

# Company presentation and update on recent business developments

September, 2023



thyssenkrupp  
nucera

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# 1. Market environment & company profile



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# thyssenkrupp nucera management team



Dr. Werner Ponikwar (CEO)

- CEO since July 2022
- 20+ years of experience in the chemicals industry
- In his last role, he served as CEO of Linde Hydrogen FuelTech



Dr. Arno Pfannschmidt (CFO)

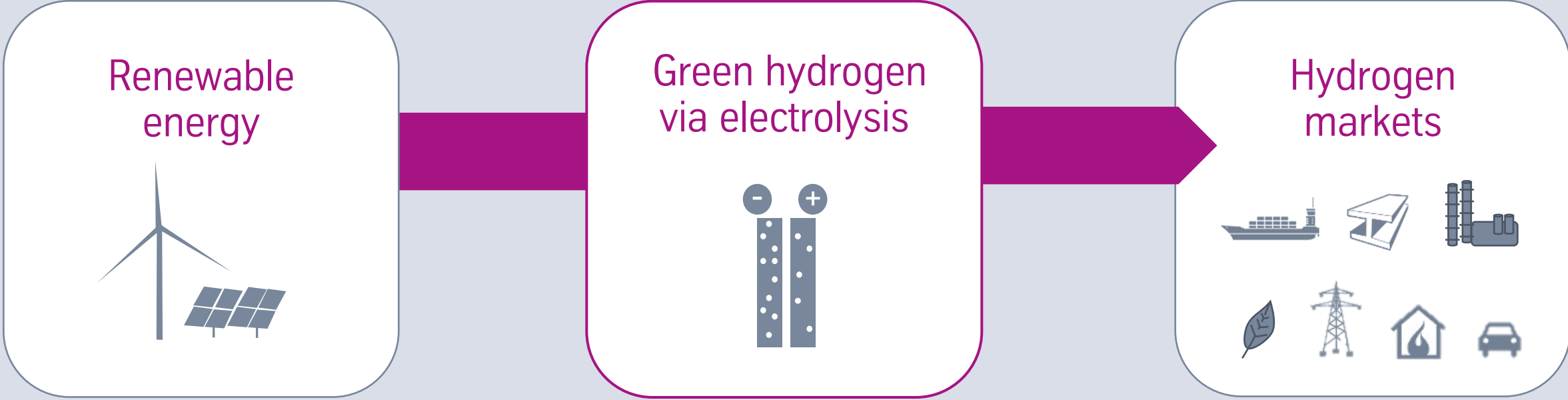
- CFO since 2014
- 30 years of industry and 9 years of electrolysis experience
- Held various CFO positions in different subsidiaries of thyssenkrupp AG



Fulvio Federico (CTO)

- CTO since 2017
- 30 years of industry and electrolysis experience
- Held leading positions in development of technologies for the electrochemical industry

# Electrolysis connects the renewable energy sector with a wide range of industries and enables industry decarbonization



Green hydrogen economy drivers

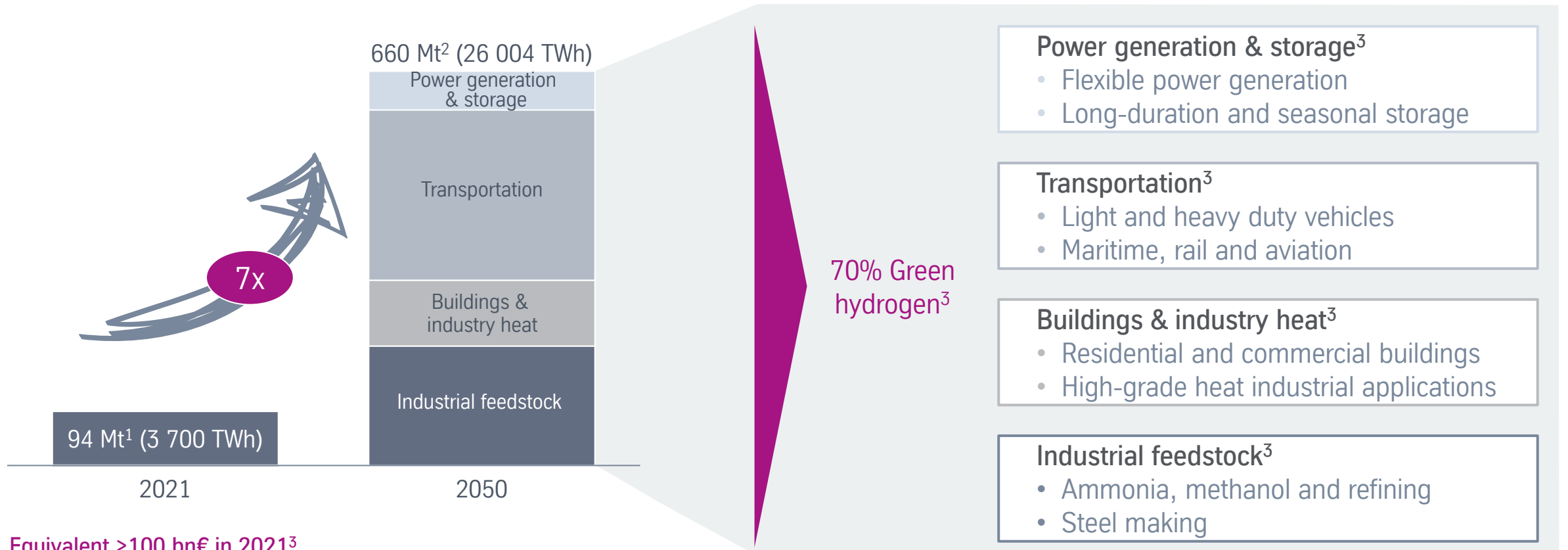
Climate & environmental protection

Growing renewable energy sector at low cost

Appropriate legal frameworks

# Worldwide hydrogen market is expected to grow sevenfold by 2050

Estimated global hydrogen demand by segment by 2050 in Mt (TWh<sup>1</sup>) p.a.



**Equivalent >100 bn€ in 2021<sup>3</sup>**

Large opportunities for electrolysis within existing hydrogen market

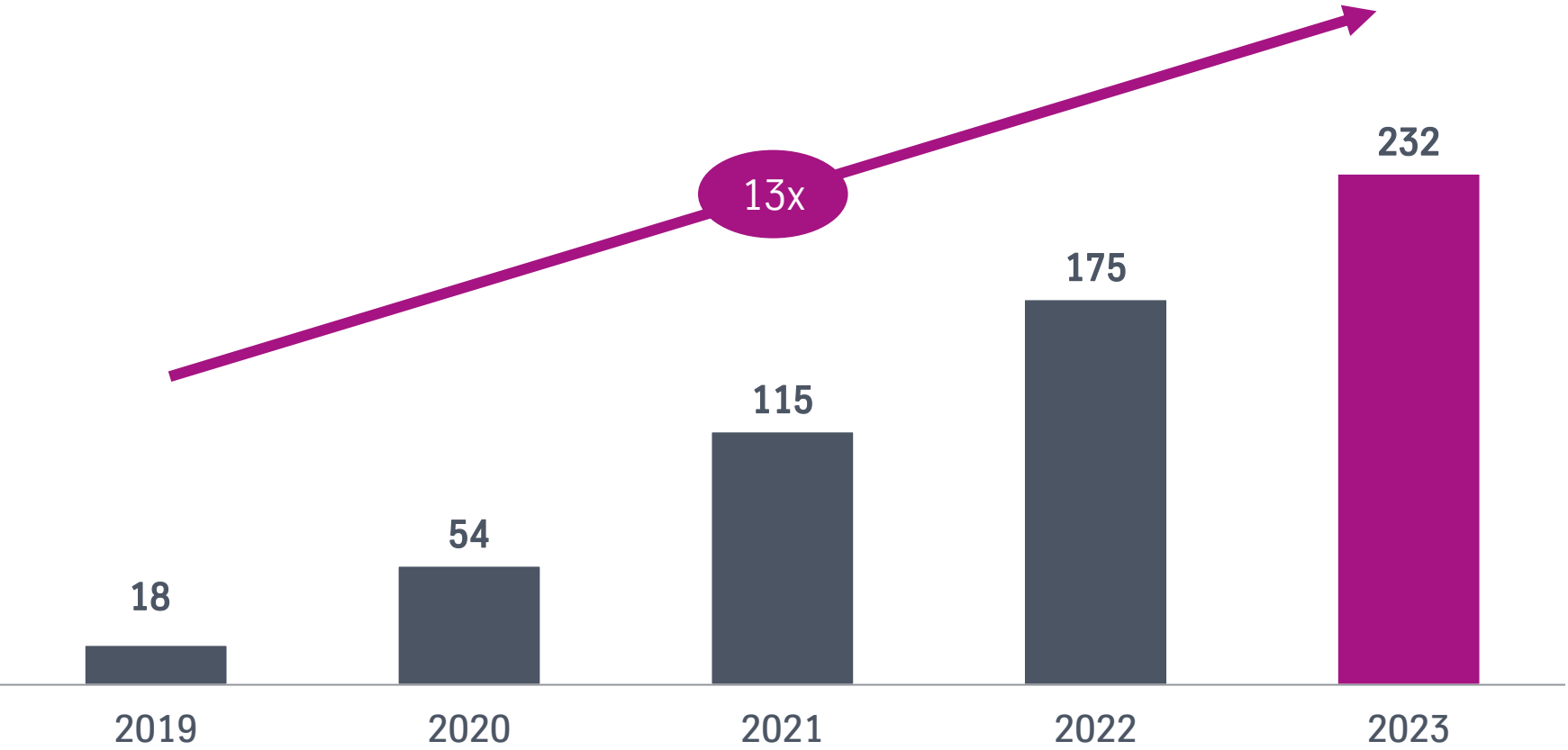
1. Energy content of 1 kg of hydrogen is 141.9 MJ (HHV) = 39.4 kWh 2. Source: IEA (2022), Hydrogen, IEA, <https://www.iea.org/reports/hydrogen> 3. Source: Hydrogen Council in collaboration with McKinsey & Company, Global Hydrogen Flows, October 2022.  
3. Source: Bloomberg News, Hydrogen Generation Market Worth \$201 Billion by 2025, February 16, 2021



# Global green H<sub>2</sub> demand growth is accelerating providing significant demand for the scale up of electrolyser production capacity

## Announced electrolyser capacity to be operational by 2030

(GW; year of forecast)

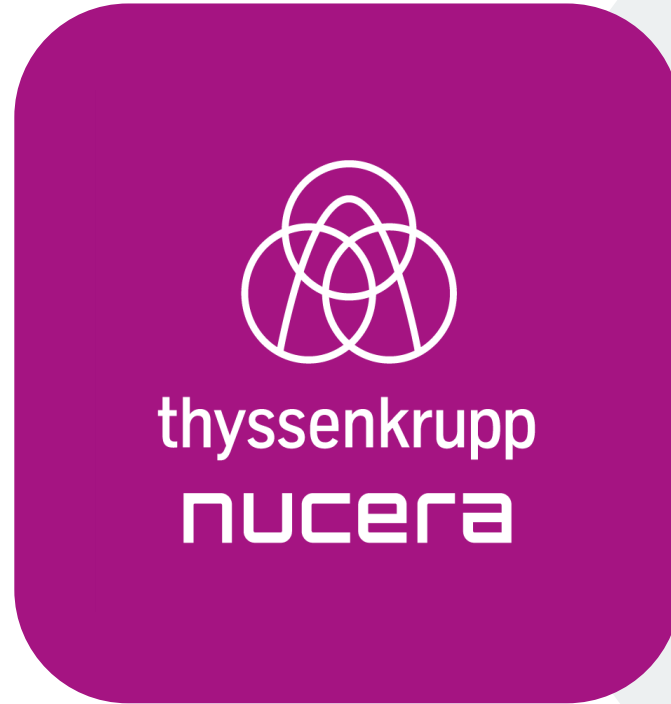
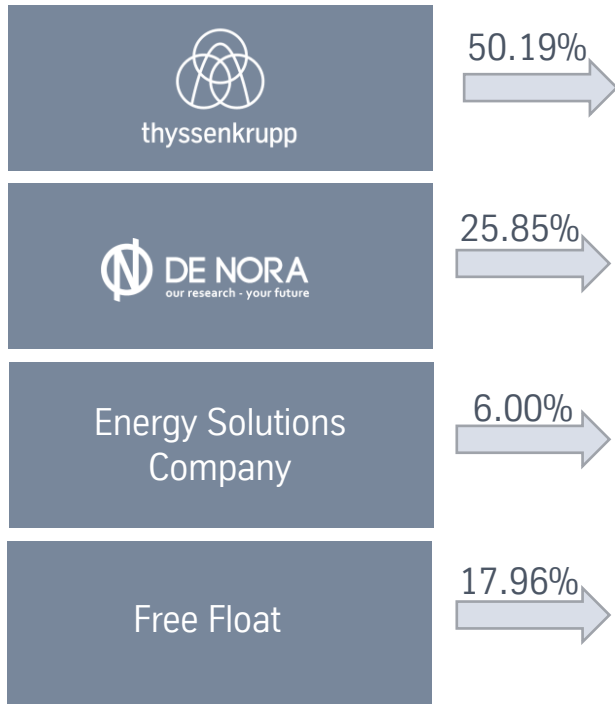


- The **global electrolyser installed base** was **~1 GW in 2022**
- **Electrolyser manufacturing capacity** needs to **significantly increase** to fulfil **strong demand growth**
- To date, the **>2 GW NEOM** project is the largest green H<sub>2</sub> plant under construction globally
- **~120 GW of the announced electrolyser projects** are currently considered to be at an **advanced planning stage<sup>1</sup>**

Note: 1. Projects that have passed final investment decision or are undergoing FEED (front-end engineering design) or feasibility studies. Source: Hydrogen Council in collaboration with McKinsey & Company; Hydrogen Insights 2023, May 2023.

# We are the Alkaline Water Electrolysis (AWE) and Chlor-Alkali (CA) technology provider globally

## Shareholder structure post-IPO<sup>2</sup>



### AWE

Order backlog June 23:  
~1.0bn €

Select AWE Customers

AIR PRODUCTS H2 green steel

### CA

Order backlog June 23:  
~0.5bn €

Select CA Customers

covestro Olin BASF OXY



# thyssenkrupp nucera's proven experience in Chlor-Alkali business provides a strong technology basis for AWE scale-up

## Chlor-Alkali Electrolysis



A global leader with proven experience with over **600 projects & 240,000 cell elements** >10 GW of electrolyzer capacity installed

## Alkaline Water Electrolysis



Building on Chlor-Alkali experience to be #1 in AWE

### Market Readiness

- Industrial-scale installations
- Quality proven supply chain of more than 1 GW cell manufacturing capacity p.a.

- Industrial-scale hydrogen plants
- Expand to a 5 GW supply chain

### Product

- A technology leader for electrolysis
- Handling of hydrogen as a by-product

- Standardized AWE product with leading TCO<sup>1</sup>
- Hydrogen as the main product

### Organization & Network

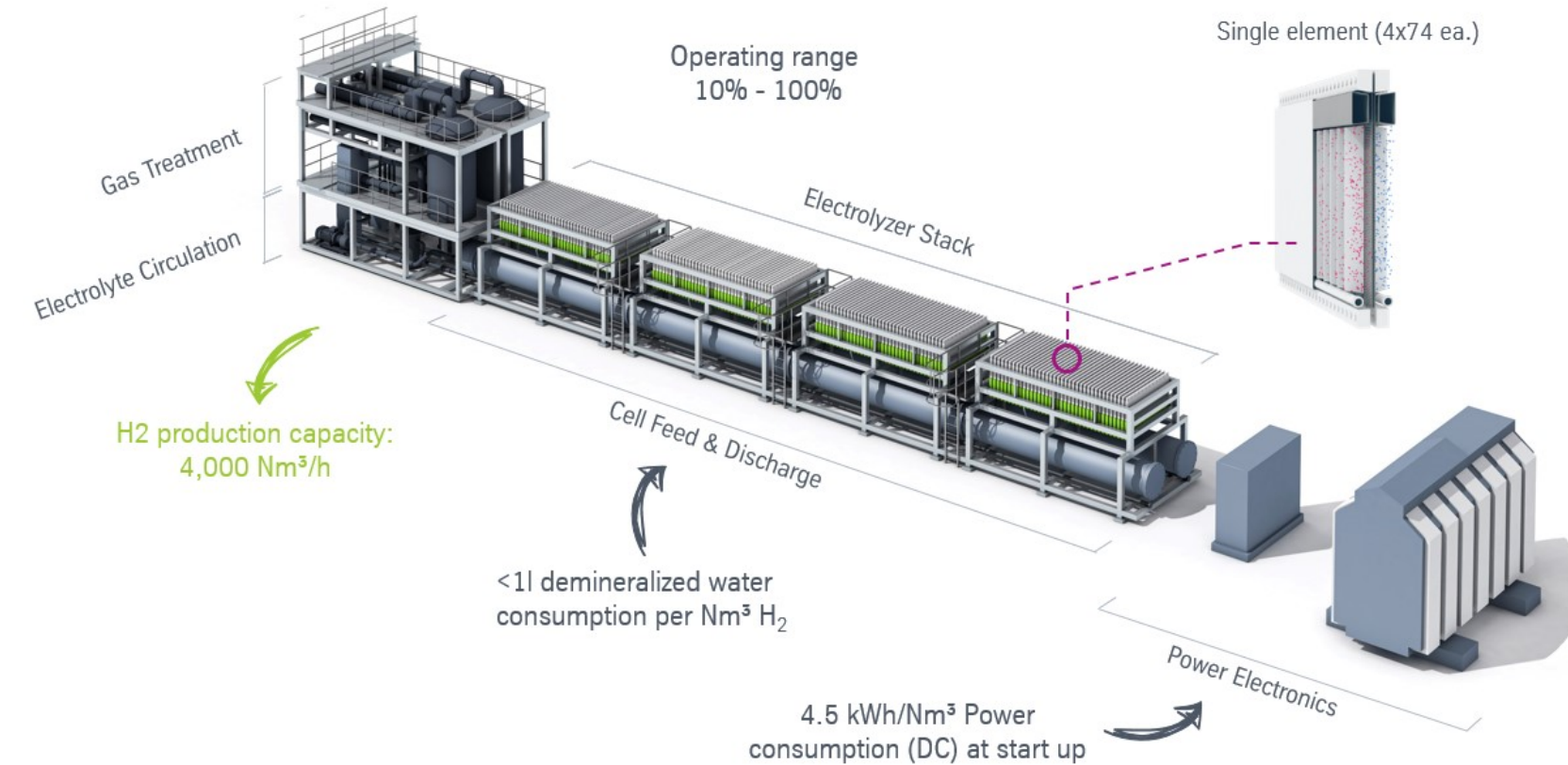
- Holistic life cycle services
- Global network with partners

- Successful service model
- Automation and digitalization

**Key enabler** of hydrogen production

1. Total cost of ownership

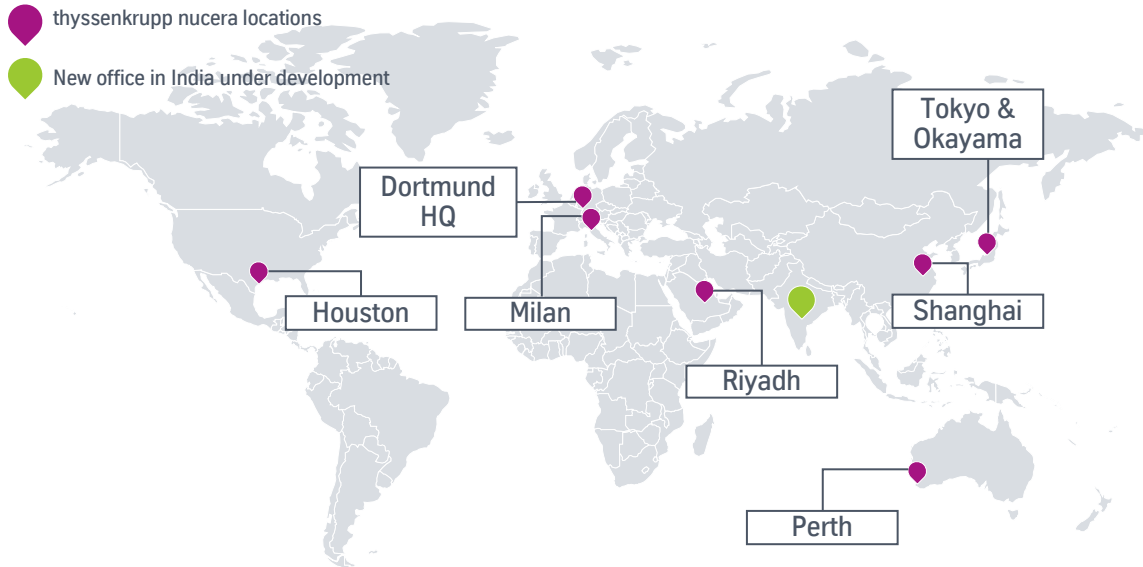
# Our technology for industrial-scale roll-out



- ✓ Safety | Non-pressurized design | Single-element monitoring
- ✓ Quality | Proven cell design
- ✓ Longevity | High durability proven by Chlor-alkali
- ✓ High performance | Long-term technology experience
- ✓ Reliability | Reliable operations
- ✓ Compact design | High current density
- ✓ Service | Global service network with partners
- ✓ Certified design | Certified by TÜV Rheinland to meet requirements of chapter 4 of ISO 22734:2019

# Ramp-up of the organization to capture accelerated growth globally

## Global presence – Current focus on NAM and Europe...



### Current focus on North America and Europe

- Strong push due to IRA in the US and ramp-up of local organization
- Europe as home market and important green hydrogen destination – initiatives such as RePower EU, NZIA<sup>1</sup> and European Hydrogen Bank as strong market impulses

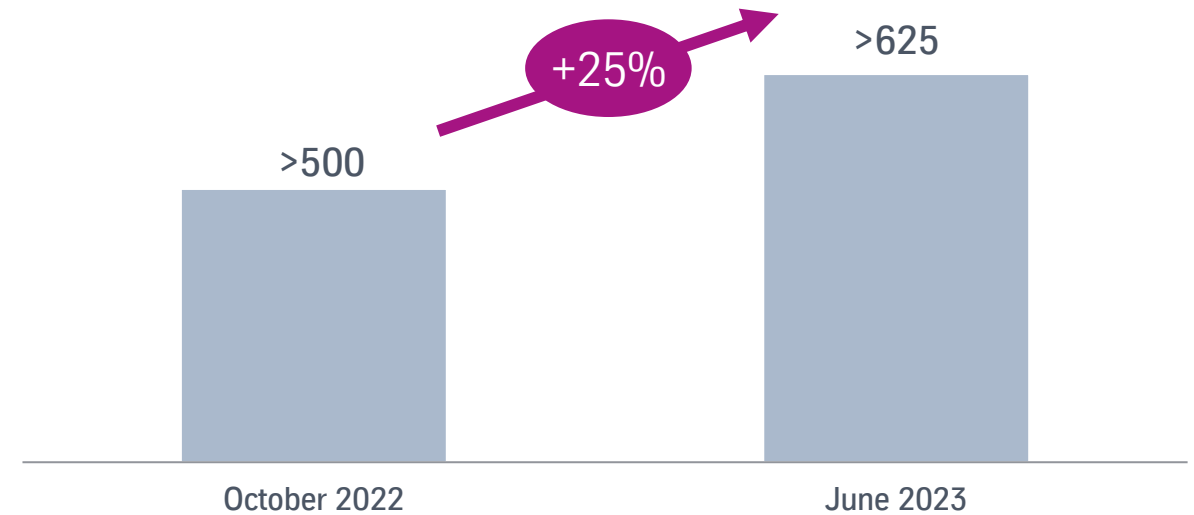
### Objective: Serve all relevant green H<sub>2</sub> markets globally by 2030

- Sequenced approach to expand business geographically in sync with our organizational ramp-up and establish a global footprint

1. Net-Zero Industry Act

## ... synchronized with organizational ramp-up

Headcount development



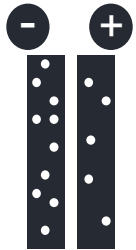
✓ Ability to attract talent globally



✓ Strong emphasize on global R&D organization

# Powering a cleaner future: Solidifying position as an industry leader for hydrogen technology

Green hydrogen via electrolysis



Global hydrogen market



Capacity Reservation

June 2023

**Signed agreement** for a North American project to reserve production capacity for the manufacturing of our standardized 20 MW "scalum" electrolysis modules for a **high multi 100 MW plant**



Air Products

Two 20 MW modules for a 10 metric ton per day facility to produce liquid hydrogen in Casa Grande, Arizona

Dec 2021

Shell

thyssenkrupp nucera to engineer, procure and fabricate Shell's 200 MW hydrogen facility in the port of Rotterdam

May 2023

H2 green steel

H2 green steel

Supply contract by CF Industries to deliver a >700 MW green hydrogen plant for the production of green ammonia

Dec 2021

NEOM

NEOM project to produce 650 tons of green hydrogen daily – thyssenkrupp nucera signs one of the largest green hydrogen projects in the world to install over 2 GW electrolysis plant for Air Products



Unigel

60 MW for Unigel's industrial scale green hydrogen facility in Camaçari Industrial Complex, Brazil

## 2. Update on Q3 22/23 financials & Q4 outlook



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# Q3 Highlights



**Continued dynamic growth in third quarter 2022/23** – organizational ramp-up and project execution going according to plans



**Strong orderbook momentum continues** – Significant increase of order intake in Chlor-Alkali accompanied by signed contract with H2GS for one of the largest gH2 projects in Europe



**First 4 scalum 20MW AWE modules** have been **delivered** to different customers - start-up in line with latest planning of the customers over the next months



**Sales grew 90%** driven by an elevenfold increase in gH2 sales, which exceed the 100 million euro mark per quarter for the first time






**CA order intake  
>200mn €**

**AWE sales  
>100mn €**

**Total order backlog  
~1.5bn €**



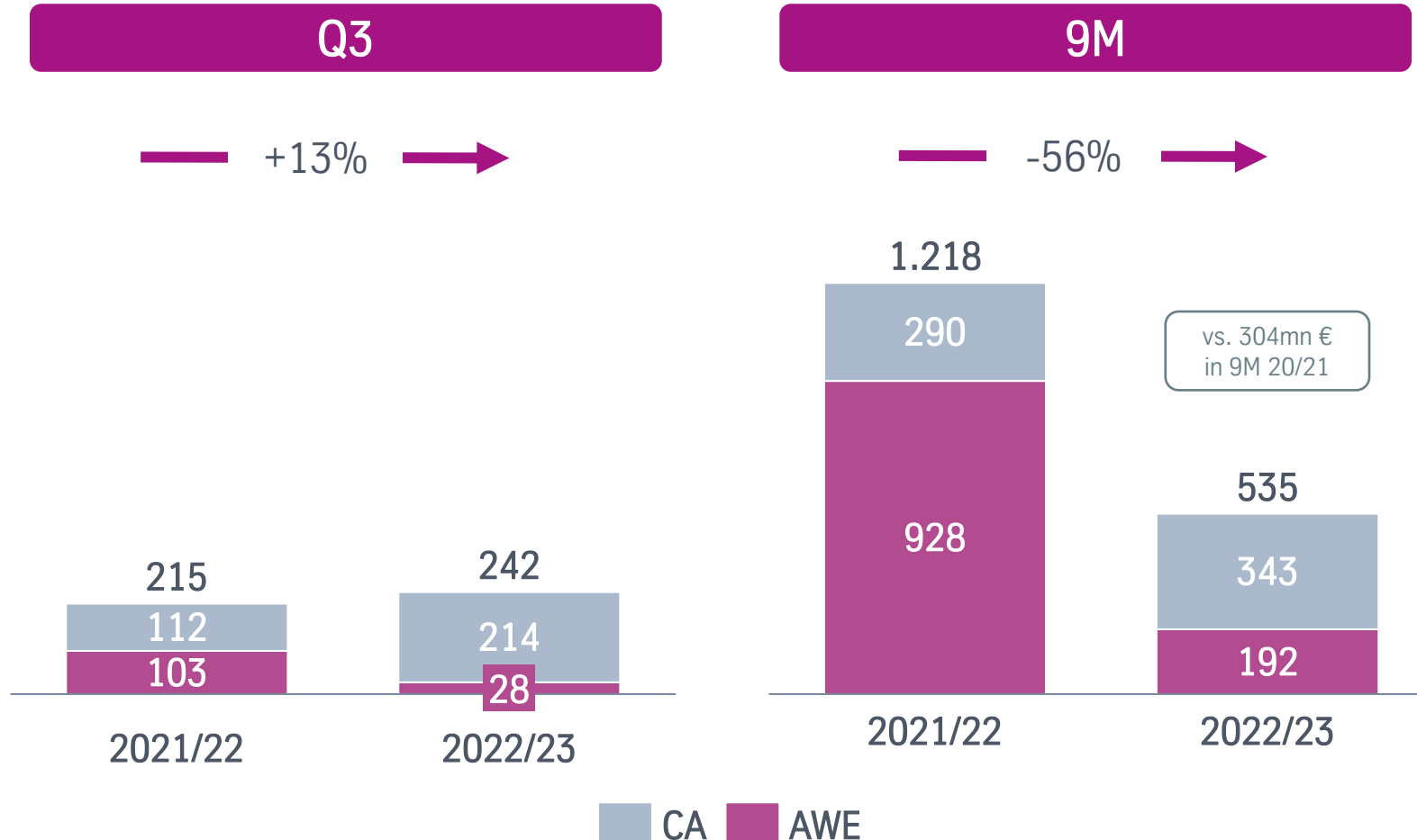
# Accelerating demand for large-scale gH2 electrolyzers fuels project pipeline – strongest market dynamics currently seen in North America

		as of Aug 22		as of May 23		as of Aug 23		as of Aug 22		as of May 23		as of Aug 23
Substantial pipeline <sup>1</sup>	 No. of projects	#97	↗	#101	↗	<b>#103</b>	 Potential contract value	>17 €bn	↗	~19 €bn	↗	<b>&gt;21 €bn</b>
	 Median project size	~135 MW	↗	200 MW	→	<b>200 MW</b>	 Aggregated size	>42 GW	→	~41GW	↗	<b>&gt;46 GW</b>
pursue												
Actively pursued projects <sup>2</sup>	 No. of projects	#28	↗	#34	↗	<b>#36</b>	 Potential contract value	>2.9 €bn	↗	>6 €bn	→	<b>&gt;6 €bn</b>
	 Average project size	~240 MW	↗	~380 MW	→	<b>~360MW</b>	 Aggregated size	~6.8 GW	↗	>12 GW	→	<b>&gt;12 GW</b>

1. Projects which thyssenkrupp nucera had first interactions with and that are being monitored closely 2. Projects which already passed the pursue / non-pursue gate

# Q3 shows increased order intake, 9M below record-breaking PY

## Order intake (mn €)



### Order Intake Q3

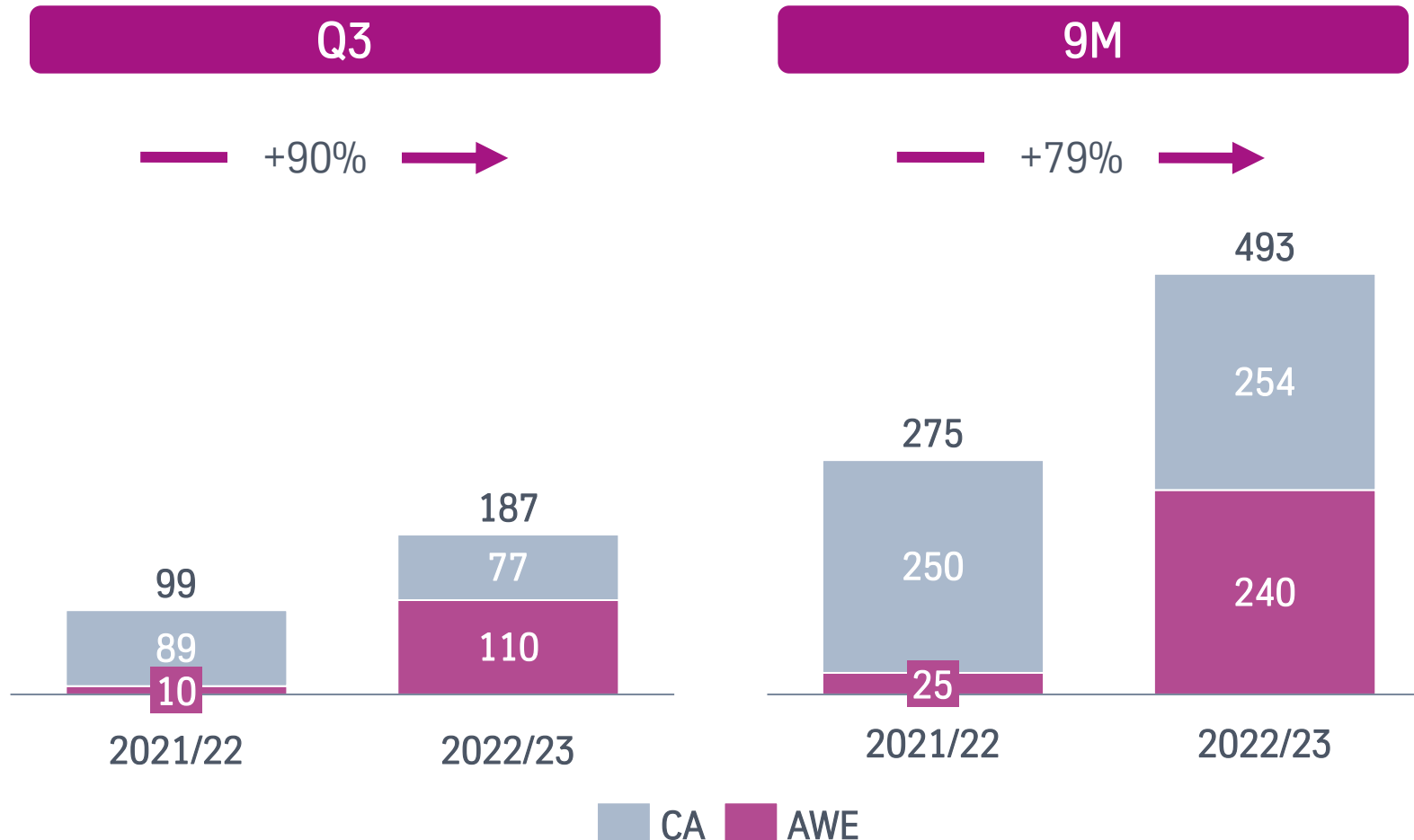
- AWE order intake mainly driven by first phase of H2GS project
- CA order intake driven by strong new build business in North and South America

### Order Intake 9M

- AWE below record level of PY, which was characterized in particular by the NEOM project
- CA order intake driven by strong business in the Americas
- 9M 22/23 backlog of ~1.5bn € thereof ~1.0bn € AWE

# Positive top-line performance due to strong growth in AWE business

Sales (mn €)



## Sales development Q3

- AWE increased 11x and for the 1<sup>st</sup> time exceeds the 100 million euro mark per quarter
- Continuous ramp-up in line with expectations driven by Shell and NEOM project
- In CA a growing new build business was overcompensated by lower service sales

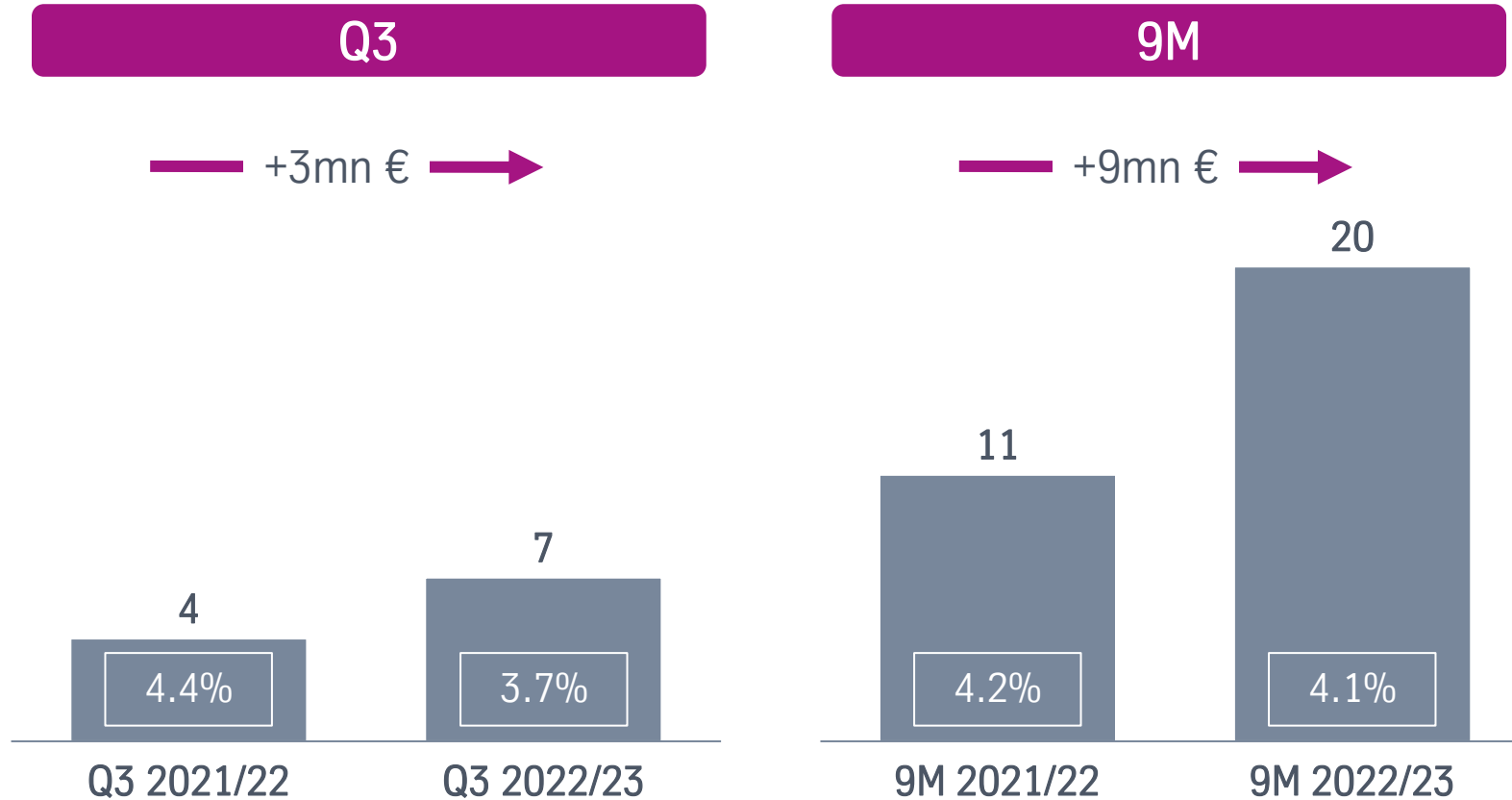
## Sales development 9M

- AWE grew dynamically, sales multiplied to 240 million euros
- CA sales slightly above PY due to strong new build business

# Earnings growth in absolute terms despite accelerating ramp-up costs

EBIT (mn €)

% of sales



## EBIT development Q3

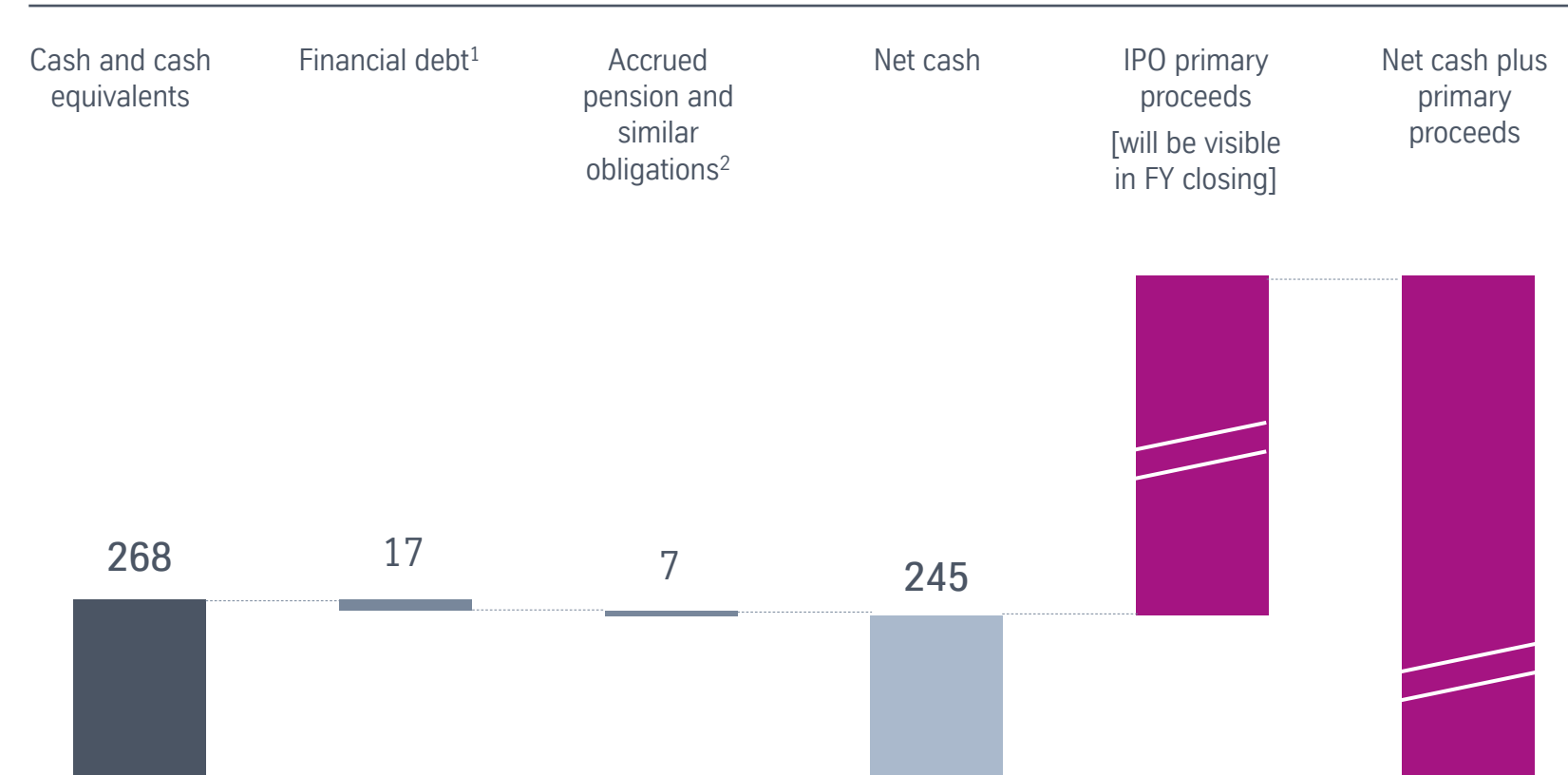
- Increase in absolute EBIT driven by volume effects, which were partially compensated by higher ramp-up costs

## EBIT development 9M

- Increase in absolute EBIT driven by volume effects and resilient 9M margin
- Higher AWE sales and improved CA new build business only partially offset by costs for organizational capacity build-up for future growth

# Solid balance sheet will be further scaled up by IPO Proceeds

## Capital structure as of June 30, 2023 (mn €)



- Strong and well capitalised balance sheet driven by profitable operations and advance payments
- Net Cash impacted by negative exchange-rate effects
- IPO primary proceeds of 526mn € will be used for, e.g.:
  - Funding of strong AWE growth (R&D and capex)
  - Strengthening of the financial position to meet counterparty requirements
  - Ability to deliver on large scale projects incl. provision of required guarantees

1. Includes lease liabilities current and non-current and other financial liabilities 2. Includes accrued pension and similar obligations and provisions for other non current employee benefits

# How we see Q4 2022/23

## Sales

- **Expectation:** Continuation of strong sales growth against previous year
- **Main driver:** ongoing execution of significant AWE order backlog

## EBIT

- **Expectation:** Negative EBIT margin in Q4, cumulative FY 2022/23 with positive EBIT contribution
- **Main driver:** Continued organizational ramp-up to capitalize on increasing demand for large-scale gH2 solutions in the mid- and long-term; acceleration of ramp-up costs as planned in upcoming FY 2023/24



# We implement our growth strategy and confirm our mid- and long-term ambition

✓ Dynamic sales growth

✓ Consistent and profitable project execution

✓ Well on track to reach AWE EBIT and FCF break-even targets

Published  
May 15, 2023

## New outlook driven by accelerating market dynamics

Financial targets reflecting thyssenkrupp nucera's attractive positioning and strong order backlog in AWE

AWE	CA	Group
<p><b>Sales</b></p> <ul style="list-style-type: none"> <li>• 600 mn € – 700 mn € Sales by FY23/24</li> <li>• 850 mn € – 950 mn € Sales by FY24/25                             <ul style="list-style-type: none"> <li>– Assumes strong demand based on an expected exponentially growing market</li> <li>– Global roll out in the long-term expected to contribute to further acceleration of growth</li> </ul> </li> <li>• Service Sales expected to ramp up 6-8 years after installation</li> </ul>	<p><b>Sales</b></p> <ul style="list-style-type: none"> <li>• Sales reflect project business related Order Intake movements, expected at around 350-400 mn € by FY25/26</li> <li>• Thereafter, expected to grow in line with GDP</li> </ul>	<p><b>R&amp;D expense</b></p> <ul style="list-style-type: none"> <li>• Aggregated R&amp;D expense between FY22/23 and FY25/26 is expected to amount to 150 mn € to 250 mn € (reflected in EBIT margin)</li> </ul>
<p><b>EBIT</b></p> <ul style="list-style-type: none"> <li>• Break-even expected around FY24/25<sup>1</sup> <ul style="list-style-type: none"> <li>– Organizational build-up including additional R&amp;D to meet expected demand in mid- and long-term and to achieve higher growth and margins</li> <li>– Strong acceleration of profitability post break-even expected</li> </ul> </li> <li>• In the long-term increase to low double digit to mid-teen margins also driven by increasing service share</li> </ul>	<p><b>EBIT</b></p> <ul style="list-style-type: none"> <li>• Mid-term target to achieve high single-digit EBIT margin</li> </ul>	<p><b>Cash flow</b></p> <ul style="list-style-type: none"> <li>• Aggregate Capex between FY22/23 and FY25/26 is expected to amount to 150 mn € to 250 mn € to drive higher growth and margins</li> <li>• Expected Capex excludes potential investments into complementary technology e.g. via M&amp;A</li> <li>• NWC expected to increase slightly into positive territory over time</li> <li>• FCF break-even expected around FY25/26</li> </ul>

EBIT and EBIT margin on product group level are not expected to be reported as part of the segment reporting in the near future  
1. We expect the gross margin in AWE will remain in the low single digit percentage area up until the time where we reach EBIT break-even in AWE

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# 3. In a nutshell



# Creating the global leader of Alkaline Water Electrolysis



Enabler for industries to decarbonize



A technology leader in the industrial scale electrolysis



Global organization with reputable partners



Highly experienced management team



High value-add aftermarket and life cycle service offering



Outstanding AWE order backlog proves validity



Significant upside potential in the long-term driven by strong market position in a dynamically growing industry



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# Events & Financial Calendar



## Upcoming events

- Sep 9 CoBa & ODDO Corporate Conference (Frankfurt)
- Sep 12 Virtual Roundtable (AlsterResearch)
- Sep 20 12th German Corporate Conference (Munich)
- Sep 21 Baader Investment Conference (Munich)



## Financial calendar

Dec 18 FY 2022/23



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