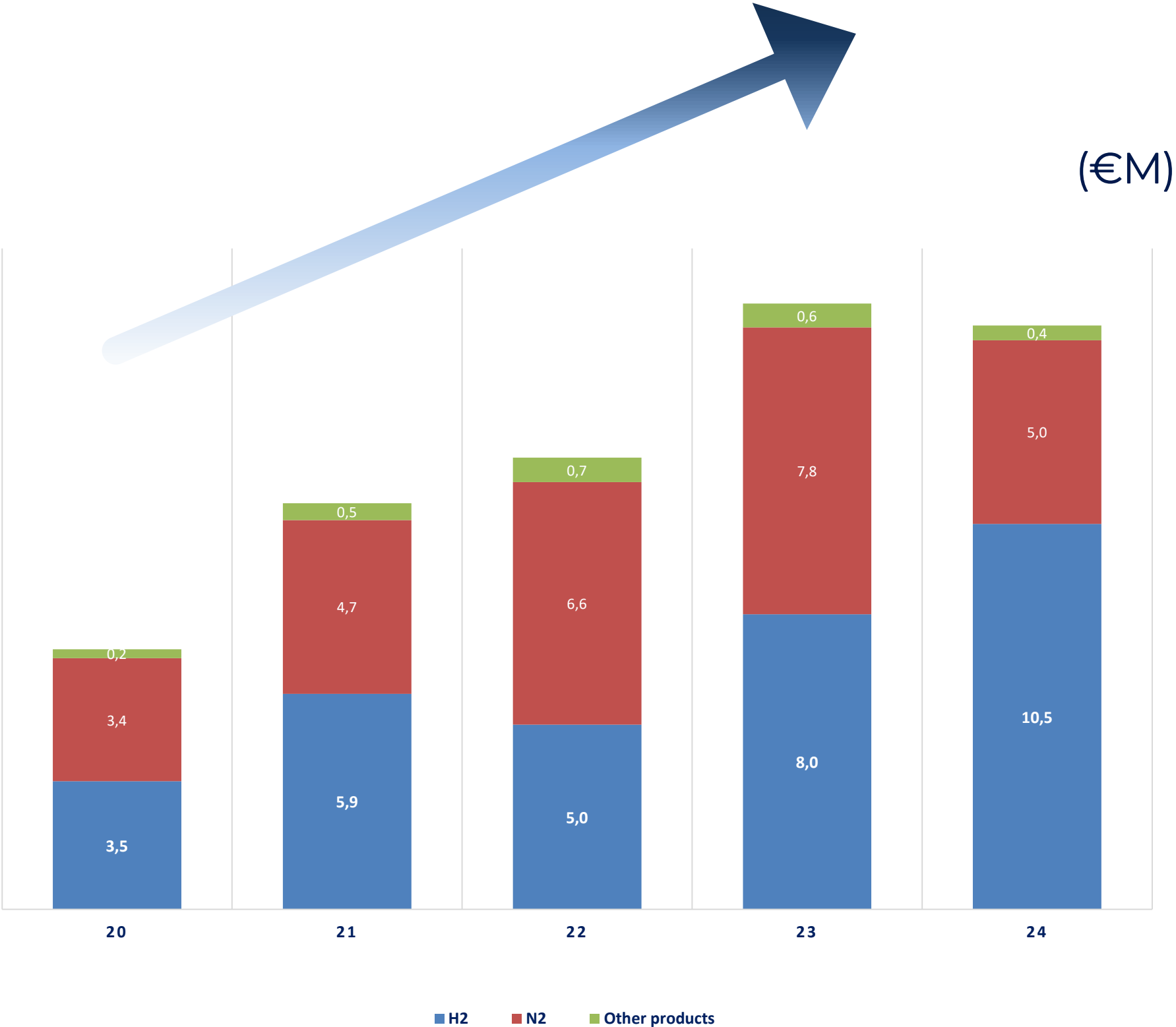
**60% OF INITIAL  
VALUE RESIDUAL  
AT EXPIRY**

On the generators'  
Rental contract  
(often up to 72  
months, 65 months  
on average)



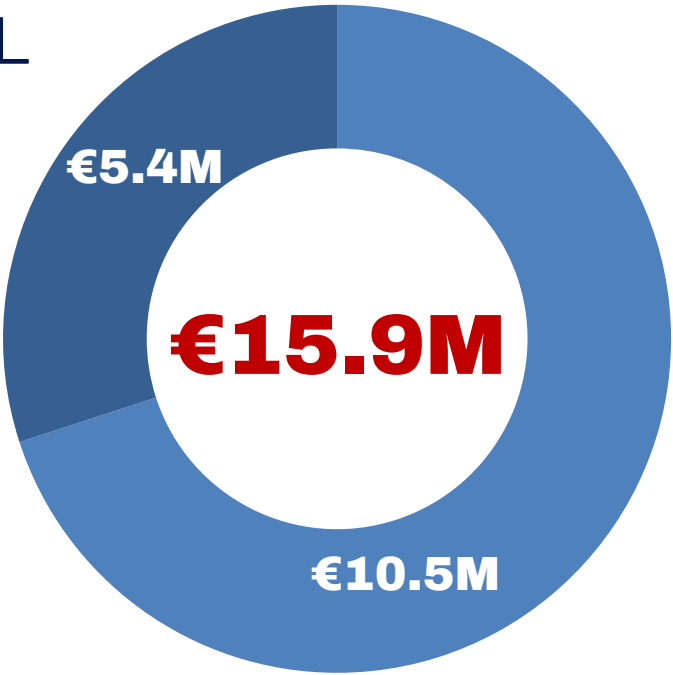
# H2 REVENUES

The energy transition segment has seen significant growth, driven by the ecological transition and promising developments in the energy sector. Along with the sharp increase in sales in the financial year, there has been a substantial rise in orders for plants to be delivered by 2025.



## DOUBLE DIGIT GROWTH

TRADITIONAL  
BUSIENSS



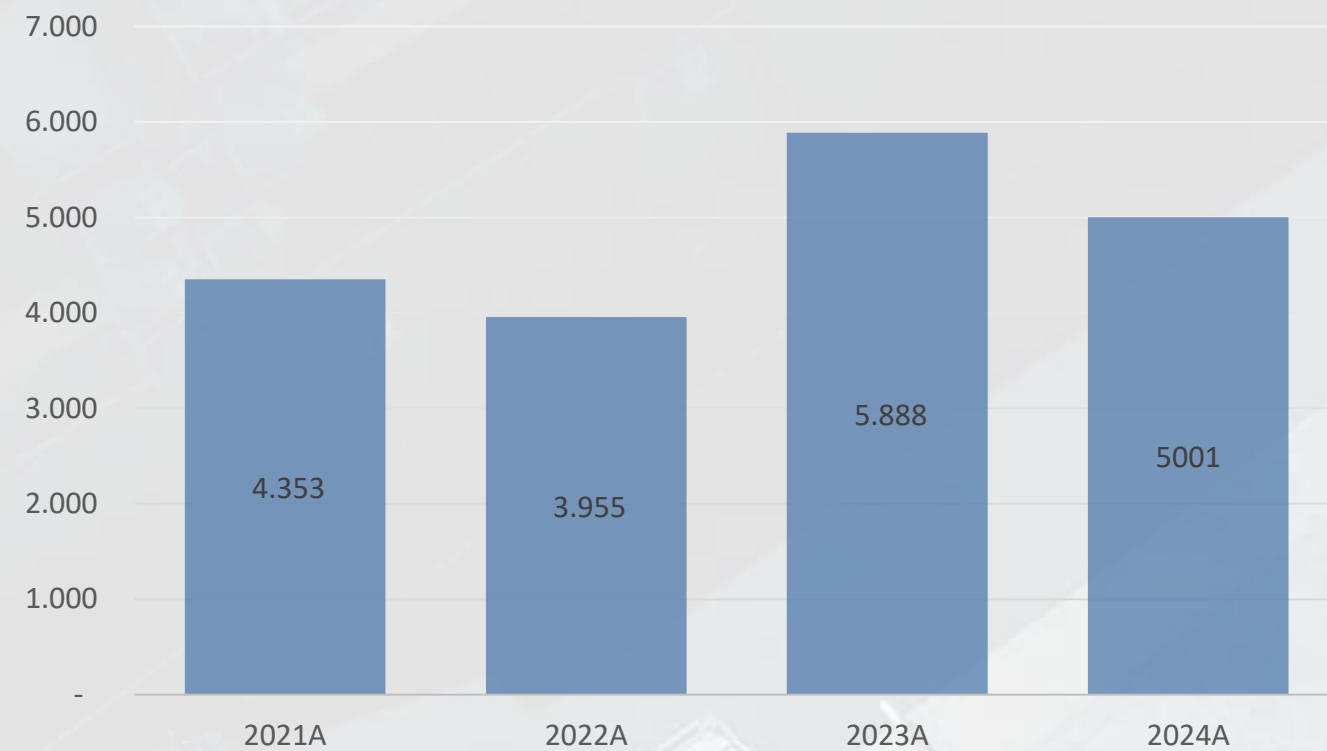
ENERGY  
TRANSITION

It should be noted that, in view of the increase in sales volumes of PEM hydrogen generators, from 2024 the revenues previously included under 'other products' have been reclassified under the corresponding gases



(€M)

## EBITDA VALUE



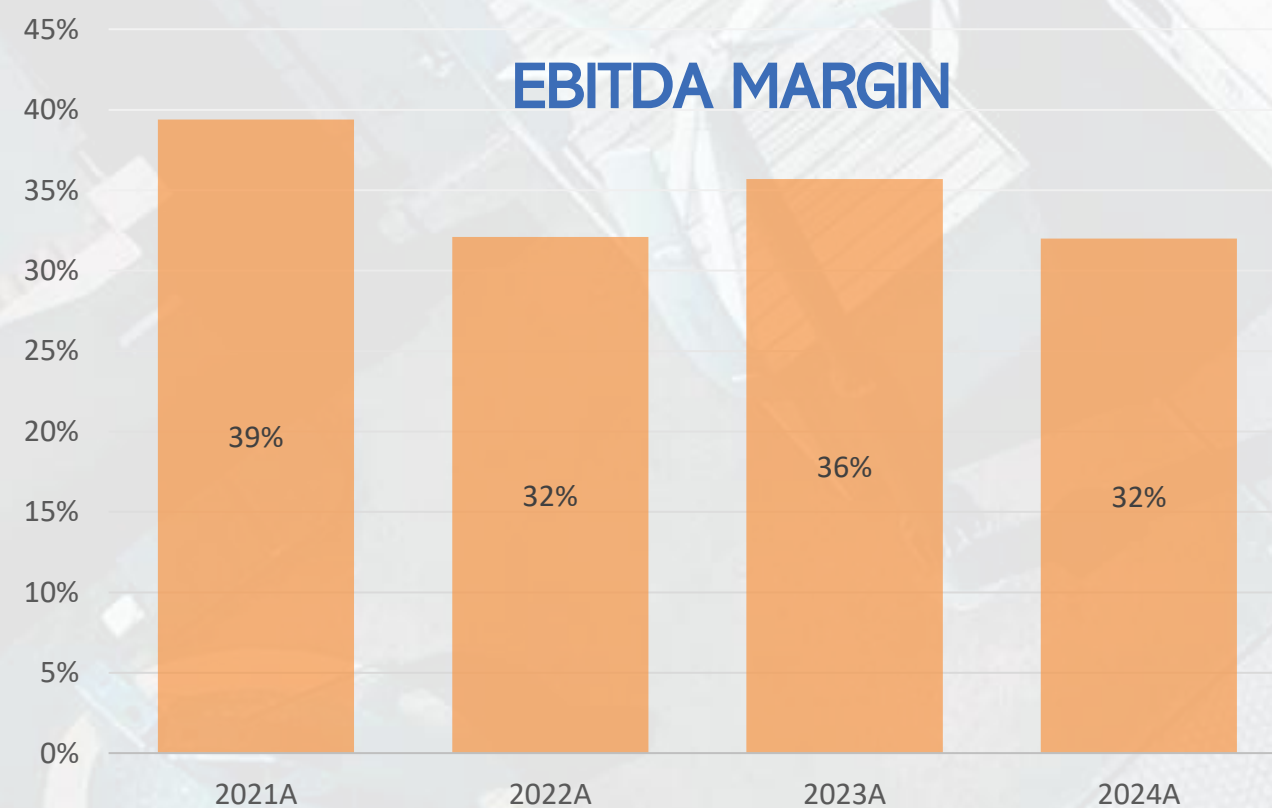
### KEY DRIVERS OF THIS TEMPORARY MARGIN IMPACT INCLUDE:

In 2024, the company achieved an EBITDA of EUR 5,088 thousand, slightly down from EUR 5,888 thousand in 2023.

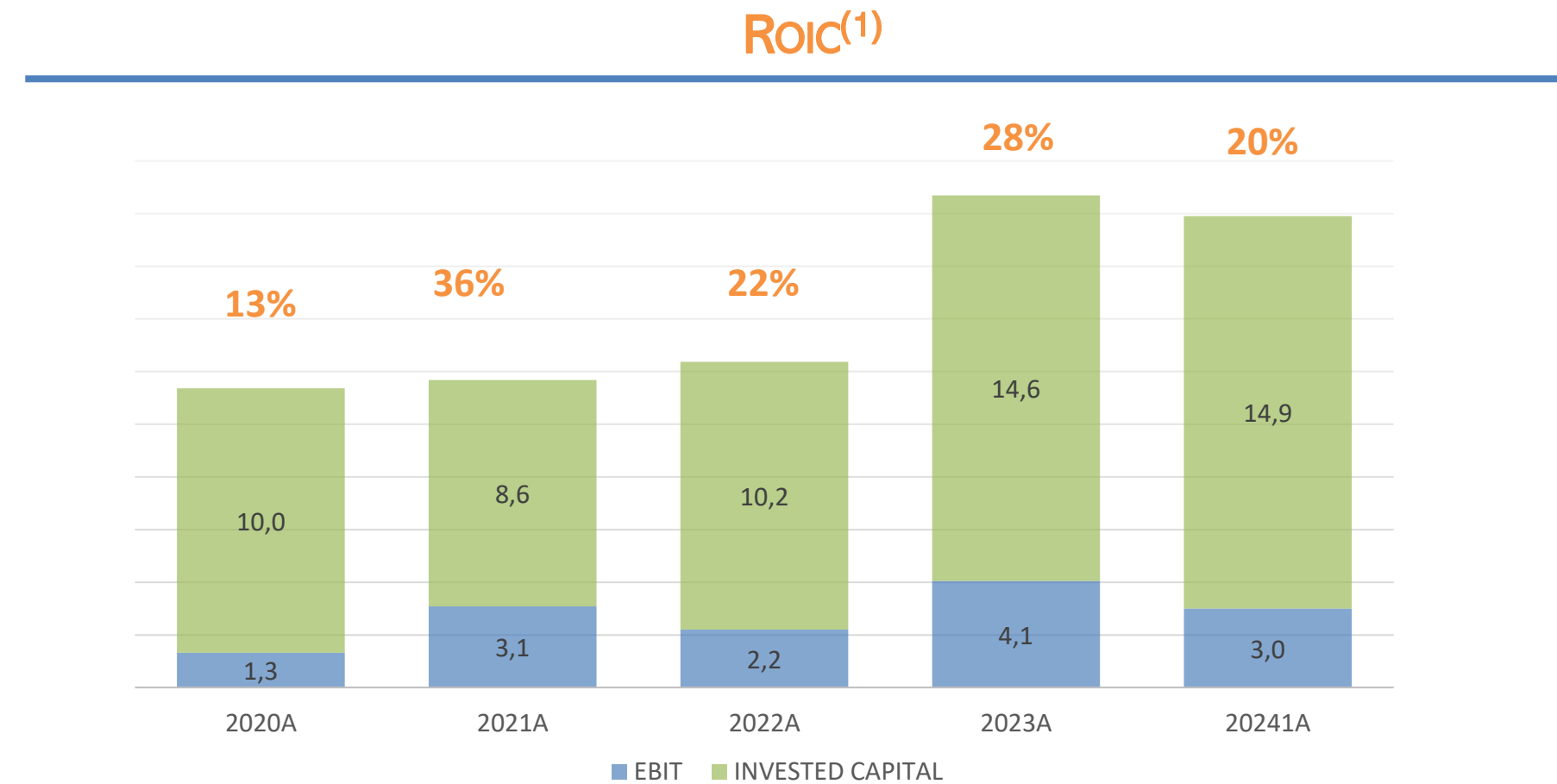
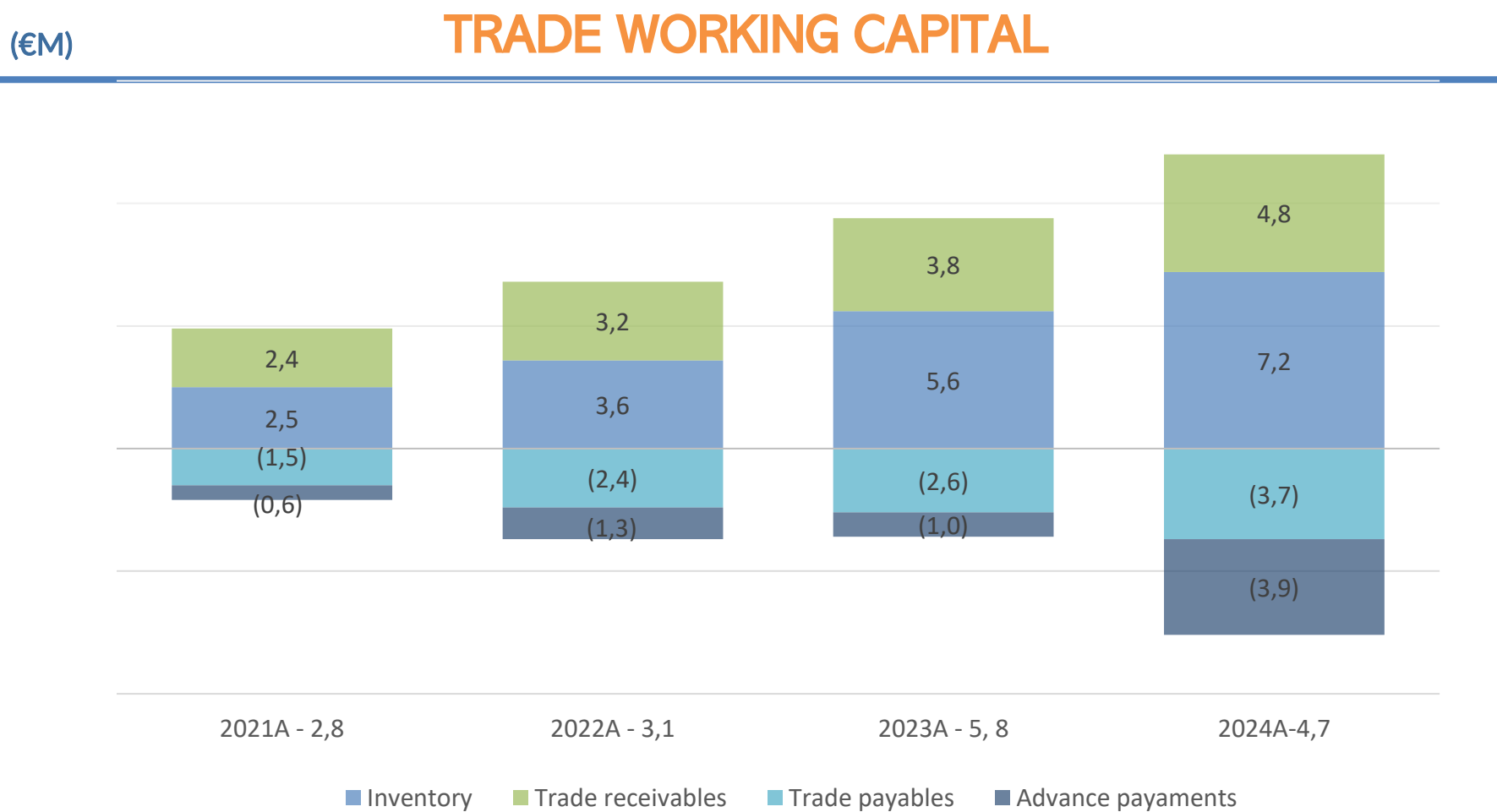
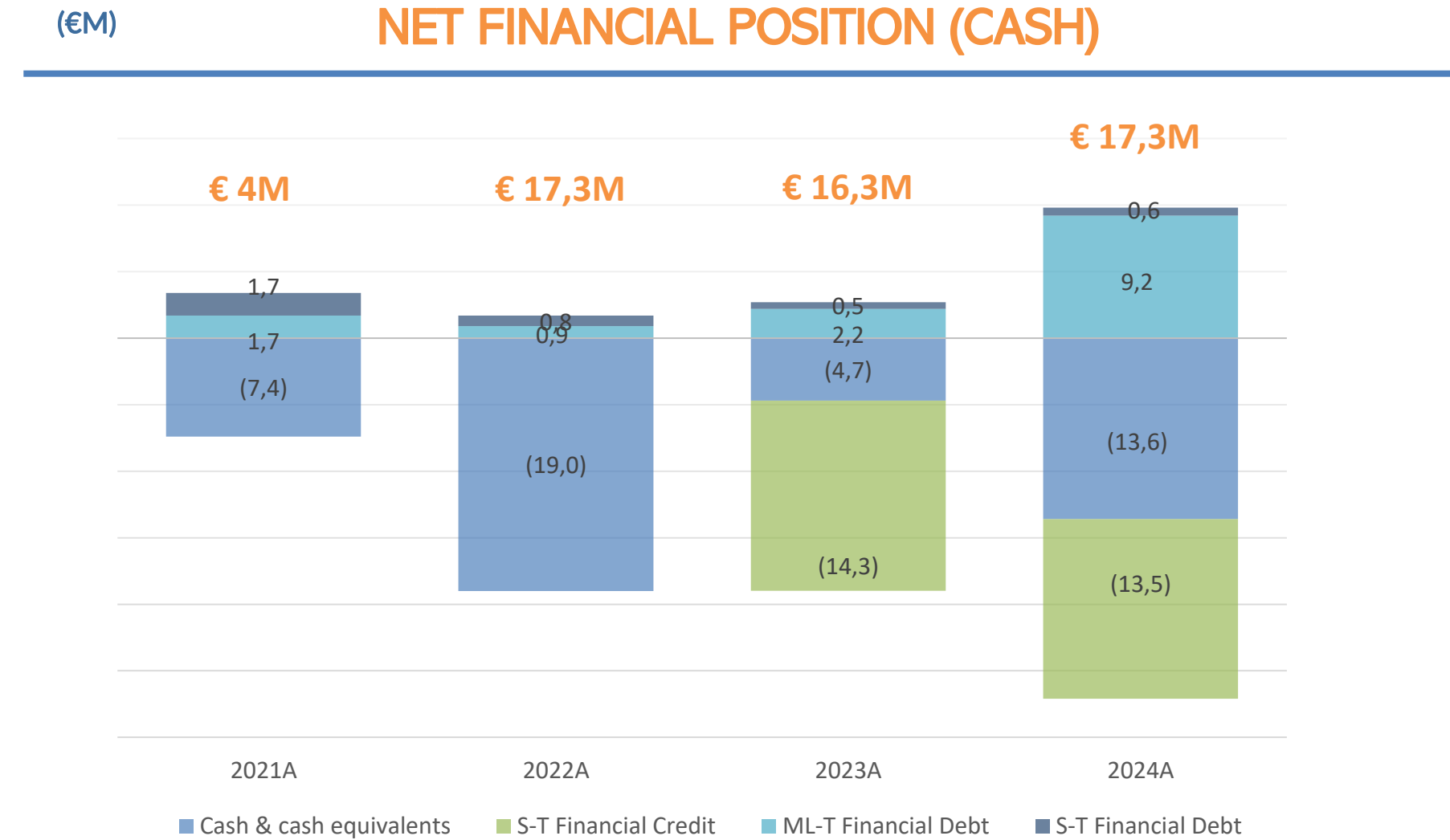
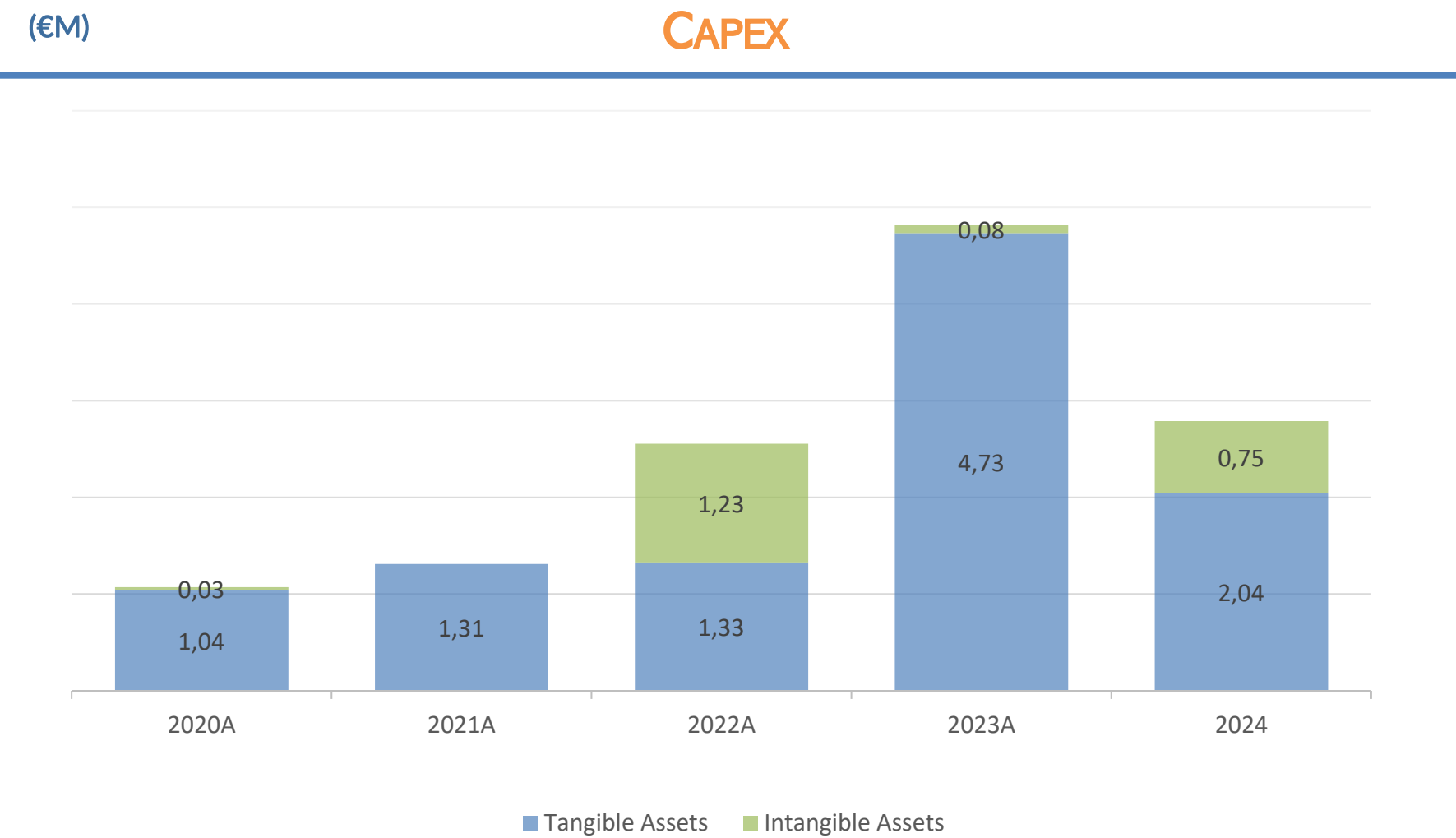
The decrease is mainly due to higher development costs for new, larger generators, a shift towards these lower-margin products, increased work-in-progress inventory, and rising personnel costs due to new hires and training.

Despite these factors, the company maintains strong operational performance. Depreciation, amortization, and write-downs amounted to EUR 2,077 thousand, a decrease of EUR 240 thousand compared to 2023. This resulted in an EBIT of EUR 3,011 thousand (19% of sales), compared to EUR 4,051 thousand (24.6% of sales) in 2023.

## EBITDA MARGIN







Note: (1) ROIC b.t. = EBIT/Invested Capital Source: Management elaboration on Group consolidated financial statements and Management Accounts



# STRATEGIC INITIATIVE





# STRATEGIC GROWING

## NEW PRODUCTION SITE

- ErreDue will be able to produce up to 60 plants per year in a single shift; production will be doubled in the case of two shifts

## FOREIGN EXPANSION

- It's scouting opportunity in Europe and discussing partnership agreement with company in Spain, Portugal and France





# STRATEGIC POSITIONING

## Strategic Vision of the Hydrogen Market:

ErreDue sees the hydrogen market as a long-term opportunity for both energy transition and decarbonization across high-emission industries. This broad vision positions the company to serve a diverse range of applications.

## Opportunities in Large-Scale Projects:

ErreDue sees the hydrogen market as a long-term opportunity for energy transition and industrial decarbonization, allowing it to target a wide range of applications.

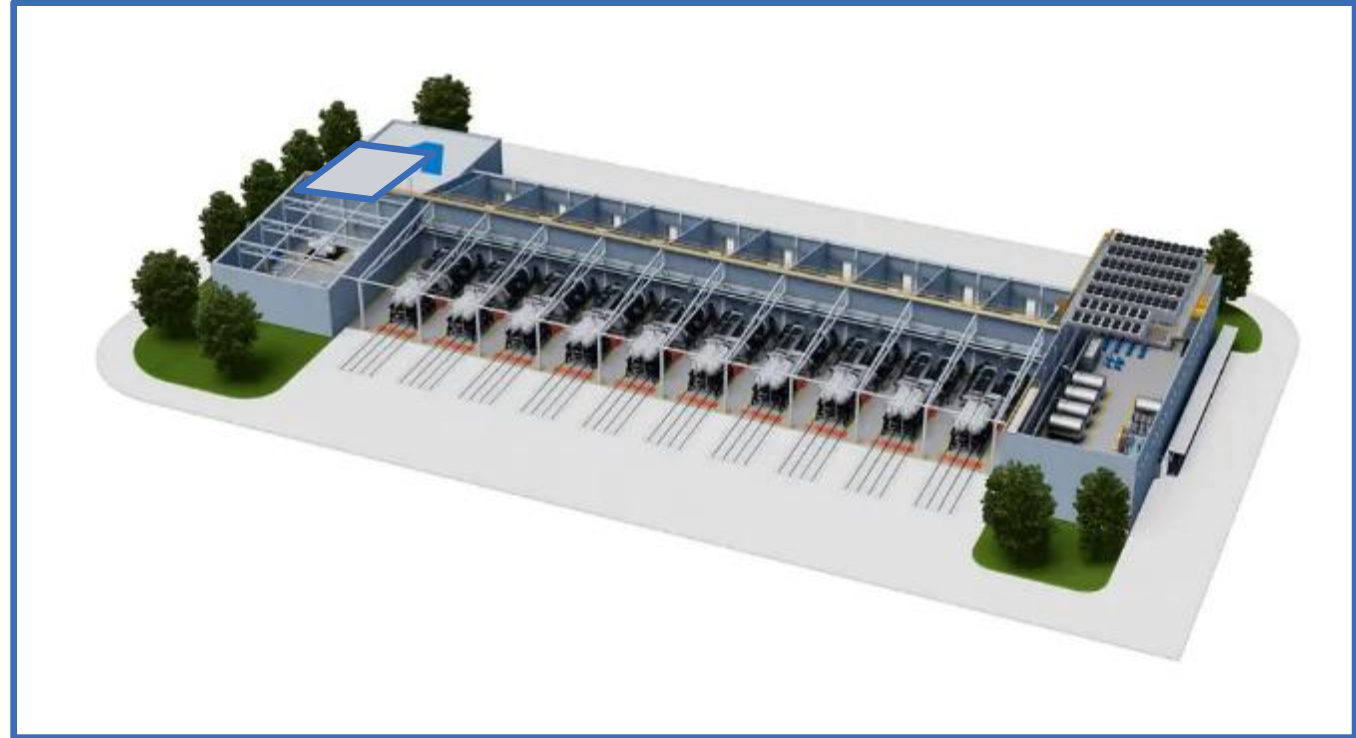
## Proven Technological Quality and Reliability:

With over 30 years of experience, ErreDue has developed reliable, high-quality technology through a fully integrated business model. This expertise has been key to building a strong reputation and a loyal customer base.

## Leadership in the Small to Medium-Scale Electrolyzer Niche:

By focusing on the 1 to 5 mw electrolyzer niche, erredu establishes a strong foundation for growth. the demand for larger plants will boost the overall market, benefiting providers of smaller, modular solutions like erredu.

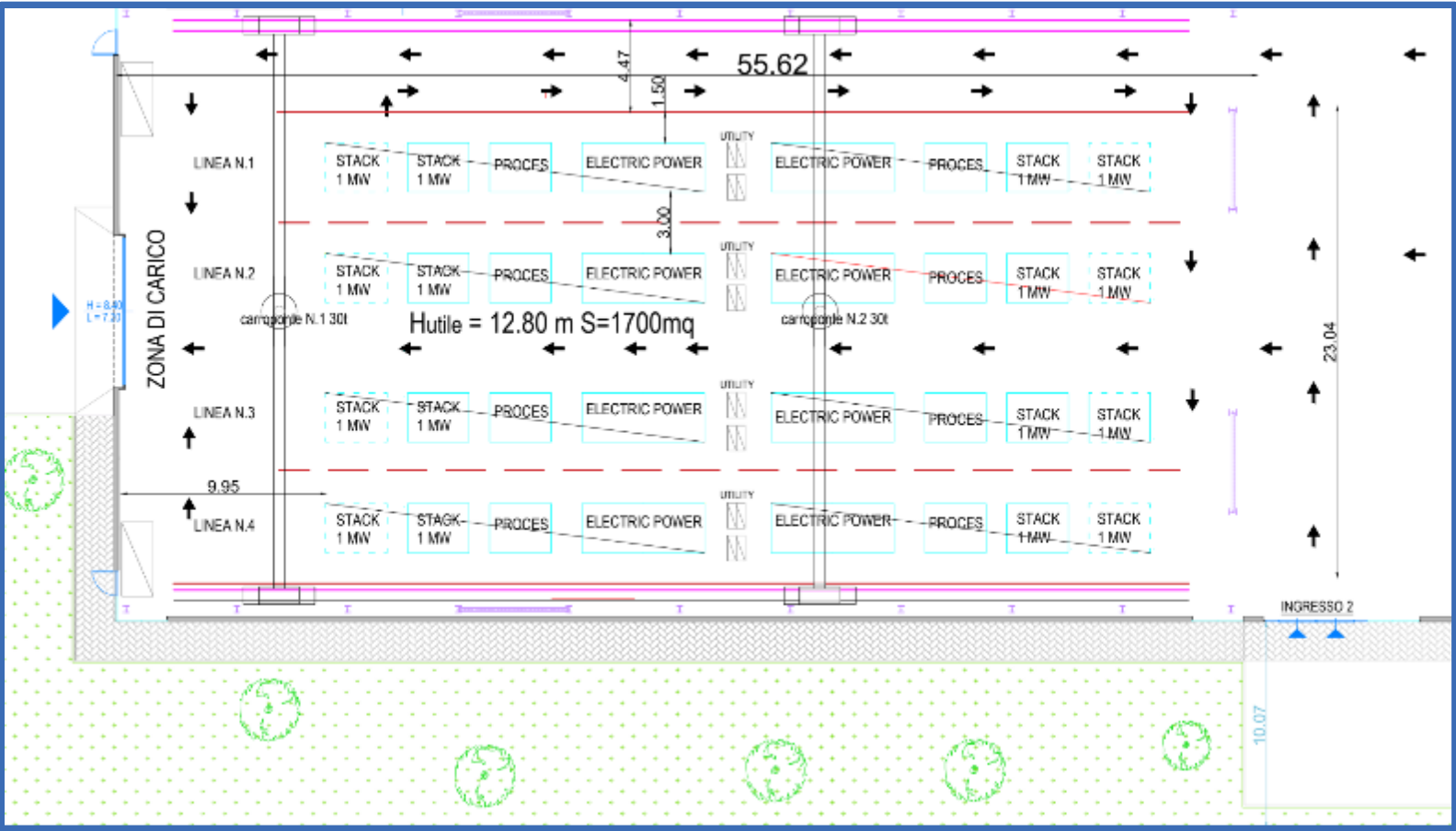




# NEW PRODUCTION SITE

**60**  
plants per year  
on one shift

**4**  
production lines



**17,000 sqm**  
new area

**increasing to**

**27,000 sqm**  
total area



# APPENDIX

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# ESG AGENDA 2030

ErreDue pays a lot of attention to ESG policy and has therefore started a path towards obtaining the major certifications in this area

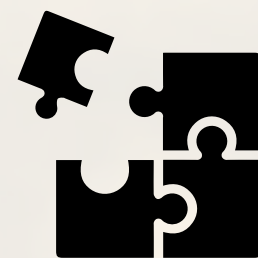
## Environment

The intrinsic nature of ErreDue's business is centred on respect, protection and improvement of the environment in which operates.



## Social

ErreDue 's success is thanks to the invaluable contribution of its people. Erredue invests in learning, promoting and rewarding proactive behaviour at all levels of the organisation.



## Governance

ErreDue is actively engaged in implementing governance, ethics and compliance best practices, aligning interests between stakeholders, supporting growth and long-term strategies





# ENVIROMENTAL ACHIEVEMENTS



7 AFFORDABLE AND  
CLEAN ENERGY



## RENEWABLE ENERGY

Installation of 650 Kw of solar panels on the roof.  
In addition, a hydrogen refuelling station will be located in the external area to serve its mobile transport and the gas produced during testing will be used to increase the efficiency of the plant.  
With the new factory, erredue begins the path to becoming a promoter of sustainability.

13 CLIMATE  
ACTION



## CARBON FOOTPRINT

Measurement of emissions (direct and indirect) of greenhouse gases (CO2, CH4, N2O, CFCs, etc.) due to company activities. Standard: ISO 14064:2019. Locations: Livorno and Lavaiano. Reference year: 2022. Certification: by the first half of 2024

11 SUSTAINABLE CITIES  
AND COMMUNITIES



## SUSTAINABILITY REPORT

The Company will produce and publish the Sustainability Report according to the European Sustainability Reporting Standards (ESRS) defined by EFRAG and the European Commission. By 1 half of 2024



# SOCIAL ACHIEVEMENTS



5 GENDER  
EQUALITY



## GENDER EQUALITY

Women make up 25 per cent of the employees, a great achievement for an industry specialising in manufacturing. Entire departments of the company are managed by women, such as the cell production department and the plant management. In addition, the the company CEO is a woman, Francesca Barontini.

4 QUALITY  
EDUCATION



## EDUCATION

The valorization of human capital has always been fundamental for ErreDue. The company continually invests in the personal and professional development of its employees. New employees' education includes both practical skills and physical and chemical concepts.

10 REDUCED  
INEQUALITIES



## WELFARE & BONUS

The valorisation of human capital has always been fundamental for ErreDue: every employee can benefit from a well-defined Corporate Welfare Plan. The range of services offered to workers include babysitting vouchers, purchase of text books, gym memberships, travel vouchers, reimbursements for school and canteen expenses. In addition, at the beginning of each year the board of directors decides to offer a meritocratic production bonus of up to € 2,000.



# GOVERNANCE ACHIEVEMENTS



8 DECENT WORK AND  
ECONOMIC GROWTH



## MICRO PUBLIC COMPANY

Erredue's focus on people is an integral part of the company's DNA.

The founders' philosophy was to share the benefit of the company with the key workers that proved to be of added value to the organization so the company turned into a micro public company with 22 worker members of Green Holding which holds the 54% of the share capital.



## ENVIROMENTAL MANAGEMENT SYSTEM

The part conforming to the ISO 14001 environmental standard will be added to the certified Integrated Quality and Safety Management System (ISO 9001 and 45001). Standard: UNI EN ISO 14001:2015. By April 2024





**Thank you**