

## **ENABLING GREEN MOBILITY**

# INVESTORS AND ANALYSTS MEETING AT INNOTRANS

BERLIN, SEPTEMBER 23, 2022



### **DISCLAIMER** NOTE

This presentation contains statements concerning the future business performance of the Vossloh Group that are based on assumptions and estimates from the Company management. If the assumptions that the projections are based on fail to occur, the actual results of the projected statements may differ substantially. Uncertainties include changes in the political, commercial and economic climate, the actions of competitors, natural catastrophes, epidemics, legislative reforms, the effects of future case law and fluctuations in exchange rates and interest rates. Vossloh and its Group companies, consultants and representatives assume no responsibility for possible losses associated with the use of this presentation or its contents. Vossloh assumes no obligation to update the forecast statements in this presentation.

This presentation contains statements concerning the future business performance of the Vossloh Group that are based on assumptions and estimates from the Company management.



# RAIL TRACKS WITH MAXIMUM AVAILABILITY FOR A BETTER WORLD





## **OLIVER SCHUSTER (CEO)**

ENABLING GREEN MOBILITY
 INNOTRANS 2022

## **GREEN MOBILITY. A BETTER WORLD.**

RENAISSANCE OF THE RAILROAD - KEY DRIVER FOR ACHIEVING THE AMBITIOUS CLIMATE TARGETS

### A MORE RAIL TRAFFIC

Megatrends such as population growth, urbanization, digitalization and climate change accelerate the importance of sustainable mobility; to achieve the climate targets, contribution to  $CO_2$  reduction of the transport sector necessary

Rail, as the most environmentally friendly means of mass transportation, plays a central role in this context; shifting passenger and freight traffic to rail is indispensable

Expansion of the rail network will not always be possible, especially in the short term; the central focus is on increasing the availability of existing rail lines

### **ENABLING GREEN MOBILITY**

Vossloh can make two contributions to increase the availability of rail track: 1. Developing and manufacturing products that are more durable, require less maintenance and at the same time are more environmentally friendly 2. More efficient maintenance of the rail network

Processing large amounts of data and AI-based evaluation in real time will disruptively change the maintenance of the rail track; transition from experience-based to condition-based and, in perspective, to predictive maintenance

Vossloh's unique selling proposition lies in its comprehensive understanding of the physics of all major track components and their systemic interaction as well as in its unique product and service portfolio

vessloh

## **GREEN MOBILITY. A BETTER WORLD.**

RENAISSANCE OF THE RAILROAD - KEY DRIVER FOR ACHIEVING THE AMBITIOUS CLIMATE TARGETS

### **Key Advantages of Rail-Based Mobility**

Lowest CO <sub>2</sub> emissions	<ul> <li>Transport second largest sector for CO<sub>2</sub> emissions (25 % of total emissions)</li> <li>CO<sub>2</sub> emissions in transport increased noticeably from 1990 - 2017</li> </ul>	<ul> <li>&gt; Of this, only 0.5% is accounted for by the rail mode of transport</li> <li>&gt; Emissions by rail down 66% against the trend</li> </ul>	
Largely independent of energy imports	<ul> <li>Intersection of the entire transport sector has increased significantly in recent decades</li> <li>Track is the most energy-independent mode of transport, especially with a high share of renewable energy</li> </ul>	<ul> <li>Share of rail in energy consumption in the transport sector at 1.7% (transport share 11% freight and 7% passenger transport)</li> <li>Share of renewable energies in Germany at &gt;62%</li> </ul>	
Lowest external costs	External costs include accident, congestion and environmental costs (climate change, air pollution, noise pollution, damage to habitats)	<ul> <li>&gt; Total external costs in the EU at around €1 trillion</li> <li>- 44% environmental, 29% accident and 27% congestion costs</li> <li>- 820 bn € road and only 18 bn € rail transport</li> </ul>	
Improved air quality	Railway hardly affects air quality, especially compared to the other modes of transport	Share of total emissions: NO <sub>x</sub> (nitrogen oxides: road: 28%, rail: <0.1%; CO (carbon monoxide): Road 18%, Rail <1%; PM <sub>2.5</sub> (particulate matter): Road 10%, Rail: <1%	

Source: FOSTERING THE RAILWAY SECTOR THROUGH THE EUROPEAN GREEN DEAL; Data refer to the EU region

vessloh

## **GREEN MOBILITY. A BETTER WORLD.**

RENAISSANCE OF THE RAILROAD – CHANGES AND NEW POTENTIALS

### A RAILWAY INDUSTRY FACES MAJOR CHANGES

Customers increasingly focus on costs and sustainability criteria over the entire life cycle

Vossloh already takes sustainability criteria into account in the development of new products, e.g. environmentally friendly engineered polymer sleeper EPS and new M-clamp. Vossloh is also driving sustainability in other ways in its internal performance. 30% CO<sub>2</sub> savings in the lead factory for rail fastening systems in Werdohl, injection of CO<sub>2</sub> in the production of sleepers or photovoltaics on the buildings are just a few examples of current projects

Increased life cycle thinking, sustainability and the resulting growing pressure to innovate will lead to market consolidation in a highly fragmented rail infrastructure market and offer potential for differentiation

### **NEW BUSINESS MODELS**

Infrastructure managers will tend to focus on their core business in the long term and outsource track maintenance and possibly even operation of the tracks

Future-oriented business models such as 'Availability as a Service AaaS' will become increasingly popular in the coming years. In this case, network operators acquire the availability of certain line sections, for example, and Vossloh assumes responsibility for asset management and maintenance

The systemic understanding of rail as a mode of transport, combined with digitalbased technologies and the comprehensive service portfolio, puts Vossloh in an excellent position to drive new business models and differentiate itself even further from the competition



## **ENABLING GREEN MOBILITY**

FOCUS TOPICS FOR THE FUTURE

Advanced infrastructure: More robust and durable

**Predict the future** 

Future turnout environment:

Smart maintenance: New developments





## **ADVANCED INFRASTRUCTURE**

MORE ROBUST, DURABLE AND SUSTAINABLE (I/II)

### Engineered polymer sleeper (EPS)

- Ecological composite tie as a sustainable alternative to wooden ties that conserves resources
- Increasing replacement of wooden ties (in Europe) due to a ban on treatment with creosote
- / High customer interest in EPS, in test operation in numerous countries
- / Homologation for the track obtained from DB
- Setting up a mass production at the existing plant in Poland
- Advantageous price-performance ratio compared to other plastic ties due to high sand content

**Going into mass production** Production capacity of 100k units per year, mass production to begin at the end of 2023 **Environmentally** 

35% secondary raw

at end of lifetime

Consists of 65% sand and

materials, 100% recyclable

friendly



Low thermal expansion and high track stability

**Lower life cycle costs** Lifetime about twice as long as wooden ties

Ve)ssio

## ADVANCED INFRASTRUCTURE

MORE ROBUST, DURABLE AND SUSTAINABLE (II/II)

#### New environmentally friendlier M-generation tension clamps

Innovative geometry with outwardly bent spring arms leads to higher natural frequency and thus strengthens the robustness and extends the service life

Significantly improved CO<sub>2</sub> footprint thanks to new micro-steel alloy, reduced material usage and compact product design
 Lower life cycle costs

Complexity reduction of offer portfolio



### **FUTURE TURNOUT ENVIRONMENT** SMART TURNOUT MONITORING

The turnout is the most technically complex and maintenance-intensive element of the entire track **/** To maximize track availability, it is of particular importance



11 |

enabling green mobility – InnoTrans 2022

# **Smart turnout monitoring** Network-wide data-based monitoring of turnouts with selected sensors Processing and analysis of Big Data in dedicated cloud environment Derive meaningful insights using AI-based algorithms Vussio

vession

### **FUTURE TURNOUT ENVIRONMENT**

DIGITAL TRACK AND TURNOUT INSPECTION

habling green mobility – InnoTrans 2022

#### **V-Drone**

Innovative, digital-based inspection of rail infrastructure, especially for the rehabilitation of track sections
 The use of drones, data analysis by means of algorithms and 3D modeling in BIM makes the modernization of the track network more efficient, safer and more transparent while at the same time increasing track availability

## FUTURE TURNOUT ENVIRONMENT

SMART TURNOUT MONITORING

#### **Smarter point machines**

Our innovative solution PM-DiagBox makes regular analog point machines smart.



 Measurement of physical parameters of the point machine (electricity consumption, hydraulic pressure, vibration, temperature, humidity, etc.)
 Solution is connected to a dedicated cloud-based platform

### Smart monitoring of non-automated

#### areas

New and intelligent Paulvé detectors provide enhanced safety on nonautomated routes, such as in shunting yards and industrial tracks.

- Wireless detectors deliver live information from the field, including track occupancy and switch positions, directly to computers or tablets
- / Universal mechanical fastening without the need to drill through the rail and run cables





### SMART MAINTENANCE

RAIL MAINTENANCE OF THE FUTURE

#### Smart maintenance "on the fly"

### Condition recording with subsequent rail processing and re-measurement in one and the same shift without track closures



art sensor



### **SMART MAINTENANCE** RAIL MAINTENANCE OF THE FUTURE

Selection of the most efficient rail

machining process

#### Smart Maintenance "on the fly"

Condition recording with subsequent rail processing and re-measurement in one and the same shift without track closures



Direct upload for data analysis and algorithm-based data processing in real time

Easy-to-understand visualization in the mapl-e

HSG-city smart with state-of-theart sensor technology for rail status detection



## **SMART MAINTENANCE**

RAIL MAINTENANCE OF THE FUTURE



Newly developed VTM-performance highefficiency milling train from Vossloh is the world's most powerful, safest and most ecofriendly mobile rail milling machine

Compared to previous milling machines, the VTM-performance removes the same amount of material at a higher speed or removes more material at the same speed (max. 3 mm in a single operation)

Ideal for use on the European high-speed network



## **ENABLING GREEN MOBILITY**

vussion

HSG High Speed Grinding

FURTHER EXAMPLES FROM VOSSLOH'S DIGITAL PORTFOLIO

11



Smart heating Purpose	V-Tight Purpose	MR.Pro Purpose	V-Laser Purpose	SoniQ Rail Explorer Purpose
Switches and points remain ice- and frost-free even at lowest temperatures	Measurement of the displacement of sleepers and the bolt load	Asset management tool to facilitate track inspection and maintenance	Measurement of the displacement of switch drives before and after train passage	Ultrasonic inspection system to localize operations-related irregularities in the rail's interior
<ul> <li>Customer value</li> <li>Significantly lower energy consumption</li> <li>Heat supply possible through all renewable energy sources</li> <li>Self-diagnosis and remote monitoring</li> </ul>	<ul> <li>Customer value</li> <li>Ensuring that bolts remain properly tightened</li> <li>Connected to a cloud platform</li> </ul>	<b>Customer value</b> An application to track all inspections over time and plan asset maintenance	<b>Customer value</b> Determining when ballast needs to be compacted to avoid breakage of point machines	<ul> <li>Customer value</li> <li>More security in data analysis and interpretation</li> <li>Direct integration of test results into digitized process chains</li> </ul>

### vession



## **DR. THOMAS TRISKA (CFO)**

FINANCIAL DEVELOPMENT IN THE FIRST HALF OF 2022

ORDERS RECEIVED AND ORDER BACKLOG REMAIN AT A VERY HIGH LEVEL



### ORDER VOLUME REMAINS HIGH

Orders received in Q2/2022 again at a very high level of €314.8 million; increase of 57.9 percent compared to Q2/2021

Order backlog reaches record level of €827.9 million, up 41.6% compared with June 30, 2021

Orders received in the quarter particularly strong compared with the previous year:

- Egypt: Contract for rail fastening systems for construction of new high-speed line (volume exceeding €40 million) won in May 2022
- USA: Significant increase in new orders for concrete ties from Class I operators
- Europe: all regions achieve higher orders received, particularly strong growth in Western and Eastern Europe

### OPERATIONAL BUSINESS PERFORMANCE

Sales revenues in Q2/2022 of €254.2 million virtually unchanged from the high figure of €255.5 million in the previous year's quarter

EBIT in Q2/2022 of €20.8 million despite the continued pressure from higher material and energy prices; exceptionally high previous-year figure of €30.3 million boosted by significantly lower procurement costs and a project mix with higher margins at VFS; EBIT margin at 8.2% (previous year: 11.9%)

Higher material and energy prices led to adjustment of sales revenues and earnings forecast in May 2022; full-year EBIT significantly impacted compared with original forecasts; nevertheless, significant increase in earnings contributions already expected in H2/2022 compared with H2/2021



### SITUATION ON THE PROCUREMENT MARKETS

#### Trend in material prices:

Material prices continued to rise in the second quarter; trend for the rest of the year difficult to forecast; indications of slight easing in regard to first components on the market; measures to limit additional costs well underway, agreements to pass on cost increases reached with customers in many cases; essential materials still available also due to early action taken to stock up

#### Trend in energy prices:

Energy prices, especially natural gas prices, are several times higher compared with previous year's levels in some cases; natural gas prices have been almost fully hedged until the end of the year; production alternatives in the event of a natural gas shortage are currently under review



SALES REVENUES SLIGHTLY ABOVE PREVIOUS YEAR'S LEVEL; PROFITABILITY IMPACTED BY HIGHER ENERGY AND MATERIAL PRICES

KEY GROUP INDICA	1-6/2021	1-6/2022	
Sales revenues	€ mill.	462	2.6 476.4
EBITDA/EBITDA margin	€ mill./%	68.4 / 14	4.8 53.8 / 11.3
EBIT/EBIT margin	€ mill./%	42.4 / 9	9.2 28.9 / 6.1
Net income	€ mill.	20	0.6 17.3
Earnings per share	€	0.	70 0.63
Free cash flow	€ mill.	15	5.742.0
Capital expenditure	€ mill.	19	9.9 19.9
Value added	€ mill.	11	l.1 -3.7

#### NOTES

**Sales revenues** up 3.0%; growth driven by Customized Modules and Lifecycle Solutions; Core Components significantly below the previous year's level

As expected, **EBIT** and **EBIT margin** are lower year over year, mainly due to a sharp increase in material and energy prices and a change in the project mix; Core Components EBIT contributions have fallen by roughly half; and Customized Modules and Lifecycle Solutions are slightly higher year over year

**Net income** was only  $\in$  3.3 million lower than the previous year, in particular due to significantly lower tax expense; **earnings per share** in Q2/2022 was even higher year over year ( $\in$  0.60 vs.  $\in$  0.55)

**Free cash flow** noticeably below previous year, mainly due to strong working capital build-up in H1/2022 (>€50 million)

**Capital expenditures** at previous year's level overall; Core Components invested less, while Customized Modules and Lifecycle Solutions invested more

**Value added** was lower year over year due to lower EBIT, but positive again in Q2/2022 at €4.3 million



EQUITY RATIO REMAINS AT HIGH LEVEL, DEBT INCREASED DUE TO RISE IN WORKING CAPITAL

KEY GROUP INDICA	1-6/2021 <b>6/30/2022</b>	2021 <b>12/31/2021</b>	1-6/2022 <b>6/30/2022</b>	
Equity	€ mill.	569.1	587.9	596.0
Equity ratio	%	44.6	45.6	43.4
Average working capital	€ mill.	197.9	194.7	201.6
Average working capital intensity	%	21.4	20.6	21.2
Closing working capital	€ mill.	206.3	175.6	229.2
Average capital employed	€ mill.	894.3	896.9	931.0
Closing capital employed	€ mill.	901.5	901.6	962.5
Net financial debt	€ mill.	241.3	215.6	281.2

#### NOTES

Despite dividend payments, **equity** has increased further since year-end 2021, in particular due to positive Group earnings; the **equity ratio** remains high at 43.4 percent

**Closing working capital** significantly higher year over year; also due to increased procurement prices and stockpiling of materials to minimize risk of supply bottlenecks; **average working capital intensity** nevertheless slightly lower than in H1/2021

**Closing capital employed** increased significantly compared with the reporting date of the previous year's period and since year-end 2021; in particular due to increases in fixed assets and working capital

Net financial debt including lease liabilities increased by €39.9 million compared to end of H1/2021, mainly due to negative FCF and dividend payments in H1/2022; significant decrease in net financial debt expected by end of year

### vessloh

ORDER SITUATION REACHES RECORD LEVEL, BOOK-TO-BILL AT 1.45

**ORDERS RECEIVED** (in € mill.)

**ORDER BACKLOG** (in € mill.)



#### NOTES

**Orders received** sets new record for a half-year period; Core Components division posts significant gains, primarily due to an increase in orders received in the Fastening Systems business unit in China and Egypt and in the Tie Technologies business unit in the USA and Australia. Customized Modules division is also significantly above the previous year, primarily in Poland and France. Lifecycle Solutions division was higher year over year mainly due to an increase in orders in the Netherlands

The Vossloh Group's **order backlog** was also at record levels at the end of the reporting period. The Core Components and Customized Modules divisions significantly outperformed their previous year's levels; Lifecycle Solutions was also up slightly year over year

### vession



## JAN FURNIVALL (COO)

 SUSTAINABILITY
 MARKET ENVIRONMENT AND GROWTH POTENTIAL

## **WE ACT RESPONSIBLY**

LONG-TERM CORPORATE PROFIT REQUIRES BALANCING ECONOMIC, SOCIAL AND ECOLOGICAL INTERESTS

#### Sustainability as a corporate value

- enabling green mobility forms Vossloh's guiding principle
- Sustainability is a central component of the Group strategy
- Target is a positive contribution and sustainable business model

#### Positive view of stakeholders

- Customers take sustainability criteria into account when awarding contracts
- / Outstanding ESG ratings confirm Vossloh's sustainability performance
- Employees look for a purpose and a positive contribution

#### New sustainability strategy

**Sustainability commitment** of the Executive Board renewed in 2021

Global sustainability organization established and focus topics defined

**Group-wide sustainability targets** adopted, including carbon neutrality by 2030 (Scope1/2)

#### Sustainability in facts & figures

CO<sub>2</sub> intensity 2017–2021 (t/M€ sales) reduced by 22%

- 100% of sales EU taxonomy eligible and62% of sales taxonomy aligned
- **7** + **55** Group-wide sustainability initiatives
- / Member of the UN Global Compact

### vossloh

## **MARKET FOR RAIL INFRASTRUCTURE**

UNIFE PREDICTS NOTICEABLE MARKET GROWTH



+ Actual development from 2017/19 to 2019/2021 positive despite Corona pandemic

+ Current market environment characterized by uncertainties (e.g. Russia-Ukraine war, corona pandemic, inflation)

+ Despite current uncertainties, noticeable growth (adjusted for inflation) forecast for the rail infrastructure market

vession

Source: World Rail Market Study 2022, UNIFE The European Rail Industry, Roland Berger Strategy Consultants.

(1) Average yearly volume or growth of the accessible market in the infrastructure segment in € million, CAGR 2019–2021 compared to 2017–2019

(2) Average yearly volume or growth of the accessible market in the infrastructure segment in € million, CAGR 2025–2027 compared to 2019–2021

## **RAIL INVESTMENT PROGRAMS WORLDWIDE**

#### FOR GREATER LEVELS OF RAIL TRAFFIC



Germany to 2030 / "Starke Schiene" Initiative & "Leistungs- und Finanzierungsvereinbarung III" (volume: ~€86 billion)

> "Digitale Schiene" including interlocking technology/ETCS (volume ~ €4 billion)

#### USA to 2026

S A

 "Biden Infrastructure Plan" passed with a volume over USD 1 trillion

USD 66 billion for rail modernization and a total of USD 89.9 billion for public transit e" Initiative und ereinbarung tease billion) ne" including chnology/ETCS

## Egypt

"Egypt Vision 2030:" Expansion and modernization of the rail network, including new high-speed lines (1,800 km) and extension of the Cairo metro, based on planned projects, investments of roughly **USD** 50 billion

EU Green Deal: Doubling high-speed transport by 2030 and freight transport by 2050 NextGenerationEU: An

additional **~€36 billion** to be

invested in rail infrastructure

Europe

bv 2027

Resilience Facility: **€25 billion** for route expansion and modernization

"Complementary Fund:" €1.5 billion for regional

### Turkey

Expansion of the rail network from 12,000 km to 18,000 km, including the expansion of high-speed lines from 1,200 km to 5,500 km

#### **China** to 2035

Expansion of the entire route network to 200,000 kilometers (currently 150,000 kilometers),

 of which of ~40 thousand kilometers high-speed
 (> 200 km/h) to be expanded to 70 thousand kilometers





 Infrastructure investment plan with a volume of around AU\$
 120 billion by 2030

includes the Inland Rail project with a volume of around AU\$ 14.5 billion as well as Melbourne Airport AU\$ 5.0 billion, Metronet AU\$ 3.7 billion







## **OLIVER SCHUSTER**



### **SUMMARY** LOOKING AHEAD IN THE SHORT, MEDIUM AND LONG TERM

#### Rail market

- Importance of sustainable mobility is increasing in connection with the achievement of climate goals, energy independence or the reduction of external costs
- More rail traffic requires an efficient and available rail network
- UNIFE study predicts noticeable market growth, significant increase in growth expectation for the infrastructure market compared to previous study



#### enabling green mobility

- With our products and services, we are making a significant contribution to the future of sustainable mobility
- Vossloh is driving maintenance into a new era thanks to digital technologies
- Systemic understanding of rail infrastructure is the key to a successful future



#### Looking ahead

- Outlook 2022: Sales revenues between €950 million and €1.05 billion, EBIT margin between 6% and 8%
- Medium-term sales growth of 4–5% and double-digit EBIT margins targeted in all divisions, long-term double-digit EBIT margin in the Group

### vessloh

## FINANCIAL CALENDAR AND CONTACT INFORMATION

HOW YOU CAN REACH US

#### Financial calendar 2022

/ October 27, 2022

Quarterly statement as of September 30, 2022

March 2023 2022 Annual Report



**Contact information for investors:** 

Dr. Daniel Gavranovic Email: investor.relations@vossloh.com Phone: +49 (0) 23 92 / 52-609 Fax: +49 (0) 23 92 / 52-219

vession

#### **Contact information for the media:**

Andreas Friedemann (Kirchhoff Consult AG) Email: presse@vossloh.com Phone: +49 (0) 23 92 / 52-608 Fax: +49 (0) 23 92 / 52-219



29 | enabling green mobility – InnoTrans 2022

# RAIL TRACKS WITH MAXIMUM AVAILABILITY FOR A BETTER WORLD





## THANK YOU FOR YOUR TIME.

