



# STADLER RAIL OCTAVIAN SEMINAR 2021

Raphael Widmer, Group CFO, 14 January 2021

**STADLER**

# REPRESENTING STADLER TODAY



**Raphael Widmer**  
Group CFO

- 
- **Company snapshot and rail market outlook**
  - **Highlights orders and deliveries 2020**
  - **Update on Stadler Signalling**
  - **Innovation in Green Technology**
  - **Discussion**
  - **Appendix**



**A LEADING GLOBAL PURE-PLAY IN ROLLING STOCK AND RELATED SYSTEMS**

**STADLER**

# WE ARE AN INDUSTRY LEADER



**>8,000**

Stadler trains and locomotives running in 41 countries every day



**444**

Vehicles delivered in 2019



**7**

New fleets introduced into service in 2019



**>170**

million kilometres covered every year by vehicles serviced by Stadler



**12**

Core sites across high- and low-cost countries



**>12,000**

employees, including engineering team of over 1,700 employees<sup>(1)</sup>



**~12%**

net sales CAGR over the last decade<sup>(2)</sup>



**16.8**





















































billion CHF backlog as at 30 June 2020

Notes:

(1) Average FTEs for H1 2020

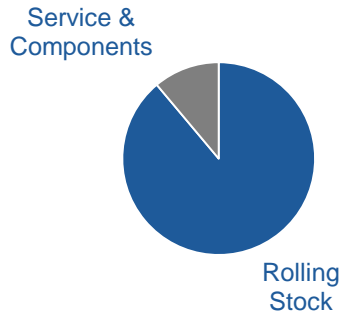
(2) 2009-2019.

# ROLLING STOCK MARKET SEGMENTS

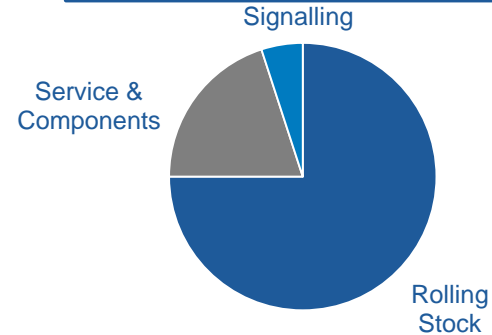
SEGMENTS			MODULAR CONCEPTS Adhesion		TAILOR-MADE CONCEPTS Adhesion and rack-and-pinion	
<b>URBAN TRANSPORT</b>						
LRV	Tram	≤80 km/h				
	Tram-Train	≤100 km/h				
Metro	Metro	≤100 km/h				
<b>MAIN-LINE</b>						
XMU	Regional/Suburban	≤160 km/h				
DMU/BMU	Regional/Suburban	≤160 km/h				
EMU	Regional/Suburban	≤160 km/h				
	Intercity	≤200 km/h				
	High Speed	≤250 km/h				
	Very High Speed	≥250 km/h				
Loco-motives	Main-line locomotives diesel / bi-modal / electric					
	Shunting locomotives / Tailor-made locomotives					
Coaches / Cars	Coaches and sleepers					
	Freight cars					

# CLEAR STRATEGY FOR BRINGING STADLER TO THE NEXT LEVEL

Stadler sales 2018



Stadler strategy 2023



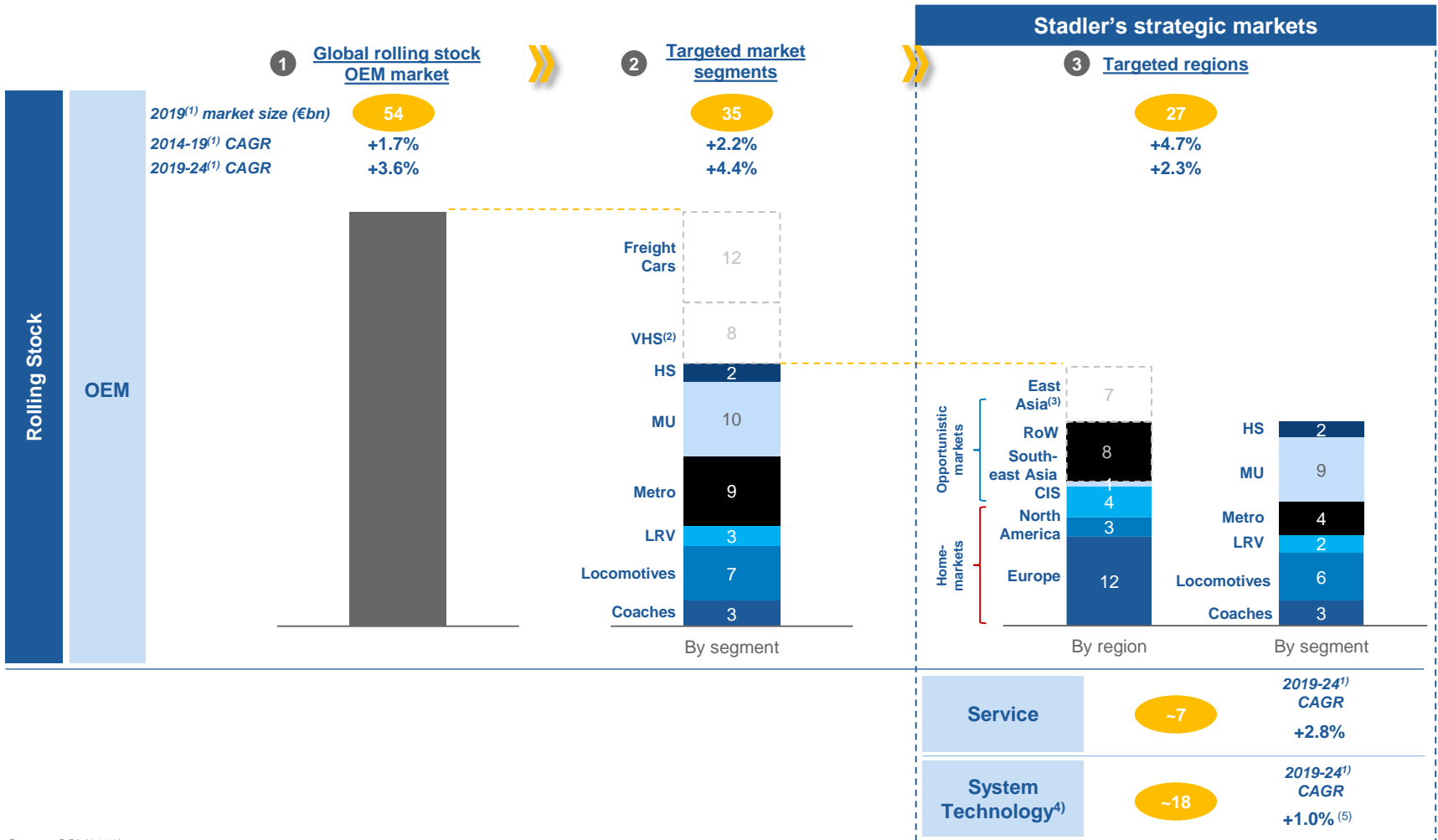
## Strategic focus

		Rolling Stock	Service & Components	Signalling
Regions	Europe	<ul style="list-style-type: none"> <li>Market segments unchanged</li> <li>Deliver on backlog and establish next sales level</li> <li>Growth through new product pipeline</li> </ul>	<ul style="list-style-type: none"> <li>Growing accessible market and installed base</li> <li>New service solutions</li> <li>Capture opportunities from signalling</li> <li>Potential selective acquisitions</li> </ul>	<ul style="list-style-type: none"> <li>Establish own signalling solutions</li> <li>AngelStar JV with Mermec</li> <li>Potential opportunistic acquisitions</li> </ul>
	North America			
	CIS			
	New markets			

Note: Sizes of pie charts are illustrative only.

# MID-TERM MARKET OUTLOOK

## TOTAL OEM AND TARGETED MARKETS



Source: SCI (2020).

Market volumes based on € value of equipment and services delivered.

(1) 2019 market size defined as average of 2018-2020, 2014 defined as 2013-2015 average and 2024 defined as 2023-2025 average.

(2) Very High Speed trains (VHS) defined as trains with top speed above 251km/h.

(3) East Asia defined as China + South Korea + Japan. Rest of the World (RoW) includes Asia (excluding East Asia), South and Central America, Middle East and Africa.

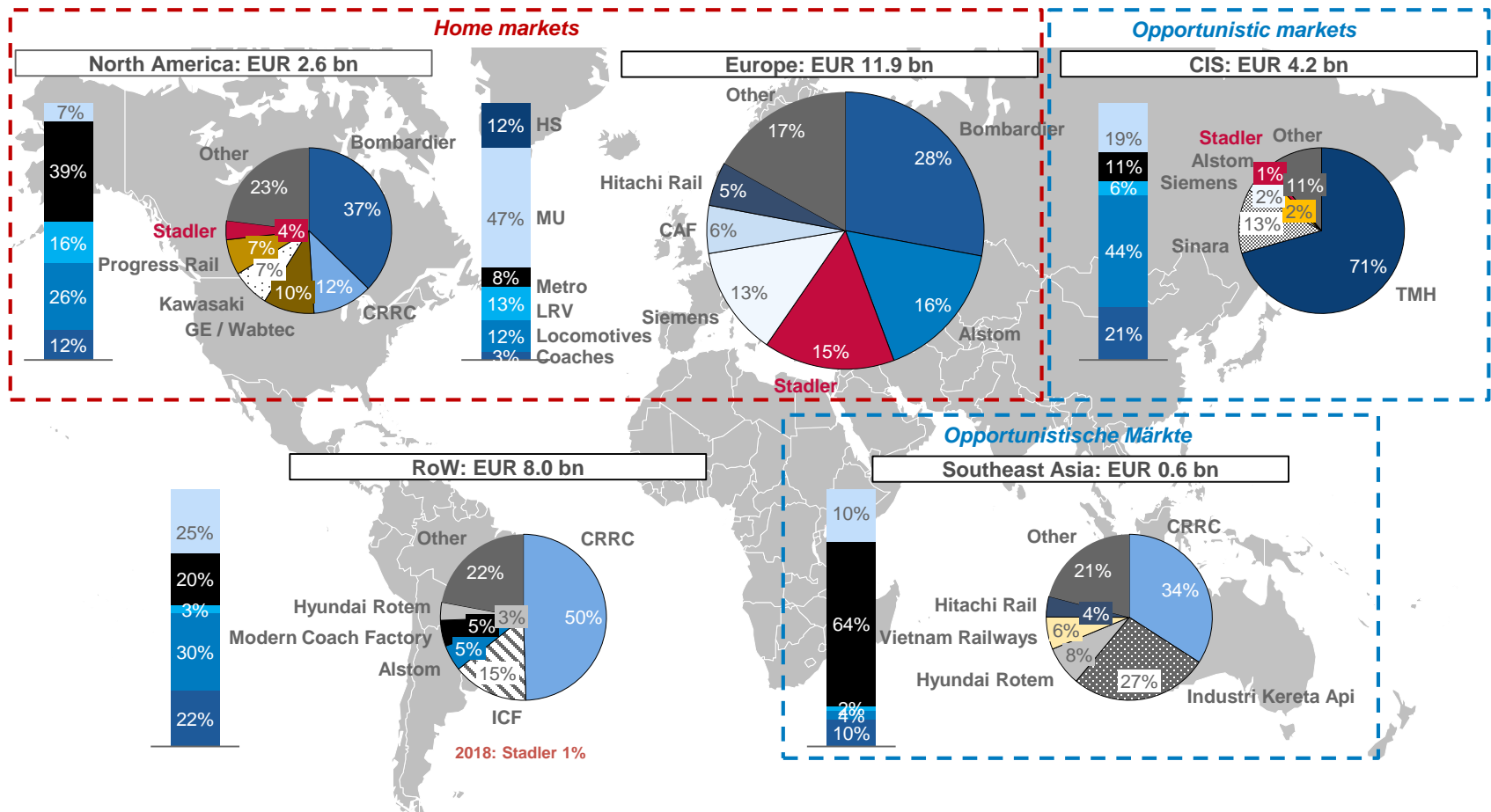
(4) System Technology includes Control, Command and Signalling (CCS) and Passenger Information Technology (PIT); excluding East Asia.

(5) Expected CAGR 2019-2024 for western Europe: +2.2%.



# COMPETITIVE LANDSCAPE

## MARKET SHARE BY REGION



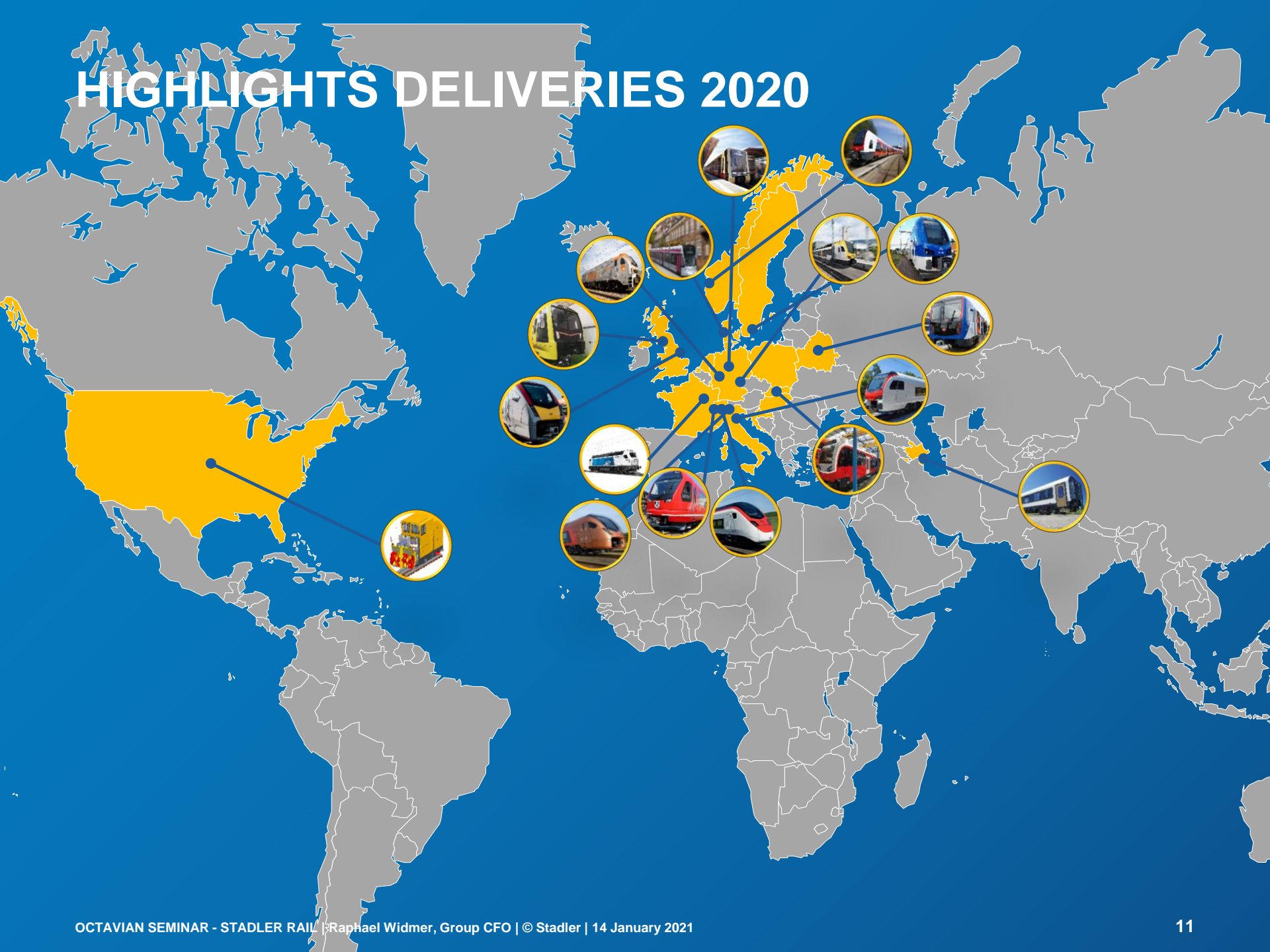
Source: SCI (2020), SCI marketstudy Worldwide Market for Railway Industries 2020.  
Market share based on delivered units in 2019 (average 2018-2020). High Speed (HS) 200 to 250 km/h.  
\*(2018 values)



# HIGHLIGHTS ORDERS AND DELIVERIES 2020

**STADLER**

# HIGHLIGHTS DELIVERIES 2020



# HIGHLIGHTS ORDERS 2020

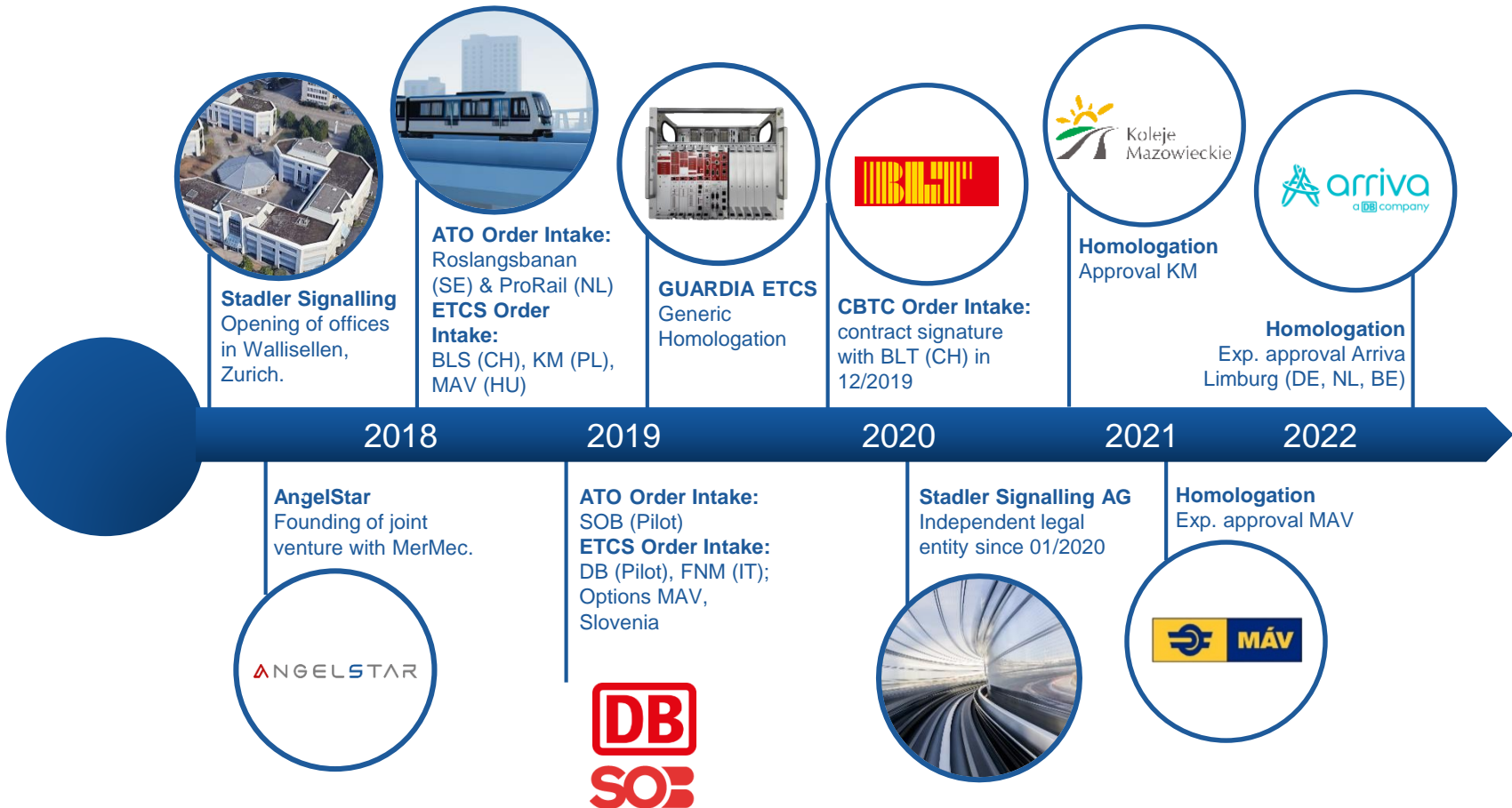


# UPDATE ON STADLER SIGNALLING



# STADLER SIGNALLING

## MAJOR MILESTONES ACHIEVED



# STADLER CBTC

## PURE MOVING BLOCK

### Stadler CBTC

- Train control to digitalise railway and supporting GoA-1 to GoA-4 operations
- Pure moving block: digital CBTC-dedicated solution
- Wayside & on-board hardware
- Control centre with line optimisation function



#### I Increased Capacity & Availability



- Increased capacity due to lower headways (< 90s)
- Better system performance, availability and failure recovery (incl. self-diagnostic function)

#### II Lower Investment



- Drastic reduction in wayside equipment
- Substantially lower maintenance costs

#### III Safety



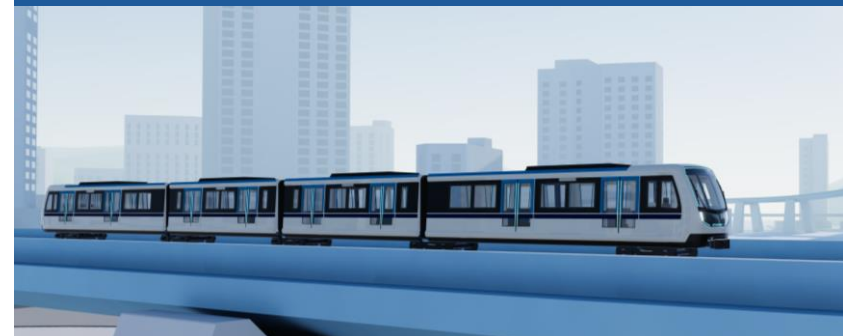
- Next generation train tracking concept delivering safe positioning in real time

### Light Rail



Example: CBTC Project with BLT, CH

### Metro



Stadler CBTC providing higher capacity at lower invest through cutting-edge pure moving block technology

# STADLER ETCS

## THE NEW PLAYER

### AngelStar ETCS Guardia

- Interoperability, optimised speed & spending, total safety through ETCS
- Based on proven signalling hardware
- Complementary strengths of railway companies Stadler & MerMec



### I Lean & Cost-Effective



- Lean architecture through new development
- Substantial cost advantage vs. competition<sup>1</sup>

### II Complete Solution



- ETCS hardware, engineering, rolling stock and service delivered by one partner

### III Experience & Competence

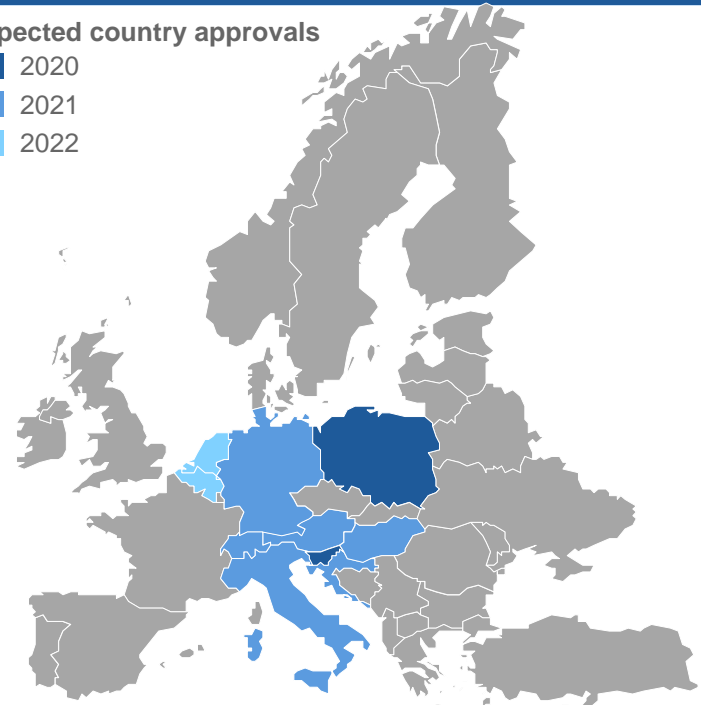


- Engineering, installation & authorisation experience
- Strong retrofit competence

### Homologation in development for customers

#### Expected country approvals

- 2020
- 2021
- 2022



**Guardia – new & cost-effective AngelStar product deployed on various Stadler projects with approval expected in 10 countries until 2022**

<sup>1</sup> On average and excluding R&D cost of generic product development.



# STADLER ATO

## LEAN AND FOCUSED

### Stadler ATO

- From partially to fully automatic train operation
- Optimisation for energy efficiency, track capacity or comfort with possible further add-on (Stadler sensor technologies)
- No negative impact on safety



### First project started



#### I Integral solution



- Seamless integration
- Minimal changes to infrastructure

#### II High Flexibility



- Modular application for customised solutions (fits existing vehicles and infrastructure)

#### III Future-Safe



- Scales with customer growth
- Investment on existing infrastructure

Modular Stadler ATO platform as basis for automatic train operations



**INNOVATION IN GREEN TECHNOLOGY**

**STADLER**

# FLIRT AKKU

## REPLACEMENT OF DIESEL TRAINS WITH EMISSION-FREE TRAINS IN GERMANY



### EMISSION-FREE OPERATION FROM 2022

- Three-car train, seating 120 to 180 passengers
- Battery-operated range of up to 150 km
- Charging of the vehicle's batteries during operation under catenary in 15 minutes
- Top-speed of 160 km/h
- Approx. 40% of the tracks in Germany are non-electrified

**With the FLIRT AKKU, Stadler won the first «Green Technology»-tender in Germany, supplying 55 trains for NAH.SH.**

# FLIRT H<sub>2</sub>

HYDROGEN-POWERED PASSENGER TRAIN FOR THE U.S.



## ENTRY INTO PASSENGER SERVICE IN 2024

- Two-car train with a PowerPack carrying fuel-cells and hydrogen tanks
- Seats 108 Passengers
- Top-speed of 130 km/h
- Part of the Redlands Passenger Rail Project connecting Redlands and San Bernardino in California
- A major milestone in bringing zero-emission passenger rail technology to the U.S.

**in 2019, Stadler signed the first ever contract to supply a hydrogen-powered train, to run in the United States.**

# DISCUSSION





# APPENDIX

**STADLER**

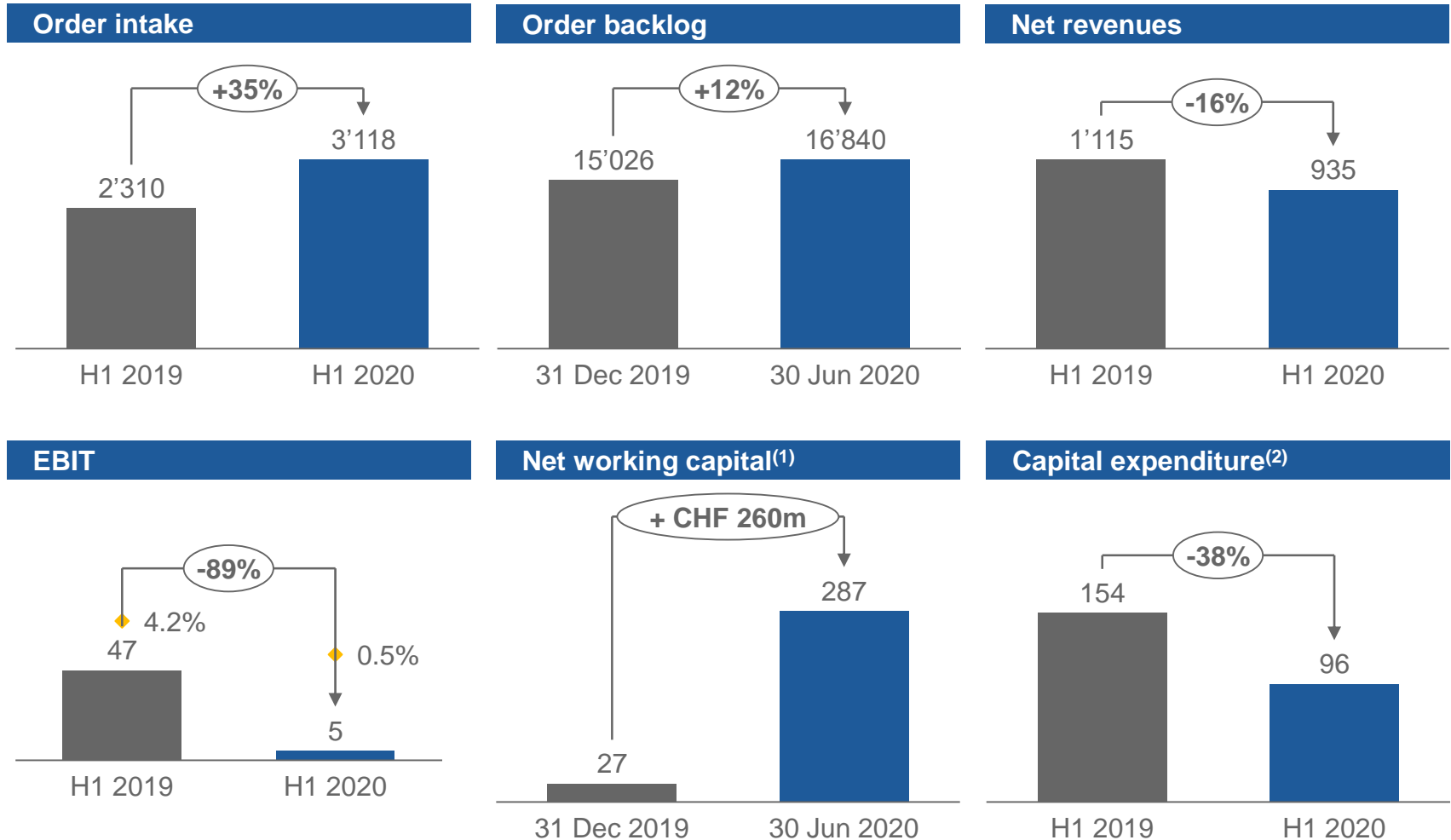


# HALF-YEAR 2020 FINANCIAL RESULTS

**STADLER**

# HALF-YEAR RESULTS 2020 SUMMARY

CHFm



◆ EBIT as % of net revenues

○ Change year-on-year / vs 31 Dec 2019

(1) Net working capital is calculated by subtracting the sum of trade payables, liabilities from work in progress and other current liabilities (including other current liabilities, current provisions and deferred income and accrued expenses) from the sum of trade receivables, inventories, work in progress and other current assets (including other current receivables, compensation claims from work in progress and accrued income and deferred expenses).

(2) Capital expenditure is calculated as the sum of investments in tangible and intangible assets.



# COVID-19 IMPACT



## Market environment

- Demand remaining strong
- No order cancelations and no large tenders lost
- Ongoing tenders largely on track
- New tenders being launched



## Impact on Operations

- Interruptions to internal and external supply chains
- Travel restrictions affecting Stadler employees, homologation officials and customers which impacts final payments
- All plants currently operating at normal levels



## Counter measures

- Health and safety measures initiated immediately
- Adapting assembly sequences and working shift times with employees partially working remotely
- Decentralised supply chain

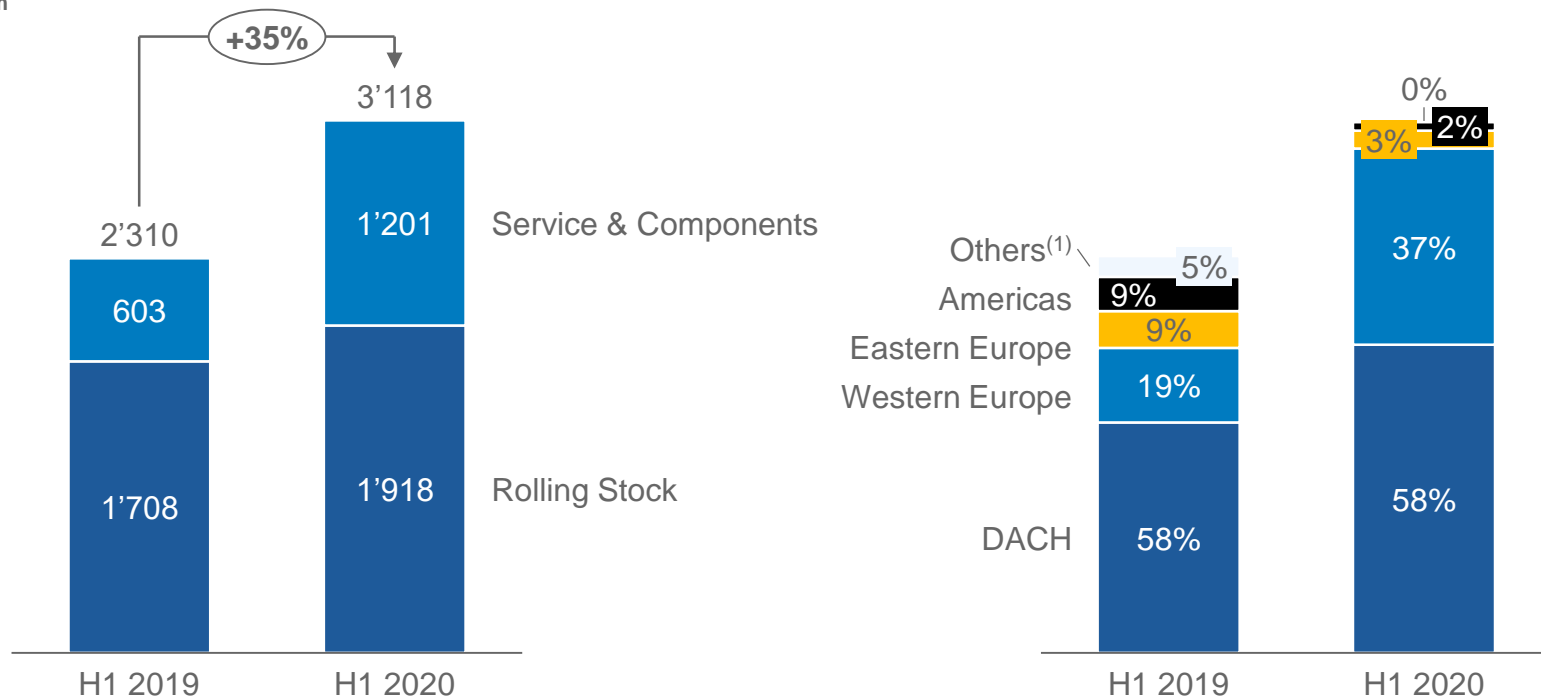


## Financial impact

- Partial recovery of deferred revenues in H2
- Lower fixed cost absorption due to decline in revenues in H1
- Service & Components impacted by lower mileage
- Significant order backlog and resilient end market

# ORDER INTAKE

CHFm



## Comments

### Rolling Stock

- Major orders in DACH region (BVG Metro Berlin, Germany) and Western Europe (Nexus, UK)
- Large Tailor Made orders in Switzerland: a new order from Matterhorn Gotthard Bahn (MGB) and an option call-off by Rhaetian Railway (RhB)

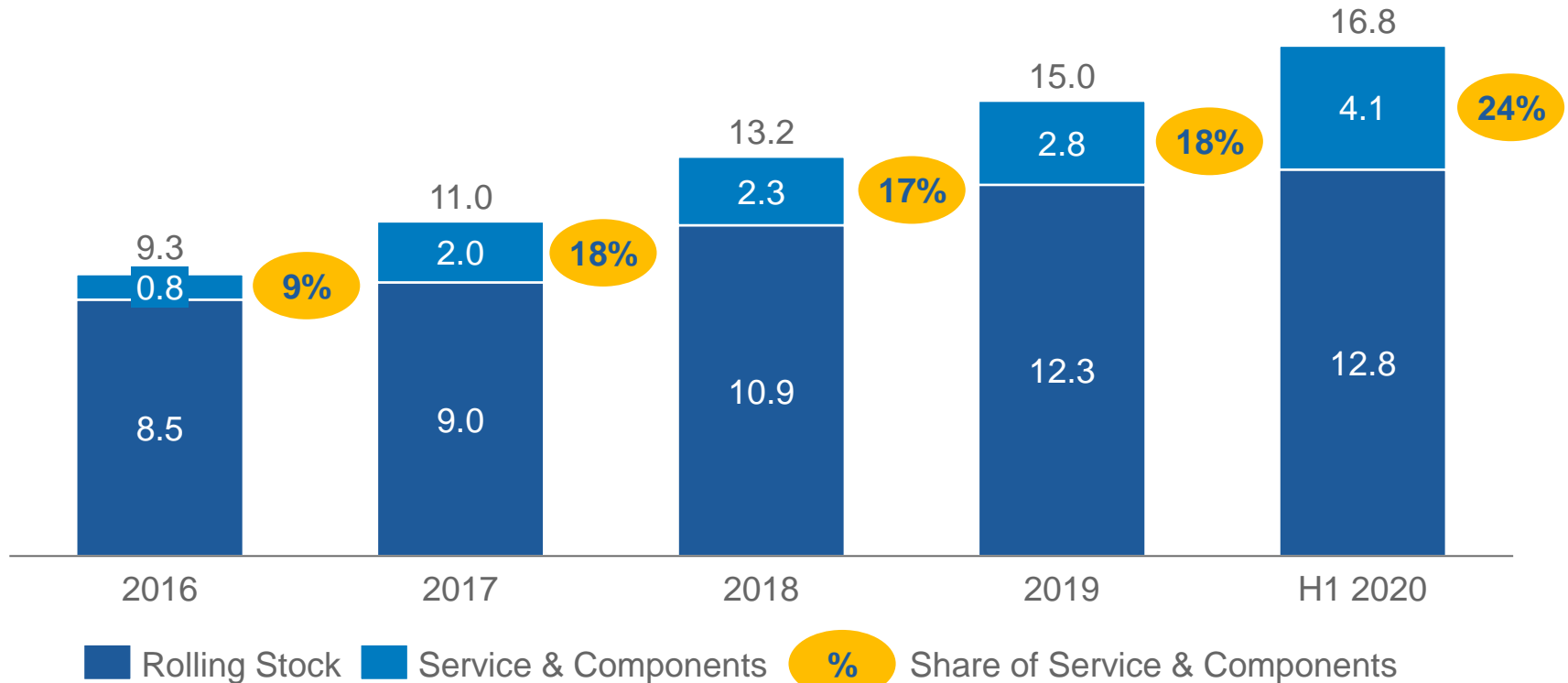
### Service & Components

- Strong order intake mainly driven by two long-term service contracts in connection with the Rolling Stock orders from BVG, Germany, and Nexus, UK

(1) Others: CIS and rest of the world.

# ORDER BACKLOG BY REPORTING SEGMENT

CHFbn

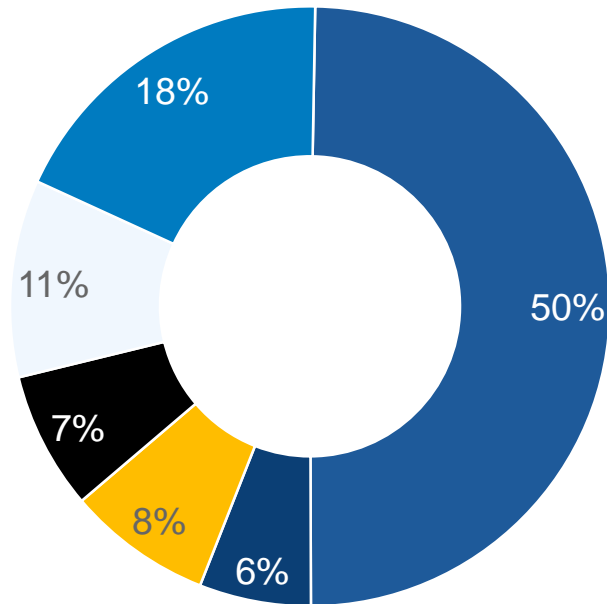


**Order backlog at new record high of CHF 16.8bn with a growing Service & Components share**

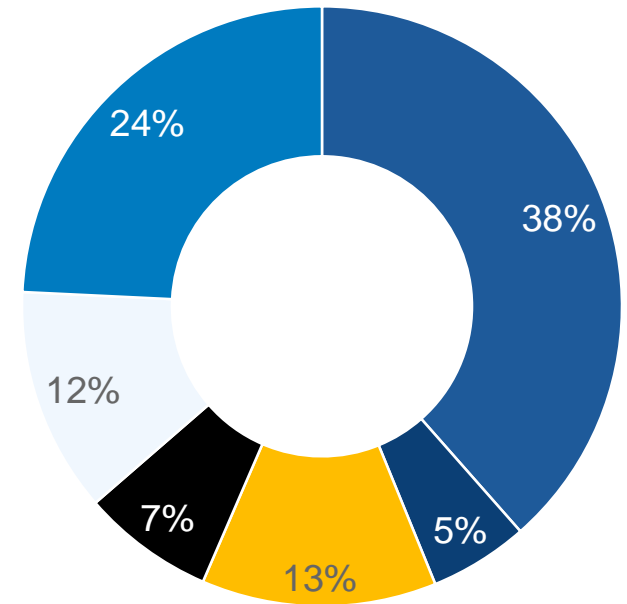
# ORDER BACKLOG BY PRODUCT SEGMENT

31 Dec 2019

30 Jun 2020



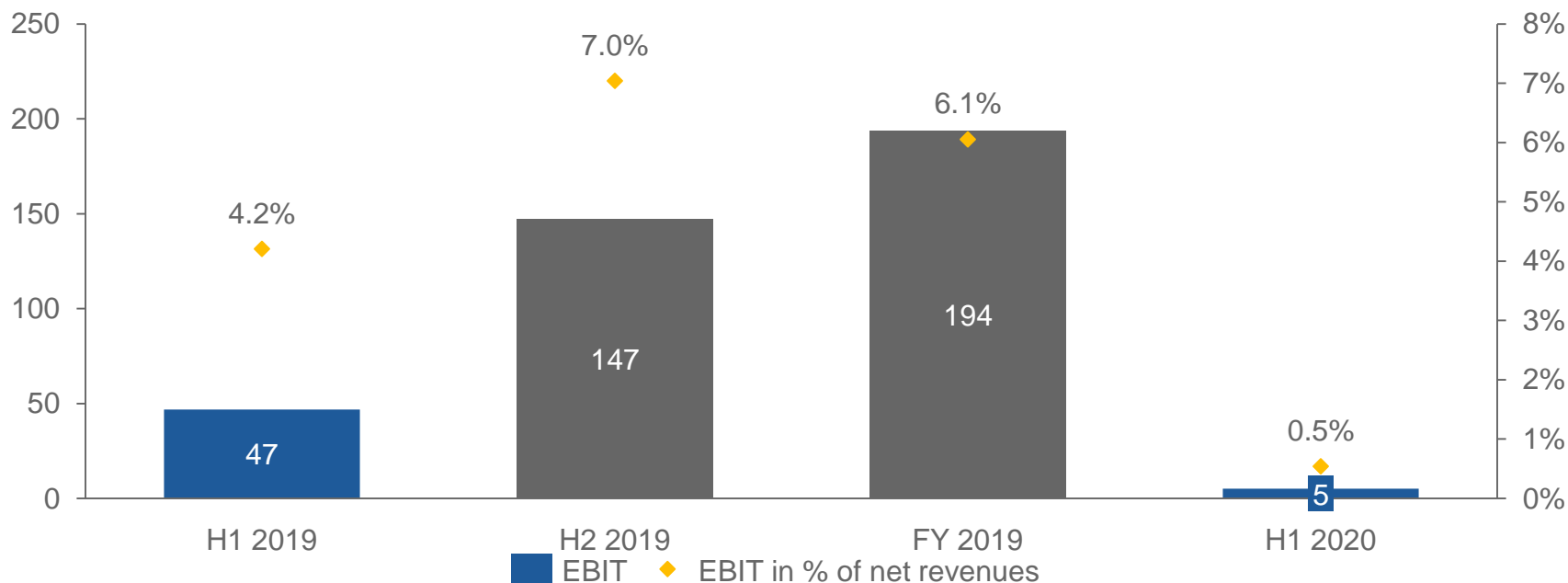
Executing on strategic focus



High quality and increasingly diversified order backlog

# EBIT

CHFm



## Comments

### Rolling Stock

- Corona-related delays in homologation and final acceptance of vehicles by customers led to a decline in revenues
- Lower volumes, supply chain disruptions and implementation of health and safety measures

### Service & Components

- Higher fixed costs from additional capacities with lower absorption due to lower than expected revenues as a result of less mileage of vehicles in service

# NET INCOME

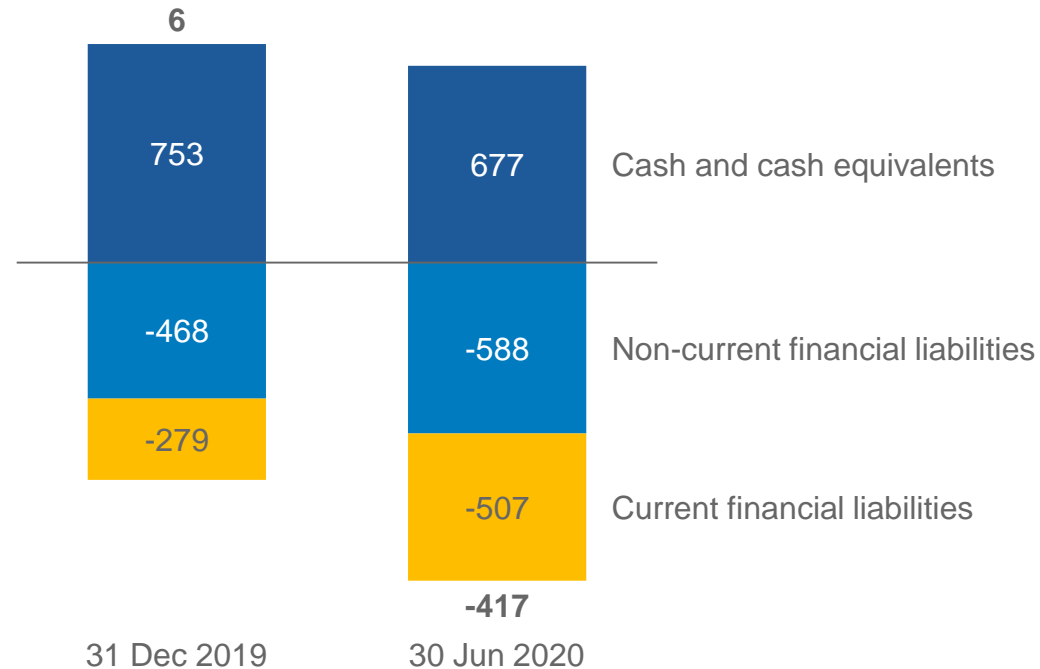
CHFm	H1 2019	H1 2020	Change YOY
<b>Earnings before interest and taxes (EBIT)</b>	<b>46.9</b>	<b>5.0</b>	<b>(89%)</b>
Financial result	(11.7)	17.7	
Share of results from associates	1.4	0.6	
<b>Ordinary result</b>	<b>36.6</b>	<b>23.4</b>	<b>(36%)</b>
Non-operating result	(0.9)	(0.8)	
<b>Profit before income taxes</b>	<b>35.7</b>	<b>22.6</b>	<b>(37%)</b>
Income taxes	(8.2)	(6.9)	
<b>Profit for the period</b>	<b>27.5</b>	<b>15.7</b>	<b>(43%)</b>
thereof attributable to			
- Shareholders of Stadler Rail AG	26.9	15.4	
- Non-controlling interests	0.6	0.3	

## Comments

- Financial result mainly impacted by favourable currency exchange rates

# NET CASH POSITION

CHFm

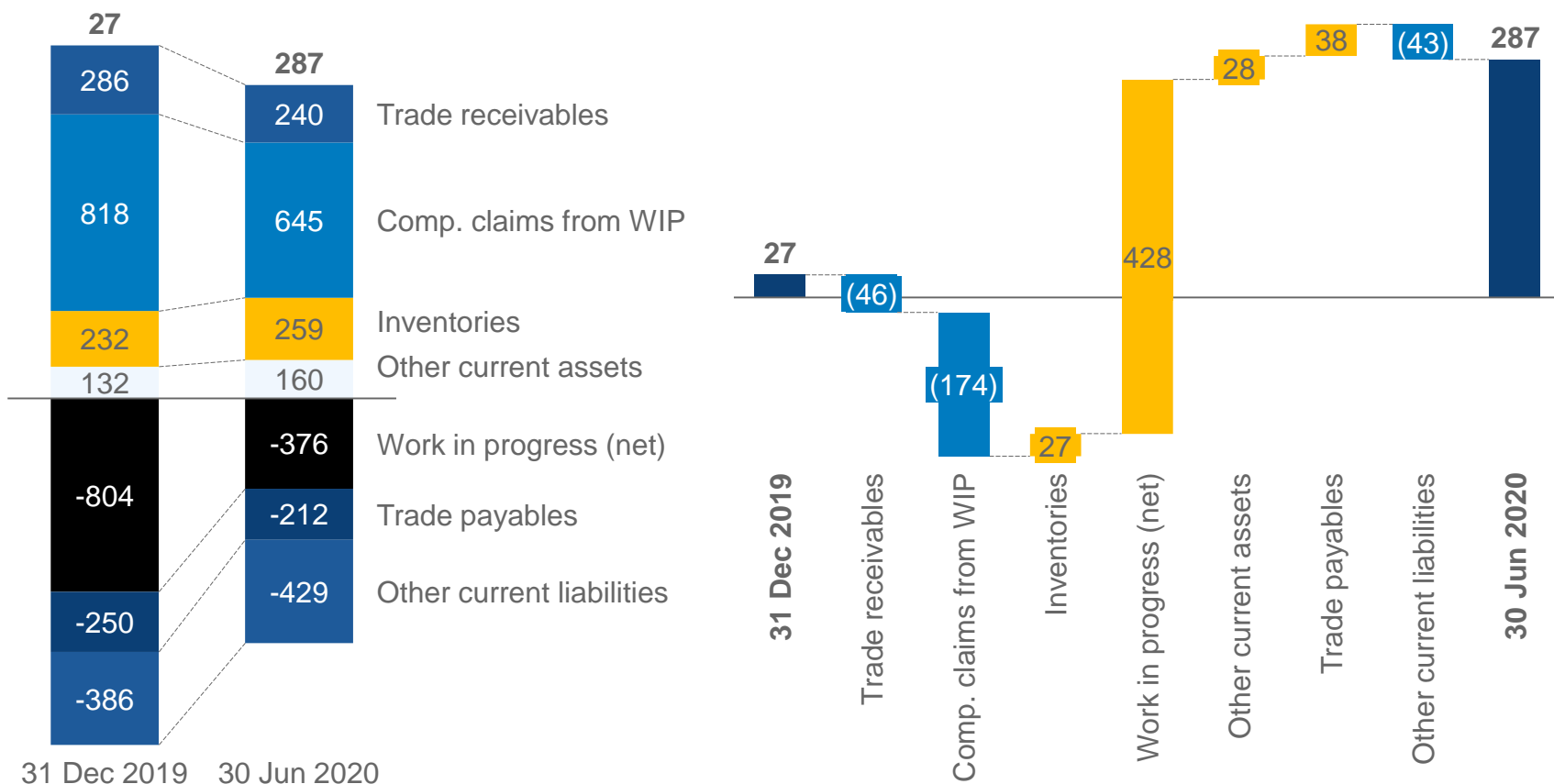


## Comments

- Decline in net cash position mainly a result of deferred homologation, customer acceptance and invoicing of new vehicles
- Continuous ramp-up of production and work in progress
- Increase in current and non-current financial liability mostly due to additional project financing facilities

# NET WORKING CAPITAL

Net working capital<sup>(1)</sup> (CHFm)



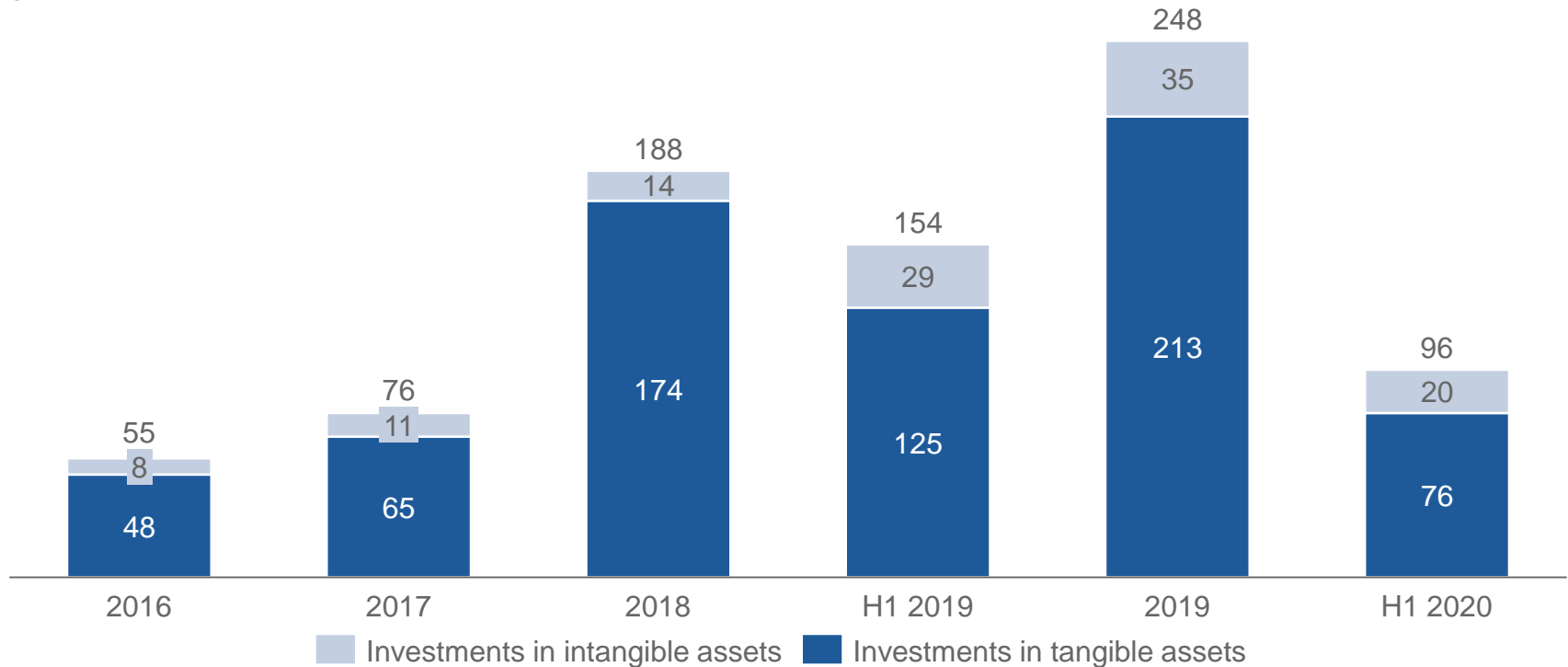
**Decrease in compensation claims from work in progress overcompensated by change in net work in progress. Mainly finished, but not delivered vehicles are driving WIP.**

(1) Net working capital is calculated by subtracting the sum of trade payables, liabilities from work in progress and other current liabilities (including other current liabilities, current provisions and deferred income and accrued expenses) from the sum of trade receivables, inventories, work in progress and other current assets (including other current receivables, compensation claims from work in progress and accrued income and deferred expenses).



# CAPITAL EXPENDITURE

CHFm



## Comments

- Ramp-up of capacity expansion in Germany related to a framework contract for the delivery of up to 1,500 METRO cars for Berlin
- Further production capacity added in Belarus, Poland and Hungary and Spain
- Investments in equipment at recently opened manufacturing site in St. Margrethen, Switzerland
- Investments in intangible assets mainly relate to development of new high-speed SMILE vehicle concept, new products in locomotives and signalling

# REPORTING SEGMENTS

## Rolling Stock

CHFm	H1 2019	H1 2020	Change
Order intake	1'708	1'918	12%
Order backlog <sup>(1)</sup>	12'254	12'759	4%
Net revenues (third party)	1'002	789	-21%
Additions to fixed assets	105	58	-45%
Total staff as FTEs <sup>(2)</sup>	8'147	9'066	11%

## Service & Components

CHFm	H1 2019	H1 2020	Change
Order intake	603	1'201	99%
Order backlog <sup>(1)</sup>	2'772	4'082	47%
Net revenues (third party)	113	146	29%
Additions to fixed assets	17	18	3%
Total staff as FTEs <sup>(2)</sup>	2'163	2'910	35%

(1) as at 30 June 2020 resp. 31 December 2019

(2) average FTEs 1 January to 30 June

# FY 2020 FINANCIAL GUIDANCE

## Net revenues

- Slightly lower than 2019

## EBIT-margin

- Above 5%

## Dividend

- Payout ratio of c. 60% of net income

Our 2020 outlook is, among other factors, subject to possible further implications related to the COVID-19 pandemic and assuming constant currency exchange rates.

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