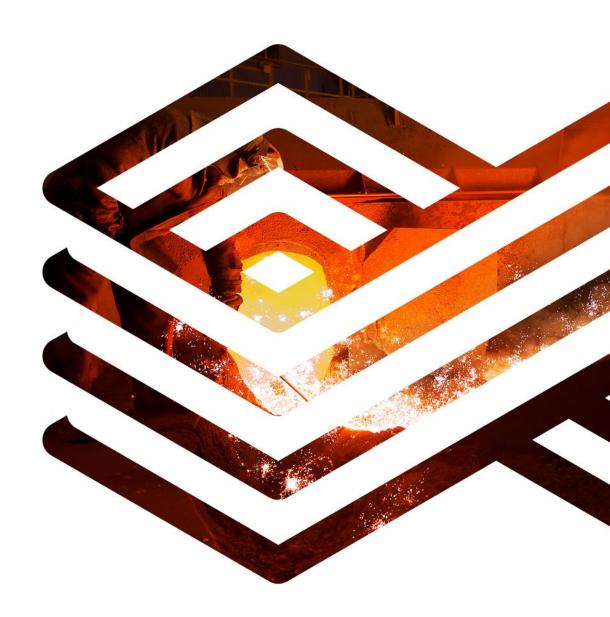


# The driving force of the refractory industry

#### Roadshow

September 2018



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### **Compelling investment case**

- Clear strategy and strong competitive position
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   Europe and Middle East with broadest value-added solution offering
- Opportunity to develop and leverage technology across regions and portfolio
- Highest level of vertical integration in the industry with unique mineral sources and 50%+ self-sufficiency in all raw materials
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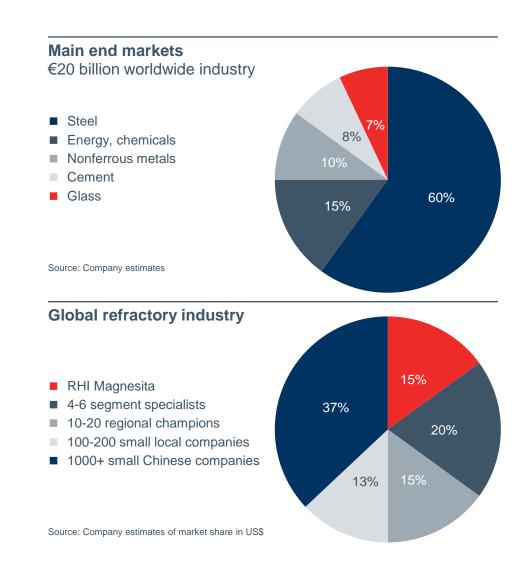


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# Refractories are critical to all high-temperature industrial processes

- Refractories are critical consumable or investment goods for high-temperature manufacturing processes
- ☐ Fireproof materials consumed whilst protecting clients' production processes, retaining physical and chemical characteristics when exposed to extreme conditions
- ☐ Critical, yet represent less than 3% of COGS in steel manufacturing and less than 1% in other applications





# Refractories are continuously consumed during finished goods production

Key industries	Applications	Replacement	% of clients'	Refractory characteristics
Steel	Basic oxygen-, electric arc furnace casting ladles	20 minutes to 2 months	~3.0%	Consumable product  Systems and solutions for complete refractory management
Cement/Lime	Rotary Kiln	Annually	~0.5%	Demand correlated to output
				Investment goods
Nonferrous metals	Copper-converter	1 – 10 years	~0.2%	Customized solutions based on the specific requirements of various industrial production processes
Glass	Glass furnace	Up to 10 years	~1.0%	Complete lining concepts including refractory engineering  Wide areas of application
Energy/ Environmental/ Chemicals	Secondary reformer	5 – 10 years	~1.5%	Mostly project driven demand cycles  Ongoing demand for repairs



# A complex range of tailored refractory products are required for each application



#### **Monolothics and pre casts**





#### **Functional products**

















#### **Example of refractory application for steel ladle**



<sup>+</sup>Systems and machinery



The driving force of the refractory industry



### Providing everything, for everyone, everywhere

**€2.7**bn

2017 adjusted pro-forma revenue

10,000

Customers served globally

14,000

Employees spread over 37 countries

35

Main production sites across 16 countries

180

Countries shipped worldwide

13

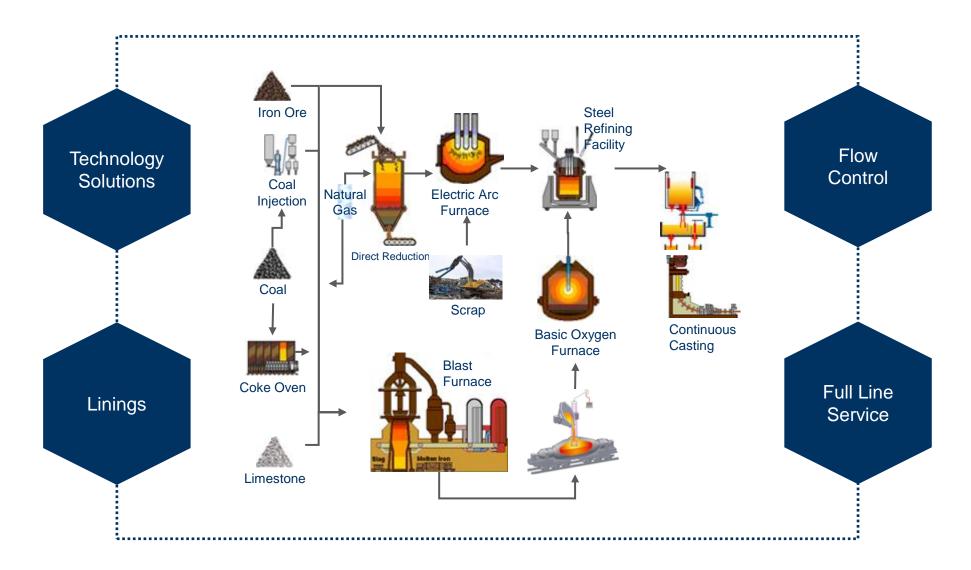
Raw material sites in 4 continents

€37m

Annual investment in Research



# Adding value through a full suite of products and services





### Serving all blue chip clients in every industry

**Steel** 











**Glass** 











































Serving 1060 of 1250 plants<sup>1</sup>

Serving 1376 of 1537plants<sup>1</sup>

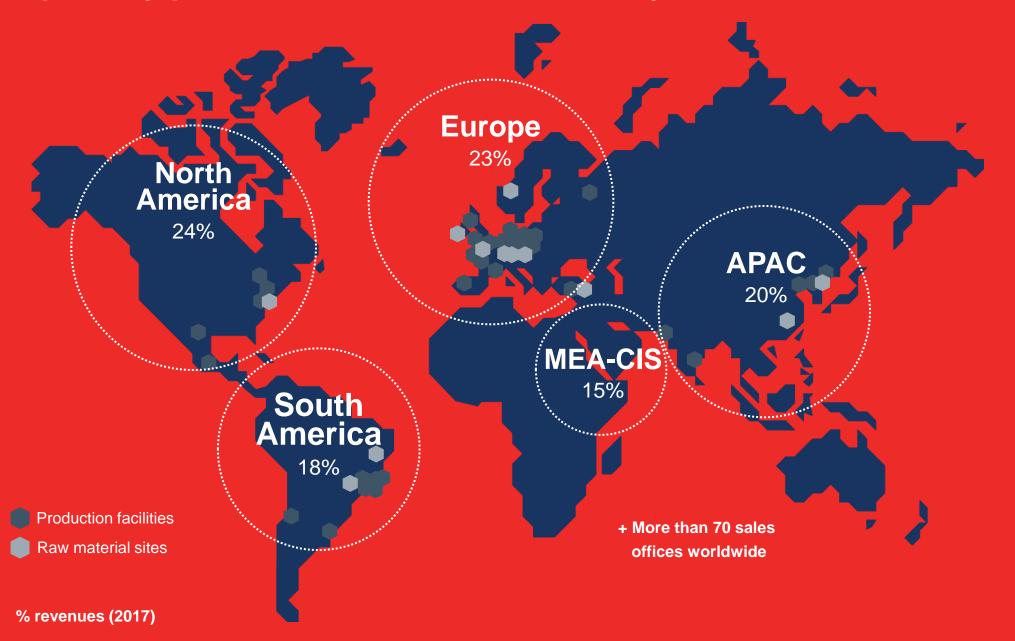
Serving 800 of 900 plants<sup>1</sup>

Serving 650 of 2000 plants<sup>1</sup>

¹ex-China

# RHI MAGNESITA

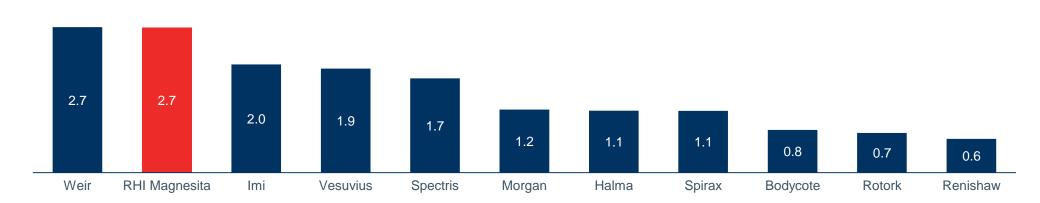
### **Optimally positioned to reach clients everywhere**



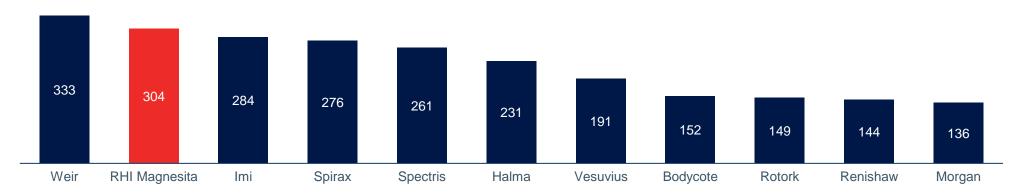


### **Amongst the leading FTSE 250 industrial companies**

#### Revenue (€ Bn)



#### EBITA (€ mln)



Source: Company 2017 Annual Reports







# Build a global refractory leader with a distinctive customer proposition based on technology and cost competitiveness to ensure manufacturing of essential materials for the world



#### **Markets**

Worldwide presence with strong local organizations and solid market positions. Opportunity to expand in Asia.



### Competitiveness

Cost competitive and safe production network supported by lowest cost G&A services.

Opportunity to lower COGS through capacity expansion.



### **Portfolio**

Comprehensive refractory product portfolio including basic, non-basic, functional products and services in high performance segments.

Opportunity to grow via capacity expansion and partnerships.



### **People**

Hire, retain and motivate talent and nurture a meritocratic, performance-driven, client-focused friendly culture. Opportunity to attract new talent from inside and outside RHI Magnesita.

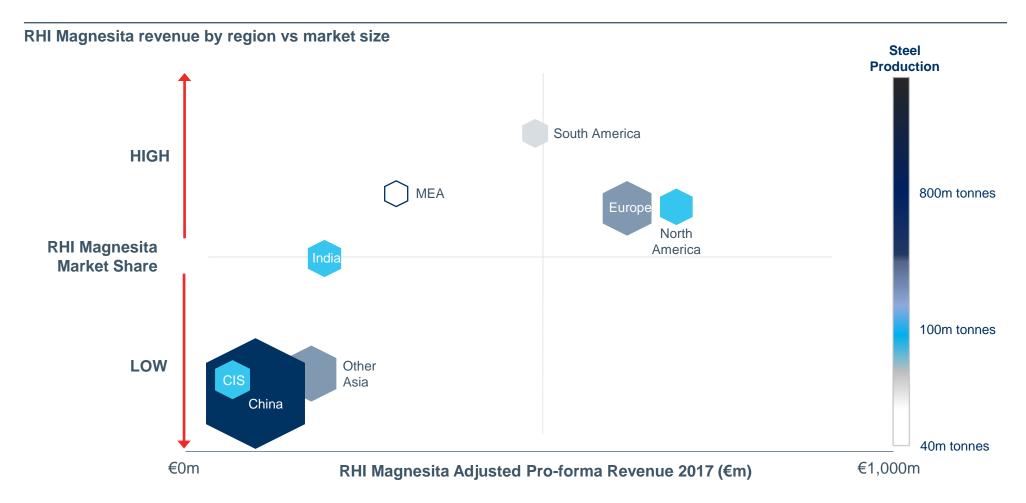


### **Technology**

Top solution provider in the refractory industry with an extensive portfolio based on innovative technologies and digitalization. Opportunities to develop tailored solutions with new technologies and partners.



# High market share in Europe and Americas with opportunities to occupy 'white spaces' in India, China and CIS



- Dedicated strategy for China with focus on growing locally, to achieve sustainable and profitable revenue growth
- Focus on organic growth in India (high quality demand) and US based on positive local market development
- Drive organic growth in the mid term and in the long run consider M&A to achieve overall global presence



# Extend market position in high quality applications and strengthen non-basic mixes and functional products

Portfolio	Main Applications	Opportunity		
Basic Products	<ul><li>Steel: converters and ladles</li><li>Industrial: Nonferrous Metals</li></ul>	<ul> <li>Great capability and logistics: Production in all continents and short lead-time to everyone, everywhere</li> <li>RHI Magnesita, for example, produces world-class mag-carbon bricks. The combination of the best raw materials with the continuous investments in R&amp;D allowed the Company to develop a high-performance product which enhances clients productivity</li> </ul>		
Non-basic products	<ul> <li>Steel: blast furnace &amp; reheating furnaces and direct reduction</li> <li>Industrial: bricks &amp; castables</li> </ul>	<ul> <li>□ Estimated global market of €4 billion+</li> <li>□ RHI Magnesita has a complete non-basic product portfolio</li> <li>□ Strong presence in South America. Great opportunity to expand in North America and Europe</li> </ul>		
Functional Products	<ul><li>Steel: continuous and ingot casting</li><li>Industrial: Nonferrous Metals</li></ul>	<ul> <li>Technical expertise, complete product portfolio, solutions beyond refractory products such as mechanisms</li> <li>A global plant footprint allows optimization of supply chain</li> <li>Continuosly growing business with a combined market share globally ~20%; significant growth potential</li> </ul>		
Engineering Solutions	<ul> <li>Steel: tundish efficiency improvement</li> <li>Industrial: raw material testing &amp; experimenting</li> </ul>	<ul> <li>Service provider and strong partner with the capability to provide solutions beyond refractories</li> <li>Tailor made solution for all customer requirements</li> <li>Simulations and modelling for improvement of customer processes (water modelling; fluid dynamics)</li> </ul>		



# Top solution provider in the industry, investing in innovative technologies and digitalization

1 Continue investing in R&D to create products, which have a distinct competitive advantage by costs or by product performance and defend current margin level sustainably

Develop into a system supplier based on R&D, partnerships and selective acquisitions and gain 50-100 basis points in margin

2 Explore digitalization & automation across the value chain to create additional value for our customers and achieve cost reduction and gain additional margin to our company



# The industry's largest dedicated research team, pushing the boundaries of what is possible

We drive innovation in every aspect of our business, from materials, robotics and Big Data, to bespoke new business models and efficient new processes, under extreme conditions.

#### Refractories

- Development and optimization of refractory products and manufacturing processes
- Market driven project portfolio
- Plant technical support and quality control

#### **Mineral**

- Increase ore recovery, maximize mine useful life and minimize environmental impacts
- Development of high quality, low cost raw material sources

#### **Basic research**

- □ Basic research ensuring technology leadership
- Strong focus on innovation

#### Recycling as an opportunity

☐ Green technology applied to reprocessing, sorting and reutilization of recycled raw material

Global research team of 270+ employees, of which 98 have masters and PHDs, working out of 2 research hubs and 3 centers



Investing €37m p.a. into technology-based solutions



# On-site technical experts consult, develop and deliver innovative solutions directly to clients

**340+ technical engineers across 90 countries**, working on-site with clients to provide custom-made solutions, installation support, recycling, post-mortem analysis and more.

#### A combination of...



High quality raw materials



World-class products



Continuous investments in R&D



On-site technical consulting

#### ...ensures customers

- ☐ Improve efficiency
- Improve quality
- Increase productivity
- Reduce costs
- Reduce working capital
- Reduce energy and other raw materials consumption
- Reduce environmental footprint



Cost competitive and safe production network supported by lowest cost G&A services

- Reduce conversion & logistics costs and optimize FX changes tactically through the most efficient usage of the global production footprint
- Run the **lowest cost G&A services** to support the daily business
- Strictly implement and safeguard achievement of operational synergies from the merger
- Improve efficiency and expand capacity selectively to support growth ambitions

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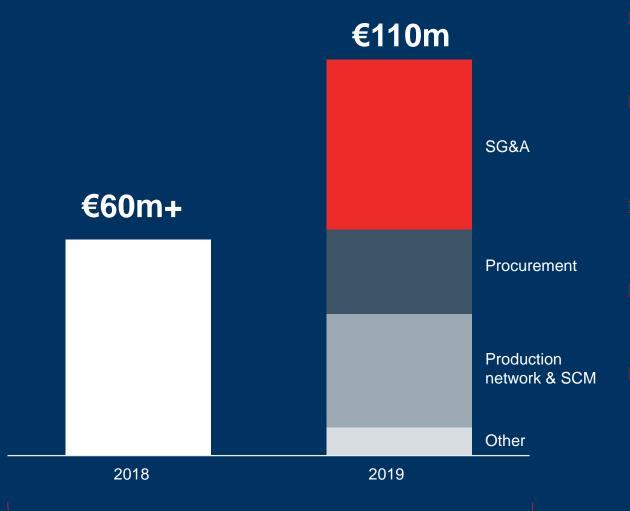


# Unrivalled competitive advantage through vertical integration, in multiple sites



### Increased synergy potential to be realised by 2020





- At least €60m synergies in the 2018 P&L and €110m in synergies to be achieved by 2020
- Expected total cash restructuring costs are projected to be €110-130m, with €75m of cash outflows disbursed during 2018
- Interest expenses reduced by at least €10m in 2018 and €20m in 2019 after re-financing completed in August 2018
- High volatility in global raw material markets pose additional risks and uncertainty, but also further upsides
  - Integration team is working on additional fronts, especially in G&A and the production network, which may lead to additional savings

Cash restructuring costs of €100-130m



# Synergy opportunities across a range of business activities

### **Opportunities** SG&A □ Rationalization of sales network ☐ Streamlining corporate management and back-office □ Ramp-up of shared service centers **Procurement** ☐ Best sourcing prices in overlapping countries and spend categories ■ Beneficial scale effect from high volumes Increase vendor financing **Production Network and** □ Network rationalization, enhancing distribution, reducing logistic costs and lead-time and improving capacity utilization **Supply Chain** ☐ Reallocate complementary product portfolios ☐ Enhanced raw material integration □ Cross-selling opportunities **Others** □ Product master-data homogenization



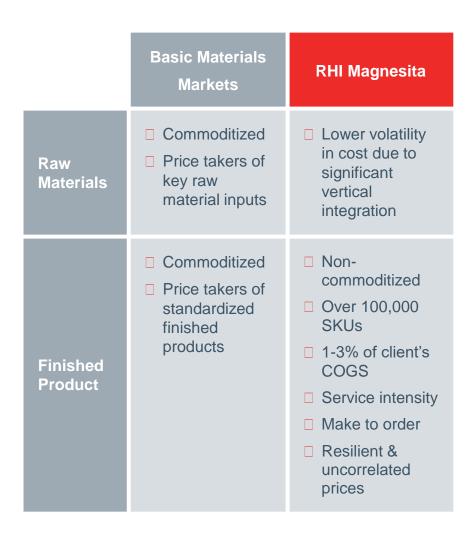
# Additional 'below the line' synergies are expected post-integration

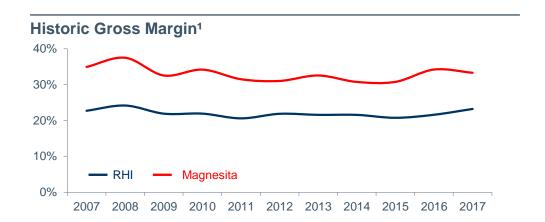
	Opportunities
Capex	<ul> <li>Footprint optimization to reduce maintenance capex over next 2-3 years</li> <li>Shift overall capex towards higher share of value &amp; growth projects</li> </ul>
Working Capital	<ul> <li>Reallocate production and shorten supply chain</li> <li>Replace third party raw materials with internal production</li> <li>Eliminate inventory overlap in key countries (Brazil, Mexico, United States)</li> </ul>
Interest Expenses	<ul> <li>Refinance facilities to take advantage of enhanced credit profile</li> <li>Use cash flows to delever company and reduce capital structure burden overall</li> <li>Target investment grade rating</li> </ul>
Tax	<ul> <li>Converge effective tax rate to global multinational levels: 25-29% in the short term and &lt;25% in the long term</li> <li>Monetize significant deferred tax assets</li> <li>Optimize efficiency of capital structure</li> </ul>

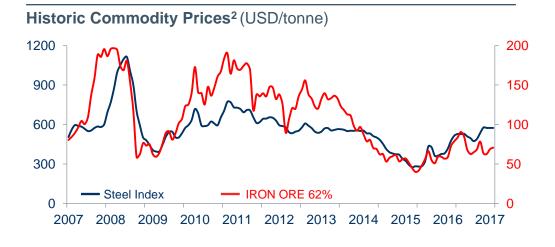




# Resilient business model with little volatility across the cycle and low level of commoditisation







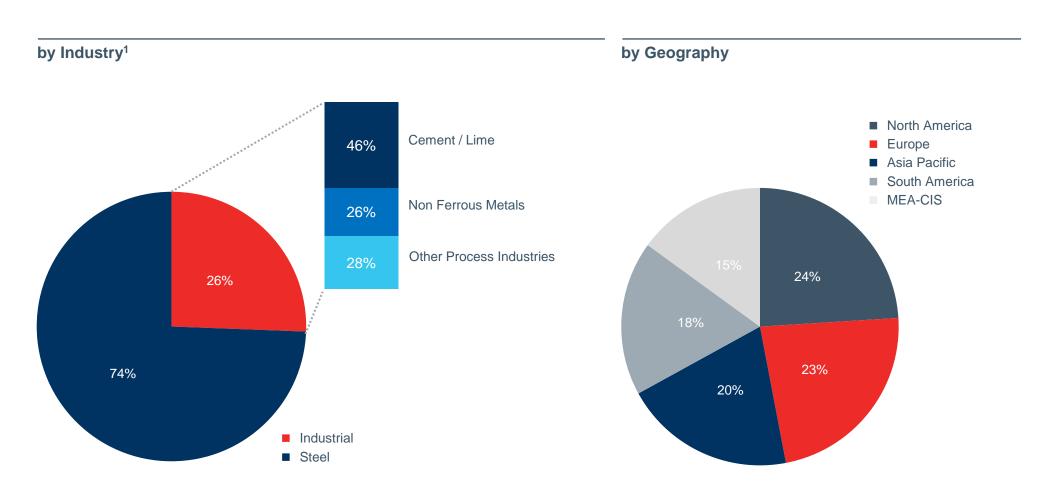
Gross margin as reported by RHI and Magnesita in their respective Financial Statements. Prior to the combination, Magnesita included freight in Selling expenses, rather than COGS.

<sup>2:</sup> Steel index: Bloomberg benchmark



### 2017 adjusted pro-forma revenue breakdown

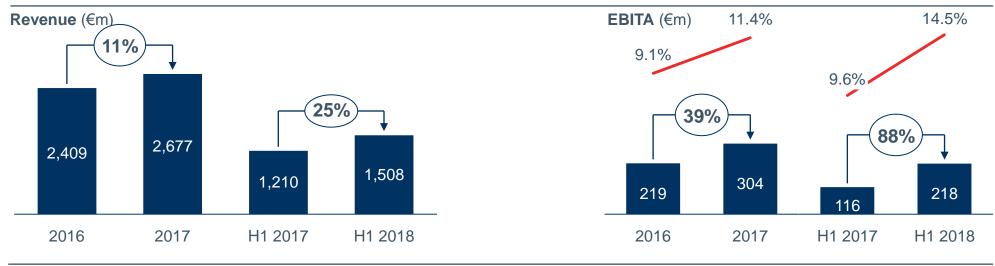
Total Revenue: c.€2.7 bn

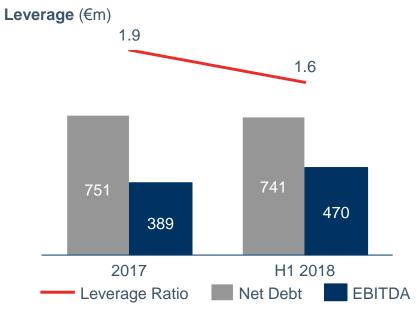


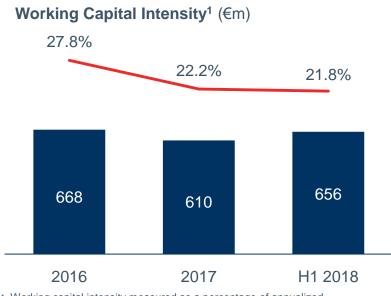
<sup>&</sup>lt;sup>1</sup> Revenue split considers only refractory segments



### Adjusted pro-forma results







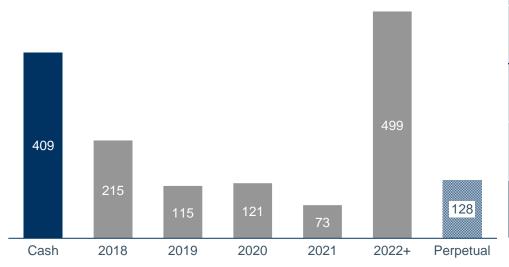


### **Capital structure**

#### Solid credit profile and commitment to de-leveraging the current business

- On 3 August 2018 the company successfully raised a new unsecured US\$600 million 5-year term loan and multicurrency revolving credit facility
- Proceeds of the new facility will be used to redeem the entire amount of outstanding Magnesita Perpetual Bonds on 20 August 2018 and prepay other short-term facilities

**Amortisation Schedule** (€ millions, as of 30 June 2018)



Capitalisation Table	€ millions
OeKB Term Loan	306
Perpetual Bond	128
Other Loans & Facilities	717
Total Gross Indebtedness	1,151
Cash, Equivalents & Marketable Securities	409
Net Debt	741



### **Capital strategy**

Dynamic capital allocation over time, supporting long term strategy, providing flexibility for market opportunities and increasing shareholder returns





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### **Driving client performance improvements**

Equipment/Application	Service	Starting point	End game	Improvement		
Client A (Integrated)						
Basic Oxygen Furnace (B.O.F.)	Refractories	1,900 heats	7,200 heats	+385%		
	Assembly	145 h	40 h	3.8X faster		
Blast Furnace	Runners	1,600 h	330 h	4.8X faster		
Torpedo Cast	Casting	230 kton metal	640 kton metal	+280%		
Client B (Mini Mills)						
	Roof	300 heats	2,100 heats	+600%		
EAF	Assembly	27 h	8 h	3.4X faster		
	Working Line	360 heats	1,200 heats	+200%		
Slide Gate	Refractory	3 heats	9 heats	+200%		
Client C (Stainless)						
AOD	Working Line	55 heats	70 heats	27%		
EAF	Working Line	200 heats	300 heats	50%		
Ladle	Working Line	50 heats	65 heats	30%		

Source: RHI Magnesita

## **Management team**



<b>Executive Management Team</b>	Joined	Background
Stefan Borgas CEO	2016	□ Former CEO of Israel Chemicals Ltd and Lonza Group □ Several management positions at BASF
Octavio Lopes CFO	2012	□ Former CEO of Magnesita and Equatorial Energia □ Several management positions at GP Investments
Luis R. Bittencourt	1989	<ul> <li>Former R&amp;D and raw material VP of Magnesita</li> <li>BA in mining engineering (UFMG), MS degree in metallurgical engineering (University of Utah) and PhD in ceramic engineering (University of Missouri)</li> </ul>
Gerd Schubert	2017	<ul> <li>Former COO of Pfleiderer S.A.</li> <li>Global Operations Director at Ferro Deutschland GmbH and Ferro Spain</li> </ul>
Reinhold Steiner CSO	2012	□ Former CSO Steel Division of RHI □ Former CEO of Chtpz Group
Thomas Jakowiak Integration	2000	□ Former CSO Industrial Division of RHI □ Several leadership positions at RHI
Simone Oremovic Human Resources	2017	□ 19 years of experience in leadership positions in HR, among other fields at GE, Telekom Austria, IBM and Shire/Baxter
Luiz Rossato Corporate Develop.	2008	□ Former Legal Council, M&A and Institutional VP of Magnesita □ General Counsel of the Year 2012 by International Law Office





### EBITDA Sensitivity on an annualised basis

### H1 2018 Exchange Rates

vs€	Unit	∆ <b>in EBITDA</b> (€m)	1 € =	Closing Rate	Average rate
USD	+1 cent	4.30	USD	1.16	1.21
CNY	+0.01 yuan	-0.24	CNY	7.70	7.70
BRL	+0.10 reais	2.12	BRL	4.49	4.08
INR	+1 rupee	0.58	INR	79.78	79.13



Find out more at rhimagnesita.com

