

Steel Europe

Equity Story

November 2023

engineering.tomorrow.together.

thyssenkrupp



tkSE executive team



+135 years

of combined industry
experience committed
to delivering

Dr. Arnd Köfler

Chief Technical Officer
since 01/17

- 30Y industry experience
- 10Y tk experience

Carsten Evers

Chief Financial Officer
since 03/20

- 33Y tk & industry experience

Bernhard Osburg

Chief Executive Officer
since 03/20

- 24Y industry experience
- 19Y tk experience

Dr. Heike Denecke-Arnold

Chief Operations Officer
since 05/22

- 24Y tk & industry experience

Markus Grolms

Chief Human Resources
Officer since 04/20

- 26Y industry experience
- 14Y tk experience¹

Source: Company Information; 1. Including 10 years at supervisory board tk



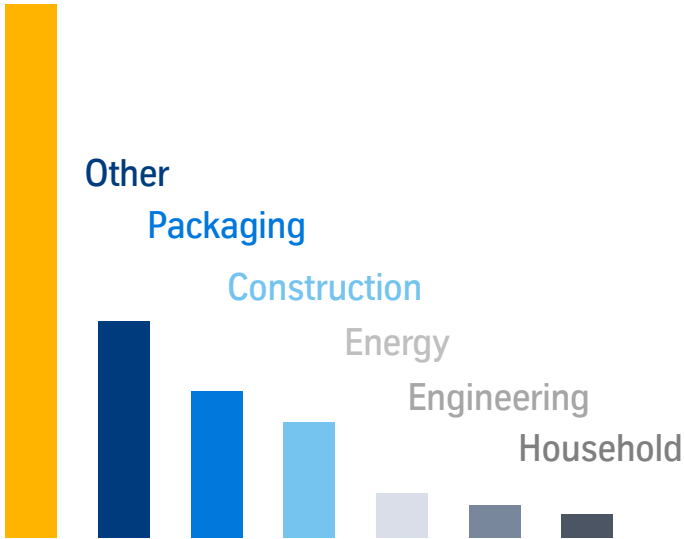
No. 2 flat steel producer in EU with broad end-market exposure



Shipments by end market
(22/23)

9.4 Mt

Automotive



10.4 Mt
Crude steel production

10 sq km
Duisburg area
One of the largest EU industrial sites

9.4 Mt
Shipments

20
Production facilities

€12.4 bn
Revenue

~26,820
Employees

€0.6 bn
Adj. EBITDA

~1,200
Customers



+200 years of innovation continuing today and tomorrow

Track record of pioneering industrialisation and innovation



1811 - 2010

- Seamless forged and rolled railroad tires (industrial)
- Development of stainless, acid-resistant steels (industrial)
- First electrolytic steel strip tinning worldwide (packaging)
- First fully galvanized steel car body, tailored blanks & hot-formed parts (automotive)
- Driving lightweight construction with “NewSteelBody” (automotive)

Source: Company Information

Future innovations and pioneering approach in shaping Green Transformation



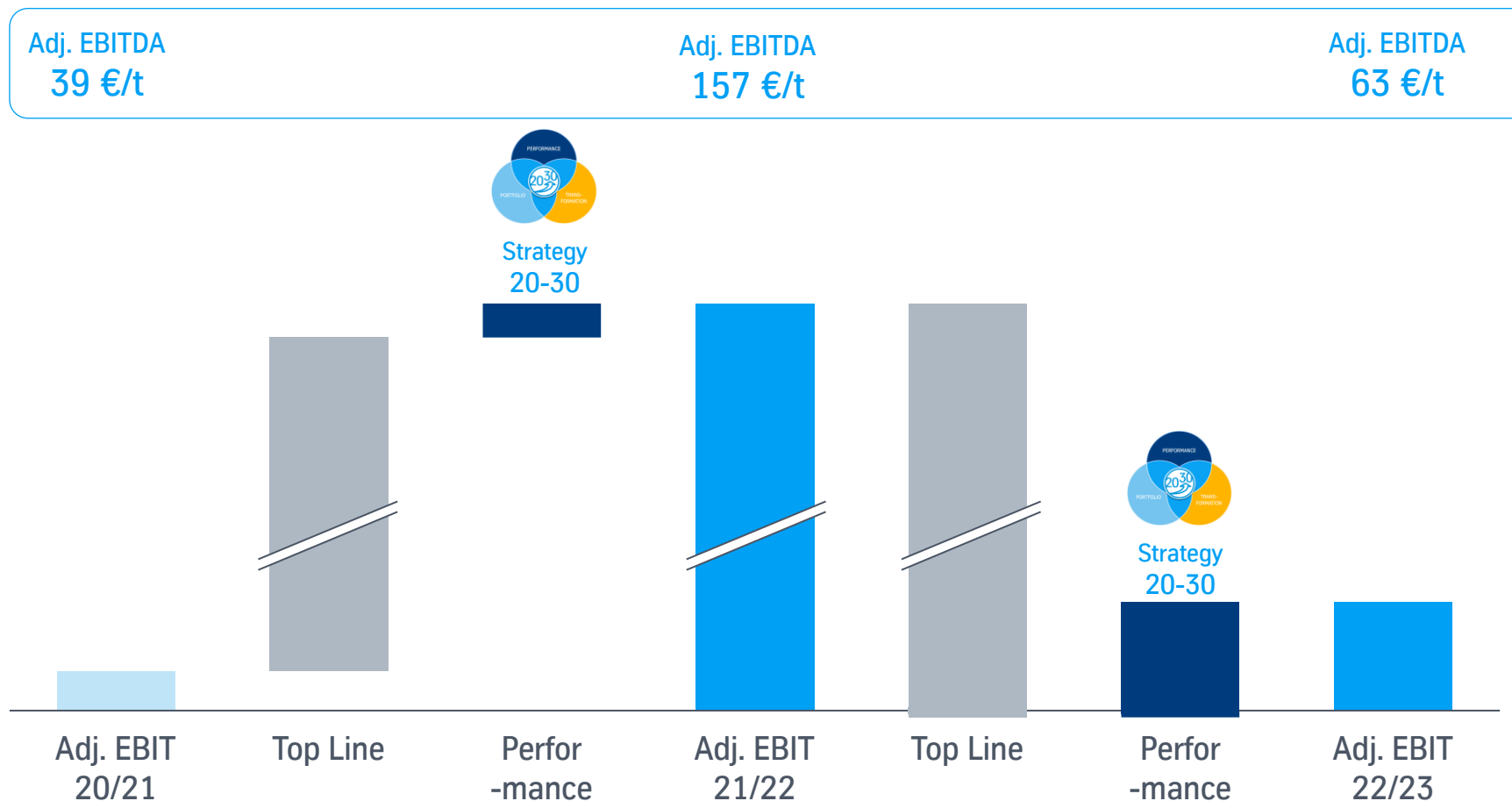
2010 - the future

- Development of high strength steels with superior surface properties; steel solutions for e-mobility
- H₂ decarbonised steel: First use of hydrogen in blast furnace
- First production of carbon-reduced steel bluemint® (2021)
- Innovative DRI/SAF concept: Green Steel commissioning in 2026E
- A fully green zero emission steel producer by 2045E



Effect of adverse market conditions on EBIT adj. compensated partially by impact of performance measures within Strategy 20-30

Adjusted EBIT [€ mn]



Development and drivers FY22/23

- Effect of subsequent, **high raw material and energy costs** in FY H1
- **Deterioration of economic boundary conditions** with impact on volumes and revenue in FY H2
- Execution of **performance measures** from Strategy 20-30 amounting to total €340 mn – in total €770 mn within 3 years



Current challenges in the economic environment require resolute management actions with strategic long-term implications

External factors

- Rising costs for input factors
- Disrupted supply chains
- Slowing down of pricing dynamics
- Transformation of markets for end-products
- Inflation combined with recession trends
- High pressure by imports



Management actions



Further execution of Strategy 20-30



APEX @ Steel - identification of actions to stabilize performance in FY23/24



Accelerate green transformation by investment in DR-plant



Foster strategic partnerships with suppliers & customers



Strategic implications





- Sustainable product portfolio offering
- Increased operational performance
- Strengthened working capital management
- Releasing cash by increased performance
- Securing market share for green steel
- Maintain technology leadership
- Leverage partnerships on profitability
- Increased resilience in supply chains



SE: Financial track record, outlook 23/24 and mid-term targets FYE 24/25

Mid-term targets confirmed

Cycle & risk-adjusted averages

	5YØ 2014-2019 ¹	19/20 ¹	20/21	21/22	22/23	23/24E	FYE 24/25
Shipments ¹ [Mt]	11.2	9.2	10.0	9.5	9.4	 Current market uncertainties are reflected in customer demand, leading to a slight decrease in sales	~11.0 ⁴
Sales [€ mn]	8,756	7,269	8,932	13,156	12,375		
Adj. EBITDA [€ mn]	821	(480)	389	1,489	591		~100
Adj. EBITDA [€/t]	73	(52)	39	157	63		
Adj. EBIT [€ mn]	414	(946)	116	1,200	320	 Profitability increase to an amount for EBIT adj. in a mid three-digit € mn range (supported by APEX and S20-30)	>700
Adj. EBIT margin [in %]	4.7	(13.0)	1.3	9.1	2.6		6-7
BCF [€ mn]	376	(1,574)	(681)	(55)	370	 Continuing high investments and lower NWC releases compared to prior year	>300
Employees ²	27,770	27,400	26,300	26,300	26,820 ³		

1. incl. Heavy Plate, excluded as of 20/21 | 2. Without leased labor | 3. Driven by switch from contracting of former leased labor and increase due to recruitment for Green Transformation, Strategy 20-30 (e.g. annealing and isolating line and double reversing stand). Restructuring program with countervailing effects on headcount | 4. In FY24/25, 10.5Mt can be achieved due to ongoing implementation of investments. 11.0 Mt Shipments can be achieved after completion of investments and availability of full capacity



Proof Points – Major achievements up to FY22/23

Proof Points



Strategy 20-30

Targets

Performance

Results achieved so far

- Electrical Steel turnaround achieved
- Headcount reduction with good progress, ~ 2,550 achieved so far
- €340 mn measure potential achieved – in total €770 mn within 3 years



Portfolio

- ~ €800 mn Capex invest initiated
- Walking beam furnace, hot dip galvanizing line & coating line completed
- Buildup of new annealing and isolating line and double reversing stand started



Transformation

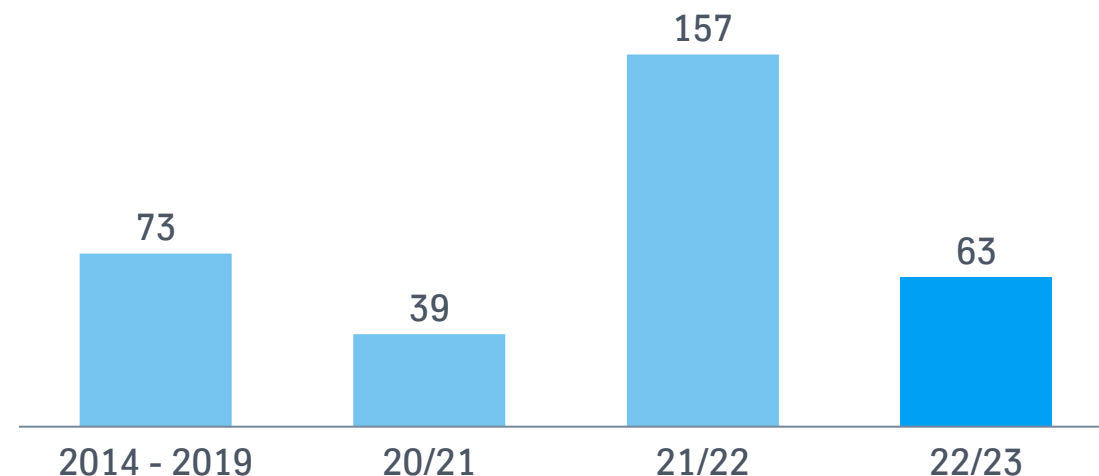
- Funding volume of around €2 bn for DR-plant (2.5 Mt) confirmed
- Green products: First bluemint® volumes successfully marketed



EBITDA improvement

Target: ~100 €/t over the cycle

Adj. EBITDA €/t in 22/23 close to average level of 2014-2019, years with extraordinarily strong demand in the automotive industry and significantly higher shipping volumes:



Steel Europe – Investment Highlights

1

#1 German and #2 EU producer of premium steel products

2

Strong strategic position in the center of Europe

3

Green Transformation – strong positioning in green steel market

4

Turnaround program in execution

5

Core portfolio benefitting from global electrification & decarbonization mega trends



1 | #1 German & #2 EU producer of premium steel products – Strong positions in core segments

Excellent position in premium automotive/industrial segments in China and India

Strong position in Europe and internationally



No. 2
Flat steel producer

> 1,200
customers

> 25 years
average customer
relationship



No. 1
Steel producer



No. 2
Chinese automotive HDG²



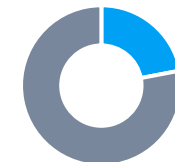
Exceptional position
Only Indian producer of high-quality
grain oriented electrical steel grades

Strong positioning within diverse customer segments³



Automotive

Premium automotive flat
steel for exposed &
lightweight components



No. 2 in EU



Energy

NGO¹ for generators &
engines



NGO No. 2 in EU

GO¹ for transformers



GO No. 1 in EU



Packaging

Tinplate for food,
beverage and aerosols



No. 1 in EU



Other industries

Amongst others: trailer,
cold rolling



No. 1 in EU
trailer⁴



No. 1 in EU
cold rolling

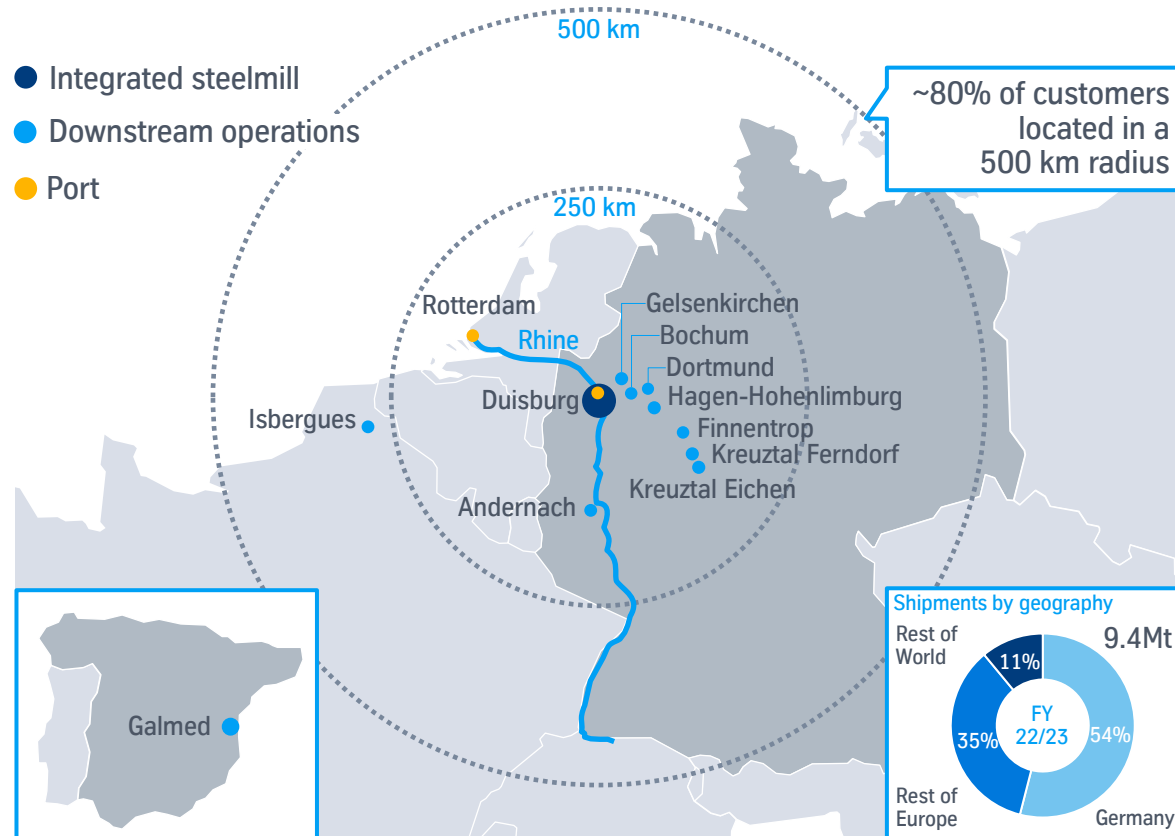
1. NGO: Non-grain oriented electrical steel; GO: Grain oriented electrical steel | 2. HDG: Hot dip galvanized; Chongqing and Guangzhou sites are held by Tagal JV | 3. IHS, Eurostat, Eurofer, tkSE analysis, graphics illustrative | 4. Trailer - Cooler & Dry-Freighter



2 Largest integrated European steel mill strategically located in the centre of Europe

Advantages in efficient logistics

Integrated steelworks and downstream facilities in close proximity to demand centres



Efficient supply chain implying ease of transport, rapid response and just-in-time deliveries as per customer requirements

- Easy access to deep-water Rotterdam port through the river Rhine; also owns 2nd largest bulk terminal in Europe (in Rotterdam)
- Rotterdam handles raw materials as well as finished goods shipments to rest of the world/UK/Spain
- Owns the largest Rhine barge fleet as well as specialised ships for high/low water conditions
- Owns 2 ports in Duisburg on the Rhine enabling transport to European customers through barge as well as global customers through ocean-faring ships
- Access to highly efficient German/European rail freight and road network



3 | Green Transformation – tkSE with significant contribution to CO₂ reduction targets

We will play a pivotal role as facilitator of Europe's green industrial future

CO₂ impact of the steel industry in Germany, all approximate

65% CO₂ reduction target 2030 in Germany¹

9% tkSE's share of CO₂ emissions in NRW

2.5% tkSE's contribution to Germany CO₂ reduction target²

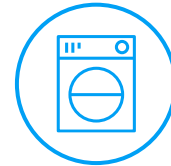
Decarbonizing tkSE's operations results in significant progress to achieve Germany's decarbonization target

Share of CO₂ material emissions³ of flat steel, all approximate



Automotive
(example electric car⁴)

21%



Household
(example washing machine⁵)

50%



Construction
(example warehouse⁶)

23%

Europe's industry is not able to achieve its decarbonization targets without the decarbonization of flat steel

1. Greenhouse Gas reduction; Base year 1990 | 2. Base year 2020 until 2030 | 3. Scope 3 emissions | 4. Battery electric car in the c-segment | 5. Washing machine with <15kg capacity, 225kg | 6. 5,500 sqm warehouse
Source: Company information



3 | Green Transformation – Significant progress in planning and construction of first DR-plant

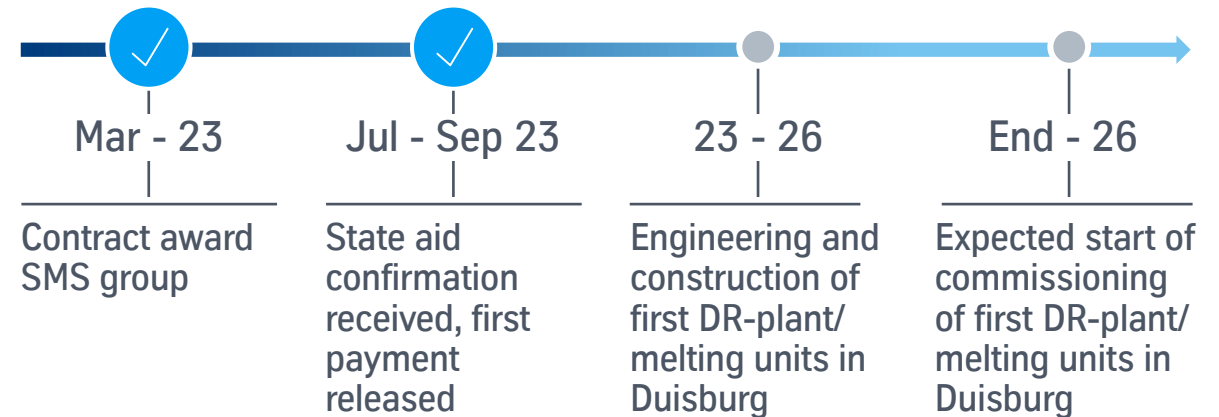
tkSE reaffirms its leading role in decarbonization of the steel industry

Decision to invest in first DR-plant with two melting units



- Largest DR-plant for green steel in Germany will **avoid the emission of >3 Mt of CO₂ p.a.**
- DR-SAF route with significant benefits, e.g., **downstream activities remain unaffected** - securing production of **highest premium steel grades**

Construction and ramp-up roadmap



- **Project progress according to planned timeline**
- **Financing of project is secured by government funding and thyssenkrupp's own contribution**



3 | Green Transformation – State aid confirmation for DR-plant received

State aid through the "Initial Grant" and "Conditional Payment" funding instruments



July 20th, 2023: Official handover of the funding grant

tkH₂Steel

Supported by:



Federal Ministry
for Economic Affairs
and Climate Action

on the basis of a decision
by the German Bundestag

Funded by:

Ministry of Economic Affairs,
Industry, Climate Action and Energy
of the State of North Rhine-Westphalia



Overview of funding conditions

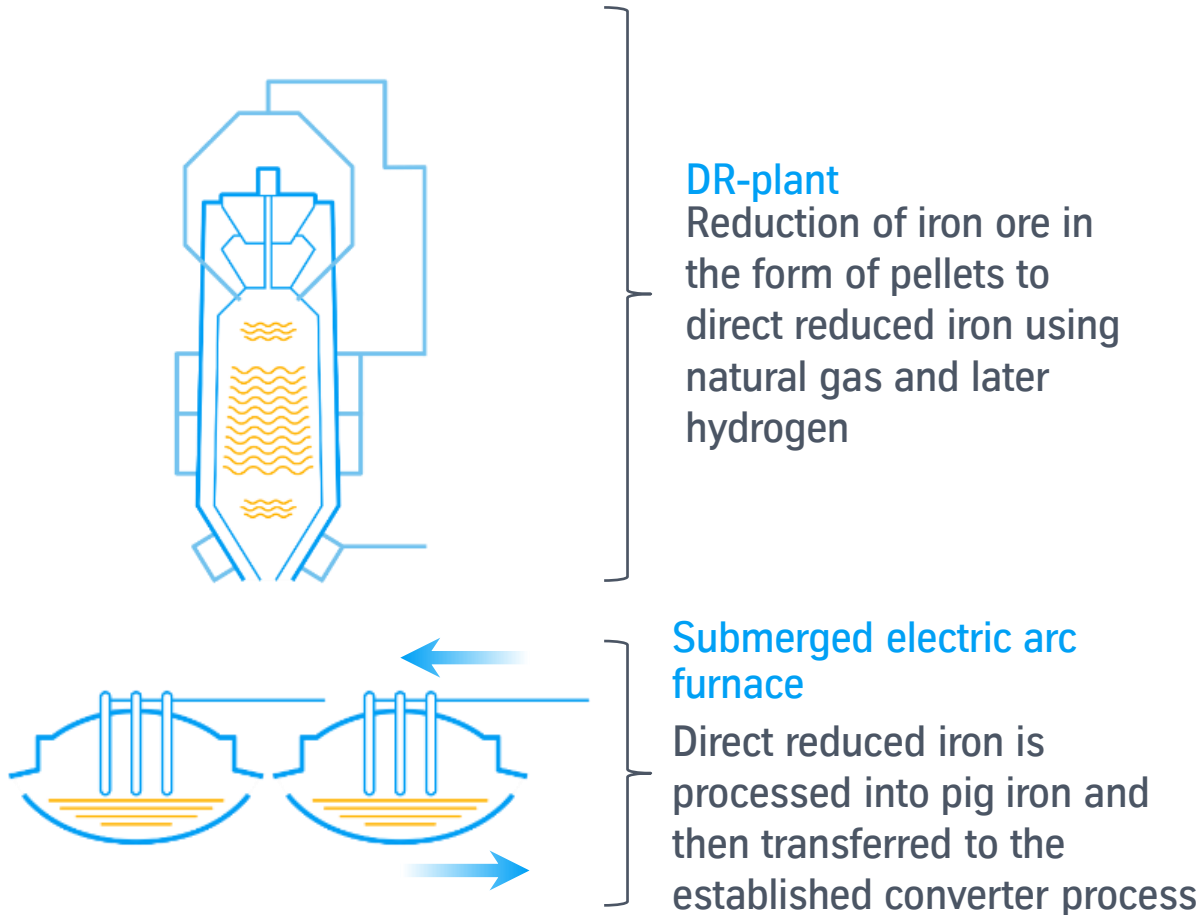
- The project will be a **crucial driver of the hydrogen industry** and serve as an **anchor point for the development of the H₂ infrastructure within Europe**
- The State Aid approval of the EU Commission allows the funding of the **construction and installation of the first DR-plant** and two melting units in Duisburg
- Requirement to produce **2.5 Mt DRI** and **2.3 Mt hot metal**
- **Strong focus on using green hydrogen**
- DR-plant to run on **natural gas initially**; complete **transition to H₂ for reduction until 2029**



3 | Green Transformation – DR-SAF approach for first DR-plant

Technology set-up leads to significant advantages

Technology approach



Benefit of our technology approach



Significant **CO₂ savings** in hot metal production by using **hydrogen**



Enables production of all **premium grades** in the current customer portfolio



Higher energy efficiency through use of “Hot-Link”



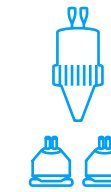
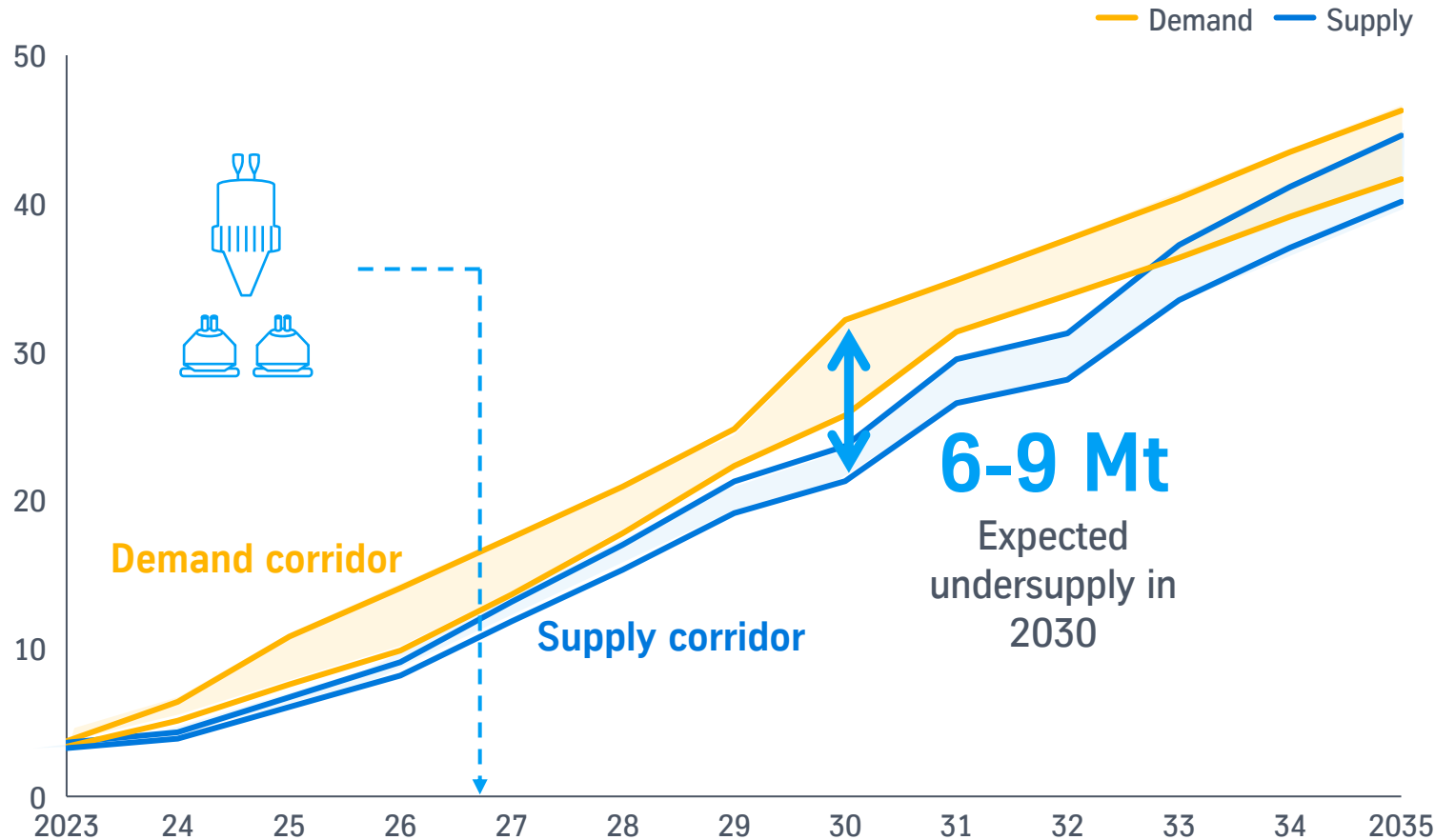
Continued **use of existing steel plant processes and downstream production facilities** – no new homologation for green steel products required



3 | Green Transformation – Strong positioning of tkSE in future green steel market

Ensuring the long-term industrial value creation in the “Ruhrgebiet”

Flat steel: EU estimated demand vs. supply for green steel, Mt



Demand for green steel is expected to **grow**, with demand expected to **exceed supply significantly** from 2030 onwards



We will play a **pivotal role** in the EU green steel market, securing the long-term industrial value creation in the “Ruhrgebiet”



3 | Green Transformation – Comprehensive master plan

Roadmap to reduce CO₂ by >30% until 2030 and become a climate neutral steel location by 2045



2019
Trialling H₂ use
in the blast furnace

since 2021
bluemint® Steel

from 2026
First DR plant with melting units (SAF)
Removal of the first coal-based blast furnace

up to 2029
Hydrogen ramp-up
of the first DR plant to 100 %

up to 2030
Removal of the second
coal-based blast furnace
replacement by
DR-based
technology

before 2045
Complete implementation of the transformation
Carbon-neutral steel production without coal-based
blast furnaces incl. decarbonization of
the downstream systems

Available quantities of bluemint® Steel per year

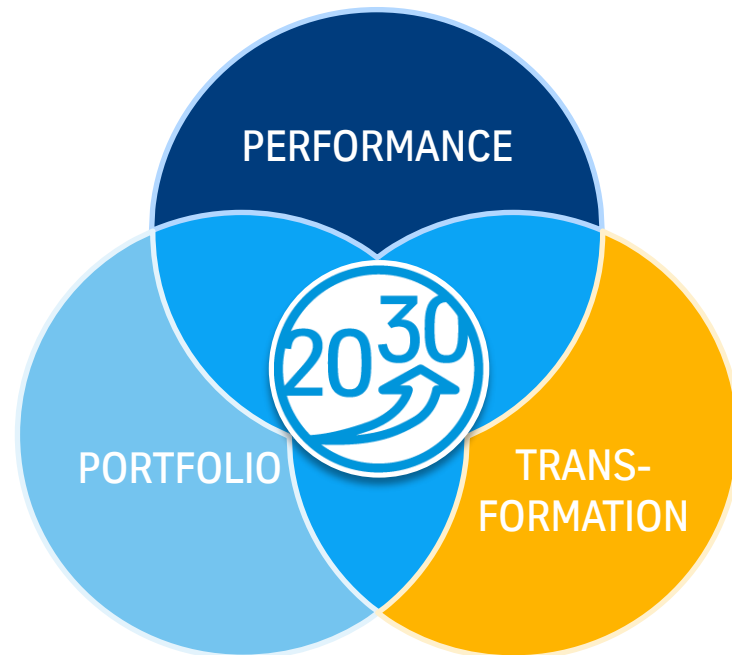
2022-2025 ~ 50-500 kt/a 2026 onward ~ 3 mt/a 2030 onward ~ 5 mt/a 2045 onward ~ 11 mt/a

Avoidance of residual CO₂ emissions,
e.g. through Carbon2Chem® (CCU)



Turnaround program in execution – Strategy 20-30 program underway

€770 mn measure effect until 22/23 – expected long-term EBIT improvement of ~ €1,000 mn



22/23: €340 mn – in total €770 mn within 3 years

Long-term (E): €1,000 mn

PERFORMANCE

*Fix & close of businesses,
cost reduction*

- Heavy Plate business closed
- GO Electrical Steel business fixed
- Headcount reduction in execution
- Operational Excellence Programme

PORTFOLIO

*Shift towards premium
and focus segments
backed by investments
into production network*

- Volume shift towards E-Mobility, Multi Phase and GO Top Grades
- ~ €800 mn Capex invest enabling production network to meet and deliver increased customer quality demands and delivering improved productivity

TRANSFORMATION

*Sustainable improvements
for competitive positioning*

- Green Transformation
- People & Culture
- Digital Transformation

Turnaround program as key driver achieving pre-Covid-19 profitability level short-term

4 | Turnaround program in execution – ~ €800 mn Capex initiated

Investing ~ €800 mn in shift to premium and greater efficiency

Strategy 20-30

Focus premium automotive

Portfolio shift to E-Mobility and Multi Phase steel



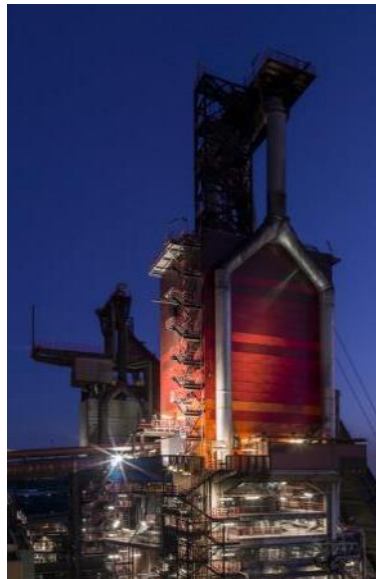
Defend industry, packaging

Defend market position in Packaging and Industry



High performing production

Invest in product quality, process stability and Duisburg site



Source: Company Information

Capex overview

Upstream

Steel

Duisburg

→ Productivity & quality

Hot Rolling

Duisburg

→ Quality & flexibility

Cold Rolling

Bochum

→ Capacity thin & high strength, product quality, E-Mobility

Coating

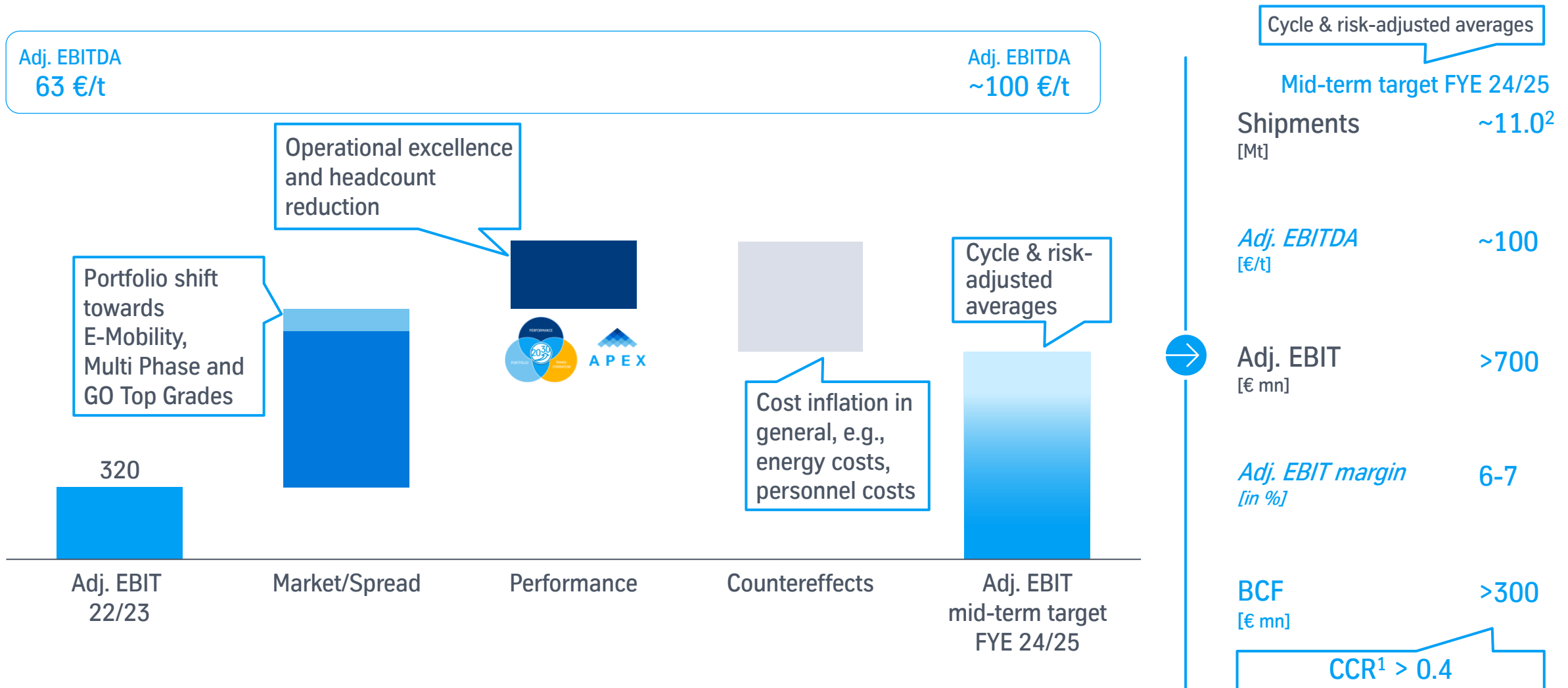
Duisburg & Dortmund

→ High strength
→ Capacity & quality coating



4 | Turnaround program in execution – expected profitability improvements

Profitability improvement by Strategy 20-30 and APEX; adjusted EBIT [€ mn]



1. Excl. green transformation; ratio BCF/EBIT as reported 2. In FY24/25, 10.5Mt can be achieved due to ongoing implementation of investments. 11.0 Mt Shipments can be achieved after completion of investments and availability of full capacity



Steel is durable, light & recyclable

tkSE core portfolio perfectly positioned to benefit from global electrification and decarbonization mega trends

Global megatrends

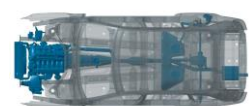
Global megatrends		Long-term tonnage impact	Long-term impact (tkSE)
Population growth/ changing demographics		✓	✓
Urbanisation/ prosperity		✓	✓
Recycling/ sustainability		Key focus of turnaround plan ✓	✓✓
Energy/ allied infrastructure		✓✓	✓✓✓
Electrification		✓✓	✓✓✓
Light weighting		✗	✓✓

Electrification and decarbonization in particular benefitting tkSE

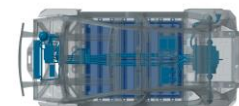
Steel infinitely recyclable

Recyclable without losses in EAF and Blast Furnace – magnetic properties simplify separation and allows high recycling quotas

Increasing flat material usage per vehicle in EVs¹



ICE²
~780 kg



BEV³
~980 kg

Increased demand for high-strength steel

High-strength steel is used for lightweight construction within automotive industry to reduce energy consumption and to increase crash resistance



GO⁴ Electrical Steel for
renewables and grid
~ 3x increase in global
demand (2021-50)⁶

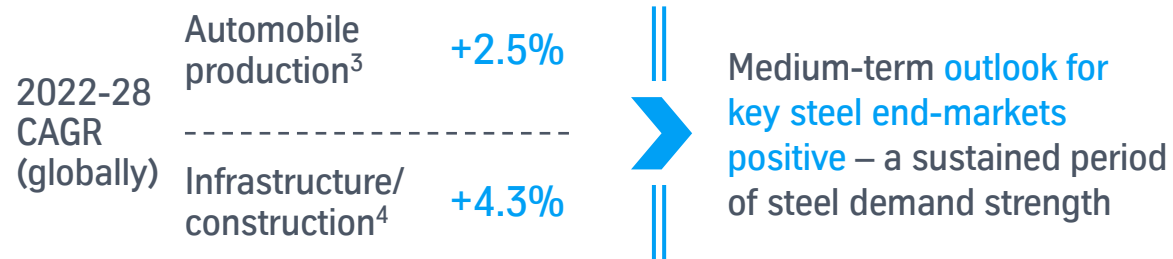
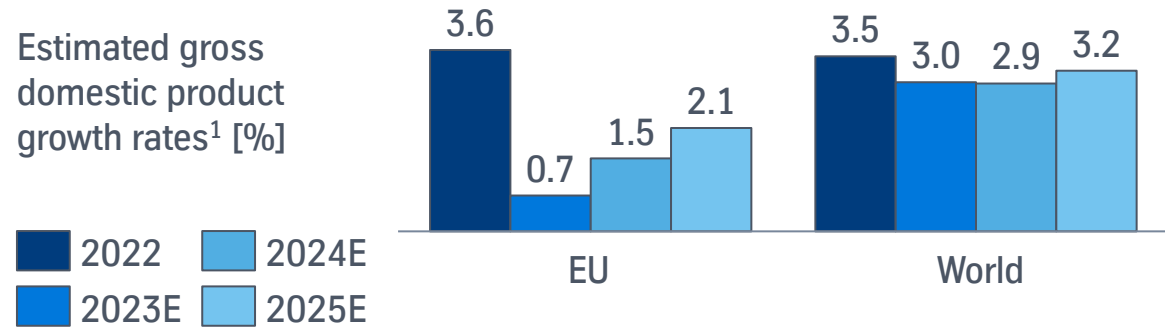


NGO⁵ Electrical Steel
in engines
>6x increase in usage
in EU (2020-30)

5 | Mid-term outlook slowly recovering – restrained short-term growth rates

Regulatory and governmental activities influencing demand

Restrained short-term outlook but moderate mid-term growth...



...regulatory/govt.² policies influencing demand and cyclicity



- CBAM⁵ will enter into application in its transitional phase on 1 October 2023
- Anti-dumping duties in place against China and other key export nations into EU
- Further import sanctions against Russia active









- Decarbonization and emission controls capping steel production; “peak steel” in 2030
- In the short term no major production cuts ordered in view of the weak economy



- Global Arrangement on Sustainable Steel and Aluminum (GSSA) to address the common global challenge of excess capacity⁶
- Impacts from US Inflation Reduction Act 2022
- Lower production costs resulting in competitive advantage for US companies reducing attractiveness of imported products



Solid track record in ESG governance and steering – Ambitious future goals are set

ENVIRONMENTAL	CO ₂ emissions ¹		Amount of CO ₂ reduced steel per year		 <ul style="list-style-type: none">• Innovative path to carbon-neutral steelmaking by 2045 – goals approved by SBTi²• Launch of first CO₂ reduced product in October 2021
 A clear route to decarbonize steelmaking	-30% Target 2030	-100% Target 2045	5 Mt Target 2030	~11.0 Mt Target latest 2045	
SOCIAL	Accident rate ³		Female share in senior mgmt. ⁴		 <ul style="list-style-type: none">• Highest standards applied to ensure safety of workforce• Commitment to create inclusive & diverse workspace
 A safe and inclusive workspace for our employees	4.9 Fatalities 0 22/23	2.2 0 Target 22/23	10.9% 22/23	9.6% Target 24/25	
GOVERNANCE	Transparent reporting standards ⁶		ESG criteria in variable long term compensation ⁷		 <ul style="list-style-type: none">• Compliant with all DCGK⁹ recommendations• Sustainable corporate management ensured through link of ESG criteria to executive compensation
 A compliant and ethical company	<ul style="list-style-type: none">• Sustainability reporting integr. in annual report• UN Global Compact• Task Force on Climate-related fin. disclosures• Global Reporting Initiative		~30% <div>e.g. OSH⁸, female share in senior mgmt., CO₂ reduced steel volume</div>		

1. Base year 2018 | 2. Science Based Targets Initiative; tk group level | 3. 1 to n lost days per 1 million hours worked | 4. Share of females in A-L3 positions | 5. 31.12.2022 , Germany | 6. tk group level
7. Part of variable compensation, see more details in compensation report | 8. Occupational safety & health | 9. Deutscher Corporate Governance Kodex; tk group level



Steel Europe: Committed to realizing sustainable shareholder value

Execute and further deliver
Strategy 20-30

€770 mn measure volume achieved until 22/23

Realize break through in
Green Transformation

Funding volume of around €2 bn for DR-plant (2.5 Mt) confirmed

Deliver **EBITDA margins** and **cash flow targets**

EBITDA/t of 63 €/t achieved despite unfavorable market conditions

Leverage and enhance **technological leadership**

~ €800 mn Capex invest program implemented

Our sustainably produced steel is the foundation of industrial value creation



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