



NEXT GEMS

October 22nd, 2024

WWW.ERREDUEGAS.IT

SPEAKERS



ENRICO D'ANGELO
FOUNDER



FRANCESCA BARONTINI
CHIEF EXECUTIVE OFFICER



ELIANA BOLLINO
COMMUNICATION & ESG DEPT.

EXECUTIVE SUMMARY

- A high-tech industrial company in the gas generation sector worldwide, supplying **nitrogen, oxygen and hydrogen generation machines in both alkaline and pem technology** and, thanks to its extensive experience, scaling up to large hydrogen generation machines 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 combination of the two segments makes Erredue one of the few companies able to capitalise on the H2 opportunity while remaining highly profitable. The company is **building a new advanced plant** that increases production capacity by 10 times, is opening **branches outside Italy**, and is **hiring senior managers** to help drive growth and introduce operational and financial best practices.



ERREDUE PRODUCTS PORTFOLIO



LABORATORY



INDUSTRY



ENERGY
TRANSITION
PLANT

KEY SUCCESS FACTORS



CUSTOMIZATION

FULL SYSTEM
OFFERING
CUSTOMIZED FOR
DIVERSIFIED
END-MARKET
APPLICATIONS



SCALABILITY

ON-SITE GAS
GENERATION
SCALABILITY ACROSS
MULTIPLE
END-MARKETS



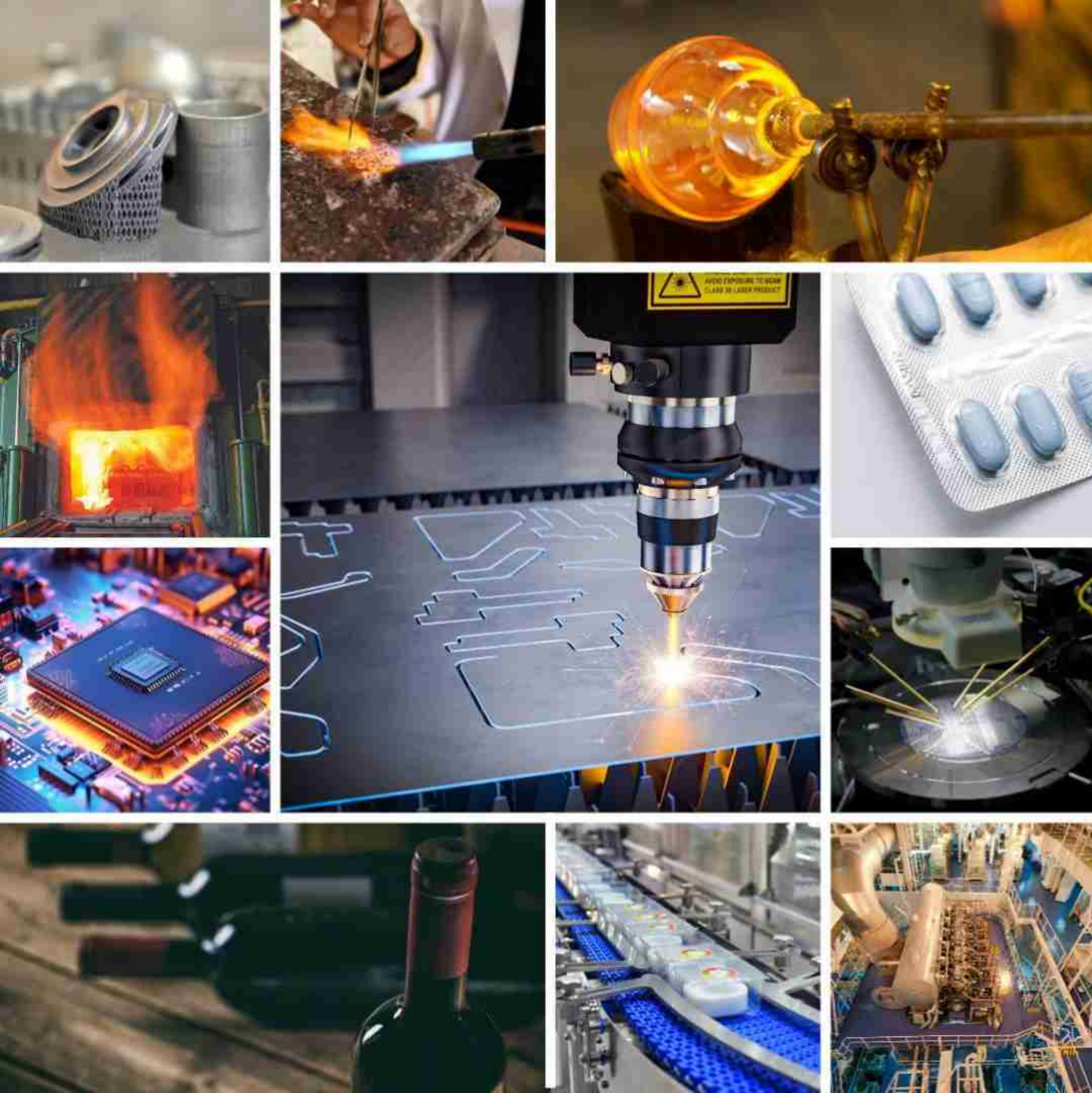
RELIABILITY

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



VERTICALLY INTEGRATED BUSINESS MODEL

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



**FULL SYSTEM
OFFERING
CUSTOMIZED
FOR DIVERSIFIED
END-MARKET
APPLICATIONS**

TRADITIONAL BUSINESS GROWING STRATEGY END-MARKET APPLICATION

Retail hydrogen price for medium/small consumers makes on-site production very attractive

COST SAVING

Distance is a significant determinant of price. For instance, it could scale up to 50€/kg for sintering and jewelry companies

**LOGISTIC
ADVANTAGE**

Industries need to become cleaner.

Purchasing hydrogen from the SMR process does not contribute to this goal. On-site generation, even when powered by the grid, represents a much cleaner solution for companies, reducing emissions and improving their sustainability rating

SUSTAINABILITY



ON-SITE GAS GENERATION SCALABILITY ACROSS MULTIPLE END MARKETS

- On site technical gas generation is quickly spreading across industrial, laboratory and medical applications, leading to end-market diversification
- On-site generated hydrogen currently represents less than 1% of global hydrogen production and consumption. It will need to increase by more than 100-fold by 2030 to align with the NZE goals
- Demand consistently higher than supply capacity
 - End markets diversification ensures volumes growth leveraging the same asset base

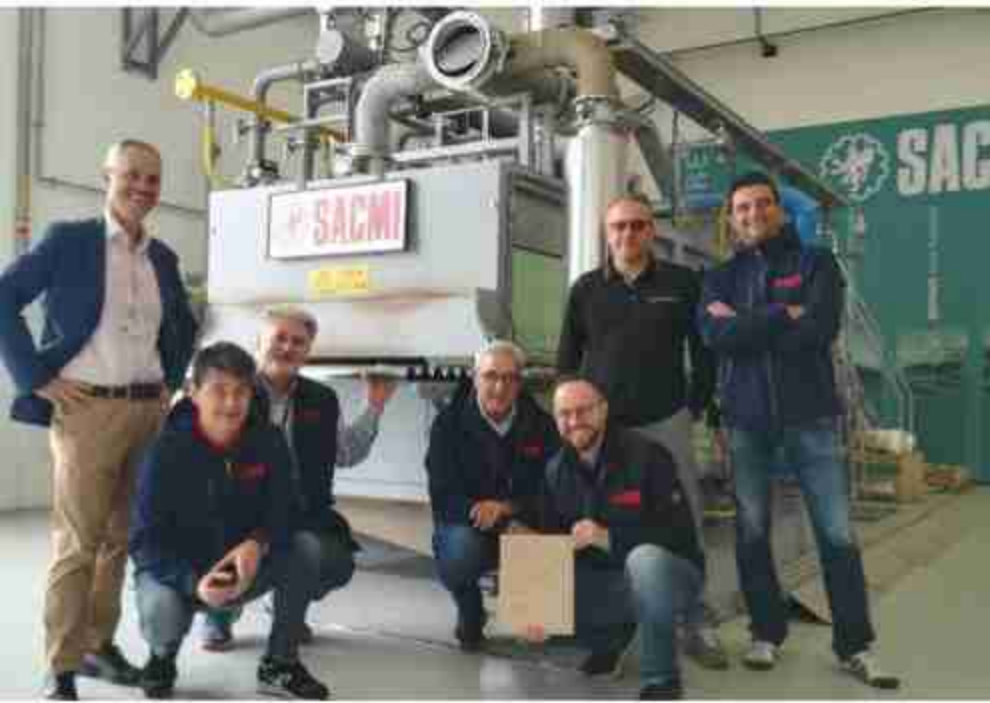


Energia: idrogeno, primo trattore portuale per movimento merci

WHITE SPACE IN PILOT PROJECTS IN H2 PLANTS TO ACHIEVE NET ZERO EMISSION



La prima piastrella cotta con un forno 100% a idrogeno? È di SACMI



ErreDue consegna un elettrolizzatore da 500 kW a Snam per test su mobilità e industria

Redazione 21 Febbraio 2024



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.

01

Electrolytic cell

The heart of the machine, it is made of plastic polymeric components then stacked together, produced with proprietary moduls.

02

Metal shell

Component without any specific know how, whose production is generally outsourced to clients in the metal cutting and treatment business

03

Software

Internally developed and proprietary

04

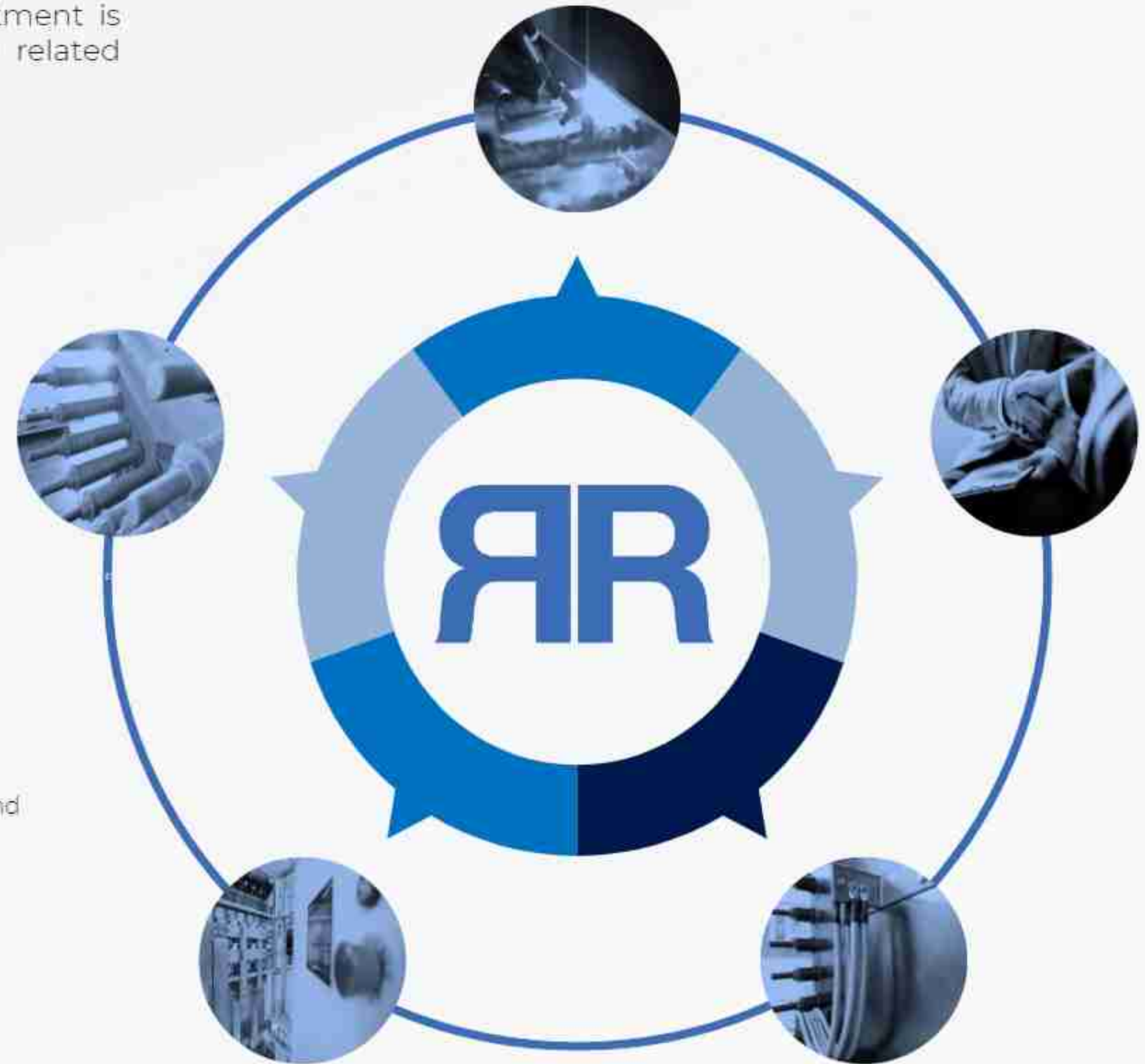
Process components

Tanks, tubes, manifolds, generator sealing plates (both for H2 cells and N2 generators); produced internally

05

Electric system

Internally designed and assembled



SUCCESS FEATURES

**HYDROGEN
GROWTH
+40%**

**BACKLOG *
€ 22 M**

**EBITDA Margin
> 30%**

**CASH
CONVERSION**
> 50%**

HYDROGEN REVENUES

The hydrogen 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 first half of the year, there has been a substantial rise in orders for plants to be delivered by 2024, with further growth expected in 2025. The hydrogen segment recorded a 40% increase in sales at 30 June 2024 versus the same period of 2023.

TOTAL BACKLOG €22 M

with 35% related to the current year, comprising approx. €5 M from generator sales, approx. €2 M from spare parts and maintenance, and €1 M from leases. The remaining 65% is related to the coming year, confirming the significant growth anticipated in 2025.

*last update on 31/08/2024

**calculated as OpFCF before taxes and development capex / EBITDA

REVENUES BREAKDOWN 1H2024

RENTALS OF GENERATORS
+8.5% VS 1H23



SERVICE E
SPARE PARTS
+10.8% VS 1H23

SALES OF GENERATORS
-8.3% VS 1H23

REVENUES
BREAKDOWN BY
CONTRACTS
1H2024

OTHER PRODUCTS
-73.6% VS 1H23

OTHER GASES
-21.7% VS 1H23



HYDROGEN
+40.1% VS 1H23

REVENUES
BREAKDOWN BY
PRODUCTS
1H2024

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.



ErreDue s.p.A.
Research and Development

**2.6 YEARS
AVERAGE
PAYBACK TIME**

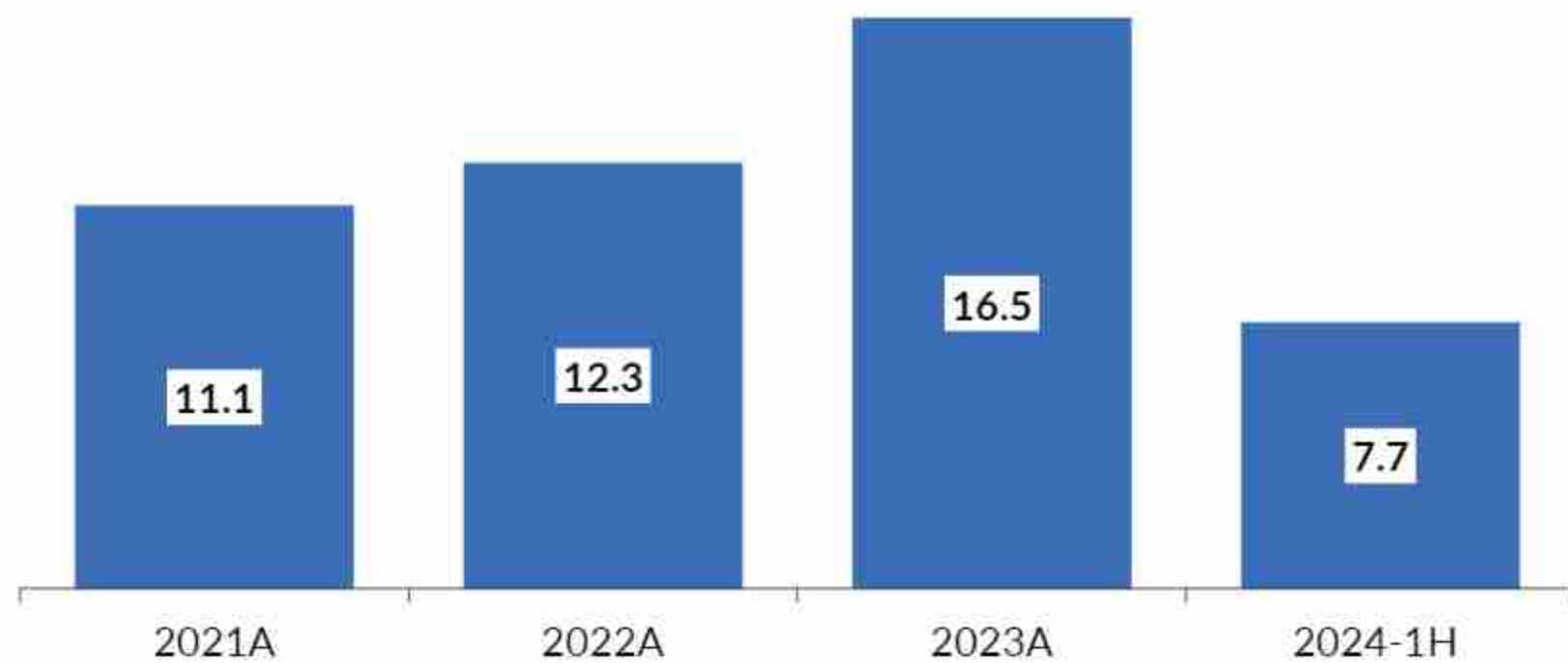
On the investment
on internal
construction cost
(capitalized)

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

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

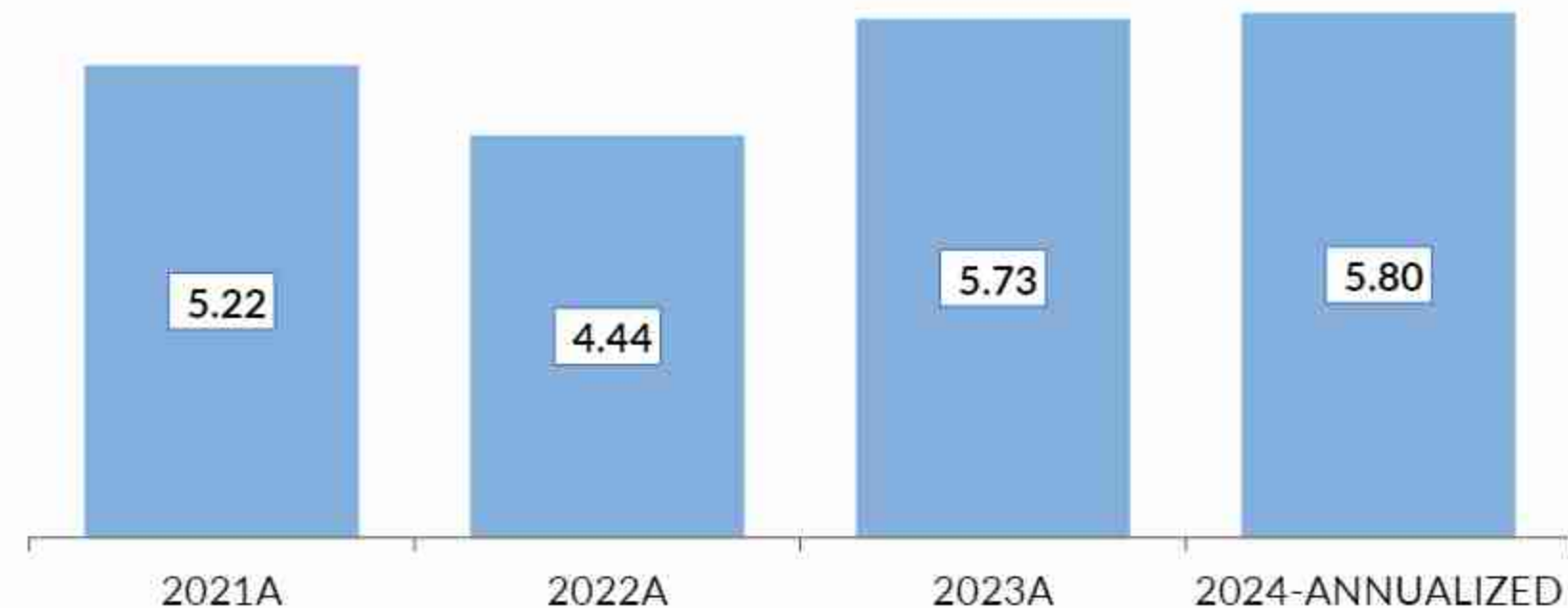
(€M)

CORE REVENUES



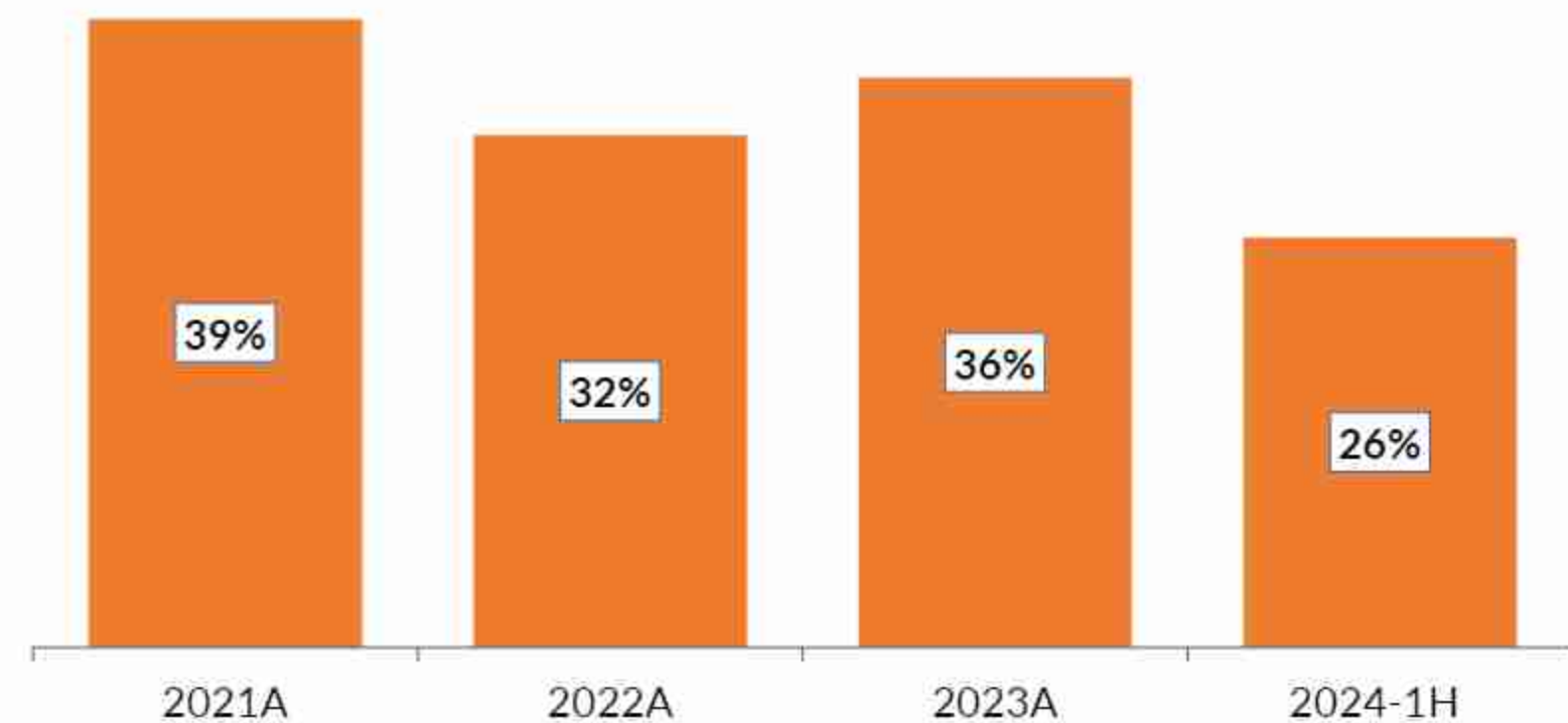
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RECURRING REVENUES



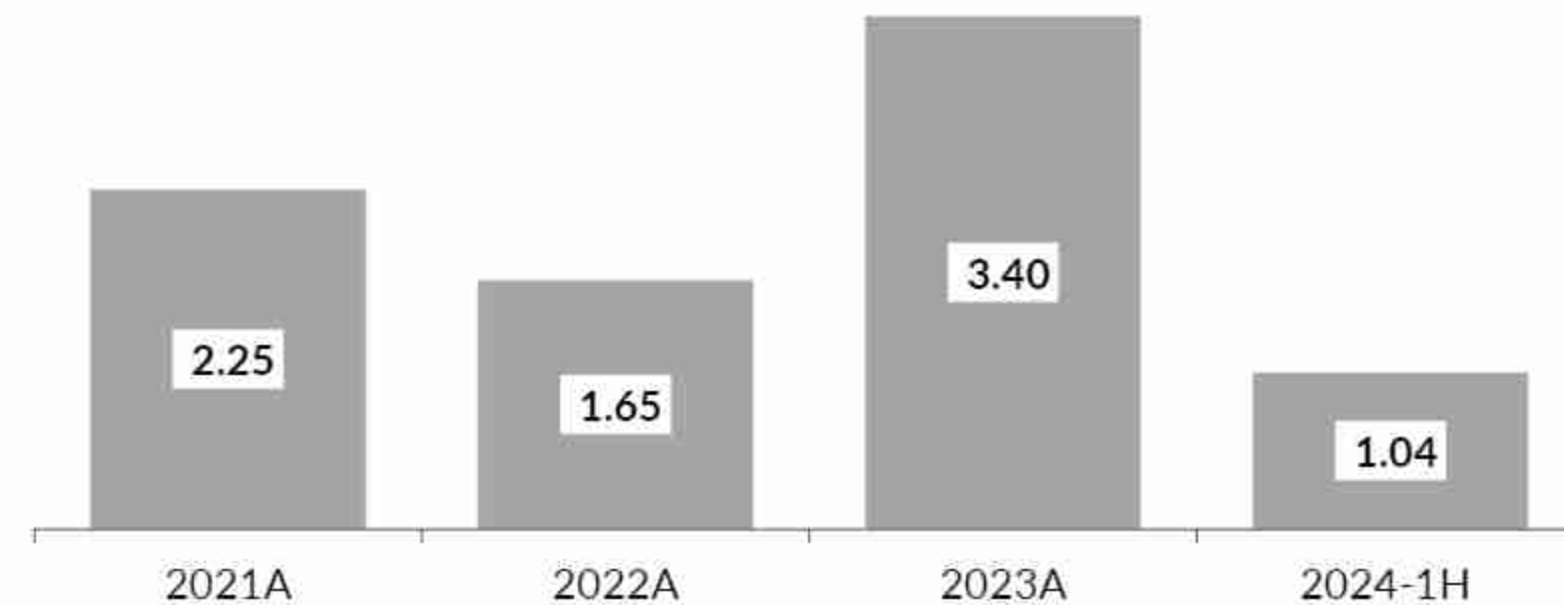
(€M)

EBITDA MARGIN



(€M)

NET PROFIT



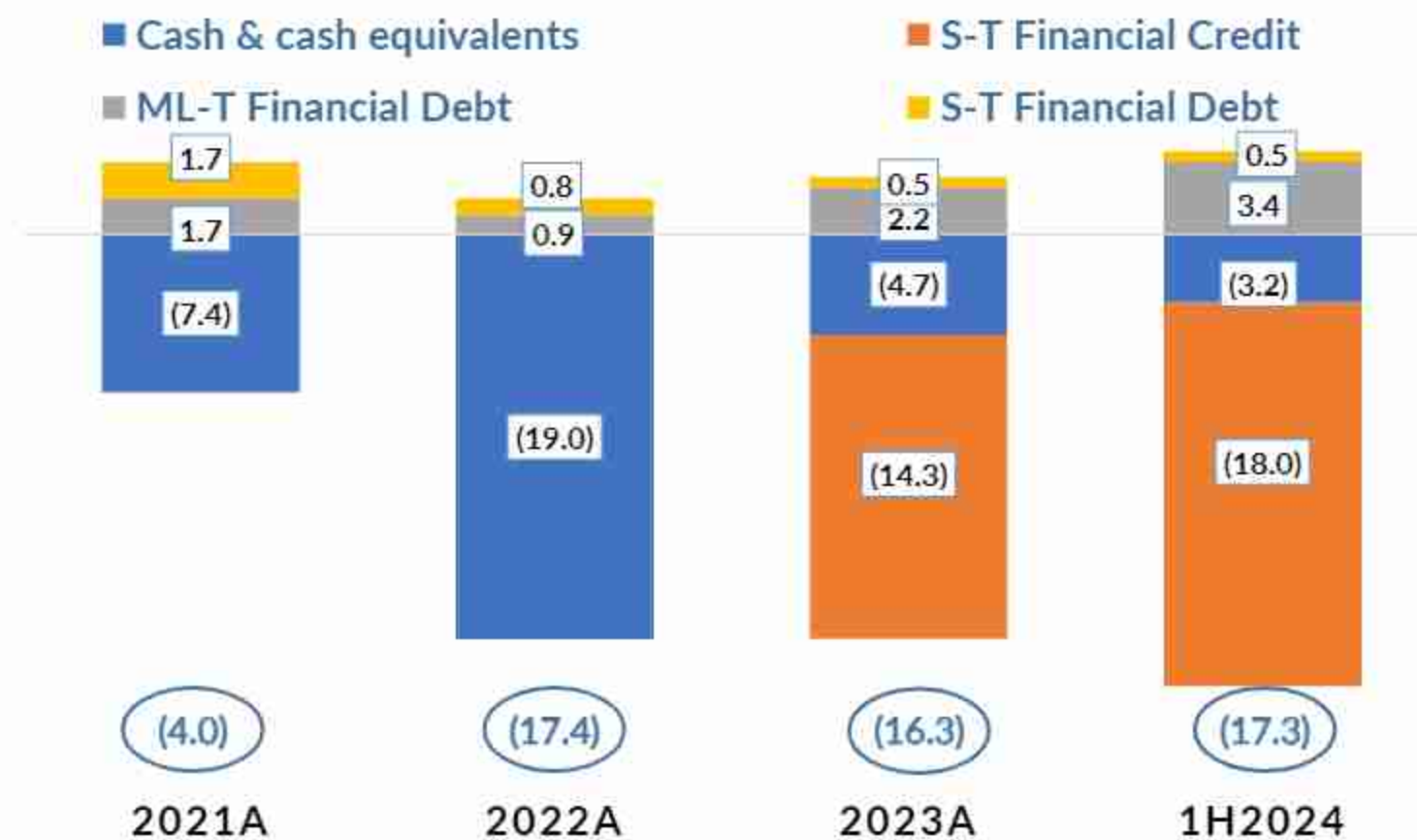
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CAPEX



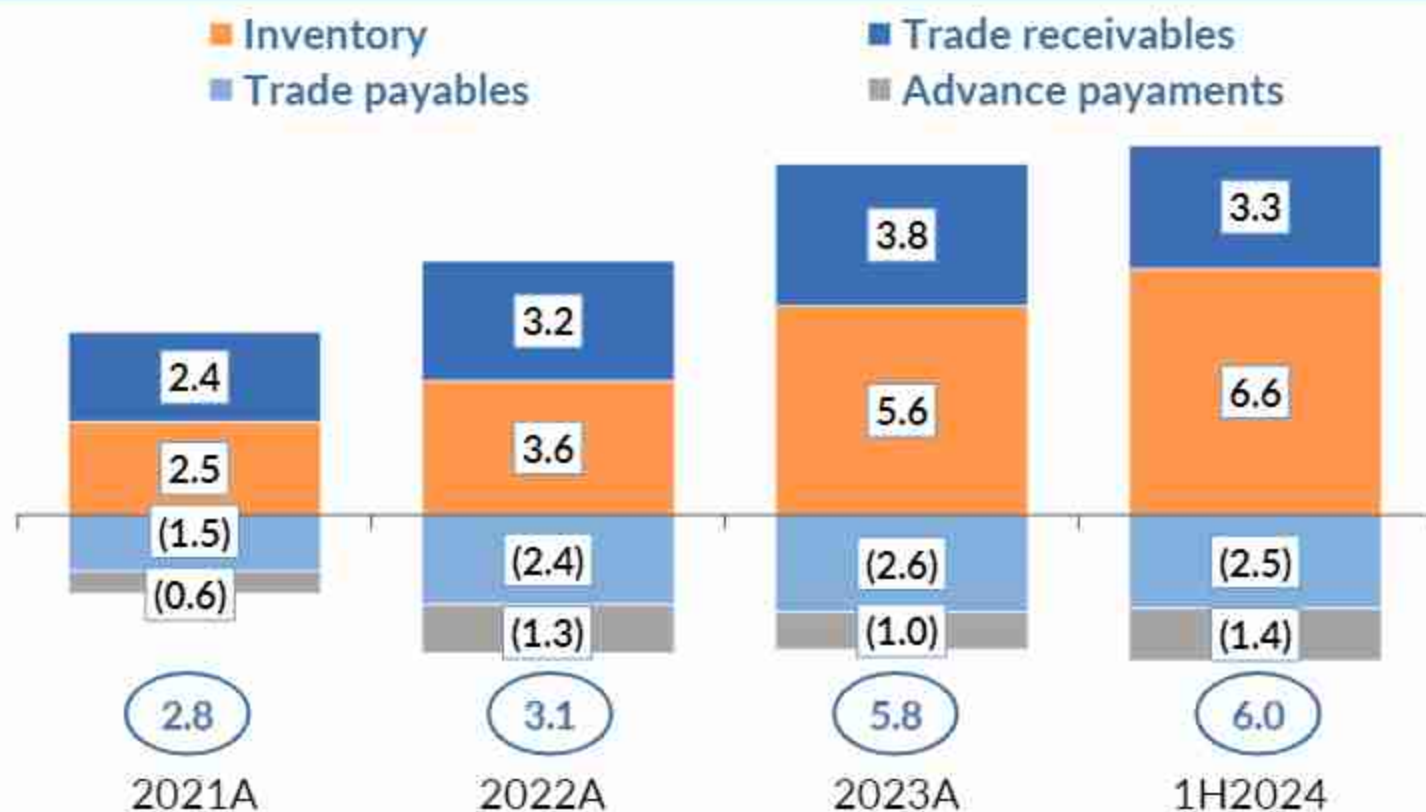
(€M)

NET FINANCIAL POSITION (CASH)



(€M)

TRADE WORKING CAPITAL



Roic⁽¹⁾

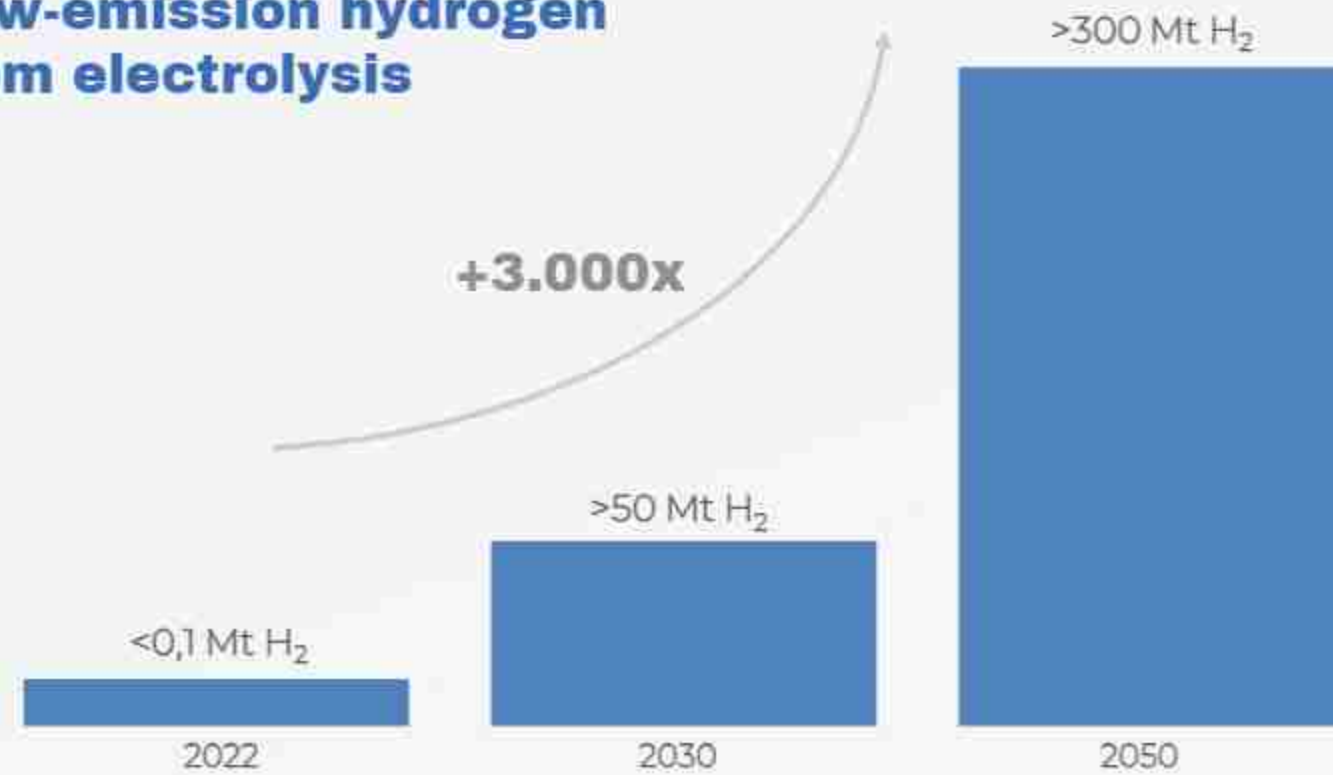


Note: (1) ROIC b.t.= EBIT/Invested Capital Source: Management elaboration on Group consolidated financial statements and Management Accounts

MARKET OVERVIEW

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

Low-emission hydrogen from electrolysis



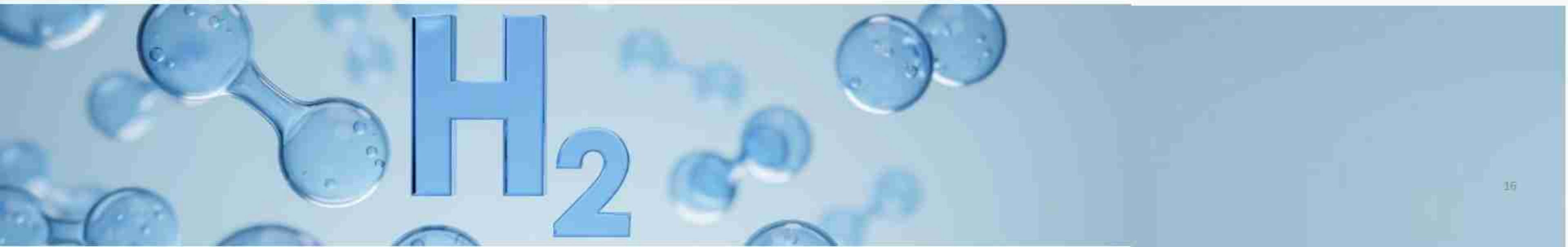
\$308 bn

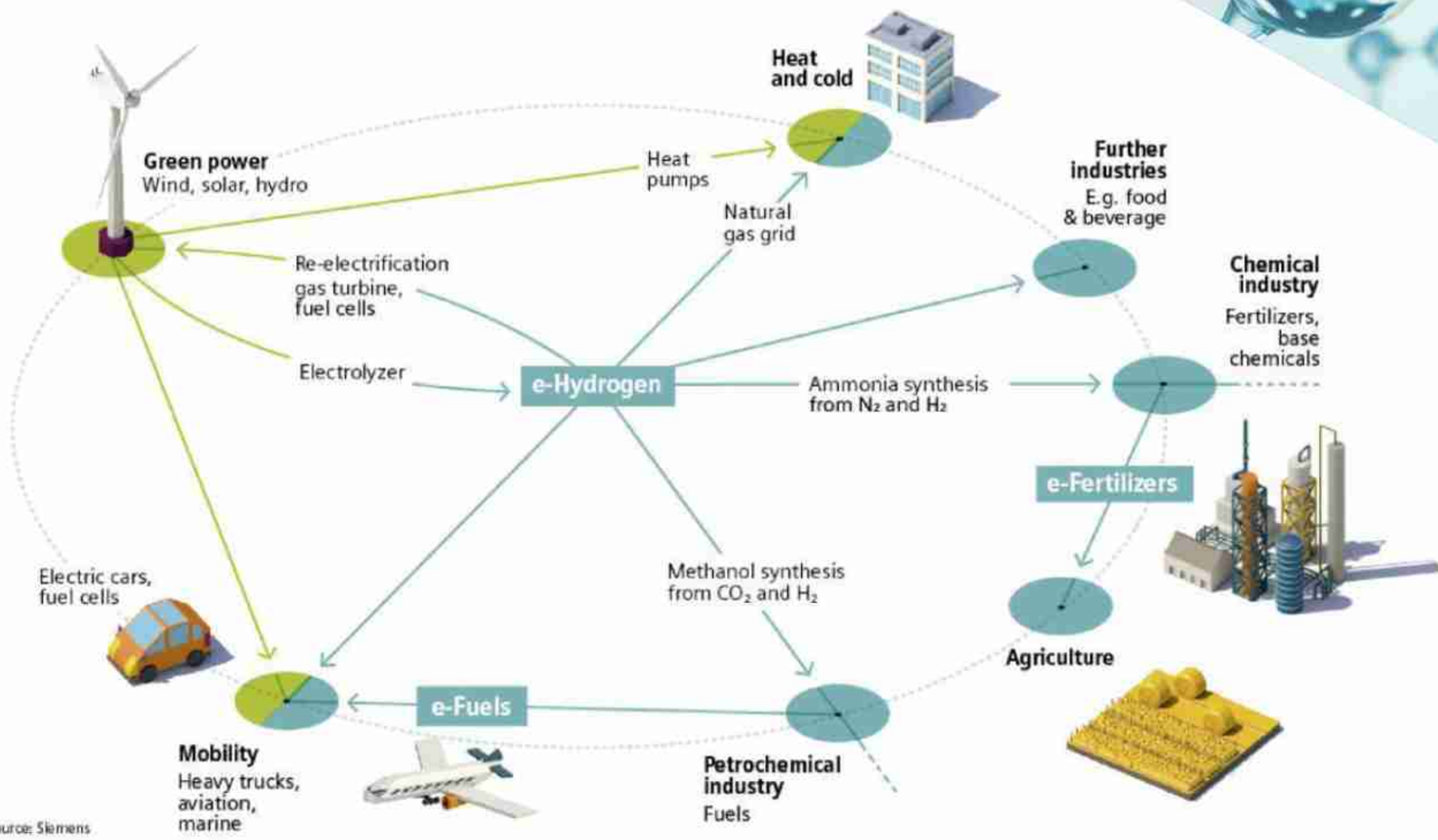
Government funding for hydrogen in 2023, **+46% vs 2022**

119 GW

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





Source: Siemens

SECTORS GROWING DEMAND



STRATEGIC POSITIONING

- Broader vision of the hydrogen market, which extends beyond the energy transition to embrace industries' decarbonization
- Extremely high quality and reliability of generators, thanks to over 30 years of experience, proprietary technology, and a fully-integrated business model
 - Large H2 plants will not pose a threat to ErreDue but rather an opportunity. The energy transition requires a trial period utilizing smaller MW-scale facilities. Leveraging its experience and reliability, ErreDue could become the ideal partner for this phase
 - 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

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

- To strengthen its presence abroad, ErreDue is considering to open foreign branches with commercial and maintenance personnel



NEW PRODUCTION SITE

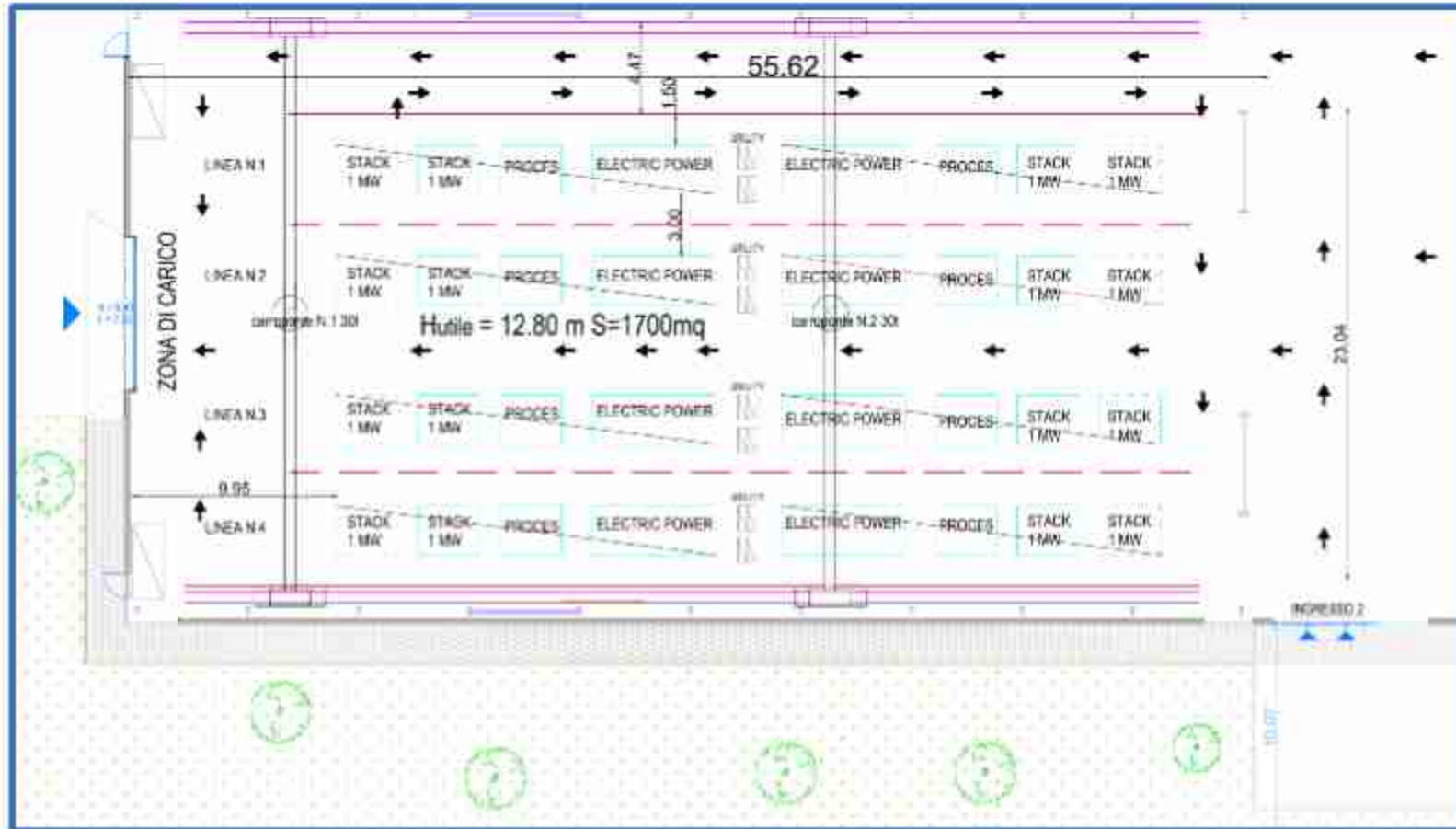
60
plants per year
on one shift

4
production lines

17,000 sqm
new area

increasing to

27,000 sqm
total area



FOREIGN EXPANSION

Industrial

+30 Dealers

+20 Countries

Laboratory

+70 Dealers

+50 Countries

To improve its presence in the global hydrogen market, ErreDue is considering the opening of new branches abroad or the participation in joint-ventures

+40% of revenues abroad

	1H 2024	%	1H 2023	%
Italy	4,537	59.1%	5,135	65.4%
UE	926	12.1%	977	12.4%
ROW	2,219	28.9%	1,744	22.2%
Total	7,682	100%	7,855	100%

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

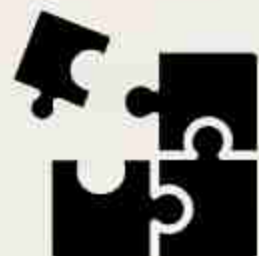
Environment

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



APPENDIX



ABOUT US

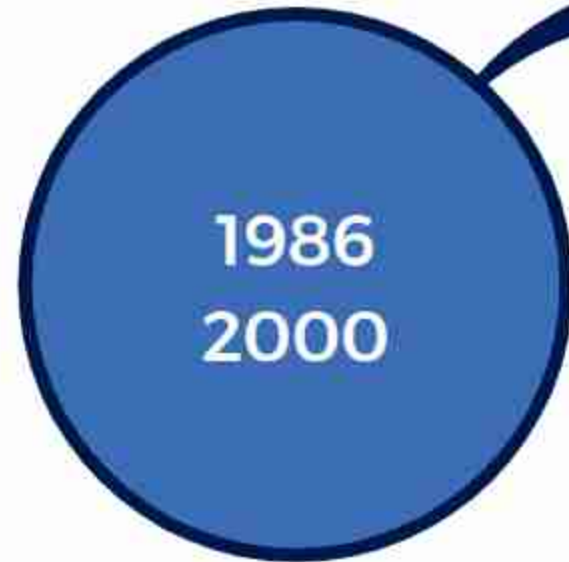
ErreDue is a vertically integrated company, able to design and build the components of its generators totally in-house. Its technology and know how, have permitted ErreDue to open-up new profitable business markets such as:

LABORATORY & INDUSTRY DECARBONIZATION
AND ENERGY TRANSITION

BUSINESS PROPOSITION

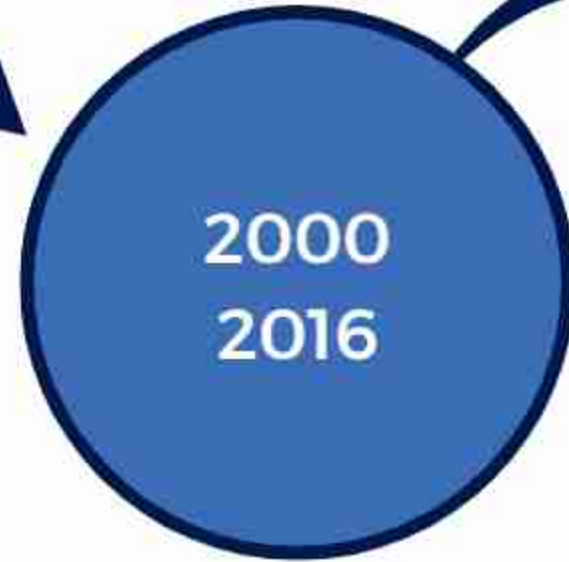
Today, companies and institutions are extremely concerned about ESG issues, and the geopolitical situation has underlined the problem of energy independence, so the market is turning from a minority sector into a mainstream sector whose future is linked to political purposes concerning de-carbonization. Thanks to more of 30's years experience Erredue will be able to became a key players of this emerging market

THE PIONEERING YEARS



ErreDue was founded in 2000 by Enrico D'Angelo. The company was able to play a leading role immediately, thanks to the background of its founder, who as early as the mid-1980s began to take a strong interest in the hydrogen market, producing its first alkaline generators.

THE GROWING YEARS



ErreDue has grown organically over the past 20 years and is one of the companies ready to participate in the new market boom. In 2016, ErreDue developed the Pem technology, thanks to which it was able to diversify its commercial offerings, increasing its product portfolio and readiness for the new market opening

THE YEARS TO COME



The new production site will have an area designated for energy transition plants. The area will be 17,000 square metres covered will be able to produce 60 MW per year on one shift once the full capacity of the plant is reached. In addition the R&D department is concerned in important research project to optimize the Pem technology and to develop the Aem technology





Thank you