

11 May 2020

**IBU-tec advanced materials AG**

**Rating** Buy  
**Share price (EUR)** 12.50  
**Target price (EUR)** 19.00

Bloomberg IBU GY  
Sector Chemicals

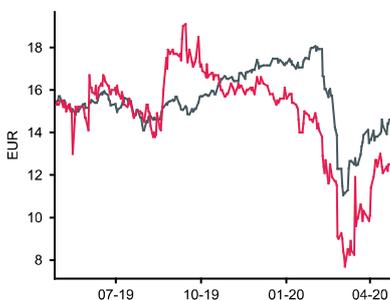
**Share data**

Shares out (m) 4.0  
Daily volume shs (m) 0.0  
Free float (%) 31.00  
Market cap (EUR m) 50  
EV (EUR m) 63  
DPS (EUR) 0.00  
Dividend yield (%) 0.0  
Payout ratio (%) 0.0

**Performance**

ytd (%) -24.7  
12 months (%) -31.6  
12 months rel. (%) -18.6  
Index SDAX

**Share price performance**



— IBU-tec advanced materials AG  
— Price rel. to SDAX - Price Index

Source: Bloomberg

**Next triggers**

18 June: Quirin Champions Conference

**Analysts**

Daniel Kukalj – Financial Analyst  
T +49 (0) 69 2475049-28  
daniel.kukalj@quirinprivatbank.de

# Hidden Greentec champion with current attractive valuation level

We start our coverage on IBU-tec advanced materials AG ('IBU-tec') with a BUY rating and a DCF based TP of EUR 19.00, implying an upside potential of more than 50%. The company is in the mid- to long-term a high-conviction growth story, according to us, driven by various megatrends. The company commands a superior market position protected by high barriers to entry. We believe the market has currently hardly discounted company's future growth perspectives accompanied by rising group sales, earnings and free cash flow generation for the coming years. In the mid-term we are convinced that an increased demand for IBU-tec service and production capacities will be first supported by the general development of increasing global green mobility, green economy and medical technology.

**IBU-tec is the hidden growth story in the German Mittelstand**

We assess IBU-tec's ability to accelerate its business going forward through organic and external growth, underpinned by ongoing megatrends such as green mobility (e-mobility and automotive catalysts), green economy (including CO2-reduced building materials, rare earths, stationary energy storage) and medical technology (including artificial joints and dental prostheses) as the key investment story aspects.

**Valuation at the lowest level since the IPO does not reflect company's growth potential in the next years despite current challenging markets**

Without question the market has so far priced in a massive correction in sales and earnings for the current year in general, however in the case of IBU-tec, we see a massive exaggeration because the market underestimates the fact that the company is family-owned and -managed and thus its risk/chance profile tends likely more to the positive side. Analyzing historical P/E pattern IBU-tec shares are now trading at the lowest level (please see page 5) since its IPO, thus implying attractive upside potential in the mid-to long-term view.

**Stable business despite global Covid-19 pandemic**

Despite the current crisis, the broad diversification of IBU-tec with several hundred individual projects per year and a large number of customers from a wide variety of industries is proving stability in business development.

Key figures		2018	2019	2020e	2021e	2022e
Sales	EUR m	19	48	35	45	53
EBITDA	EUR m	5	7	5	6	9
EBIT	EUR m	2	2	0	1	4
EPS	EUR	0.35	0.22	0.00	0.12	0.61
Sales growth	%	12.9	155.2	-27.6	27.6	18.5
EBIT growth	%	476.1	-4.9	-83.8	240.3	265.2
EPS growth	%	729.0	-38.6	-97.9	2580.1	394.5
EBITDA margin	%	24.5	14.7	13.9	13.9	17.4
EBIT margin	%	10.8	4.0	0.9	2.4	7.4
Net margin	%	7.4	1.8	0.1	1.1	4.6
EV/Sales	ratio	4.19	1.64	1.78	1.36	1.12
EV/EBITDA	ratio	17.1	11.2	12.8	9.8	6.4
EV/EBIT	ratio	38.7	40.8	198.1	56.8	15.2
P/E	ratio	48.7	75.0	2716.1	101.3	20.5
P/BV	ratio	2.2	2.0	1.6	1.5	1.4
Dividend yield	%	0.0	0.0	0.0	0.0	0.0

Source: Bloomberg, Company data, Quirin Privatbank estimates

Please see final page for important disclaimers and disclosures

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## Executive summary

*IBU-tec is addressing worldwide megatrends*

### Fast growing company with potential to expand growth rates

IBU-tec advanced materials AG ( in the following 'IBU-tec'), headquartered in Weimar, Germany, is a fast growing, highly specialized, development and production, service provider for the thermal process engineering industry for the treatment of inorganic powders and granules, thus resulting in modified and superior material properties. Through the acquisition of BNT Chemicals GmbH in 2018, the existing core services business of IBU-tec has been supplemented by the tin-based BNT product portfolio and the wet chemistry segment, significantly expanding its positioning and value creation. The company addresses worldwide megatrends such as green mobility (e-mobility and automotive catalysts), green economy (including CO<sub>2</sub>-reduced building materials, rare earths, stationary energy storage) and medical technology (including artificial joints and dental prostheses) through its broad, international customer base.

### High knowledge to support customers, e-mobility megatrend one of growth fields

IBU-tec is using its pulsation reactor technology in furtherance of the Green Mobility revolution, manufacturing innovative new substances for the sustainable reduction of environmental pollutants. The recent positive developments at IBU-tec are part of an ongoing successful trend that has been characterized in recent years by a robust expansion of the company's customer and technology base. Since 2015, IBU-tec has approximately doubled its number of battery material customers. In the past IBU-tec predominantly delivered sample materials to customers, today IBU-tec is a well-integrated and increasingly essential industry supplier. This unique position allows IBU-tec to derive revenue from generally increasing global production figures for batteries for e-mobility and stationary energy storage. IBU-tec now covers a broad spectrum of cathode and anode materials in addition to lithium-ion battery materials and is thus ideally positioned for the further market penetration of current battery types and future developments.

*Green Mobility*

### Sustainability: Supporting sustainable client projects and promoting the recycling sector with our processing know-how and plant capacities



Source: Company Data

In general, the IBU-tec group develops and produces innovative materials of the highest quality for industry, noteworthy among other things, the products are important components of battery materials for electromobility and stationary energy storage, as well as solutions for air purification, resource conservation, and the reduction of plastic packaging. As mentioned before, IBU-tec is positioned in the long term in global megatrends, especially in climate and environmental protection.

### We initiate with a Buy recommendation and a TP of EUR 19.00

We initiate coverage on IBU-tec with a Buy rating and a target price of EUR 19.00, derived from our DCF model. Our target price implies 52% upside from the current share price.

*BUY recommendation – TP 19.00*

## SWOT

### Strengths

- ◆ Family-owned and managed company
- ◆ Complete value chain for customers
- ◆ Technological advantage through pulsation reactors
- ◆ High scalability of the business model
- ◆ Experienced management and employees with a high level of specialist knowledge
- ◆ Long-term relationships with customers
- ◆ High barriers to entry
- ◆ Ability to adjust services and products to customers' specific needs through its tried and proven R&D and production capabilities

### Weakness

- ◆ IBU-tec AG still generates a significant proportion of its sales with a small number of major customers. The distribution of sales is still relatively clustered, with ~66% of group sales in FY 2019 (previous year ~73%) being generated with the top 5 customers
- ◆ No dividend payments for shareholders
- ◆ Low transparency regarding reporting due to listing in the Scale segment
- ◆ Low free float and liquidity of the IBU-tec stock

### Opportunities

- ◆ High relationship to customers in important future-oriented areas of Greentec, electromobility and energy storage as well as life science which provides numerous opportunities to expand business
- ◆ Value accretive acquisitions to strengthen the product portfolio and expand into new niche markets/regions
- ◆ Sales potential with battery materials of more than EUR 200m p.a. according to plant capacity

### Threats

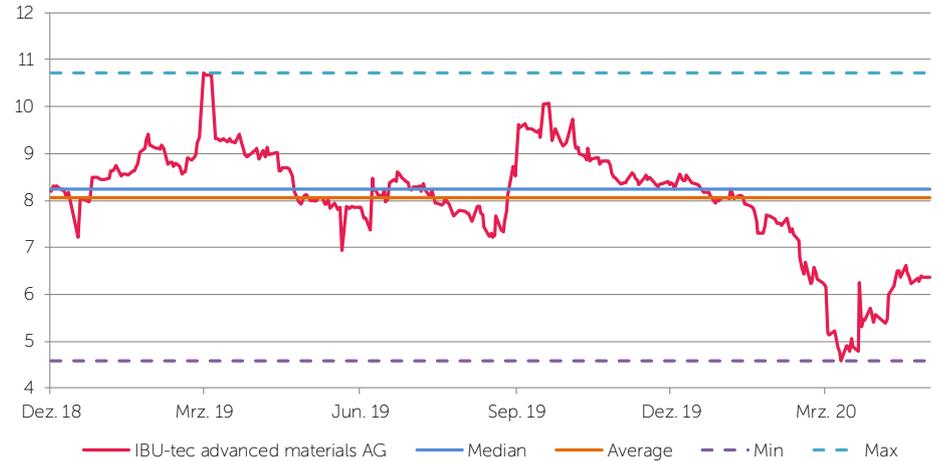
- ◆ The lack of acquisition of new projects
- ◆ The loss of know-how through the generation of patents by customers
- ◆ The default risk of receivables
- ◆ The liquidity/financing risk

## Status quo of valuation

Regarding important valuation multiples, the current valuation is at the low point since the IPO

Considering current valuation we see sharp upside potential for IBU-tec shares mainly by the fact that the upcoming growth prospects are currently not priced in.

### Overview of blended EV/EBITDA (NTM) of IBU-tec



### Overview of blended EV/EBIT (NTM) of IBU-tec



### Overview of blended PE (NTM) of IBU-tec



Source: Bloomberg; Quirin Privatbank

## Valuation

### Viewing our peer group, we believe IBU-tec has upside potential

We believe IBU-tec should be compared to other high-quality and growth companies related to the automotive (e-mobility; battery systems) and chemistry industry. We include following companies in our peer group valuation approach:

**AKASOL AG** is a German manufacturer of high-performance lithium-ion battery systems for buses, commercial vehicles, rail vehicles, industrial vehicles, ships and boats. Current customers include two of the world's leading commercial vehicle manufacturers, Alstom, Bombardier, Rolls-Royce Power Systems (MTU Friedrichshafen) and several more.

**Nabaltec AG**, based in Schwandorf, develops, manufactures and distributes environmentally friendly and simultaneously highly specialized products based on mineral raw materials, in particular on the basis of aluminum hydroxide (ATH) and aluminum oxide. The company belongs to the world's leading suppliers of functional fillers and specialty alumina. The production capacity entails approximately 260,000 tons per annum (t.p.a.) with an export share of over 70%.

**Nanogate SE** is a global technology company for design-oriented, multifunctional components and surfaces. Nanogate develops and produces design-oriented surfaces and components and enhances them with additional properties (e.g. nonstick, scratchproof, anticorrosive). The Group has first-class references (e.g. Airbus, Audi, August Brötje, BMW, BSH Hausgeräte, Daimler, FILA, Ford, Fresenius, GM, Jaguar, Junghans, Porsche and Volkswagen).

**VARTA AG** is a company headquartered in Ellwangen, Jagst. The business activities of VARTA AG encompass the development, production, sale, research and development of microbatteries and energy storage solutions.

**Voltabox AG** is a system provider for e-mobility in industrial applications as well as in select mass markets. Company's core business lies in intrinsically safe, highly developed high-performance lithium-ion battery systems that are modular and in serial production. The battery systems are used for applications including commercial vehicles, such as buses for public transportation, forklifts, automated guided vehicles and mining vehicles. Voltabox also develops and produces high-quality lithium-ion batteries for select mass-market applications, such as pedelecs and e-bikes as well as starter batteries for high-performance motorcycles and cars.

## Peer group renders a Fair value of EUR 15.99 per share

To value the stock we use a peer group multiple comparison model. Our valuation is only based on 2020-2022 EV/EBITDA multiples to consider the high depreciation amount, thus indicating a market-derived value of EUR 15.99 per share.

### IBU-tec's peer group overview

Peer Group Overview	EV/EBITDA			EV/EBIT			P/E		
	2020e	2021e	2022e	2020e	2021e	2022e	2020e	2021e	2022e
AKASOL AG	35.2	16.8	11.4	110.9	30.1	16.3	329.9	47.6	24.2
NABALTEC AG	8.9	7.2	n.a.	17.0	11.9	n.a.	19.2	12.5	n.a.
NANOGATE AG	40.8	9.0	n.a.						
VARTA AG	15.7	10.9	9.0	23.0	15.5	13.3	36.2	24.3	20.9
VOLTABOX AG	8.4	4.1	n.a.	n.a.	13.3	3.9	n.a.	36.2	n.a.
<b>Median</b>	<b>15.7</b>	<b>9.0</b>	<b>10.2</b>	<b>23.0</b>	<b>14.4</b>	<b>13.3</b>	<b>36.2</b>	<b>30.2</b>	<b>22.5</b>

Source: Bloomberg, Quirin Privatbank estimates

### Peer Group Valuation

Peer Group Results in EUR m	EBITDA 2020e	EBITDA 2021e	EBITDA 2022e	EBIT 2020e	EBIT 2021e	EBIT 2022e	EPS 2020e	EPS 2021e	EPS 2022e
IBU-tec advanced materials AG Quirin Privatbank estimates	4.9	6.2	9.2	0.3	1.1	3.9	0.00	0.12	0.61
Multiple	15.7x	9.0x	10.2x	23.0x	14.4x	13.3x	36.2x	30.2x	22.5x
<b>Enterprise value</b>	<b>76.5</b>	<b>55.8</b>	<b>94.1</b>	<b>7.3</b>	<b>15.5</b>	<b>52.1</b>	<b>-</b>	<b>-</b>	<b>-</b>
Pension provisions					0.0				
Minorities					0.0				
Net debt					12.5				
<b>Fair value of equity</b>	<b>64.0</b>	<b>43.3</b>	<b>81.5</b>	<b>n.a.</b>	<b>3.0</b>	<b>39.6</b>	<b>0.7</b>	<b>14.9</b>	<b>55.0</b>
<b>Median</b>					<b>64.0</b>				
Premium (discount) vs. Peer Group					0%				
<b>Fair market capitalization (after premium/discount)</b>					<b>64.0</b>				
Number of shares (m)					4.0				
<b>Fair value per share (in EUR)</b>					<b>15.99</b>				

Source: Bloomberg, Quirin Privatbank estimates

We assume that a short term driven peer group comparison does not lead to fair results. Obviously the long term growth prospects are currently kept out of valuation considerations. Nevertheless especially in case of IBU-tec the growth potential clearly exists and need to be integrated into our valuation considerations. We therefore focus to a larger extent on DCF as the methodology does better reflect the long term potential of the company.

**DCF valuation**

Our DCF model indicates a fair value of EUR 19.08 for a IBU-tec share and reflects the long-term perspectives of the company. Our assumptions are as follows:

**Phase 1 (2020-22e):**

We estimated the free cash flows (FCF) of phase 1 according to our detailed financial forecasts for this period stated in the financials section.

**Phase 2 (2023-29e):**

For Phase 2, we assumed an initial sales growth of 15% that fades out to 2% in 2029e. We assumed a continuously increasing EBIT margin to 8.0%.

**Phase 3:**

For the calculation of the terminal value, we applied a long-term FCF growth rate of 2.0% which equals the estimated long-term inflation rate.

**DCF renders a Fair value of EUR 19.08 per share**

Based on these assumptions, we calculated a fair value of IBU-tec's operating business of EUR 90.9m. We deducted IBU-tec's net debt (financial debt minus cash). The resulting fair value of equity is EUR 76.3m or EUR 19.08 per share.

**Discounted Cash Flow Model**

EURm	PHASE 1			PHASE 2							PHASE 3
	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	∞
Sales	35.1	44.8	53.0	61.0	70.1	80.6	92.7	106.6	117.3	119.6	
YoY growth	-27.6%	27.6%	18.5%	15.0%	15.0%	15.0%	15.0%	15.0%	10.0%	2.0%	
EBIT	0.3	1.1	3.9	4.6	5.3	6.2	7.2	8.4	9.4	9.6	
EBIT margin	0.9%	2.4%	7.4%	7.5%	7.6%	7.7%	7.8%	7.9%	8.0%	8.0%	
Income tax	0.0	-0.2	-1.0	-1.2	-1.4	-1.7	-1.9	-2.2	-2.5	-2.6	
Depreciation and amortisation	4.6	5.1	5.3	4.9	5.6	6.4	7.4	8.5	9.4	9.6	
Change in long-term provisions	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Change in net working capital	2.8	-0.6	-0.4	-1.3	-1.4	-1.6	-1.7	-1.9	-1.2	-1.1	
Net capital expenditure	-9.8	-3.6	-4.8	-3.0	-3.5	-4.0	-4.6	-8.5	-9.4	-9.6	
<b>Free cash flow</b>	<b>-2.4</b>	<b>1.9</b>	<b>3.0</b>	<b>3.9</b>	<b>4.6</b>	<b>5.4</b>	<b>6.4</b>	<b>4.3</b>	<b>5.7</b>	<b>6.0</b>	
<b>Present values</b>	<b>-2.3</b>	<b>1.7</b>	<b>2.5</b>	<b>3.1</b>	<b>3.4</b>	<b>3.7</b>	<b>4.0</b>	<b>2.5</b>	<b>3.2</b>	<b>3.1</b>	<b>66.1</b>
Present value Phase 1	1.8										
Present value Phase 2	22.9										
Present value Phase 3	66.1										
Total present value	90.9										
+ Excess cash	0.7										
- Financial debt	-15.3										
Fair value of equity	76.3										
Number of shares (m)	4.0										
Fair value per share (EUR)	19.08										

Risk free rate	0.003%	Target equity ratio	75.0%
Equity risk premium	6.00%	Beta (fundamental)	1.47
Debt risk premium	1.00%	<b>WACC</b>	<b>6.79%</b>
Tax shield	26.7%	<b>Terminal growth</b>	<b>2.0%</b>

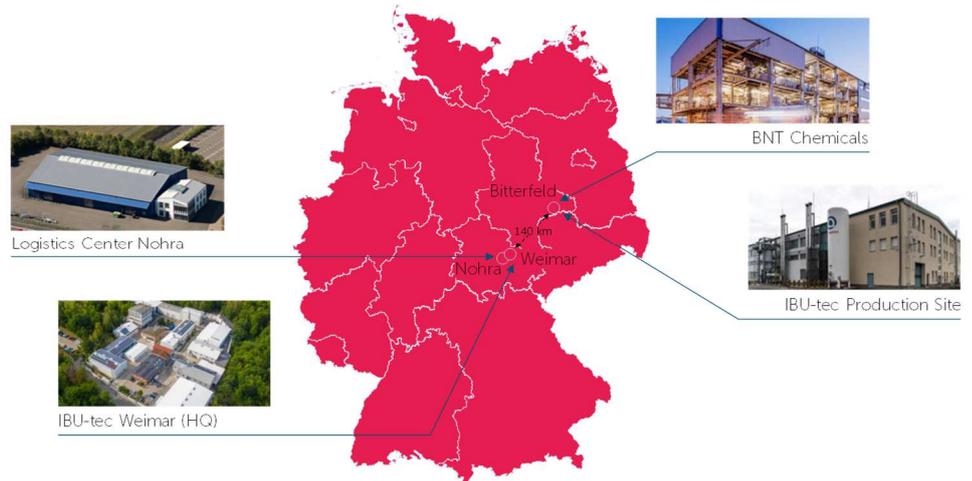
<b>Sensitivity analysis</b>						
<b>Terminal growth (Phase 3)</b>						
		1.0%	1.5%	2.0%	2.5%	3.0%
<b>WACC</b>	<b>5.8%</b>	20.98	23.18	25.96	29.58	34.49
	<b>6.3%</b>	18.30	20.01	22.11	24.77	28.24
	<b>6.8%</b>	16.09	17.44	<b>19.08</b>	21.09	23.64
	<b>7.3%</b>	14.23	15.32	16.62	18.18	20.11
	<b>7.8%</b>	12.65	13.54	14.58	15.82	17.32

Source: Quirin Privatbank estimates

## Company profile

The IBU-tec Group, headquartered in Weimar, Germany, generates its sales in various target markets such as the chemical, pharmaceutical, plastics, paint and automotive industries.

**Four locations: Weimar region and at the Bitterfeld-Wolfen chemical park**



Source: Company Data

### Development and production partner

As a development and production partner, IBU-tec advanced materials AG (IBU-tec) uses its thermal processes to generate functional chemicals with modified material properties from the product idea through to production, thereby significantly reducing the customer’s material and process risk. IBU-tec’s business activities are focused on reducing CO2, nitrogen oxide and pollutants, electromobility and resource conservation. BNT Chemicals GmbH (BNT GmbH) complements the existing core service business of IBU-tec with its tin-based product portfolio and the liquid chemical process, which complements the service offering in the field of thermal processes. This has enabled the Group to expand its market position and added value in its range of services on the one hand and to position itself on the market with its own products to complement these in the future.

**Material for clients from manifold industries and with a wide range of end-uses**

BNT   chemicals	IBU   tec			
<b>ORGANOTIN PRODUCTS</b> <ul style="list-style-type: none"> <li>Tin-based catalysts (e.g. for dip-coating)</li> <li>Organotin stabilizers (e.g. for PVC plastics)</li> <li>Glass-coatings</li> </ul>	<b>E-MOBILITY &amp; ENERGY STORAGE</b> <ul style="list-style-type: none"> <li>Battery materials                             <ul style="list-style-type: none"> <li>– LFP</li> <li>– NM</li> <li>– ... and more</li> </ul> </li> <li>Regenerating active substances</li> </ul>	<b>MATERIAL DEVELOPMENT</b> <ul style="list-style-type: none"> <li>Specialty chemicals</li> <li>Zirconium oxide for bio ceramics</li> <li>Pigments</li> <li>Abrasives &amp; polishing agents</li> <li>Activated charcoal</li> </ul>	<b>CONTRACT MANUFACTURING</b> <ul style="list-style-type: none"> <li>Aluminum oxide</li> <li>Phosphates</li> <li>Titanium oxide</li> <li>Silicon oxide</li> <li>Silicates</li> <li>Carbonates</li> <li>... and more</li> </ul>	<b>CLEAN AIR</b> <ul style="list-style-type: none"> <li>Catalysts &amp; catalyst carriers for the automotive sector and the chemical industry</li> </ul>
<b>IBU-tec treats and refines material worth EUR 290m annually</b>				

Source: Company Data

### ~238 employees in the Group

The IBU-tec Group develops and produces quality materials for industrial use. The Group combines thermal process engineering technologies, some of which are protected by patents, with the process and material know-how of its approximately 238 employees.

**The company produced and refined materials from its customers with a total value of approximately EUR 230m in 2019**

The products of its customers, which the company processes and fabricates as part of its service, are, among other things, components of battery materials for electromobility and stationary energy storage as well as solutions for air purification and resource conservation. The IBU-tec Group's own products help to make glass bottles and container glass more durable and improve the effectiveness of a drug used worldwide. IBU-tec thus sees itself as a player in global megatrends, especially climate and environmental protection is positioned for the long term and has an international customer base ranging from medium-sized companies to global corporations. In order to fulfill its services IBU-tec has an own laboratory, 8 pulsation reactors and 16 rotary kilns on in total 3 sites. In FY 2019 the company produced and refined materials from its customers with a total value of approximately EUR 230m.

**Thermal process equipment, ancillary systems and laboratory equipment to enable a wide variety of projects: from initial development to contract manufacturing**

<p><b>Rotary Kilns</b></p> <p>16 rotary kilns in various sizes for trials and production</p> 			<p><b>Pulsation Reactors</b></p> <p>8 Pulsation reactors: Thermoshock-treatment of ultrafine powders</p> 
<b>PLANT &amp; EQUIPMENT</b>			
<p><b>Lab Equipment</b></p> <p>Everything for development work and production support</p> 			<p><b>Ancillary Equipment</b></p> <p>Mixers, conveyors, exhaust gas treatment and more</p> 

Source: Company Data

### Group structure and operating subsidiary

#### IBU-tec advanced materials AG

As the parent company, IBU-tec AG is responsible for the strategic and operational management of the Group and the subsidiary. This is mainly realised by the fact that the CEO of IBU-tec AG also takes over the management of the subsidiary. IBU-tec AG also coordinates the development of business segments from within its structure and provides central functions such as the preparation of financial statements, quality management, central purchasing and controlling.

IBU-tec AG operates as a development and production service provider in the field of thermal process engineering with a focus on the treatment of inorganic powders and granulates. These are given modified material properties as a result. Through its customer base, IBU-tec AG addresses global megatrends such as green mobility (e-mobility and automotive catalytic converters), green economy (including CO<sub>2</sub>-reduced construction materials, rare earths, stationary energy storage) and medical technology (including artificial joints and dental prostheses).

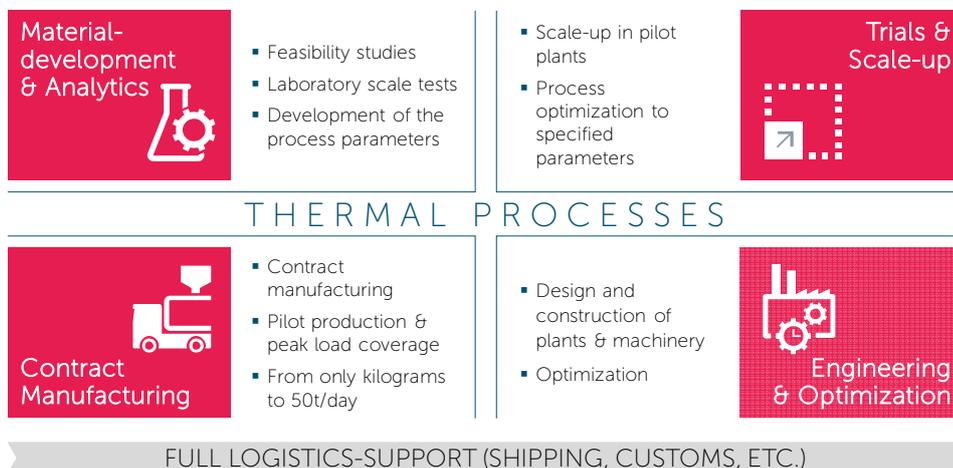
#### BNT Chemicals GmbH

As a manufacturer of organometallic compounds, with a focus on organotin products and wet chemical processes, BNT GmbH supplies a variety of different applications mainly in the glass, automotive, plastics, chemical and pharmaceutical industries. With the acquisition of BNT GmbH, it was possible to acquire additional know-how in liquid chemistry, which primarily concerns the process stages of precipitation, synthesis, distillation and pre-drying, which are upstream of IBU-tec's thermal processes. This enables an expansion of the value chain that can be represented in the Group. The Group thus has the opportunity to serve the market with a more comprehensive range of products. Sales and distribution will take place worldwide.

## Business model

The company offers customer-specific development and production services in the field of thermal process engineering.

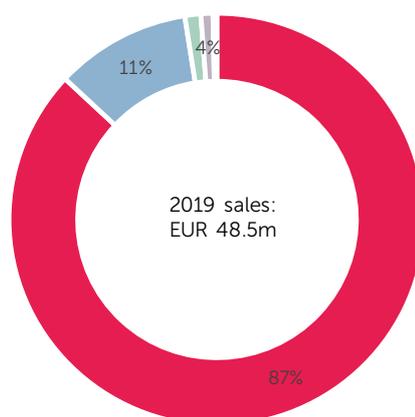
### IBU-tec Services



Source: Company Data

With the services offered, the IBU-tec Group covers the entire life cycle of a product from product development to marketability. The company's value chain ranges from development and analysis from materials, through the implementation of the first pilot tests and scaling up to industrial scale, to contract production (customer-specific production services) for customers and their advice on plant design and plant optimization. The company develops new materials for customers, improves material properties of existing products and implements efficient and resource-saving production methods and processes for their customers. The major share of sales in FY 2019 is generated in the area of production services (87% of group sales).

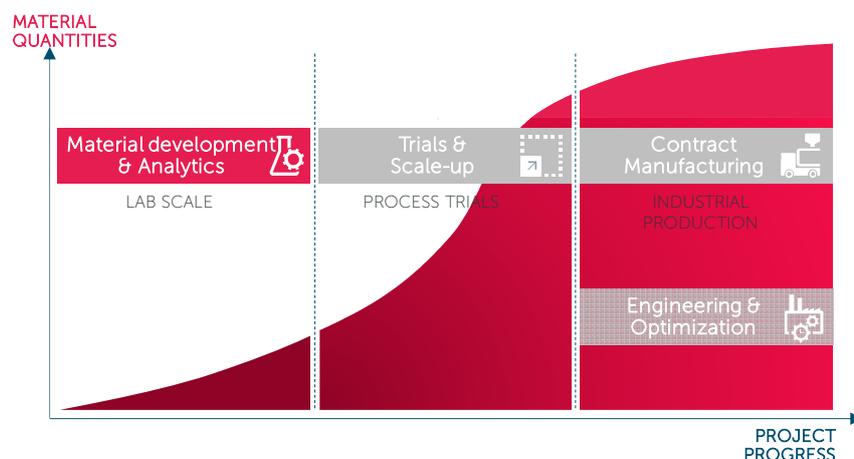
### Revenue by segment:



- Production Services
- Process Development
- Material Development
- Engineering
- Other

Source: Company Data

**IBU-tec Services: Support at every level – from development and scale-up, to contract manufacturing, in addition to engineering & plant optimization services**



Source: Company Data

**IBU-tec's business activities can be divided into the following segments:**

**i) Production Services:** IBU-tec offers its customers outsourced industrial contract production (customized production service) of materials using their production site and the existing thermal plants. This includes in particular pulsation reactors and rotary kilns (directly and indirectly heated) and other technical plants such as conveying and dosing systems, mixing and granulating apparatus and screening and classifying plants that are available. The company mainly produces for its customers catalytically active powders for use in catalysts, battery materials, proppants for gas and oil industry, special clays and special cements for the building materials industry, various powder materials with modified surfaces and powder materials for bioceramics or industrial ceramics. During production, the quality of the materials produced is regularly checked by analyses in their own laboratory. In addition, the company offers for customers the storage of the produced materials. The customer-specific production services account for the largest share of group sales (87%) in FY 2019.

**ii) Process Development** is IBU-tec's second largest segment accounting for approximately 11% (EUR 5.1m) of the group sales in 2019. The company offers customers pilot tests for converting production processes to industrial scale for already developed processes or materials by using its own laboratory and various thermal plants. On the basis of tests, the process or material idea is validated for the customer. Within the scope of scaling up production processes, the company tests for customers under which conditions a successful small-scale production of materials also allows industrial-scale production. The tests and scaling of production processes are carried out for the customer using the company's expertise in process plant operation, the corresponding special knowledge, the rotary kilns and pulsation reactors including various equipment and devices for material preparation and post-processing and the company's own laboratory.

The design of experiments includes the planning of the required production facilities, the adjustment of the plant periphery, the planning of safety and the personnel planning required for production. The planning of the plant periphery is of particular importance for customers. The plant periphery is used to feed the different materials used in the reaction chamber of the furnaces, e.g. powders or liquids, into the furnace and to remove the material produced in this way from the furnace. A large part of the special knowledge of company is allocated to this planning. After completion of the experimental design, the specified process parameters, product specifications and the coordinated process steps are tested in pilot trials in the test facilities set up for this purpose. Once the series of tests have been completed, the customer is provided with the necessary information and parameters to enable the customer to assess the property rights for the industrial production of materials and experimental quantities of the produced material. On this basis, either the production at the customer or the contract production is carried out by the company.

**iii) Engineering:** Due to the long-term expertise in process engineering plant operation the company also offers its customers specialist knowledge for the design and optimization of thermal plants, processes and the associated workflows, especially in reference to rotary kilns. For this purpose, the company analyses the work processes at the respective production site of the customer and carries out process measurements, among other things. Usual technological measurements include measurements of volume flows, dust quantities, gas-, material and wall temperatures, the determination of gas concentrations in waste gas, the determination of filter separation efficiency, heat losses and false air volumes and the verification and calibration of operational measurement technology. The aim is to provide the customer with the existing thermal plants, weak points that lead to a production stoppage or this can lead to a lack of product quality at the customer and unused potential, which can lead to energy and cost savings. The company also offers general engineering services. These include feasibility studies for thermal plants, their basic conceptual design and the accompanying of customers until the commissioning of such plants. The services provided for customers in this area contribute to the special knowledge of the company in terms of thermal process engineering.

The Engineering segment accounts for approximately 1% (EUR 0.6m) of the group sales in 2019.

**iv) Material Development:** In the field of material development and laboratory analysis, the company develops in its own laboratory or at the pilot plants of pulsation reactors and rotary kilns materials and processes on behalf of the customer. The object of development is in particular preliminary products for catalysts (catalytically active powders), battery materials, proppants for gas and Petroleum industry, special clays and special cements for the building materials industry, various powder materials with modified surfaces and powder materials for bioceramics or industrial ceramics regardless of whether it is the development of primary materials or reusable materials from used materials (recycling).

After working out the task, determining the material parameters to be developed and a first estimation of realisation, the company carries out research and first analyses related to the material to be developed. The thermal processes are tested and the reaction conditions are defined with test series on laboratory scale. The results of the development are material samples and test protocols containing all necessary information and parameters for the reproduction of the developed material. The intellectual property rights for the respective development are held by the customer. In particular, the Company's analysis services in its own laboratory are a prerequisite for the implementation of pilot tests and the production services of the company a consistently high level of quality.

## Strategy

The profitable growth of the company was and is the core objective of the past strategy meetings. The main objectives are the expansion of megatrends such as the production of powder materials for high-performance batteries for the automotive industry and for stationary energy storage systems, process development and contract manufacturing of special catalysts for the chemical industry, additives for nitrogen reduction in air, process development for the regeneration of rare earths, the development of production capacities and the expansion of the market in the field of glass coating as well as the development of new areas of application for tin and metal organic catalysts and the production of catalytically active powders for the automotive industry.

With the strategy paper IBU-2020 and its continuation in the Strategy IBU-2025, a strategy has been developed for the IBU-tec Group on how to further expand organic growth by increasing capacity and acquiring new business areas. A new production site was thus created in the Bitterfeld-Wolfen chemical area, which went into operation in September 2019. In the future, material systems will be produced there which are used in battery systems, among other things, and which cannot be approved at the Weimar site.

In addition to organic growth, inorganic growth was the focus of IBU-tec AG's strategic considerations. BNT GmbH was acquired as a subsidiary in FY 2018. This allowed the strategic option of offering customers wet chemical processes in addition to thermal processes in the future to be implemented. At the same time, the Group's market positioning was expanded, as it is now active in new markets with its own products in addition to the service business. To grow further also M&A activities are one pillar of the growth story of IBU-tec, however currently the focus is on optimisation efforts, acquisitions are likely more a mid-to long-term task in our view.

FY 2019 was characterised by the further development of the combination of wet chemical and thermal processes for powder production as a new service offering of the Group and the associated acquisition of service projects in the field of liquid chemistry in combination with drying and calcination processes. The company continued to work on the strategic expansion of its engineering and plant construction services. One focus was the completion and commissioning of the production site in Bitterfeld-Wolfen to further expand organic growth with the implementation of the first production orders in Q4 2019. The implementation of the developed strategy paper in the first half of 2019 for BNT GmbH with the focus on future profitable growth was another key strategic activity. In Q3 2019, IBU-tec defined its medium-term future strategic priorities. In particular, the new sales concept, including cross-group approaches, was described in the strategy paper IBU-2025 as main topic. It was and is necessary to continue to drive forward the transformation process of the IBU-tec Group in order to cope with the strong dependence on individual customers and the changes in the market, mainly triggered by the 'Dieselgate' which had existed in the past.

Summarized, the management intends to further expand its established position in the area of customer-specific development and production services and to continue its historically strong growth both in terms of sales and earnings by following tasks:

- Increase in customer-specific production services and expansion of the production range
- Gaining new domestic and foreign customers
- Expansion of specialist process engineering knowledge
- M&A to expand its niche-player quality

## Competitive landscape

Only few competitors in domestic market

Direct competitors to IBU-tec's business activities cannot be clearly identified since IBU-tec offers a wide range of products of customer specified production and R&D services that are not likewise covered by any other firm. Additionally IBU-tec employs technical equipment and applies thermal treatment methods in pulsation reactors that are patent protected and thus not undoubtedly reflected by any competitor.

However, the company faces potential competitors that can be identified when breaking them down into the categories R&D institutes (without toll manufacturing) plant manufacturers, producers with own products and toll manufacturers as well as developer.

### i) R&D institutes (without toll manufacturing):

- ◆ **hte GmbH:** Headquartered in Heidelberg, Germany, hte GmbH is a German provider of high throughput technology and services for a faster and cost-effective catalysis R&D. The firm offers solutions for various applications in the industries (Petro-) Chemicals, Energy & Refining, Environment and Renewables. Founded in 1999 hte GmbH is wholly owned subsidiary of BASF SE.

Further R&D competitors are:

- ◆ **Otto-von-Guericke Universität Magdeburg (Germany)**
- ◆ **CUTEC Institute (Germany)**
- ◆ **Hazen Research (USA)**

### ii) Plant Manufacturers (Primarily industrial furnaces):

- ◆ **ThyssenKrupp Industrial Solutions AG:** Is the ThyssenKrupp AG business area providing solutions for the engineering, construction and service of industrial plants and systems. The subsidiary is spread over more than 100 locations worldwide and headquartered in Essen, Germany. Its products comprise industrial solutions, coke plant technologies, materials handling, industrial plant services, chemical plants, cement plants, mining & mineral solutions and High-pressure processings (HPP). Industries affected are Engineering, Chemicals, Mining & Metals, Oil & Gas and Food & Drinks.

Further competing plant manufacturers are:

- ◆ **TS Elin GmbH (Germany)**
- ◆ **Riedhammer (Germany)**
- ◆ **Feeco International Inc. (USA)**
- ◆ **FLSmidth & Co. A/S (Denmark)**
- ◆ **Turbulent Diffusion Technology Inc. (Canada)**
- ◆ **Thermal Product Solutions (TPS) LLC (USA)**
- ◆ **Harper International Corp. (USA)**
- ◆ **ARVOS Holding GmbH (Germany)**

### iii) Producers with own products

- ◆ **Imerys SA:** Imerys S.A. is a French multinational company, headquartered in Paris which specializes in the production and processing of industrial mineral. Imerys has operations in about 50 countries with more than 18,000 employees. The firm operates in about 130 mines globally and develops solutions for use by industrial clients in their products and processes using minerals mined from its own reserves. The minerals are applied in various fields of everyday life including construction, hygiene products, paper, paint, plastic, ceramics, telecommunications, and beverage filtration.

Further competitors with own products are:

- ◆ **Thermograde Process Technology Limited (UK)**
- ◆ **Nickelhütte Aue GmbH (Germany)**

- ◆ Porocel Industries LLC (USA),
- ◆ Eurosupport BV (Netherlands)
- ◆ AURA GmbH & Co. KG (Germany)
- ◆ Nabaltec AG (Germany)
- ◆ NQR Nordische Quecksilber Rückgewinnung GmbH (Germany),
- ◆ Moxba-Metrex B.V. (Netherlands),
- ◆ Duesmann & Hensel Recycling GmbH (Germany)
- ◆ Clariant AG (Schweiz).

**i) Toll Manufacturers (without plant manufacturing nor own products):**

- ◆ **YS Inc.:** Is an US-American dry and liquid chemical toll manufacturing service company, headquartered in Collinsville, Alabama. It provides solutions for Custom Catalyst Manufacturing, Milling & Classification, Blending & Mixing, Calcining & Drying and Custom & Packaging. Furthermore processing services include milling, grinding, classification, drying, calcining, blending, mixing, packaging and transloading.

Further competing toll manufacturers are:

- ◆ Howard Industries Inc. (USA)
- ◆ PPT Powder Processing Technology LLC (USA)

## Events and contracts in FY 2019

### Important events in FY 2019

FY 2019 was marked by an increase in demand for battery materials both for the automotive industry and for stationary energy storage systems. In addition, BNT was able to increase production of an active ingredient for the pharmaceutical industry.

As in previous years, IBU-tec's sales were generated not only by battery materials for the automotive industry and stationary energy storage systems, but mainly by demand from the chemical and raw materials industries. However, sales of catalytic powder materials for the automotive industry in 2019 were again below the previous year's level. Through acquisition work, this further declining trend was offset by new customer projects.

In the second half of 2019, IBU-tec felt the effects of the economic downturn. The chemicals customer sector in particular was and still is affected to an above-average extent. This led to a decline in contract manufacturing orders and commissioned production, particularly in Q4 2019. Appropriate sales activities made it possible to compensate for this to a large extent and even to achieve renewed sales growth through smaller, but lower-margin research and development projects on the sales side. In order to maintain the margin at the planned level, stringent cost controlling was practiced early on in the second half of the year and staff capacity was adjusted towards the end of the year.

The industrial property in Bitterfeld acquired last year represented a key investment focus for IBU-tec in 2019. The company also worked in the fourth quarter to ensure that the next plant could be commissioned promptly. The management expects the next plant to go into operation at the beginning of the second quarter of 2020. At BNT GmbH, the focus remained on increasing profitability.

Unfortunately, as reported in the published ad hoc release, a fire broke out at BNT GmbH on 29 December 2019. A production building with three production lines was severely affected by this fire. According to the company the complete reconstruction will probably take one year, whereby the management is striving to resume production earlier with individual parts. According to the current state of knowledge, the expected insurance compensation is sufficient to ensure the reconstruction.

### Important contracts in the FY 2019

IBU-tec has already succeeded in concluding a supply contract for battery materials in the field of electromobility with a Far Eastern customer in the first half of 2019. This is the first time IBU-tec has supplied a global supplier of batteries for e-mobility directly with materials for direct battery production. This opens up completely new dimensions for IBU-tec in this area of application since 2019. For the first time IBU-tec AG is acting as a producer of battery materials and is thus taking over a new process step in the value-added chain. Furthermore, the acquisition of this battery supplier has enabled IBU-tec to achieve other dimensions in the field of battery materials in terms of sales. Compared to the previous year sales increased by approx. 73% yoy through large-volume orders with a high value-added share. The focus of the business model continues to shift from a pure service provider to a producer. We consider it positive that this contract will also further reduce company's dependence on few major customers.

Also in the first half of 2019, BNT GmbH succeeded in extending a supply contract with a Swiss pharmaceutical group, which will have a positive effect on earnings in 2019 and 2020 as well as on the company's level of debt in the long term. As already mentioned, several long-term contracts were concluded with customers in the glass industry.

## Financials and Outlook

### Sales increase in FY 2019

Due to the acquisition of the shares of BNT GmbH as of 30 June 2018 and the associated inclusion of BNT GmbH in the consolidated financial statements as of 1 July 2018 a comparison with the previous year's period at the income statement level is difficult to make. In order to nevertheless ensure a period comparison of the earnings situation, the FY 2018 was used for comparison purposes within the framework of a pro forma presentation, in which it was hypothetically assumed that control over BNT GmbH and thus the date of initial consolidation was 1 January 2018. This is a hypothetical presentation for illustrative purposes that does not correspond to the actual circumstances.

Consolidated sales in 2019 increased by ~4% to EUR 48.452m (pro-forma sales in 2018: EUR 46.568m). In addition to subsidized R&D projects, sales revenues from materials development include analytical services within the scope of customer projects to a small extent. The R&D projects are closely linked to the business model of IBU-tec AG.

The increase in sales revenue is primarily due to the extension of the supply contract between BNT GmbH and a Swiss pharmaceutical group and the 8% increase in sales revenue at IBU-tec AG.

The associated lower cost of materials (EUR -0.529m), which is also due to a lower price of tin, as well as higher personnel expenses (EUR +0.505m) and higher other operating expenses (EUR +0.408m) in connection with changes in inventories and own work capitalised, led to an increase in EBITDA of around EUR 0.217m to EUR 7.122m compared to the same period of the previous year. Increased depreciation and amortisation resulted in EBIT of EUR 1.949m, which is around EUR 0.605m lower than in the previous period.

Earnings before taxes (EBT) of EUR 1.540m were also down on the comparable figure for the previous period (EUR 2.357m) due to a lower financial result (EUR -0.212m), which was mainly attributable to the financing of investments. A positive tax effect from the formation and partial reversal of deferred taxes in the year of initial consolidation improved the net profit for the previous year by EUR 0.653m. Taking into account the pro rata reversal amount (EUR 0.224m) and a EUR 0.228m lower income tax burden, net profit for FY 2019 is therefore EUR 1.414m lower than the comparative figure for the previous period (EUR 2.357m).

### 2020 outlook indicates a transition year for IBU-tec

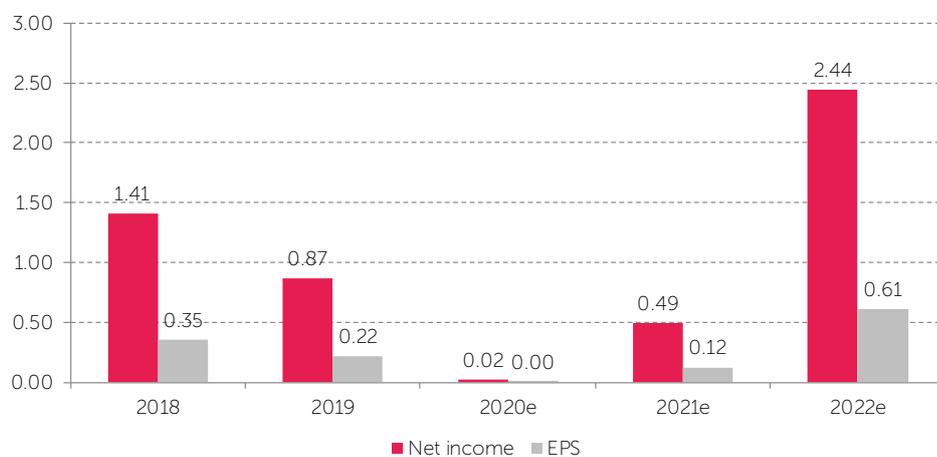
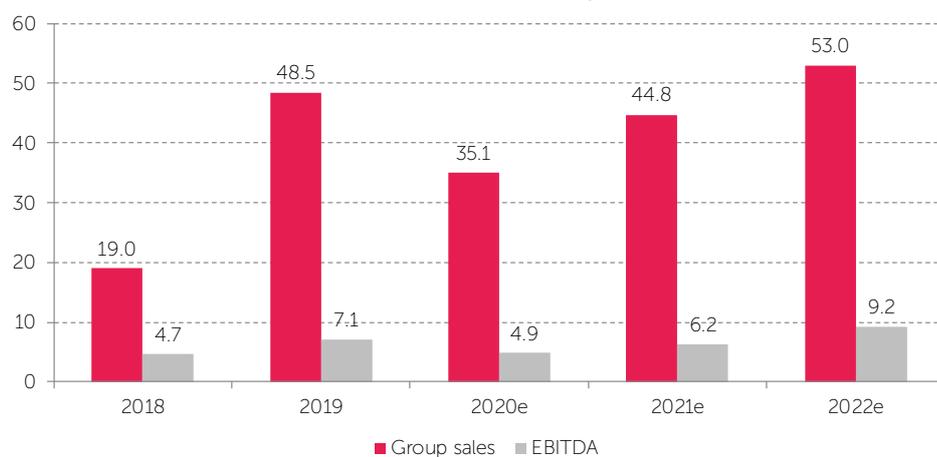
According to the management the visibility of the business development in FY 2020 is significantly lower compared to previous years. In addition to the very cautious sales forecasts of IBU-tec customers, the situation in some target industries, which has already led to a changed order structure with increasingly small-scale project business since the second half of 2019 and which the management continues to expect for 2020, also allows to make a cautious assessment on FY 2020. At BNT GmbH, the focus is on the reconstruction of the production building with three production lines which was destroyed by the fire on 29 December 2019. Reconstruction and the decision on the plant equipment to be selected will be made taking into account a balanced relationship between the sales-oriented and the procurement-oriented material input side. The management sees significant potential for optimization, especially in connection with the tin values tied up in the intermediate products. By improving the yield of its raw material input, the company expects an immediate and significant reduction in the amount of capital tied up, which should have a positive effect on the company's liquidity. Another important aspect of the reconstruction concept is the plant-side upgrade of BNT GmbH for the future realization of group-wide service contracts.

As a result, the management currently considers sales in 2020 to be in the upper single-digit percentage range below the previous year's level. Despite the margin reduction in the lower single-digit percentage range associated with the currently discernible change in the sales structure, the management is very confident that the EBITDA margin will remain in the double-digit range. In this context we forecast group sales of EUR 35.1m and EBITDA margin of 13.9%.

**FY 2021-22 estimates**

In our opinion, IBU-tec is well positioned in the important future-oriented areas of Greentec, electromobility and energy storage as well as life science, and we are therefore confident that the company will be able to further expand its market share in the coming years. IBU-tecs' business performance will be likely supported by several megatrends in the long-term. Global population growth, the economic upswing in emerging market countries, urbanization, and the ongoing globalization of the world economy are feeding into higher mobility globally and triggering the sales of various means of transportation, especially passenger and commercial vehicles. Besides environmental and energy efficiency issues, there is growing consumer awareness of such aspects.

Please find below our sales earnings estimates for IBU-tec until FY 2022e.

**Sales, EBITDA, Net income (in EURm) and EPS development and forecasts**

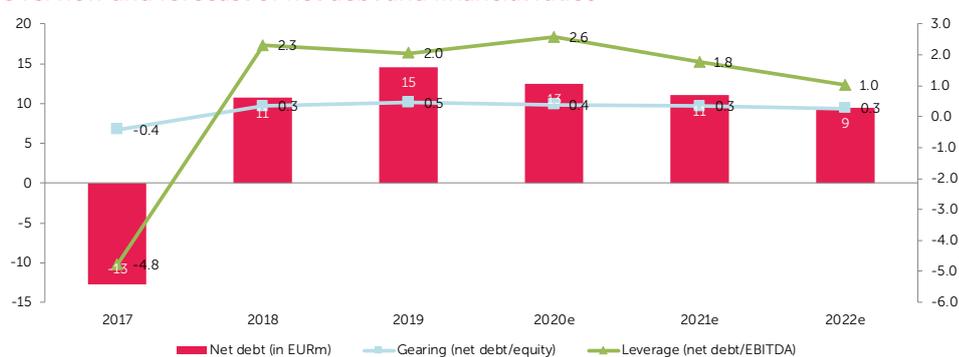
Source: Company data; Quirin Privatbank estimates

### Balance sheet

IBU-tecs balance sheet ratios are on a solid level. As of 31 December 2019, total assets stood at EUR 55.6m. At the end of December 2019, equity stood at EUR 31.8m, corresponding to an equity ratio of 57.2%. Assuming the company does not make a sizeable acquisition in the remainder of this fiscal year, we estimate that equity will remain at 2019 level of EUR 31.8m as of 31 December 2020e, resulting in an equity ratio of 53.8%. Based on IBU-tecs' growth prospects for the future, we expect the equity ratio to increase to ~58% by 31 December 2022e.

Net financial debt (cash and cash equivalents less current and non-current loans and borrowings and pension provisions), stood at EUR 14.6m, translating to gearing of ~46%. Assuming that i) the company does not make a sizeable acquisition and ii) the company business performance remains positive until fiscal year end 2022, net debt is forecasted to decline to EUR 9.5m as of 31 December 2022e.

### Overview and forecast of net debt and financial ratios

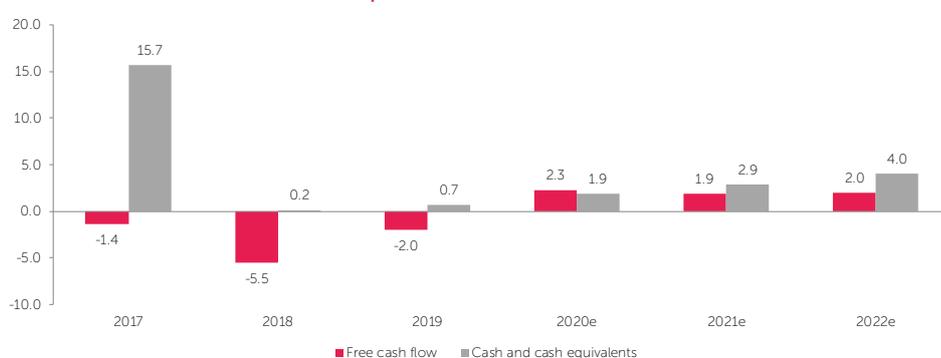


Source: Company data, Quirin Privatbank estimates

### Free Cash flow and cash position

In FY 2019 free cash flow came in at EUR -2.0m. Capex amounted to EUR -6.2m (py: EUR -8.8m). Capex ratio (QP 2020 estimate: 28% of group sales) is expected to increase vs FY 2019e level (12.8% of group sales) mainly driven by the BNT GmbH investments. In total we forecast free cash flow of approx. EUR 2.3m in FY 2020e. Looking forward to 2021 and 2022 FCF generation and cash position are expected to increase. As mentioned before IBU-tec is well positioned in the important future-oriented areas of Greentec, electromobility and energy storage as well as life science, and we are therefore confident that the company will be able to further expand its market share and sales and increase profitability in the coming years.

### Overview of FCF and cash development and forecast (in EURm)



Source: Company data, Quirin Privatbank estimates

## German chemicals and pharmaceuticals market

### Weak German chemical and pharmaceutical industry in 2019, more weakness in 2020 due to the coronavirus pandemic, relief expected in 2021

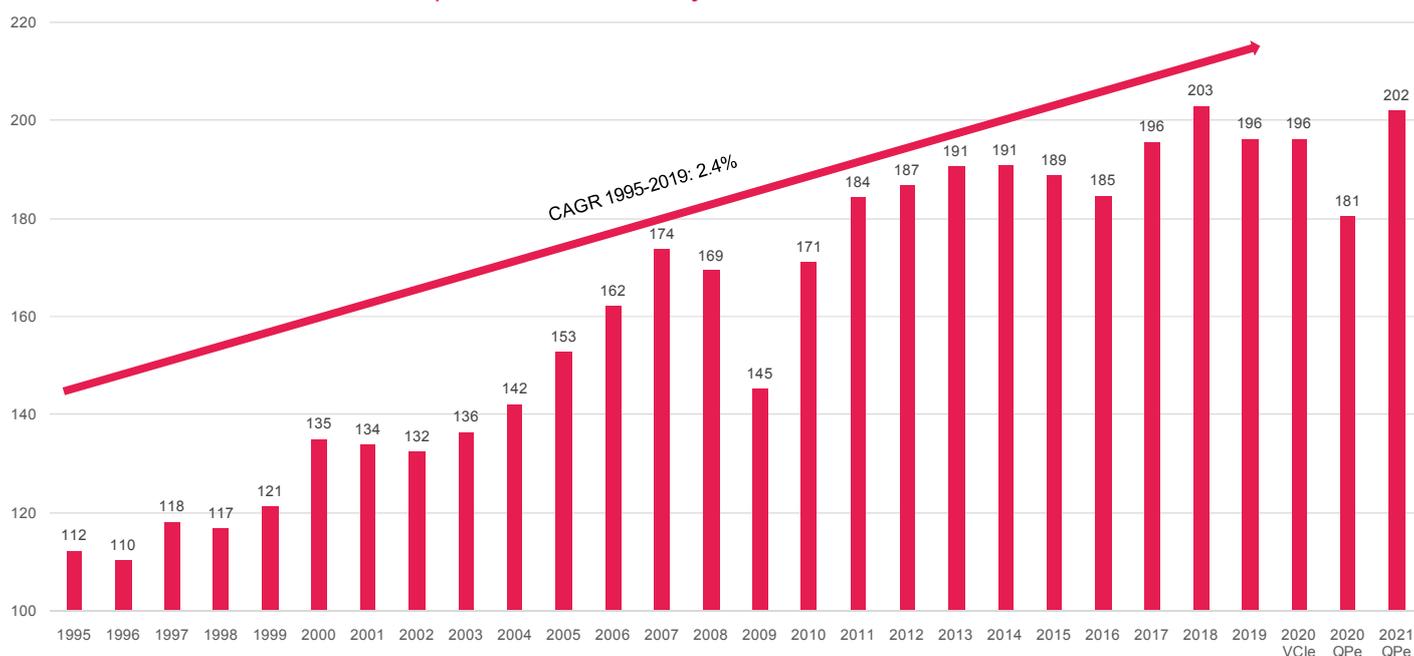
Business in the German chemical and pharmaceutical industry temporarily improved slightly in the fourth quarter of 2019. This is shown in the current quarterly report published by the German Chemical Industry Association (VCI). Thus, the downturn of the previous quarters in Germany's third largest industrial sector did not continue in Q4 2019. Production and sales increased slightly compared to the previous months. However, there was no turnaround in the chemicals business. In Q4 2019, chemical production rose by 1.6% compared to the previous quarter. Compared with the previous year, production fell by 2%. Capacity utilization in the chemical industry rose slightly to 82.7% and was thus in the lower normal range. In Q4 2019, industry turnover rose by 0.8% to EUR 45.4bn compared to the previous quarter. In Germany, revenues increased by 0.7% despite the weak industrial economy. International business developed somewhat more positively (+ 0.9%). However, industry sales fell well short of the previous year's level with a minus of 2.7%.

The slight growth was far from sufficient to offset the declines of the previous quarters. German industry is still in recession and demand for chemicals is restrained. The industry's domestic sales in the fourth quarter were significantly lower than in the previous year. In addition, there is the coronavirus with which the economic risks for the economy have increased in the meantime.

### Forecast

The VCI has lowered its forecast for 2020. The association now expects chemical production to decline by 1.5%. Volume development in the chemical-pharmaceutical industry as a whole is expected to stagnate at best. Industry sales are expected to remain unchanged at EUR 196bn. In our view due to the sharp fall of global economic activity in 2020 the German chemical and pharmaceutical industry is facing another difficult business year. The effects of the corona epidemic will be felt massively by the export-oriented German industry and thus also by the chemical industry. As a result we forecast a sales decline of 8% yoy. The weakness might be only temporary, for 2021 we expect a relief by 11.9%.

### Total turnover of the German chemical-pharmaceutical industry in EURbn



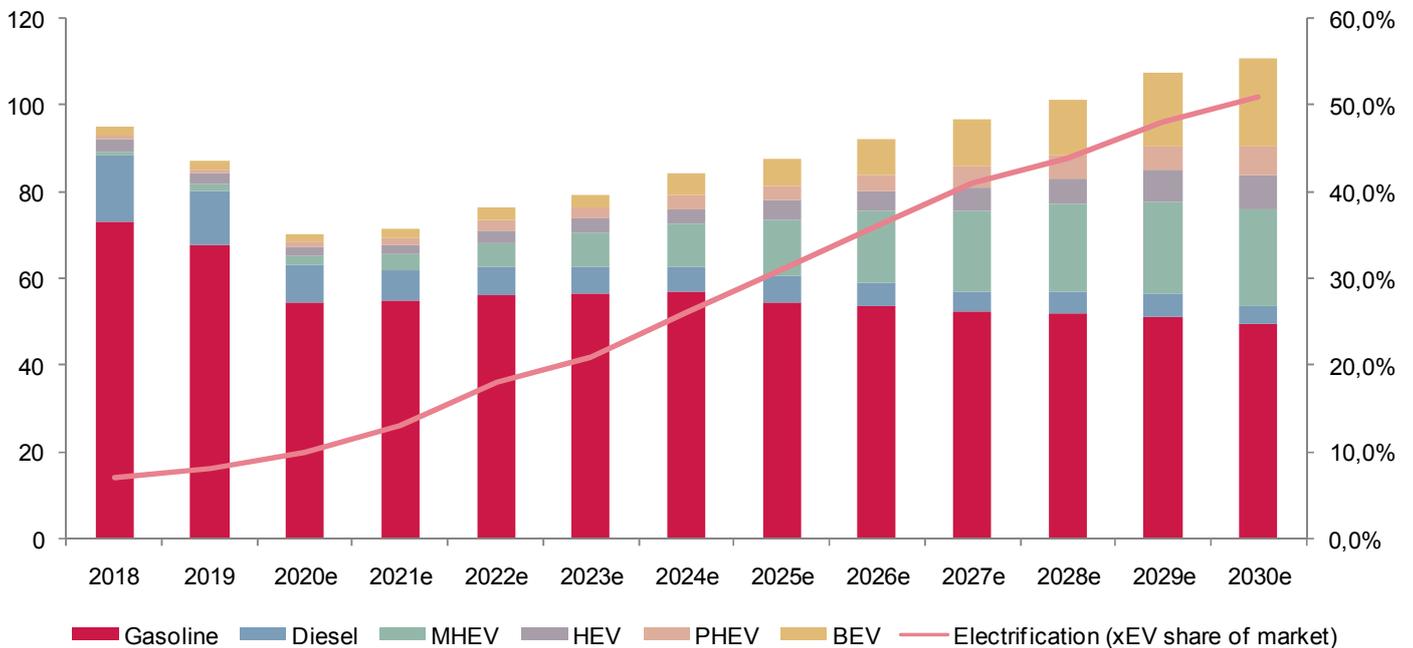
Source: VCI, Quirin Privatbank estimates

## Automotive market

### Rising sales figures for Electric Vehicles

According to Boston Consulting Group (BCG) the latest global automotive powertrain forecast shows sales of electrified vehicles (xEVs) are growing even faster than expected. Electrified vehicles will seize a third of the market by 2025 and 51% by 2030, surpassing sales of vehicles powered purely by internal combustion engines (ICEs). BCG’s previous forecast from 2017 showed xEV sales taking a quarter of the market by 2025 and approaching 50% by 2030. Battery-powered electric vehicles (BEVs) and plug-in hybrids (PHEVs) will seize almost a quarter of the market by 2030; BCG had previously projected their global market share at about a fifth. Noteworthy there are several factors which are driving the accelerated rate of xEV- and particularly BEV and PHEV-uptake: 1) One is government incentives, which play an important role in lowering the total cost of ownership (TCO) for consumers. 2) Another is tighter regulation on tailpipe emissions in a number of markets, which force OEMs to produce more xEVs to meet emission targets. The European Union has recently agreed on new CO2 emissions reduction targets for new passenger cars for 2025 and 2030 stating that carmaker will have to reduce CO2 emissions from all new cars by 15% in 2025 and 37.5% (31% for vans) in 2030 compared to 2021. 3) A third is falling battery prices and the extended driving ranges that these batteries allow, which contribute to rising consumer satisfaction with xEVs. According to BCG the top 29 OEMs already plan to invest more than USD 300bn over the next 10 years to further xEV production, resulting in more than 400 new models which might appear by 2025. Assuming that global weaning from fossil fuels continues, automobiles will contribute fewer greenhouse gases on a “well-to-wheel” basis over time. Under the premise that governments continue to support electrification with financial and nonfinancial incentives and by tightening regulations during the next few years, the demand for EVs will increase rapidly until 2030.

Forecast of global car sales until 2030 by powertrain type

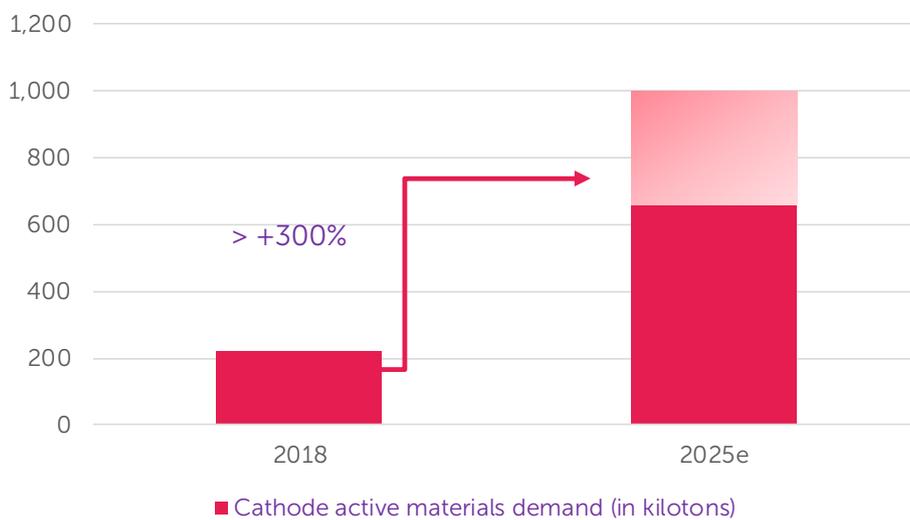


Source: BCG, Quirin Privatbank estimates

Taking all catalysts into account to the increasing demand for Electrified vehicles results also in a massive demand of battery materials, and this case IBU-tec will benefit from the development. IBU-tec has already built up capacity to deliver battery material to its customers.

The demand for cathode active materials in general is expected rise by at least 300% from 2018 to 2025 following the trend rising sales figures in the EV market.

### Electromobility drives demand for battery materials



Source: BASF 2019; Quirin Privatbank

## Company history

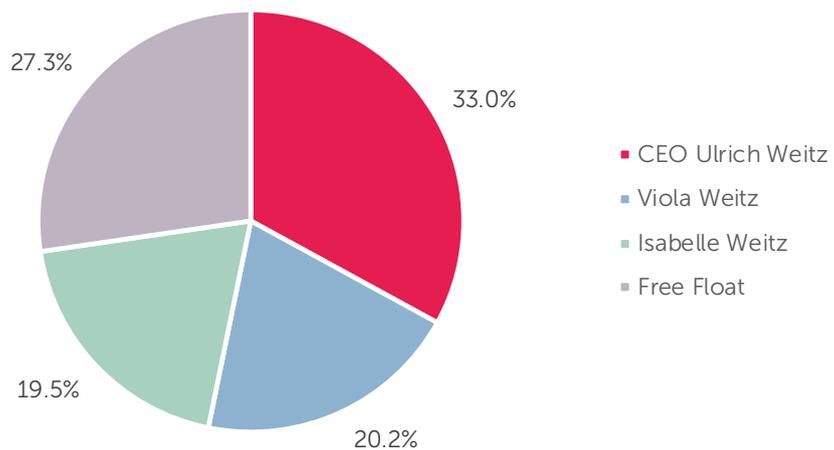
- 1885: Originally founded to manufacture decorative stone from travertine and cast stone from quicklime.
- 1946: Restarted production post WWII.
- 1975: R&D Center conversion and installation of the first rotary kiln.
- 1993: R&D Institute Privatization and Reincorporation.
- 2000: Takeover of the firm by current CEO Ulrich Weitz.
- 2001: Beginning of catalyst research.
- 2002: Beginning of development and production of chemical precursors and catalytic active powders.
- 2003: Expansion of the product portfolio with production- and development services with respect to materials for Speciality Chemicals.
- 2004: Development of nanoscale powder materials, suspensions and granulates (i.e. proppants).
- 2005: Fostering existing developments and patenting of the respective production methods on the basis of pulsation reactor methods.
- 2008: Installation of the until then world's largest pulsation reactor. Beginning of production of nano- and submicro powder, suspensions and granulates.
- 2009: Launch of two new trial sites.
- 2013: Completion of the firm's largest indirect rotary kiln.
- 2014: New strategic orientation: restructuring of technology fields and centralization of sales department.
- 2015: Construction of the new logistics- and production site in Nohra, Germany.
- 2016: Capacity expansion to 7 pulsation reactors and 12 rotary kilns.
- 2017: Company's IPO placed at €16.50 per share raising EUR 4m of share capital.
- 2017: Inauguration of Logistics Centre in Nohra, Germany.
- 2018: Acquisition of BNT Chemicals, a tin chemistry-based company with a product portfolio of catalysts for the chemical and pharmaceutical industries as well as glass coatings.
- Present: 3 Site locations, 16 rotary kilns, 8 pulsation reactors, state-of-the-art laboratory

## Ownership structure

Currently IBU-tec CEO Ulrich Weitz holds 33.0% of the company shares. The Weitz family in total has a stake of 79.5% in the company.

### Main shareholders

#### Current Ownership Structure



Source: IBU-tec advanced materials AG, Quirin Privatbank AG

## Key role biographies

### Management board:

IBU-tec's management consists of Ulrich Weitz, CEO; Jörg Leinenbach, CFO and Dr Arndt Schlosser, CSO.

**Ulrich Weitz (CEO):** Mr Weitz joined IBU-tec in 2000. He began holding executive positions in the industry in 1995 as Director Manufacturing Engineering at OTIS International, Inc. in Paris. From 1998-2000 he served as a factory manager HR at Winkler+Dünnbier AG, Neuwied, Germany, responsible for 750 employees. He is the CEO of IBU-tec advanced materials AG since 2000 and as of today also holds the position of Executive Director at BNT Chemicals GmbH within the IBU-tec group. Together with his family Mr Weitz holds 79.5% of the IBU-tec shares outstanding. He is responsible for the fields of Sales & Business Development as well as for the firm's operating activities.

**Jörg Leinenbach (CFO):** Mr Leinenbach joined IBU-tec in 2015. He studied Business Administration with a focus on revision and tax law at the University of Saarland. In his career he served for various management positions in the areas of Accounting, Controlling and Management of Investments, recently at prego services GmbH, Saarbrücken, where he was a manager for commercial controlling. From 2015-2017 he took over the role as Manager Administrations at IBU-tec and became CFO of the firm afterwards. He is responsible for the commercial activities of IBU-tec and responsible for the value adding operating activities of the firm.

**Dr Arndt Schlosser (CSO):** Mr Dr Schlosser joined the IBU-tec Group as Chief Sales Officer (CSO) as of 1 May 2020. He is responsible for sales, technology and business development. Dr. Schlosser has a doctorate in chemistry and worked for more than 20 years in leading positions at the globally operating chemical group Wacker Chemie AG. His management activities focused on sales, research and development and innovation management.

### Heads of key operational divisions:

**Dr Toralf Rensch, Head of Sales & Technologies:** Dr Rensch joined IBU-tec in 1997 and has long prior industry experience. As Head of Sales & Technology he coordinates the order processing all along from the offer to the realization. Additionally he is responsible for the internal R&D division of the IBU-tec group. Dr Rensch has been awarded his PhD at Otto-von-Guericke University, Magdeburg on the topic of thermal ground contamination in rotary kilns.

**Dr Thomas Wocadlo, Head of Engineering & Plant Management:** Dr Wocadlo is the manager of the division Engineering & Optimization being responsible for the measurement of emissions at customer sites, energetic optimizations, replacement deliveries as well as the full construction of new plants. He received his PhD from the Technical University Darmstadt, Germany in the field of thermal ground redevelopment in rotary kilns. In the following he worked on development technologies for waste disposal. Prior to his career at IBU-tec he held executive positions as manager of a company manufacturing industrial boilers as well as Head of Business Development, Marketing and Sales at ALSTOM, Viessmann and Infracore Gendorf.

**Rober Süße, Vice President Business Development:** Mr Süße joined IBU-tec advanced materials AG in 2015 where he is responsible for the development of new business areas. His tasks include the placement of (new) Applications, Technologies, Products and Know-How in the market. Prior to his role at IBU-tec he was a senior consultant from 2000-2005 at Roland Berger and later served as VP Corporate Development Asia at SMS Plastics Technology for 1 and as Interim Manager and Consultant at RS Consulting for 9 years.

**Max Narr, General Counsel & Head of IR:** Mr Narr joined IBU-tec in 2017 as Personal Assistant of the CEO. Within his current role as General Counsel he is the person of interest for legal questions for Investors Relations. Furthermore he holds the position of Commercial Director being responsible for the Business Development, Sales and Purchase at IBU-tec subsidiary BNT Chemicals GmbH. As a jurist focused on M&A transactions and commercial patents Mr Narr worked at various law firms including Baker & McKenzie from 2013-2017 in Munich, Germany.

#### Supervisory board:

**Dr Hans-Joachim Müller, Chairman:** Müller became Member of the Supervisory Board in 2012 and also functions as the legal advisor of the IBU-tec group. He holds a PhD from the Ludwig-Maximilians-Universität, Munich, Germany and is recipient of a research grant at the University of California in Los Angeles, USA. He started his career at BASF AG, Ludwigshafen, Germany and BASF East Asia Ltd in Hong Kong later on where he was responsible for the catalyst business in the APAC region. He then went on to work on the management board of leading specialty chemical company Süd-Chemie AG. In his current position as Group CEO at Azelis, he is responsible for implementing strategies and achieving defined goals for the shareholders. In 2017 he became the chairman of the supervisory board of IBU-tec advanced materials AG.

**Dr Jens Thoma Thau:** Mr Thau has been a member (and Vice-Chairman) of the Supervisory Board since 2012. He is a lawyer, specializing in Employment Law and also acts as legal advisor to IBU-tec. Following his university studies in Berlin and New York, he worked as an academic researcher, a coach for legal examinations, and as a lawyer. In his current position, Dr Thau is Chairman of the EBF Banking Committee for European Social Affairs, Co-Chair and Chief Legal Counsel of AGV Banken (The Employers' Association of Private Banks). Dr Thau is also a partner in his own legal firm.

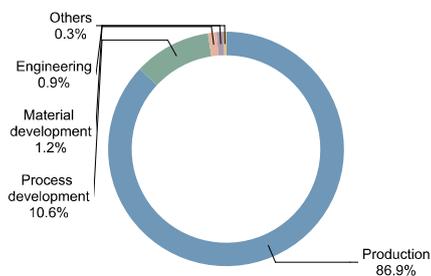
**Sandrine Cailleateau:** Ms Cailleateau has been member of the supervisory board since 2009. She holds a degree in Political Science and an MBA. After her MBA studies, she worked for several years as a Licensing Project Director for Sanofi and held a variety of positions at the leading edge pharmaceutical companies Fournier Pharma and Hesperion, as well as the investment banking firm, Michel Dyens & Co. She currently is CEO of SCiH Advisory, which she founded in 2013.

## Appendix

### Company description

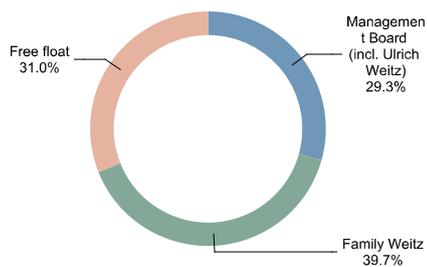
IBU-tec provides R&D, scale-up and tolling services with regards to the thermal treatment of inorganic materials. Its service portfolio includes scale-up trials as well as material and process development. With its broad expertise and years of experience, the company reduces development risk for its customers. Additionally, IBU-tec serves as a toll manufacturer and can rapidly create flexible production capacities.

### Revenues by segment 2019



Source: Company data

### Shareholder structure



Source: Company data

### Company guidance 2020

Group sales in 2020 to be in the upper single-digit percentage range below the previous year's level. EBITDA margin will remain in the double-digit range.

## Profit &amp; loss statement

Profit & loss statement (EUR m)	2018	YOY	2019	YOY	2020e	YOY	2021e	YOY	2022e	YOY
Sales	19.0	12.9 %	48.5	155.2 %	35.1	-27.6 %	44.8	27.6 %	53.0	18.5 %
Unfinished Goods	0.0		-0.3		0.0		0.0		0.1	
Other own work capitalized	0.3		0.3		0.4		0.4		0.5	
Other operating earnings	0.8		2.2		0.5		0.6		0.7	
Cost of goods	-2.5		-23.7		-18.2		-23.3		-26.0	
Gross profit	16.7		24.7		17.2		22.0		27.6	
Personnel expenses	-9.1		-12.7		-8.2		-10.5		-12.2	
Depreciation	0.0		0.0		0.0		0.0		0.0	
Other operating expenses	-3.7		-7.0		-4.6		-5.8		-6.9	
EBITDA	4.7	74.6 %	7.1	53.1 %	4.9	-31.6 %	6.2	27.6 %	9.2	48.3 %
EBITDA margin (%)	24.50		14.70		13.90		13.90		17.40	
EBIT	2.1	476.1 %	1.9	-4.9 %	0.3	-83.8 %	1.1	240.3 %	3.9	265.2 %
EBIT margin (%)	10.80		4.02		0.90		2.40		7.40	
Net interest	0.0		-0.4		-0.3		-0.4		-0.4	
Income from Participations	0.0		0.0		0.0		0.0		0.0	
Net financial result	0.0		-0.4		-0.3		-0.4		-0.4	
Exceptional items	0.0		0.0		0.0		0.0		0.0	
Pretax profit	2.1	590.7 %	1.5	-25.8 %	0.0	-98.3 %	0.7	2580.1 %	3.5	394.5 %
Pretax margin (%)	10.93		3.18		0.08		1.57		6.58	
Taxes	-0.7		-0.7		0.0		-0.2		-1.0	
Tax rate (%)	32.00		43.74		30.00		30.00		30.00	
Earnings after taxes	1.4		0.9		0.0		0.5		2.4	
Minorities	0.0		0.0		0.0		0.0		0.0	
Group attributable income	1.4	729.0 %	0.9	-38.6 %	0.0	-97.9 %	0.5	2580.1 %	2.4	394.5 %
No. of shares (m)	4.0		4.0		4.0		4.0		4.0	
Earnings per share (EUR)	0.35	729.0 %	0.22	-38.6 %	0.00	-97.9 %	0.12	2580.1 %	0.61	394.5 %

Source: Company data, Quirin Privatbank estimates

## Balance sheet

Balance sheet (EUR m)	2018	YOY	2019	YOY	2020e	YOY	2021e	YOY	2022e	YOY
<b>Assets</b>										
Cash and cash equivalents	0.2		0.7		1.9		2.9		4.0	
Accounts receivables	15.9		6.6		4.6		5.0		5.3	
Inventories	0.8		8.9		8.0		8.2		8.5	
Other current assets	0.0		0.0		0.0		0.0		0.0	
Tax claims	0.2		0.8		0.8		0.8		0.8	
<b>Total current assets</b>	<b>17.1</b>	<b>-11.5 %</b>	<b>17.0</b>	<b>-0.5 %</b>	<b>15.3</b>	<b>-10.0 %</b>	<b>17.0</b>	<b>11.0 %</b>	<b>18.6</b>	<b>9.6 %</b>
Fixed assets	22.3		33.8		37.7		35.5		35.3	
Goodwill	0.0		4.4		4.4		4.4		4.4	
Other intangible assets	0.5		0.5		1.8		2.4		2.1	
Financial assets	6.6		0.0		0.0		0.0		0.0	
Deferred taxes	0.0		0.0		0.0		0.0		0.0	
Other fixed assets	0.0		0.0		0.0		0.0		1.0	
<b>Total fixed assets</b>	<b>29.4</b>	<b>77.0 %</b>	<b>38.6</b>	<b>31.3 %</b>	<b>43.9</b>	<b>13.6 %</b>	<b>42.3</b>	<b>-3.6 %</b>	<b>42.8</b>	<b>1.1 %</b>
<b>Total assets</b>	<b>46.5</b>	<b>29.4 %</b>	<b>55.6</b>	<b>19.6 %</b>	<b>59.2</b>	<b>6.4 %</b>	<b>59.3</b>	<b>0.2 %</b>	<b>61.4</b>	<b>3.5 %</b>
<b>Equity &amp; Liabilities</b>										
Subscribed capital	4.0		4.0		4.0		4.0		4.0	
Reserves & other	16.0		16.0		16.0		16.0		16.0	
Revenue reserves	11.3		11.9		11.9		12.4		14.8	
Accumulated other comprehensive	0.0		0.0		0.0		0.0		1.0	
<b>Shareholder's equity</b>	<b>31.3</b>	<b>4.2 %</b>	<b>31.8</b>	<b>1.7 %</b>	<b>31.9</b>	<b>0.1 %</b>	<b>32.3</b>	<b>1.5 %</b>	<b>35.8</b>	<b>10.6 %</b>
Minorities	0.0		0.0		0.0		0.0		0.0	
<b>Shareholder's equity incl. minorities</b>	<b>31.3</b>	<b>4.2 %</b>	<b>31.8</b>	<b>1.7 %</b>	<b>31.9</b>	<b>0.1 %</b>	<b>32.3</b>	<b>1.5 %</b>	<b>35.8</b>	<b>10.6 %</b>
<b>Long-term liabilities</b>										
Pension provisions	0.0		0.0		0.0		0.0		0.0	
Financial liabilities	3.6		11.3		10.6		10.1		9.6	
Tax liabilities	0.0		0.1		0.1		0.1		0.1	
Other liabilities	2.9		5.3		4.8		4.8		4.8	
<b>Total long-term debt</b>	<b>6.5</b>	<b>48.3 %</b>	<b>16.7</b>	<b>158.7 %</b>	<b>15.5</b>	<b>-7.1 %</b>	<b>15.0</b>	<b>-3.5 %</b>	<b>14.5</b>	<b>-3.4 %</b>
<b>Short-term debt</b>										
Other provisions	0.0		0.0		0.0		0.0		0.0	
Trade payables	1.2		2.9		2.9		2.9		3.0	
Financial debt	7.3		3.9		3.7		3.8		3.9	
Other liabilities	0.2		0.2		5.2		5.2		4.2	
<b>Total short-term debt</b>	<b>8.7</b>	<b>481.8 %</b>	<b>7.1</b>	<b>-19.1 %</b>	<b>11.8</b>	<b>66.9 %</b>	<b>11.9</b>	<b>1.4 %</b>	<b>11.1</b>	<b>-7.0 %</b>
<b>Total equity &amp; liabilities</b>	<b>46.5</b>	<b>29.4 %</b>	<b>55.6</b>	<b>19.6 %</b>	<b>59.2</b>	<b>6.4 %</b>	<b>59.3</b>	<b>0.2 %</b>	<b>61.4</b>	<b>3.5 %</b>

Source: Company data, Quirin Privatbank estimates

## Financial key ratios

Key ratios	2018	2019	2020e	2021e	2022e
<b>Per share data (EUR)</b>					
EPS	0.35	0.22	0.00	0.12	0.61
Book value per share	7.8	8.0	8.0	8.1	8.7
Free cash flow per share	-1.4	-0.5	0.6	0.5	0.5
Dividend per share	0.00	0.00	0.00	0.00	0.00
<b>Valuation ratios</b>					
EV/Sales	4.19	1.64	1.78	1.36	1.12
EV/EBITDA	17.1	11.2	12.8	9.8	6.4
EV/EBIT	38.7	40.8	198.1	56.8	15.2
P/E	48.7	75.0	2716.1	101.3	20.5
P/B	2.2	2.0	1.6	1.5	1.4
Dividend yield (%)	0.0	0.0	0.0	0.0	0.0
<b>Growth</b>					
Sales growth (%)	12.9	155.2	-27.6	27.6	18.5
EBITDA growth (%)	74.6	53.1	-31.6	27.6	48.3
EBIT growth (%)	476.1	-4.9	-83.8	240.3	265.2
EPS growth (%)	729.0	-38.6	-97.9	2580.1	394.5
<b>Profitability ratios</b>					
EBITDA margin (%)	24.5	14.7	13.9	13.9	17.4
EBIT margin (%)	10.8	4.0	0.9	2.4	7.4
Net margin (%)	7.4	1.8	0.1	1.1	4.6
ROCE (%)	4.9	4.0	0.6	2.1	7.7
<b>Financial ratios</b>					
Total equity (EUR m)	31.3	31.8	31.9	32.3	35.8
Equity ratio (%)	67.3	57.2	53.8	54.6	58.3
Net financial debt (EUR m)	10.7	14.6	12.5	11.0	9.5
Net debt/Equity	0.7	0.6	0.5	0.5	0.6
Interest cover	-83.2	4.8	1.1	2.9	9.0
Net debt/EBITDA	2.3	2.0	2.6	1.8	1.0
Payout ratio (%)	0.0	0.0	0.0	0.0	0.0
Working Capital (EUR m)	15.5	12.6	9.8	10.3	10.7
Working capital/Sales	0.82	0.26	0.28	0.23	0.20

Source: Company data, Quirin Privatbank estimates

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#### Competent supervisory authority

Bundesanstalt für Finanzdienstleistungsaufsicht - BaFin – (Federal Financial Supervisory Authority), Graurheindorfer Str. 108 , 53117 Bonn

#### Contact Quirin Privatbank AG Frankfurt am Main

Schillerhaus / Schillerstraße 20 / 60313 Frankfurt am Main

Management Board: Karl Matthäus Schmidt • Johannes Eismann •

## Contact Details

### Quirin Privatbank AG

Schillerhaus | Schillerstrasse 20 | 60313 Frankfurt am Main

Tel.: +49 69 2 47 50 49-0 | Fax: +49 69 2 47 50 49-44 | Institutional-Sales-FFM@quirinprivatbank.de

Equity Research	Tel.	Email
Klaus Soer	+49 (0) 69 2475049-27	klaus.soer@quirinprivatbank.de
Ralf Marinoni	+49 (0) 69 2475049-24	ralf.marinoni@quirinprivatbank.de
Sebastian Droste	+49 (0) 69 2475049-26	sebastian.droste@quirinprivatbank.de
Daniel Kukalj	+49 (0) 69 2475049-28	daniel.kukalj@quirinprivatbank.de
Jannik Lucas	+49 (0) 69 2475049-29	jannik.lucas@quirinprivatbank.de

Equity Sales	Tel.	Email
Rainer Jell	+49 (0) 69 2475049-45	rainer.jell@quirinprivatbank.de
Klaus Messenzehl	+49 (0) 69 2475049-46	klaus.messenzehl@quirinprivatbank.de
Bruno de Lencquesaing	+49 (0) 69 2475049-81	bruno.delencquesaing@quirinprivatbank.de

Fixed Income Sales	Tel.	Email
Jürgen Raabe	+49 (0) 69 2475049-41	juergen.raabe@quirinprivatbank.de
Janine Kaiser	+49 (0) 69 24750 49-83	janine.kaiser@quirinprivatbank.de
Stefan Krewinkel	+49 (0) 69 2475049-43	stefan.krewinkel@quirinprivatbank.de
Michael Laufenberg	+49 (0) 69 2475049-48	michael.laufenberg@quirinprivatbank.de
Roman Piroutek	+49 (0) 69 2475049-47	roman.piroutek@quirinprivatbank.de

Trading / Sales Trading	Tel.	Email
Thomas Flügel	+49 (0) 69 2475049-92	thomas.fluegel@quirinprivatbank.de
Jean-Marie Frémion	+49 (0) 69 2475049-90	jean-marie.fremion@quirinprivatbank.de
Peter Rumstich	+49 (0) 69 2475049-65	peter.rumstich@quirinprivatbank.de

Business Support	Tel.	Email
Suganya Sutharsan	+49 (0) 69 2475049-88	suganya.sutharsan@quirinprivatbank.de