

Capital Markets & Media Day 2017 SCHMOLZ + BICKENBACH GROUP

Emmenbrücke, June 22, 2017



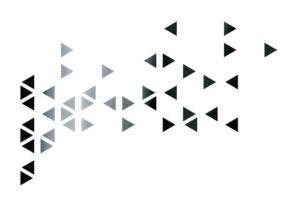


Capital Markets & Media Day 2017

Clemens Iller, CEO



## 02 SCHMOLZ + BICKENBACH 2017 and beyond



## Game-Changing Transformation Since 2003 – From a Broadly Diversified Distributor to a Focused Special Steel Group

< 2003

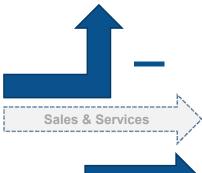
#### SCHMOLZ + BICKENBACH KG

Broadly diversified (steel) distributor:

- Refined, special and tool steels
- Semi-finished products
- ▶ Bars, steel and rolled steel
- Sheets and strips, steel, cold rolled
- Plates, steel, cold rolled
- Iron and steel, drawn, compressed and turned, tubes
- Semi-manufactured products, aluminium/alloys
- Steel castings and parts
- ▶ Pipes and tubes, non-ferrous metals
- Pipe, tube and hose fittings, metal
- Metal components, fittings for gates, doors, windows, skylights, shutters, blinds,...
- Metal cutting services
- Wholesale trade
- · ....

2003 - 2015

## Distribution Units





- DEW
- ► Finkl Steel
- Steeltec
- Swiss Steel
- Ugitech
- Sales & Services

> 2015

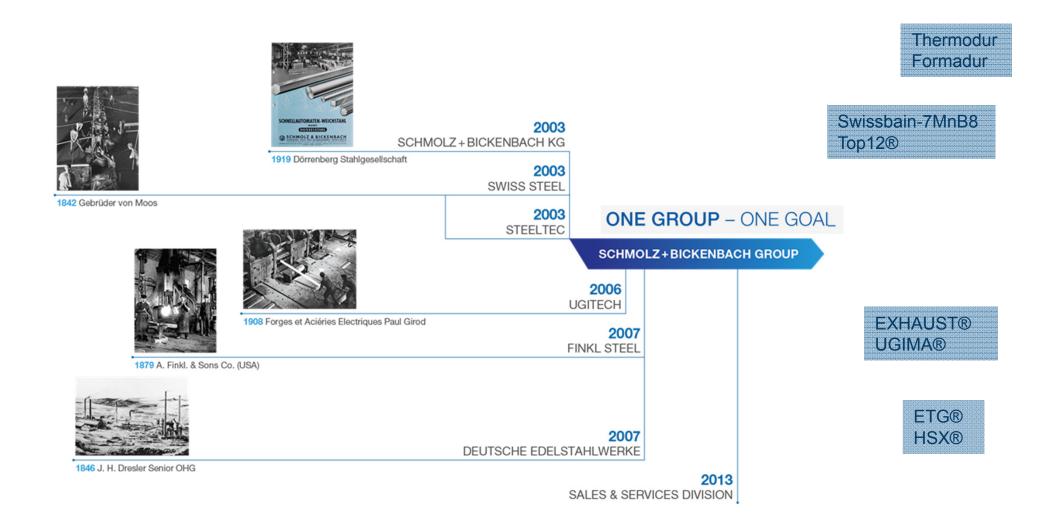
SCHMOLZ + BICKENBACH

Group



- ► Focused integrated special long steel group
- ► Leading market positions in attractive niche markets
- Six BUs with minimum production overlap
- **▶** Strong brands

## Well-Introduced Brands – Grown Individually Over More Than 100 Years, Now Growing Together

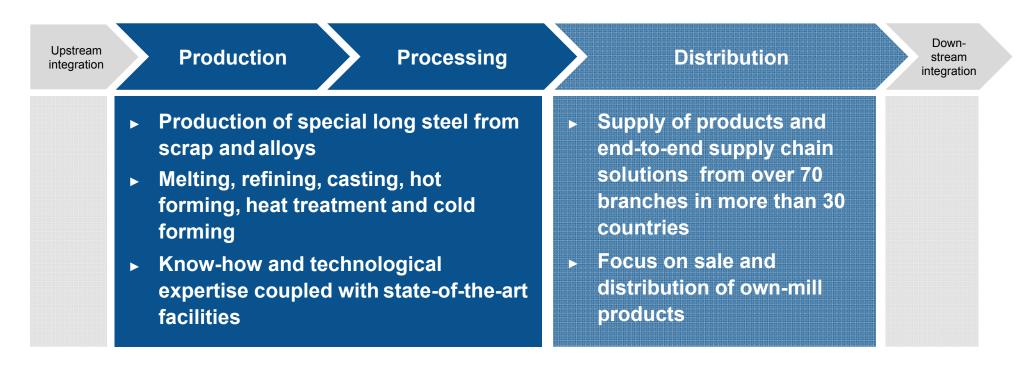


## Transformed Into a Group With Compelling Competitive Strengths

- Leading special long steel player with a fully integrated business model
- Operating in attractive niche market segments with significant growth prospects
- Strong and diverse customer base with close relationships
- State-of-the-art production facilities and equipment
- Experienced and successful senior management team
- Flexible cost structure with the ability to pass on raw material prices volatility
- Attractive financial profile with strong momentum on deleveraging



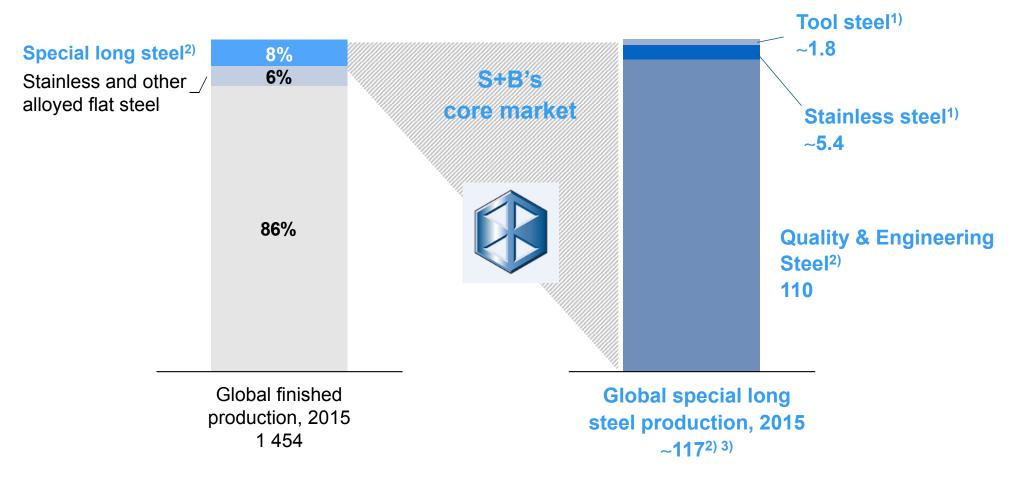
## Vertical Integration Through the Value Chain and Global Presence Enable Economies of Scale and Synergies



- Synergies captured by optimizing capacity, purchasing and sharing services
- Global distribution of special long steel products independent of manufacturing location
- R&D and product innovation leveraged throughout the group
- ► Leverage of full application range across the entire value chain
- ► Technological leadership and customer proximity enable unique tailor made solutions

## **Today, S+B Operates in Attractive Niche Market Segments**

#### **Breakdown of Global Steel Production** (million tons)



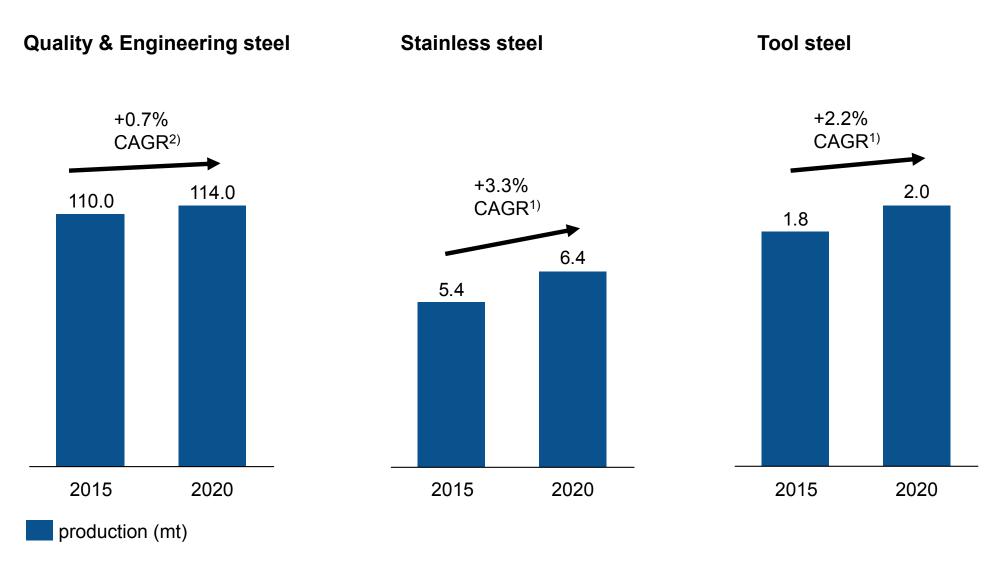
Sources: 1) SMR, 2) Management estimate based on SMR data, 3) Rounded

## **Niche Market Segments Allow to Differentiate**

	Special long steel	Carbon flat steel	Stainless and other alloyed flat steel
Share of global production (2015)	8%	86%	6%
Key success factors	<ul> <li>✓ Quality &amp; innovation</li> <li>✓ Technological expertise</li> <li>✓ Close customer relationship</li> <li>✓ Capture growth in mature and emerging markets</li> <li>✓ Service</li> <li>✓ Flexible cost basis</li> <li>✓ Broad product portfolio with smaller lot sizes (grades, dimensions, mechanical and thermal refining)</li> </ul>	<ul> <li>Price</li> <li>Scale</li> <li>Captive iron ore / coking coal</li> <li>Capture growth in emerging markets</li> <li>Service</li> </ul>	<ul> <li>Price</li> <li>Assets utilisation</li> <li>Capture growth in emerging markets</li> <li>Service</li> </ul>

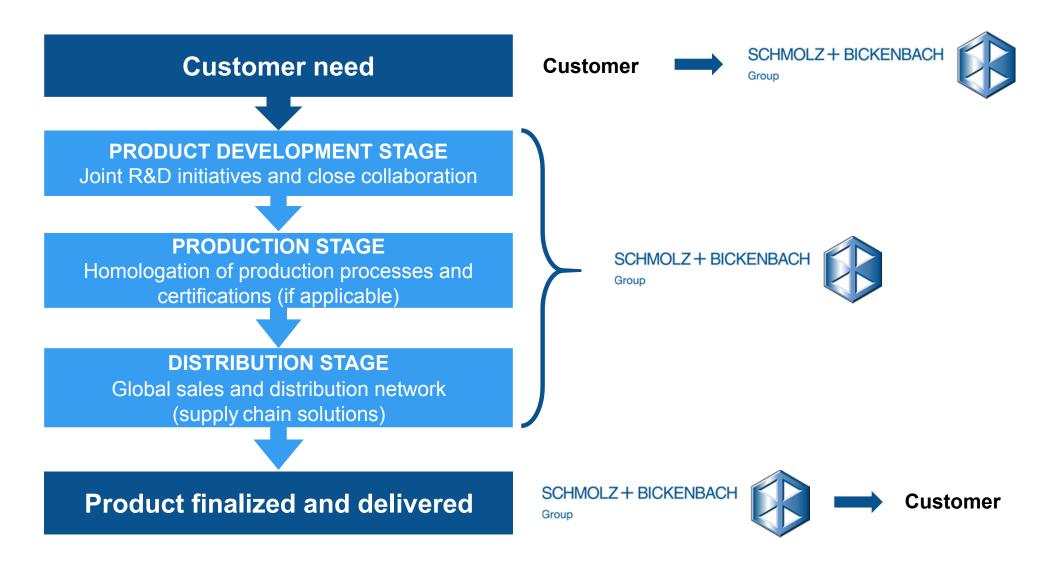
Sources: Management estimate based on SMR data

## Moderate Market Growth in a Mature Industry Requires a Sophisticated Strategy to Grow



Sources: 1) SMR, 2) Expectation in line with global crude steel market which is estimated by BMI to grow with a CAGR of 0.7% for 2015–2020

## Presence Along the Value Chain Fosters Long-term Client Relationships



### **Example – Innovative Material for Underwater Pelletizer Units**

Together with customers in Germany and the USA, an innovative material for Underwater Pelletizer Units was developed

## Result of the close cooperation – a product characterized by:

- ▶ 50% higher resistance to wear and tear
- More than a third higher corrosion resistance
- ► One fifth less thermal conductivity than conventional material.





The perforated plate is the heart of the underwater pelletizer

Images: Coperion GmbH

### **State-of-the-art Facilities and Equipment Limits Future Capex**

- Continued investments throughout the economic cycle
- Recent investment decisions include:
  - new walking beam furnace and Garret coilers in Emmenbrücke
  - new furnace at Ugitech that will be certified for high-value added applications as required by the aerospace or aircraft industry.
- Current facilities will be able to cover increased demand and allow S+B to grow the business without any significant increase of capital expenditures







### **Three Focus Areas for Execution**



See next slide / CFO pres.

## INVESTMENTS INTO TECHNOLOGY & INNOVATION



CONSOLIDATION & (GEOGRAPHIC) EXPANSION

See slide 15

# Further Potential for Increasing Value – Areas of Continuous Improvement

- Swiss Steel: Improved production performance, scrap optimization and improved structures
- ▶ DEW: Ongoing restructuring / productivity improvement, operational efficiencies, higher sales prices through better customer satisfaction and more technical developments, new electricity contracts
- Ugitech: Improved productivity, better product mix / debottlenecking
- ► Finkl Steel: New customer base, regain oil and gas volumes, increase of foreign business
- ▶ **Steeltec:** Restructuring Scandinavia, focus on special products (XTP), perf. improvement Steeltec GmbH
- Sales & Services: Price/volume improvements, optimized cost structure for going to market

Potential for value increase **Capacity utilization Group synergies Asset efficiency Tech.** products **Cost efficiency Acquisitions Swiss** Steeltec **DEW** Ugitech **Finkl** S&S

Illustrative

## M&A and Growth as Long-Term Key Elements to Expand Leading Market Positions

**OBJECTIVE GENERAL CRITERIA REGION** Cost synergies Improve European network Value creation Growth region Hard synergies Leverage special steel know-how Financial feasibility Asia Downstream expansion Leverage production at Finkl plant **North America** Extend global reach through investments in Sales & Services network

### From the Past into the Future

< 2003

DISTRIBUTOR

TRANSFORMATION

RESTRUCTURING
EXPANSION
CONSOLIDATION
CONTINUOUS
IMPROVEMENT

2015-2017

2003-2015

2017+

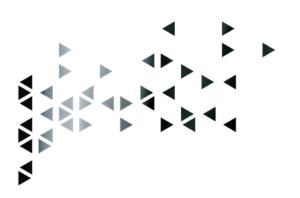


**Capital Markets & Media Day 2017** 

Matthias Wellhausen, CFO



## Financial Aspects of Strategy for Value Creation

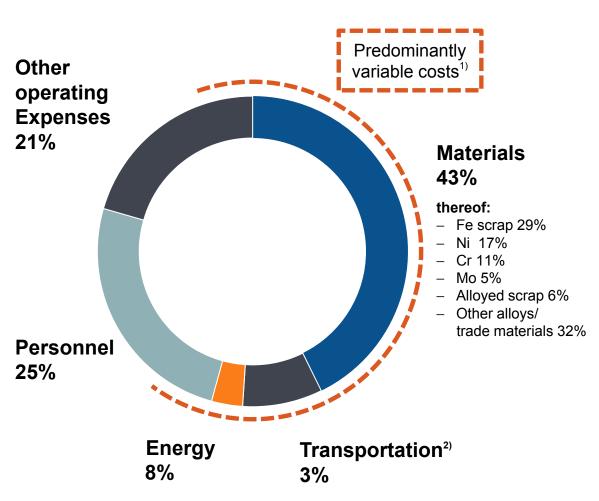


## Transformed Into a Group With Compelling Competitive Strengths

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- Attractive financial profile with strong momentum on deleveraging



## Flexible Cost Structure through EAF Technology Smoothens Earnings Volatility Over The Cycle



- Steelmaking with Electric Arc Furnaces (EAF) enhances flexibility of production level and of cost as compared to basic oxygen furnace (BOF) route:
  - Adjust production to actual demand
  - Less capital-intensive
- Cost base is largely flexible
  - Cost of materials 43%
  - Energy costs
  - Transportation for goods dispatched
- Important recycler
  - Production from 100% scrap
  - Low emissions

<sup>1)</sup> Management estimates, Illustrative based on production division, 2) Transportation of goods dispatched

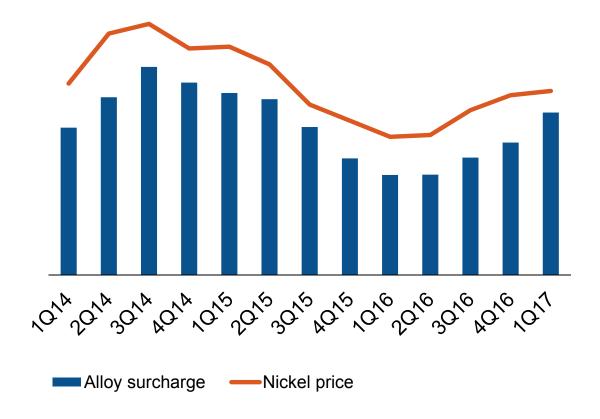
## Sales Price Dynamics Provide Natural Hedge Through Surcharge





### **Surcharge Mechanism Is Effective**

### Alloy surcharge, Nickel Price (EUR/t)<sup>1)</sup>

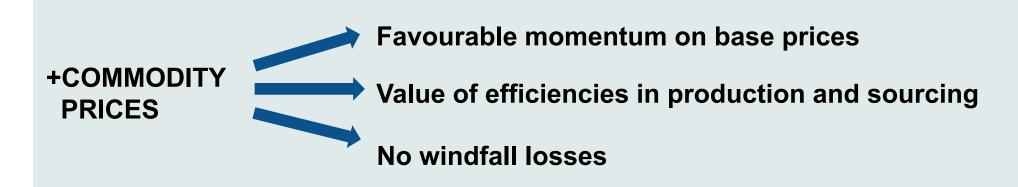


- Special long steel industry widely follows an index system
- ► E.g. surcharge is based on a nickel price index<sup>2</sup>), scrap surcharges follow local reference prices
- Customers accept industry-wide price arrangement
- ► Therefore, the industry is able to pass on raw material price volatility to a large extent

<sup>&</sup>lt;sup>1)</sup> Quarterly alloy surcharges calculated based on monthly averages. Example limited to Stainless product 4404 sold by DEW. Note: Surcharges can vary significantly depending on the product, <sup>2)</sup> Independent from the actual sourcing price of the producer

## Yet Some Cyclicality of the Gross Margin Remains

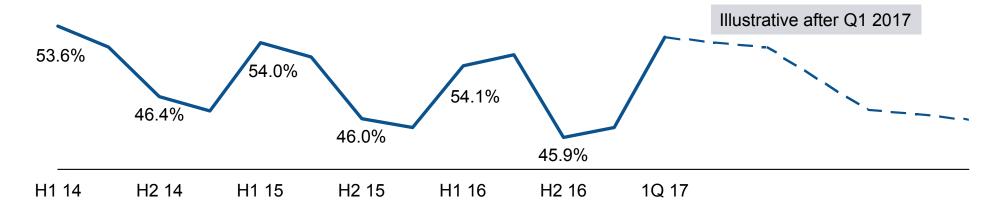




<sup>1)</sup> Raw material basket

## ...With A Regular Seasonal Pattern

#### Sales volume (kt)



### Optimized Summer production breaks<sup>1)</sup>

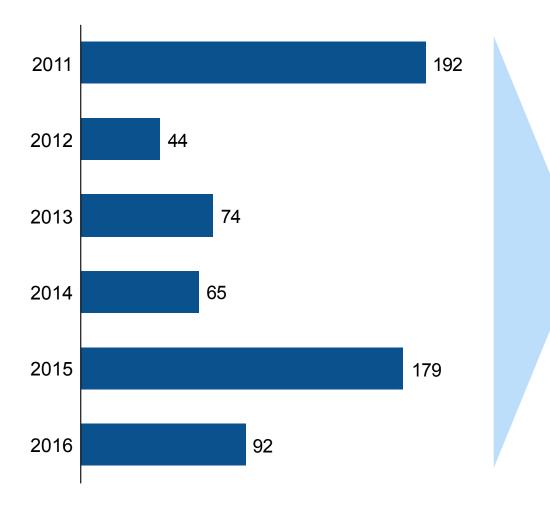
- DEW: **23 days** (Jul 16 Aug 7)
- Swiss Steel: **12 days** (Jul 31– Aug 11)
- Ugitech: **21 days** (Jul 31 Aug 20)
- Steeltec: **12 days** (Jul 31 Aug 11)

### Optimized Winter production breaks<sup>1)</sup>

- DEW: 7 days (Dec 25 Dec 31)
- Swiss Steel: 9 days (Dec 23 Dec 31)
- Ugitech: **7 days** (Dec 25 Dec 31)
- Steeltec: 9 days (Dec 23 Dec 31)

<sup>1)</sup> Actual dates may vary from planned

## Robust and Positive Free Cash Flow Cycle – Flexibility for Investments and De-lever the Group



- ▶ 75% maintenance Capex
- ▶ 25% prudent investments into technology and innovation projects:
  - XTP production line Steeltec
  - Coil handling Swiss Steel
  - Heat treatment line Ugitech
  - Walking beam furnace Swiss Steel
  - Production equipment JV with Tsingshan

## Attractive financial profile with strong momentum on deleveraging

### Positive Free Cash Flow 1)

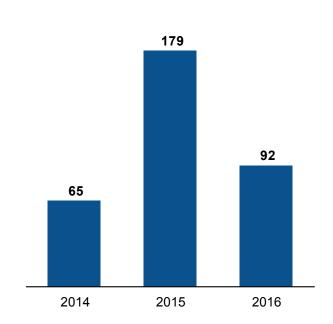
#### **Net Debt Reduction**

EUR million, unless stated otherwise

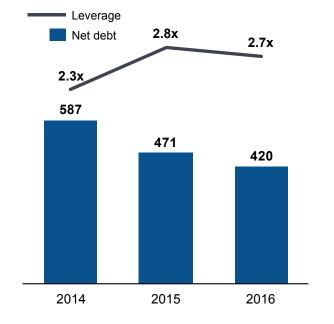
EUR million, unless stated otherwise

Improved NWC Efficiency<sup>2)</sup>

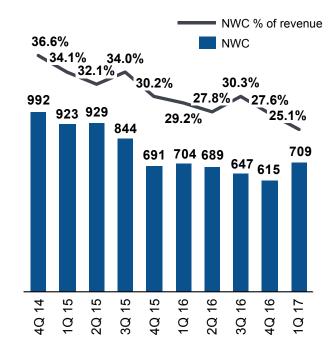




Robust and positive FCF from continuing operations over the cycle



 Focus on sustainable net debt reduction and deleveraging



- Net Working Capital % of revenue is a key management KPI
- Current levels of NWC supported by launch of NWC optimization program in 2015 and divestiture of distribution assets

<sup>1)</sup> Free cash flow comprises the cash flow from operations plus the cash flow from investing activities

<sup>2)</sup> NWC % of revenue is calculated based on current quarter annualised revenue and closing NWC. This methodology delivers a more accurate picture of the performance than calculating NWC % of revenue based on LTM revenue and current quarter NWC. 2014 NWC figures (absolute and in %) not restated for the disposal of selected distribution centres

## Significant Progress Towards Sustained Profitability

### Issues 2 years ago...

#### Profit warnings as a result of low resilience

- Swiss currency
- Oil dependency
- Commodity exposure, little pricing power
- Operational issues

#### Additional quantitative improvements missing

- Poor productivity progress
- Structural cash traps / loss-making segments to be eliminated
- NWC at high levels

#### **Unattractive investment**

- Investors lost repeatedly on steel investments
- Off the radar of investors (mid-cap, weak in US/UK)
- Unspecific equity story (no acquisition/divestment)
- High leverage despite cyclicality, exposure to covenants
- Management changes, disposal process on/off
- Penny stock

### ...overcome by tangible progress

- Sustainable cost improvements: EUR 70 million
- Realignment of DEW
- Restructuring of Steeltec (closure Boxholm, restructuring Dusseldorf)
- Closure/sale of loss makers (Malaysia, Distribution businesses, UK)
- Further focus on deleveraging the Group
- Refinancing (no worry on access, covenants)
- Group Integration (organization, enabler projects), stability (mgmt continuity, investor continuity), less surprises (upper end of guidance), less volatility (harmonization, grip and control)
- Normalization of demand (results)



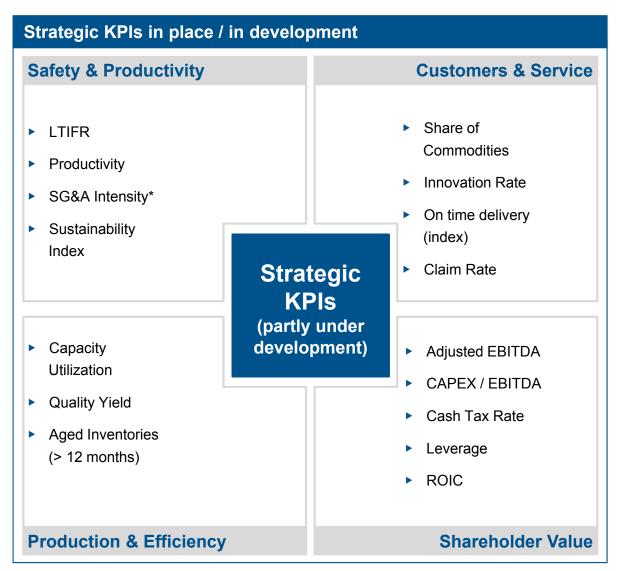
# **Key Initiatives to Sustainably Reduce Fix Costs, Improve Market Approach and Promote Technology & Innovation**

	2015	2016	2017	2018	2019
Performance Improvement Program		Cost savin	gs of €70m	Continuous im	provement
Reorganization of DEW (Market approach & Innovation)		New legal structure operational since 1 Jan 2017	Top line (	growth – market a	pproach
Restructuring collective bargain agreement for DEW		- Agreed for 2 year - Expected saving in 2016 and 201	gs of EUR 15mn		
Further restructuring measures (DEW, Steeltec, S&S)	New investments to improve product margin		- Cost savings of - Costs associated measures are ref		
Technology (e.g. Walking Beam Furnace/Swiss Steel, Nadcap Heat Treatment Furnace/Ugitech)				Technolo	ogy Leadership

## **Applying the Right Approach to Measuring Progress**

Improvement Project (2012–15)	New Definition (2016–2017)
Improvement measures	Sustainable improvements – cost do not grow back, revenues last
Whole scope of sustainable, volume driven, tactical and mitigation measures that lead to both long term and short term effect.  Resulting valuation based on high	<ul> <li>Reduction in headcount / closures and tariff reductions</li> <li>Decrease of consumption rates</li> <li>Yield improvement</li> <li>Increase of capacity at bottlenecks</li> <li>Purchasing related measures (discounts vs. benchmark)</li> <li>New products</li> <li>New clients (based on opportunity margin)</li> </ul>
margin / high price scenario.	Tactical and once-off mitigation measures
→ result depending on market conditions	<ul> <li>Measures as a reaction to market environment</li> <li>Any volume driven cost improvements (e.g. decrease in consumption, FTE reduction; variabilization of costs)</li> <li>Optimization of input factors (e.g. hi-quality scrap vs. mark 2)</li> <li>Reduction of provisions</li> <li>Maintenance cost savings – postpone to next period</li> </ul>

### **Steering of Strategy: Cornerstones in Place**



#### **Bonus Measurements**

#### LTI

- Absolute Share Price Performance (ASP)
- Return on Capital Employed (ROCE)

#### STI

- Adjusted EBITDA
- Operating Free Cashflow (OFCF)

#### Governance

- Board Charter, Organisation, Policies
- Authorization matrix
- Go-to-market optimization
- Transfer pricing
- Purchasing
- Product Development
- Strategic Investment Planning / Specialization
- Incentivizing



<sup>\*</sup> SG&A [narrow definition] / gross profit

### **Enabler Projects are Key to the Transformation Process**

#### Illustrative

### **Accounting**

- Harmonizing Group Chart of Account, Cost by Function
- Replacement of Cognos consolidation tool by SAP BPC
- FY16 Hard Close Audit
- Guidance on various key areas (e.g. inventory, slow low mover, reverse factoring etc.)
- Shared Services

### Controlling

- Controlling Excellence: Harmonizing Group Reporting.
   Analytical horsepower / KPI, Fore-casting, Sensitivities,
   Product grouping/ margins, Cost Calculation / EBITDA
   bridge / margins
- ► NWC optimization: Improve Aging (> 1y = 0)
- Supply Chain Controlling: Purchasing, Sales, Logistic

### **Information Technology**

- Completion of DIS sale to Jacquet
- ▶ Finance Excellence
- Master data Governance
- DEW IT Optimisation 2018
- Global data centre / unified Communication

#### Tax

- ► Tax Compliance Project (with EY)
- ▶ Permanent settlement through Sales Agents
- Country Reporting

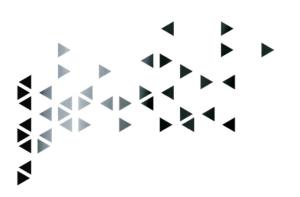
### **Treasury**

- Roll-out new policies: Customer Credit Mgmt, Foreign Exchange Mgmt, Cash & Treasury Mgmt
- Introduction group-wide short-term liquidity planning





## Swiss Steel, Steeltec & Panlog – Jointly Stronger





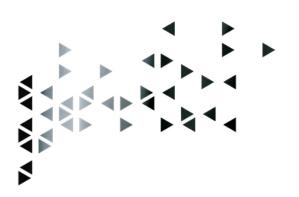
## Jointly Stronger – Swiss Steel



### Content

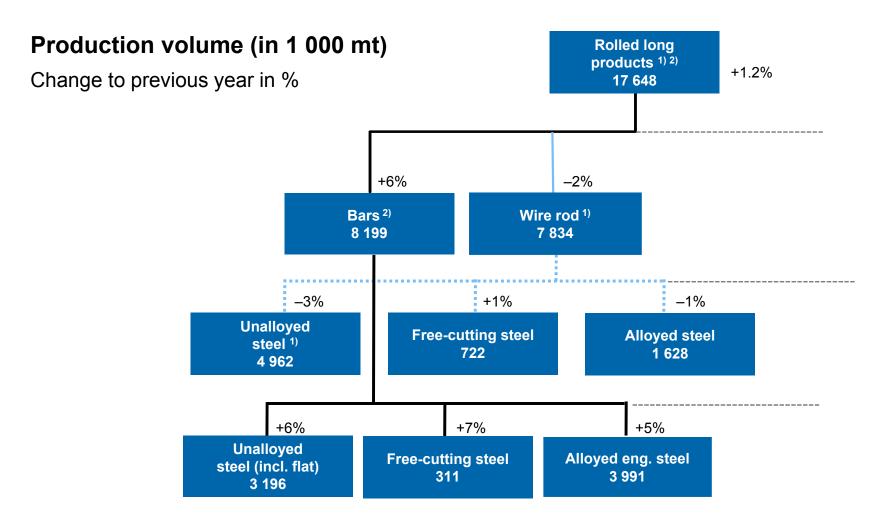
- Market Position
- Production Process, Products and Productivity
- Jointly Stronger Contribution to the Group's Strength
- Strategic Action Plan 2017–2024
- Value of Environmental Protection, Key Position in Recycling Chain

## Market Position





### **Swiss Steel Competes in a 15 Million Tons Market**



<sup>1)</sup> w/o Mesh and Steel Cord

Sources: SPAS (La chambre Syndicale des Producteurs d'Aciers fins et Spéciaux), EU15, 2014 figures



<sup>2)</sup> w/o rebar

## **Product Range – Billets, Wire Rod and Steel Bars**



► From scrap ...
good quality iron scrap mainly from Switzerland



17.7–42.5 mm (hexagonal)/ 6–14 mm (ribbed)

From billets to wire rod (~53% of sales)
Coil weight 1.8 tons/ 5.5–44 mm (round)/

... to billets (~15% of sales)
 10.8 – 13.0 m/ 150 x 150 mm/ 140 x 140 mm



► From billets to steel bars (~32% of sales) Bundle weight 4–6 tons/ 16–66 mm (round)/ 17.7–62 mm (hexagonal)/ 16–40 mm (ribbed)



## **Swiss Steel Production of Technical Products and Specialties Totals 60%**

#### Technical Products

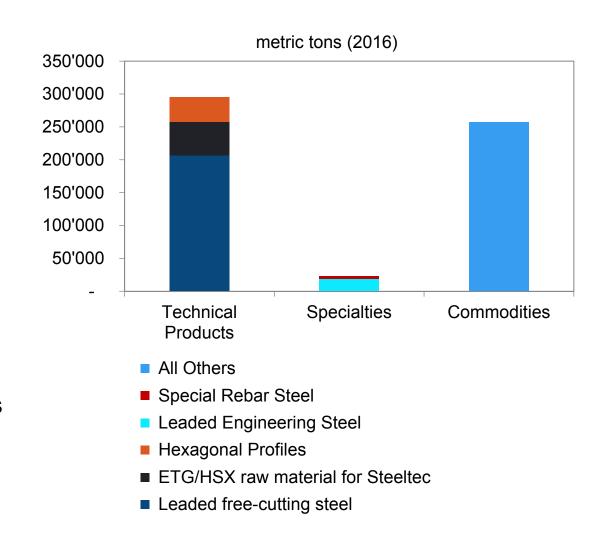
- Leaded free-cutting steel
- ETG/HSX raw material
- Hexagonal profiles

#### Specialties

- Leaded Engineering Steel
- Special Rebar Steel

#### Commodities

Cold forging grades, carbon, others

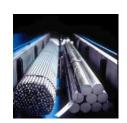




## Our Products – Broad Range of Applications in Many User Markets

 Leading supplier for bright bar producers (65% of total sales, 25% free-cutting steel market share)





Fasteners producers buy 10% of rolling mill production





Product range allows presence in the drop forging sector

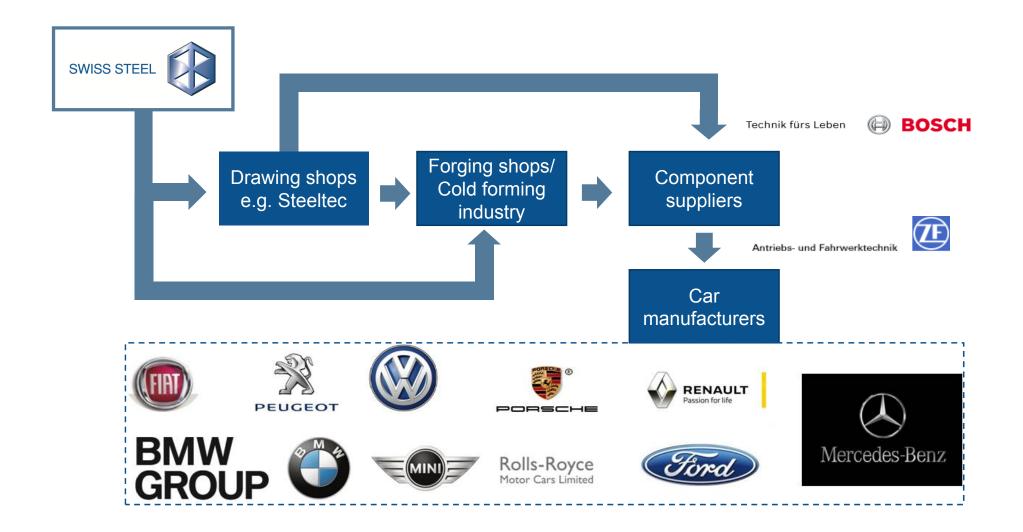


 Chains and profile producers are also supplied user markets



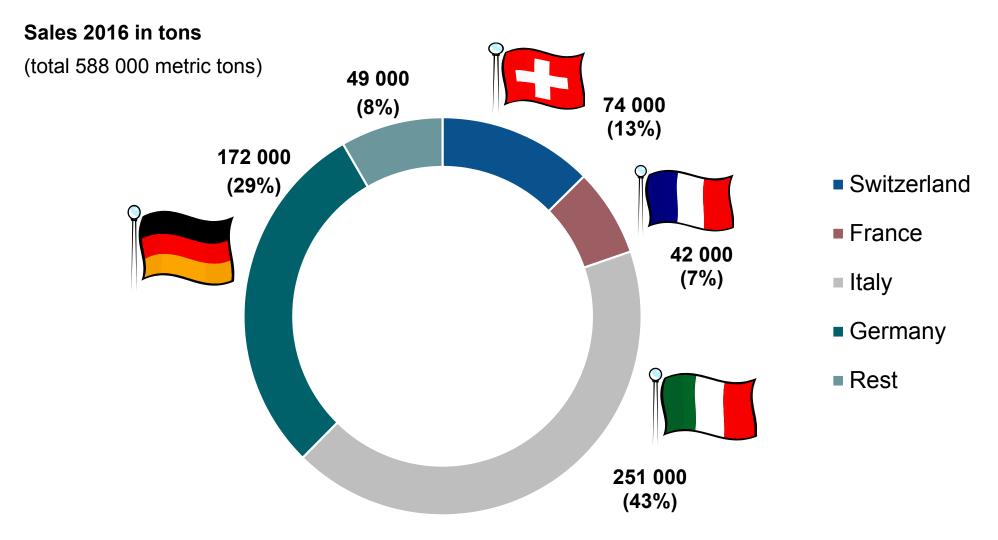


### **European Automotive Sector is Swiss Steel's Key Market**





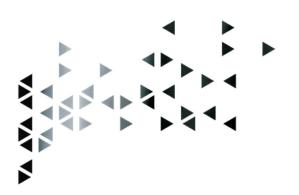
### Ideal Location To Focus On The European Industrial Centers



Switzerland: thereof 63 000 tons are owed to Steeltec Italy: thereof 95 000 tons of billets

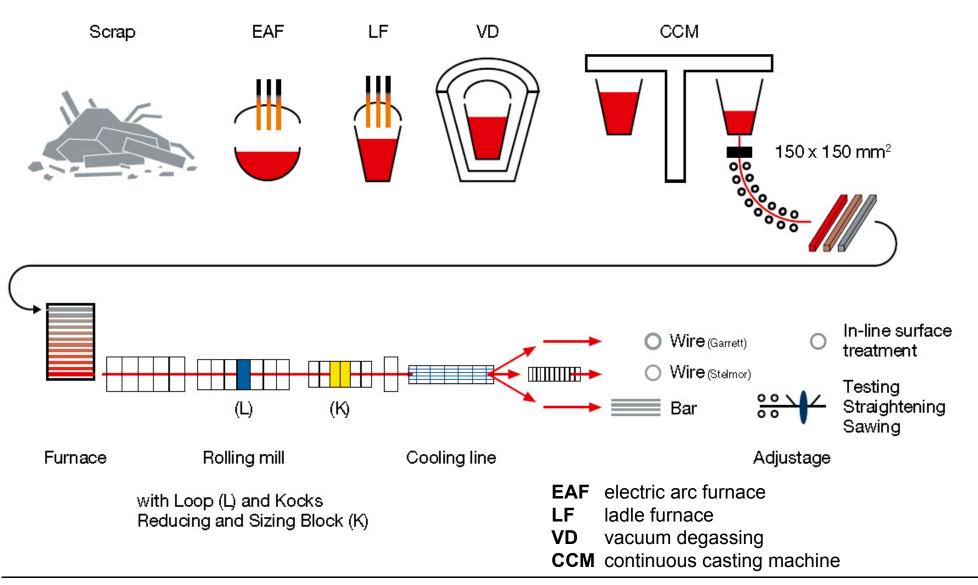


## Production Process, Products and Productivity





### **Production Process – From Scrap to High-Quality Special Steel**



### Selective Modernization Investments Secure Competitiveness

#### **Melt Shop**

► Electric Arc Furnace

Ladle Furnace

Vacuum Degassing

Continuous Caster

→ Start up 1999, revamp 2013

→ Start up 2002, revamp 2015

→ Start up 2005

Start up 1998, revamp 2007

#### **Hot Rolling Mill**

Walking Beam Furnace

Rolling Mill

Stelmor line (wire)

Garrett line (BIC)

Garret Coiler

Bar line

→ Start up 1980, replacement in 2019

→ Start up 1980, revamp 2002

→ Start up 1980, revamp 2016

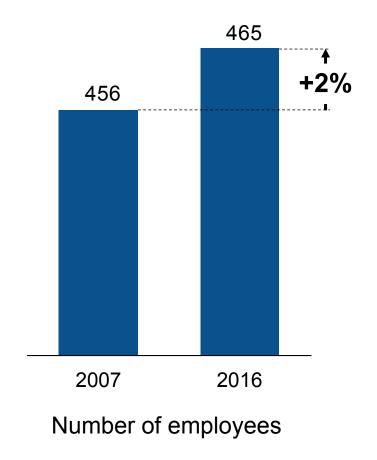
→ Start up 1980, revamp 2016

→ Start up 1980, replacement 2018

→ Start up 1980, revamp 2015



## Improved Productivity Over the Years Supports Profitability



1 238 +9% 1 135 2007 2016

Tons produced per employee



# Ongoing Efficiency Improvement Measures Support Profitability

#### **Efficiency improvement measures (examples)**

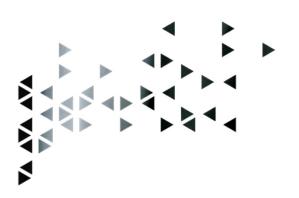
- Scrap quality increase through intensified contact to suppliers, optimization of scrap supplier mix and better delivery inspections
- ► Raw material optimization model to improve the raw material mix per heat
- Improvement of process and yield in melt shop and rolling mill (e.g. optimization starting billet, automation and digitalization concepts)
- ► Transform EAF slag from waste to good and reduce thereby dumping costs
- ► Introduce step by step Industry 4.0 (e.g. PQA project with Steeltec)

Cost reduction 2017 approx. CHF 3 million

Cost reduction 2018–2021 approx. CHF 5 million



## Jointly Stronger – Contribution to The Group's Strength





# Jointly Stronger – Network in Emmenbrücke Offers Many Advantages

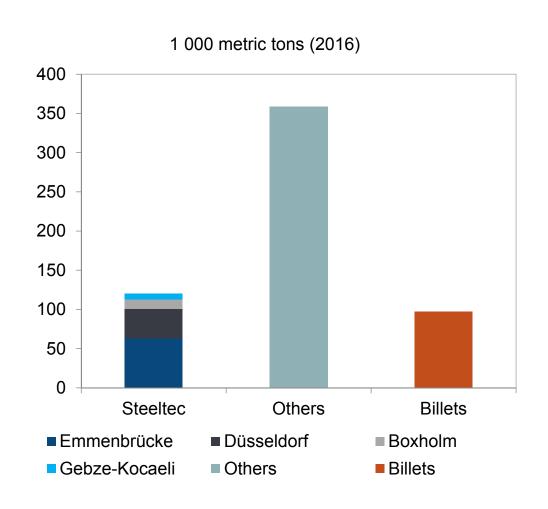
- ▶ 1842 Steel industry in Emmenbrücke was born
- ▶ 1997 Split into three competence centers:
  - von Moos Stahl AG (since 2007 Swiss Steel AG) as competence center for special and freecutting steel
  - Steeltec AG as competence center for unique bright steel products
  - Panlog AG as logistic competence center
- ► Market-driven logic for split: many Swiss Steel customers were competitors to Steeltec
- Existing "intra-company" network was continued and nurtured, resulting in:
  - deep knowledge of bright bar steel market and leading position
  - development synergies resulting in short time to market for new products
  - cost benefits through shared services
  - cost benefits from bundled logistics



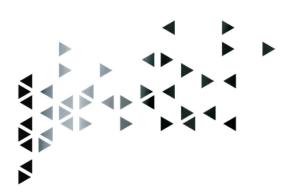
# Steeltec Group Purchases 25% of Rolled Material Production From Swiss Steel, Thereby Covering Over 55% of Their Needs

#### **Steeltec locations:**

- Emmenbrücke (CH)>75% ETG/HSX
- Düsseldorf (GER)>80% leaded free-cutting
- ► Boxholm (SWE)
  leaded free-cutting, carbon
- Gebze-Kocaeli (TR)carbon, leaded free-cutting



## Strategic Action Plan 2017–2024





### Strategic Review Resulted in Need For Action

- Main competitors are Western European producers
- Competitors: recent and current substantial investments, primarily aimed at increasing quality and productivity
- <u>Customers:</u> recent and current investments in new production capacities and state-of-the-art test equipment
- → Conclusion: optimism on the European steel market development prevails
- Swiss Steel is well positioned and a key player in most of its markets in Western Europe
- Swiss Steel USP: Promptness, flexibility and reliability
- ▶ BUT: Swiss Steel needs to react to the investment offensive of both competitors and customers



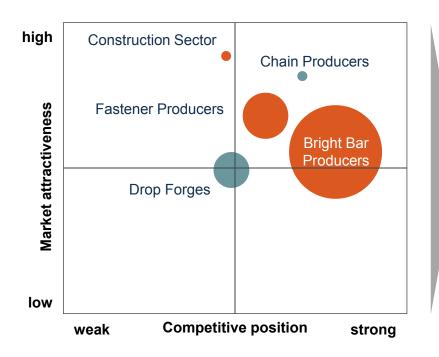
# **Key Strategic Cornerstones to Strengthen Swiss Steel's Future Competitiveness**

Process / Market Strategy Product Innovation **SWISS STEEL** Continuous Technology Efficiency Investments Improvements



# **Bright Bar and Fastener Producers Remain Key Markets – Opportunities in the Construction Sector**

#### Strategic position



Note: Size represents sales average 2015–2016 in EUR (indication)

#### Market strategy

#### Bright Bar Producers

- keep key player position in free-cutting steel market (#1 in Italy)
- continue to support Steeltec's strong competitive position – raw material optimization for ETG<sup>®</sup>/HSX<sup>®</sup>, develop new grades
- develop & bring to market unleaded free-cutting grades

#### Fastener Producers

- increase market share in standard products (mainly in I/D)
- develop products aimed at giving cost advantages to customers (e.g. no heat treatment)

#### **▶** Chain Producers

 to keep our key position by producers of high grade chains (D, A and S)

#### Drop Forges

keep market positions (strong in France)

#### Construction Sector

- increase sales of niche products GEWI, Top12, Top700



## Competitiveness Beyond 2020 Ensured by New Walking Beam Furnace

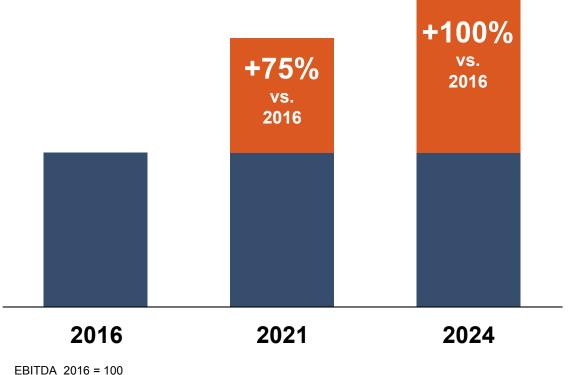
- Productivity improvement by 8%
- Quality improvement: reduction of customer claims and internal rejections by 25% respectively 24%
- Cost reduction: gas consumption reduction by 15%
- Improvement of customer/product mix increased coil weight or more constant quality 15 000 t/a
- Strategic option: reduce billets sales by increasing the rolled material sales → reduced risk of loosing steel mill full utilization







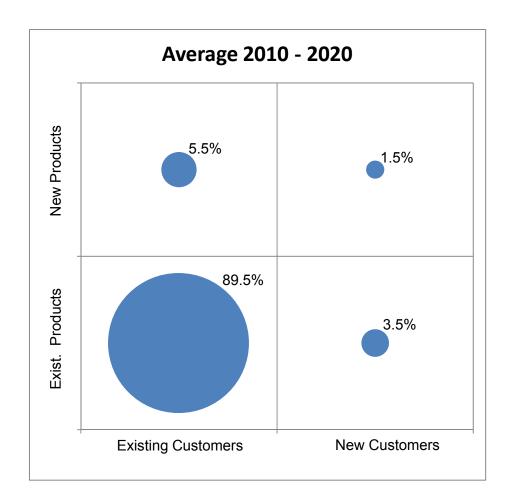
# Doubling EBITDA by 2024: Efficiency Measures and New Walking Beam Furnace Are Main Drivers

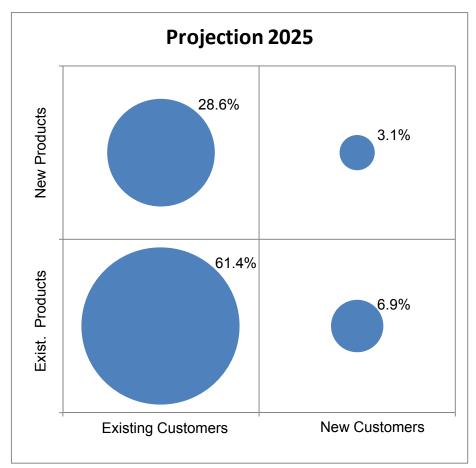


- Efficiency improvements
- Walking Beam Furnace
- C&P mix improvement
- Brand new products through innovation focus



# Walking Beam Furnace and Strategic Process Innovations Will Change the Portfolio





Bubble size = EBITDA in CHF, adjusted for royalties



# Value of Environmental Protection, Key Position in Recycling Chain





## Significant Investments to Reduce the Environmental Impact – CHF 60 Million in the Past 10 Years



Filter system hall extraction in steel mill (CHF 4.6 million)



Noise barrier (CHF 1.3 million)



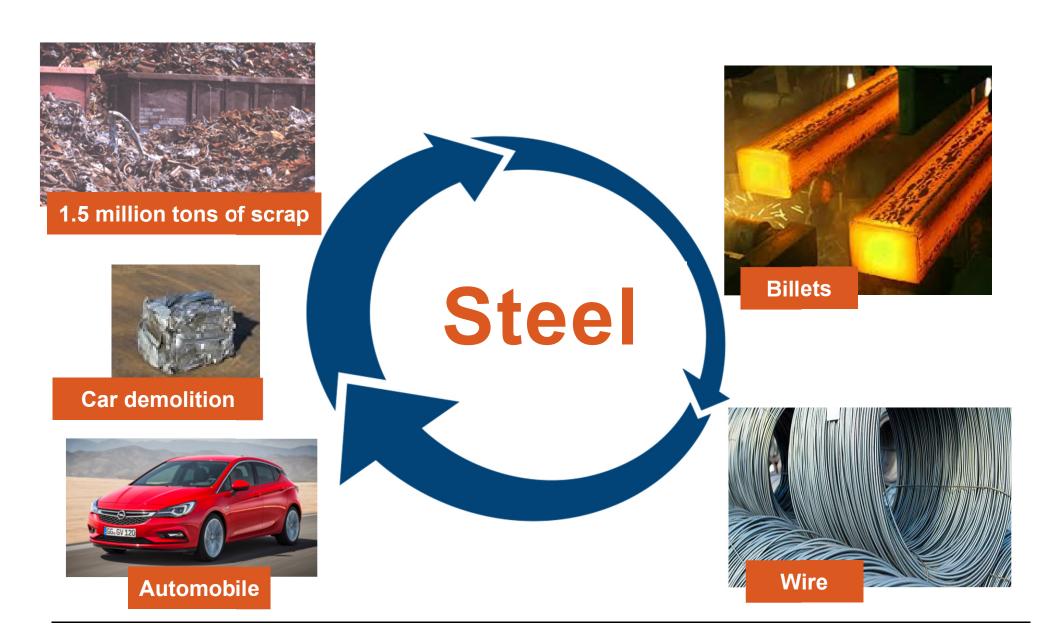
Filter system in rolling mill (CHF 9.2 million)



Cooling water system / Water management (CHF 1.1 million)



### Swiss Steel as a Recycler of the Nation



## Jointly Stronger – Swiss Steel







## Swiss Steel, Steeltec & Panlog – Jointly Stronger





## Jointly Stronger – Steeltec Group



Steeltec Group – the Leading Special Bright Steel Producer

in Europe Steeltec Boxholm AB | S Stock distribution + service centre Boxholm Steeltec A/S | DK Sales office **Nørresundby** Steeltec GmbH | D Steeltec Praezisa GmbH | D Manufacturing and warehousing Stock distribution + service centre Düsseldorf **Niedereschach** Steeltec Celik A.S.| TR Steeltec AG | CH Manufacturing and warehousing Manufacturing and warehousing Gebze - Kocaeli Emmenbrücke

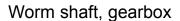


#### Our Vision & Mission – We Do What We Do Best

Raw Material Bright Bar Parts System Vendor OEM

- "Premium" supplier and recognized development partner along the automotive supply chain
- ► Technological leadership for high-strength special steels steel for sophisticated parts



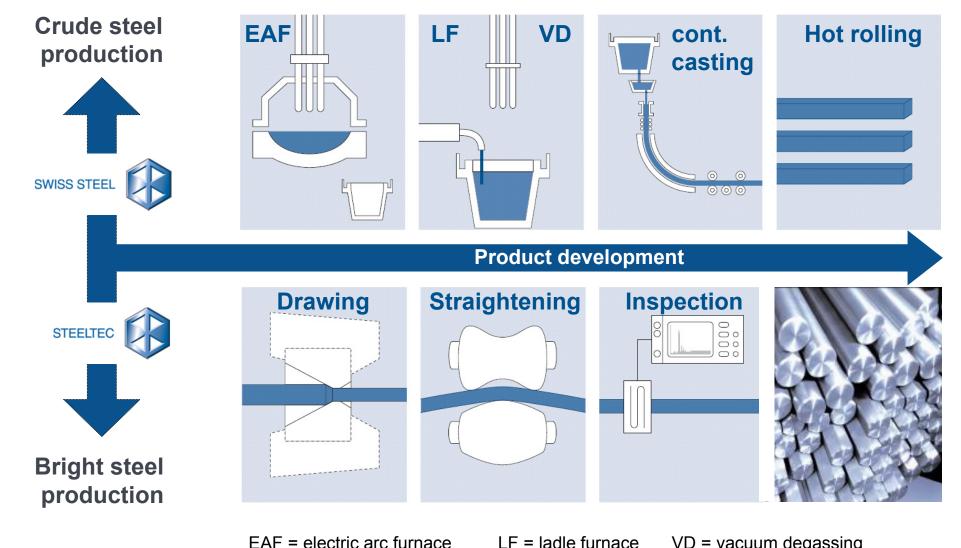




Common rail diesel injector



## **Jointly Stronger – Integrated Product and Process Development Between Swiss Steel and Steeltec**

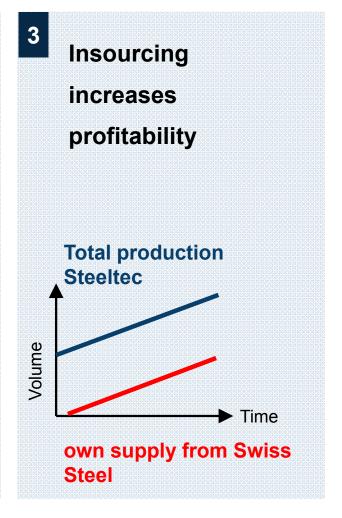




## Specialization and Top-Notch Products As Unique Selling Points

**Growth of profitable** high-strength special steels & innovations **High-strength steels total** Volume Time of which HSX®

2 **Standard products** are replaced by profitable special solutions **Standard products** Volume Time of which Swiss Cut



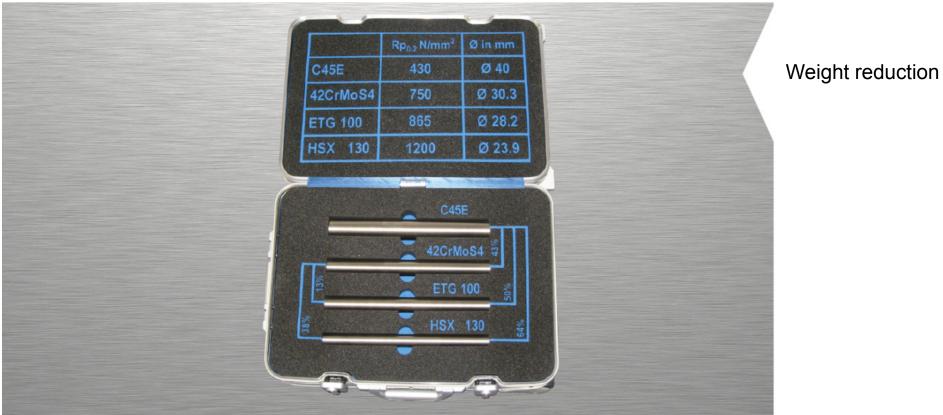
## High Value-added Products – What Do ETG® and HSX® Stand For?

- ► ETG® and HSX® stand for Steeltec brand names established throughout Europe for High-Strength Special Steels
- Special Steels manufactured using specially-developed processes
- ► High competence in material and cutting processes
- High tensile strength as drawn
- Outstanding machining properties
- High process capability
- **→** ETG<sup>®</sup> and HSX<sup>®</sup> = greater customer benefits





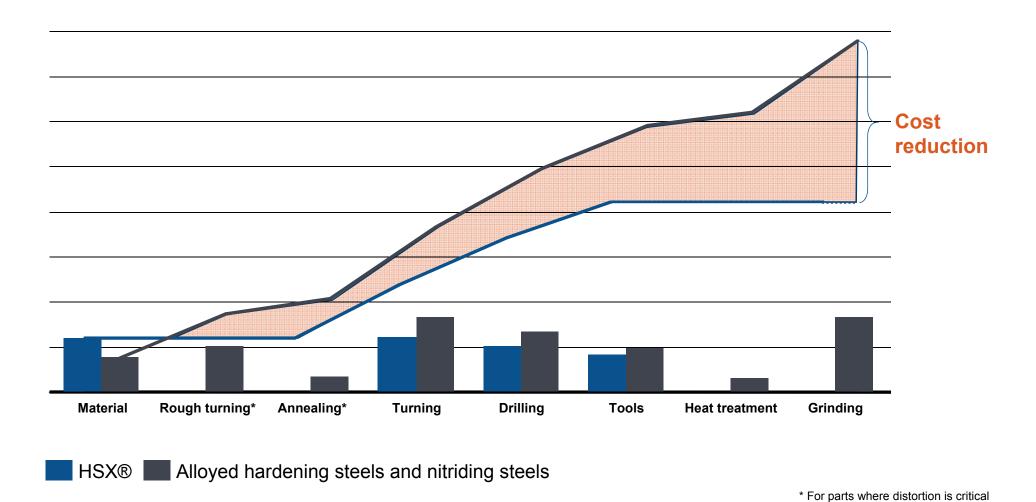
## **Customer Benefit – Weight Reduction Compared to Conventional Steels**





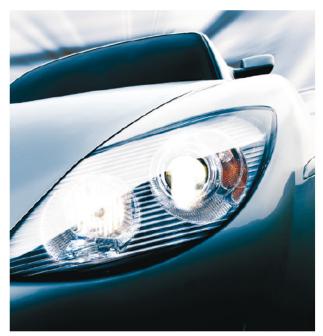
## **Customer Benefit – Cost Reduction Compared to Conventional Steels**

Structured cost comparison: HSX® vs. alloyed hardening steels and nitriding steels

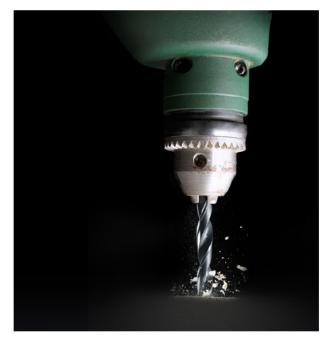




# **Industrial Segments Served by Steeltec**







Automotive industry

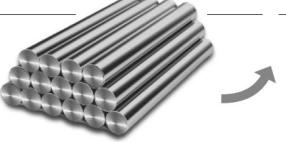


**60%** Hydraulic

**30%** Mechanical engineering

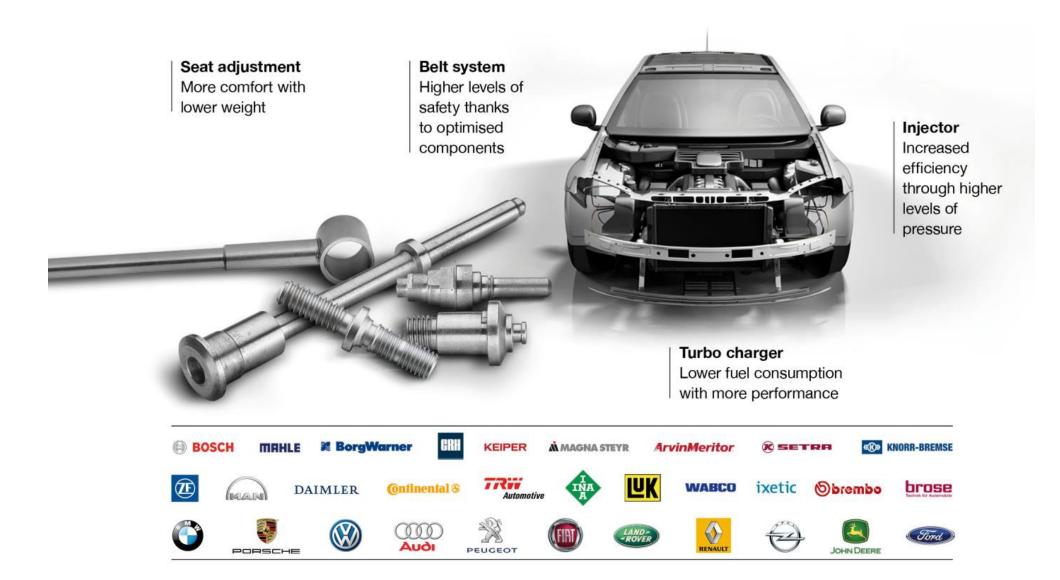
10%





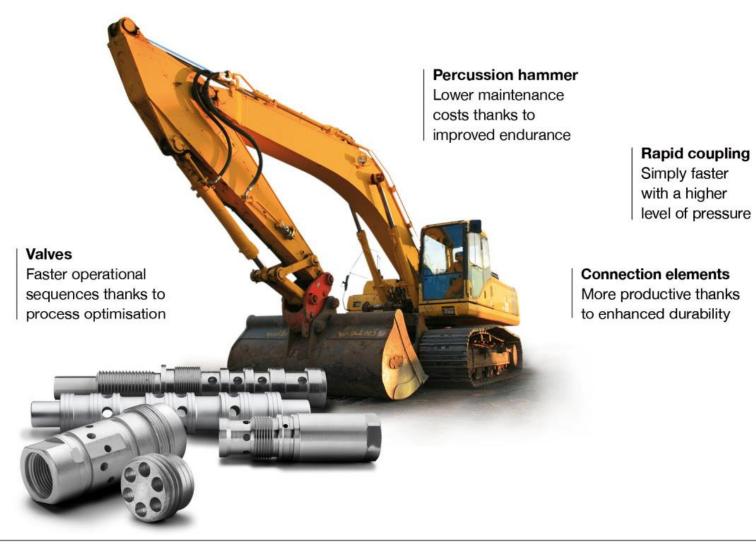


# **Application Examples Automotive**





# **Application Examples Hydraulic**



















# **Application Examples Mechanical Engineering**



**HSM**°

( BOSCH

GEZE



9-411L-T-1

ABB

**IDAHLE** 

IDE//L

### Jointly Stronger – Steeltec Group





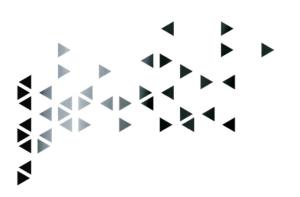
Capital Markets & Media Day 2017

Peter Klarer, CEO Panlog





# Swiss Steel, Steeltec & Panlog – Jointly Stronger





# **Jointly Stronger – Panlog**



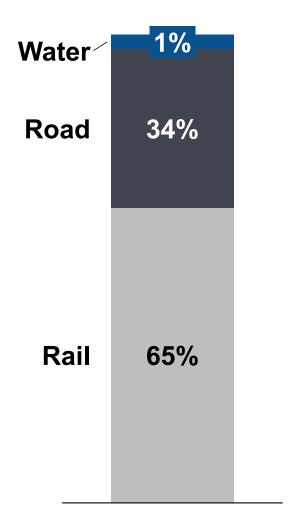
### Panlog – Experts in Steel Logistics

- Offer high-quality services for industrial and trading companies in the steel segment
- Areas procurement, internal site, warehouse and distribution logistics
- Core Competences organization and execution of transports on rails, roads and water, mainly in the trans-European network





# Two-thirds of Transport Volume are by Rail











# **Efficient Logistics – Panlog's Transport Capacities**







- 3 Locomotives
- 1 Robot
- 44 Rail wagons
- 18 km rail length on site
- 26 Switches manual
- 26 Switches electrical
- 1 Locomotive garage

- 4 Semi-trucks
- 4 Trailers
- 1 Three axle motor vehicle
- 3 Two axle motor vehicles
- 1 Delivery van
- 1 Swap body tipping trailer

- ▶ No own ships
- Ship capacities are rented



# **Switzerland and Neighboring Countries as Main Markets**

Shares of transport	Rail (65%) 643 mt/y	Road (34%) 333 mt/y	Water (< 1%) 4 mt/y
+	Scrap intake 30% Dispatch 5%	16%	
	15%	41%	50%
		15%	
	34%	12%	
C*			50%
<b>C</b> *	1%		
* * * * * * *	Scrap import 15%	16%	

# Jointly Stronger – A Key Element in Competitive and Efficient Transport Logistics For Swiss Steel and Steeltec

#### Rail

- ▶ 7 block trains/week to Italy
- 2 in- and outbound trains respectively in Emmenbrücke
- Management of train stationEmmenbrücke for SBB Cargo
- Railway activity on site in 2–4 shifts / 7 days a week



#### Road

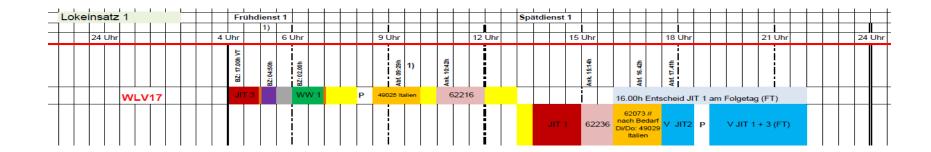
- Ø 50 truckloads per day from Swiss Steel
- Ø 15 truckloads per day from Steeltec





# Jointly Stronger – Efficiency Gains in Recent Years Supporting the Profitability of the Group

- ► Management of rail wagons 90% of wagons are used for reloading
  - Reduction of standing costs for rail wagons
  - No additional rental costs for wagon equipment
- Service portfolio: tender for transport services
  - Portfolio of suppliers could be optimized two to max. three suppliers for all destinations
- ▶ Introduction of time management in railway production one locomotive is less in use





### **Summary Jointly Stronger – Emmenbrücke Network Works**



### MANAGING THE NETWORK FOR

**Costs Efficiency Technology Innovation** 

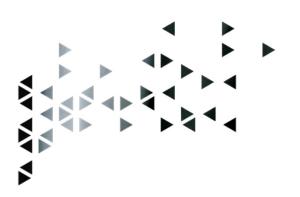




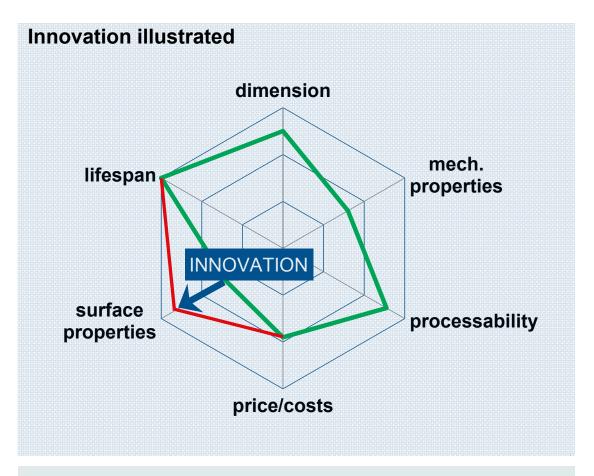
Joachim Graefe, VP Technical Development & Program Office



# 105 Innovation & Technology – A Key Element of Long-Term Success



### Value-added to the Customer is at the Heart of Innovation

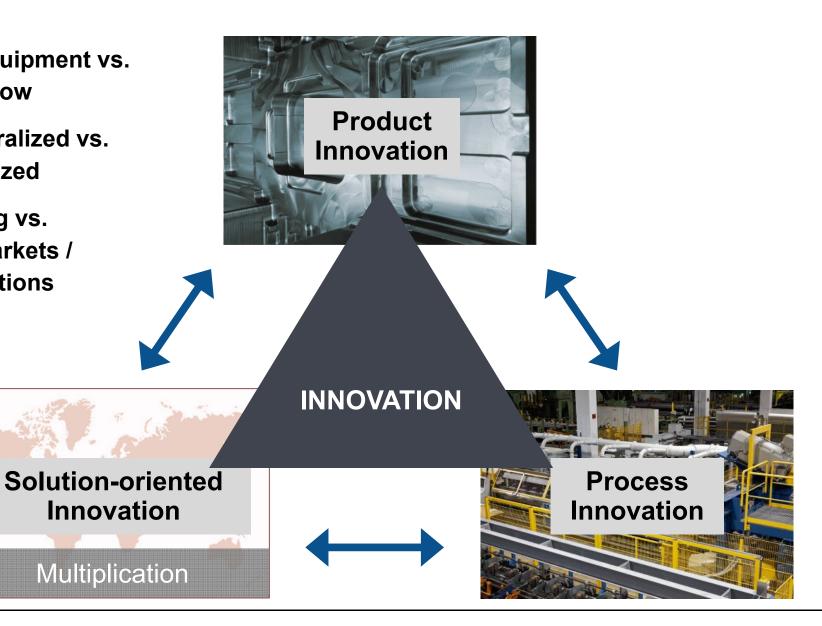


#### **Future innovation KPI holistic:**

Steel analysis will cover solidification, thermo-mechanical treatment, cold forming, logistics

### Innovation Structure as Base for Future Growth

- New equipment vs. know-how
- Decentralized vs. centralized
- **Existing vs.** new markets / applications



# Axes of Innovation Require Different Timelines and Resources

# Products / Services

new

existing

Engineering steel – Bainitic steels; ingots up to 130 mt net;

 Stainless steel –Steels for turbo chargers, for injection; frack blocks, Magnadur 509 for O&G; UGIMA3®; duplex rebar with TRIP

- ► Tool steel Mould steel CoreBloc® alloy, ESR/VAR, MD®-Xtra, MLQ®-Xtra; Supercool 1.2383; 1.2626 for semi-hot forging
- Increase market share through quality and service
- Grow value-added services –
   machining, short length cutting

► Additive manufacturing – Powder metallurgy; PM tool steels; 3D printing

- XTP technology
- ► Thermal disruptor duplex steel
- ▶ Non-ferrous profiles for aerospace / nuclear
- ► Aludur light-weight, precipitation hardening
- ▶ Optidur 6315 highest strength, Mn-managing
- ▶ **Growth** through Sales & Services
- ► Engineering steel Bearings
- ► Stainless steel Boat shafts; aerospace remelted products; medical products 1.4472; valve steel; reinforcement bars
- ▶ Tool steel Cold rolls, Thermodur E40K

existing

**Markets / Customers** 

new

# **Key Metrics of the Innovation Process**

#### **Capex and dedicated R&D spent:**

- ► EUR 15 mn to 20 mn capex per year for product and process innovation
- ► EUR 9 mn dedicated R&D spend

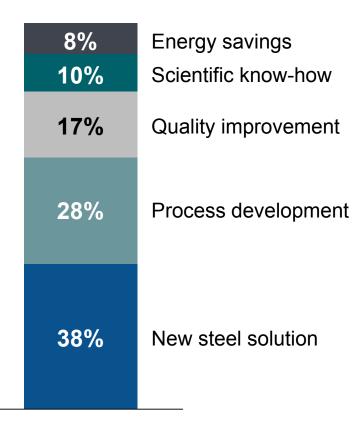
#### Not measured / not included:

e.g. customer trial expenses, increase of market share through quality or grow through value-added services

#### **Innovation KPI – new steel analysis:**

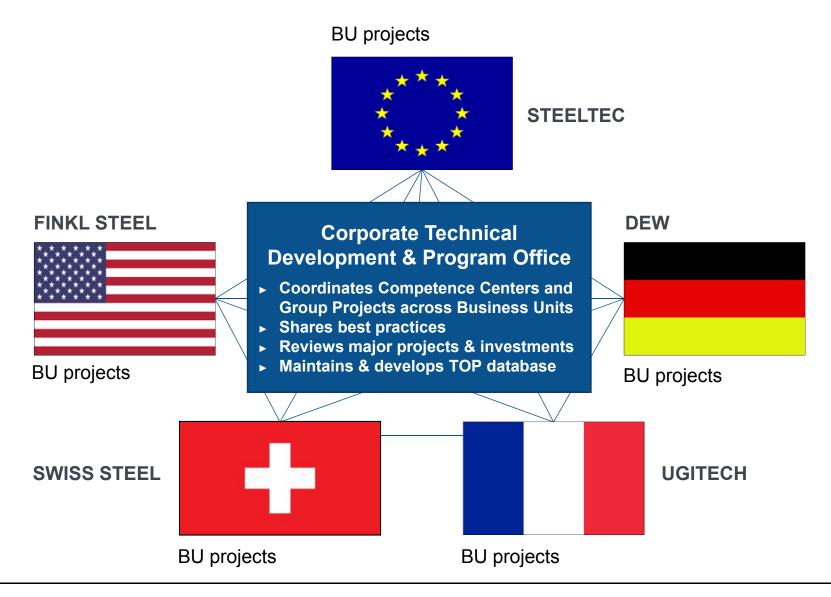
12–18% of total sales and total EBITDA (2014–16) are less than 6 years old

#### Split of dedicated R&D spent





# Decentralized But Globally Coordinated Innovation and Technology Approach Maximizes Flexibility



# **Competence Centers** as Catalysts for Innovation at Group Level

- Group-wide integration of experts
- ► Face-to-face meetings twice annually to exchange ideas
- ► Access to TOP, Technical Online Portal currently 85 staff, growing

Business Unit Competence Center	DEW	Finkl Steel	Steeltec	Swiss Steel	Ugitech
Engineering Steel					
Stainless Steel					
Tool Steel					
Technology					
			****	+	



# **Group Projects** Leverage Synergies Across the Group

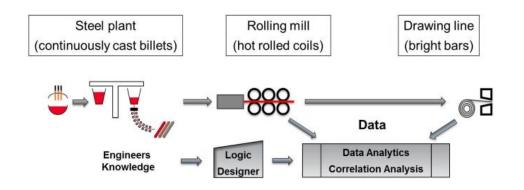
### **Industry 4.0 – Predictive Quality Analysis**

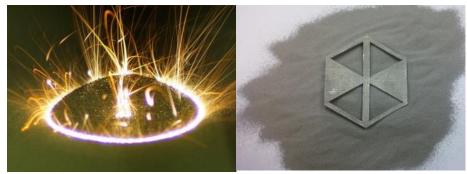
First installation in the long products industry
Prospective quality assessment based on
production data

### Additive Manufacturing -

Establish a group strategy to participate in this new and rapidly growing market.

Integrate and develop internal small-scale industrial and research production





# Business Unit Projects Focus on Process Improvements and Market-driven Innovations





### **Swiss Steel – walking beam furnace**

- Cost reduction
- Quality improvement

### **Ugitech – NADCAP certified heat treatment**

- New end user markets
- Quality improvement

# Multidisciplinary Approach to Push Innovation and Technology

### **Contributing ideas**

- Sales, technical support, logistics
- Process engineering metallurgy, hot & cold forming, machining
- Quality management, manufacturing
- Equipment, measurement & control systems, information technology, maintenance & repair



# Multiple Productivity Improvement Projects are «Cross-Fertilizing»

All sites –

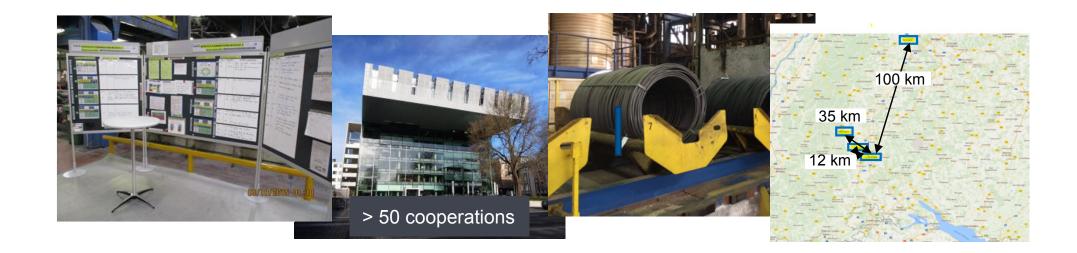
CIP continuous improvement program

All Business
Units –
applied research
with external
partners

Group sharing best practice – e.g. scrap, refractory selection, pickling

Group integration projects new site roles

within S+B





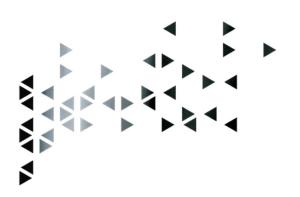
# **Capital Markets & Media Day 2017**

Heiko Haupt-Peter, Head Research & Development Swiss Steel





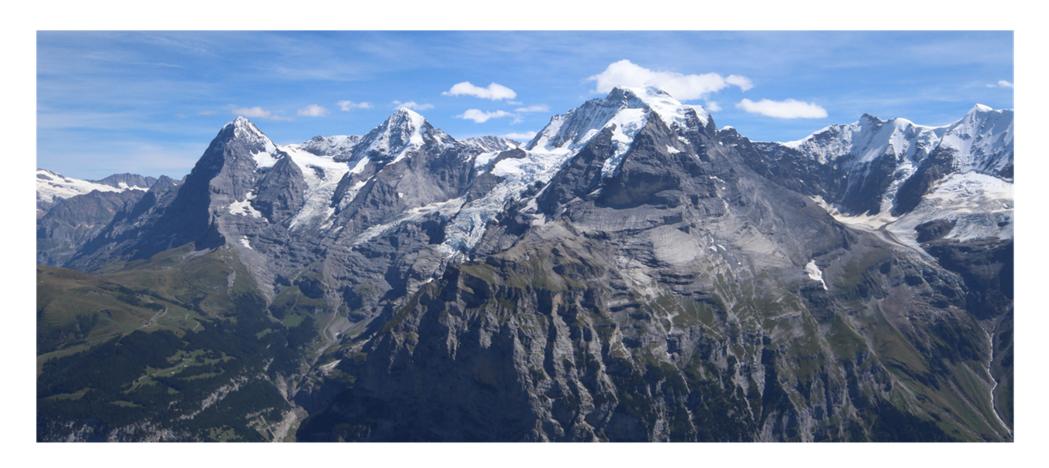
# 105 Innovation & Technology – A Key Element of Long-Term Success





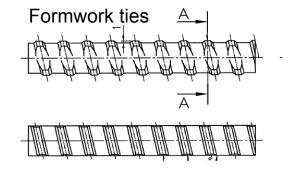
### **MORE Safe – Innovative – Economic – Ecologic Products**

### **Innovation example: Geotechnical application of Top12-670**

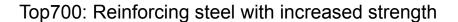


# Framework – Swiss Steel is Already a Well Established Niche Player in the Construction Sector











Top12-500: Reinforcing steel with increased corrosion resistance



### **Customers Tell Us Their Problems**

#### Somewhere at a construction site



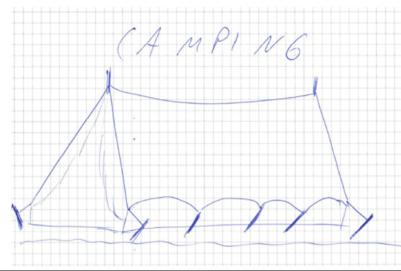
**Use of micropiles** 



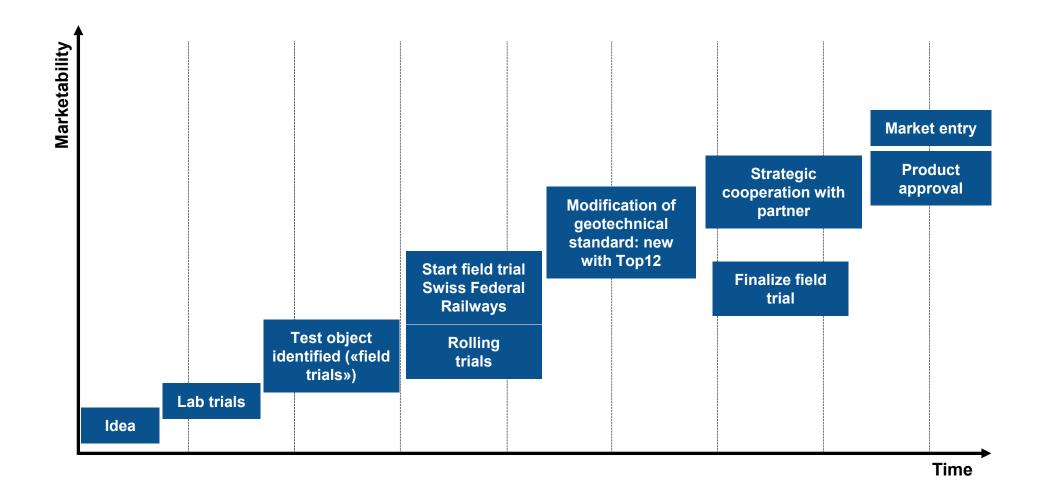
### **Micropiles**



Comparable with use of tent pegs



# A Long Way From an Idea to a Product



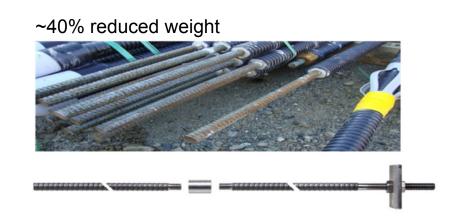


# **Top12-670-Anchor – Innovation Highlights**

#### More robust solution



# State of the art / conform to standards State of the art / conform to standards Schweizer Norm Norme suisse Norma svizzera State of the art / conform to standards Schweizer Norm Norme suisse Norma svizzera Sobs 267 Ersetzt Norm SIA 267, Ausgabe 2003 Geotechnique Geotechnique Geotechnical Design



# **Top12-670-Anchor – Innovation Highlights**

Light weight is an important advantage: Example Via Mala (Grisons)

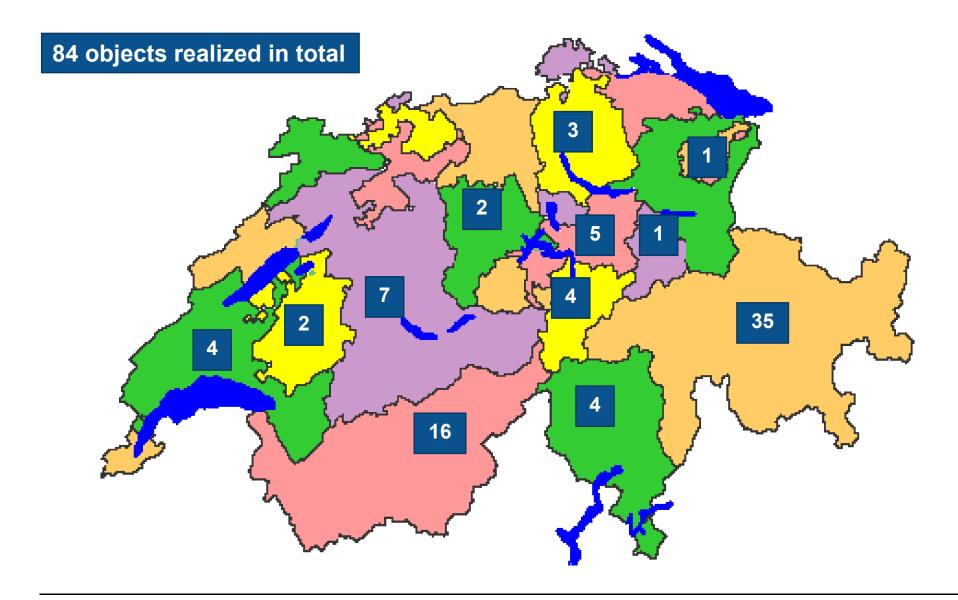








# **Top12-670-Anchor – A Success Story Begins**



### **Top12-670-Anchor – Our Solution for the Future Challenges**

#### Trend safety: Security against landslide



#### Zugausfälle nach Erdrutsch in Lausanne

Die Bahnstrecke Lausanne-Vevey bleibt für die nächsten Tage eingeschränkt. Die Aufräumarbeiten werden bis Freitag andauern.



Erdrutsch in Lausanne: Bahnstrecke zwischen Lausanne und Vevey blockiert. (Video: Tamedia/SDA

20.02.2017

#### Feedback Tragen Sie mit

Ein Erdrutsch in Lausanne hat am Montag zu Verspätungen im Bahnverkehr zwischen Genf und Brig geführt. Ein in der Nähe befindliches Gebäude musste vorübergehend evakuiert werden. Die Arbeiten dürften laut SBB bis Freitag dauern.



2 | 4 Der Erdrutsch sei in der N\u00e4he eines Geb\u00e4udes niedergegangen, teilte die Stadtpolizei Lausanne mit (20. Februar 2017). Bild: Jean-Christophe Bott/Keystone

#### Artikel zum Thema

Zug blockiert Strecke am Lötschberg



Die Bahnstreeke durch den Lötschberg-Basistunnel ist unterbroehen. Rund 350 Passagiere eines Euroeity-Zuges müssen im Tunnel in einen Ersatzung umsteigen. Mehr 51,015517

#### Defekter Lastwagen blockiert Gotthard-Tunnel

Der Getthardtunnel musste nach einer LKW-Panne gesperrt werden. Mittlerweile ist die A 2 wieder geöffnet. Mehr... 1801-2017

#### Die Redaktion auf Twitter

Stets informiert und aktuell. Folgen Sie uns auf dem Kurznachrichtendienst.

#### Trend sustainability: Corrosion resistance



#### New segment: Soil and rock nails, also for excavations



Top12-670 Object Gallerie near Lunschania



## **Performance and Reliability at Highest Levels**









# 105 Innovation & Technology – A Key Element of Long-Term Success

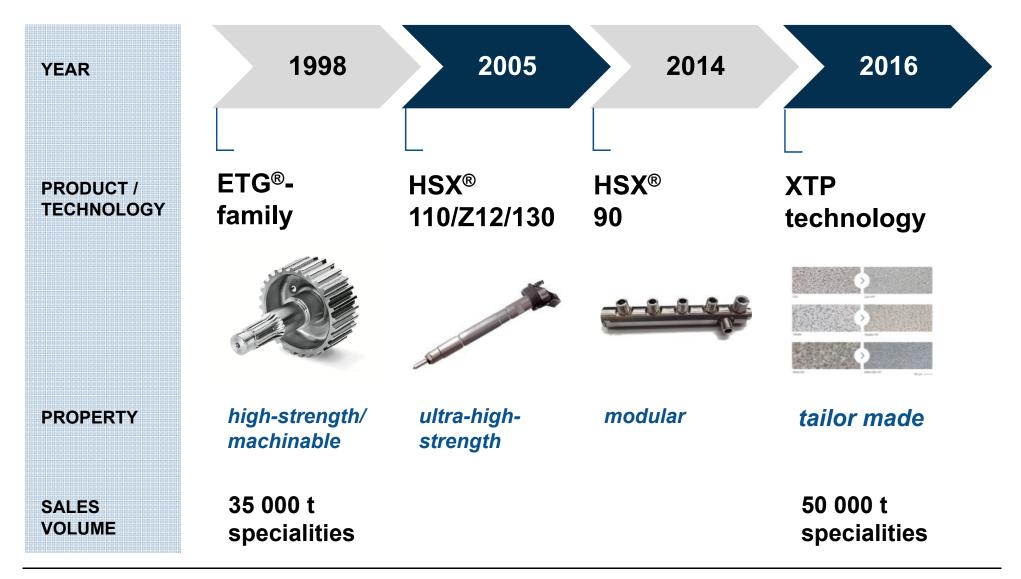




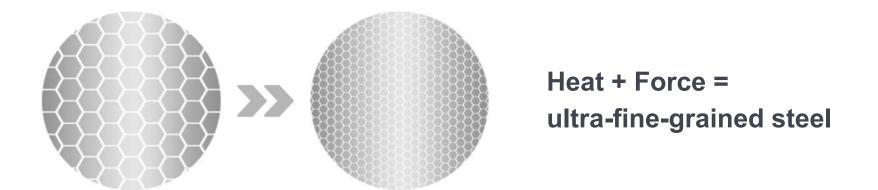
## **XTP Technology – From an Idea to Market Entry**



## From a Product Family to a Technology Solution

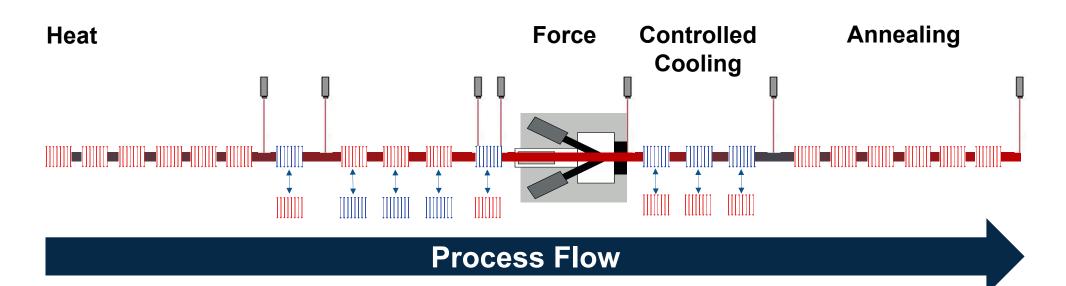


## XTP – The Idea is Based on Applying Heat and Force



- Refinement of grains is one of the effective methods for achieving toughness and strength in steels without the addition of alloying elements.
- Method is based on a well-controlled thermo-mechanical treatment of all types of steels.

# The Technology – XTP Line Operational in Düsseldorf Since 2016







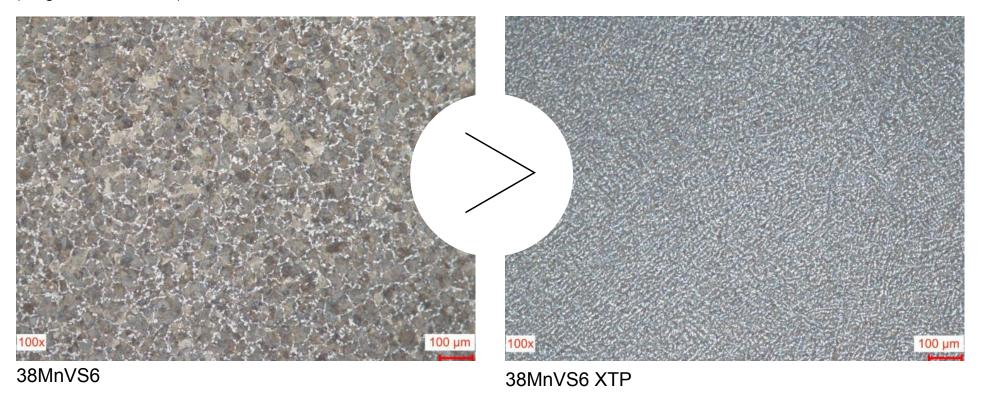




# The New Xtreme – Treatment of Most Conventional Standard Steels Significantly Improves its Properties

#### XTP-treated steel compared with standard steel

(magnification: 100 x)



Ultra-fine-grained steel that comes out on top in any trial of strength

### **Xtreme Characteristics – Superior Properties**



Xtreme toughness

Low-temperature toughness down to

-101°C



Xtreme strength

Increased tensile strength of up to

1800 MPa



Xtreme robustness

Dynamic strength increased by at least

+10%

Properties achieved with treatment of most conventional standard steels



## **Customer Benefits – Slimmer, Lighter, More Efficient**

XTP-treated steel gives users access to wholly new high-performance steel solutions for applications where materials have to cope with high levels of dynamic loading or where longer component lives are required.

#### **Key benefits of XTP-treated steel**

Downsize components without Withstand even Highest levels of Make existing any loss in their resistance to crack components tougher the most extreme and stronger ability to transmit conditions propagation forces **Greater design flexibility & greater** Maximum endurance and freedom in engineering and maximum safety manufacturing processes

# XTP-treated Steel Opens Up a Whole New Array of Potential Applications in Many Industries

- Spring manufacturing
- Hydraulics industry
- Connectors and fasteners
- Refrigeration systems

- Lifting equipment and lifting gear
- Automotive
- Wind power industry
- Railway industry

- Agriculture and forestry
- Oil and gas extraction and recovery
- ▶ and many others...







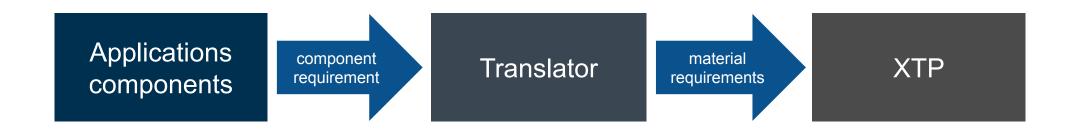








# Steeltec's Innovative High Performance Steel Solutions – Competitive Advantage For Our Customers



#### **Our strength:**

We help our customers to stay one step ahead of the competition.

We design innovative steel solutions that meet their application needs.



### XTP Market Activities Launched, Market Penetration Ongoing

- ▶ 114 European customers visited since official launch in April 2016
- ▶ 56% of customers visited are highly interested in the XTP technology
- 24 projects with a potential tonnage of > 2'145 metric tons
- ► International market launch supported by world-wide Sales & Services network
- Transfer of XTP technology to stainless steels from DEW and Ugitech



## The Future is Promising – Further Potential For XTP

