



# MANAGEMENT BOARD REPORT

on activities of the CIECH Group and CIECH S.A.  
in 2018

We are providing a courtesy English translation of our Management Board Report on activities of the CIECH Group and CIECH S.A. which was originally written in Polish. We take no responsibility for the accuracy of our translation. For an accurate reading of our Management Board Report on activities of the CIECH Group and CIECH S.A., please refer to the Polish language version of our Management Board Report on activities of the CIECH Group and CIECH S.A.

## LETTER FROM THE PRESIDENT OF THE MANAGEMENT BOARD OF CIECH S.A.



Dear Sirs and Madams,

2018 was a challenging year for the CIECH Group, especially in the face of rising prices of raw materials, electricity and CO<sub>2</sub> emission allowances. This makes it even more important to acknowledge the fact that despite the unfavourable market situation, the CIECH Group earned PLN 3,673 million in consolidated revenues and PLN 633 million in adjusted EBITDA. The margins earned by the Group were lower than in 2017, but remained solid. EBITDA (A) margin stood at 17.2% and net margin at 5.0%. We have mitigated the negative impact of external factors on the CIECH Group's operations owing to the global scale of operations, effective use of the upturn in the core markets, effective management of product prices or continuous expansion of the product range, as well as consistent cost optimisation. The CIECH Group has been expanding all its operational businesses.

2018 confirmed the solid foundations for the growth of the soda ash and sodium bicarbonate market, and new supply streams and their impact on the market have been offset by changes in Chinese industry, driven by the environmental aspects and reduced exports from China to Southeast Asia. This created a demand gap in those markets, effectively exploited by CIECH in 2018. The growing demand for detergents on Asian, African and Latin American markets was also conducive to the Group's market expansion. However, it should be stressed here that we are still focusing on the strategic European market, because we still see a great potential for growth here. In 2018, CIECH also continued intense efforts with respect to its product portfolio and customers, and made the most of all market opportunities, both in terms of geographical expansion and product range.

Our key investments – construction of new saltworks and increasing sodium bicarbonate, including pharmaceutical-grade soda, production capacity in the Stassfurt plant – also went smoothly. The launch of a salt plant in Germany is scheduled for 2020 and owing to this project CIECH will move up to third place in the European ranking of largest evaporated salt producers. The total salt production in Stassfurt and Janikowo will reach 1 million tonnes per year, which means that the production capacity will almost double. The plant will supply Western European markets with a wide range of highly processed salt products: from food grade salt, salt for dishwashers, tablets, electrolysis salt to specialised pharmaceutical-grade salt. On the other hand, the project to expand the sodium bicarbonate production capacity by 50 thousand tonnes per year is scheduled for completion in the first half of 2019.

In the agro business by far the most important event of the past year was the acquisition of a Spanish company, Proplan, a supplier of crop protection products, operating on three continents. With this acquisition, CIECH has gained access to new markets in Southern Europe, North Africa, South America and Australia and acquired a portfolio of active substances and 120 product registrations. By acquiring Proplan, we have entered a new stage of development of the agro business within the Group, combining the intellectual capital of the acquired company and its presence on new markets with the scale of CIECH's operations, its production capacities and R&D facilities. The expansion of the Group's crop protection products business was also supported by CIECH Sarzyna's strong activity in foreign markets, as it started supplying its herbicides to Canada and Australia. In agro business, the value of exports increased 2,5 times between 2015 and 2018 and the Company currently sells its crop protection products to approximately 40 countries worldwide. The increased share of export makes the agro business resistant to unfavourable weather conditions on the domestic market. Moreover, as a result of intensive R&D efforts, CIECH Sarzyna expanded its product range by introducing 12 new agro products in 2018.

During the past year, we focused on the development of the resin and foam areas. In the resin business, we have fundamentally redesigned our product portfolio towards specialist resins, tailored to the needs of different customers. These efforts resulted in the stabilization of business in the face of rapidly growing prices of raw materials and the persistently high level of supply from Asia, which in turn was the effect of the ongoing trade war between China and the USA. In the foam business, we expanded our product portfolio with high-margin products and increased production capacity and efficiency. Thanks to our efforts in this business, despite a noticeable drop in demand in the furniture sector, especially on the German market, we are still one of the key players on the polyurethane foams market in Poland.

The business of silicates – which are used for the production of precipitated silica in such sectors as the tire and cosmetics industries – has benefited from favourable conditions on the global market in the past year. In the first half of 2018,

CIECH Vitrosilicon completed a project to expand the glassy sodium silicate production capacity of its plants by 20%. This was another – after replacing the furnace in 2016 – CIECH Group's investment aimed at increasing capacity in this area. As a result of these efforts, CIECH has become one of the largest producers of sodium silicate in Europe. For us, this is a prospective business whose global value may increase significantly in the coming years.

One of the most significant events of the past year was the announcement of the CIECH Group Strategy for 2019-2021 which was published on 5 December 2018. We have prepared a strategy aimed at stable and precisely planned development of the CIECH Group, which will result in business diversification, strengthening of the leading position on the soda ash market, expansion in the salt area, and using the potential of the organic segment and intra-group synergies in the area of silicates. An important element of the strategy is the utilisation of employees' potential through the implementation and improvement of the best HR practices, as well as innovations aimed at increasing production efficiency and expanding the product portfolio. In terms of the operation of the Strategy, we do not impose any restrictions on the choice of the Group's development model, thus confirming a flexible approach to our asset portfolio management. I am convinced that through consistent implementation of the objectives set out in the Strategy, with the support of the majority shareholder of CIECH S.A. and our Group's employees, by 2021 we will create an effective and diversified chemical holding that generates a positive value for shareholders in the long term and, apart from the soda business, holds a significant position in innovative, specialised market segments.

Thanks to the successful contracting of our products for 2019, especially of soda, salt and silicates, we enter the next year with optimism, although we remain attentive to the challenges posed by the market environment and competition. We will consistently implement the new Strategy of our Group in accordance with the following values: customer orientation, innovation, efficiency and effective management. The Management Board of CIECH S.A. will make every effort to ensure that our Group grows in line with the interests of all its stakeholders – that it generates profit for shareholders, maintains high level of customer satisfaction, becomes an increasingly attractive employer and maintains its position as a reliable partner for local communities, with an eye for the natural environment.

On behalf of the Management Board of CIECH S.A. and the Management Boards of the CIECH Group companies, I would like to present the Management Board Report on Activities of the CIECH Group and CIECH S.A. in 2018 and encourage you to read this document. On behalf of the entire Management Board of CIECH S.A., I would like to take this opportunity to express my sincere thanks to all Employees for their hard work and commitment, to the Clients for another year of fruitful cooperation, to the Shareholders for the trust they placed in the Company, and to the Supervisory Board for their invaluable support and constructive dialogue.

Yours faithfully,



Dawid Jakubowicz  
President of the Management Board of CIECH S.A.



**Sebastian Kulczyk**  
Chairman of the Supervisory  
Board of CIECH S.A.

## LETTER FROM THE CHAIRMAN OF THE SUPERVISORY BOARD OF CIECH S.A.

Dear Sirs and Madams,

2018 saw the completion of the first stage of transforming the CIECH Group into a modern and diversified chemical holding. Through the implementation and consistent pursuit of the strategy adopted in 2014, the Group was able to deliver in that period the strongest financial results in history, despite such complex challenges as the global increase in raw material prices and, more recently, also in prices of CO2 certificates.

A special priority of the Group was to actively plan its growth in the long term, with particular emphasis on new investment projects and acquisitions. The decision to commence the construction of a new salt production plant in Germany, the purchase of a Spanish company in the crop protection products segment, forward-looking projects in the soda or silicates segment – this contributes to the image of the company that professionally identifies the challenges of the global market.

In December 2018, the Supervisory Board unanimously approved the Strategy for 2019-2021. This is the beginning of another complex stage of the CIECH Group's transformation into an international, competitive, socially responsible and environmentally friendly chemical holding.

CIECH S.A. is and will remain a key asset of Kulczyk Investments. The Supervisory Board of the Company will actively support the Management Board in the implementation of all strategic objectives. We intend to carefully analyse and encourage changes aimed at increasing production efficiency, development and marketing of new, specialized products, expansion into new markets, as well as implementation of state-of-the-art technologies. Special priority will also be given to the Group's HR policy. We want the CIECH Group to be the first choice employer, a modern and attractive place to work.

On behalf of the Supervisory Board, I would like to invite you to read the Report of the Management Board of the CIECH Group and CIECH S.A. for 2018 and would also like to thank the Employees and the Management Board for their commitment and their everyday efforts which have resulted in the continuous transformation of the CIECH Group.

Yours faithfully

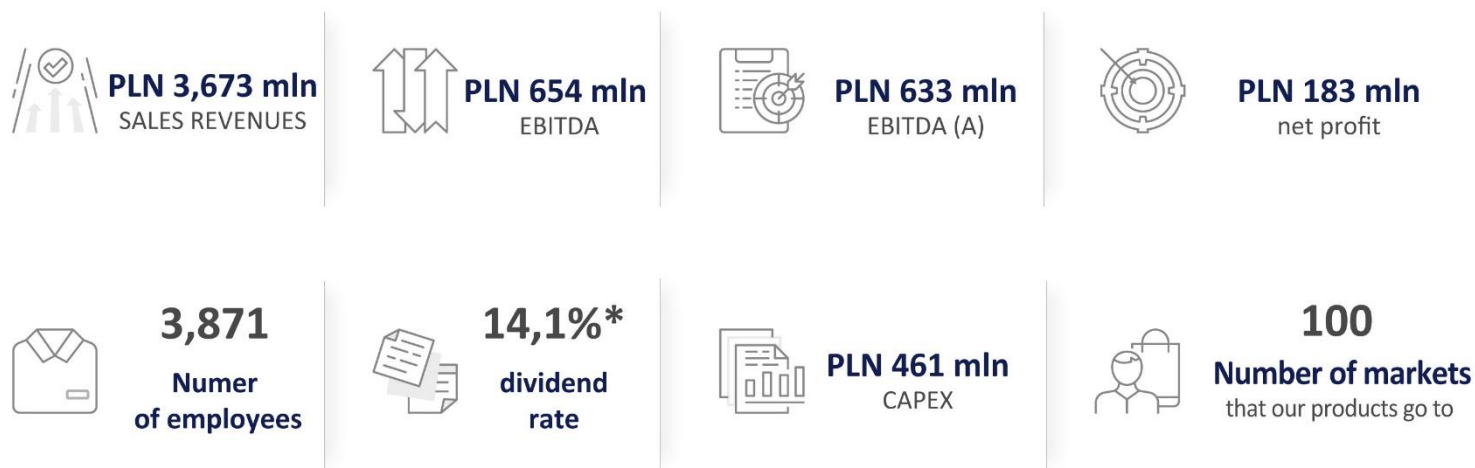


Sebastian Kulczyk

Chairman of the Supervisory Board of CIECH S.A.

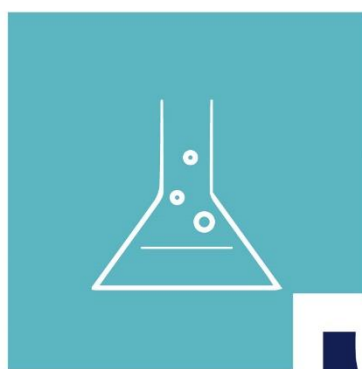


# CIECH GROUP IN 2018



## SODA SEGMENT

**PLN 2,423 mln** sales revenues  
**PLN 537 mln** EBITDA (A)



## SILICATES & GLASS SEGMENT

**PLN 249 mln** sales revenues  
**PLN 35 mln** EBITDA (A)



## TRANSPORT SEGMENT

**PLN 147 mln** sales revenues  
**PLN 15 mln** EBITDA (A)



## ORGANIC SEGMENT

**PLN 886 mln** sales revenues  
**PLN 76 mln** EBITDA (A)

**IN 2018 THE MOST IMPORTANT ACTIVITIES OF THE CIECH GROUP WERE CONCENTRATED ON THE EXTENSION OF THE PRODUCT PORTFOLIO, EXPANSION TO NEW MARKETS AND LIMITING THE NEGATIVE INFLUENCE OF HIGH PRICES OF RAW MATERIALS AND EMISSION RIGHTS.**

- Acquisition of 100% shares in Proplan - a Spanish supplier of plant protection products operating on three continents.
- Continuation of investment in highly specialized sodium bicarbonate at a factory in Germany.
- The launching of the project of building salt plant in Stassfurt.
- Completion of the expansion of production capacity of glassy sodium silicate by over 20%.
- Approval of the CIECH Group Strategy for 2019-2021\*\*

\* As at 28 June 2018.

\*\* Detailed information about Strategy on page 43-44

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# OPERATING ACTIVITIES

of the CIECH Group







# 1 CIECH GROUP'S OPERATING ACTIVITIES

## 1.1 MAJOR EVENTS AND ACHIEVEMENTS IN 2018

### Execution of annexes to a facility agreement

On 9 January 2018, negotiations related to an annex to the loans agreement were completed. As a result, the following documents were signed:

- an annex amending and restating the senior and revolving loans agreement for up to PLN 1,590 million of 29 October 2015, concluded by and between, inter alia, CIECH S.A., its selected subsidiaries, Bank Handlowy w Warszawie S.A. as agent, Powszechna Kasa Oszczędności Bank Polski S.A. as security agent and certain other financial institutions
- an annexe amending and restating the intercreditor agreement of 28 November 2012, concluded by and between, inter alia, CIECH S.A., its selected subsidiaries, Bank Handlowy w Warszawie S.A. and Powszechna Kasa Oszczędności Bank Polski S.A. as security agent,
- the deed of release of collateral.

On 6 April 2018, amendments to the above facility agreement came into effect. For more detailed information, see section 4.6 of this report.

### Changes in the composition of the Management Board of CIECH S.A.

On 6 March 2018, the Supervisory Board of CIECH S.A. appointed Mr Krzysztof Szłaga as a Member of the Management Board of CIECH SA with effect from 12 March 2018.

On 10 August 2018, Mr Artur Król submitted his resignation from the Management Board of CIECH S.A.

On 10 September 2018, Mr Maciej Tybura submitted his resignation from the Management Board of CIECH S.A. At the same time, the Supervisory Board delegated Mr Dawid Jakubowicz to temporarily perform the function of the President of the Management Board for a period of 3 months. On 5 December 2018, the Supervisory Board of CIECH S.A. appointed Mr Dawid Jakubowicz as President of the Management Board of CIECH S.A.

On 10 September, the Supervisory Board of CIECH S.A. appointed Mr Mirosław Skowron to the office of member of the Management Board. Mr Mirosław Skowron is responsible for matters related to production, energy and maintenance.

On 26 November 2018, Mr Krzysztof Szłaga submitted his resignation from the Management Board of CIECH S.A.

### Execution of a significant contract by a subsidiary

On 30 March 2018, CIECH Soda Polska S.A., as a result of negotiations conducted, signed an agreement for the supply of power coal with Polska Grupa Górnicza S.A. The estimated value of the agreement in the period of 5 years may amount to approx. PLN 340,000 thousand.

### Agreement with the auditor

On 16 April 2018, the Supervisory Board of CIECH S.A. resolved to extend the agreement with PricewaterhouseCoopers Sp. z o.o. for the audit of the statutory financial statements of CIECH S.A. and the consolidated financial statements of the CIECH Group for the years 2018-2019. The agreement was concluded for a period necessary to perform the obligations specified therein.

### Commencement of the implementation stage of an investment project

On 27 April 2018, the Management Board of CIECH S.A. made a decision to proceed with the implementation stage of a project whose subject matter is the construction of an evaporated salt production plant in Germany. The value of the project is estimated at about EUR 100 million, and the approximate time of its implementation is 2 to 3 years. The estimated production capacity of the plant is approx. 450 thousand tons of salt per annum.

### Acquisition of shares in Proplan Plant Protection Company, S.L.

On 28 May 2018, CIECH S.A. signed an agreement whereby the Company undertook to acquire 18,750 shares representing 75% of share capital of Proplan Plant Protection Company, S.L. Proplan manufactures and sells generic crop protection products. It operates in the European market, mostly in Spain, and on other continents – mainly in Australia and Africa.

On 28 May 2018, CIECH S.A. also signed the shareholders' agreement in relation to the remaining 6,250 shares representing 25% of the share capital of Proplan, which was to enter into force upon closing of the Transaction. The transaction was finally closed by transferring the title to 100% of shares in Proplan in the form of a sale agreement which was concluded on 26 July 2018. The purchase price of shares according to the contract amounted to EUR 44,615 thousand (PLN 191,519 thousand according to the exchange rate from the closing day of the transaction). The total amount of the payment transferred included in the purchase settlement, including discounted contingent payment depending on the results of Proplan for 2018 and 2019 (payable in 2019 and 2020), is EUR 47,373 thousand (PLN 203, 866 thousand).

### Decision on dividend payment

On 22 June 2018, the Ordinary General Meeting adopted a resolution to allocate the following to the payout of dividend in the amount of PLN 395,249 thousand:

- the entire net profit earned by CIECH S.A. in 2017, amounting to PLN 243,907 thousand;
- a part of profits included in the supplementary capital, amounting to PLN 151,342 thousand.

The dividend record and payment dates were set respectively for 2 July 2018 and 31 August 2018.

### Appointment of the Supervisory Board

On 24 July 2018, Mr Sebastian Kulczyk was appointed to the office of the Chairman of the Supervisory Board of CIECH S.A., Mr Tomasz Mikołajczak was appointed to the office of the Deputy Chairman, and Mr Mariusz Nowak was appointed to hold the office of the Secretary of the Supervisory Board. At the same time, Mr Piotr Augustyniak, Mr Mariusz Nowak and Mr Artur Olech became members of the Audit Committee. Mr Piotr Augustyniak was elected by the members of the Audit Committee as its Chairman. Furthermore, the Supervisory Board of CIECH S.A. adopted a resolution on the appointment of the following members of the Remuneration Committee: Mr Tomasz Mikołajczak, Mr Mariusz Nowak and Mr Dawid Jakubowicz. Following Mr. Dawid Jakubowicz's resignation from the Supervisory Board of CIECH SA as of 5 December 2018, he also ceased to be a member of the Committee as of that date.



### Execution of facility agreements

On 28 August 2018, an overdraft facility agreement was signed by CIECH S.A. and Bank Pekao S.A. in the amount of PLN 50,000 thousand. The agreement was concluded for a period of 1 year, i.e. until 28 August 2019. A drawn-down amount of the facility will bear interest at the 1M WIBOR rate plus the bank's margin. The facility is intended to finance the Company's day-to-day operations. No collateral was established for this facility. The terms and conditions of the agreement do not differ from standard terms used for facility agreements.

On 29 August 2018, overdraft facility agreements were signed by CIECH S.A. and Bank Millennium S.A. in the amount of PLN 50,000 thousand and EUR 10,000 thousand. The agreements were concluded for a period of 1 year, i.e. until 29 August 2019. Drawn-down amounts of the facilities will bear interest at the 1M WIBOR and 1M EURIBOR rate, respectively, plus the bank's margin. The facility is intended to finance the Company's day-to-day operations. The facility is secured with a package of collateral shared with the lenders of the consortium loan (agreement dated 9 January 2018) and with a surety issued by selected subsidiaries of CIECH S.A. The terms and conditions of the agreement do not differ from standard terms used facility agreements.

### Agreement with a strategic brine supplier

On 10 October 2018, a tripartite agreement was concluded between the CIECH S.A., CIECH Soda Polska S.A. and Inowrocławskie Kopalnie Soli "SOLINO" S.A. The subject matter of the agreement is the construction by IKS Solino of a brine pipeline to connect the maneuvering tank owned by IKS Solino in Inowrocław – Mątwy with the Production Plant of CIECH Soda Polska S.A. in Janikowo. IKS Solino agreed to construct the connection by 30 June 2021. The agreement also regulates issues related to the establishment of transmission easements and the legal status of the existing industrial infrastructure for the purposes of implementing the project.

### Extension of the deadline for determining a price formula for the supply of process steam to CIECH Soda Romania S.A.

On 27 November 2018, CIECH Soda Romania S.A. signed an annex to an agreement for the supply of process steam with S.C. CET Govora S.A. in composition bankruptcy based in Romania. Pursuant to the Annex, the Parties extended the deadline for the completion of negotiations related to the determination of the price formula for the supply of process steam until 31 March 2019. At the same time, the Parties agreed that in the event of failure to determine the price formula on or before 31 March 2019, the Agreement would terminate by operation of law as of 1 April 2019. Furthermore, the parties agreed on the new price of steam for the period until 31 March 2019.

### Adoption of strategy for 2019-2021

On 5 December 2018, the Supervisory Board of the CIECH S.A. approved the "CIECH Group Strategy for 2019-2021" adopted by the Management Board of CIECH S.A. The Strategy envisages the development of the CIECH Group towards a more effective and diversified chemical holding, generating a positive value for shareholders. This objective will be pursued by increasing competitive advantages in the key soda business, further investing in the development of specialist businesses and value creation through changes in the asset portfolio, based on the following three pillars: customer orientation, innovation and increased efficiency.

The Strategy also provides for building a work environment conducive to the development of the best employees, creating a culture of efficiency, as well as strengthening the position of a reliable partner of local communities, demonstrating responsibility for the natural environment.

Strategic financial goals of the CIECH Group:

1. sales revenues in 2021: more than PLN 4.0 billion;
2. Adjusted EBITDA in 2021: more than PLN 900 million;
3. adjusted EBITDA margin in 2021: more than 22%.

## 1.2 CHARACTERISTICS OF THE CIECH GROUP

The CIECH Group is an international, professionally managed group with a well-established position of a leader of the chemical sector in Central and Eastern Europe. It manufactures products which are used in the production of articles necessary in

The CIECH Group is a global concern focused on prospective markets.

everyday life of people all over the world - state-of-the-art products of the highest, world quality. Taking advantage of the support of a reliable strategic investor – Kulczyk Investments – it implements the strategy of global development.

The core sales market for the CIECH Group is the European Union, including mainly Poland, Germany and Central Eastern European countries. Products manufactured by the CIECH Group are also exported to overseas markets and sold

mainly to customers in India, North Africa and the Middle East.



FIGURE 1: KEY OPERATING SEGMENTS AND MAJOR CATEGORIES OF THE CIECH GROUP'S PRODUCTS

	 SODA SEGMENT	 ORGANIC SEGMENT	 SILICATES AND GLASS SEGMENT	 TRANSPORT SEGMENT
<b>COMPANIES</b>	CIECH CIECH Soda Polska CIECH Soda Deutschland CIECH Soda Romania	CIECH CIECH Sarzyna CIECH Pianki Proplan	CIECH CIECH Vitrosilicon CIECH Soda Romania	CIECH CIECH Cargo
<b>PRODUCTS SERVICES</b>	soda ash evaporated salt baking soda energy	epoxy resins polyester resins saturated and unsaturated agro products polyurethane foams	lanterns and jars sodium and potassium silicates	transport services forwarding services transshipments siding operations railcar rental
<b>CUSTOMERS</b>	glass industry food detergent industry pharmaceutical households	agriculture furniture industry households	chemical food detergent industry paint industry households	major companies of the CIECH Group
<b>MARKETS</b>	global	global	global	domestic

Products of the CIECH Group are manufactured in 8 production plants. Four largest production plants (2 in Poland, 1 in Germany and 1 in Romania) operate in the soda segment and manufacture soda ash and soda derived products (in the case of CIECH Soda Romania S.A., the plant also manufactures glassy sodium silicate and sodium water glass). The other 4 plants are dedicated to the organic segment, and to silicates and glass segment, and are located in Poland. In addition, the new Group company, Proplan, outsources the product formulation and packaging services from two plants.

Strategic distribution of the Group's plants enables optimisation of logistics efforts and expansion of the distribution network which is of particular importance in the area of the soda segment's products. Plants in Poland and Germany guarantee access to key markets and stability of supplies in Europe. Owing to production in the Romanian plant, the CIECH Group strengthens its presence in fast-growing overseas markets.

In the third quarter of 2018, the Spanish company, Proplan Plant Protection Company, S.L., engaged in the production and sale of crop protection chemicals, became a member of the CIECH Group. The company specialises in registering and



distributing fungicides, herbicides, insecticides, growth regulators. It operates in the European market, mostly in Spain, and on other continents – mainly in Australia and Africa.

FIGURE 2: KEY COMPANIES WITHIN THE CIECH GROUP



The CIECH Group is the exclusive Polish exporter of:

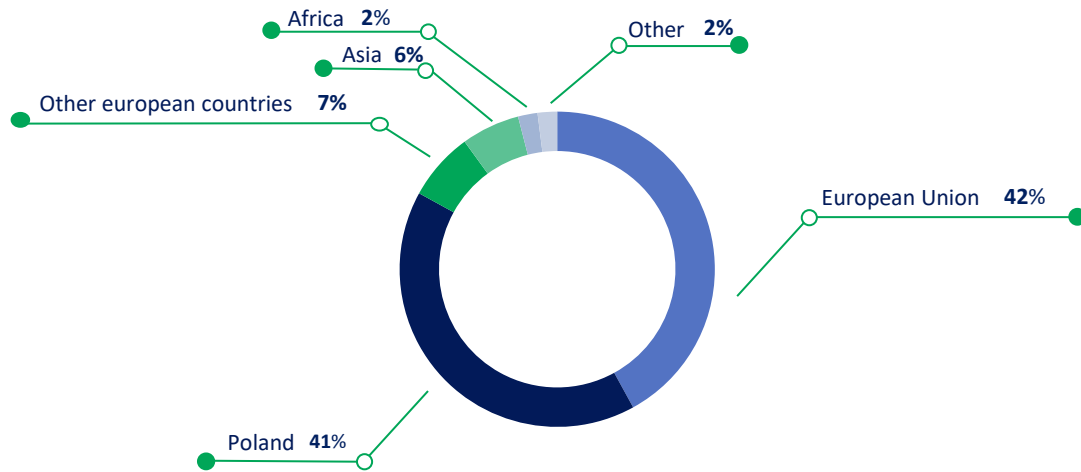
- Soda ash
- Sodium bicarbonate,
- Calcium chloride,
- Epoxy resins.

The CIECH Group is the largest producer of sodium carbonate in the CEE region and the second largest in Europe.





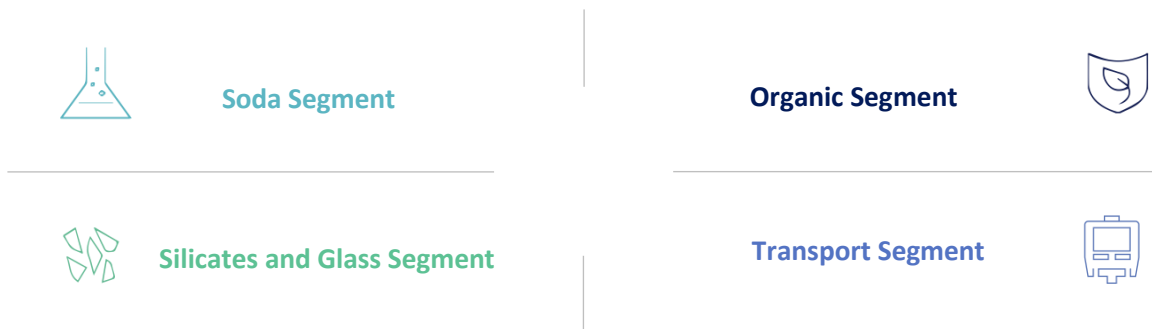
FIGURE 3: GEOGRAPHICAL STRUCTURE OF THE CIECH GROUP'S REVENUES IN 2018




Source: Own compilation

### 1.3 OPERATING SEGMENTS

Activities of the CIECH Group are focused on four key segments which ensure a diversification of its business.



 <b>SODA SEGMENT</b> Soda ash   Sodium bicarbonate   Salt	<b>66%</b>   of the CIECH Group's revenues in 2018
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Soda is one of the basic semi-finished products (raw materials) of modern chemistry that finds wide application in the industry.

The Soda segment is an area with the largest share in the Group's financial performance. In 2018, it accounted for nearly 85% of adjusted EBITDA (adjusted by one-off events). The CIECH Group is focused on expanding its business potential and creating competitive advantages which result from, among other aspects, the Group's strong position on key markets and relations with customers, increase in production capacity, wide range of soda products, extension of the sodium bicarbonate portfolio and optimal distribution of production plants.

There are two basic soda production methods: synthetic method – the Solvay method (soda ash) and natural – mining method (trona). The Solvay method underwent several modifications, of which the most popular is the Hou method, used by certain production companies in China. The CIECH Group produces soda using the Solvay method.

## Soda ash

Soda ash is one of the basic raw materials for the glass manufacturing industry — about one half soda ash produced worldwide is used for the production of glass. It is also used for the production of washing and cleaning products, in metallurgy and chemical industry, among others, to produce certain types of mineral fertilizers as well as dyes and pigments. There are two basic types of soda ash:



Dense soda – used primarily in the production of glass.



Light soda – used primarily in the production of granular detergents.

The main difference between light and dense soda is the bulk density (1 tonne of light soda is of higher volume than 1 tonne of dense soda), and the basic chemical characteristics are identical. The type of product purchased by customers depends primarily on the technology they use and on their individual preferences.

The CIECH Group sells soda ash both in bulk, as well as packed in big and smaller bags. The products sold in bulk are transported to the customer in specialist tankers or railway wagons, and the packed products – by road or railway transport. To overseas markets, soda ash is transported by ships.

Soda ash is used primarily in production of:

- flat glass,
- glass packaging and glassware,
- detergents,
- technical application, other chemical applications, treatment plants, mineral extraction.

The CIECH Group produces both types of soda, adapting the production structure to the customers' expectations.

## Sodium bicarbonate

Sodium bicarbonate is used mainly in production of animal feed (as an acidity regulator), food (among others as an ingredient of baking powder and sparkling drinks), pharmaceuticals (e.g. for dialysis), detergents, cosmetics and for purifying exhaust fumes.



Food grade soda – a product that finds many uses in the food industry and in households.



Feed soda – an animal feed ingredient intended for feed manufacturers and private farmers.



Pharmaceutical-grade soda – its acid neutralisation action, potential binding with other chemicals and cleaning properties help pharmaceutical grade soda find widespread use in the pharmaceutical sector.



Pharmaceutical-grade dialysis soda – a specially purified soda grade with specific granulometric parameters and complying with requirements set out in special regulations.



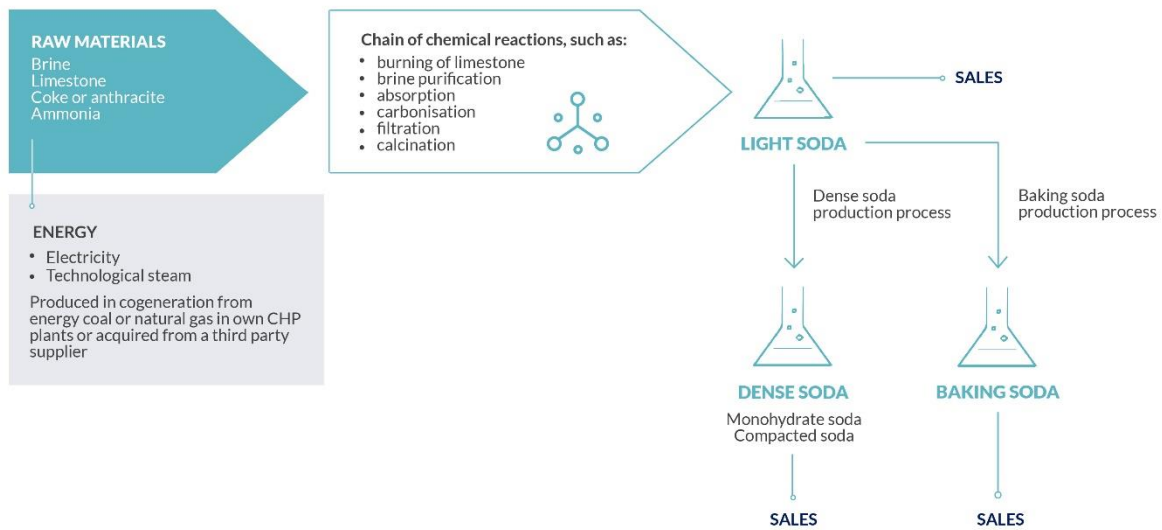
Industrial-grade soda – a product widely used in many branches of industry, including: in the production of detergents, in paper industry, flue gas desulphurization industry and chemical industry.

## Production processes in the soda segment

The production of soda in the CIECH Group is the responsibility of the following three companies: CIECH Soda Polska S.A. (plants in Janikowo and Inowrocław), CIECH Soda Deutschland GmbH & Co. KG (Stassfurt) and CIECH Soda Romania S.A. (Ramnicu Valcea). Soda ash is produced in all plants and sodium bicarbonate – in Inowrocław and Stassfurt.

Presented below is a simplified schematic diagram of the soda ash and sodium bicarbonate production process.

FIGURE 4: SODA PRODUCTION PROCESS



Main raw materials used in the production process in soda segment include limestone, salt brine, ammonia, furnace fuel (coke or anthracite) and heat.

The soda ash production plants are located in close proximity to limestone and brine suppliers (due to the high transportation costs of these raw materials in comparison with their price). The production plant located in Germany uses also own deposits of brine and limestone.

Coke is the so-called furnace fuel, used to burn limestone and produce CO<sub>2</sub>. Coke is usually supplied based on short- or long-term contracts. In the soda production process, coke can be replaced with anthracite which is slightly less efficient, but also cheaper than coke. The Group's soda plants can use a mixture of both fuel types, i.e. coke and anthracite. Prices and availability on the market are the main factors determining which raw material is used.

The largest component of manufacturing costs in the production process is heat energy in the form of technological steam – production plants in Poland and Germany have their own CHP plants, and the Romanian company buys it from a third party supplier. Key energy-producing raw materials used by the Group's CHP plants include: hard coal (plants in Inowrocław and Janikowo) and natural gas (plant in Stassfurt). Hard coal is supplied based on short-term and multi-annual contracts with a fixed price or indexed by various types of indicators, and the price formula of gas supplied in Germany is based on market prices of this raw material.

The soda segment is intensely developed by the Group. In 2015 and 2016, a key project, Soda +200, was completed. It consisted in increasing the production capacity of the soda plant in Inowrocław by 200 thousand tonnes per year (ended in the first quarter of 2016). Currently, the Group is implementing a project involving the increase of production capacity in the production of sodium bicarbonate at a plant in Germany.

Further development of activities in the soda segment will take place mainly through continuation of optimisation activities with regard to production capacity, as well as the growth of product quality and concentration on more processed products. At the same time, the Group will improve the quality of service of its current clients and conduct intensive activities to attract new customers.

FIGURE 5: CIECH GROUP'S SODA PLANTS AND KEY MARKETS

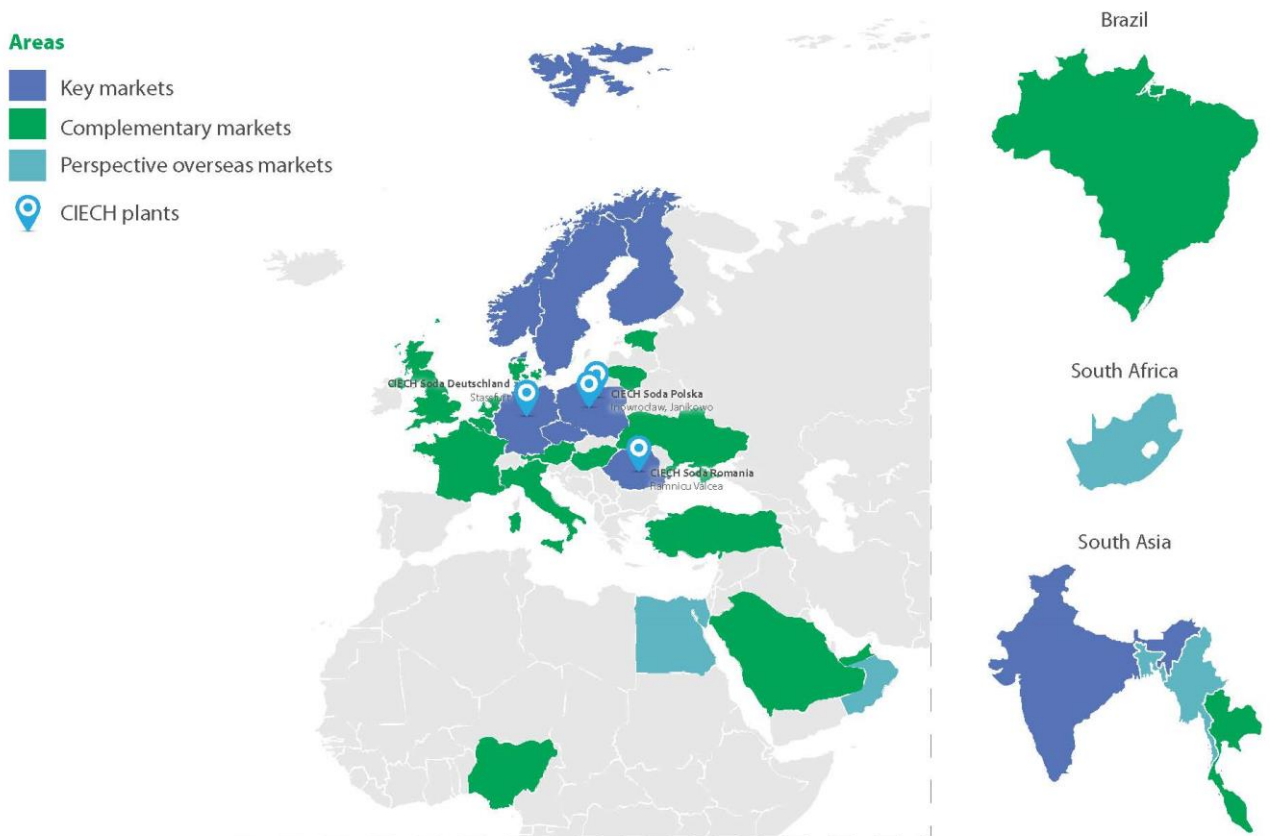


FIGURE 6: PRODUCTION CAPACITY OF THE CIECH GROUP'S SODA PLANTS  
SODA ASH



SODIUM BICARBONATE\*



\* Sodium bicarbonate is produced from soda ash, therefore the calculation of total production capacity of the CIECH Group should take into account the soda ash production capacity only – these two items should not be added up.



## Salt

Among various types of salt, the most popular are evaporated salt, which is produced the CIECH Group, sea salt and rock salt. Evaporated salt is widely used in chemical industry (electrolysis, detergent and dye production), food industry, as well as water treatment and softening.

### Salt products of the CIECH Group

#### Dry salt:

- **Table salt and iodised table salt** – produced from the saline solutions generated by the wet mining of natural rock salt beds. Table salt contains a minimum of 99.9% of sodium chloride and finds widespread use in the food industry. The CIECH Group sells salt primarily in 1 kg bags, under the brand name of Sól Kujawska and under private label brands of discounts and retail chains, as well as in larger bags, e.g. for spice manufacturers or bakeries.



- **“0” Salt** – used in food production (mainly products manufactured on the BIO market - this product does not contain an anti-caking agent E536).



- **Salt tablets** – used in water purification systems, e.g. to regenerate ion exchangers and multi-functional filter softeners that filter out water hardness contributors (i.e. calcium and magnesium). The key recipients of salt tablets produced by the CIECH Group include: households (private water purification systems), housing associations (water purification for new residential estates), industry (water purification for factories), as well as by such entities as swimming pools or hospitals. The CIECH Group sells salt tablets in Poland (where it holds a majority share of the market) and abroad.



- **Fodder-grade salt** – used in agriculture and for production of animal feeds which, owing to the salt content, perfectly supplement the diet of livestock, especially ruminants, with minerals. It is also used in emergency feeding of forest animals since it improves assimilation of potassium, magnesium and calcium. Fodder-grade salt is sold in the GMP+ chain.
- **Pickling salt** – nitrite salt (for pickling) is an essential additive used in the production of raw and cured meats. Pickling is one of the oldest forms of food preservation – preservation using salt.
- **Granulated salt** – used by households (dishwashers). Granulated salt extends dishwasher life.
- **Industrial salt** – one of the components used in the manufacture of detergents, washing powders and dyes. The product finds widespread use in electrolysis and the production of soda.

At present, the CIECH Group is focused on expanding the range of specialised products in the dry salt portfolio, increasing production capacity, developing new products and new sales directions.

Salt products are supplied to most European countries. The key export markets are: Germany, Belgium, France, Sweden, Czech Republic, Slovakia, Hungary, Lithuania, Latvia, Ukraine.

### Salt production process

Evaporated salt is produced from the saline solutions generated by the wet mining of natural rock salt beds.

FIGURE 7: SALT PRODUCTION PROCESS

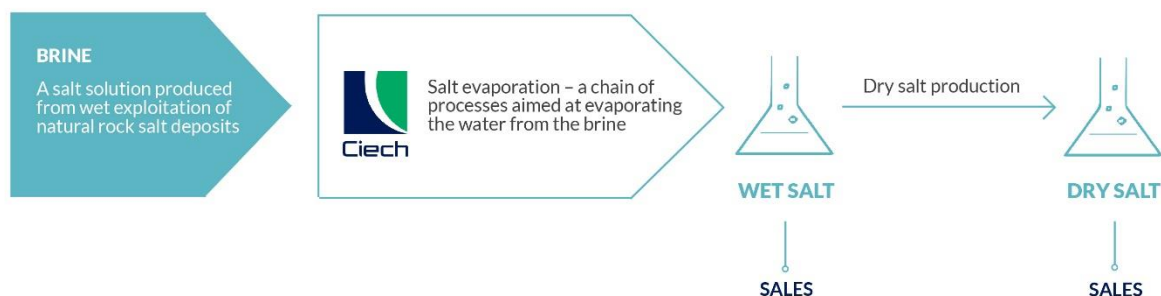


FIGURE 8: SALT PRODUCTION IN THE CIECH GROUP AND KEY MARKETS

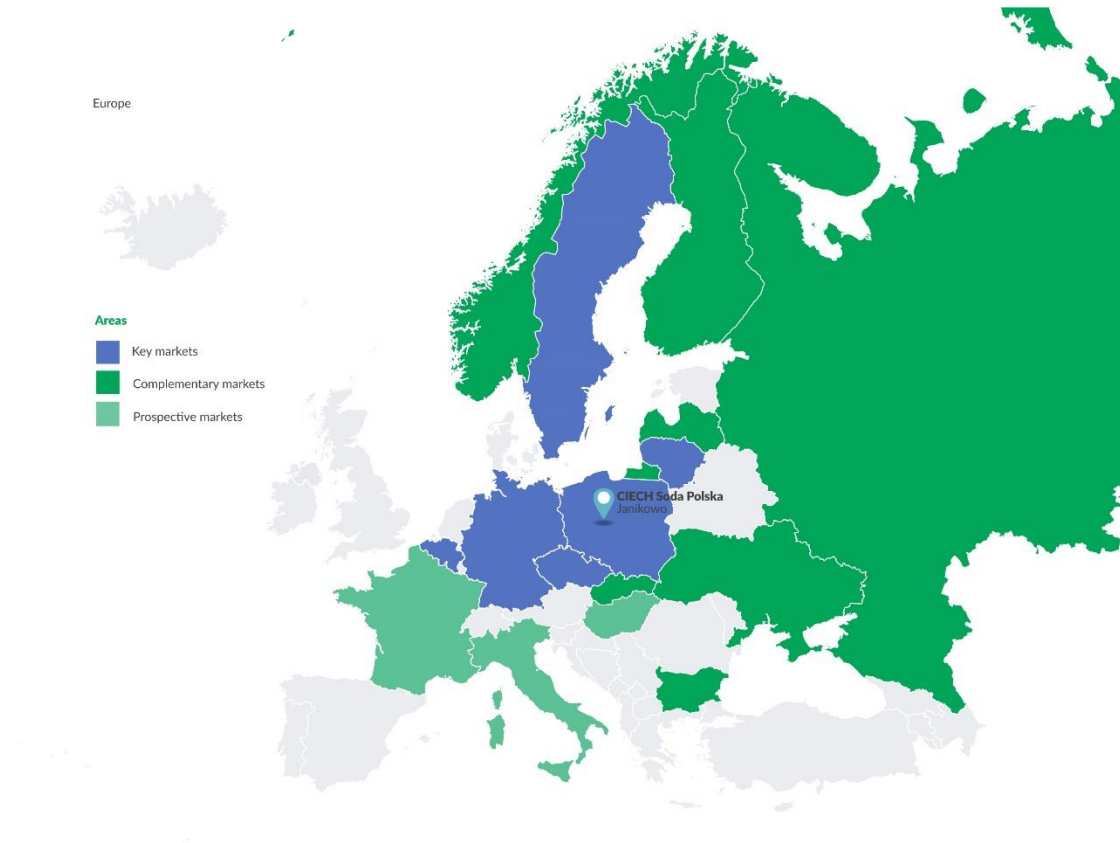
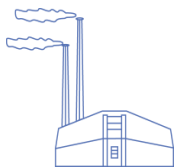


FIGURE 9: PRODUCTION CAPACITY OF THE CIECH GROUP'S PLANTS – SALT

**600 tt**

CIECH Soda Polska  
• Janikowo

**Sorbeco**

Sorbeco is a product obtained chemically from sodium carbonate or sodium chloride and carbon dioxide. It is used by CHP plants of medium size and by CHP plants that use biomass. Its high quality ensures very good efficiency of dry desulphurisation of flue gas — lowers SO<sub>2</sub> emissions by 90%. In Poland, the market of products for desulphurisation of flue gases has been growing fast over the recent years, and this trend will be sustained due to tightening of SO<sub>2</sub> emissions standards by the European Union.

**Calcium chloride**

Calcium chloride finds common use in road maintenance, building construction, the chemical sector, as well as coal, oil and gas extraction. At present, the CIECH Group is focused primarily on increasing the production volume of high quality calcium chloride.



### ORGANIC SEGMENT

Crop protection products | Resins | Polyurethane foams

24%

of the CIECH Group's revenues in 2018

The organic segment is the second largest pillar of the business activity of the CIECH Group. In 2018, it generated 12% of adjusted EBITDA (adjusted for one-off events). Products falling within this segment are manufactured by the following two companies: CIECH Sarzyna S.A. (crop protection products and resins) and CIECH Pianki Sp. z o.o. (polyurethane foams). In addition, the agro business includes Proplan Plant Protection Company, a supplier of plant protection products.

The CIECH Group is the largest domestic producer of crop protection chemicals and the leader in the market of herbicides. It is also the main domestic manufacturer of resins which are present in European markets, and one of the largest suppliers of polyurethane (PUR) foams to the domestic market.

Petroleum derivatives are the main raw materials used in production processes of the organic segment – they constitute the largest component of production costs.

#### Crop protection products

The company that specialises in the production of crop protection chemicals (herbicides, fungicides, insecticides, seed treatment) is CIECH Sarzyna S.A., a Polish company. Full range of products includes over 100 items of different chemical, application and packaging forms appropriate for their target market and use. The most famous trademarks of the company include brands from the AGRO area, i.e. Chwastox, Agrosar, Sarox, Ekonom and from the Home and Garden area: the ZIEMOVIT brand. In addition to the European markets, the CIECH Group's products are sold also markets in Asia and Australia.



In July 2018, CIECH S.A. acquired a Spanish company, Proplan Plant Protecion Company, S.L. The company specialises in registering and distributing fungicides, herbicides, insecticides and growth regulators.

#### Resins

CIECH Sarzyna S.A. is the leading manufacturer of resins and curing agents in Poland. For many years, the company has been offering a rich product portfolio of EPIDIAN epoxy resins, POLIMAL polyester resins, gel coats and top coats, curing agents for water glass and phenol-formaldehyde resins.

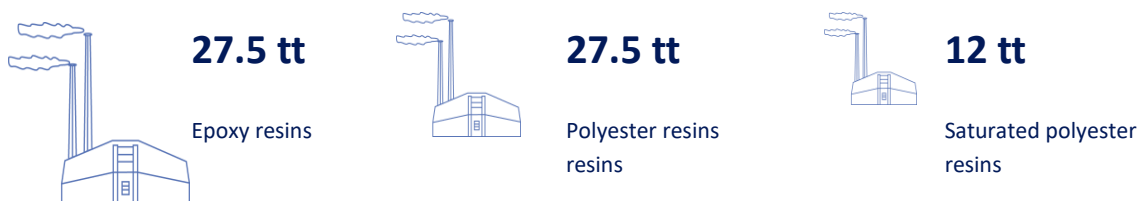
##### Polyester resins

- Unsaturated – used, among others, in the production of polyester and glass laminates, glass fibre-reinforced products used in the production of, e.g. sports and tourist floating equipment, bathtubs, garden decorations.
- Saturated – used mainly in the production of powder paints.

##### Epoxy resins

- They are used, among others, in the manufacture of various composite elements, flooring systems, protective coatings, interior elements and other decorative applications.

FIGURE 10: RESIN PRODUCTION CAPACITY OF THE CIECH GROUP (CIECH SARZYNA)



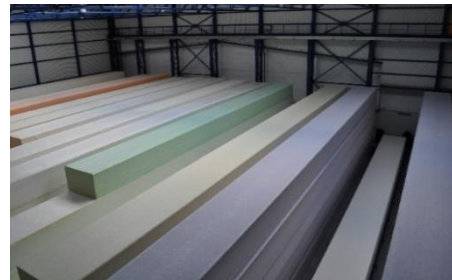


### Polyurethane foams

Flexible polyurethane foams are used mainly in production of upholstered furniture and sleeping mattresses.

To a lesser extent, they are used in the automotive industry, construction industry and textile industry.

CIECH Pianki Sp. z o.o. has many years of experience in the production and sale of flexible PUR foams. It is one of the largest elastic foam producers in Poland. Recipients of the company's products include the largest furniture and mattress manufacturers in Poland and Europe. Because of physical and mechanical properties (low specific gravity) PUR foams are sold primarily on local markets. In Poland, the consumption of flexible polyurethane foams is associated largely with the national furniture industry and its high position in the international markets which is consistently strengthening and the value of export of Polish furniture keeps growing.



### SILICATES AND GLASS (S&G) SEGMENT

Glass products | Silicates | Water glass

7% of the CIECH Group's revenues in 2018

In 2018, it generated more than 5% of adjusted EBITDA (adjusted for one-off events). The operation of this segment is based on CIECH Vitrosilicon S.A., a company which has two production plants: in Iłowa and Żary, and on CIECH Soda Romania S.A. – a plant in Ramnicu Valcea. The Iłowa plant manufactures glass packaging products, water glass (sodium and potassium water glass) and glassy sodium silicate, while the Żary plant concentrates on glassy sodium and potassium silicates. The plant in Ramnicu Valcea produces glassy sodium silicates and sodium water glass.

Soda and sand are the main raw materials used in the silicates and glass segment. Like in the soda segment, production is very energy intensive. Energy is generated from gas.

### Glass products

CIECH Vitrosilicon S.A. specialises in the manufacturing of lanterns for vigil lights and is recognised as the leader of the Polish market. The full range covers approx. 100 designs, including lanterns for jar candles and custom designs, dedicated to individual customers.



The Company offers a wide and diversified range of lanterns for vigil lights, including lanterns in the smallest and largest sizes and with a very diverse design.

The company is also the only Polish producer of COMFORT-type jars with glass cover and fastening clamps. On a small scale, the Company also produces standard Twist-off jars for the food processing industry.

### Silicates

The CIECH Group manufactures sodium and potassium silicates. Both types of silicates are produced in two forms – solid, offered under the brand name of VITROSIL (glassy sodium and potassium silicate) and liquid, offered under the brand name of VITROLIQ (sodium water glass and potassium water glass).





Sodium silicates are used for production of precipitated silica (about 37% of consumption in Europe, used mainly in the tire and beauty product industries), detergents (about 17%), paper, zeolites and in other industries.

After expanding the production capacity of sodium silicate in the Żary and Hłowa plants, CIECH Vitrosilicon S.A. is currently the third largest manufacturer of sodium silicate in Europe and the leader in the sales of this raw material.

Potassium silicates are used in the production of welding electrodes, construction chemicals, including paints and silicate plaster. For the purpose of continued development of this segment, the CIECH Group concentrates on the use of new applications of silicates and development of high-margin products.



### TRANSPORT SEGMENT

Transport services | Railway transport | Transshipment

**4%** | of the CIECH Group's revenues in 2018

The operation of the transport segment is concentrated in CIECH Cargo Sp. z o.o., a company rendering rail transport services in Poland, within the scope of: rail cargo transport, rental of rail carriages and maintenance services of rail sidings. The main customers of the services of the CIECH Cargo company are currently the companies of the CIECH Group, but – as part of its continuous development – the Company has been increasing the share of transport services provided to companies from outside the Group.



### OTHER ACTIVITIES SEGMENT

Services | Distribution | Sale and management of real property

Other Activities Segment covers mainly services rendered outside the CIECH Group and goods sold mainly by CIECH S.A. and CIECH Trading S.A., as well as foreign companies outside the scope of key segments of the Group.

CIECH Trading S.A. is a distributor of raw materials, chemical products and reagents. It supplies raw materials to many branches of the industry. A large section are products for household, cosmetic and pharmaceutical use; for milk and sugar industries, as well as the feed industry and selected branches of the heavy industry, including galvanising plants, smelters, coke plants and foundries. It also supplies water treatment and sewage treatment plants, as well as manufacturers of tires, paints and varnishes.

In addition to trading activities, this segments also includes companies that support the Group's operations in terms of, among others, R&D commodity works (CIECH R&D Sp. z o.o.), sale and management of real property (CIECH Nieruchomości S.A.) and financing activities.



### Operating segments of CIECH S.A.

CIECH S.A., as the Parent Company of the CIECH Group, holds shares in subsidiaries assigned to individual segments described above. In addition to support services provided to these companies, CIECH S.A. also carries out operating activities in the following segments:

**Soda segment** – CIECH S.A. sells the majority of soda segment products manufactured by the CIECH Group companies. Key products of this segment include: light and dense soda ash, sodium bicarbonate, evaporated salt and calcium chloride.

**Organic segment** – CIECH S.A. is the main supplier of raw materials to polish companies operating within the organic segment.

**Silicates and Glass segment** – CIECH S.A. sells the Silicates and Glass segment products manufactured by CIECH Soda Romania S.A. Key products in this group include glassy sodium silicate and sodium water glass.

**Transport segment** – it includes forwarding activities carried out by CIECH S.A. for its subsidiaries, i.e. CIECH Pianki Sp. z o.o., CIECH Sarzyna S.A., CIECH Vitrosilicon S.A., CIECH Soda Polska S.A. and CIECH Trading S.A.

### Seasonality and cyclicity of activity of the CIECH Group

Seasonality associated with periodic demand and supply fluctuations has little impact on the CIECH Group general sales trends. Products clearly influenced by seasonality are crop protection chemicals. Most crop protection chemicals are used in the first half of the year, during the period of intensive plant growth. However, sales of these products take place mainly in the 4<sup>th</sup> quarter of the preceding year. For other products, the Group's revenues and financial results are not influenced by any significant seasonal fluctuations over the year.

## 1.4 SIGNIFICANT AGREEMENTS AND TRANSACTIONS

### Agreement on the sale of thermal coal

On 30 March 2018, CIECH Soda Polska S.A., as a result of negotiations conducted, signed an agreement for the supply of power coal with Polska Grupa Górnicza S.A. The estimated value of the agreement in the period of 5 years may amount to approx. PLN 340,000 thousand.

### Extension of the deadline for determining a price formula for the supply of process steam to CIECH Soda Romania S.A.

On 27 November 2018, CIECH Soda Romania S.A. signed an annex to an agreement for the supply of process steam with S.C. CET Govora S.A. in composition bankruptcy based in Romania. Pursuant to the Annex, the Parties extended the deadline for the completion of negotiations related to the determination of the price formula for the supply of process steam until 31 March 2019. At the same time, the Parties agreed that in the event of failure to determine the price formula on or before 31 March 2019, the Agreement would terminate by operation of law as of 1 April 2019. Furthermore, the parties agreed on the new price of steam for the period until 31 March 2019.

### Transactions with related parties other than on an arm's length basis

CIECH Group's companies, to the best of their knowledge and belief, did not conclude relevant transactions on the terms other than market ones. Sales to and purchases from related entities are realised at market prices that reflect market conditions.

For a description of transactions concluded between related parties, see note 9.3. to the Consolidated Financial Statements of the CIECH Group for 2018 and note 9.3 of the Financial Statements of CIECH S.A. for 2018.





## EXTERNAL ENVIRONMENT



## 2 EXTERNAL ENVIRONMENT

### 2.1.1 FACTORS WITH MAY IMPACT ON THE CIECH GROUP'S ACTIVITIES

The CIECH Group business is largely based on the production and sales of chemical products used as raw materials and semi-finished goods in a wide range of industries, including the glass, detergent, furniture, automotive, construction, food, agricultural, pharmaceutical, chemical and consumer goods industries. The demand for the CIECH Group customers' products depends on a number of factors, including general economic conditions.

Costs of labour and energy, interest rates and other macroeconomic factors also have a significant impact on the Group's operations. Due to the fact that a significant portion of the Group's revenue and expenses is generated in foreign currencies, changes in exchange rates also affect its financial performance.

As a result, the volume and profitability of the CIECH Group companies' sales depend on these variables as well as on the economic situation in Poland, Europe, and worldwide.

#### **Situation in industries of recipients of products of the Group in Poland**

Poland is the largest sales market of the CIECH Group. The direct, most important domestic recipients of the Group's products include: glass industry, chemical and plastic products industries, furniture, agriculture, construction, food industry. The development of these sectors of the economy depends on the economic situation in Poland.

According to the data of the Central Statistical Office, the sold industrial output at constant prices during 2018 increased by 5.8% year on year (in 2017 — an increase by 6.6%). In 2018, the relevant dynamics of production in the industries of significant importance to the Group's activities (as receiving or target markets) were: chemicals and chemical products (increase by 3.0%); rubber and plastic products (increase by 6.1%); manufacture of motor vehicles (increase by 3.0%); manufacture of furniture (increase by 5.9%); manufacture of food (increase by 3.9%); construction and assembly production (increase by 17.9%).

The past year was the second consecutive period of very good economic situation in the Polish economy (estimated GDP growth of approx. 5.1% or more in 2018 compared to 4.8% in 2017). Poland's GDP growth rates were and should still be significantly higher than the average rates for the European Union. However, the economic situation in Poland is expected to weaken slightly in 2019 (the European Commission projects that GDP growth will stand at 3.7%). Similar trends should be expected in the chemical industry which usually develops similarly to the economy as a whole.

#### **Economic situation in Europe and in the world**

The activity of the CIECH Group is based, in a considerable part, on the sales of chemical products on foreign markets. The level of profitability on sales depends on the global economic situation in Europe and in the world. Global economic downturn usually results in the fall of the demand for raw materials on global markets and hence on the amount of export turnover of the Group.

As projected by the International Monetary Fund, the dynamics of global economic development is expected to weaken slightly in 2019 year on year (GDP growth by 3.5% vs. 3.7% in 2018 as a result of, among other factors, increased trade barriers between the USA and China). The largest Asian economies will continue grow relatively quickly (India, China, and ASEAN countries, for which the GDP growth indicators in 2019 should be, respectively: 7.5%, 6.2%, 5.1%). Among large economies, the relatively weaker conditions are expected in the current year in Japan, Russia and Brazil (expected GDP growth rates in 2019 of 1.1%, 1.6% and 2.5% respectively). According to the IMF, a clear acceleration in 2019 can be expected in Latin America (especially in Brazil) and sub-Saharan Africa (South Africa).

The European Union, on the other hand, the current good economic situation is expected to slow down slightly (GDP growth in EU 28 by 1.9% in 2019 vs. 2.1% in 2018, according to the European Commission's forecasts).

For the chemical sector, the American Chemical Chamber (ACC) expects that this year the growth rate of global chemicals production will increase for another year in a row and will amount to 3.0% in 2019 (compared to 2.8% in 2018). According to ACC, in 2019 the chemical production in the US is expected to grow by 3.6%, as compared to 3.1% in the previous year.



According to the European Chemical Industry Council (CEFIC), in 2018 the chemical industry output of the European Union decreased by about 0.9% (compared to an exceptionally high growth of 3.6% in 2017). The main reasons for last year's decline include higher crude oil prices, lower demand from the automotive sector and logistics problems due to exceptionally low levels of water in Europe's rivers. CEFIC expects that European chemical output will grow slightly by 0.5% in 2019.

As for the European construction sector, 2018 was marked by a slower growth rate compared to the previous year. According to Euroconstruct, construction output in Western Europe and Central Europe increased by 2.8% in 2018, compared to 4.1% in 2017. The sector is expected to slow down further (to 2% in 2019) over the next 2-3 years. However, it is expected that the countries of Central Europe, including Poland, will report much higher growth rates. As projected by Euroconstruct, in 2019 construction output in our region of Europe should increase by approx. 9% (compared to approx. 13% in 2018).

TABLE 1: OTHER FACTORS AFFECTING THE CIECH GROUP'S ACTIVITIES

Factors	Description
Economic situation on raw material market	<p>Due to the fact that costs of raw materials account for a large share of total costs of the Group, the situation on certain raw material markets (availability and price) significantly affect the CIECH Group's activities and financial performance. Price and availability of raw materials depends largely on economic and political developments across the globe.</p> <p><b>Hard coal</b> – situation on the market depends on a number of macroeconomic factors. The largest producer of hard coal in the European Union is Poland, but EU's import of coal (primarily from Russia, Columbia, USA and Australia) is nearly two times higher than production. Most of the coal imported to the EU is power coal, i.e. coal used by the CIECH Group in the production of heat in soda plants in Poland. Despite the fact that the Group buys it usually from Polish mines, the price of hard coal in Poland depends on the European and global situation in the area of demand and supply.</p> <p><b>Furnace fuel (coke/anthracite)</b> – coke prices depend primarily on prices of coking coal, from which it is produced. The largest global producer of coke is China which, at the same time, is one of the largest consumers of this raw material. In Europe, coke is produced mainly in Poland and the Czech Republic. In its business activity, the Group may also use anthracite as a substitute for coke. The main suppliers of anthracite for Europe are Ukraine and Russia. Due to rising prices of coke, in 2018 the Group used anthracite to a large extent.</p> <p><b>Oil-derivative raw materials</b> – used primarily in the organic segment, are linked to oil prices. Oil prices depend primarily on macroeconomic and political factors which translate into global demand and supply situation.</p>
Exchange rates of Polish zloty (PLN) and Romanian leu (RON) to euro (EUR) and US dollar (USD)	<p>The CIECH Group's main source of exposure to foreign currency risk is related to EUR and USD in which export sales are denominated. Weakening of PLN and RON (in which significant costs are incurred) in relation to EUR and USD (in which a material portion of sales is made) has a positive impact on the CIECH Group's financial performance. The Group applies natural hedging and hedging instruments.</p>
Volume of chemical production capacity on markets where the CIECH Group operates	<p>In the sectors of mass chemical products, in which the CIECH Group operates, the capital expenditures are an important barrier to entry, and in the case of the soda segment – an access to natural resources. For this reason, in the scope of the most important segment of the CIECH Group, the soda segment, green field investments are rare and generally done outside Europe.</p> <p>The CIECH Group's business is significantly affected by the extension of large soda ash and sodium bicarbonate production capacity in Turkey. This changes the global supply and demand situation and prices in the short-term, which may have a negative impact on the Group's financial performance. On the other hand, it should be noted that the commissioning of new capacity in Turkey has been spread over 2017–2018 and coincided with strong demand for soda in the world and environmental constraints in the world's largest market, China. This situation provides a framework for greater globalisation of the soda ash market and reduction of possible oversupply in Europe (as a result of Turkish investment projects).</p>
Environmental requirements	<p><b>REACH system implementation</b></p> <p>In accordance with the REACH regulation, the Group's companies selling substances in quantities exceeding 1 tonne p.a. have completed or plan to complete full registration</p>



Factors	Description
	<p>of these substances by defined deadlines, which will enable them to continue their operations in the current scope.</p> <p><b>Emission trading system</b></p> <p>Production companies of the CIECH Group are included in the emission trading system. External analyses performed by the CIECH Group companies indicate that the amount of free CO<sub>2</sub> emission allowances in the 3<sup>rd</sup> settlement period (2013–2020) will be insufficient to cover the actual demand for this type of settlement units. In addition to the direct costs connected with the purchase of CO<sub>2</sub> emission allowances, the CIECH Group companies will bear higher costs of electricity due to their assumption of the costs of purchase of emission allowances from the producers.</p>

## 2.2 CHARACTERISTICS OF THE MARKET AND POSITION OF THE CIECH GROUP

### 2.2.1 SODA SEGMENT

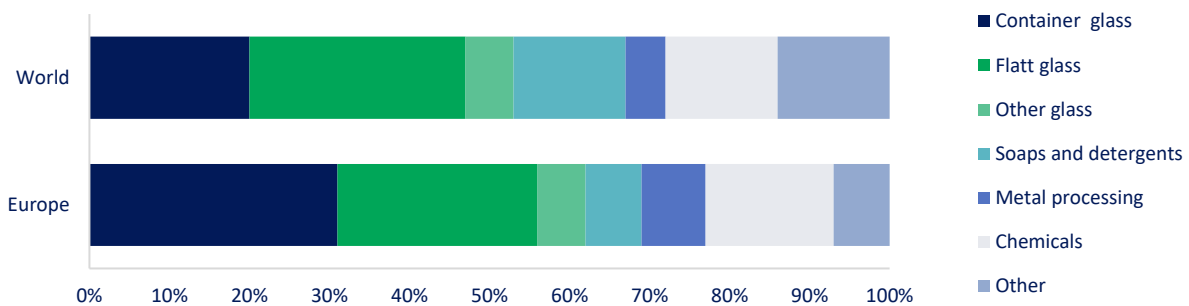


The CIECH Group is the **second European** and the **largest in Central and Eastern Europe producer of soda ash**. It is the **eighth largest producer on the global market**.

#### Soda ash

Soda ash is one of the basic raw materials for the glass manufacturing industry. It is also used for the production of washing and cleaning products, in metallurgy and chemical industry, among others, to produce silicates, other sodium compounds, certain types of mineral fertilizers as well as dyes and pigments. On a global scale more than one half of the currently produced soda ash is used for the production of glass. Further recipients of soda ash include the soap and detergent producers and the chemical industry. 1/5 of soda is used by other branches of industry.

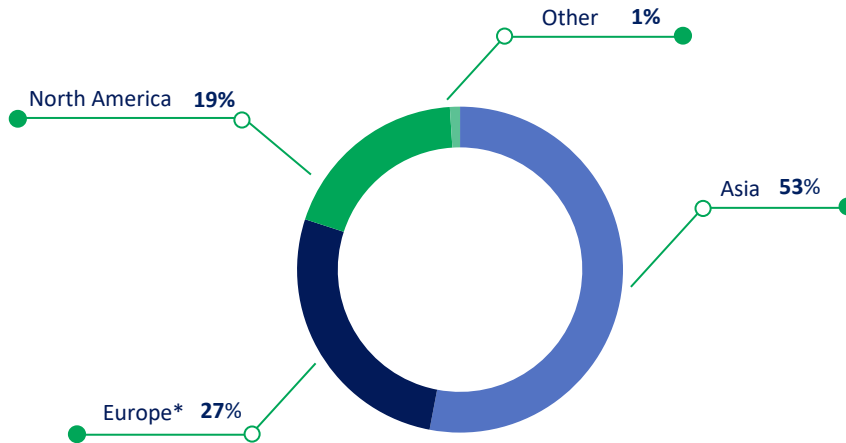
FIGURE 11: SODA ASH CONSUMPTION STRUCTURE



Source: Own compilation based on data from IHS Markit

In Europe, the share of glass manufacturers and metallurgy sector in soda ash purchases is much larger than on the global market. On the other hand, in Europe relatively lower volumes of soda are used in the production of soap and detergents.

FIGURE 12: PRODUCTION CAPACITIES OF SODA ASH IN THE WORLD BY REGION



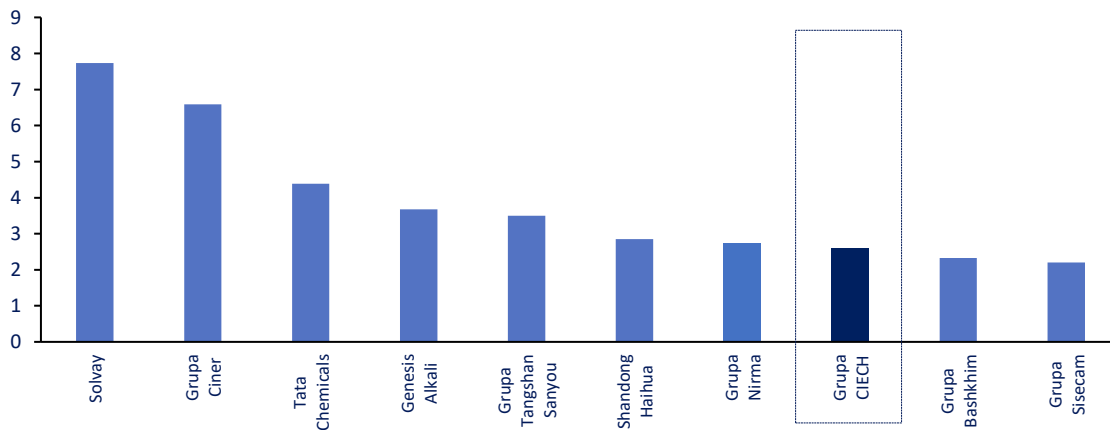
\*Europe including all of Russia and Turkey

Source: Own compilation based on data from IHS Markit

As at the end of the past year, the global production capacities of soda ash stood at approx. 70 million tonnes per year, of which over half is produced in Asia. More than a quarter of the capacity is concentrated in the European region (including Turkey and all of Russia), while the third key production region is North America, representing about 20% of the capacity. The largest soda ash producers in the world, with capacity of 4 million tonnes/year or more, are the following four concerns: Solvay, Ciner Group, Tata Chemicals and Genesis Alkali. As at the end of 2018, these companies represented about 1/3 of global production capacity.

FIGURE 13: LARGEST GLOBAL PRODUCERS OF SODA ASH BY PRODUCTION CAPACITIES IN 2018

million tonnes/year



Source: Own compilation based on IHS Markit and others

Last year, the production capacity of soda ash was increased mainly in Turkey, China and Indian subcontinent. Over the next 3 years or so, significant increase in production capacity are also planned in the above-mentioned regions: in China (approx. 2 million tonnes/year), in the Indian subcontinent (more than 1 million tonnes/year) and in the Middle East (several hundred thousand tonnes/year). In the long-term, further investments in power expansion cannot be excluded (eg in the USA, based on natural resources - thrones, where the Ciner Group project is considered at a level of several million tonnes / year).



The main soda ash market for CIECH Group is Europe, especially Poland. The biggest producer in this region is Solvay, which owned factories in 6 locations around Europe in 2018, with total production capacities estimated at approximately 5 million tonnes/year. CIECH Group is on the second position in the European market with production capacities of 2.6 million tonnes. 4 production plants of the CIECH Group are located in Poland (Inowrocław and Janikowo), Germany (Stassfurt) and Romania (Ramnicu Valcea). The CIECH Group is the sole producer of soda ash in Poland and Romania. The Group's share of the soda ash market in Poland exceeds 95%, around 16% in Europe and about 4% globally (source: own estimates based on market data compiled by IHS Markit).

Demand for soda ash in Europe (including CIS) is estimated at more than 11 million tonnes per year. European (including Polish) soda ash market is a mature market with no rapid changes, with yearly growth rates ranging from 1-2%. Growth dynamics in Central Europe is usually higher by 1 percentage point than in Western Europe.

The structure of soda ash consumption hasn't changed much for many years. The demand for soda ash depends mostly on the demand for flat and packaging glass. In Central Europe, the share of the detergent segment is relatively significant, and in Eastern Europe – the share of metallurgical sector.

We believe that the European soda market is now fairly well balanced. The commissioning of new significant production capacity in Turkey (spread over 2017-2018) coincided with strong demand in world and environmental constraints in the world's largest market, China. This situation provided a framework for greater globalisation of the soda ash market and alleviated the threat of possible oversupply in Europe (as a result of Turkish investment projects). Further investments in new capacity in different regions of the world should be balanced by a stable increase in demand for soda (capacity and demand are projected to growth at similar rates).

**Sodium bicarbonate**

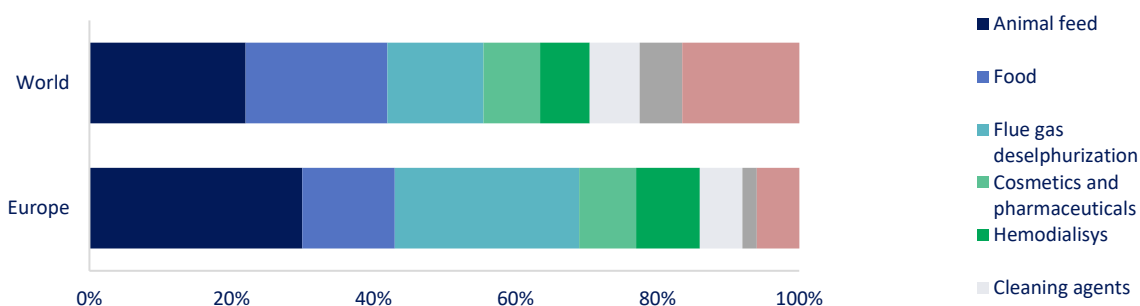


The CIECH Group is the second largest sodium bicarbonate producer in Europe.

Sodium bicarbonate is used mainly in production of animal feed (as an acidity regulator), food (among others as an ingredient of baking powder and sparkling drinks), pharmaceuticals, detergents and cosmetics, and for purifying exhaust fumes (mainly for desulphurisation). In the chemical industry it is used for production of pigments and explosives as well as a basic component of fire extinguishers. The sodium bicarbonate market is divided into the segments of low, high and very high quality sodium bicarbonate. The high quality segment covers food and pharmaceutical industries. Very high quality is required also for medical purposes – e.g. in hemodialysis.

In Europe, sodium bicarbonate is used mostly in production of feed and exhaust gas purification (respectively, approx. 1/3 and 1/4). Other important segments are food production and hemodialysis.

FIGURE 14: SODIUM BICARBONATE CONSUMPTION STRUCTURE



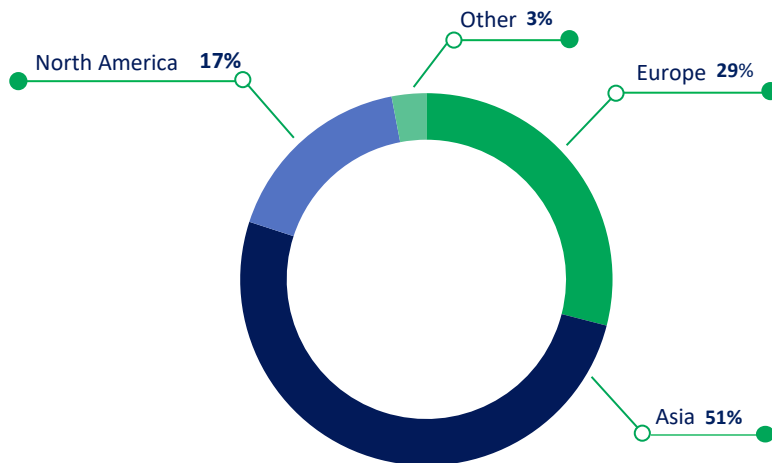
Source: Own compilation based on data from IHS Markit.

Global production capacities for sodium bicarbonate are estimated at about 6.5 million tonnes per year. Asia accounts for more than 50% of these capacities. The share of Europe together with Russia and Turkey reaches nearly 30% and North America – 17%.

The target market for the CIECH Group for sodium bicarbonate is the local market and the foreign markets, especially Western Europe. The share in the sodium bicarbonate market of the CIECH Group is about 11% in Europe and 3% globally.

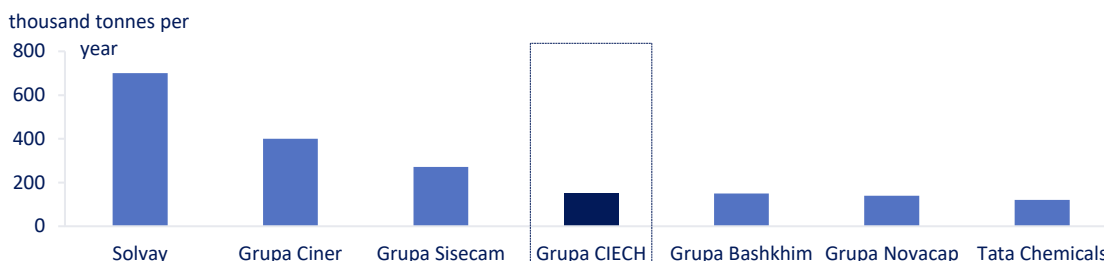
Sodium bicarbonate is produced in two soda factories of the Group: in Inowrocław and in Stassfurt. CIECH Soda Polska S.A. is the only producer of sodium bicarbonate in Poland and its market share reaches approx. 2/3. The CIECH Group's share in the German market is about 25%.

FIGURE 15: PRODUCTION CAPACITIES OF SODIUM BICARBONATE BY REGION



Source: Own compilation based on data from IHS Markit

FIGURE 16: LARGEST PRODUCERS OF SODIUM BICARBONATE IN THE REGION COMPRISING EUROPE AND TURKEY BY PRODUCTION CAPACITY IN 2018



Source: Own compilation based on IHS Markit and others

In the European region (including Turkey) sodium bicarbonate production capacity is estimated at around 1.9 million tonnes per year; including the Ciner Group's new plants in Turkey with a capacity of 300 thousand tonnes/year, based on trona deposits, launched in 2017-2018. The biggest producer both in Europe and globally is Solvay, owning factories in seven countries. Currently, the CIECH Group with production capacity at 150 thousand tonnes per year is the second largest producer in Europe (and fourth after Solvay, Ciner Group and Sisecam Group in the region, including Turkey).

Much like the soda ash markets, Polish and European markets for sodium bicarbonate are mature markets, not volatile to rapid changes, with yearly growth of 3%–4% per year.

In the coming years, above average dynamics can be expected within the scope of hemodialysis due to an increase in incidence of illnesses related with modern lifestyle in developed countries (primarily kidney diseases caused by diabetes). Due to growing requirements of environmental protection, a major increase in usage of sodium bicarbonate for fumes desulphurisation is expected.

An increase in demand for sodium bicarbonate is supported by global megatrends.

The animal feed industry is usually the most vulnerable to economic shifts among the target sectors for sodium bicarbonate. In Poland however, this sector is less vulnerable than in most markets in Europe.

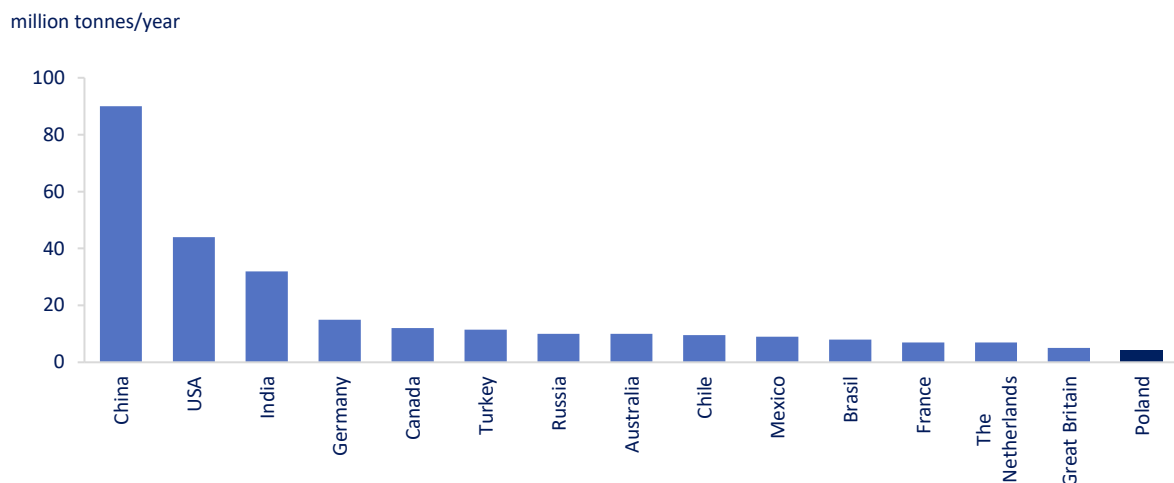
As part of the Ciner Group's green field project concerning the soda ash plant in Turkey based on natural raw material (trona), new sodium bicarbonate production plants (with nominal capacity of 200 thousand tonnes/year) are also commissioned. This project may contribute to the periodical oversupply of the product in Europe and neighbouring regions. However, this will apply to the basic varieties of sodium bicarbonate.

**Evaporated salt**

The CIECH Group is the largest Polish producer of **evaporated salt**, with a share in the domestic production capacity of approx. **85%**

Since the beginning of this decade, global salt production has been on an upward trend from around 300 million tonnes in 2010 to around 330 million tonnes in 2018. The ten biggest producers (countries) are responsible for over 3/4 of global supply. Among them are only two European countries (Germany, producing approximately 15 million tonnes per year and Russia, producing 10 million tonnes per year). Poland (producing more than 4 million tonnes of salt a year) is ranked among the second tenth in the global ranking, with a share in total production of 1.3%.

FIGURE 17: MAJOR SALT PRODUCERS IN THE WORLD (INCLUDING POLAND)



Source: Own compilation based on USGS

European salt production capacities are estimated at approximately 100 million tonnes per year (including producers using salt only for the purposes of their own chemical production, such as Solvay and Dow Chemical). The largest producer in Europe operating in the free market is Esco from the K+S Group, with capacities of 9-10 million tonnes per year and production plants in several countries of Western Europe. Other companies with large production capacities (above 5 million tonnes per year) include a Ukrainian company, Artyomsol (around 7 million tonnes per year; capacities used recently to a small extent) and a chemical concern, Akzo Nobel (around 6 million tonnes per year).

Salt is usually present in the European market in two forms: rock salt and evaporated salt. Evaporated salt is one of the key products of the CIECH Group, which offers varieties intended, among others, for food, water treatment, chemical industry and for animal feed.

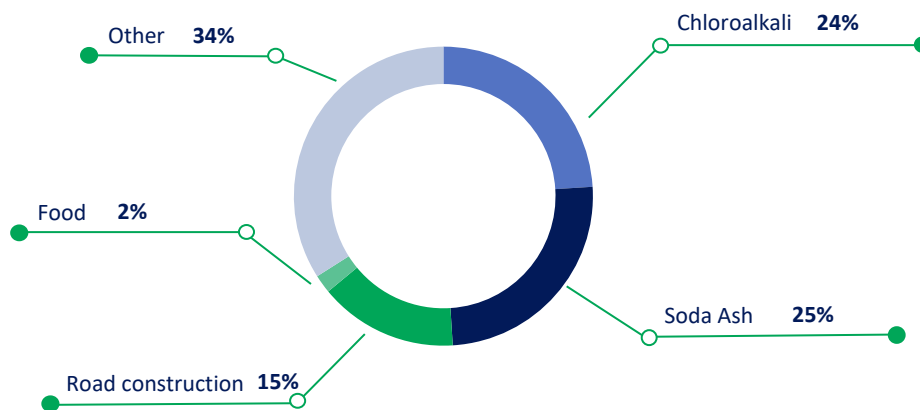
Due to advantages of evaporated salt with regards to quality parameters, chemical industry in Western Europe abandoned using of rock salt. A similar process occurred in food and households industries. Rock salt is presently used primarily in highway maintenance for winter de-icing. Evaporated salt, on the other hand, is widely used in chemical industry (electrolysis, detergent and dye production) as well as water treatment and softening. It is also used in food industry (including: baking, fruit and vegetable processing and meat industry). Evaporated salt of pharmacological purity grade is also used in pharmaceutical industry.

In Europe, most of salt is used in the soda ash and chlorine-alkali industries (approx. half of the demand). In recent years, much less salt has been used for highway maintenance. Globally, use of salt in highway maintenance is significant only in



North America (about 1/3). In other regions of the world, chemical sector (chlorine-alkali industry and soda ash industry) is the main buyers of salt. In Asia (outside China), Latin America, Africa and the Middle East, significant volumes of salt are used for direct consumption and food production.

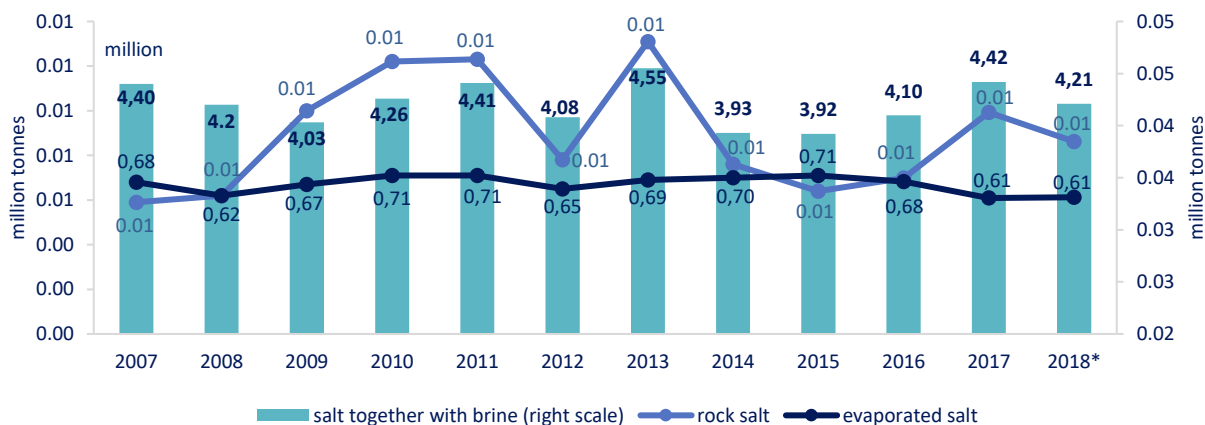
FIGURE 18: SALT CONSUMPTION STRUCTURE IN EUROPE



Source: own estimates based on Roskill

Polish salt market structure differs from the one in Europe. Much more important is the salt used for the production of soda ash, in highway maintenance and for direct consumption, while the salt used in the chlorine-alkali industry is of lesser significance.

FIGURE 19: SALT PRODUCTION IN POLAND WITH DIVISION INTO KINDS IN THE YEARS 2007-2018



Source: Own compilation based on the Central Statistical Office; \* estimates based on partial data for 12 months

Poland belongs to leading salt producers in Europe. Total production of evaporated salt, rock salt and brine in the recent years oscillated between 3.9 and 4.5 million tonnes.

Polish salt market, like Europe, is mature. The volume of evaporated salt consumption shows a slight average annual growth rate of 1%-1.5%. This growth is mainly driven by highly processed salt products, e.g. for water treatment and health care. On the other hand, the market of rock salt used mainly for winter road maintenance is variable. The demand for rock salt in case of atmospheric anomalies can change by several dozen percent. The CIECH Group does not supply the highway sector with large quantities of salt and as a result, atmospheric anomalies practically do not influence sales volumes.

The CIECH Group plays an important role in the following segments: table salt (food industry and direct consumption), water treatment and chemical industry.

The CIECH Group with its production capacity of 550 thousand tonnes per year is the biggest producer of evaporated salt on the Polish market, with a share in domestic capacity of approximately 85%.

In the coming year, the directions and further development of the global salt market will be determined by general economic development (because of important role of chemical industry in salt consumption) as well as seasonal factors (due to important role of salt in road maintenance in the developed countries). Development of plants in Asia (with regard to synthetic chlorine-alkali and soda ash) will be especially important for the chemical sector. The projected rate of growth of salt consumption on a global scale should be comparable to that of previous years, i.e. amount to 1.5% on average per year.

Due to global economic, social or demographic trends, specialist products become more and more important in the salt industry. There is a growing awareness of the need to improve water quality – an increase in demand for salt tablets from many industries and from households is visible. In turn, increasing volumes of evaporated salt of pharmacological purity grade are used in pharmaceutical industry. Due to the development civilization diseases related to lifestyle in developed countries, expenditures on health care are growing. The quality of pharmaceuticals also improves, which determines the increase in consumption of salt used in this industry.

There is a worldwide increase in demand for specialist products of the salt industry – salt tablets, salt used in the pharmaceutical and food industries.

The prospects for evaporated salt market development in Europe, including Poland, are stable. The possible quantitative increases will depend on sales dynamics in the sector of highly processed products, e.g. for water treatment systems. Because of the dominating position of rock salt (used mainly in road maintenance) in the total salt market, sales of this type of salt will still be dependent on atmospheric conditions and can be subject to significant periodic fluctuations. Such events do not influence table salt segment and salt used for chemical industry.

## 2.2.2 ORGANIC SEGMENT

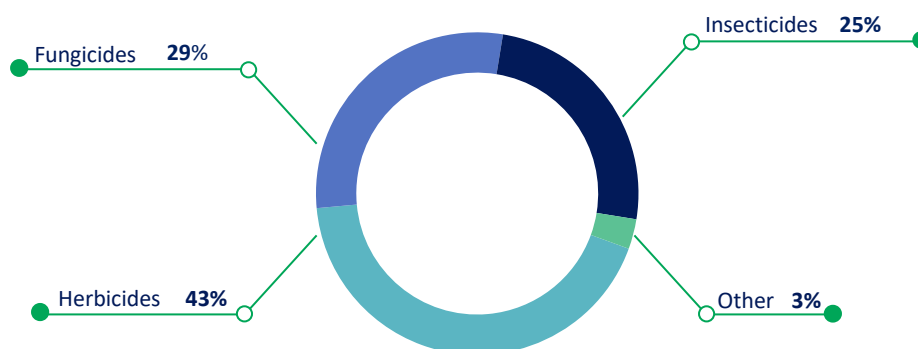
### Crop protection chemicals (CPC)



The CIECH Group is the largest domestic producer of crop protection products and one of the leaders in the domestic market of herbicides.

More than 40% of sales of global crop protection chemicals is attributable to herbicides. Fungicides and insecticides account for about 30% and 25% of the global market value respectively.

FIGURE 20: STRUCTURE OF GLOBAL CONSUMPTION OF CROP PROTECTION CHEMICALS BY TYPE AND BY VALUE



Source: Own compilation based on Phillips McDougall.

In 2018, as in previous years, the global market for crop protection agrochemicals was dominated by several major global producers: Syngenta (acquired in 2017 by ChemChina), Bayer (which acquired Monsanto, an American corporation, in 2018), Corteva (effect of the merger of Dow Chemicals and DuPont in 2017) and BASF. These companies are main

contributors to the world markets because they significantly influence directions of the industry development, including: development of new technologies and introduction of innovative products to the market. The total share of the aforementioned producers in the total global sales of agrochemicals is estimated at about 2/3.

It is estimated that in 2018, the value of sales in the global market of crop protection chemicals reached USD 56-57 billion and was higher than in the previous year by 4%. This relatively strong growth was driven mainly by: a very good economic situation in the big market of Brazil and high prices resulting from reported shortages of supply. As for China (one of the leading market), high prices were driven both by increasing environmental protection requirements and consolidation efforts in the agrochemical industry.

FIGURE 21: STRUCTURE OF SALES OF CROP PROTECTION CHEMICALS BY REGION (% OF VALUE)



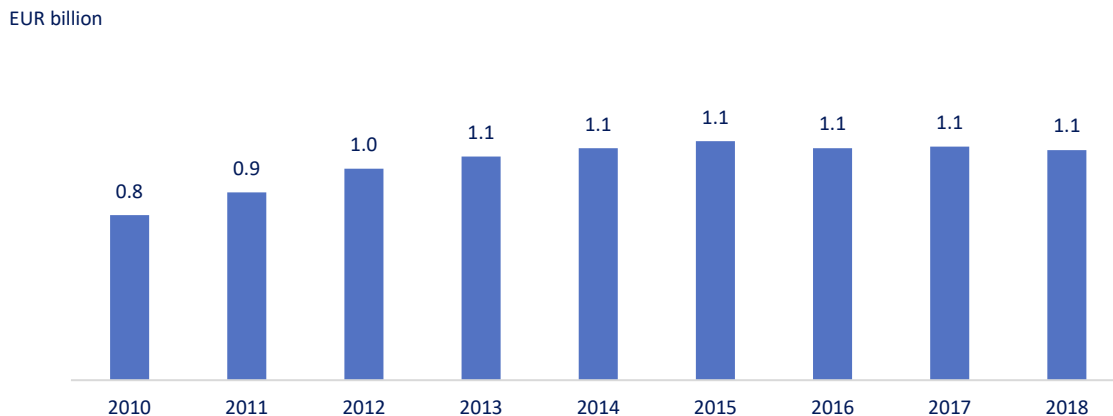
Source: Own compilation based on Phillips McDougall.

Asia and Latin America are currently the largest regional markets of crop protection chemicals with shares in global sales amounting to approx. 30% and 24% respectively. Slightly smaller markets are Europe and North America (about 20% each). The value of the European market in 2018 is estimated at approx. USD 12.8 billion (EUR 10.9 billion). Consumption of crop protection chemicals in the other regions amounts to the remaining few percent of global consumption.

From the beginning until the half of this decade, demand for CPC in Europe has been growing rapidly (by 8 per cent annually, according to the value in EUR). Since 2016, European sales have remained at a similar level of about EUR 11 billion, which can be attributed to the fact that Europe is a very mature market. The absence of any significant change in sales in 2018 is attributable to two different factors: rapid growth in cereal crops in the east of the continent and unfavourable weather conditions in the west.

In general, prospects for further development of the European market of crop protection chemicals can be assessed as positive, especially in the area of generic products manufactured by the CIECH Group.

FIGURE 22: SALES OF CROP PROTECTION CHEMICALS IN EUROPE IN 2010-2018



Source: Own compilation based on Phillips McDougall.

For a number of years, the biggest European markets for CPC are France, Germany, Italy, Russia, Spain, United Kingdom and Poland.

In Poland, since the beginning of this decade, the consumption of crop protection products has been following a growing trend with some fluctuations between 70-100 thousand tonnes/year. The estimated decrease in tonnage in 2018 should be associated mainly with unfavourable weather (drought). Despite the overall upwards trend in local CPC production, the Polish market continues to be dominated by foreign suppliers with a very wide range of products.

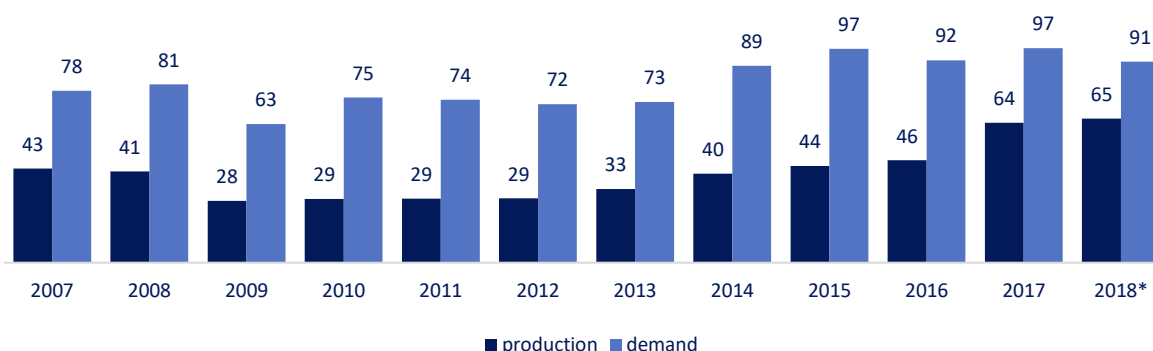
Imports, in terms of weight, account for 60%-70% of demand (approx. 90% in terms of value). The reason of such a high disproportion is lack of sufficient offer of Polish producers, who have much less of financial resources to conduct research on new products, their registration and marketing.

The share of herbicides in the structure of CPC consumption in Poland is similar to the global one. Significantly more herbicides are used in Poland because of high percentage of grains in general cultivated area and considerable importance of gardening. Insecticide consumption is lower than the world average.

The long-term growth prospects for the CPC market remain attractive, especially in terms of generic products manufactured by the CIECH

FIGURE 23: VOLUME OF PRODUCTION AND CONSUMPTION OF CROP PROTECTION CHEMICALS IN POLAND IN THE YEARS 2007-2018

(in thousand tonnes)



Source: Own compilation based on the Central Statistical Office and Eurostat (\* estimates based on preliminary data)

Global concerns and several local producers are main participants in the Polish market. CIECH Sarzyna S.A. is the largest domestic producer. The company's activity regarding crop protection chemicals is focused on the Polish market, where the CIECH Group has a share of 5%-6% (in terms of value). This share is much higher with regards to grain herbicides segment, which is the company's main product group, and amounts to about 20%. Over the last few years, the CIECH Group has been consistently implementing its development strategy (in the area of plant protection), which consisted in intensification of research and development activities, expansion of the product range and strengthening of the sales and marketing areas. One of the pillars of further development is the expansion into foreign markets, which resulted in 2018 in the acquisition of a Spanish company, Proplan, operating in the field of generic CPC, not only in Europe.

Over the next few years, the value of the domestic market for crop protection products should continue to grow at a fairly

The CIECH Group's development strategy in the field of crop protection products includes intensive research and development activities, the expansion of its product portfolio and progressive foreign expansion

fast pace (of about 3%). In Poland, the unit consumption of active substances of CPC in kg per 1 ha of arable land and permanent crops is still much lower than the EU average. Moreover, it can be assumed that economic situation of Polish farmers should be sustained due to direct subsidies received from the EU. Additionally, controversies concerning genetically modified plants (GMO) should effectively influence the higher demand level for traditional crop protection chemicals.

For the next few years, the global demand for crop protection products is also expected to continue to grow at a robust pace, with an average

annual rate of 3%–4% (in terms of value). Growth will mainly be driven by overseas markets such as Brazil, China, India, USA, Canada, as well as by European markets such as Germany, Spain and Italy.

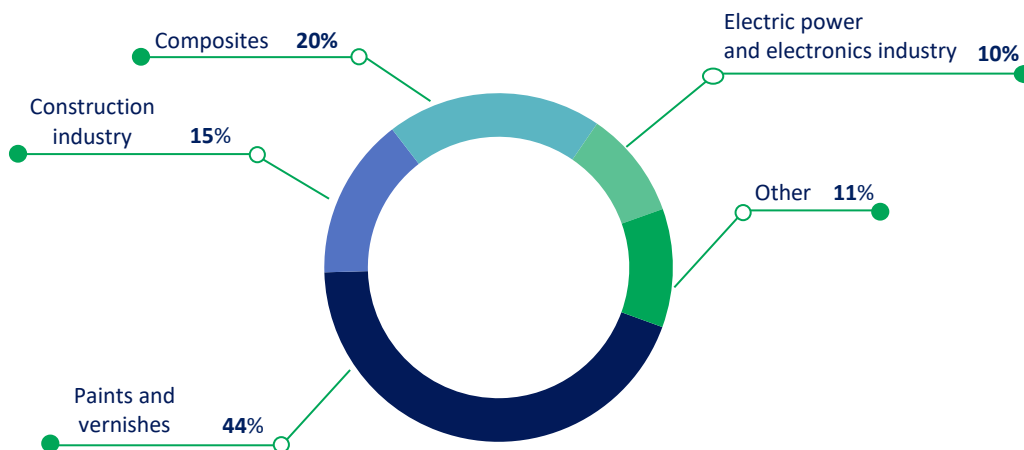
Market forecasts are based on the assumption of decreasing arable land area on the global scale, increasing population and the resulting necessity of constant yield increase. On the other hand, various national and international regulatory bodies, whose task is to monitor the consumption of crop protection chemicals in order to lower their negative influence on the natural environment will affect the growth in consumption of crop protection chemicals.

**Epoxy and saturated polyester resins**

The CIECH Group is the sole Polish producer of epoxy resins and a prominent supplier of epoxy resins to European markets.

The majority of epoxy resins offered on the market are standard mass commodities products (approx. 80%). Other, specialties products are intended for niche applications such as composites in the aerospace or wind power industry. In Europe, these resins are used primarily (45%) for the production of powder paints and varnishes (chemically resistant, insulation, electrical insulation). Approximately 20% of the volume of epoxy resins is consumed for the production of composites. Another 15% is used in the construction sector (screeds, sealants, fillers, binders, coatings, wall coverings), and approx. 10% — in electric and electronic sectors.

FIGURE 24: APPLICATION SEGMENTS OF EPOXY RESINS IN EUROPE



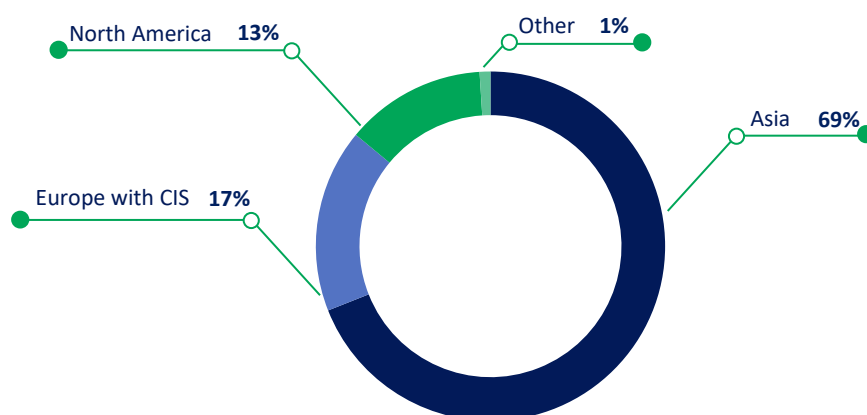
Source: Own compilation based on the IHS Markit data.

Global production capacity of epoxy resins (liquid and solid) is estimated at 5.2-5.3 million tonnes per year: Asia (more than 2/3), Europe and CIS (about 900 thousand tonnes per year), North America (about 700 thousand tonnes per year). Despite the oversupply in some parts of the world, the supply of epoxy resins in Asia (Korea) has increased over the past year. The largest global resin manufacturers are: KUKDO (South Korea), Nan Ya (Taiwan), Jiangsu Sanmu (China) and US-based corporations: Hexion, Olin and Huntsman. The above-mentioned companies are collectively responsible for approx. 40% of the world production of these resins.

The CIECH Group, through CIECH Sarzyna S.A., is the only producer of epoxy resins in Poland and one of a dozen or so in Europe (as regards base resins). Production capacity of the Group is estimated at 30 thousand tonnes per year. The biggest competitors in Poland are suppliers from the EU and Far East. Primary export markets of the CIECH Group are Western and Central European countries.



FIGURE 25: GEOGRAPHIC STRUCTURE OF EPOXY RESINS PRODUCTION CAPACITY



Source: Own compilation based on the IHS Markit data.

The global market size of epoxy resins (liquid and solid) in 2018 is estimated at 3.4-3.5 million tonnes per year. The demand in Europe (including CIS) is estimated at more than 450 thousand tonnes per year and the CIECH Group's share in the European market – at approx. 4%. Respectively, domestic consumption is estimated at around 25 thousand tonnes/year, and our share is estimated at around 20%.

In spite of increasing consumption, usage of production capacities in Europe is very low (50%). This results from a significant increase in production capacities in previous years, relatively low local demand and imports – in particular from Asia.

In the long term, the prospects for increase of demand are quite optimistic (globally by approx. 4% yearly on average). The highest growth rates are to be expected on the largest market - in Asia, and the lowest - in Europe (to the tune of 2%-3%). Above average growth prospects are also assumed for a relatively small market of Central and Eastern Europe.

The CIECH Group implements a development programme for new products dedicated to the fast-growing composite

The key segments driving the growth in consumption of epoxy resins in the following years will be glues and composites for aviation and wind power plants (globally) as well as electronics and powder paints (in the Far East and South-East Asia region).

In the powder paint segment, important substitutes for epoxy resins are saturated polyester resins. Through CIECH Sarzyna S.A., the CIECH Group is also a producer of saturated polyester resins with production capacities of 12 thousand tonnes per year. Saturated polyester resins are used primarily for production of solvent-free powder paints. The European market for these products, estimated at 230-240 thousand tonnes/year, is developing at the rate of 2%–3% on average per year.

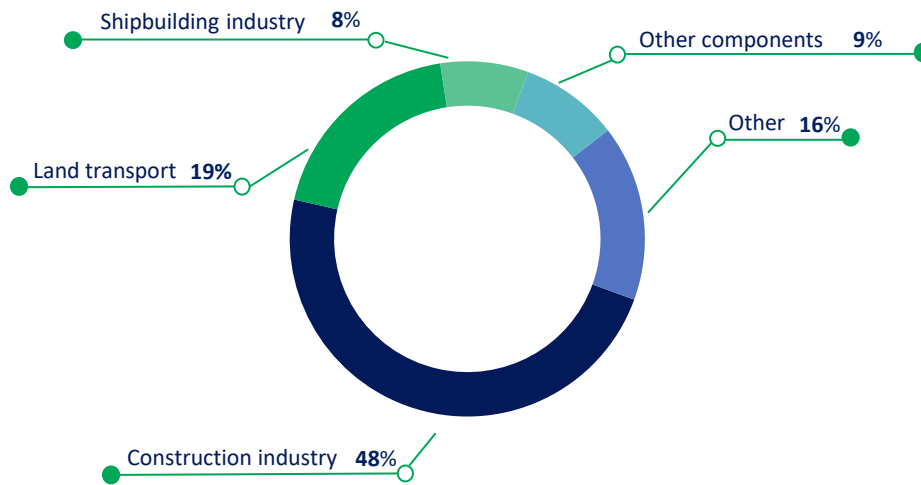
The market for saturated polyester resins is dominated by global players, and due to the location of production capacities, inter-continental trade remains insignificant. The largest net importers are Germany and UK, while the largest net exporters are the Netherlands, Spain and Italy. Growth of the saturated polyester resins market is primarily driven by the development of the powder coatings segment in the construction industry, household appliances segment as well as machinery and equipment segment.

The primary sales markets of the CIECH Group are: Poland and other Western and Central European countries.

### Unsaturated polyester resins

The global market for unsaturated polyester resins is related to their consumption in the construction industry (approx. 50%) as well as the production of yachts and means of transport on land. The majority of these resins in Europe is used in construction and transport industries. The demand of these two segments accounts for around 2/3 of the market.

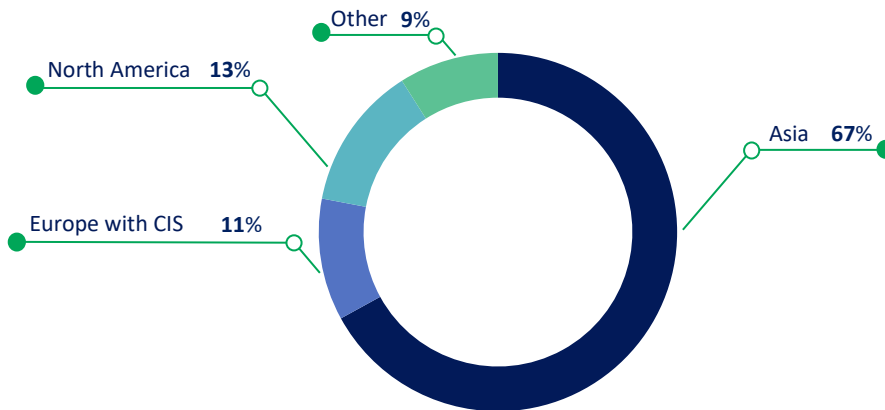
FIGURE 26: APPLICATION SEGMENTS OF UNSATURATED POLYESTER RESINS IN EUROPE



Source: Own compilation based on the IHS Markit data.

The global production capacity of unsaturated polyester resins is estimated at approximately 9 million tonnes per year. Of that, approximately 1 million tonnes per year is produced in Europe (including CIS).

FIGURE 27: GEOGRAPHIC STRUCTURE OF UNSATURATED POLYESTER RESINS PRODUCTION CAPACITY



Source: Own compilation based on the IHS Markit data.


About 30 producers of these resins are active in Europe. The biggest four international concerns own about 60% of the European production capacity. These include international concerns: the Polynt-Reichhold Group, Aliancys - AOC (joint venture formed by CVC and DSM), Ashland and Scott Bader. Small producers usually focus on high value market niches because of very strong competition.

The largest producer of unsaturated polyester resins in Poland is Lerg S.A. The second largest producer is the CIECH Group (with capacity of approx. 30 thousand tonnes per year). A significant portion of sales is directed to the domestic market (of more than 60 thousand tonnes per year), where the CIECH Group holds a share of approx. 20%. Resins from CIECH Sarzyna S.A. are also supplied to other European markets. Important competitors on the Polish market include (in addition to domestic companies) suppliers from Finland, Italy, France, Germany, UK, the Netherlands and the Czech Republic.

The unsaturated polyester resins consumption in Europe (including CIS) is estimated at about 400 thousand tonnes per year. Because the use of resins is highly dependent on the economic situation in construction and transport industries, a moderate growth rate is expected for this market in Europe in the upcoming years (by 2% annually on average, as compared to global growth rate of 4%).

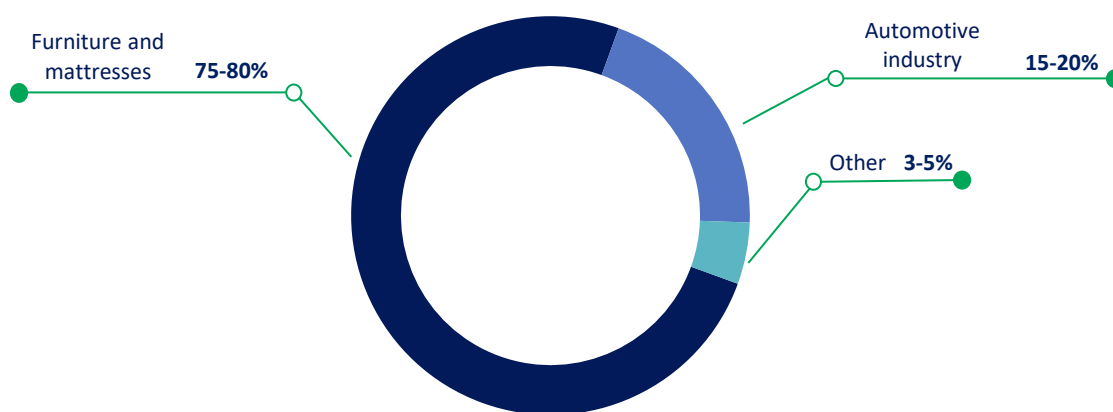
Construction industry (pipelines, tanks, structural elements, synthetic marble, etc.) will have the most significant impact on resins sales on the European market in the coming years. Also automotive industry will be important (substitution of metal parts with the ones made of resins). However, these two sales directions will be characterized by relatively low growth rates.

**Flexible polyurethane foams (PUR)**

 The CIECH Group has about 16% share in the polyurethane foam market in Poland.

Flexible polyurethane foams are used mainly in production of furniture and sleeping mattresses, which amount to about 75% of consumption of this material. Another 15–20% is used in automotive industry for production of seats, interiors and the textile industry. As a result, demand for foams is very sensitive to economic cycles.

FIGURE 28: APPLICATION SEGMENTS OF FLEXIBLE POLYURETHANE FOAMS IN EUROPE



Source: Own compilation based on the IAL Consultants and Europur data.

Because of physical properties (low specific gravity) PUR foams are sold only on local markets. Therefore production base develops close to potential buyers. The CIECH Group is active mainly on the Polish market. However, export sales are being developed as well. Furniture manufacturers and foam processing plants are clients of the Group.

Globally, production of polyurethane foams is very fragmented (over a thousand producers of total production capacity of 6 million tonnes per year). Production capacities of Polish producers are estimated at about 210–220 thousand tonnes per year. Major competitors of the CIECH Group on the Polish market are: Eurofoam, Vita Polymers and MZCh Organika. IKEA also hold large production capacities, however, they are designated mainly for internal purposes.

The CIECH Group, through Ciech Pianki Sp. z o.o., has about 16% share in the Polish market of flexible foams.

Over the next few years, the global market for flexible polyurethane foams (estimated at nearly 6 million tonnes) is expected to grow at a rate of 3%-4%. This will mainly be attributable rising standards of living in developing countries (especially in Asia). European demand for soft polyurethane foams, such as those used in the furniture industry, is estimated at 1.3-1.4 million tonnes per year (including Turkey). The Polish market for such foams is estimated at more than 200 thousand tonnes/year and is expected to growth at the average annual rate of approx. 3%.

The furniture industry, which is one the key recipient of foams produced by the CIECH Group, has been in a very good economic situation for the last few.

In general, demand for flexible polyurethane foams depends on the situation in the industries that are the biggest consumers of the product i.e. furniture and automotive industries. In the case of the domestic furniture industry, a very good economic situation was observed for about 5 years. However, the previous year was characterised by a slight slowdown in the growth rate, most probably associated with the stagnation on the German furniture market – the most important market for Polish furniture exports. According to the Central Statistical Office (GUS), the total domestic furniture output sold increased by 5.9% in 2018 compared to +7.5% in 2017. Economic results and the financial position of the furniture industry (oriented mainly at export) depend greatly on the economic situation on foreign markets and on exchange rates of the Polish currency. High price competitiveness of the national furniture industry supports its good position on foreign markets.

### 2.2.3 SILICATES AND GLASS SEGMENT

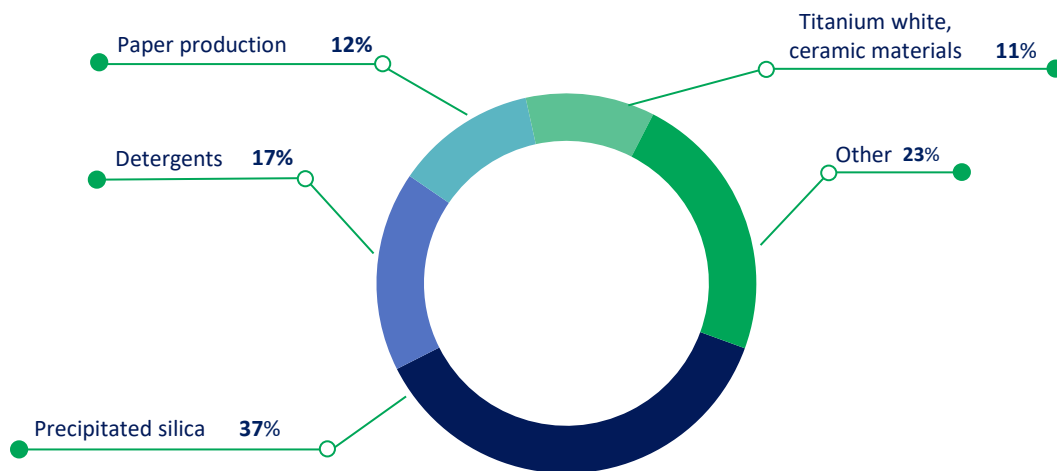
#### Sodium silicates (glassy sodium silicate and sodium water glass)

Sodium silicates are manufactured in solid form (glassy sodium silicate) and in liquid form (sodium water glass usually obtained by dissolving glassy sodium silicate in water). The CIECH Group, through CIECH Vitrosilicon S.A. and CIECH Soda Romania S.A., manufactures and sells glassy sodium silicate as well as sodium water glass.

Sodium silicates are used for production of precipitated silica (about 40% of consumption in Europe, used mainly in the tyre and beauty product industries), detergents (more than 15%), paper, coatings based on titanium white and ceramic materials and in other industries.

In developing countries, applications related to production of detergents dominates, and the total consumption of these silica depends to a large extent on the number of citizens.

FIGURE 29: APPLICATION SEGMENTS OF SODIUM SILICATES IN EUROPE

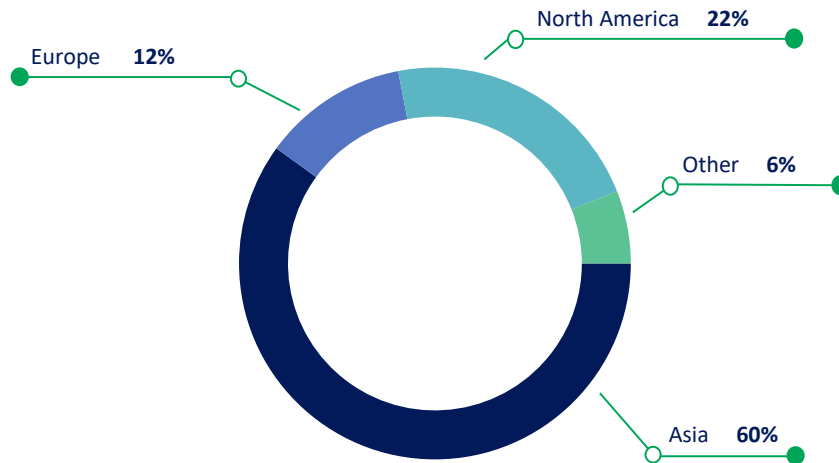


Source: Own compilation based on the IHS Markit data.

Sodium silicates are one of the most popular non-organic chemicals, and are manufactured all over the world. However, due to their relatively low price and high importance of the liquid form in trade (silicates dissolved in water), international turnovers are performed usually on a local level, i.e. only on the European continent.

The largest production capacities are located in Asia (about 60%) and the most developed regions of the world (Europe, North America) are responsible for another approx. 34% of global production capacities in total.

FIGURE 30: GEOGRAPHIC STRUCTURE OF PRODUCTION CAPACITIES OF SODIUM SILICATES



Source: Own compilation based on the IHS Markit data.

Sodium silicate production capacities in Europe are estimated at approx. 1.2 million tonnes per year. However, majority of these capacities is used by producers, who in general do not offer silicates on the free market. European production capacities are located in Western and Central Europe. PQ and BASF concerns as well as the CIECH Group, are European leaders in silicates production. Our Group's share in total production capacities in Europe is estimated at about 14% for glassy sodium silicate (third largest producer).

Total demand for sodium silicates in Europe, at the free market, is estimated at about 400 million tonnes per year, and its annual average growth rate is 6%. Production of precipitated silica is a segment with a relatively high growth rates.

The CIECH Group, owing to investments in the expansion of capacity in previous years, has been strengthening its position on the free market of sodium silicates. We estimate our share in sales of silicates in Europe at approx. 35%.

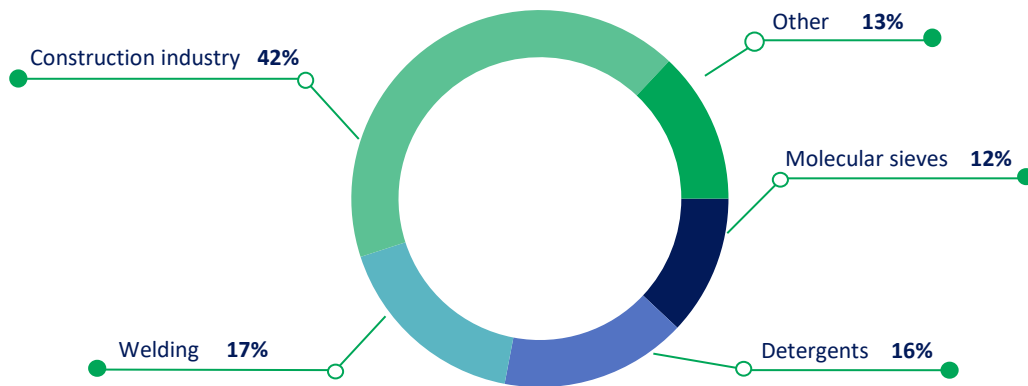
### Potassium silicates

Potassium silicates (in the form of glassy silicates or potassium water glass) are used as a raw material in the production of plaster and facade paints for construction, welding (production of electrodes), production of detergents, molecular sieves, fertilisers and crop protection chemicals.

The European market for potassium silicate is a mature market with a small growth rate of around 1% per year. The growth of this area is positively affected by segments which are growing at above-average rates: the market for speciality detergents in liquid form and the market of molecular sieves (used for gas cleaning in various chemical processes). There are several glassy potassium silicates producers in the European market, with Van Baerle and PQ holding the dominant market share. We estimate that the production capacity in Europe is around 60 thousand tonnes per annum, including CIECH Group's capacity in CIECH Vitrosilicon S.A. of up to 3 thousand tonnes per year.



FIGURE 31: APPLICATION SEGMENTS OF POTASSIUM SILICATES IN EUROPE



Source: Own compilation based on the IHS Markit data.

### Glass products (decorative lanterns, jars)

Glass products manufactured by CIECH Vitrosilicon S.A. are intended for niche markets: decorative lanterns are used to manufacture vigil lights; jars with clamp lids and twist-off jars are to be used for food products.

#### Decorative lanterns

Vigil lights are the products used mainly in Poland and in some Central European countries. Consequently, activity of the CIECH Group in this respect is focused on the domestic market. The demand for vigil lights is related to the tradition of visiting cemeteries, and sales are performed mainly around 1 November every year. Supplies of lanterns used in the production of vigil lights are delivered earlier, mainly in the second and third quarter of a year.

In Poland, there are only few producers of decorative lanterns (glass-works). At the same time, complete vigil lights are manufactured by about 300 companies that usually buy lanterns directly from producers. Major producers of decorative lanterns are: CIECH Vitrosilicon S.A. in Iłowa and HS Sława S.P. in Kielce.

The domestic market of decorative lanterns is estimated at about 220 million pieces per year. The CIECH Group, through CIECH Vitrosilicon S.A. has been without any doubt a leader of this market for many years. Key advantages of the leader include: production potential and a wide and differentiated product range. The market for glass lanterns is very mature and no increase in demand is expected.

#### Jars

CIECH Vitrosilicon S.A. specialises in the manufacture of COMFORT-type jars with glass lids and fastening clasps, used on niche markets (for storage of bulk products and products that do not require pasteurisation). The CIECH Group is the only producer of such jars, and sales are targeted at the domestic market and to foreign markets (approx. 10%). Competitive products on the Polish market are imported from Germany, China and Italy. The domestic market of Comfort-type jars is estimated by the CIECH Group at about 3.5 million pieces per year. The Group with a share of about ¼ is the third supplier on this market.



# **CIECH GROUP'S STRATEGY**

AND DEVELOPMENT CONDITIONS



### 3 CIECH GROUP'S STRATEGY AND DEVELOPMENT CONDITIONS

#### 3.1 CIECH GROUP STRATEGY FOR 2019-2021

The Management Board of CIECH S.A. carries out an on-going analysis of the market environment and identifies innovative solutions aimed at the building of the CIECH Group's value. Therefore, the Management Board presented an update of the CIECH Group strategy for 2019-2021, approved by a resolution of the Supervisory Board on 5 December 2018.

According to the adopted document, the strategic objective is to maximise the CIECH Group's value, primarily by increasing competitive advantages in the key soda business, continuous improvement of customer service, further investing in the development of specialist businesses in other segments, intensive use of innovations and the effects of R&D efforts to increase production efficiency and expand the product portfolio and value creation through changes in the asset portfolio.

The CIECH Group's visions and ambition is to create real value for all stakeholders.


FIGURE 32: VISION AND AMBITIONS OF THE CIECH GROUP FOR 2019-2021



Objectives set in the CIECH Group's strategy will implemented through:

TABLE 2: IMPLEMENTATION OF STRATEGIC OBJECTIVES FOR 2019-2021

<p>Soda segment</p>	<p>Increasing the efficiency of the soda business, which will translate into an increase in customer satisfaction and enable the Group to increase its share in the sodium bicarbonate market and to develop the salt business by, among other things:</p> <ul style="list-style-type: none"> <li>increasing production capacity of sodium bicarbonate and expanding the portfolio to include, among others, sodium bicarbonate for dialysis (soda),</li> <li>a programme of continuous production efficiency improvement, also through modernisation in the area of energy (soda and salt),</li> <li>a programme of increasing maintenance efficiency (soda and salt),</li> <li>commencing production and sales of volumes from the new plant in Germany with capacity of 450 thousand tonnes by 2021, which means +75% compared to current capacity (salt),</li> </ul>
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	<ul style="list-style-type: none"> <li>increasing the share of the Group's products in the specialist products market, including, among others, salt tablets, pharmaceutical salt and granulated salt (salt).</li> </ul>
 Organic segment	Consistent strengthening of the market position in the organic segment through, among other things: <ul style="list-style-type: none"> <li>expanding the portfolio of active substances (increase by 40+) and new product registrations (increase by 200+) (crop protection chemicals),</li> <li>strengthening the position on key markets, i.e. Poland and Spain, and developing sales on other markets (crop protection chemicals),</li> <li>increasing the share of sales outside Poland to 40% (crop protection chemicals),</li> <li>development of specialist products (resins),</li> <li>maintaining current market position (foams).</li> </ul>
 Silicates and Glass segment	Selective strengthening of the market position through, among other things: <ul style="list-style-type: none"> <li>taking advantage of the growing silicates market,</li> <li>maintaining current market position in glass packaging.</li> </ul>
 Organisational culture	The HR vision involves building an environment in which the best people can grow and create a culture of effectiveness, thus implementing the Group's strategy by: <ul style="list-style-type: none"> <li>building the best teams,</li> <li>creating a culture of continuous efficiency improvement,</li> <li>introducing state-of-the-art performance review and career planning tools.</li> </ul>

In 2018, the Strategy of the CIECH Group for 2014-2019, presented by the Management Board of the Company and approved by resolution of the Supervisory Board dated 3 November 2014, was in effect. According to that document, the strategic objective was the maximisation of the value of the CIECH Group, mainly through the development in the soda and organic segments.

Figure 33: STRATEGY OF THE CIECH GROUP FOR 2014-2019 EFFECTIVE IN 2018




For the purpose of calculating the net debt to EBITDA ratio, the estimated average annual dividend yield was determined at 3%. The value of the dividend and its distribution will depend on the market situation and the financial position of the CIECH Group.



Objectives set in the CIECH Group's strategy were implemented through:

TABLE 3: IMPLEMENTATION OF STRATEGIC OBJECTIVES


 Soda segment	Strengthening of the leader's position in the soda segment in the key European markets through, among other things: <ul style="list-style-type: none"> <li>• effective acquisition of new clients,</li> <li>• further improvement of the quality of products,</li> <li>• strengthening the position of a preferred supplier,</li> <li>• development of more processed types of sodium bicarbonate.</li> </ul>
 Organic segment	Consistent strengthening of the market position in the organic segment through, among other things: <ul style="list-style-type: none"> <li>• an increase of the production effectiveness,</li> <li>• an increase in the production capacity usage (resins and crop protection chemicals).</li> </ul>
 Silicates and Glass segment	Utilising the increased demand for sodium silicate: <ul style="list-style-type: none"> <li>• increasing the production capacity of glassy sodium silicate by more than 20% by changing the production profile of one of the Divisions at the Iłowa plant.</li> </ul>
 Optimisation and development	<ul style="list-style-type: none"> <li>• Optimisation of the product portfolio</li> <li>• Development of highly processed products to meet the customer requirements (resins)</li> <li>• Geographical expansion (crop protection products), with the support of CIECH R&amp;D Sp. z o.o., a company which is the Group's R&amp;D centre</li> <li>• Active steps taken for the purpose of identification and implementation of new development initiatives focusing on the building of the CIECH Group's value.</li> </ul>

### 3.2 STRATEGIC ACTIVITIES IN 2018

The CIECH Group has been continuously performing its strategic activities which impact the achievement of the financial objectives and the maximisation of the Group's goodwill.

In terms of the main segments of activities and other objectives set by the Group, it is necessary to mention the following activities carried out in 2018:

TABLE 4: ACTIVITIES OF THE CIECH GROUP IN 2018

 Soda segment	<ul style="list-style-type: none"> <li>• Increase in the share of sales to end customers.</li> <li>• Taking advantage of the economic upturn and effective relocation of volumes, which resulted in increased prices in Romania.</li> <li>• Maintaining presence in Asian markets and expanding sales on the African continent (Nigeria, South Africa).</li> <li>• Specialisation in container sales to distant markets – mainly Asia, Africa.</li> <li>• Launch of a new packaging line in Romania to increase sales in small packages.</li> <li>• Relocation of sales towards higher-margin markets.</li> <li>• Expansion of sales on the Polish feed and food market (sodium bicarbonate).</li> <li>• Inter-segment diversification through introduction of new, highly processed products into the product portfolio – implementation of an investment in pharmaceutical-grade soda.</li> <li>• Improvement in logistics with regard to salt following the construction of a high-storage warehouse.</li> </ul>
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	<ul style="list-style-type: none"><li>• Development of the product offer in salt - licks and salt granules.</li></ul> <hr/> <ul style="list-style-type: none"><li>• Acquisition in the third quarter of 2018 of a Spanish company Proplan, specializing in registering and distributing fungicides, herbicides, insecticides and growth regulators.</li><li>• Intensification of new products registration process, building new distribution channels, significant strengthening of the sales force, and advertising campaigns for the flagship products by CIECH Sarzyna S.A. (e.g. CHWASTOX and AGROSAR).</li><li>• Implementation of a large investment programme aimed at extending the product portfolio of CIECH Sarzyna S.A. on the domestic and foreign markets for crop protection chemicals. This programme includes increasing the level of product registrations on key markets and work on ensuring direct access to key active substances.</li><li>• Development of the “Home and Garden” – ZIEMOVIT line which will allow for reaching new users.</li><li>• In 2018, a new facility for the production of coloured epoxy compositions was commissioned. The rebranding of the EPIDIAN® brand was completed, mainly in the area of epoxy flooring and decorative resin – EPIDIAN® DECO.</li><li>• Commercialisation of new products from the UPR, ER and SPR areas. Intensification of marketing and PR efforts in the areas of resins.</li><li>• Increasing the production capacity of PUR foams, as well as elimination of production bottlenecks as a result of completion of a long block warehouse.</li><li>• Implementation of the development programme in CIECH Pianki Sp. z o.o. aimed at introducing new types of foams into the product portfolio, searching for new applications for current and new products.</li></ul>
 Silicates and Glass segment	<ul style="list-style-type: none"><li>• Change in the production profile of Division No 1 in the Iłowa plant - launch of production of glassy sodium silicate in place of glass packaging.</li></ul>
 Optimisation and development	<ul style="list-style-type: none"><li>• Continued development of the R&amp;D area to support the development of products being a response to growing needs of the market. The CIECH Group also implements a number of R&amp;D projects aimed at improving the efficiency of plants.</li></ul>

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### 3.3 DEVELOPMENT PROSPECTS

The prospects for CIECH S.A.'s and the CIECH Group's development result both from its market position and position in the chemical industry as well as the present and the forecast conditions of environment of the Group in Poland and worldwide. Key development prospects of the CIECH Group and CIECH S.A. in individual segments of its operations are discussed below. More information about market factors affecting the CIECH S.A.'s and CIECH Group's operations is provided in Chapter II of this report: External environment.

The most important economic factors in the environment of CIECH S.A. and the CIECH Group include:

- situation on consumer markets of the CIECH Group – including the glass packaging sector, furniture sector, automotive sector, plastics sector, chemicals and chemical products sector, agricultural sector and construction sector,
- level of economic activities in Europe – growth rate of the EU industrial production, domestic demand,
- market conditions – including conditions on the raw material market and currency situation,
- european and global economy situation, in particular, the direction of the Chinese economy GDP's changes being difficult to foresee,
- legal and regulatory environment.



TABLE 5: DEVELOPMENT PROSPECTS OF THE CIECH GROUP AND CIECH S.A. IN INDIVIDUAL BUSINESS SEGMENTS

Soda segment	
Soda ash	
Key trends in the market environment	Strategic activities of the CIECH Group
<ul style="list-style-type: none"> <li>• Extension of soda production capacity based on natural trona deposits (lower production costs compared to the dominant synthetic technology applied in Europe, including in the CIECH Group).</li> <li>• Nearly doubled volume of Turkish soda exports to Europe in 2018 driven by new production capacities.</li> <li>• Almost complete reduction of American soda exports to Europe in 2018.</li> <li>• Maintenance of the environmentally friendly orientation of the Chinese economy and related reduction in production capacity, owing to which additional volumes from Turkey can be absorbed without negative impact on the supply and price situation.</li> <li>• Moderate increase in global demand.</li> <li>• Possible large price increases in the European region in 2019 and further increases in subsequent years, related to the growing demand for soda from glass producers (flat and packaging glass), as well as from the chemical sector.</li> <li>• Recycling of packaging glass (the threat of decreasing demand for soda in the production of glass packaging).</li> <li>• Decreasing demand for washing powder in favour of liquid detergents (resulting in a decrease in the consumption of soda in the detergent industry).</li> <li>• Growing demands for the energy efficiency of buildings that can be satisfied through, among others, increased use of flat glass (double or triple glazing of windows).</li> <li>• Expansion of glassworks in Poland, increasing annual domestic demand for soda by over 70 tt.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintaining the presence in key European markets (CEE).</li> <li>• Maintaining a strong position on the Indian market despite the reduction in volumes due to the strong increase in competition (expiry of anti-dumping tariffs for US and Chinese producers and the prospect of their expiry for Turkish and Russian producers, commissioning of new production capacity by RSPL).</li> <li>• Intensification of sales in prospective markets (Egypt, Bangladesh, South Africa, Oman, Myanmar).</li> <li>• Consistent relocation of sales towards higher-margin markets.</li> <li>• Consistent development of direct sales.</li> <li>• Further increase in carriage management as an integral service function.</li> <li>• Building strong, long-term relationships with key customers.</li> </ul>
Sodium bicarbonate	
Key trends in the market environment	Strategic activities of the CIECH Group
<ul style="list-style-type: none"> <li>• Possible large price increases in the European region in 2019 and further increases in subsequent years, related to the growing demand for sodium bicarbonate.</li> <li>• Global megatrends supporting the increasing demand for sodium bicarbonate:                         <ul style="list-style-type: none"> <li>✓ Increased availability of treatment through hemodialysis and the resulting increase in demand for soda used for this purpose.</li> <li>✓ Improving health care in developing countries – increased consumption of soda used in the pharmaceutical industry.</li> <li>✓ Growing regulatory requirements in the area of environmental protection – a major increase in usage</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Expansion of the portfolio towards more processed products, specialised products and products that fit in with the trends related to environmental protection and demographic changes.</li> <li>• Concentration of operations in key markets.</li> <li>• Implementation of sales strategy focused on the supply of higher grades of sodium bicarbonate to customers in the pharmaceutical sector.</li> <li>• Intensification of sales of the “SORBECO” sorbent used in the desulphurisation of flue gas.</li> </ul>

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of consumption for fumes desulphurisation is expected.

- ✓ Global population growth (mainly Asia and Africa) accelerating the rate of food consumption – increased consumption of soda used in the food industry.
- ✓ Discontinuation of the quota system for milk production in the EU (since 2015) resulting in an increase in milk production and potentially increased consumption of soda in feed.

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#### Evaporated salt

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##### Key trends in the market environment

- Apparent increase in demand for specialist products of the salt industry – salt tablets, salt of pharmacological purity grade used in the pharmaceutical sector, salt for the food industry and for direct consumption (e.g. with low sodium content).
- Growing awareness of the need to improve water quality – an increase in demand for salt tablets from the industry, hospitals and similar institutions and households.
- Growing market of salt for feed and salt licks – development of agriculture in the country.
- Moderate increase in European and global demand for salt.
- Decreasing importance of rock salt with increasing importance of evaporated salt in the European industry

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##### Strategic activities of the CIECH Group

- The commencement of the investment, the subject of which is the construction of a salt production plant brewed in Germany (production capacity at the level of approximately 450,000 tonnes of salt per year).
- Expansion of the offer in the direction of specialty products within the dry salt portfolio – new directions of sales of existing products.

**Organic segment**

## Crop protection products

Key trends in the market environment	Strategic activities of the CIECH Group
<ul style="list-style-type: none"> <li>Expected further systematic growth (over the next few years) of the Polish market of crop protection products, where the unit consumption of products per 1 ha is still lower than in Western European countries with more developed agriculture.</li> <li>Prospects of further improvement of economic situation of Polish farmers owing to direct subsidies received from the European Union.</li> <li>Progressing consolidation of major players in the market (a few large transactions in 2015, 2016 and 2017 among the largest companies – suppliers of raw materials used by the AGRO business).</li> <li>Controversies concerning genetically modified plants (GMO) in Europe which should effectively influence the higher demand level for traditional crop protection chemicals.</li> <li>Decreasing arable land area on the global scale and increasing population – necessity of constant increase in the volume and quality of food.</li> <li>Significant reduction in the supply of active substances and other additives by Chinese plants in connection with the “Blue Sky” policy to improve air quality. Rapid increase in prices and decrease in the availability of raw materials for the CPC industry.</li> </ul>	<ul style="list-style-type: none"> <li>Strengthening the position on the Polish market, development of distribution on foreign strategic markets for which a product portfolio is being prepared.</li> <li>Development of new distribution channels, strengthening sales and marketing forces.</li> <li>Extension of the product portfolio, access to technical documentation for selected active substances and continuous improvement of the product range, which is the responsibility of CIECH R&amp;D Sp. z o.o.</li> <li>Intensification of marketing communication, further strengthening in the AGRO segment of the CIECH brand and strong product brands (CHWASTOX, AGROSAR).</li> <li>Development in the Home &amp; Garden area (the ZIEMOVIT brand) covering products used in the cultivation of allotment plots, gardens and balcony plants.</li> <li>Leveraging lower supply of active substances from China and increasing the share of CIECH Sarzyna in the global technical MCPA market (Europe, Australia and Oceania, North America).</li> </ul>

## Resins

Key trends in the market environment	Strategic activities of the CIECH Group
<ul style="list-style-type: none"> <li>The growth rate of the global resin market remains high – about twice the GDP growth rate. The value of the global resin market in 2019 is estimated at about PLN 90 billion.</li> <li>The APAC region is the fastest growing resin market and its value will exceed PLN 50 billion. China accounts for about 80% of the APAC market. The growth continues to be driven by base resins (commodity).</li> <li>Traditional European markets are becoming less and less important. The slowdown in economic growth will translate into the relatively lowest increase in the value of the resin market. Speciality resins become the driving force of growth.</li> </ul>	<ul style="list-style-type: none"> <li>Development towards high-margin specialist products.</li> <li>Gradual increase in production volumes, especially in the SPR and UPR segments.</li> </ul>

## Foams

Key trends in the market environment	Strategic activities of the CIECH Group
<ul style="list-style-type: none"> <li>Direct dependence of demand for flexible polyurethane foams on the situation in industries that are the biggest consumers of the product i.e. furniture and automotive industries.</li> <li>Significant increase in the availability of strategic raw materials – a slowdown in the upward trend in prices.</li> </ul>	<ul style="list-style-type: none"> <li>Enhancing cooperation with existing customers and searching for new prospective customers.</li> <li>Optimisation of the product portfolio.</li> <li>Increasing the efficiency of processes and logistics in the plant.</li> <li>Reducing production costs and increasing feedstock supply security.</li> </ul>

## Silicates and Glass segment

### Glass products, silicates, water glass

Key trends in the market environment	Strategic activities of the CIECH Group
<ul style="list-style-type: none"><li>• Moderate long-term increase in global demand for sodium silicates due to an increase in production of precipitated silica and a short-term increase in demand due to an increase in the price of soda lye.</li><li>• Growing global demand for the so-called green tires produced using precipitated silica manufactured from sodium silicates.</li><li>• Growing demand for liquid detergents resulting in a decrease in the consumption of sodium silicates in this area.</li><li>• Continuous trend of rich and diverse design of lanterns for vigil lights accompanied by a simultaneous increase in the share of sales of vigil lights by retail chains.</li><li>• Persistently low level of sales prices of standard twist-off jars for the food processing market</li></ul>	<ul style="list-style-type: none"><li>• Focusing on the use of new applications of silicates and development of high-margin products.</li><li>• Continuous expansion of the range of lanterns for vigil lights, intensification of efforts aimed at obtaining network contracts.</li></ul>

## 3.4 RISKS TO OPERATIONS

### Risk management at the CIECH Group

The CIECH Group continues to develop the risk management system which constitutes a significant element in supporting its operations. This process aims at reducing risks that may arise and introducing mechanisms to recognise, identify and properly manage various external risks affecting the future growth of the CIECH Group's value, so that they would be neutral to the implementation of strategic objectives.

The Risk Management System of the CIECH Group is an organised set of general principles and guidelines, defining how the risks to which the CIECH Group is exposed should be managed. The system determines the responsibility for the implementation of these principles in the CIECH Group. The objective of the system is to lay a foundation for introducing risk management methods, procedures, requirements and reports required for keeping the CIECH Chemical Group's risk at an acceptable level.

Risk management in the CIECH Group is an instrument that supports the Management Board and Supervisory Board of CIECH S.A. in monitoring the effectiveness of internal control system, audit system and risk management system. Risk management objectives in the CIECH Group are implemented through:

- systematic approach to the identification of all risks,
- supporting the allocation of resources by setting priorities for risks,
- selection and implementation of the best risk management strategy,
- risk monitoring, analysis and reporting that take into account all potential effects of existing risks.

TABLE 6: LIST OF THE MOST SIGNIFICANT RISKS RELATED TO THE FUNCTIONING OF THE GROUP

## Operational risks

**Risk related to the availability of raw materials**

The supply relies on a limited number of suppliers for certain raw materials that are of key importance for the CIECH Group, which may cause supply disruptions and delays or additional costs if suppliers fail to deliver their products in a timely manner or fail to meet high quality requirements set by the CIECH Group.

The production process of the Group companies requires adequate and timely supplies of raw materials. For certain required raw materials, there is a limited number of possible suppliers. Most of the limestone and brine – two main raw materials used in the production of soda with the Solvay method – is purchased locally by soda producers from single suppliers. The soda ash production plants need to be located in close proximity to limestone and brine suppliers due to relatively high transportation costs of these raw materials in comparison with their price. The majority of key raw materials for production plant in Romania is obtained from individual suppliers. Furthermore, some production plants, in particular those manufacturing soda ash, are located in areas with a limited number of suppliers in the profitable radius.

In addition, certain raw materials, such as limestone, brine or energy, are purchased under long-term contracts. Key terms of the supply contracts, such as price and quality, are generally flexible and can be modified under certain circumstances to better reflect current business conditions. There is no guarantee that this flexibility will be sufficient to adapt the contracts to current business conditions in a way acceptable for the Group, which could have negative impact on the CIECH Group's operating activity and financial situation.

It cannot be ruled out that the existing difficulties in the transport of bulk raw materials related to limited availability of rolling stock and limitations in connection with ongoing infrastructure repairs will affect the availability of raw materials to the CIECH Group.

**The risk is estimated to be moderate**

**Risk mitigation methods**

In order to reduce this risk, the CIECH Group constantly seeks alternative ways to purchase raw materials and improve its negotiating position towards suppliers as a large and reliable recipient of raw materials. In the case of power coal, the Group seeks to enter into long-term contracts, as a way to mitigate this risk. For coke, the Group partially replaces this raw material with anthracite. The CIECH Group actively utilises its own transport capacity in order to minimise the risk related to the availability of rail transport.

**Risk of breakdowns and unplanned stoppages**

Production activities of the CIECH Group companies can be interrupted as a consequence of risk factors, which are beyond the Group's control, such as environmental threats, some disasters, including fires, weather events, serious breakdowns of equipment and other accidents or events that may result in cessation of the operations. Any damages to facilities, including IT systems, causing short-term interruptions in operations of facilities and distribution and logistics services, for the time of repair or for other reasons, may have considerable, unfavourable impact on the CIECH Group's operating activities and financial situation.

**The risk is estimated to be moderate**

**Risk mitigation methods**

The Group has an active security system at all organisational levels and in technological processes. Group companies constantly analyse the status of key equipment and maintenance schedules for this equipment in order to eliminate the potential risks of breakdown. The CIECH Group improves its technological processes on an ongoing basis and invests in modern technologies.

**Risk of failure to retain or attract staff to the CIECH Group**

Loss of important management, technical and administrative personnel, or the failure to recruit such personnel, may affect the CIECH Group's operations.

The nature of the CIECH Group's operations and its development plans require hiring personnel with high qualifications in various domains. Ability to maintain a competitive position and implementation of business strategy depends significantly on the quality and the experience of staff. The loss of competences important for the CIECH Group or

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### Operational risks

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impossibility to acquire them may have a considerable, negative effect on operating activities, which translate into financial situation.

**The risk is estimated to be moderate**

#### Risk mitigation methods

Due to the relatively high costs of acquiring personnel with desired competences and skills, the search for employees having appropriate experience constitutes an element of an ongoing policy of the CIECH Group. A component of the strategy for managing this risk is continuous improvement of management, technical and administrative personnel through the improvement of working conditions and salaries, introduction of development and incentive programmes, as well as trainings improving the personnel's expertise.

A vital element of personnel policy of the company is to build the image of the CIECH Group as an attractive employer for young, educated and ambitious people. Therefore, the Group cooperates with selected universities and conducts, every year, apprenticeships and traineeships projects in the companies of the Group.

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#### Risk of personnel disputes

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The CIECH Group employed 3,871 persons as at 31 December 2018, 60% of whom belongs to trade unions. Therefore, the risk of personnel disputes or long-term negotiations, conducted with the employer by trade union organisations to influence the employer, cannot be ruled out.

**The risk is estimated to be low**

#### Risk mitigation methods

The CIECH Group companies take a number of measures to maintain good relations with trade unions, an example of which can be the agreements on preserving social concord in force in CIECH Soda Polska S.A. and CIECH Sarzyna S.A. The companies strive to settle disputes amicably and to conduct dialogue in a spirit of cooperation and mutual trust.

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### Business risks

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#### Risk of oversupply and decrease in prices of soda resulting from the launching of new production capacities and other activities of competitors

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The growing competition from existing and new domestic and foreign producers may occur on the main markets and in industries in which the Group operates. The competition within the chemical industry depends on local market dynamics and varies significantly depending on specific product and its use. In addition, the competition depends on many factors, including: demand, product prices, stability of supply, relevant production capacity, customer service quality, product quality, and availability of substitutes.

As regards the soda segment, after the entry of new volumes from the Turkish project, the CIECH Group identifies the possibility of increasing the activity of trading companies in the area of our operations, which has so far been only moderately affected by the new supply – i.e. Poland and Germany – and thus triggering a more intense competition. This may be amplified by the indirect competition of Western European producers moving eastwards - looking for a way out for volumes as part of market balancing.

**The risk is estimated to be high**

#### Risk mitigation methods

From the time of publishing the information about the Turkish project, the CIECH Group has been taking active steps to develop the soda segment by: active management of customer portfolio, geographical sales directions, applications in which we locate products, improvement of production processes efficiency, as well as strengthening customer relations and development of services.

These actions allow the CIECH Group to compete against other soda manufacturers in Europe in an effective manner. In addition, developments in China, the world's largest soda industry, involving a significant reduction in capacity expansion and production restrictions linked to the Blue Sky policy, should have a positive impact on the global balance of supply and demand.

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#### Economic risk

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## Business risks

The CIECH Group business is largely based on the sales of chemical products used as raw materials and semi-finished goods in a wide range of industries, including the glass, detergent, furniture, automotive, construction, food, pharmaceutical, chemical and consumer goods industries. The demand for the CIECH Group customers' products is affected by general economic conditions and other factors, including conditions in the construction, automotive and packaging industries, the costs of labour and the energy costs, the exchange rates fluctuations, the interest rate fluctuations, and other factors beyond control of the Group.

The CIECH Group turnover is primarily attributable to the sales of soda and organic products, where the prices are cyclical and sensitive to changes in the supply and demand, the availability and price of raw materials, the general economic conditions, and other factors that are beyond control of the CIECH Group. These industries are characterised by periods of increased demand, leading to high operating profits and margins, followed by periods of oversupply resulting primarily from significant production capacity increases or a decreased demand, leading, in turn, to reduced profits and margins.

The markets for other products of the CIECH Group, including epoxy resins used mainly in the construction and paint industry, are affected by cyclicity, experiencing alternating periods of increased demand combined with an increase in prices and margins, followed by periods of decreased demand, resulting in oversupply and declining prices and margins. The demand for epoxy resins is closely linked to the demand for end-use products of paint, construction and electronic industries, which, in turn, depends on the overall economic situation. The cyclicity may affect the prices of the CIECH Group's products and may negatively impact the CIECH Group's operating activity and financial standing.

It is uncertain whether events that have an adverse effect on the industries and markets in which the CIECH Group operates, such as a downturn in the Polish, European and global economies, increases in interest rates, unfavourable exchange rate fluctuations, or other factors, will not occur. Any significant downturn in the CIECH Group customers' activities or in the Polish, European and global economic conditions could result in a reduction in the demand for the CIECH Group products and could negatively affect the operating activity and the financial standing of the CIECH Group.

**The risk is estimated to be moderate**

### Risk mitigation methods

The CIECH Group minimises this risk by monitoring the economic situation throughout the world, in Europe and Poland, as well significant events, and also by taking actions reducing the negative impact of materialisation of this risk. Also, the objectives adopted in the new Group Strategy, such as the increase in the EBITDA (A) of the Group in the share of products other than soda products are aimed at minimizing this risk.

## Risk of changes in market prices of raw materials

The CIECH Group's operations may be negatively affected by changes of raw material and fuel costs, inability to retain or replace key suppliers, unexpected supply shortages or supply chain disruptions. The CIECH Group's profit is largely dependent on attainable sales prices of raw materials and energy required for manufacturing of different products.

The prices of many raw materials, constituting a significant portion of operating costs, can be variable. The availability and prices of these raw materials are influenced by factors that mostly are beyond the CIECH Group's control, such as market conditions, general global economic prospects, production constraints by the suppliers, fluctuations of oil or other commodity prices, infrastructure failures, political conditions, weather conditions, legal regulations and other.

The upward trend in the price of coal used to produce steam and electricity at CIECH Soda Polska S.A.'s plants in Janikowo and Inowrocław continued in 2018. At the same time, market prices of coke remained relatively high, what makes the purchase price of this raw material for production plants in Poland, Romania and Germany higher. It cannot be ruled out that the situation will look similar in 2019.

**The risk is estimated to be moderate**

### Risk mitigation methods

The CIECH Group actively manages the process of rising raw material prices by, among other measures, using alternative specifications of raw materials (using anthracite as a cheaper substitute for coal), searching for new sources of supply as well as by replacing more expensive raw materials with raw materials that are relatively less expensive, optimising its production processes on an on-going basis. Owing to these actions, the Group is able to minimise the impact of the increase in prices of strategic raw materials on the performance of this production segment of the CIECH Group.

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### Business risks

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The CIECH Group minimises the risks described above by monitoring the situation on the market, negotiating conditions for subsequent periods with its current suppliers and signing long-term contracts, as well as by looking for alternative suppliers.

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#### **Risk of strong price competition from large corporations and Far East producers in the area of crop protection products**

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Large corporations are the leaders in the area of crop protection chemicals. Due to the progressing consolidation of competitors and distributors, these entities can benefit from economies of the scale and offer their products at lower prices than the CIECH Group. At the same time, these companies may offer their products on multiple markets, based on the registrations held. In addition, the competitiveness in this area is affected by regulatory changes, i.e. registration processes or prohibitions on the use of certain substances in a specific area.

The competitiveness of activities in the area of crop protection products is also negatively affected by weather conditions. Bad weather conditions can cause smaller harvest and, thereby, lower demand for the CIECH Group products. Weather conditions may have a delayed effect on operating results, as the CIECH Group sells products to distributors who, having excessive stocks after bad vegetation period, will be interested in a lower number of orders for the following period.

**The risk is estimated to be moderate**

#### **Risk mitigation methods**

The CIECH Group conducts ongoing development activities in the area of crop protection products through the registration of new active substances, new products, strategic alliances with other companies in the access to active substances, as well as entering new geographical markets.

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### Financial risks

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#### **Tax risk**

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The CIECH Group companies tax burdens may increase as a result of current and future tax inspections as well as currently planned or potential changes in binding tax regulations as well as changes in the interpretation of existing regulations.

For the purposes of calculation of income tax liabilities and all other tax liabilities, the CIECH Group companies follow their assessment of situation and make decisions to the best of their knowledge. Despite the belief that the tax estimates are reasonable, many factors may decrease their accuracy. Furthermore, the Polish tax system is known for its instability. Changes in regulations, often to the disadvantage of tax remitters, are unclear, inconsistent and introduced quickly and often in an unpredictable manner and impose additional extensive documentation obligations, the failure to comply with which may result in tax sanctions. The instability of the Polish tax system results not only from changes in the law, but also from differing interpretations of the same regulations by the tax authorities after years of their application and from reliance on tax regulations interpretations issued by the treasury authorities and on judicial decisions. Issued interpretations and judicial decisions are not coherent and may be subject to potential corrections or changes. Another element influencing the lack of stability of the tax law is the necessity to implement changes resulting from adjusting the national legislation to the new European Union regulations.

The CIECH Group companies are and may be subject to tax authorities inspections, during which these authorities may disagree with the approach regarding tax treatment of certain significant items adopted by the companies, including past and future events, and therefore they may oblige companies to re-calculate and potentially increase their tax liability and pay interests on tax arrears.

Frequent changes in tax regulations had and may have future negative impact on activities of the CIECH Group companies, their financial situation, operating results and development possibilities. What is more, the lack of stability in the Polish tax regulations may hinder the ability for effective future planning and implementation of the business plan according to the assumptions. In addition, changes in the existing law can also increase the real tax rate, and the increased tax expense may have a significant, negative impact on the further development of the Group.

**The risk is estimated to be high for CIT 2012 and moderate for other matters**

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## Financial risks

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### Risk mitigation methods

The Group constantly monitors changes in the law and potential tax risks, taking steps to eliminate them or to reduce them substantially through a constant cooperation with reputable tax advisors and by official inquiries to the tax authorities.

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### Foreign exchange risk

Due to the nature of conducted import and export operations, the CIECH Group is subject to currency exposure related to the significant lead of export over import, the exposure value is also affected by investment projects implemented in foreign currencies and the currency structure of external financing. Sources of currency risk to which the Group companies are exposed include: product sale, purchase (raw materials, expenses related to investment projects), loans raised and cash in foreign currencies. Unfavourable changes in currency exchange rates may worsen the Group's financial results. Fluctuations in the foreign exchange rates may also significantly affect the comparability of the Group's results between the periods.

The CIECH Group's main source of exposure to foreign currency risk is related to EUR and USD. The estimated exposure to the currency exchange risk in EUR (excluding SDC Group and Proplan) amounted to EUR -301.4 million, EUR -253.3 million and EUR -250.5 million, as at 31 December 2016, 31 December 2017 and 31 December 2018 respectively; in USD: USD -18 million, USD 16.1 million and USD -18.1 million, as at 31 December 2016, 31 December 2017 and 31 December 2018 respectively.

**The risk is estimated to be moderate**

### Risk mitigation methods

The CIECH Group aims to naturally hedge its foreign currency exposure, including matching cash flows in given currencies resulting from sales and purchases and denomination of debts in certain currencies, in order to adjust it to the expected exposure to foreign currency risk in operating activities. Moreover, the Group hedges a portion of its foreign currency exposure using derivative instruments. The Group has introduced a uniform market risk management strategy, covering, among other aspects, the currency risk management.

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### Risk associated with debt financing

The Group finances its activities, to a large extent, with interest-bearing debt, i.e. with loans, finance leases. As at 31 December 2018, the debt on this account amounted to approximately PLN 1,656 million.

The CIECH Group's ability to service the debt in a timely manner depends, among other factors, on future operating activities and the ability to generate sufficiently high cash flows. In the absence of sufficient funds to service the debt, the Group may be forced to limit or postpone business activities and capital expenditures, sell assets, contract additional debt or equity financing and restructure or refinance all or part of the debt.

Debt financing conditions contain obliging clauses and covenants. Where these clauses or covenants are violated and the effects of such violations are not remedied, the Group may be required to immediately repay the debt or a portion thereof. Restrictions contained in financing agreements may also limit the Group's ability to finance future operations and own cash requirements, to implement business undertakings.

Despite the above restrictions, CIECH S.A. and Group companies are able to contract significant amounts of additional debt. Increasing the value of debt may significantly increase the risk associated with the use of financial leverage.

**The risk is estimated to be moderate**

### Risk mitigation methods

As part of the financial planning processes, the CIECH Group analyses and monitors, on a regular basis, the cash flows generated and its ability to maintain liquidity and service its debt.

The CIECH group aims at unifying the debt financing conditions, including the covenants applicable, to limit the risk of infringing these covenants. The observance of provisions of financing agreements and compliance with financial ratios set out therein is monitored on a regular basis. Debt financing is obtained in a controlled and coordinated manner at the Group level. The Group has implemented uniform rules for obtaining external financing in order to take into account

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### Financial risks

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the consolidated need for financing of the entire CIECH Group, take advantage of the economies of the scale, reduce financing costs and apply consistent limiting conditions.

When entering into agreements, in order to reduce the risk of infringement and ensure the highest possible flexibility of operating conditions, the Group aims at negotiating the most favourable provisions concerning conditions that limit the financing.

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#### Risk of inability to service the current debt and maintain liquidity

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The ability of the CIECH Group to make scheduled payments to repay the Group's debt as well as to finance working capital and capital expenditures depends on the future operating activities and the ability to generate sufficient amounts of cash. If the CIECH Group's future cash flows from operating activities and other capital resources prove insufficient to repay liabilities timely or to satisfy liquidity related requirements, the Group may be forced to:

- limit or postpone business operations and capital expenditures,
- sell its assets,
- obtain additional debt or equity financing,
- reorganise or refinance all or part of the debt on or before maturity.

**The risk is estimated to be moderate**

#### Risk mitigation methods

As part of the financial planning processes, the Group analyses and monitors the cash flows generated and its ability to maintain liquidity and service its debt. The Group's debt financing sources are diversified in terms of creditors and maturities.

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#### Risk of increase in the debt level

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The CIECH Group companies are able to contract significant amounts of additional debt. Increasing the value of debt may significantly increase the risk associated with the use of financial leverage.

**The risk is estimated to be moderate**

#### Risk mitigation methods

As part of the financial planning processes, the Group analyses and monitors the financial results, cash flows, rates of return on investments and ability to service new debt. The Group's debt financing sources are diversified in terms of creditors and maturities.

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#### Risk of limited flexibility of operations due to restrictions resulting from financing agreements

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The CIECH Group is subject to restrictive financing agreement conditions, which can limit its ability to finance future operations and own cash requirements, to implement business projects.

The term loan and revolving credit facility agreement limits, among others, the ability of the CIECH Group companies to:

- contract or guarantee additional debts and issue some preference shares,
- establish certain pledges or incur liabilities secured by a pledge,
- make certain payments, including dividends or other profit distribution forms,
- encumber or restrict the payment of dividends or other forms of profit distribution, loans or advances and payments for the transfer of assets to such entity,
- sell, lease or transfer certain assets,
- consolidation or mergers with other entities,
- breach of security created to the benefit of the creditors.

As a result of non-compliance with financing agreements, the creditors may terminate the financing and call in all outstanding amounts.

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## Financial risks

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**The risk is estimated to be moderate**

### Risk mitigation methods

The observance of provisions of financing agreements and compliance with financial ratios set out therein is monitored by the Group. The Group aims at diversifying the financing sources and ensuring the most favourable provisions concerning conditions that limit the financing.

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### Risk of insufficient insurance coverage

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The CIECH Group companies have insurance policies, concluded with international and local insurers, providing protection (with some restrictions with regard to the subject and substantive scope) against selected operational risks, including

- property insurance,
- loss of profits insurance,
- business liability insurance,
- product liability insurance,
- insurance of goods in transport,
- railway rolling stock and vehicles insurance,
- civil liability of company's officers and directors insurance,
- receivables insurance.

The types and amounts of insurance currently held by the CIECH Group companies are in compliance with customary practices in the chemical sector and are adequate to the type of their activities. The insurance held does not cover all potential risks related to scope of activities or other threats, for which the Group might be responsible. The policies are subject to standard deductions, exclusions and limitations, which can affect the possibility to notify claims.

**The risk is estimated to be low**

### Risk mitigation methods

The Group cooperates with insurance brokers to assess whether the scope of insurance cover is appropriate to the Group's operations. The Group companies are subject to regular audits carried out with the insurers, aimed at updating the risk assessment.

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## Credit risk

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The Group is exposed to credit risk of financial institutions connected with cash placed on bank accounts and deposits as well as transactions with financial institutions.

**The risk is estimated to be low**

### Risk mitigation methods

In order to limit the credit risk of financial institutions the CIECH Group enters into transactions with high-rating banks with stable market position.

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## Trade credit risk

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The CIECH Group is exposed to credit risk of its business partners connected with the credit rating of customers being parties to sales transactions of products and goods.

**The risk is estimated to be low**

### Risk mitigation methods

The credit risk of the business partners is mitigated by using internal procedures to establish amounts of credit limits for customers and to manage trade receivables (the Group uses securities such as letters of credit, bank guarantees, mortgages, receivables insurance and non-recourse factoring). An important part of the credit activity is assessing the customers' creditworthiness and obtaining appropriate collateral from them, thus allowing for a reduction of potential losses in the case of failure to repay the debt. Credit risk assessment for customers is performed prior to concluding an agreement and periodically at subsequent deliveries of goods in accordance with the binding procedures.

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## Financial risks

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### Interest rate risk

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The costs of the Group's debt depend on the reference rate. This refers to loans, bonds, factoring and some lease contracts. There is a risk of an increase of the reference rate, which may lead to increased financial costs and deterioration of the CIECH Group's financial result.

**The risk is estimated to be low**

#### Risk mitigation methods

The interest rate risk is reduced by the assets owned by the CIECH Group (bank deposits), interest bearing in accordance with variable interest rate, and by concluding hedging transactions such as cross currency interest rate swaps or interest rate swaps.

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## Legal and regulatory risks

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### Risk related to the tightening of regulations concerning the use of the natural environment

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Dynamic legal changes in the area of the environmental protection significantly impact the CIECH Group's activities.

The CIECH Group is a subject to very strict regulations, which may generate significant costs regarding compliance with the obligations resulting from the environmental protection regulations applicable to the CIECH Group's activities. CIECH Group's companies operate under the current permits regulating the manner and extent of use of the environment, comply with standards defined by law, in particular in the area of dust emissions, water and sewage management and waste management.

The CIECH Group's activity, in particular that of its soda companies, will be significantly affected by legal changes in the scope of the emissions trading system and amendments to the Water Law Act.

The process of implementing the new ETS Directive started in 2018. Despite the relatively favourable provisions for industry, allowances under the MSR (Market Stability Reserve) will expire above a certain level from 2023. The completion of works related to the revision of the Carbon Leakage List and the redefinition of new benchmarks are also scheduled for 2019.

Therefore, it cannot be ruled out that legal developments unfavourable to the CIECH Group will result in the need to incur additional costs.

Another material risk is related to the planned revision of the Regulation (EC) No 2003/2003 of the European Parliament and of the Council of 13 October 2003 relating to fertilizers, which, with the currently proposed provisions, does not provide for the possibility to use soda lime for production of fertilizers. The CIECH Group conducts works on finding a different application for the product. Any such factors may have negative impact on the CIECH Group's operating activities and financial situation.

**The risk is estimated to be high.**

#### Risk mitigation methods

The CIECH Group companies comply with standards defined by law. By introducing a uniform Environmental Policy, the CIECH Group strives to implement the best available industry practices.

Pursuant to provisions of Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions – IED, implemented in Polish law in 2014 and the adopted National Transitional Plan concerning the reduction of emissions of gaseous and particulate pollutants emitted in CHP plants in Janikowo and Inowrocław, the CIECH Group carried out the modernization of electrofilters and implements projects in the area of desulphurisation and denitrogenation of flue gas.

The main goal of the investment project is to increase the atmosphere protection level through the reduction of pollution emissions and adaptation of installations to new emission standards.

The CIECH Group companies hold valid permits required by the Water Law Act.

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## Legal and regulatory risks

### Risk related to changes in regulations concerning registration of crop protection products on target markets

Compliance with the increasingly stringent legal requirements related to the manufacturing products research, evaluation, registration and safety analysis may lead to substantial additional costs or reduction or elimination of the availability and/or tradability of some raw materials used in products manufacturing.

The products manufactured and the raw materials used in production by the CIECH Group are subject to many legal regulations in the scope, among others, of registration and safety analysis of substances they contain. The EU Regulation (EC) No 1907/2006 on Registration, Evaluation, Authorization and Restriction of Chemicals ("REACH") imposes substantial obligations on the entire chemical industry concerning research, evaluation and registration of chemical substances produced or imported from non-EU member countries.

In connection with the REACH regulation or Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixed chemical products ("CLP Regulation"), certain substances in raw materials or products may be classified as having adverse impact on the environment, product users or employees. Their production can be subject to authorization in the European Chemicals Agency (ECHA) or completely restricted.

Any such laws or regulations which may be adopted in the future can adversely affect the availability and/or tradability of the raw materials used and products manufactured by the CIECH Group, lead to restriction or ban on their purchase or sale, or oblige the Group to incur increasing costs of fulfilling the requirements regarding registration, labelling and use of products. Furthermore, since some of the products manufactured by the CIECH Group are sold on markets on which proper classification is very important for legal requirements determined for such substances, it cannot be excluded that the Group's classification will be questioned or challenged. Any such factors may have negative impact on the CIECH Group's operating activities and financial situation.

EC Regulation No 1107/2009 concerning the placing of crop protection products on the market imposes an increasing number of requirements on entities who place crop protection products on the market. The scope of registration tests required for the registration of crop protection products keeps growing, resulting in the need to constantly increase research expenditure. Moreover, guidelines regarding the necessary product risk assessment concerning the impact on human or animal health and impact on environment and organisms living in this environment continue to change. Active substances used in crop protection products are cyclically assessed in terms of risk, which entails a re-evaluation of crop protection products on a given market.

**The risk is estimated to be moderate**

#### Risk mitigation methods

To reduce this risk, the Group continues to carry out market and business analyses and develops registration plans in such manner, as to select appropriate active substances for the tests. The CIECH Group monitors regulatory environment related to particular active substances, including regulations and requirements for the scope of tests.

### Risk associated with judicial proceedings or other non-judicial proceedings

The CIECH Group is exposed to an inseparable risk of susceptibility to diverse types of claims and legal proceedings resulting from cooperation with customers, counterparties, employees and other parties, as well as from the fact that CIECH S.A.'s shares are listed on Warsaw Stock Exchange and on Frankfurt Stock Exchange. The CIECH Group companies are subject to adversarial proceedings, including anti-trust proceedings that could be detrimental to their interests if the final decision is unfavourable. In the future, the CIECH Group members may also become a party to legal proceedings regarding, among others, intellectual property rights, producer's liability, product guarantee, environmental or antitrust claims, or enter into settlements regarding legal proceedings and claims that may exert material adverse effect on their operating results.

**The risk is estimated to be moderate**

#### Risk mitigation methods

The CIECH Group introduces appropriate internal regulations aimed at eliminating or reducing this risk. In accordance with the accounting policy, provisions are created for such proceedings if it is highly probable that costs will be incurred and their amount may be reasonably assessed.

CIECH S.A., as a holding company managing the Group, is exposed to analogous risks to its operations.

### 3.5 CORPORATE SOCIAL RESPONSIBILITY (CSR)

Equal concern for economic, social and environmental issues is an important element of the management strategy at the CIECH Group and CIECH S.A.



#### 3.5.1 CSR IN THE CIECH GROUP

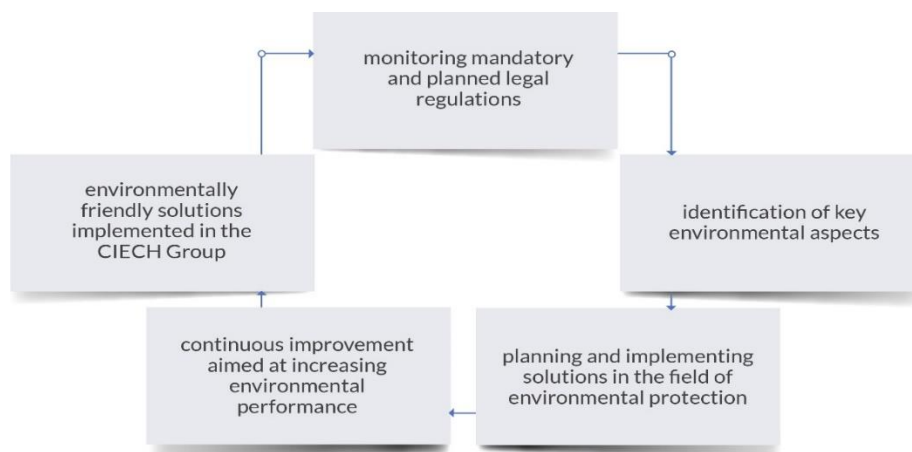
Information on corporate social responsibility was presented in detail in the **Non-financial Report of the CIECH Group for 2018**.

This report complements the data disclosed by the Group with environmental, social, employee and ethical issues. Key issues in the areas of environmental protection, sponsorship activities as well as research and development are presented below.

#### 3.5.2 KEY ISSUES RELATED TO ENVIRONMENTAL PROTECTION

For the CIECH Group, an important issue in the area of environmental protection is maintaining the technology regime and high quality of products, but also minimising negative impact on the environment by limiting emission of pollution to the atmosphere, waters and soil, rational waste management and optimisation of energy consumption per one tonne of the output. Environmental issues are a priority for the CIECH Group, which was reflected in the development and implementation of a Uniform Environmental Policy in 2016. Pursuant to the Policy, all companies of the Group are required to comply with applicable environmental law regulations, reduce air emissions and the amount of wastes produced, utilize natural resources in a rational manner and combat climate changes through CO<sub>2</sub> reduction, and to maintain good social relations in communities where business activities are conducted.

FIGURE 34: ENVIRONMENTAL MANAGEMENT SYSTEM IN THE CIECH GROUP



During the last several years, the CIECH Group has implemented a number of investment projects in the soda segment to support the protection of atmosphere, including:

- reduction of dust emissions from the Group's CHP Plants by modernising ESPs,
- reduction of nitrogen oxide emissions from the Group's CHP Plants by constructing flue gas denitrification units,
- reduction of nitrogen dioxide emissions from the Group's CHP Plants by constructing flue gas desulfurisation units,
- a comprehensive modernisation of the dust removal system at the Lime Furnace Facility in Janikowo.

At present, the Group continues to carry out further projects in the scope of, among others, reduction of CO<sub>2</sub> emissions, reduction of energy consumption and reduction of noise emission.

Production plants of CIECH Group operate under required permits and administrative decisions. The majority of production companies within the CIECH Group have implemented environment management systems in conformity with ISO 14001 regulations.

The National Transitional Plan (PPK), applicable to plants that produce energy and steam (CHP plants), extended the deadline to adjust LCP (Large Combustion Plant) systems to new standards, until 30 June 2020 at the latest.

As of 1 July 2020, plants that produce energy and steam will be required to observe very restrictive emission standards for dust (20-25 mg/Nm<sup>3</sup>), sulphur oxides (200-250 mg/Nm<sup>3</sup>) and nitrogen oxides (200 mg/Nm<sup>3</sup>) emissions introduced for large combustion plans (LCP).

It should also be emphasized that in 2017 work on the so-called BAT Conclusions for LCP was completed. The installations have 4 years as of the entry of the BAT Conclusions into force to adapt to the requirements which are more stringent than those set in the IED Directive, i.e. for dust (15–20 mg/Nm<sup>3</sup>), sulphur oxides (130–200 mg/Nm<sup>3</sup>) and nitrogen oxides (150–180 mg/Nm<sup>3</sup>) emissions.

Material legislative changes influencing activity of the CIECH Group include the duty to draw up initial site condition reports and monitor the quality of underground water by owners of IPPC installations.

In the area of regulations on the emissions trading system, the ETS Directive has been revised, discussions have also started on the revision of the Carbon Leakage List, and there are plans to redefine benchmarks. The coming months will therefore be crucial for establishing the rules that will apply in the 4<sup>th</sup> accounting period, i.e. in the years 2021-2030.

#### Legal status of the use of the environment

CIECH Group's companies operate under the current administrative decisions regarding the manner and extent of use of the environment. All CIECH Group's companies operating IPPC plants received integrated permits.

**TABLE 7: LIST OF INTEGRATED PERMITS HELD BY CIECH GROUP COMPANIES**

Company	Permit for	Validity period
CIECH Soda Polska S.A. – Production Plant in Inowrocław	Integrated permit for installation to manufacture soda and soda derived products.	Indefinite
CIECH Soda Polska S.A. – Production Plant in Janikowo	Integrated permit for installation to manufacture soda and soda derived products.	Indefinite
CIECH Soda Polska S.A. – Power Plant in Inowrocław	Integrated permit for heat and power station's installation (4 OP-110 boilers).	Indefinite
CIECH Soda Polska S.A. – Power Plant in Janikowo	Integrated permit for heat and power station's installation (3 CKTI boilers and 2 OP-140 boilers).	Indefinite
CIECH Soda Deutschland GmbH & Co. KG	Integrated permit for installation to manufacture soda ash. Integrated permit for installations to manufacture light and dense soda ash, and sodium bicarbonate.	Indefinite
CIECH Energy Deutschland GmbH	Integrated permit for heat and power station's installation.	Indefinite
CIECH Soda Romania S.A.	Integrated permit for installation to manufacture soda ash.	12.09.2022

Company	Permit for	Validity period
CIECH Sarzyna S.A.	Integrated permit for installations to manufacture unsaturated and saturated polyester resins, epoxy resins, curing agents for epoxy resins, phenol-formaldehyde resins, Flodur and crop protection products (MCPA i MCPP and esters from the esterification of phenoxyacids).	Indefinite
CIECH Vitrosilicon S.A. – Plant in Żary	Integrated permit for installations to manufacture sodium silicate glass and potassium silicate glass.	Indefinite
CIECH Vitrosilicon S.A. – Plant in Iłowa	Integrated permit for installations to manufacture water solution of sodium and potassium silicates (water glass), glass packaging and solid sodium silicate (glassy sodium silicate).	Indefinite
CIECH Pianki Sp. z o.o.	Integrated permit for the installation to manufacture PUR foams.	Indefinite

### Environmental liabilities

Due to the nature of the CIECH Group's business, there are active sources of groundwater pollution on some of the Group's lands. The Group incurs ongoing operating expenses and establishes provisions related to the reclamation of contaminated soil and groundwater purification. The amount of provisions for environmental liabilities in CIECH Group as at 31 December 2018 amounted to PLN 78,105 thousand and as at 31 December 2017 – to PLN 71,716 thousand.

### EU REACH Regulation

The REACH Directive binding from 1 June 2007 concerns safe usage of chemical substances produced or imported (from countries outside EU) in quantities exceeding 1 ton annually. Producers and importers who put substances to turnover in the EU customs area were obligated to complete registration. In 2018, the CIECH Group registered 3 substances with tonnage range of < 100 tonnes per year and 3 with tonnage range of < 1000 tonnes per year. For the first half of 2019, the Group planned to complete the registration of 1 substance with tonnage range of > 1000 tonnes per year and 2 substances with tonnage range of < 100 tonnes per year.

### Emission trading

Information on emission trading is provided in items 2.1 and 3.4 of this Report.

## 3.5.3 SPONSORSHIP AND CHARITY POLICY

Sponsorship activities of CIECH S.A. are aimed at supporting the business and strengthening the positive image of the CIECH Group.

Sponsorship activities are carried out primarily in the cities, where production plants and the head office of the Group are located. Sponsorship activities involve mainly the activities supporting educational and cultural initiatives, or initiatives aimed at supporting local communities, in which the CIECH Group functions.

Charity activities of the CIECH Group are related primarily to education of children and youth, and popularisation of the chemistry knowledge (primary objective). The Group also supports local communities, inter alia, by education, donations, in particular, in the case of catastrophes and unexpected events.

## 3.6 RESEARCH AND DEVELOPMENT

The CIECH Group consistently implements innovations in key areas of its operations. The activities taken are focused on the development and improvement of products for key markets, improvement of existing production processes as well as implementation of innovative technologies. The CIECH Group has the ambition to become a leader among the most advanced chemical groups in Poland and worldwide.

In the CIECH Group, research, innovation and development activities are concentrated in a specially established company, CIECH R&D Sp. z o.o., that coordinates and carries out research and development activities for companies from the Group.

The CIECH Group collaborates with universities and experts in the area of innovation and development, and a part of project implemented is co-financed from EU funds as well as from domestic and regional support funds.

#### **Achievements in research and development**

The Group runs a number of R&D projects in virtually all segments. These projects are implemented by R&D Sp. z o.o. These projects are implemented with the use of various support programmes.

#### **Cooperation with universities and institutes**

In 2018, CIECH R&D Sp. z o.o. implemented research and development projects in cooperation with renowned universities and institutes, including:

##### **Universities**

- Warsaw University of Technology
- Rzeszów University of Technology
- Nicolaus Copernicus University in Toruń

##### **Institutes**

- New Chemical Syntheses Institute
- Institute For Chemical Processing of Coal – ICHPW in Zabrze
- Institute of Industrial Organic Chemistry – IPO in Warsaw
- Institute of Heavy Organic Synthesis “Blachownia”.





**FINANCIAL POSITION**  
OF THE CIECH GROUP AND CIECH S.A.





## 4

## FINANCIAL POSITION OF THE CIECH GROUP AND CIECH S.A.

#### 4.1 PRINCIPLES FOR DRAWING UP THE ANNUAL FINANCIAL STATEMENTS OF THE CIECH GROUP AND CIECH S.A.

The consolidated financial statements of the CIECH Group and separate financial statements of CIECH S.A. have been prepared in accordance with accounting principles consistent with the International Financial Reporting Standards (IFRS) that were approved by the European Union (EU) and were effective as at 31 December 2018.

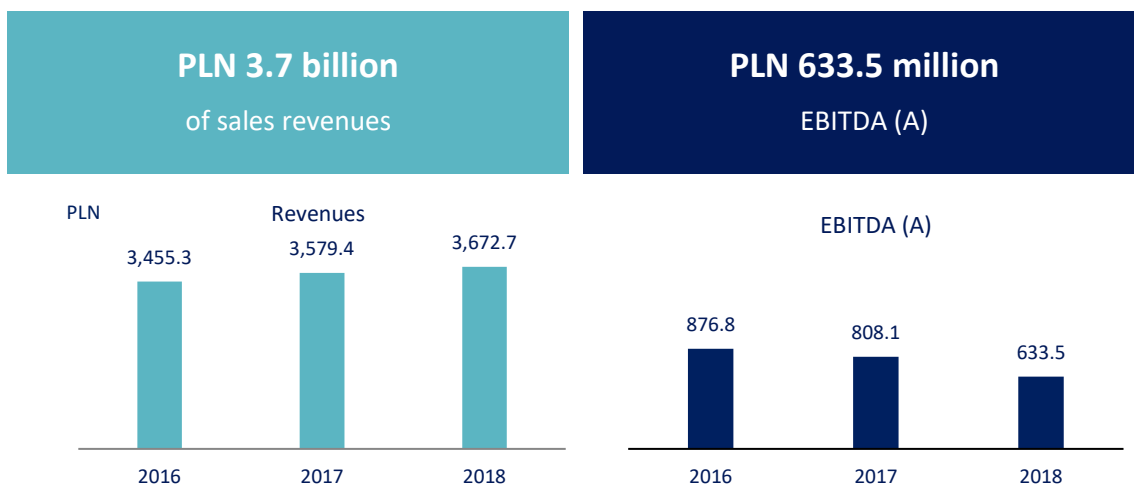
The consolidated financial statements of the CIECH Group and separate financial statements of CIECH S.A. have been prepared on a historical cost basis, except for financial instruments at fair value through profit or loss, available-for-sale financial assets, and investment real property at fair value.

Acquisition of the newly acquired company, Proplan Plant Protection Company, S.L., was initially accounted for provisionally, as permitted by IFRS 3 "Business Combinations". This company was included in consolidation as at 26 July 2018 on the basis of the book values of its assets and liabilities. Next, following the completion of the fair value measurement of the company's identifiable assets, liabilities and contingent liabilities, any adjustments resulting from the completed initial provisional accounting were included in the consolidated financial statements starting from the acquisition date as at subsequent balance sheet dates, including as at the balance sheet date of this report for 2018.

The consolidated financial statements of the CIECH Group and separate financial statements of CIECH S.A. give a fair view of the financial and economic position of the CIECH Group and CIECH S.A. as at 31 December 2018, results of their operations and cash flows for the year ended 31 December 2018. The consolidated financial statements of the CIECH Group and separate financial statements of CIECH S.A. were prepared on a going concern basis. As at the date of approval of the consolidated financial statements of the CIECH Group and separate financial statements of CIECH S.A., no facts or circumstances are known that would indicate any threat to the CIECH Group and CIECH S.A. continuing as going concerns. References to accounting policies applied in the preparation of the consolidated financial statements of the CIECH Group and separate financial statements of CIECH S.A. have been presented, respectively, in notes: 1.4 to the Consolidated financial statements of the CIECH Group and 1.4 to the Separate financial statements of CIECH S.A.

#### 4.2 REVIEW OF KEY ECONOMIC AND FINANCIAL FIGURES CONCERNING THE CIECH GROUP

In 2018, the CIECH Group generated:



In 2018, the Group's results were most significantly shaped by:

- decrease in soda prices on European markets due to supply pressure from Turkey and increase in prices of overseas markets (prices in USD),
- lower production of soda ash mainly as a result of planned maintenance shutdowns in Romania and Germany and as a result of production limitations caused by both planned activities and failures on production installations,
- increased prices of basic raw materials for soda production and prices of CO<sub>2</sub> units, as well as increase in electricity prices,
- strengthening of PLN and RON against USD, and weakening of RON against EUR,
- weaker season for crop protection products and weaker performance in the resins and silicates area.

In 2018, the CIECH Group generated sales revenues in the amount of PLN 3,672,658 thousand and adjusted EBITDA of PLN 633,493 thousand. Net profit on continuing operations reached PLN 183,491 thousand, net cash decreased by PLN 297,832 thousand and total assets amounted to PLN 4,831,303 thousand as at the end of 2018.

#### Forecast performance of the CIECH Group

The CIECH Group did not publish any forecasts for 2018.

### 4.2.1 STATEMENT OF PROFIT OR LOSS OF THE CIECH GROUP

TABLE 8: CONSOLIDATED STATEMENT OF PROFIT OR LOSS

	2018	2017	2016	Change 2018/2017
<b>CONTINUING OPERATIONS</b>				
Sales revenues	3,672,658	3,579,393	3,455,335	2.6%
Cost of sales	(2,909,242)	(2,662,729)	(2,415,670)	(9.3%)
<b>Gross profit/(loss) on sales</b>	<b>763,416</b>	<b>916,664</b>	<b>1,039,665</b>	<b>(16.7%)</b>
Selling costs	(271,734)	(263,481)	(231,462)	(3.1%)
General and administrative expenses	(144,997)	(141,402)	(157,990)	(2.5%)
Other operating income/expense	32,515	77,027	10,107	(57.8%)
<b>Operating profit/(loss)</b>	<b>379,200</b>	<b>588,808</b>	<b>660,320</b>	<b>(35.6%)</b>
Net financial income/expenses	(68,578)	(73,288)	(36,044)	6.4%
Share of profit of equity-accounted investees	516	225	674	129.3%
Income tax	(127,647)	(121,770)	(30,814)	(4.8%)
<b>Net profit/(loss) on continuing operations</b>	<b>183,491</b>	<b>393,975</b>	<b>594,136</b>	<b>(53.4%)</b>
<b>DISCONTINUED OPERATIONS</b>				
Net profit/(loss) on discontinued operations	-	-	-	-
<b>Net profit / (loss)</b>	<b>183,491</b>	<b>393,975</b>	<b>594,136</b>	<b>(53.4%)</b>
including:				
Net profit/(loss) attributed to non-controlling interest	459	562	623	(18.3%)
Net profit/(loss) attributable to shareholders of the parent company	183,032	393,413	593,513	(53.5%)
EBITDA from continuing operations	654,403	833,196	883,794	(21.5%)
Adjusted EBITDA from continuing operations*	633,493	808,137	876,832	(21.6%)

\*Principles of calculating EBITDA and adjusted EBITDA have been described in section "Ratio calculation methodology".

#### Sales revenues

Consolidated sales revenues net from continuing operations of the CIECH Group for 2018 amounted to PLN 3,672,658 thousand. Compared to the previous year, revenues increased by PLN 93,265 thousand (i.e. by 2.6%).

This increase was driven both by market factors such as an increase in the prices of soda on the so-called overseas markets (USD prices), an increase in salt prices, an increase in electricity prices in Germany and higher sales prices of products based on oil-derivative raw materials due to higher prices of oil-derivatives, as well as by internal factors such as an increased share of highly processed products (dry salt) in sales and higher sales of silicate as a result of conversion of one of the furnaces for production of packaging into a furnace for production of silicates in 2018.

### **Gross profit on sales**

Cost of goods sold for 2018 amounted to PLN 2,909,242 thousand, which represents an increase by PLN 246,513 thousand (i.e. by 9.3%) compared to the cost of goods sold in 2017, amounting to PLN 2,662,729 thousand. The level of the cost of goods sold was driven primarily by rising prices of energy carriers (natural gas, coal) and higher prices of EUA certificates in the soda segment, higher electricity prices and rising of prices of oil-derivative products in the organic segment.

### **Operating profit/loss**

Selling costs for 2018 amounted to PLN 271,734 thousand which represents an increase by PLN 8,253 thousand (i.e. by 3.1%), compared to PLN 263,481 thousand in 2017. Selling costs accounted for 7.4% of sales revenues for 2018. This increase was attributable mainly to higher transport costs due to increased share of carriage management, increased transport rates in some markets, as well as to increased selling and marketing costs resulting from the development of individual businesses.

General and administrative expenses for 2018 amounted to PLN 144,997 thousand which is a slight increase by PLN 3,595 thousand (i.e. by 2.5%) as compared to PLN 141,402 thousand in 2017. The increase in these costs as compared to 2017 resulted mainly from expenditures on strategic projects implemented by the Group.

Other operating income for 2018 amounted to PLN 89,040 thousand which represents a decrease by PLN 27,520 thousand (i.e. by 23.6%), compared to the amount of PLN 116,560 thousand for 2017. The decrease in other operating income in 2018 resulted mainly from lower reversals of provisions, impairment write-downs on receivables and lower sales of surplus CO<sub>2</sub> certificates held by the Romanian company.

Other operating expenses for 2018 amounted to PLN 56,525 thousand which represents an increase by PLN 16,992 thousand from 2017, when these expenses amounted to PLN 39,533 thousand. The higher level of other operating expenses is attributable, among other factors, to higher costs related to unused assets and production capacity, recognition of additional provisions for environmental protection, negative fair value measurement of investment property.

Operating profit for 2018 stood at PLN 379,200 thousand, whereas in the comparative period it reached PLN 588,808 thousand.

### **Financing activities and net profit/loss**

Financial income for 2018 amounted to PLN 19,159 thousand and recorded a decrease compared to the corresponding period of the preceding year, when it amounted to PLN 13,499 thousand.

Financial expenses for 2018 amounted to PLN 87,737 thousand and remained relatively flat as compared to the previous year, when they stood at PLN 86,787 thousand.

The net profit was boosted mainly by foreign exchange gains of PLN 6,241 thousand, whereas in 2017 the Group posted foreign exchange losses of PLN 32,603 thousand. Costs of servicing external debt remained at a level similar to the one recorded in the corresponding period. The net finance income was additionally affected by the recognition of a provision for interest on late payment of CIT for 2012 in connection with the pending tax audit. The provision increased the financial expenses by approximately PLN 23,500 thousand.

The CIECH Group's income tax for 2018 stood at PLN 127,647 thousand. The tax charge also reflects the recognition of a provision for CIT for 2012 in the amount of PLN 43,700 thousand. The tax for 2017 amounted to PLN 121,770 thousand. The consolidated net profit for 2018 amounted to PLN 183,491 thousand (of which PLN 183,032 thousand was a net profit attributable to the shareholders of the parent company and PLN 459 thousand was the profit of non-controlling shares).



## EBITDA<sup>1</sup>

TABLE 9: CONSOLIDATED EBITDA OF THE CIECH GROUP

	2018	2017	2016	Change 2018/2017
Net profit/(loss) on continuing operations	183,491	393,975	594,136	(53.4%)
Income tax	127,647	121,770	30,814	4.8%
Share of profit of equity-accounted investees	(516)	(225)	(674)	(129.3%)
Financial expenses	87,737	86,787	59,595	1.1%
Financial income	(19,159)	(13,499)	(23,551)	(41.9%)
Amortisation/depreciation	275,203	244,388	223,474	12.6%
<b>EBITDA from continuing operations</b>	<b>654,403</b>	<b>833,196</b>	<b>883,794</b>	<b>(21.5%)</b>

EBITDA from continuing operations for 2018 amounted to PLN 654,403 thousand which represents a decrease by PLN 178,793 thousand from the amount of PLN 833,196 thousand earned in 2017. EBITDA decreased mainly due to a decrease in gross profit on sales and lower result on other operating activities.

The EBIT margin ratio amounted to 10.3% at the end of 2018 (16.4% in the preceding year) and the EBITDA margin ratio amounted to 17.8% (23.3% in the preceding year). The adjusted EBIT margin ratio amounted to 9.8% at the end of 2018 (15.7% in the preceding year), and the adjusted EBITDA margin ratio amounted to 17.2% (22.6% in the preceding year).

## Adjusted EBITDA

Adjusted EBITDA<sup>2</sup> is another additional ratio of operating performance. Adjusted EBITDA is EBITDA adjusted for costs/revenues that were classified by the management as one-off due to their nature. We believe that adjusted EBITDA is a key ratio used in the Group to evaluate the implemented result.

<sup>1</sup>EBITDA is the net profit/loss for a financial year plus income tax plus a share in net profit of subordinated entities evaluated with the equity method plus financial costs/income plus profit/loss on sale of a discontinued operation plus amortisation and depreciation. EBITDA is not a liquidity ratio or business performance ratio calculated in accordance with IFRS. EBITDA should be viewed as a supplement not as a substitute for the business performance presented in accordance with IFRS. EBITDA is a useful ratio of the ability to incur and serve debt. EBITDA and similar ratios are used by different companies for different purposes and are often calculated in a manner adapted to the conditions in which these companies exist. Care needs to be exercised when comparing EBITDA with EBITDA of other companies.

<sup>2</sup>Other companies may calculate adjusted EBITDA in a manner different from the manner applied by the CIECH Group. Adjusted EBITDA is not a measure of financial performance under IFRS and is therefore not audited. It should not be used as a ratio of liquidity or as an alternative to operating profit or net profit for a year or as another measure of results calculated in accordance with IFRS.

TABLE 10: ADJUSTED EBITDA OF THE CIECH GROUP

	2018	2017	2016
<b>EBITDA on continued operations</b>	<b>654,403</b>	<b>833,196</b>	<b>883,794</b>
One-offs including:	(20,910)	(25,059)	(6,962)
Impairment (a)	2,203	1,238	1,612
Cash items (b)	(16,654)	(2,017)	(3,371)
Non-cash items (without impairment) (c)	(6,459)	(24,280)	(5,203)
<b>Adjusted EBITDA from continuing operations</b>	<b>633,493</b>	<b>808,137</b>	<b>876,832</b>


(a) Impairment losses are associated with the creation/reversal of impairment write-downs of assets value.

(b) Cash items include, among others, profit/loss of the sale of property, plant and equipment and other items (including fees and compensations received or paid).

(c) Non-cash items include: fair value measurement of investment properties, environmental provisions, provisions for liabilities and compensation, costs of unused production capacity, costs of development activities written-off and other items (including extraordinary costs and other provisions).

#### 4.2.2 FINANCIAL PERFORMANCE BY OPERATING SEGMENT OF THE CIECH GROUP

During 2018, the CIECH Group's activities were focused on four operating segments: soda, organic, silicates and glass, and on the transport segment. Additionally, financial performance reported includes figures for the "other operations" segment, corporate functions and consolidation exclusions. The structure of sales revenues, by business segment, has not changed significantly in comparison with 2017. Invariably, the largest share in revenues was attributed to the sales of soda segment products (soda ash, sodium bicarbonate, salt, electric energy), i.e. 66.0%.

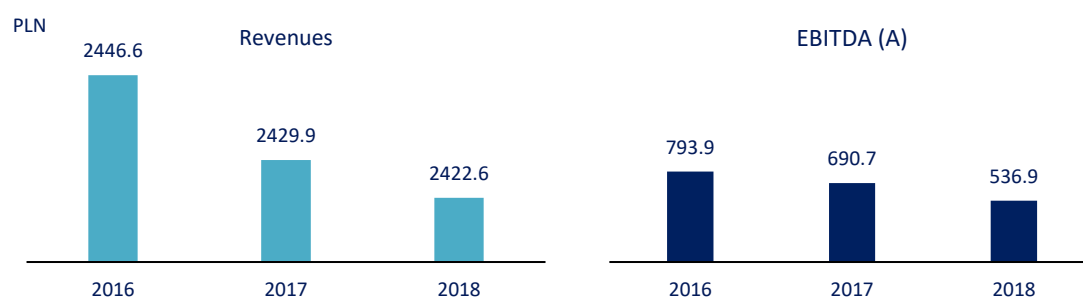


**SODA SEGMENT**

Soda ash | Sodium bicarbonate | Salt

**66%** | of the CIECH Group's revenues in 2018

FIGURE 35: REVENUES AND ADJUSTED EBITDA IN THE SODA SEGMENT OF THE CIECH GROUP



In 2018, the Group's results in the soda segment were most significantly shaped by:

**Positive developments:**

- Balancing of the European market of sodium carbonate (demand and supply balance) with a tendency to increase in demand.
- Increase in soda prices on the so-called overseas markets (USD prices).
- Higher revenues from sales of dry salt (higher volumes and prices),
- Higher result at the German power plant owing to higher compensation received from the network operator on account of the vNNe mechanism settlement for 2017 and higher electricity prices.

**Negative developments:**

- Slight decrease in sodium carbonate prices since the beginning of 2018 on European markets due to supply pressure from Turkey.

- Lower production of soda ash mainly as a result of planned maintenance shutdowns in Romania and Germany and as a result of production limitations caused by both planned activities and failures on production installations.
- Continuing high prices of raw energy resources used in production of sodium carbonate (coal, natural gas) and prices of CO<sub>2</sub> units, as well as the increase in electricity prices paid by the Group.

TABLE 11: THE CIECH GROUP'S PERFORMANCE IN THE SODA SEGMENT

	2018	2017	2016	Change 2018/2017	Change %	% of total revenues in 2018	% of total revenues in 2017	% of total revenues in 2016
<b>Sales revenues</b>	<b>2,422,568</b>	<b>2,429,920</b>	<b>2,446,568</b>	<b>(7,352)</b>	<b>(0.3%)</b>	<b>66.0%</b>	<b>67.8%</b>	<b>70.8%</b>
Dense soda ash	1,308,146	1,371,834	1,432,439	(63,688)	(4.6%)	35.6%	38.3%	41.5%
Light soda ash	498,849	490,220	448,085	8,629	1.8%	13.6%	13.7%	13.0%
Salt	184,819	169,909	181,374	14,910	8.8%	5.0%	4.7%	5.2%
Sodium bicarbonate	159,978	158,309	162,390	1,669	1.1%	4.4%	4.4%	4.7%
Energy	143,154	97,645	90,853	45,509	46.6%	3.9%	2.7%	2.6%
Gas*	3,367	7,645	20,124	(4,278)	(56.0%)	0.1%	0.2%	0.6%
Calcium chloride	26,815	25,614	23,256	1,201	4.7%	0.7%	0.7%	0.7%
Other products	40,986	60,310	58,732	(19,324)	(32.0%)	1.2%	1.7%	1.7%
Revenues from inter-seg- ment transactions	56,454	48,434	29,315	8,020	16.6%	1.5%	1.4%	0.8%
<b>Gross profit /(loss) on sales</b>	<b>602,865</b>	<b>756,073</b>	<b>879,214</b>	<b>(153,208)</b>	<b>(20.3%)</b>	-	-	-
<b>EBITDA</b>	<b>539,853</b>	<b>704,370</b>	<b>799,437</b>	<b>(164,517)</b>	<b>(23.4%)</b>	-	-	-
<b>Adjusted EBITDA</b>	<b>536,856</b>	<b>690,667</b>	<b>793,921</b>	<b>(153,811)</b>	<b>(22.3%)</b>	-	-	-

\* Resale of surplus gas.

Sales in the soda segment for 2018 amounted to PLN 2,422,568 thousand which represents a slight decrease by PLN 7,352 thousand (i.e. by 0.3%) as compared to sales for 2017, amounting to PLN 2,429,920 thousand. The decrease was mainly due to lower volumes of soda sales and a slight decrease in soda ash sales prices in Europe. On the other hand, soda sales prices in the so-called overseas markets (USD markets) and sales volumes and prices of salt and electricity from the plant in Germany increased.

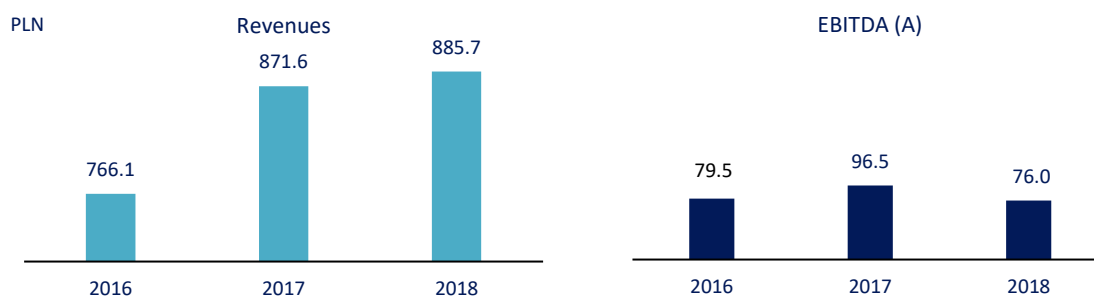
The gross profit on sales in the soda segment for 2018 amounted to PLN 602,865 thousand compared to PLN 756,073 thousand for 2017. This decrease was driven by the negative developments described above and an increase in manufacturing costs as a result of higher prices of basic raw materials, such as natural gas, hard coal, and an increase in prices of CO<sub>2</sub> certificates and electricity purchased by the Group.




**ORGANIC SEGMENT**

Crop protection products | Polyurethane foams | Resins

**24%** of the CIECH Group's revenues in 2018

**FIGURE 36: REVENUES AND ADJUSTED EBITDA IN THE ORGANIC SEGMENT OF THE CIECH GROUP**


In 2018, the Group's results in the organic segment were most significantly shaped by:

**Positive developments:**

- increased export sales volume of crop protection products,
- acquisition of Proplan and consolidation of its figures starting from the third quarter of 2018,
- increased prices of PUR foams and resins.

**Negative developments:**

- a weaker season in crop protection products which resulted in high pressure from competitors and a decrease in margins earned,
- high oversupply of Asian resins in Europe and the resulting price pressure from competitors and decrease in margins,
- higher prices of crude oil and, consequently, higher prices of raw materials for the organic industry (partially offset by an increase in prices of finished products).

**TABLE 12: THE CIECH GROUP'S PERFORMANCE IN THE ORGANIC SEGMENT**

	2018	2017	2016	Change 2018/2017	Change %	% of total revenues in 2018	% of total revenues in 2017	% of total revenues in 2016
<b>Sales revenues</b>	<b>885,699</b>	<b>871,557</b>	<b>766,119</b>	<b>14,142</b>	<b>1.6%</b>	<b>24.0%</b>	<b>24.3%</b>	<b>22.2%</b>
Resins	326,518	316,452	297,891	10,066	3.2%	8.9%	8.8%	8.7%
Polyurethane foams	317,222	314,174	245,120	3,048	1.0%	8.6%	8.8%	7.1%
Crop protection chemicals	240,488	224,032	208,903	16,456	7.3%	6.5%	6.3%	6.0%
Other	1,116	14,531	10,063	(13,415)	(92.3%)	0.0%	0.3%	0.3%
Revenues from inter-segment transactions	355	2,368	4,142	(2,013)	(85.0%)	0.0%	0.1%	0.1%
<b>Gross profit /(loss) on sales</b>	<b>156,421</b>	<b>153,068</b>	<b>136,888</b>	<b>3,353</b>	<b>2.2%</b>	-	-	-
<b>EBITDA</b>	<b>76,381</b>	<b>96,768</b>	<b>77,832</b>	<b>(20,387)</b>	<b>(21.1%)</b>	-	-	-
<b>Adjusted EBITDA</b>	<b>75,983</b>	<b>96,517</b>	<b>79,543</b>	<b>(20,534)</b>	<b>(21.3%)</b>	-	-	-

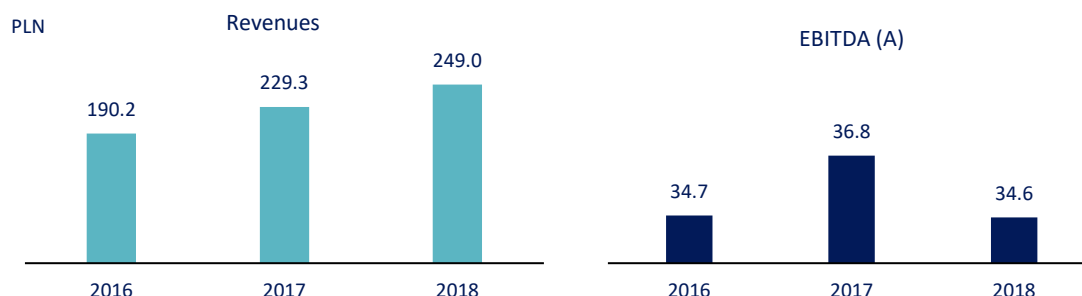
Sales in the organic segment for 2018 amounted to PLN 885,699 thousand which represents an increase by PLN 14,142 thousand (i.e. by 1.6%) as compared to sales for 2017, amounting to PLN 871,557 thousand. The increase was driven, among other factors, by the acquisition of the Spanish company, Proplan, engaged in the sale of crop protection products and consolidation its results since 3<sup>rd</sup> quarter of 2018.

The gross profit on sales in the organic segment for the year ended 31 December 2018 amounted to PLN 156,421 thousand and was similar to the one recorded in 2017. Adjusted EBITDA decreased by PLN 20,534 thousand from 2017. This decrease was caused both by weaker results in crop protection products and resins (reasons are described above).


**SILICATES AND GLASS SEGMENT**

Glass products | Water glass | Silicates

**7%** of the CIECH Group's revenues in 2018

**FIGURE 37: REVENUES AND ADJUSTED EBITDA IN THE SILICATES AND GLASS SEGMENT OF THE CIECH GROUP**


In 2018, the Group's results in the silicates and glass segment were most significantly shaped by:

**Positive developments:**

- higher sales of silicates resulting from the conversion of one of the furnaces for production of packaging into a furnace for production of silicates in of 2018,
- change in the packaging product structure towards higher margin products.

**Negative developments:**

- aggressive competition in the sodium silicate market mainly due to significant under-utilisation of production capacity among other producers,
- increased competition in the glass packaging area and the resulting decrease in prices,
- rising prices of gas and electricity.

**TABLE 13: THE CIECH GROUP'S PERFORMANCE IN THE SILICATES AND GLASS SEGMENT**

	2018	2017	2016	Change 2018/2017	Change %	% of total revenues in 2018	% of total revenues in 2017	% of total revenues in 2016
<b>Sales revenues</b>	<b>248,969</b>	<b>229,345</b>	<b>190,168</b>	<b>19,624</b>	<b>8.6%</b>	<b>6.8%</b>	<b>6.4%</b>	<b>5.4%</b>
Sodium silicates	167,896	144,291	106,562	23,605	16.4%	4.6%	4.0%	3.1%
Potassium silicates	6,305	5,696	5,048	609	10.7%	0.2%	0.2%	0.1%
Container glass	73,270	78,578	77,279	(5,308)	(6.8%)	2.0%	2.2%	2.2%
Other	1,416	771	1,275	645	83.7%	0.0%	0.0%	0.0%
Revenues from inter-segment transactions	82	9	4	73	811.1%	0.0%	0.0%	0.0%
<b>Gross profit /(loss) on sales</b>	<b>52,313</b>	<b>52,400</b>	<b>51,050</b>	<b>(87)</b>	<b>(0.2%)</b>			
<b>EBITDA</b>	<b>34,422</b>	<b>36,844</b>	<b>34,675</b>	<b>(2,422)</b>	<b>(6.6%)</b>			
<b>Adjusted EBITDA</b>	<b>34,603</b>	<b>36,768</b>	<b>34,676</b>	<b>(2,165)</b>	<b>(5.9%)</b>			

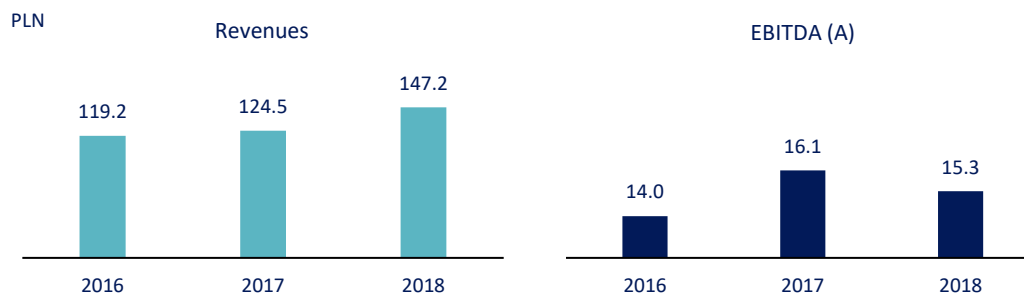
Sales in the silicates and glass segment for 2018 amounted to PLN 248,969 thousand which represents an increase by PLN 19,624 thousand (i.e. by 8.6%) as compared to sales for 2017, amounting to PLN 229,345 thousand. The increase resulted primarily from higher sales of sodium silicates.

The gross profit on sales in the silicates and glass segment for 2018 amounted to PLN 52,313 thousand compared to PLN 52,400 thousand for the year ended 31 December 2017.


**TRANSPORT SEGMENT**

Transport services | Railway transport | Transshipment

**4%** | of the CIECH Group's revenues in 2018

**FIGURE 38: REVENUES AND ADJUSTED EBITDA IN THE TRANSPORT SEGMENT OF THE CIECH GROUP**


In 2018, the Group's results in the transport segment were most significantly shaped by:

**Positive developments:**

- increased revenues CIECH Cargo Sp. z o.o. as a result of a higher volume of rail services.

**Negative developments:**

- rising costs of road, sea and rail transport as a result of increased fuel prices and labour costs,
- large number of railway line repairs causing drop in an average commercial speeds and as a result, a decline in business efficiency.

**TABLE 14: THE CIECH GROUP'S PERFORMANCE IN THE TRANSPORT SEGMENT**

	2018	2017	2016	Change 2018/2017	Change %	% of total revenues in 2018	% of total revenues in 2017	% of total revenues in 2016
<b>Sales revenues</b>	<b>147,180</b>	<b>124,454</b>	<b>119,220</b>	<b>22,726</b>	<b>18.3%</b>	<b>4.1%</b>	<b>3.5%</b>	<b>3.4%</b>
Transport services	16,772	11,097	11,393	5,675	51.1%	0.5%	0.3%	0.3%
Revenues from inter-segment transactions	130,408	113,357	107,827	17,051	15.0%	3.6%	3.2%	3.1%
<b>Gross profit /(loss) on sales</b>	<b>17,984</b>	<b>16,855</b>	<b>14,465</b>	<b>1,129</b>	<b>6.7%</b>			
<b>EBITDA</b>	<b>19,385</b>	<b>15,610</b>	<b>8,854</b>	<b>3,775</b>	<b>24.2%</b>			
<b>Adjusted EBITDA</b>	<b>15,333</b>	<b>16,064</b>	<b>13,976</b>	<b>(731)</b>	<b>(4.6%)</b>			

Sales in the transport segment for 2018 amounted to PLN 147,180 thousand which represents an increase by PLN 22,726 thousand (i.e. by 18.3%) as compared to sales for 2017, amounting to PLN 124,454 thousand.

The gross profit on sales in the transport segment for the year ended 31 December 2018 amounted to PLN 17,984 thousand compared to PLN 16,855 thousand for the year ended 31 December 2017.


**OTHER ACTIVITIES SEGMENT**

Services | Distribution | Sale and management of real property

Sales in the other activities segment for 2018 amounted to PLN 189,547 thousand which represents a decrease by PLN 66,755 thousand (i.e. by 54.4%) as compared to sales for 2017, amounting to PLN 122,792 thousand. The increase was mainly attributable to higher sales of trading goods by CIECH Trading S.A.

The gross profit on sales in the other activities segment for the year ended 31 December 2018 amounted to PLN 35,093 thousand compared to PLN 28,098 thousand for the year ended 31 December 2017.

### 4.2.3 ASSET POSITION OF THE CIECH GROUP

TABLE 15: BASIC CONSOLIDATED BALANCE SHEET DATA

	31.12.2018	31.12.2017	31.12.2016	Change 2018/2017
<b>Total assets</b>	<b>4,831,303</b>	<b>4,643,511</b>	<b>4,501,892</b>	<b>4.0%</b>
Total non-current assets	3,558,745	3,204,963	3,209,515	11.0%
Total current assets	1,272,558	1,438,548	1,292,377	(11.5%)
Inventory	438,518	364,517	299,265	20.3%
Current receivables	611,279	523,068	515,542	16.9%
Cash and cash equivalents	192,139	489,754	414,369	(60.8%)
Short-term financial assets	29,832	57,979	59,971	(48.5%)
Non-current assets held for sale	790	3,230	3,230	(75.5%)
<b>Total equity</b>	<b>1,970,115</b>	<b>2,184,645</b>	<b>1,763,492</b>	<b>(9.8%)</b>
Equity attributable to shareholders of the parent	1,969,827	2,187,596	1,766,827	(10.0%)
Non-controlling interest	288	(2,951)	(3,335)	-
Total non-current liabilities	1,627,589	1,369,282	1,695,514	18.9%
Total current liabilities	1,233,599	1,089,584	1,042,886	13.2%

#### Assets

As at the end of 2018, the Group's non-current assets amounted to PLN 3,558,745 thousand. As compared to the balance as at 31 December 2017, the value of non-current assets increased by PLN 353,782 thousand. This change is mainly attributable to the acquisition of Proplan Plant Protection Company based in Spain in the third quarter. The transaction value was PLN 203,866 thousand. As a result of this transaction, the carrying amount of the Group's assets increased by the fair value of product registrations held by Proplan. In addition, following the accounting for this acquisition, a goodwill of PLN 74,955 thousand was recognised in the consolidated statement of financial position.

The Group's current assets amounted to PLN 1,272,558 thousand as at 31 December 2018. The largest components of non-current assets included: short-term receivables accounting for 46.8%, inventory accounting for 34.5% as well as cash and cash equivalents accounting for 15.1% of total current assets. Compared to the end of December 2017, the value of current assets decreased by PLN 165,990 thousand. This decrease is mainly due to a decrease in cash and changes in working capital.

#### Capital resources

The sources of liquidity include cash flows generated from operating activities, cash from the sale of assets, cash from EU grants for capital expenditure, cash available due to the revolving credit facility agreement and overdraft. The Group also uses factoring agreements.

#### Liabilities

As at 31 December 2018, the CIECH Group's liabilities (non-current and current) amounted to PLN 2,861,188 thousand, which is an increase compared to the end of December 2017 by PLN 402,322 thousand (i.e. by 16.4%).

The debt ratio amounted to 59.2% as at 31 December 2018 (at the end of December 2017 to 53.0%). The consolidated net debt of the Group amounted to PLN 1,501,768 thousand as at 31 December 2018 and increased in comparison to the balance as at the end of December 2017 by PLN 565,094 thousand.

#### Debt instruments currently used

The Group's sources of debt financing include: term loan, revolving credit, overdraft as well as lease liabilities. Additional information about the management of financial resources is provided in item 4.6.

### 4.2.4 CASH POSITION OF THE CIECH GROUP

TABLE 16: CONSOLIDATED CASH FLOWS OF THE CIECH GROUP

	2018	2017	2016	Change 2018/2017
Net cash from operating activities	453,938	628,832	836,871	(27.8%)
Net cash from investment activities	(626,669)	(389,137)	(445,582)	(61.0%)
Net cash from financial activities	(125,101)	(165,773)	(177,545)	24.5%
<b>Total net cash flows</b>	<b>(297,832)</b>	<b>73,922</b>	<b>213,744</b>	-
Free cash flow	(172,731)	239,695	391,289	-

In 2018, total net cash flows were negative and amounted to PLN 297,832 thousand. Compared to the same period of the previous year, the cash flows generated by the Group were lower by PLN 371,754 thousand. Cash flows from operating activities amounted to PLN 453,938 thousand and decreased as compared to the same period in 2017 by PLN 174,894 thousand. In 2018, the net cash flows from investing activities were negative, which was mainly the result of expenses for an investment programme implemented by the Group and the acquisition of Proplan Plant Protection Company. The net cash from financial activities was negative and amounted to PLN 125,101 thousand. In comparison to 2017, they were higher by PLN 40,672 thousand. The balance of cash from financing activities resulted mainly from funds obtained from credit facilities and distribution of dividend.

TABLE 17: ABILITY TO GENERATE CASH FLOWS OF THE CIECH GROUP

	2018	2017	2016
Financial surplus ((net profit/(loss) on continuing operations + depreciation)	458,694	638,363	817,610
Other adjustments to net profit/(loss) on continuing operations	111,141	38,364	(72,968)
<b>Adjusted financial surplus (1+2)</b>	<b>569,835</b>	<b>676,727</b>	<b>744,642</b>
Change in working capital	(115,897)	(47,895)	92,229
<b>Net cash from operating activities (3+4)</b>	<b>453,938</b>	<b>628,832</b>	<b>836,871</b>
Net cash from investing activities	(626,669)	(389,137)	(445,582)
<b>Free cash flow (5+6)</b>	<b>(172,731)</b>	<b>239,695</b>	<b>391,289</b>

In 2018, the CIECH Group did not generate positive free cash flows, which means that it was unable to finance its capital expenditure with cash flows generated on operating activities.

### 4.2.5 SELECTED FINANCIAL RATIOS AND WORKING CAPITAL OF THE CIECH GROUP

#### Liquidity of the CIECH Group

Liquidity ratios as at 31 December 2018 decreased as compared to their level as at 31 December 2017. The current ratio, calculated as the ratio of total current assets to total current liabilities, amounted to 1.03 as at 31 December 2018, while the quick liquidity ratio amounted to 0.68.

TABLE 18: LIQUIDITY RATIOS OF THE CIECH GROUP

	31.12.2018	31.12.2017	31.12.2016
Current ratio	1.03	1.32	1.24
Quick ratio	0.68	0.99	0.95

### Working capital of the CIECH Group

As at the end of 2018, working capital, defined as the difference between current assets and short-term liabilities, adjusted by relevant balance sheet items (cash and cash equivalents and short-term loans) was positive and amounted to PLN 141,725 thousand, which is an increase by PLN 106,011 thousand compared to the end of 2017.

TABLE 19: WORKING CAPITAL OF THE CIECH GROUP

	31.12.2018	31.12.2017	31.12.2016
1. Current assets, including:	1,272,558	1,438,548	1,292,377
Inventory	438,518	364,517	299,265
Trade receivables and services and advances for deliveries	377,073	339,092	298,449
2. Cash and cash equivalents and short-term investments	221,971	547,733	474,340
<b>3. Adjusted current assets (1-2)</b>	<b>1,050,587</b>	<b>890,815</b>	<b>818,037</b>
4. Current liabilities, including:	1,233,599	1,089,584	1,042,886
Trade liabilities and advances taken	447,871	387,331	368,937
5. Short-term credits and other current financial liabilities*	324,737	234,483	199,067
<b>6. Adjusted current liabilities (4-5)</b>	<b>908,862</b>	<b>855,101</b>	<b>843,819</b>
<b>7. Working capital including short-term credits(1-4)</b>	<b>38,959</b>	<b>348,964</b>	<b>249,491</b>
<b>8. Working capital (3-6)</b>	<b>141,725</b>	<b>35,714</b>	<b>(25,782)</b>

\* Other short-term financial liabilities include current finance lease liabilities + current derivative liabilities + factoring liabilities.

Trade working capital is the difference between current assets (trade receivables and inventory) and trade liabilities. The recorded levels of working capital and trade working capital vary due to a number of factors such as the change in the scale of business, changes in key suppliers' payment terms, foreign exchange rates, the Group companies' strategic decisions regarding inventory maintenance and the seasonal nature of operations (in particular in the crop protection chemicals business).

In order to ensure adequate financial liquidity, the Group has the access to a revolving credit facility and factoring limits.

### The CIECH Group's profitability ratios

In 2018, profitability ratios of the CIECH Group in respect of the continuing operations were at a lower level than in 2017.

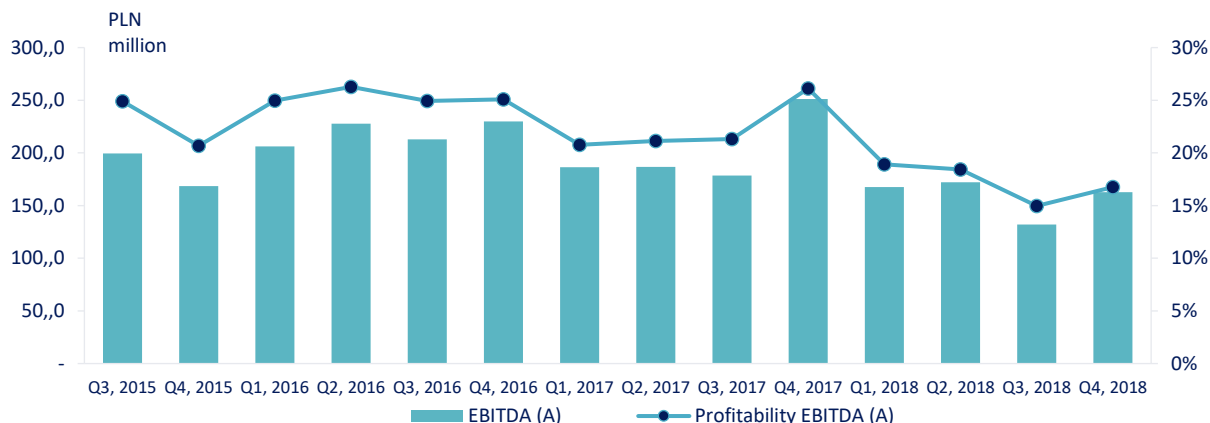
TABLE 20: THE CIECH GROUP'S PROFITABILITY RATIOS

	2018	2017	2016	Change 2018/2017
<b>CONTINUING OPERATIONS</b>				
Gross return on sales	20.8%	25.6%	30.1%	(4.8) p.p.
Return on sales	9.4%	14.3%	18.8%	(4.9) p.p.
EBIT margin	10.3%	16.4%	19.1%	(6.1) p.p.
EBITDA margin	17.8%	23.3%	25.6%	(5.5) p.p.
Adjusted EBIT margin	9.8%	15.7%	18.9%	(5.9) p.p.
Adjusted EBITDA margin	17.2%	22.6%	25.4%	(5.4) p.p.
Net return on sales (ROS)	5.0%	11.0%	17.2%	(6.0) p.p.
Return on assets (ROA)	3.8%	8.5%	13.2%	(4.7) p.p.
Return on equity (ROE)	9.3%	18.0%	33.7%	(8.7) p.p.
Earnings/(loss) per share (in PLN) from continuing operations	3.47	7.47	11.26	(4.00)

\* Principles of calculating EBITDA and adjusted EBITDA have been described in section "Ratio calculation methodology".



FIGURE 39: PROFITABILITY LEVELS OF THE CIECH GROUP



EBITDA (A) – adjusted EBITDA – excluding one-off events reported in particular quarters.

### Indebtedness

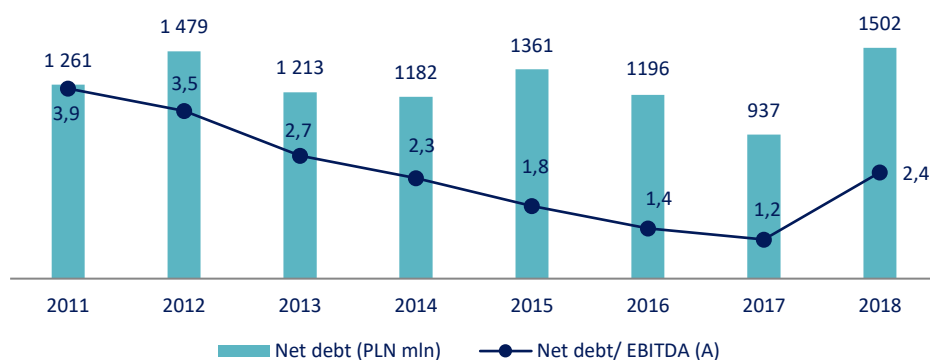
The debt ratio increased in comparison to December 2018 and amounts to 59.2%. Consequently, the relative level of net debt (net financial liabilities in relation to EBITDA) increased as compared to the end of 2017. The ratio adjusted by one-off events doubled as compared to the previous year (net financial liabilities in relation to adjusted EBITDA).

TABLE 21: THE CIECH GROUP'S DEBT RATIOS

	2018	2017	2016	Change 2018/2017
Debt ratio	59.2%	53.0%	60.8%	6.2p.p.
Long term debt ratio	33.7%	29.5%	37.7%	4.2p.p.
Debt to equity ratio	145.2%	112.6%	155.3%	32.6p.p.
Equity to assets ratio	40.8%	47.0%	39.2%	(6.2) p.p.
Gross debt	1,693,907	1,426,428	1,610,867	18.8%
Net debt	1,501,768	936,674	1,196,498	60.3%
EBITDA annualized	654,403	833,196	883,794	(21.5%)
Adjusted EBITDA (annualised)	633,493	808,137	876,832	(21.6%)
Net debt / EBITDA annualized	2.3	1.1	1.4	109.1%
Net debt / Adjusted EBITDA (annualised)	2.4	1.2	1.4	100.0%
Gross debt / EBITDA annualised	2.6	1.7	1.8	52.9%
Gross debt / Adjusted EBITDA (annualised)	2.7	1.8	1.8	50.0%

\*Principles of calculating EBITDA and adjusted EBITDA have been described in section "Ratio calculation methodology".

FIGURE 40: DEBT OF THE CIECH GROUP (IN PLN MILLION) AND NET DEBT/EBITDA (A) RATIO



#### 4.2.6 GROUP'S PERFORMANCE IN THE 4<sup>TH</sup> QUARTER OF 2018

 TABLE 22: CIECH GROUP'S PERFORMANCE IN THE 4<sup>TH</sup> QUARTER OF 2018

	01.10.-31.12.2018*	01.10.-31.12.2017*	01.10.-31.12.2016*
<b>CONTINUING OPERATIONS</b>			
Sales revenues	970,752	961,743	907,802
Cost of sales	(787,316)	(680,549)	(626,987)
<b>Gross profit/(loss) on sales</b>	<b>183,436</b>	<b>281,194</b>	<b>280,815</b>
Other operating income	32,004	54,985	30,186
Selling costs	(66,856)	(73,984)	(61,664)
General and administrative expenses	(31,277)	(42,957)	(51,743)
Other operating expenses	(24,715)	(11,873)	(35,480)
<b>Operating profit/(loss)</b>	<b>92,592</b>	<b>207,365</b>	<b>162,114</b>
Financial income	4,956	7,127	14,465
Financial expenses	(49,471)	(31,478)	(20,384)
<b>Net financial income/(expenses)</b>	<b>(44,515)</b>	<b>(24,351)</b>	<b>(5,919)</b>
Share of profit / (loss) of equity-accounted investees	325	63	246
<b>Profit/(loss) before tax</b>	<b>48,402</b>	<b>183,077</b>	<b>156,441</b>
Income tax	(64,635)	(45,411)	17,808
<b>Net profit/(loss) on continuing operations</b>	<b>(16,233)</b>	<b>137,666</b>	<b>174,249</b>
<b>DISCONTINUED OPERATIONS</b>			
Net profit/(loss) on discontinued operations	-	-	-
<b>Net profit / (loss) for the year</b>	<b>(16,233)</b>	<b>137,666</b>	<b>174,249</b>
including:			
Net profit/(loss) attributable to shareholders of the parent company	(16,303)	137,466	174,015
Net profit/(loss) attributed to non-controlling interest	70	200	234
<b>Earnings per share (in PLN):</b>			
Basic	(0.31)	2.61	3.30
Diluted	(0.31)	2.61	3.30

\*Unaudited data

The decrease in operating profit for the fourth quarter of 2018 by PLN 114,773 thousand compared to the corresponding period of 2017 resulted mainly from lower production and sales volumes of soda ash, lower prices of soda ash on the European market, rising prices of energy raw materials (coal and gas), CO<sub>2</sub> certificates and energy purchased by the Group. Weaker performance in the organic segment was caused by lower results in the agro business, mainly due to lower margins resulting

from a weak season in crop protection products and weaker performance in the resins sector, mainly due to pressure from Asian producers.

In addition, the CIECH Group's performance in the fourth quarter of 2018 was affected, among others, by the recognition of the provision for CIT for 2012 by CIECH SA. The total impact of the provision on the Group's performance was approximately PLN 67.2 million (including the provision for income tax of PLN 43.7 million and the provision for late payment interest of 23.5 million).

### 4.3 REVIEW OF KEY ECONOMIC AND FINANCIAL FIGURES CONCERNING CIECH S.A.

During 2018, CIECH S.A. generated net profit from continuing operations of PLN 270,612 thousand, net cash decreased by PLN 320,620 thousand and total assets as at the end of 2018 amounted to PLN 3,927,454 thousand.

#### Forecast performance of the CIECH S.A.

CIECH S.A. did not publish any forecasts for 2018.

#### 4.3.1 STATEMENT OF PROFIT OR LOSS OF CIECH S.A.

TABLE 23: STATEMENT OF PROFIT OR LOSS OF CIECH S.A.

	2018	2017	2016	Change 2018/2017
<b>CONTINUING OPERATIONS</b>				
Sales revenues	2,418,534	2,365,764	2,193,357	2.2%
Cost of sales	(2,029,456)	(1,863,346)	(1,651,553)	(8.9%)
<b>Gross profit/(loss) on sales</b>	<b>389,078</b>	<b>502,418</b>	<b>541,804</b>	<b>(22.6%)</b>
Selling costs	(221,224)	(207,112)	(167,804)	(6.8%)
General and administrative expenses	(55,688)	(55,327)	(68,524)	(0.7%)
Other operating income/expense	113	2,234	(4,702)	(94.9%)
<b>Operating profit/(loss)</b>	<b>112,279</b>	<b>242,213</b>	<b>300,774</b>	<b>(53.6%)</b>
Net financial income/expenses	221,734	59,258	(106,096)	274.2%
Income tax	(63,401)	(57,564)	(42,237)	(10.1%)
<b>Net profit/(loss) on continuing operations</b>	<b>270,612</b>	<b>243,907</b>	<b>152,441</b>	<b>10.9%</b>
<b>DISCONTINUED OPERATIONS</b>				
Net profit/(loss) on discontinued operations	-	-	-	-
<b>Net profit / (loss)</b>	<b>270,612</b>	<b>243,907</b>	<b>152,441</b>	<b>10.9%</b>
EBITDA from continuing operations	120,906	247,426	305,422	(51.1%)
Adjusted EBITDA from continuing operations*	120,581	246,185	310,404	(51.0%)

\*Principles of calculating EBITDA and adjusted EBITDA have been described in section "Ratio calculation methodology".

#### Sales revenues

Net sales revenues net from continuing operations of CIECH S.A. for 2018 amounted to PLN 2,418,534 thousand. Compared to the previous year, revenues increased by PLN 52,770 thousand (i.e. by 2.2%). The changes were mainly due to market factors.

The **positive** contributors to the presented sales revenues were as follows:

- increase in soda prices on the so-called overseas markets (USD prices),
- higher revenues from sales of dry salt (higher volumes and prices),



- development of specialist products in the area of sodium bicarbonate, increased sales prices,
- increased sales of raw materials for the production and crop protection chemicals

The **negative** contributors to the presented sales revenues were as follows:

- decrease in soda ash prices on European markets due to supply pressure from Turkey,
- decreased sales volume of soda and wet salt.

TABLE 24: CIECH S.A.'S SALES BY BUSINESS SEGMENT

	2018	2017	2016	Change 2018/2017	% of total revenues in 2018
<b>Soda segment, including:</b>	<b>1,822,982</b>	<b>1,817,739</b>	<b>1,772,601</b>	<b>5,243</b>	<b>75.4%</b>
Dense soda ash	1,006,615	1,053,263	1,061,175	(46,648)	41.6%
Light soda ash	467,732	445,528	387,534	22,204	19.3%
Salt	182,634	169,968	180,185	12,666	7.6%
Sodium bicarbonate	97,255	94,998	98,829	2,257	4.0%
Calcium chloride	26,159	19,829	15,144	6,330	1.1%
Other goods and services	42,587	34,153	29,734	8,434	1.8%
<b>Organic segment, including:</b>	<b>531,116</b>	<b>505,095</b>	<b>392,897</b>	<b>26,021</b>	<b>22.0%</b>
Raw materials for production of plant protection products	130,734	117,596	70,345	13,138	4.9%
Raw materials for production of plastics	245,919	235,199	198,899	10,720	9.7%
Raw materials for the production of polyurethane foams	143,793	142,961	115,513	832	5.9%
Other goods and services	10,670	9,339	8,140	1,331	1.5%
<b>Silicates and Glass segment, including:</b>	<b>16,939</b>	<b>15,108</b>	<b>15,192</b>	<b>1,831</b>	<b>0.7%</b>
Sodium silicates	15,225	13,868	14,103	1,357	0.6%
Other goods and services	1,714	1,240	1,089	474	0.1%
<b>Transport segment, including:</b>	<b>44,465</b>	<b>25,128</b>	<b>9,169</b>	<b>19,337</b>	<b>1.8%</b>
Transport services	44,465	25,128	9,169	19,337	1.8%
<b>Other segment, including:</b>	<b>3,032</b>	<b>2,694</b>	<b>3,498</b>	<b>338</b>	<b>0.1%</b>
Revenues from third parties	3,032	2,694	3,498	338	0.1%
<b>TOTAL</b>	<b>2,418,534</b>	<b>2,365,764</b>	<b>2,193,357</b>	<b>52,770</b>	<b>100.0%</b>

#### CIECH S.A.'s sales in the soda segment

Sales in the soda segment for the year ended 31 December 2018 amounted to PLN 1,822,982 thousand, which is an increase by PLN 5,243 thousand, compared to sales for the year ended 31 December 2017 which amounted to PLN 1,817,739 thousand. The increase was mainly driven by higher sales prices of dry salt and an increase in USD prices of soda ash.

#### CIECH S.A.'s sales in the organic segment

Sales in the organic segment for the year ended 31 December 2018 amounted to PLN 531,116 thousand, which is an increase by PLN 26,021 thousand, compared to sales for the year ended 31 December 2017 which amounted to PLN 505,095 thousand. The increase resulted from higher sales of raw materials for the production of plastics and crop protection chemicals.

#### CIECH S.A.'s sales in the silicates and glass segment

Sales in the silicates and glass segment for the year ended 31 December 2018 amounted to PLN 16,939 thousand, which means an increase as compared to the previous year by PLN 1,831 thousand.

### CIECH S.A.'s sales in the transport segment

Sales in the transport segment for the year ended 31 December 2018 amounted to PLN 44,465 thousand, which is an increase from the previous year's sales, which amounted to PLN 25,128 thousand. This increase was mainly driven by an increase services provided to the Group companies.

### Cost of sales

Cost of goods sold for the year ended 31 December 2018 amounted to PLN 2,029,456 thousand, which is an increase by PLN 166,110 thousand (or 8.9%) compared to PLN 1,863,346 thousand in the cost of goods sold in 2017. The increase stemmed from higher purchase prices of soda from the Group and higher prices of raw materials for the organic segment.

### Gross profit on sales

TABLE 25: CIECH S.A.'S GROSS PROFIT ON SALES BY BUSINESS SEGMENT

	2018	2017	2016	Change 2018/2017
Soda segment	370,752	485,937	530,741	(23.7%)
Organic segment	15,142	14,224	9,178	6.5%
Silicates and glass segment	2,481	1,329	1,108	86.7%
Transport segment	97	527	235	(81.6%)
Other	606	401	542	51.1%
<b>Gross profit /(loss) on sales</b>	<b>389,078</b>	<b>502,418</b>	<b>541,804</b>	<b>(22.6%)</b>

### Soda segment

The gross profit on sales in the soda segment for the year ended 31 December 2018 amounted to PLN 370,752 thousand compared to PLN 485,937 thousand for the year ended 31 December 2017. The decrease was mainly caused by higher prices of soda purchased from the Group companies as a result of increasing production costs (mainly driven by higher prices of power and furnace fuel, and by an increase in prices of CO<sub>2</sub> units).

### Organic segment

The gross profit on sales in the organic segment for the year ended 31 December 2018 amounted to PLN 15,142 thousand compared to PLN 14,224 thousand for the year ended 31 December 2017. The increase is caused by higher volume and prices of raw materials purchased and resold to CIECH Sarzyna S.A. and CIECH Pianki Sp. z o.o.

### Silicates and Glass segment

The gross profit on sales in the silicates and glass segment for the year ended 31 December 2018 amounted to PLN 2,481 thousand compared to PLN 1,329 thousand for the year ended 31 December 2017.

### Operating profit

Other operating income for 2018 amounted to PLN 4,154 thousand which represents a decrease by PLN 307 thousand compared to the amount of PLN 4,461 thousand in 2017.

Selling costs for 2018 amounted to PLN 221,224 thousand which represents an increase by PLN 14,112 thousand (i.e. by 6.8%), compared to PLN 207,112 thousand in 2017. This increase resulted mainly from higher transport costs due to higher sales volume, increased share of carriage management on the side of CIECH S.A. and increased transport rates in some markets.

General and administrative expenses for 2018 amounted to PLN 55,688 thousand which means that they were relatively flat as compared to the amount of PLN 55,327 thousand in 2017.

Other operating expenses for 2018 amounted to PLN 4,041 thousand which is an increase by PLN 1,814 thousand from PLN 2,227 thousand in 2017.

Operating profit for 2018 reached PLN 112,279 thousand, while in the comparable period it amounted to PLN 242,213 thousand.

### Financing activities and net profit/loss

Financial income for 2018 amounted to PLN 343,552 thousand and remained relatively unchanged as compared to the previous year, when they stood at PLN 342,793 thousand. In 2018, the area of financial activity in the position of financial revenues was positively affected by the reversal of the write-down of shares in SDC GmbH in the amount of PLN 260 million, while lower dividends received from subsidiaries were paid.

Financial expenses for 2018 amounted to PLN 121,818 thousand and recorded a decline as compared to the preceding year, when they amounted to PLN 283,535 thousand. The decrease in financial expenses was mainly attributable to lower impairment losses on shares, which in 2017 amounted to PLN 202,313 thousand.

Moreover, CIECH S.A.'s performance was adversely affected by the recognition of the provision for CIT for 2012. The total amount posted under financial expenses and tax charge was PLN 67.2 million (including the provision for income tax of PLN 43.7 million and the provision for late payment interest of 23.5 million).

The Company's separate net profit for 2018 amounted to PLN 270,612 thousand and was higher by PLN 26,705 thousand than the net profit for 2017. This change was driven primarily by the reversal of the impairment write-down on shares in SDC GmbH. The net profit was adversely affected by weaker operating results, lower dividends paid by subsidiaries, and the recognition of a provision for the outcome of the 2012 CIT audit.

### EBITDA<sup>3</sup>

TABLE 26: CIECH S.A.'S EBITDA IN 2018

	2018	2017	2016	Change 2018/2017
Net profit/(loss) on continuing operations	270,612	243,907	152,441	10.9%
Income tax	63,401	57,564	42,237	10.1%
Financial expenses	121,818	283,535	296,423	22.8%
Financial income	(343,552)	(342,793)	(190,327)	75.5%
Amortisation/depreciation	8,627	5,213	4,648	65.5%
<b>EBITDA from continuing operations</b>	<b>120,906</b>	<b>247,426</b>	<b>305,422</b>	<b>172.7%</b>

EBITDA from continuing operations in the year ended 31 December 2018 amounted to PLN 120,906 thousand, which represents a decrease by PLN 126,520 thousand, compared to PLN 247,426 thousand for the year ended 31 December 2017. The decrease in EBITDA was mainly caused by higher prices of soda purchased from the Group companies as a result of increasing production costs (mainly driven by higher prices of power and furnace fuel, and by an increase in prices of CO<sub>2</sub> units) and higher selling costs.

<sup>3</sup>EBITDA is the net profit/loss for a financial year plus income tax plus costs/financial income plus profit/loss on sale of a discontinued operation plus amortisation and depreciation. EBITDA is not a liquidity ratio or business performance ratio calculated in accordance with IFRS. EBITDA should be viewed as a supplement not as a substitute for the business performance presented in accordance with IFRS. EBITDA is a useful ratio of the ability to incur and serve debt. EBITDA and similar ratios are used by different companies for different purposes and are often calculated in a manner adapted to the conditions in which these companies exist. Care needs to be exercised when comparing EBITDA with EBITDA of other companies.



## Adjusted EBITDA<sup>4</sup>

TABLE 27: ADJUSTED EBITDA OF CIECH S.A.

	01.01.-31.12.2018	01.01.-31.12.2017	01.01.-31.12.2016
<b>EBITDA on continued operations</b>	<b>120,906</b>	<b>247,426</b>	<b>305,422</b>
One-offs including:	(325)	(1,241)	4,982
Impairment	210	1	-
Cash items (a)	112	(84)	547
Non-cash items (without impairment) (b)	(647)	(1,158)	4,435
<b>Adjusted EBITDA from continuing operations</b>	<b>120,581</b>	<b>246,185</b>	<b>310,404</b>

(a) Cash items include, among others, gain/loss on the sale of property, plant and equipment and other items (including fees and compensations received or paid).

(b) Non-cash items include: result on sales of property, plant and equipment, the costs of suspended investments, provisions for liabilities and compensation and other items (including extraordinary costs and other provisions).

## 4.3.2 ASSET POSITION OF CIECH S.A.

TABLE 28: SELECTED BALANCE SHEET DATA OF CIECH S.A.

	31.12.2018	31.12.2017	31.12.2016	Change% 2018/2017	Change 2018/2017
<b>Total assets</b>	<b>3,927,454</b>	<b>3,652,664</b>	<b>3,599,972</b>	<b>7.5%</b>	<b>274,790</b>
Total non-current assets	2,424,310	1,952,407	2,593,182	24.2%	471,903
Total current assets	1,503,144	1,700,257	1,006,790	(11.6%)	(197,113)
Inventory	41,019	31,795	37,450	29.0%	9,224
Current receivables	400,673	280,765	394,711	42.7%	119,908
Cash and cash equivalents	54,988	375,393	342,607	(85.4%)	(320,405)
Short-term financial assets	1,006,464	1,012,304	232,022	(0.6%)	(5,840)
<b>Total equity</b>	<b>1,402,701</b>	<b>1,549,028</b>	<b>1,296,766</b>	<b>(9.4%)</b>	<b>(146,327)</b>
Equity attributable to shareholders of the parent	1,402,701	1,549,028	1,296,766	(9.4%)	(146,327)
Total non-current liabilities	1,393,685	1,172,446	1,467,349	18.9%	221,239
Total current liabilities	1,131,068	931,190	835,857	21.5%	199,878

### Assets

As at the end of 2018, the CIECH S.A.'s non-current assets amounted to PLN 2,424,310 thousand. As compared to the balance as at 31 December 2017, the value of non-current assets increased by PLN 471,903 thousand. This change is mainly attributable to the acquisition of Proplan Plant Protection Company based in Spain in the third quarter, and to the reversal of an impairment write-down on shares in SDC GmbH.

CIECH S.A.'s current assets amounted to PLN 1,503,144 thousand as at 31 December 2018. Compared to the end of December 2017, the value of current assets decreased by PLN 197,113 thousand. This decrease was attributable to a decrease in cash resulting from the distribution of dividends and the acquisition of Proplan. The increase in current receivables resulted from an increase in trade receivables from Group companies, an increase in financing of Group companies through the cash pooling system and a higher balance of factoring receivables outstanding at the balance sheet date.

<sup>4</sup>Adjusted EBITDA is another additional ratio of operating performance. Adjusted EBITDA is EBITDA adjusted for costs/revenues that were classified by the management as one-off due to their nature. We believe that adjusted EBITDA is an important ratio when estimating and measuring the Company's recurring business performance. Other companies may calculate adjusted EBITDA in a manner different from the manner applied by CIECH S.A. Adjusted EBITDA is not a measure of financial performance under IFRS and is therefore not audited. It should not be used as a ratio of liquidity or as an alternative to operating profit or net profit for a year or as another measure of results calculated in accordance with IFRS.

### Liabilities

As at 31 December 2018, liabilities (non-current and current) of CIECH S.A. amounted to PLN 2,524,753 thousand, which is an increase compared to the end of December 2017 by PLN 421,117 thousand. This increase was mainly driven by the contracting of additional debt on account of credit facilities and the recognition of a provision for tax liabilities.

The debt ratio amounted to 64.3% as at 31 December 2018 (at the end of December 2017 to 57.6%). CIECH S.A.'s standalone net debt amounted to PLN 1,756,390 thousand as at 31 December 2018 and increased from the end of December 2017 by PLN 719,850 thousand.

### Capital resources and debt instruments

The sources of liquidity include cash flows generated from operating activities, cash from the sale of assets, cash available due to the revolving credit facility agreement and overdraft. The Company also uses factoring agreements.

### Debt instruments currently used

CIECH S.A.'s sources of debt financing include, among others, a term loan, revolving credit and working capital facilities.

## 4.3.3 CASH POSITION OF CIECH S.A.

TABLE 29: CIECH S.A.'S CASH FLOWS

	2018	2017	2016	Change 2018/2017
Net cash from operating activities	64,232	300,288	344,602	(78.6%)
Net cash from investment activities	(268,087)	(131,486)	(86,973)	(103.9%)
Net cash from financial activities	(116,765)	(137,479)	(87,457)	15.1%
<b>Total net cash flows</b>	<b>(320,620)</b>	<b>31,323</b>	<b>170,172</b>	-
free cash flows	(203,855)	168,802	257,629	-

In 2018, total net cash flows were negative and amounted to PLN 320,620 thousand. Compared to the same period of the previous year, the cash flows generated by CIECH S.A. were lower by PLN 351,943 thousand. The cash flows from operating activities amounted to PLN 64,232 thousand and decreased by PLN 236,056 thousand as compared to the same period in 2017.

In 2018, the net cash flows from investing activities were negative. Investment outflows were higher than investment inflows by PLN 268,087 thousand. The excess of loans granted over total repayments of these loans and expenses on the acquisition of Proplan had the main impact on net cash flows from investing activities.

The net cash from financing activities was negative and amounted to PLN 116,765 thousand. As compared to the corresponding period of 2017, they were higher by PLN 20,714 thousand. This item was mainly affected by the distribution of dividends in the amount of PLN 395,249 thousand. On the revenue side, the funds obtained from the revolving credit and the acquisition of additional financing from the two overdraft lines constituted a significant value.

### Ability to generate cash flows

In 2018, CIECH S.A. generated negative free cash flows due to the fact that the amount of capital expenditure was higher than the proceeds from operating activities and divestments. The high level of capital expenditure was mainly caused by the acquisition of Proplan in 2018 – in 2018 the amount paid on this account exceeded PLN 170 million (the remaining portion of the purchase price represents a deferred payment)

TABLE 30: CIECH S.A.'S ABILITY TO GENERATE CASH FLOWS

	2018	2017	2016
Financial surplus ((net profit/(loss) on continuing operations + depreciation)	279,239	249,120	157,089
Other adjustments to net profit/(loss) on continuing operations	(241,141)	(57,538)	105,228
<b>Adjusted financial surplus (1+2)</b>	<b>38,098</b>	<b>191,582</b>	<b>262,317</b>
Change in working capital	26,134	89,266	82,285
<b>Net cash from operating activities (3+4)</b>	<b>64,232</b>	<b>280,848</b>	<b>344,602</b>
Net cash from investing activities	(268,087)	(131,486)	(86,973)
<b>Free cash flow (5+6)</b>	<b>(203,855)</b>	<b>149,362</b>	<b>257,629</b>

#### 4.3.4 SELECTED FINANCIAL RATIOS AND WORKING CAPITAL OF CIECH S.A.

##### Profitability ratios of CIECH S.A.

In 2018, the majority of profitability ratios of CIECH S.A. in respect to continuing operations declined in relation to those recorded in 2017.

TABLE 31: CIECH S.A.'S PROFITABILITY RATIOS

	2018	2017	2016	Change 2018/2017
<b>CONTINUING OPERATIONS</b>				
Gross return on sales	16.1%	21.2%	24.7%	(5.1) p.p.
Return on sales	4.6%	10.1%	13.9%	(5.5) p.p.
EBIT margin	4.6%	10.2%	13.7%	(5.6) p.p.
EBITDA margin	5.0%	10.5%	13.9%	(5.5) p.p.
Adjusted EBIT margin	4.6%	10.2%	13.9%	(5.6) p.p.
Adjusted EBITDA margin	5.0%	10.4%	14.2%	(5.4) p.p.
Net return on sales (ROS)	11.2%	10.3%	7.0%	0.9 p.p.
Return on assets (ROA)	6.9%	6.7%	4.2%	0.2 p.p.
Return on equity (ROE)	19.3%	15.7%	11.8%	3,6 p.p.
Earnings/(loss) per share (in PLN) from continuing operations	5.13	4.63	2.89	0.50

\*Principles of calculating EBITDA and adjusted EBITDA have been described in section "Ratio calculation methodology".

##### CIECH S.A.'s liquidity and working capital

Liquidity ratios as at 31 December 2018 decreased as compared to their level as at 31 December 2017. The current ratio, calculated as the ratio of total current assets to total current liabilities, amounted to 1.33 as at 31 December 2018, while the quick liquidity ratio amounted to 1.29.

TABLE 32: CIECH S.A.'S LIQUIDITY RATIOS

	31.12.2018	31.12.2017	31.12.2016
Current ratio	1.33	1.83	1.20
Quick ratio	1.29	1.79	1.16

##### CIECH S.A.'s working capital

As at the end of 2018, working capital, defined as the difference between current assets and current liabilities, adjusted by relevant balance sheet items (cash and cash equivalents and short-term loans) was negative and amounted to PLN 182,209 thousand, which is an increase by PLN 4,460 thousand compared to the end of 2017.

TABLE 33: CIECH S.A.'S WORKING CAPITAL

	31.12.2018	31.12.2017	31.12.2016
1. Current assets, including:	1,503,144	1,700,257	1,006,790
Inventory	41,019	31,795	37,450
Trade receivables and services and advances for deliveries	280,416	217,339	314,853
2. Cash and cash equivalents and short-term investments	1,061,452	1,387,697	574,629
<b>3. Adjusted current assets (1-2)</b>	<b>441,692</b>	<b>312,560</b>	<b>432,161</b>
4. Current liabilities, including:	1,131,068	931,190	835,857
Trade liabilities and advances taken	476,681	398,885	385,404
5. Short-term credits and other current financial liabilities*	507,167	431,961	369,296
<b>6. Adjusted current liabilities (4-5)</b>	<b>623,901</b>	<b>499,229</b>	<b>466,561</b>
<b>7. Working capital including short-term credits(1-4)</b>	<b>372,076</b>	<b>769,067</b>	<b>170,933</b>
<b>8. Working capital (3-6)</b>	<b>(182,209)</b>	<b>(186,669)</b>	<b>(34,400)</b>

\* Other current financial liabilities include current derivative liabilities + factoring liabilities + cash pooling liabilities.

Trade working capital is the difference between current assets (trade receivables and inventory) and trade liabilities. The recorded levels of working capital and trade working capital vary due to a number of factors such as the change in the scale of business, changes in key suppliers' payment terms, foreign exchange rates, the Company's strategic decisions regarding inventory maintenance and the seasonal nature of operations.

In order to ensure adequate financial liquidity, the Company has the access to a revolving credit facility and factoring limits.

#### Indebtedness

In 2018, the debt ratio increased in comparison to December 2017 and amounts to .

TABLE 34: CIECH S.A.'S DEBT RATIOS

	2018	2017	2016	Change 2018/2017
Debt ratio	64.3%	57.6%	64.0%	6,7 p.p.
Long term debt ratio	35.5%	32.1%	40.8%	3,4 p.p.
Debt to equity ratio	180.0%	135.8%	177.6%	44,3 p.p.
Equity to assets ratio	35.7%	42.4%	36.0%	(6,7) p.p.

### 4.3.5 CIECH S.A.'S PERFORMANCE IN THE 4<sup>TH</sup> QUARTER OF 2018

 TABLE 35: CIECH S.A.'S PERFORMANCE IN THE 4<sup>TH</sup> QUARTER OF 2018

	01.10.-31.12.2018*	01.10.-31.12.2017*	01.10.-31.12.2016*
<b>CONTINUING OPERATIONS</b>			
<b>Sales revenues</b>	<b>631,121</b>	<b>602,562</b>	<b>577,614</b>
Cost of sales	(570,937)	(460,970)	(441,604)
<b>Gross profit on sales</b>	<b>60,184</b>	<b>141,592</b>	<b>136,010</b>
Other operating income	(3,569)	1,801	1,196
Selling costs	(55,190)	(58,450)	(45,304)
General and administrative expenses	(8,093)	(17,415)	(23,888)
Other operating expenses	1,790	(1,160)	(4,828)
<b>Operating profit</b>	<b>(4,878)</b>	<b>66,368</b>	<b>63,186</b>
Financial income	294,467	236,190	(6,681)
Financial expenses	(47,769)	(214,273)	(211,433)
<b>Net financial income/(expenses)</b>	<b>246,698</b>	<b>21,917</b>	<b>(218,114)</b>
<b>Profit before tax</b>	<b>241,820</b>	<b>88,285</b>	<b>(154,928)</b>

	01.10.-31.12.2018*	01.10.-31.12.2017*	01.10.-31.12.2016*
Income tax	(43,657)	(19,954)	(7,903)
<b>Net profit on continuing operations</b>	<b>198,163</b>	<b>68,331</b>	<b>(162,831)</b>
<b>Earnings per share (in PLN):</b>			
Basic	3.76	1.30	(3.09)
Diluted	3.76	1.30	(3.09)
<b>Earnings per share (in PLN) from continuing operations:</b>			
Basic	3.76	1.30	(3.09)
Diluted	3.76	1.30	(3.09)

\*Unaudited data

The decrease in CIECH S.A.'s operating profit in the fourth quarter of 2018 by PLN 61,490 thousand as compared to the corresponding period of 2017 results mainly from higher prices of soda purchased from the CIECH Group companies due to rising production costs.

The net profit of CIECH S.A. in the fourth quarter of 2018 was mainly driven by the following factors: lower operating profit, change in impairment write-downs on CIECH S.A.'s interest in subsidiaries, including the reversal of a write-down on shares in SDC GmbH in the amount of approximately PLN 260 million and the recognition of an income tax provision whose total impact on CIECH S.A.'s net profit was approximately PLN 67.2 million (including the provision for income tax of PLN 43.7 million and the provision for late payment interest of 23.5 million).

#### 4.4 INVESTING ACTIVITIES OF THE CIECH GROUP

##### Investments implemented in 2018

The CIECH Group has and constantly updates its capital expenditure program for production facilities in order to develop or maintain the current levels of production in particular plants and their expansion, as well as to fulfil the conditions related to customers' requirements and new legal regulations. The capital expenditure incurred by the Company and its subsidiaries is also intended to replace worn-out equipment and to modernise facilities in order to improve energy efficiency, streamline the automation and control process, streamline management processes, as well as to seek new development opportunities.

Investment expenditures incurred by the CIECH Group companies in 2018 amounted over PLN 460 million. Major capital expenditures were spent on several large-scale projects, including the extension and modernisation of plants in the soda segment, development of new products in the agro segment and increase in silicate production capacity. Furthermore, in 2018 CIECH Soda Polska S.A. finalised the implementation of large projects relating to development of flue gas desulphurisation and denitrification systems in CHP plants, and to the modernisation of the energy area to improve the efficiency and effectiveness of the energy area (replacement of mills, modernisation of boilers). Expenditure in the R&D area in 2018 was primarily focused on the registration of new active substances, new products in the organic segment (mainly crop protection products, but also resins and foams), as well as on the search for new applications for currently manufactured products. Other investment expenditures were incurred mainly in relation to modernisation and replacement projects which aimed at improving and retaining the production capacity as well as improving the production efficiency of the plants.

Decisions relating to executing development projects are made on the basis of a detailed analysis of each task and such indicators of investment effectiveness as: the internal rate of return, net present value and payback period. Key projects implemented in 2018 are presented below:

TABLE 36: KEY INVESTMENT PROJECTS OF THE CIECH GROUP IMPLEMENTED IN 2018

	Investment project	Implementation status in 2018
	<p><b>Development investments in the Soda segment – CIECH Soda Deutschland</b></p> <p>The Stassfurt plant is implementing a two-stage project to build a facility for the production of a highly specialised product, i.e. soda for dialysis. In 2017, key tender procedures were completed, technological and construction designs were prepared and a number of administrative decisions were obtained. Construction started in 2018 and full capacity will be reached in 2019.</p>	Project in implementation.
	<p><b>Salt – increase of product range</b></p> <p>As part of continued development of the salt business in 2018, investment projects were implemented which will result in the introduction of new, high-margin products (granulate, licks) and improvement of product packaging methods in line with the needs of the market. In 2018, the project was completed to the extent necessary to launch production on 1 January 2019.</p>	Project in implementation.
	<p><b>Salt – increase of production capacity</b></p> <p>In 2018, the planning phase was completed and the implementation phase of the Group's largest project in the salt area – the construction of the plant in Strassfurt – commenced. The project is scheduled to be completed in 2020. The estimated expenditure is about PLN 440 million.</p>	Project in implementation.
	<p><b>Construction of the installation for treatment of flue gas</b></p> <p>Based on the latest technologies, a project is implemented involving the construction of the installation for desulphurisation and denitrification of flue gas, and improvement of efficiency of the dust removal process in CHP plants in Inowrocław and Janikowo. As a result, both plants will meet the highest possible environmental standards for air emissions.</p> <ul style="list-style-type: none"> <li>• Construction of flue gas denitrification plant – CHP Inowrocław</li> <li>• Construction of flue gas denitrification plant – CHP Janikowo</li> <li>• Construction of flue gas desulphurisation plant – CHP Inowrocław</li> <li>• Construction of flue gas desulphurisation plant – CHP Janikowo.</li> </ul>	Project in implementation.
	<p><b>R&amp;D projects</b></p> <p>In 2018, the Group incurred significant expenditures on R&amp;D activities:</p> <ul style="list-style-type: none"> <li>• registrations of new active substances used in the production of crop protection chemicals,</li> <li>• registration of new products in the organic segment (mainly crop protection products, but also resins and foams),</li> <li>• search for new applications for currently manufactured products.</li> </ul>	
	<p><b>Energy Project Package</b></p> <p>In 2018, the implementation of a multi-annual investment programme in the energy area was commenced. Replacement and modernisation projects implemented under the programme will contribute to increasing the efficiency and reliability of energy generation sources, especially in the Inowrocław and Janikowo plants (replacement of coal mills, modernisation of boilers, modernisation of turbines).</p>	Project in implementation.

### Capital expenditures planned for the upcoming 12 months

As part of the investment expenditure plan for 2019, the CIECH Group assumes further implementation of the aforementioned projects, execution of new development projects that are currently in the preparatory phase and execution of new tasks aimed at restoring and increasing the production capacity of individual plants. The most important projects include the construction of a dialysis soda plant in Stassfurt, continuation of tasks related to increasing production capacity in the soda area at the soda production plant in Inowrocław, and the construction of a salt plant in Strassfurt. Projects concerning desulphurisation and de-nitrogenation facilities will be finalised and efficiency improvement programmes will be continued in the



energy area of CIECH Soda Polska S.A.'s plants. The CIECH Group will also continue a number of R&D activities aimed at increasing the efficiency of technological processes in the area of production and implementing modern products responding to the growing needs of the market (in particular, increasing the efficiency of soda ash production and improving efficiency through the reuse of waste streams in the production process, as well as work on the extension and optimisation of the agro product portfolio). The investment plan for 2019 includes the implementation of replacement investments needed to maintain the current production infrastructure and modernisation of equipment to improve production efficiency. The CIECH Group is also working on new development projects. The implementation of these projects will depend on business decisions taken on an individual basis.

#### **Evaluation of the ability to complete investment plans in relation to owned assets**

The CIECH Group's investment policy has been updated to include new task planning and implementation principles and is always adapted to the current ability to acquire capital so that it fully covers the planned material and capital investment. The sources of financing of investing activities in the CIECH Group are as follows:

- cash flows from operating activities,
- external sources of funding in the form of bank loans,
- external sources of funding in the form of European Union funds.

## **4.5 STATE AID USED**

2018 was another year in which the CIECH Group benefited from the state aid in the form of allowances and grants.

The R&D activity is an important tool in the development of the CIECH Group contributing to increasing the company's value by enhancing innovation and developing a portfolio of state-of-the-art, advanced products ensuring high profitability of the business. Product development is possible mainly owing to the own research activities, including research activities conducted as part of co-financed projects. In 2018, the CIECH Group companies implementing research and development projects under the Smart Growth Operational Programme received approximately PLN 2 million in reimbursement under the co-financing agreements signed.

In 2018, CIECH Cargo Sp. z o.o. received the first funding in its history. The company may draw on a grant of PLN 14.2 million for the purchase of rolling stock used for intermodal transport, which will allow the company to expand its portfolio of transport services offered.

The CIECH Group companies operating outside Poland also benefit from the available sources of state aid. CIECH Soda Romania S.A., operating in Romania, received RON 918 thousand (EUR 200 thousand) for the implementation of a project aimed at building a smart energy monitoring system.

## **4.6 FINANCIAL RESOURCE MANAGEMENT**

### **4.6.1 EXTERNAL DEBT FINANCING OF THE GROUP**

The Group's debt financing is secured mainly through loans made available to CIECH S.A. under:

1. the Facilities Agreement dated 9 January 2018:
  - term loan in the amount of PLN 1,212,520 thousand and EUR 30,000 thousand (the total amount of the loan as at 31 December 2018 was PLN 1,341,520 thousand),
  - revolving credit facility granted to CIECH S.A. in the amount of up to PLN 250,000 thousand (the amount of used credit as at 31 December 2018 was PLN 250,000 thousand).
2. overdraft facilities up to PLN 100 million and EUR 10 million on the basis of contracts from 28 and 29 August 2018 (as at 31 December, the drawdown amount was PLN 32,873 thousand).

### Facilities Agreement

On 9 January 2018, an annex amending and restating the facilities agreement of 29 October 2015 (the "Facilities Agreement") was signed by CIECH S.A. as the borrower, subsidiaries of CIECH S.A.: CIECH Soda Polska S.A., CIECH Sarzyna S.A. and CIECH Soda Deutschland GmbH & Co.KG, CIECH Energy Deutschland GmbH, CIECH Soda Romania S.A. as guarantors ("Guarantors") and Bank Handlowy w Warszawie S.A., Bank Millennium S.A., Santander Bank Polska S.A., Credit Agricole Bank Polska S.A., HSBC Bank Polska S.A., HSBC Bank plc, Industrial and Commercial Bank of China (Europe) S.A. (spółka akcyjna) Oddział w Polsce, Powszechna Kasa Oszczędności Bank Polski S.A., mBank S.A. and BGŻ BNP Paribas S.A. ("Creditors").

### Facilities granted:

Under the Facilities Agreements, the Creditors granted the following facilities to the Company:

- The synthetic term loan in PLN and EUR granted by the Lenders in order to: (i) finance general corporate aims of the Company ("Term Loan"); The Term Loan was disbursed on 6 April 2018 in the amount of PLN 1,212,520 thousand and EUR 30,000 thousand
- Revolving credit facility in PLN to the total amount of PLN 250,000 thousand, granted by the Creditors in order to finance the general corporate aims and the working capital of the Group, excluding acquisitions and prepayment for the Term Loan (hereinafter referred to as the "Revolving Credit Facility", and "Facilities" jointly with the "Term Loan"). As at 31 December 2018, the amount drawn under the facility was PLN 250 thousand.

### Interest rate:

The Term loans bear interest at a floating rate determined on the basis of the WIBOR / EURIBOR base rate, plus margin, the level of which depends on the level of the net debt to EBITDA. At the end of 2018, the margin stood at 1%. Based on the level of the net debt to EBITDA as at the end of 2018, the loan margin will increase to 1.5%.

### Facilities repayment conditions:

The main repayment conditions of the Facilities are as follows:

- amortisation of the Term Loan in the value of 26.12% of the loan amount on 30 December 2021 and 30 September 2022, the remaining portion of the loan is to be repaid on 31 December 2022,
- repayment of the Working Capital Loan with the lapse of the interest period selected by the Company for a given loan amount used, with mechanism of automatic revolving of the used amount for subsequent interest periods,
- cases of gross breach, allowing the creditors to request an earlier repayment of the facilities:
  - no payment of the amounts due to the Creditors;
  - violating the financial covenant provided for in the Facilities Agreement;
  - ceasing the entire business activity conducted by the Company or its important part;
  - violations of the law;
- the final date of repayment of the Term Loan and the Revolving credit facility – 31 December 2022.

### Security for repayment of the facilities:

The Facilities have been secured by sureties granted by each Guarantor, towards each of the Creditors, in the value of 125% of the maximum involvement of each Creditor in a given currency, whereas the total amount of sureties granted by each Guarantor shall not exceed 125% of the amount of Facilities.

As at 31 December 2018, facilities granted pursuant the Facilities Agreement are secured by, e.g. securities established by the Company and Guarantors, in order to secure the parallel debt created pursuant to the Intercreditor Agreement concluded on 28 November 2012 and amended on 9 January 2018, including:

- pledges (register and financial pledges in relation to the companies seated in Poland and the corresponding securities in Germany and Romania), on the shares or stocks of Guarantors,
- registered pledge on property and other assets of CIECH S.A.,
- financial pledges on the rights to the funds deposited on the bank accounts of CIECH S.A. and Guarantors (including securities corresponding to financial pledges in Germany and Romania),

- statements of submission to enforcement proceedings of CIECH S.A. and Guarantors,
- powers of attorney to the bank accounts of CIECH S.A. and Guarantors.

#### Other essential terms of the Facilities Agreement:

Pursuant to the Facilities Agreement, CIECH S.A. and the Guarantors are also obliged to the following:

- abiding by the limitations specified in the Facilities Agreement relating to disposal of assets, with an exception of the allowable disposals under the Facilities Agreement;
- refraining from paying a dividend in the case of exceeding the financial index specified in the Facilities Agreement;
- refraining from taking out loans or granting loans in the case of exceeding the financial index specified in the Facilities Agreement;

#### Overdraft facilities

On 29 August 2018, overdraft facility agreements were signed by CIECH S.A. and Bank Millennium S.A. in the amount of PLN 50,000 thousand and EUR 10,000 thousand. The agreements were concluded for a period of 1 year, i.e. until 29 August 2019. Drawn-down amounts of the facilities will bear interest at the 1M WIBOR and 1M EURIBOR rate, respectively, plus the bank's margin. The facility is intended to finance the Company's day-to-day operations. The facility is secured with a package of collateral shared with the lenders of the consortium loan (agreement dated 9 January 2018) and with a surety issued by selected subsidiaries of CIECH S.A. The terms and conditions of the agreement do not differ from standard terms used facility agreements.

On 28 August 2018, an overdraft facility agreement was signed by CIECH S.A. and Bank Pekao S.A. in the amount of PLN 50,000 thousand. The agreement was concluded for a period of 1 year, i.e. until 28 August 2019. A drawn-down amount of the facility will bear interest at the 1M WIBOR rate plus the bank's margin. The facility is intended to finance the Company's day-to-day operations. No collateral was established for this facility. The terms and conditions of the agreement do not differ from standard terms used for facility agreements.

#### Intercreditor Agreement

On 28 November 2012, CIECH S.A. and particular companies of the Group have concluded an intercreditor agreement ("Intercreditor Agreement"), subsequently amended on 9 January 2018, in order to establish a shared security package, regulate the relations and the possible priority between: (i) creditors and other senior creditors due to the initial loan agreement and any other loan agreements which will replace the initial loan agreement; (ii) entities who will enter into the Intercreditor Agreement as Parties of certain allowed agreements securing against risks; (iii) the Trustee acting on its own behalf and on behalf of the owners of bonds issued on foreign markets; (iv) Espirito Santo Investment Bank as the administrative agent for the purpose of the Domestic Bonds; (v) representatives of creditors and equivalent creditors; (vi) internal creditors and debtors within the group; and (vii) bank PKO BP S.A. as the Security Agent.

## 4.6.2 INTRAGROUP LOANS GRANTED

TABLE 37: SUMMARY OF LOANS GRANTED BY CIECH S.A. TO SUBSIDIARIES IN 2018

Borrower	Repayment date	As at 31 December 2018		Conditions of granting
		The amount of loan granted per agreement (in the currency in thousands)	The amount of loan disbursed in PLN '000	
CSD GmbH & CO KG	31.12.2019	EUR 9,000	38,700	fixed interest rate of 2.7%
CSD GmbH & CO KG	10.04.2023	EUR 138,746	107,500	fixed interest rate of 2.7%
CIECH Soda Polska S.A.	08.07.2023	PLN 217,300	37,495	interest at 6M WIBOR + margin of 2.4%
Vasco Polska Sp. z o.o.	31.12.2019	PLN 198	198	interest at 6M WIBOR + margin of 2.4%

TABLE 38: SUMMARY OF LOANS CONCLUDED BETWEEN SUBSIDIARIES IN THE CIECH GROUP IN 2018

Lender	Borrower	Repayment date	As at 31 December 2018		Conditions of granting
			The amount of loan granted per agreement (in the currency in thousands)	The amount of loan disbursed in PLN '000	
Verbis ETA Sp. z o.o. SKA	CIECH S.A.	31.12.2019	PLN 50,000	35,000	interest at 6M WIBOR + margin of 2.4%
Cerium Finance Sp. z o.o.*	CIECH Soda Polska S.A.	24.02.2019	PLN 25,277	25,277	interest at 6M WIBOR + margin of 2.4%
Algete Sp. z o.o.	CIECH Sarzyna S.A.	31.12.2019	PLN 4,000	4,000	interest at 6M WIBOR + margin of 2.4%
Verbis KAPPA Sp. z o.o. SKA	CIECH Sarzyna S.A.	31.12.2019	PLN 15,000	15,000	interest at 6M WIBOR + margin of 2.4%

\*The loan was offset with a liability as a result of the merger of Cerium Finance Sp. z o.o. and CIECH S.A. in the fourth quarter of 2018.

Sureties and guarantees granted as at 31 December 2018 were described in detail in section 4.8.

#### 4.7 MATERIAL LITIGATION PENDING BEFORE A COURT, AN APPROPRIATE ARBITRATION AUTHORITY OR A PUBLIC ADMINISTRATION AUTHORITY

Information about material litigation pending before a court, an appropriate arbitration authority or a public administration authority is presented in note 9.2 to the Consolidated Financial Statements of the CIECH Group for 2018 and in note 9.2 to the Financial Statements of CIECH S.A. for 2018.

#### 4.8 INFORMATION ON CHANGES IN CONTINGENT ASSETS AND LIABILITIES OF THE CIECH GROUP

Information about changes in contingent assets and liabilities is presented in note 9.2 to the Consolidated Financial Statements of the CIECH Group for 2018 and in note 9.2 to the Financial Statements of CIECH S.A. for 2018.

#### 4.9 TRANSACTIONS WITH RELATED PARTIES OTHER THAN ON AN ARM'S LENGTH BASIS

CIECH Group's companies, to the best of their knowledge and belief, did not conclude significant transactions on the terms other than market ones. Sales to and purchases from related entities are realised at market prices that reflect market conditions.

For a description of transactions concluded between related parties, see note 9.3. to the Consolidated Financial Statements of the CIECH Group for 2018 and note 9.3 of the Financial Statements of CIECH S.A. for 2018.

#### 4.10 CONTRACT WITH THE ENTITY AUTHORISED TO AUDIT FINANCIAL STATEMENTS

Information about contracts concluded with the entity authorised to audit the consolidated financial statement is presented in note 9.4 to the Consolidated Financial Statements of the CIECH Group for 2018 and in note 9.4 to the Financial Statements of CIECH S.A. for 2018.





**ORGANISATION, MANAGEMENT,  
STRUCTURE AND  
HUMAN RESOURCES**  
IN THE CIECH GROUP





## 5 ORGANISATION, MANAGEMENT, STRUCTURE AND HUMAN RESOURCES IN THE CIECH GROUP

### 5.1 EQUITY AND ORGANISATIONAL LINKS

The CIECH Group consists of domestic and foreign manufacturing, distribution and trade companies operating in the chemical industry. The CIECH Group comprises CIECH S.A. as the parent company, and related companies located, inter alia, in Poland, Germany, Romania and Spain.

<b>Parent company</b>	<b>CIECH Spółka Akcyjna</b>
Registered office	00-684 Warsaw, Wspólna Street 62
KRS (National Court Register number)	0000011687 (District Court for the Capital City of Warsaw in Warsaw, 12 <sup>th</sup> Commercial Division of the National Court Register)
Website	www.ciechgroup.com
IR Contact	ri@ciechgroup.com

As at 31 December 2018, the CIECH Group comprised 37 business entities, including:

- parent company,
- 30 subsidiaries, of which:
  - 21 domestic subsidiaries,
  - 9 foreign subsidiaries,
- 3 domestic affiliates,
- 1 foreign affiliate,
- 1 jointly controlled domestic entity,
- 1 jointly controlled foreign entity.

The strategic and operational goals of the CIECH Group are attained via organisational structure based on vertical functions, including the function of sales, production, procurement and support.

The parent company of CIECH S.A. has a branch in Romania, a branch in Germany, and operates through its offices in Inowrocław and Nowa Sarzyna. CIECH Trading S.A. subsidiary has a branch in Bydgoszcz.

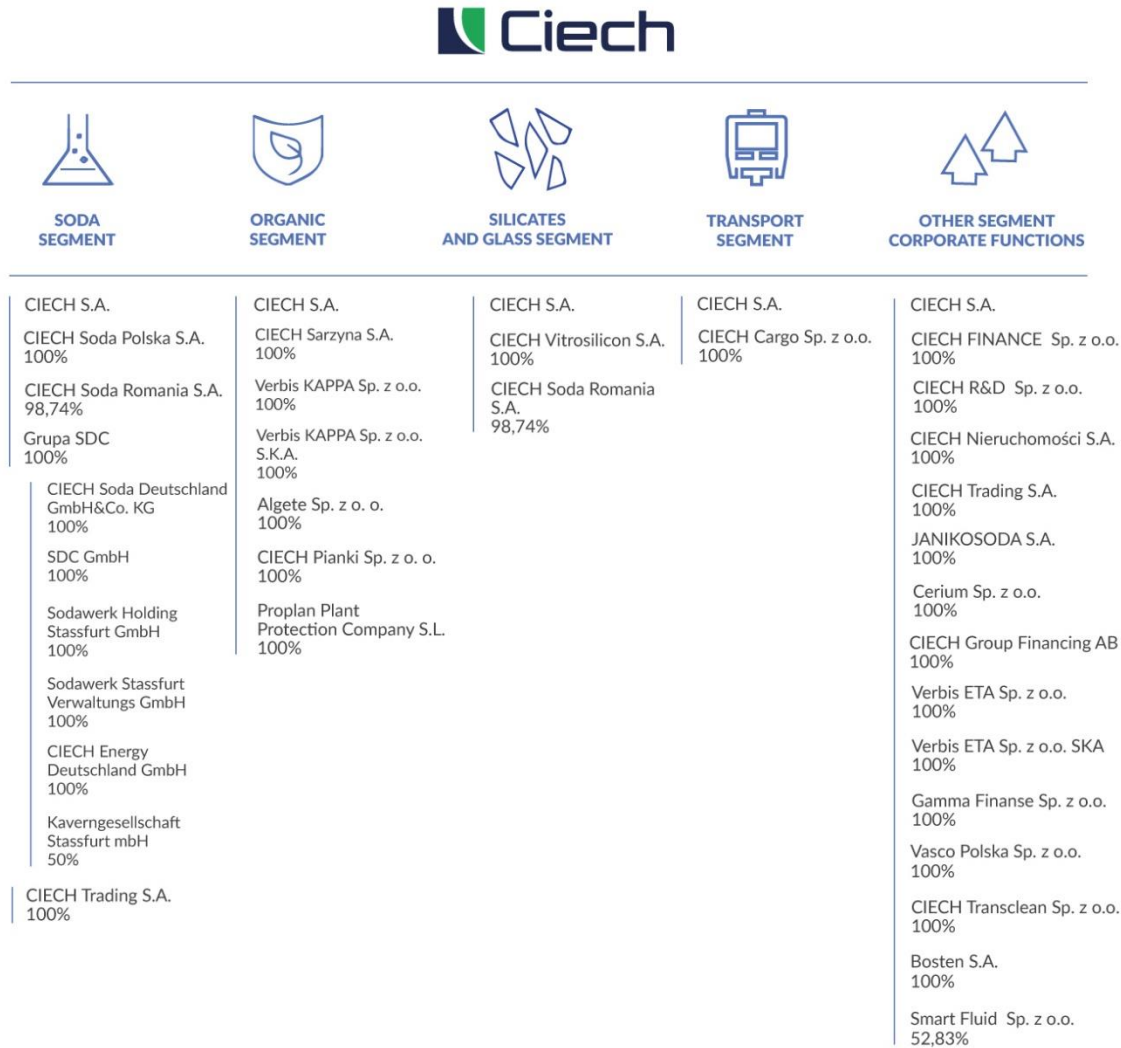
The trading activity is carried out mostly by CIECH S.A., domestic and foreign trading subsidiaries of CIECH S.A., as well as selected manufacturing companies (CIECH Sarzyna S.A., CIECH Vitrosilicon S.A., SDC Group, CIECH Pianki Sp. z o.o.) while the manufacturing activity is carried out by production companies, subsidiaries of CIECH S.A. The production is located in 8 plants, with four largest production plants (two in Poland, one in Germany and one in Romania) operate in the soda segment and manufacture soda ash and soda derived products (in the case of CIECH Soda Romania S.A., the plant also manufactures products in the silicates and glass segment, the soda plant in Janikowo also manufactures salt products and the plant in Germany produces electric energy sold to third parties). The other 4 plants are dedicated to the organic segment, and to silicates and glass segment, and are located in Poland. In the third quarter of 2018, a Spanish company, Proplan Plant Protection Company, S.L., engaged in the production and sale of crop protection chemicals, became a member of the CIECH Group. The company specialises in registering and distributing fungicides, herbicides, insecticides, growth regulators. It operates in the European market, mostly in Spain, and on other continents – mainly in Australia and Africa.

### 5.2 SCOPE OF ACTIVITIES OF CIECH S.A. AND CONSOLIDATED ENTITIES WITHIN THE GROUP

The CIECH Group's business activities are primarily divided by business segments, including in 2018: soda segment, organic segment, silicates and glass, and transport segment. A detailed description of the management segments is presented in item 1.3. The following diagram shows the structure of the CIECH Group, including fully consolidated companies or companies accounted for using the equity method in the consolidated financial statements of the CIECH Group as at 31 December 2018.



FIGURE 41: SEGMENT STRUCTURE OF THE CIECH GROUP AS AT 31 DECEMBER 2018



Detailed information about the number of shares held by CIECH S.A./the CIECH Group in the equity of individual companies, along with the consolidation methods, is presented in note 9.5 to the Consolidated Financial Statements of the CIECH Group for 2018.

### 5.3 SCOPE OF ORGANISATION AND MANAGEMENT IN THE CIECH GROUP AND CHANGES IN 2018

In 2018, the CIECH Group’s organisational structure was based on the Matrix Management model in which the heads of specific areas within CIECH S.A, as a holding company, are responsible for their proper functioning in the entire CIECH Group.

The main assumptions for the above mentioned model and for the changes implemented in the Group structure are, among others:

- integration of business and support functions at CIECH S.A. level,

- concentration of production companies of the Group on their production activity,
- clear division of competences and responsibilities (operational management of production companies by the parent company),
- reduction of positions related to overlapping business and support functions
- centralisation, among others, of the management in the areas of finance, IT, HR, or legal affairs.

The business model implemented in 2012-2015 increased the organisational effectiveness in the CIECH Group. In particular, higher effectiveness was reached in all areas of the Group's operations, along with higher flexibility and efficiency in response to occurring market changes, including a shorter decision-making process and a transparent division of responsibilities; also, overlapping competences between CIECH S.A. divisions and the Group companies were eliminated.

## 5.4 OWNERSHIP CHANGES

In 2018, the following changes occurred in relation to the companies in which CIECH S.A. held shares, either directly or indirectly. These changes translated into changes in the structure of the CIECH Group.

### 1) changes in control from indirect to direct control

On 3 January 2018, the Court registered the increase of the share capital of Ciech Nieruchomości S.A. The Company's share capital was increased by PLN 18,000 thousand by way of issue of 900 million series D bearer shares with the nominal value and issue price of PLN 0.02 per share. CIECH SA acquired series D shares in exchange for cash, thus control over the Company changed from indirect to direct. At present, CIECH S.A. directly holds 99.18% of this Company's share capital.

### 2) Increased shareholding in companies

- **CIECH Cerium Sp. z o.o. Sp. k.**

In April 2018, at the general meeting of partners of CIECH Cerium Sp. z o.o. Sp. k., it was decided to express consent for CIECH S.A. to make a new contribution in the amount of PLN 150 thousand, therefore the current contribution of CIECH S.A. amounts to PLN 625 thousand.

- **CIECH R&D Sp. z o.o.**

On 4 October 2018, the Extraordinary Shareholders' Meeting of CIECH R&D Sp. z o.o. resolved to increase the Company's share capital by PLN 5 thousand, i.e. from PLN 40,000 thousand to PLN 40,005 thousand through creation of 100 new, equal and indivisible shares with a value of PLN 50 per share. The new shares were earmarked for acquisition by CIECH S.A. in exchange for a cash contribution of PLN 5,700 thousand, where the amount of PLN 5,695 thousand represents the share premium allocated to the supplementary capital. By way of a representation of 4 October 2018, CIECH S.A. acquired 100 new shares. The court registered the share capital increase on 30 October 2018.

On 22 November 2018, the Extraordinary Shareholders' Meeting of CIECH R&D Sp. z o.o. increased the Company's share capital by PLN 2 thousand, i.e. from PLN 40,005 thousand to PLN 40,007 thousand through creation of new, equal and indivisible shares with a value of PLN 50 per share. The right to acquire 40 new shares with a total nominal value of PLN 2 thousand was granted to CIECH S.A. in exchange for a cash contribution of PLN 2,200 thousand, where the amount of PLN 2,198 thousand represented the share premium allocated to the supplementary capital. The court registered the share capital increase on 23 January 2019.

- **Vasco Polska Sp. z o.o.**

On 14 November 2018, the Extraordinary Shareholders' Meeting of Vasco Polska sp. z o.o. increased the Company's share capital by PLN 500, i.e. from PLN 50 thousand to PLN 50.5 thousand through creation of 10 new, equal and indivisible shares with a nominal value of PLN 50 per share. The pre-emptive right of existing shareholders to acquire new shares in the increased share capital pro rata to their respective holdings in the share capital was waived. The right to acquire the new shares was granted to CIECH S.A. in exchange for a cash contribution of PLN 130 thousand, where the amount of PLN 129.5 thousand

represents the share premium and was allocated to the supplementary capital. By way of a representation of 15 November 2018, CIECH S.A. acquired the new shares. The Court registered the increase of the Company's share capital on 11 January 2019.

On 15 November 2018, CIECH S.A. and a minority shareholder signed an agreement on the sale of 100 shares in Vasco Polska sp. z o.o. with a nominal value of PLN 50 per share, representing 10% of the Company's share capital in total. Following the aforementioned operations, CIECH S.A. was registered by the Court as the sole shareholder of the Company on 11 January 2019.

- **Beta Cerium Sp. z o.o.**

On 30 October 2018, the Extraordinary Shareholders' Meeting of Beta Cerium Sp. z o.o. adopted resolutions approving the sale of shares in the Company to its shareholder, CIECH Soda Polska S.A., by the remaining shareholders, i.e.:

- ✓ by CIECH Sarzyna S.A. – 800 shares in Beta Cerium Sp. z o.o.,
- ✓ by CIECH Pianki Sp. z o.o. – 79,103 shares in Beta Cerium Sp. z o.o.,
- ✓ by Cerium Sp. z o.o. – 1 share in Beta Cerium Sp. z o.o.

On 30 October 2018, following the aforementioned decision of the Extraordinary Shareholders' Meeting of Beta Cerium Sp. z o.o., CIECH Soda Polska S.A. concluded relevant agreements on the sale of shares in Beta Cerium Sp. z o.o. with CIECH Sarzyna S.A., CIECH Pianki Sp. z o.o. and Cerium Sp. z o.o. The transfer of rights and obligations arising from the shares sold was effected at the time of signing the agreements and as of that moment all rights and obligations relating to the shares acquired by CIECH Soda Polska S.A. were transferred to CIECH S.A., i.e. as of 30 October 2018. As a result of the above operations, CIECH Soda Polska S.A. – whose previous share in the share capital of Beta Cerium Sp. z o.o. was 51.25% – became the sole shareholder of Beta Cerium Sp. z o.o.

### 3) merger of companies

The merger plan concerning the merger of CIECH Soda Polska S.A. with Beta Cerium sp. z o.o. and Cerium Finance Sp. z o.o. was adopted on 31 October 2018. In accordance with the Merger Plan, the merger of the companies was effected through the transfer of all assets of the Acquirees (Beta Cerium Sp. z o.o. and Cerium Finance Sp. z o.o.) to the Acquirer (CIECH Soda Polska S.A.) without increasing the share capital of the Acquirer due to the fact that the Acquirer was the sole partner of the Acquirees. As a result of the merger, the Acquirees ceased to exist.

### 4) dissolution of a partnership

- **CIECH Cerium Sp. z o.o. sp.k.**

On 15 November 2018, the Partners' Meeting of CIECH Cerium spółka z ograniczoną odpowiedzialnością spółka komandytowa decided to dissolve the Partnership and agreed on the manner of terminating the Partnership's operations without liquidation. The Partnership's operations were terminated without liquidating the Partnership, by dividing the Partnership's assets on an in-kind basis, without the need to convert them into cash. The Partnership's assets were first allocated for the repayment of its liabilities, including any known non-matured or disputable liabilities, except for liabilities towards the Partners. According to the resolution of the Partners' Meeting, other assets of the Partnership have been distributed among the Partners in the proportion in which they participate in the Partnership's profit. The Partnership was deleted from the National Court Register on 27 November 2018.

### 5) acquisition of shares in new companies

- **Proplan Plant Protection Company, S.L.**

On 26 July 2018, CIECH S.A. acquired 25,000 shares representing 100% of the share capital of Proplan Plant Protection Company S.L. (Spain) ("Proplan"). For detailed information on the transaction, see section 6.4.1 of the Consolidated financial statements of the CIECH Group for 2018.

- **Smart Fluid Sp. z o.o.**

On 12 January 2018, CIECH R&D Sp. z o.o. became a shareholder of Smart Fluid Sp. z o.o. by acquiring 12 shares with a nominal value of PLN 50 per share, in exchange for a total contribution of PLN 120 thousand. Subsequently, on 1 October 2018 CIECH R&D Sp. z o.o. acquired 100 shares in Smart Fluid Sp. z o.o. with a nominal value of PLN 50 per share, in exchange for a total contribution of PLN 5,700 thousand. Thus, as at 31 December 2018 CIECH R&D Sp. z o.o.'s share in the share capital of Smart Fluid Sp. z o.o. stood at 52.83%.

- **Insignes Labs Sp. z o.o.**

On 23 November 2018, CIECH R&D sp. z o.o. became a shareholder of Insignes Labs Sp. z o.o. by acquiring 59 shares with a nominal value of PLN 100 per share, in exchange for a total contribution of PLN 2,200 thousand. Thus, as at 31 December 2018 CIECH R&D Sp. z o.o.'s share in the share capital of Insignes Labs Sp. z o.o. stood at 22.78%.

## 5.5 EMPLOYMENT STRUCTURE AND HUMAN RESOURCES

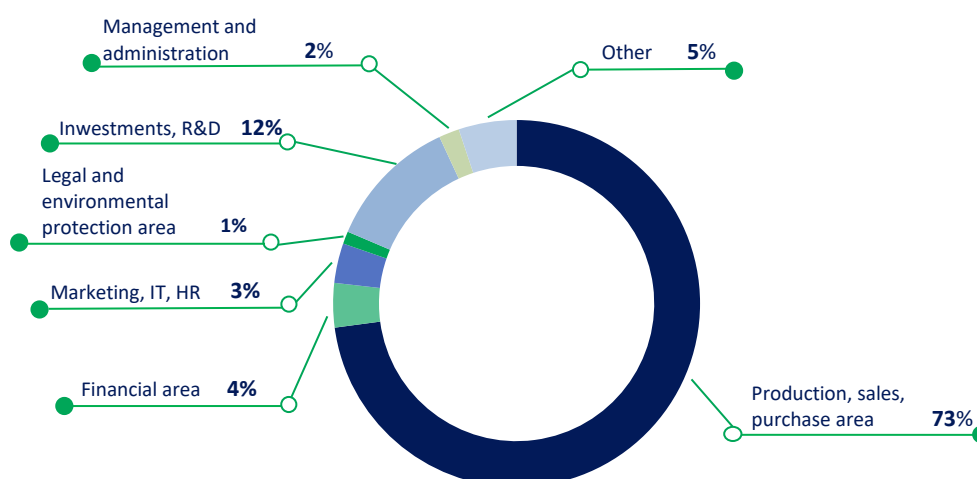
### Employment structure

As at the end of 2018, the CIECH Group (the parent company, CIECH S.A., and fully consolidated subsidiaries) employed 3,871 people (of which 493 employees in CIECH S.A.). As at the end of the comparable period, i.e. 2017, the Group employed 3,876 people (including 470 in CIECH S.A.). About 71.3% employees work in Poland, the majority of which is employed by the production department.

TABLE 39: EMPLOYMENT IN THE CIECH GROUP – WHITE COLLAR WORKERS AND BLUE COLLAR WORKERS

	31.12.2018/2018	31.12.2017/2017
<b>Headcount</b>	<b>3,871</b>	<b>3,876</b>
White-collar workers	1,422	1,341
Blue-collar workers	2,449	2,535
<b>Average headcount</b>	<b>3,876</b>	<b>3,867</b>
White-collar workers	1,392	1,314
Blue-collar workers	2,484	2,553

FIGURE 42: EMPLOYMENT IN THE CIECH GROUP – BUSINESS AREAS

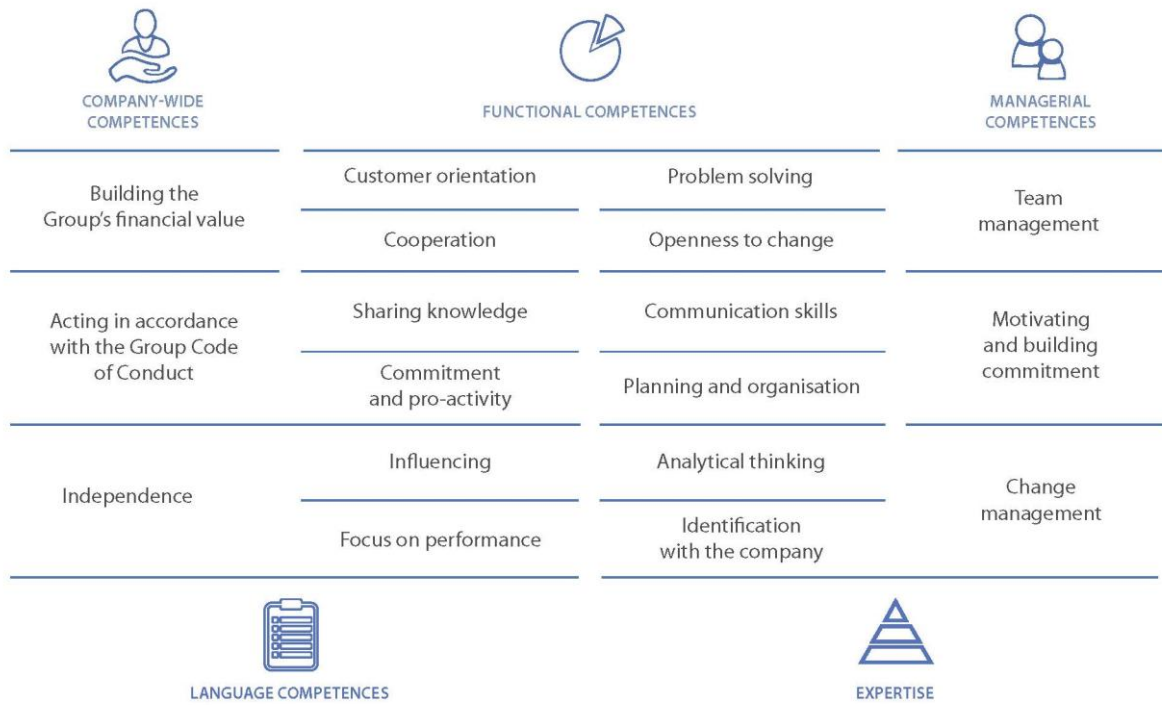


The CIECH Group is a responsible employer and undertakes a number of actions aimed at improving the efficiency of communication with employees and enhancing their satisfaction and involvement.

### Competence model

The competence model in the CIECH Group defines the organisation’s expectations towards employees and candidates. It serves as a basis for determining the level of competence of candidates in the recruitment process and planning employees’ development activities. The model comprises a total of 18 competences divided into 3 categories. Expertise is an additional area.

FIGURE 43: COMPETENCE MODEL IN THE CIECH GROUP



### Selected human capital management activities carried out in 2018

In 2018, the CIECH Group, with a view to maintaining the image of a good employer, took a number of actions for its employees, as well as actions addressed to stakeholders outside the Group, including:



- As part of building a culture of knowledge sharing, the **Internal Trainer Programme** was continued in 2018. In addition to carrying out their day-to-day duties as part of their job, the trainers engage in conducting training on topics of their own choice or in which they are specialists and actively participate in the life of the trainer group. The diverse range of training topics is a response to the needs of employees in many areas. Employees have the opportunity to participate in training courses on, among others, the preparation of business presentations, data presentation, project management issues, basics of finance, excel operation, project profitability calculation, issues related to UV absorption spectrophotometry – VIS. They also have the opportunity to develop soft skills during training on coping with stress, intercultural differences, or a workshop on communication and collaboration. In 2018, the Group acquired 13 new trainers. During the year, the trainers trained 230 employees during 24 training sessions. Training sessions are held at individual locations of the CIECH Group companies and can be attended by all employees, regardless of the company in which they are employed.

- In 2017, the CIECH Group launched the **Manager Academy Programme**, aimed to strengthen the managerial competencies in the areas of motivating and recognising, building commitment, team management and change management. Apart from classroom workshops, each manager had access to an on-line platform offering an additional knowledge base. In 2018, training sessions were held for a group of approximately 400 managers in Poland, Germany and Romania. The participants participated in a programme comprising 4 modules: engaging leader, planning and collaboration, conversation with the employee, motivation and recognition. The first edition of the programme ended in July 2018. The CIECH Group plans to continue the development activities for new managers in the organisation and to expand the program by further exploring selected aspects of the first edition of the Manager Academy.



- The **Ambassador** programme was launched in the CIECH Group in 2017. Every employee, regardless of their position or the company in which they work, can take part in the recruitment process and become an internal Ambassador. In 2018,



there were 15 Ambassadors active within the Group. The Ambassadors strengthen communication in the Group, engage in activities carried out in the Companies, raise awareness among employees about the CIECH Group's products, exchange information and share ideas on how to streamline the organisation. In addition to actively participating in the Capital

Group's life and involving other employees in projects, the Group of Ambassadors meets periodically at workshops organised by the Human Resources Department of CIECH S.A. During these workshops, participants work on new projects, review their activities and develop their competences.

- In 2018, a programme of workshops dedicated to all employees of the CIECH Group - "**I in the CIECH Group**" - was launched. HR together with Ambassadors and Internal Trainers have developed 4 thematic modules. The aim of the workshops is to increase the employees' knowledge about the Group and strengthen their identification with the Group, and not only with the Company for which they work. During the workshops, employees will have the opportunity to broaden their knowledge of the products manufactured and sold by the CIECH Group, the business environment, strategies and the most important projects implemented by the CIECH Group. The workshops also provide room for employees to reflect on the working environment and the areas that contribute to greater involvement of employees.

- In 2018, as part of building a learning organisation, an **e-learning platform** was implemented in the Polish companies and in CIECH Soda Romania S.A., providing employees with easy access to knowledge and training in various areas. In the first stage, mandatory trainings on the CIECH Group Compliance System and Personal Data Protection were launched on the platform for employees (who have a business e-mail address) (the training on Personal Data Protection is also available in English for the English-speaking employees of CIECH R&D Sp. z o.o.). Subsequently, optional specialist trainings in the field of IT and OHS were launched. Further obligatory and optional courses for CIECH Group employees are planned to be launched in 2019. At CIECH Soda Polska S.A., the e-learning platform was also used to conduct the final exams of production employees as part of the Internal Position-specific Trainings System. For the purposes of e-learning courses, computer terminals are set up in production companies to ensure access to training for production employees who do not have business e-mail addresses and business computers. With the platform it is possible to verify



the attendance at training courses, and the employees can automatically generate final documents (certificates, authorizations and declarations)

The CIECH Group places considerable emphasis on the development of its employees, allowing them to expand their competencies both during and outside working hours. Employees have a possibility to obtain co-financing for specialist trainings selected by them, language courses or studies (at the bachelor, master, post-graduate and MBA level). The CIECH Group regularly organises internal trainings to ensure continual development of competences required for particular working positions.

#### Employer branding and talent searching

The CIECH Group continues to undertake a number of initiatives aimed at maintaining the image of a good employer. Representatives of the Companies are keen to participate in events during which they have the opportunity to meet potential candidates. In 2018, they participated in a number of events addressed to students and graduates of universities in Warsaw, Toruń, Bydgoszcz, Inowrocław and Rzeszów. Many students and graduates also attended workshops on personal branding and creating a professional CV held by the CIECH Group's HR staff during the University Meetings with the Labour Market and during the Absolvent Talent Days in Warsaw. In partnership with the Poznań University of Technology, the CIECH Group's HR staff also held workshops for future engineers in the areas of chemical technology and rail transport.

On the other hand, the CIECH Group is open to potential future employees, as demonstrated by visits to production plants organised in collaboration with secondary schools and vocational schools for technical and secondary school students.

An important initiative of the CIECH Group was to organize, together with the Polish Human Resources Management Association, a meeting at the headquarters of CIECH S.A., during which a group of HR professionals discussed how to effectively implement development projects in organisations.

#### Human resources management awards received in 2018



In 2018, the CIECH Group received the certificate “HR Najwyższej Jakości” [“Top-quality HR”] awarded by the Polish Human Resources Management Association. The award was granted in the employee development category for the launch and implementation of the Internal Trainer Programme at the CIECH Group. The programme aims at creating a culture of knowledge sharing within the organisation, recognising the potential of employees and developing them as trainers, as well as expanding the internal training portfolio.



During the Warsaw Industry Week 2018, an international trade fair, the CIECH Group received a distinction for the implementation of the Manager Academy project as an innovative method of managing a production company.



The CIECH Group attaches great importance to observing the established standards and principles followed in the recruitment process and recognises the need to ensure positive experience of candidates participating in the process. Therefore, it is a member of the Coalition for Friendly Recruitment, established in June 2013.



## **SHARES AND SHAREHOLDERS**

## 6 SHARES AND SHAREHOLDERS

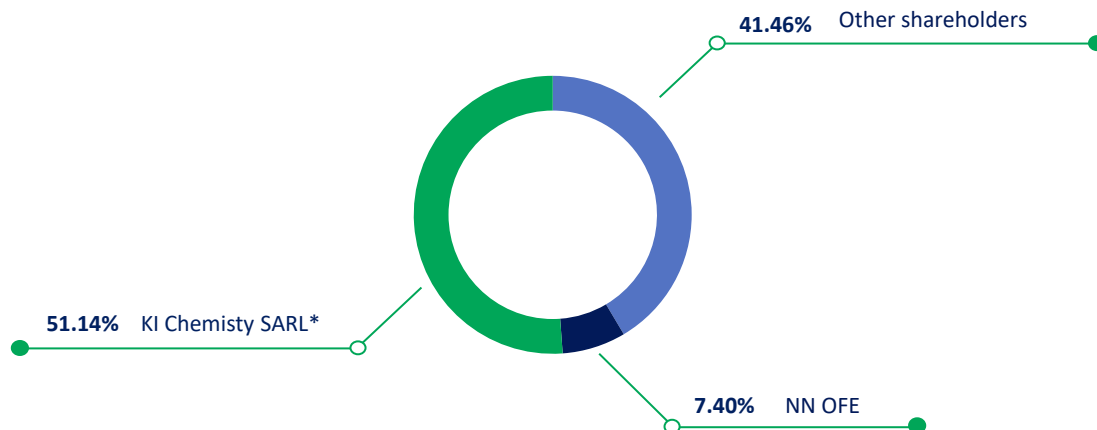
### 6.1 SHAREHOLDER STRUCTURE OF CIECH S.A.

The shares of CIECH S.A. are listed on Warsaw Stock Exchange and on Frankfurt Stock Exchange. The share capital of CIECH S.A. amounts to PLN 263,500,965 and is divided into 52,699,909 shares with a nominal value of PLN 5 each, including:

- 20,816 A-series ordinary bearer shares,
- 19,775,200 B-series ordinary bearer shares,
- 8,203,984 C-series ordinary bearer shares,
- 23,000,000 D-series ordinary bearer shares,
- 1,699,909 E-series ordinary bearer shares.

To the best knowledge of CIECH S.A., entities holding significant blocks of shares (at least 5%) are the entities listed below:

FIGURE 44: SHAREHOLDER STRUCTURE AS AT THE DATE OF APPROVAL OF THIS REPORT



\*KI Chemistry s.à.r.l. is a subsidiary of Kulczyk Investments.



Since 2014, the main shareholder of CIECH S.A. is long-term strategic investor - **Kulczyk Investments**. It is an international investment group specializing in initiating and executing transactions in markets with the highest growth potential.

## 6.2 CIECH S.A. ON THE STOCK EXCHANGE

### 6.2.1 CIECH ON THE WARSAW STOCK EXCHANGE





Shares of CIECH S.A. debuted on the Warsaw Stock Exchange on 10 February 2005. In February 2011, the company completed the process of issuing shares with pre-emptive rights, and as a result, it issued ordinary bearer shares, which were first quoted on 30 March 2011. Shares of CIECH S.A. are quoted on the primary market of the Warsaw Stock Exchange in the continuous trading system.

TABLE 40: BASIC INFORMATION ON THE SHARES

Name	CIECH S.A.
Abbreviated name	CIECH
Ticker	CIE
ISIN	PLCIECH00018
Bloomberg ticker	CIE PW
Reuters ticker	CIEP.WA
Listed from	10.02.2005
Number of shares	52,699,909
Free float	41.46%
Segment	Large company (capitalisation of over EUR 250 million)
Sector groups	chemicals, fertilisers and nitrogen compounds
Indices	WIG, WIG-Poland, mWIG40, mWIG40TR, WIG-CHEMIA, InvestorMS, MSCI EM Eastern Europe ex Russia Small Cap Index, FTSE All-World, WisdomTree EM High Dividend, WisdomTree EM Small Cap Dividend

TABLE 41: INDICES CONTAINING CIECH S.A.'S SHARES

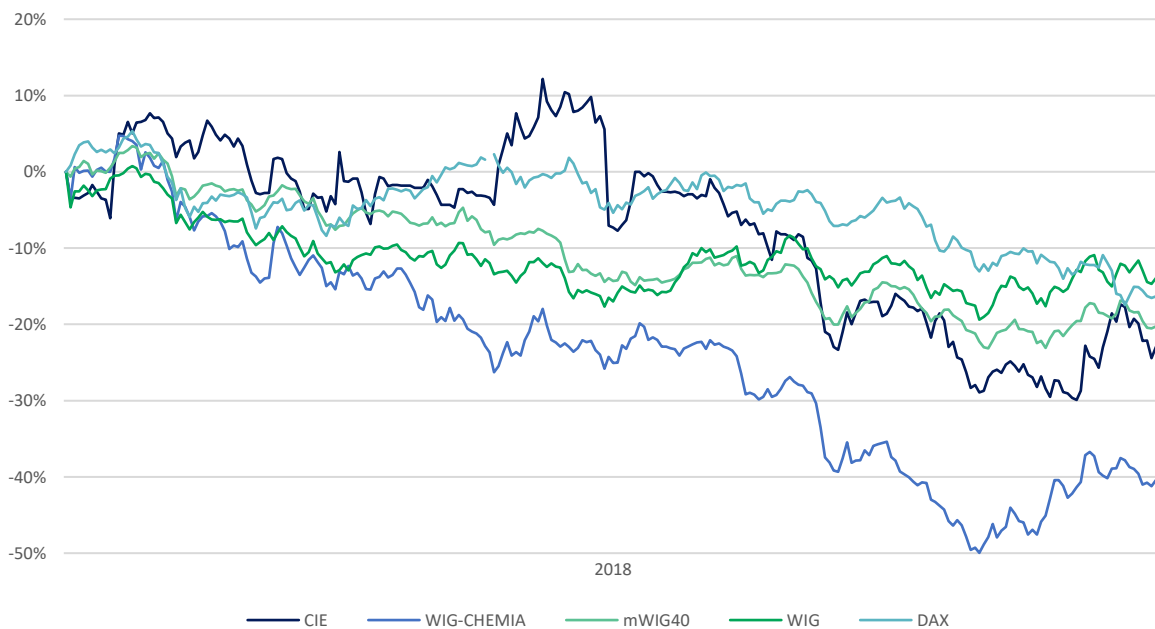
Index	Description	Share of CIECH S.A.'s shares in the index
<b>WIG</b>	WIG – an index comprised of all companies listed on the WSE Main Market which satisfy the basic eligibility criteria. The index follows the diversification principle, aimed at the limiting the share of a single company and a single exchange sector.	0.46%
<b>WIG Poland</b>	WIG-Poland – an index comprised only of shares of domestic companies listed on the WSE Main Market which satisfy the basic eligibility criteria. Both values as well as WIG-PL and WIG index participants are different.	0.48%
<b>mWIG40</b>	mWIG40 – an index comprising 40 medium size companies listed on the WSE Main Market; it is a price index which means that it is calculated taking into account prices of underlying shares, excluding dividend income.	2.24%
mWIG40TR	mWIG40TR – an index calculated since 18 September 2017, based on the value of a portfolio of 40 medium size companies on the WSE Main Market. Unlike mWIG40, mWIG40TR is the total return index, which means that it is calculated taking into account prices of underlying shares and dividend income. All other index construction rules are consistent with the mWIG40 index methodology.	2.24%
<b>WIGchemia</b>	WIG-CHEMIA – a sectoral index, which is comprised of companies which participate in the WIG index and are at the same time categorized as “chemistry” companies.	34.65%

Index	Description	Share of CIECH S.A.'s shares in the index
InvestorMS	InvestorMS – a third-party index calculated by the WSE at the request of Investors TFI S.A. The index tracks the performance of the stock of small and mid-cap companies in the investment focus of the fund Investor Top 25 Małych Spółek FIO. The InvestorMS index is the fund's investment performance benchmark. The methodology of the Investor MS index was developed jointly by the Warsaw Stock Exchange and Investors TFI S.A.	1.94%
 MSCI	MSCI Emerging Markets Index – one of the indices calculated by MSCI ESG Research. Index created for investors looking for companies whose business profile is focused on emerging markets.	4.28%
 FTSE Russell	FTSE All-World Index – an index comprised of shares of medium and large companies. The account for 90-95% of capitalisation of companies listed on global markets. It is calculated for mature and emerging markets and forms the basis for investment products.	<0.005%
 WISDOMTREE®	WisdomTree Emerging Markets High Dividend Index (WTEMHY) – an index comprised of 30% of companies from the WisdomTree Emerging Markets Dividend index with the highest dividend yield.	0.08%
 WISDOMTREE®	WisdomTree Emerging Markets SmallCap Dividend Index (WTEMSC) – the index is comprised of small-cap companies that fall within the lower 10% of the total capitalisation of the WisdomTree Emerging Markets Dividend Index.	0.26%

Data: WSE, FTSE Russell, WisdomTree; as at 12 February 2019

### Share prices

FIGURE 45: CHANGES IN PRICES OF CIECH S.A.'S SHARES IN 2018 IN COMPARISON WITH CHANGES IN INDICES



Source: infostrefa.com, Finance.yahoo.com; share prices converted accordingly.

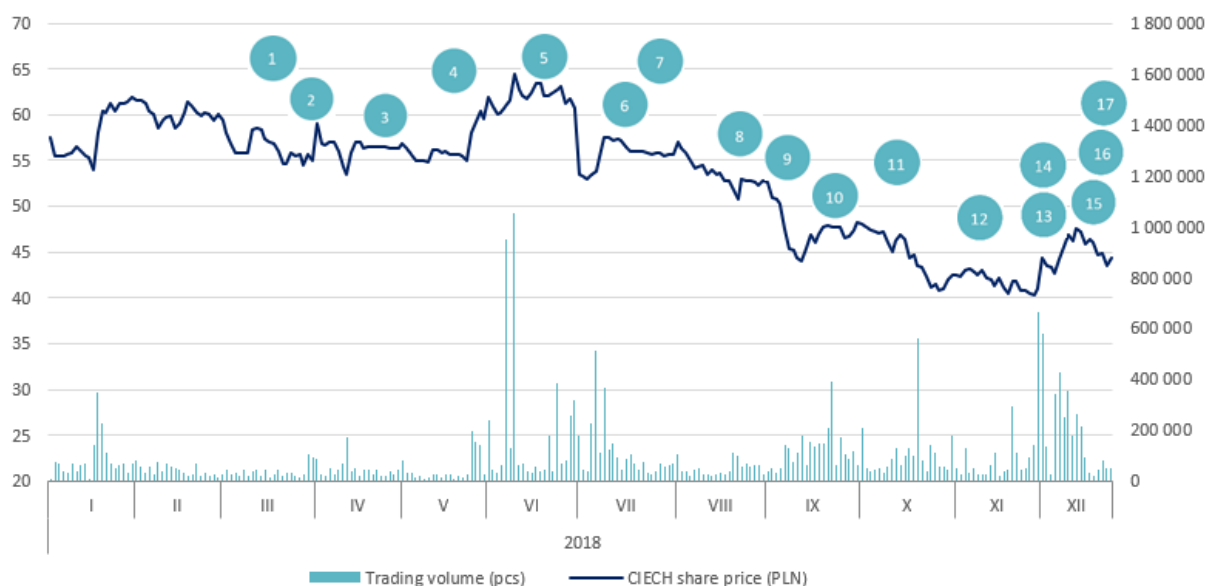
In 2018, the main WSE index, WIG, decreased by 13.9% over the previous year, to 57,690.50 points. WIG20, i.e. the index that groups twenty largest companies, fell by 13.8% and stood at 2,276.63 points at the end of 2018. Over the past year, mWIG40, an index of mid-cap companies, declined from 4,904.11 points to 3,909.37 points, i.e. by 20.3%. The industry index,

WIG-Chemia, dropped by 40.4% to the level of 9,350.86 points at the close of the last session in the year. The DAX index, the most important index of Börse Frankfurt, the German Stock Exchange, also fell by 16.4% and stood at 10,766.21 points at the end of 2018.

**PLN 2.8 billion** – average market capitalization of CIECH S.A. in 2018

In the first half of 2018, the share price of CIECH S.A. remained relatively stable. The maximum price of CIECH S.A.'s shares in 2018 was PLN 64.50 (the closing price) on 8 June 2018. A downward trend started as of the second half of 2018 and lasted until the end of November. The lowest price of PLN 40.30 was recorded on 29 November 2018. Then the price started to move in an upward trend, which could have been triggered by the CIECH Group Strategy for 2019-2021 published in December (for details see section 3.1 of this report). The closing price during the last 2018 session amounted to PLN 44.30, which is a 23.0% decline as compared to the closing price at the end of 2017.

**FIGURE 46: PRICE OF CIECH S.A.'S SHARES AND TRADING VOLUME IN 2018**

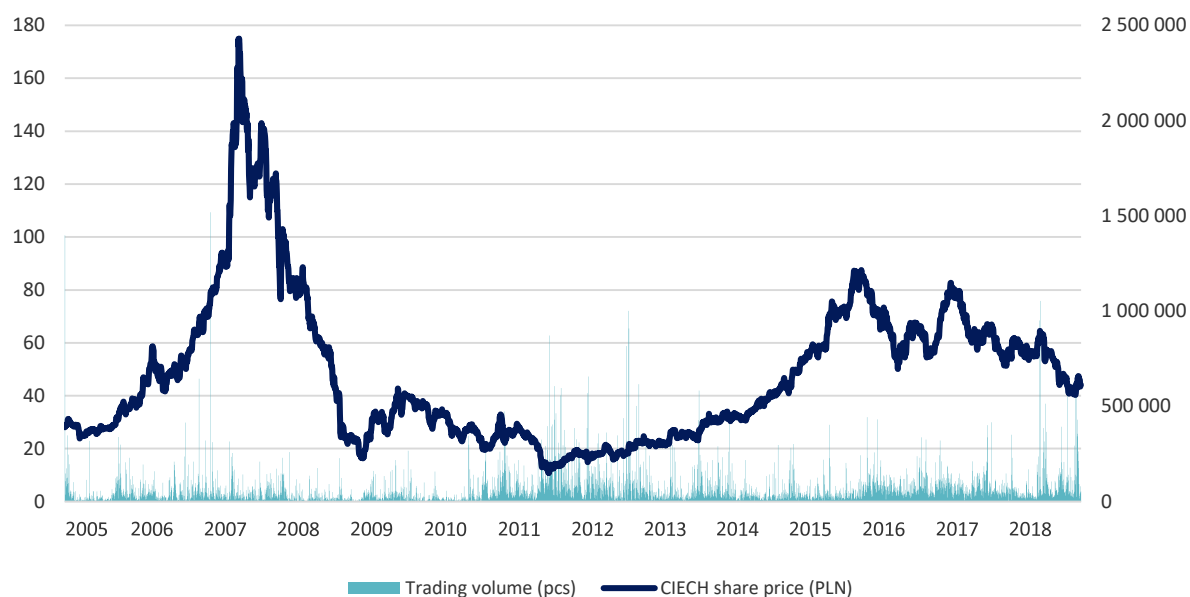


Source: infostrefa.com

- |   |  |    |  |
|---|--|----|--|
| 1 | 26.03.: Publication of the Annual Report for 2017  | 10 | 24.09.: CIECH S.A. entered the FTSE Russell developed markets index                                      |
| 2 | 30.03.: Conclusion of an agreement by CIECH Soda Polska S.A. with Polska Grupa Górnicza for the supply of power coal | 11 | 10.10.: Conclusion of an agreement with IKS Solino   |
| 3 | 27.04.: Entry of the project to construct a new evaporated salt production plant in Germany in the execution phase   | 12 | 21.11.: Publication of the Report for Q3 2018  |
| 4 | 29.05.: Publication of the Report for Q1 2018  | 13 | 05.12.: Appointment of David Jakubowicz as President of the Management Board                             |
| 5 | 22.06.: Decision on dividend payment PLN 395 million   | 14 | 05.12.: Announcement of the CIECH Group Strategy for 2019-2021   |
| 6 | 13.07.: Increase in production capacity of glassy sodium silicate  | 15 | 24.12.: Motion to apply for additional financing in the amount of PLN 500 million                        |
| 7 | 26.07.: Closure of the purchase agreement for 100% of shares in Proplan  | 16 | 27.12.: Tax authority's decision on tax arrears for 2012   |
| 8 | 31.08.: Payment of dividends to shareholders   | 17 | 28.12.: Extension of the deadline for determining a price formula for the supply of process steam to CSR |
| 9 | 05.09.: Publication of the Report for H1 2018  |    |  |



FIGURE 47: PRICE OF CIECH S.A.'S SHARES SINCE FIRST LISTING ON THE WSE



Source: infostrefa.com.

#### Key data concerning shares of CIECH S.A.

CIECH S.A.'s shares listed on the Warsaw Stock Exchange are characterised by high liquidity. In 2018, the average number of the company's shares changing hands in a trading session was 93 thousand. The average volume of trading per session was PLN 4.9 million, and the average number of trades per session was 535.

TABLE 42: DATA CONCERNING SHARES OF CIECH S.A. AT THE WSE

<b>CIECH S.A.'s shares – statistics</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>
Number of shares (item)	52,699,909	52,699,909	52,699,909
Closing share price as at the last quotation day in the year (PLN)	44.30	57.50	58.31
Capitalisation of the company as at the end of the year (PLN million)	2,335	3,030	3,073
Maximum price in the year (PLN)	64.50	88.68	87.29
Minimum price in the year (PLN)	40.30	50.52	48.89
Average trading volume per session (number of shares)	92,817	80,995	82,422
Average trading value per session (PLN)	4,913	5,399	5,474
Average number of trades per session	535	830	851
<b>Capital market ratios for CIECH S.A. shares</b>	<b>2018/ 31 December 2018</b>	<b>2017/ 31 December 2017</b>	<b>2016/ 31 December 2016</b>
EPS (PLN)	3.47	7.47	11.26
Net profit/(loss) attributable to owners / number of shares			
P/E (x)	12.8	7.7	6.1
Price / earnings per share (P/E)			
P/BV (x)	1.66	1.96	2.37
Market price per share / book value per share (P/BV)			
EV/EBITDA (x)	5.86	4.76	4.83

Source: CIECH S.A., WSE data.

## 6.2.2 CIECH S.A. ON THE FRANKFURT STOCK EXCHANGE

On 23 August 2016, CIECH S.A.'s shares were admitted to trading in the Frankfurt Stock Exchange and are listed on the regulated market, in the General Standard sub-segment. The decision of the Management Board of the company was another step in the implementation of a strategy of expansion of the leading Polish chemical company in international markets.

TABLE 43: KEY INFORMATION ABOUT SHARES LISTED ON THE FRANKFURT STOCK EXCHANGE

Ticker	CHX
Listed from	23.08.2016
Number of shares	52,699,909
Market	General Standard sub-segment

## 6.2.3 INVESTOR RELATIONS

In order to pursue the highest standards of corporate governance and communication, ensure continuous and equal access to information about the Group to all stakeholders, and to meet their needs, CIECH S.A. makes various efforts in the area of investor relations. Effective communication with the equity market and the transparency thereof are among the key priorities of CIECH S.A. that contribute to its shareholder value. 2018 was another year of intense efforts of CIECH S.A. in the area of investor communication.

CIECH S.A.'s key investor relations activities:

- **Direct meetings** – the company organises group meetings with the Management Board to discuss financial performance (dedicated to the Polish sell-side and buy-side) and other significant Group events, e.g. publication of the Group's strategy. Representatives of CIECH S.A. are also available for individual meetings where required.
- **Investor conferences in Poland and abroad** – the company also actively meets with investors in Poland and abroad during conferences organised by brokers; in 2018 the company took part in three investor conferences. At one of them, an expert from CIECH S.A. held an educational session for investors on the crop protection products market.
- **Investor Chats** – since the beginning of 2017, CIECH S.A.'s representatives have been available for individual investors via chat sessions. They are organised every quarter immediately after the publication of financial results by the company. In 2018, 4 investor chats were held.
- **Teleconferences** – in 2018, after the publication of financial results, the company was also available to investors in Poland and abroad via a telephone line, and on an ad-hoc basis, depending on the investors' needs.

In 2018, **106 meetings\*** were held and CIECH S.A.'s representatives spent a total of **98 hours** at such meetings.

*\* individual meetings, conference calls, investor conferences, performance meetings, chats*



- **WallStreet Conference** – in 2018, CIECH S.A.'s representatives took an active part, for the fifth time, in the WallStreet Conference – it is the largest meeting in the region organised

- for individual investors and one of the largest events focusing on the capital market in Poland. Individual investors had the opportunity to meet with the company's representatives during the Shareholder Forum (presentation in the form of a lecture) and the "Twoje Inwestycje" trade fair (information stand).
- **Active "Investor relations" tab on the company's website** – the company posts information on, among others, key events and new recommendations on its website. The tab is also systematically updated with new content and information (videos, presentations, infographics, one-pagers and spreadsheets).

**Awards and distinctions received in 2018 for efforts related to communication with investors and presence in the equity market:**



For the second consecutive year, CIECH S.A. investor relations website was recognised by the market – CIECH, as one of the three largest Polish listed companies from WIG20 and mWIG40, was in the third and final stage of the prestigious competition organised by the Polish Association of Listed Companies: "Golden Issuer Website". The website is available in Polish and English: <http://ciechgroup.com/relacje-inwestorskie/>.



CIECH S.A. received distinction for "The Best Directors' Report" in the "Enterprise" category, in "The Best Annual Report 2017" competition organised by the Tax and Accounting Institute (Instytut Rachunkowości i Podatków). The objective of the competition is to promote annual reports that are most useful to shareholders and investors.

TABLE 44: REPORTING CALENDAR OF THE CIECH GROUP AND CIECH S.A.

Date	Interim report
26.03.2019	Consolidated and separate annual report for 2018
28.05.2019	Consolidated report for the first quarter of 2019
10.09.2019	Consolidated report for the first half of 2019
19.11.2019	Consolidated report for the three quarters of 2019

TABLE 45: RECOMMENDATIONS FOR CIECH S.A.'S SHARES\*

<b>29</b>	Buy
<b>4</b>	Hold

\*Recommendations available to the company.

CIECH S.A., as one of the largest companies from the chemical sector listed on the WSE whose shares are included in the mWIG40 index, is regularly assessed and rated by reputable institutions of the capital market. In 2018, **11 financial institutions** issued **33 recommendations** with regard to CIECH S.A.'s shares.

TABLE 46: SUMMARY OF RECOMMENDATIONS AND REPORTS OF BROKERAGE HOUSES IN 2018

Highest target price	PLN 90.13
Median	PLN 69.42
Lowest target price	PLN 47.80



TABLE 47: DETAILED INFORMATION ABOUT RECOMMENDATIONS FOR CIECH S.A. ISSUED IN 2018

Date	Institution	Recommendation	Target price
14.12.2018	Trigon DM	BUY	PLN 58.00
13.12.2018	DM BOŚ	BUY	PLN 63.40
11.12.2018	BDM	BUY	PLN 61.10
28.11.2018	Pekao IB	BUY	PLN 53.60
08.11.2018	Pekao IB	HOLD	PLN 47.80
05.11.2018	mBank DM	BUY	PLN 77.05
30.10.2018	Trigon DM	BUY	PLN 49.00
01.10.2018	DM BOŚ	BUY	PLN 63.00
26.09.2018	Noble Securities	BUY	PLN 72.20
20.09.2018	Raiffeisen Centrobank	BUY	PLN 60.00
19.09.2018	PKO BP DM	BUY	PLN 60.10
07.09.2018	DM BOŚ	BUY	PLN 72.50
24.08.2018	BDM	BUY	PLN 64.50
02.08.2018	mDM	BUY	PLN 82.52
04.07.2018	Pekao IB	BUY	PLN 62.70
04.07.2018	mBank DM	BUY	PLN 81.14
03.07.2018	BZ WBK	BUY	PLN 65.34
28.06.2018	Trigon DM	BUY	PLN 66.50
13.06.2018	Trigon DM	BUY	PLN 74.00
12.06.2018	BZ WBK	BUY	PLN 72.84
06.06.2018	mBank DM	BUY	PLN 88.64
06.06.2018	DM BOŚ	BUY	PLN 80.00
06.06.2018	Raiffeisen Centrobank	BUY	PLN 70.00
09.05.2018	mBank DM	BUY	PLN 89.71
19.04.2018	Trigon DM	BUY	PLN 70.40
16.04.2018	DM BOŚ	HOLD	PLN 63.50
06.04.2018	mBank DM	BUY	PLN 85.40
08.03.2018	Pekao IB	BUY	PLN 65.00
05.03.2018	mBank DM	BUY	PLN 85.87
02.02.2018	mBank DM	BUY	PLN 90.13
29.01.2018	Raiffeisen Centrobank	HOLD	PLN 67.00
19.01.2018	Trigon DM	BUY	PLN 68.00
18.01.2018	DM BOŚ	HOLD	PLN 60.00

*Legal disclaimer: This consensus estimates does not constitute or form part of and should not be constructed as, an offer to sell, or the solicitation or invitation of any offer to buy or subscribe for Company's securities. This summary has been prepared for information purposes only and is not intended to constitute investment advice. CIECH S.A. is not responsible for the consequences of decisions taken based on information contained in this consensus.*

TABLE 48: INSTITUTIONS SUBMITTING RECOMMENDATIONS FOR CIECH S.A. IN 2018

Institution	Analysts	Adress data
BDM	Krystian Brymora	brymora@bdm.com.pl
IPOPEMA Securities	Piotr Jusiński	piotr.jusinski@ipopema.pl
PKO BP DM	Tomasz Kasowicz	tomasz.kasowicz@pkobp.pl
Trigon DM	Michał Kozak	michal.kozak@trigon.pl
Raiffeisen Centrobank	Dominik Niszc	dominik.niszc@rcb.at
Erste Securities	Emil Popławski	emil.poplawski@erstegroup.com
DM BOŚ	Łukasz Prokopiuk	l.prokopiuk@bossa.pl
Noble Securities	Dawid Radzyński	dawid.radzynski@noblesecurities.pl
Santander BM	Michał Sopieli	michal.sopiel@santander.pl
mBank DM	Jakub Szkopek	jakub.szkopek@mbank.pl
WOOD & Company	Paweł Wieprzowski	pawel.wieprzowski@wood.com
Pekao IB	Katarzyna Włodarczyk	katarzyna.wlodarczyk@pekaoib.pl

### Dividend

Until the date of approval of the report for publication, the Management Board of CIECH S.A. did not adopt a resolution regarding the proposal to distribute the 2018 net profit.

On 22 June 2018, the Ordinary General Meeting adopted a resolution to allocate the following to the payout of dividend in the amount of PLN 395,249 thousand:

- the entire net profit earned by CIECH S.A. in 2017, amounting to PLN 243,907 thousand;
- a part of profits included in the supplementary capital, amounting to PLN 151,342 thousand.

The dividend record and payment dates were set respectively for 2 July 2018 and 31 August 2018.

TABLE 49: DIVIDENDS PAID

	2018	2017	2016
Dividend paid	395,249,000	-	150,194,741
Number of shares	52,699,909	52,699,909	52,699,909
Dividend per share - DPS (zł) (*)	7.50	-	2.85
Dividend rate DY (%) (**)	14.10	-	6.23

(\*) DPS: Dividend per share

(\*\*) DY: (DPS/share price on the last day enabling the acquisition of shares with the right to dividend\*\*\*)

(\*\*\*) Share price two business days before the date of establishing the right to dividend

## 6.3 OTHER INFORMATION CONCERNING SHARES AND SHAREHOLDERS

### Issue of securities and utilisation of proceeds from issue of shares

In 2005 and 2011, CIECH S.A. issued securities. Proceeds from these issued were used for investments, debt reduction and restructuring efforts.

In 2018, the CIECH Group used no proceeds from the issue of shares.

### Purchase of treasury shares

CIECH S.A. and other entities of the CIECH Group did not hold and did not acquire any shares of CIECH S.A.

**Agreements on potential changes in the shareholder structure**

In 2018, after the reporting date and prior to the date of publication of this report, no agreements were signed that could influence the changes in the proportions of shares held by current shareholders.

**Employee share schemes**

In 2018, there were no employee share schemes offered in the CIECH Group.

**Number of shares of CIECH S.A. and other CIECH Group entities held by managers and supervisors of CIECH S.A.**

Mr Artur Osuchowski – Member of the Management Board of CIECH S.A., held 65,195 shares of CIECH S.A. as at 31 December 2018.

On 13 June 2018, Mr Sebastian Kulczyk – President of the Management Board of CIECH S.A., acquired indirectly 26,952,052 shares of CIECH S.A., representing 51.14% of the company's share capital.

Other Management Board Members of CIECH S.A. and Supervisory Board Members of CIECH S.A. did not hold any shares of the Company.





# CORPORATE GOVERNANCE





## 7 CORPORATE GOVERNANCE

### 7.1 SET OF CORPORATE GOVERNANCE PRINCIPLES APPLIED BY CIECH S.A.

This representation is a separate part of the Director's Report of the CIECH Group and CIECH S.A. for 2018.

In 2018, CIECH S.A. was subject corporate governance principles contained in the document adopted by the Resolution No 26/1413/2015 of the Supervisory Board of Giełda Papierów Wartościowych w Warszawie S.A. (Warsaw Stock Exchange) of 13 October 2015. This set is available at the website of Giełda Papierów Wartościowych w Warszawie S.A. (Warsaw Stock Exchange) at: <https://www.gpw.pl/dobre-praktyki>

The Management Board of CIECH S.A. represents that in the financial year ended 31 December 2018, CIECH S.A. and its authorities complied with the corporate governance rules contained in the document "Best Practice of GPW Listed Companies 2016", with exceptions described in item 7.2 below.

### 7.2 CORPORATE GOVERNANCE PRINCIPLES WHICH WERE NOT APPLIED BY THE ISSUER IN 2018

The Management Board of CIECH S.A. takes efforts to ensure the highest compliance with principles contained in the set "Best Practice of WSE Listed Companies 2016". In 2018, the Company departed from the application of 4 recommendations: IV.R.2., VI.R.1., VI.R.2., VI.R.3. and 15 detailed principles: I.Z.1.15., I.Z.1.16., I.Z.1.17., I.Z.1.20., II.Z.7., II.Z.10.1., II.Z.10.4., IV.Z.2., IV.Z.7., IV.Z.8., IV.Z.9., IV.Z.12., IV.Z.13., V.Z.6., VI.Z.4.

The reasons for departing from the aforementioned recommendations and detailed principles are indicated below:

TABLE 50: CORPORATE GOVERNANCE PRINCIPLES NOT APPLIED BY CIECH S.A.

Recommendation / detailed principle number	Content	Reasons for departing from the recommendation / detailed principle
<b>I. Information policy and communication with investors</b>		
	A company should operate a corporate website and publish on it, in a legible form and in a separate section, in addition to information required under the legislation:	
I.Z.1.15.	<ul style="list-style-type: none"> <li>information about the company's diversity policy applicable to the company's authorities and key managers; the description should cover the following elements of the diversity policy: gender, education, age, professional experience, and specify the goals of the diversity policy and its implementation in the reporting period; where the company has not drafted and implemented a diversity policy, it should publish the explanation of its decision on its website;</li> </ul>	CIECH S.A. does not find it necessary to develop and apply the diversity policy with regard to the authorities of the Company and its key managers. The fact that particular persons serve management, supervisory and key functions in the Company's structure depends mainly on their competences and experience. In the opinion of CIECH S.A., these criteria allow to select candidates who guarantee the effective implementation of the strategy and, as a result, the Company's growth and benefits for shareholders.
I.Z.1.16.	<ul style="list-style-type: none"> <li>information on the planned broadcast of the General Meeting of Shareholders – no later than 7 days before the date of the meeting,</li> </ul>	CIECH S.A. does not post information on the planned broadcasts of general meetings of shareholders on its website, because such broadcasts are not made by the Company.
I.Z.1.17.	<ul style="list-style-type: none"> <li>grounds for draft resolutions of the General Meeting of Shareholders concerning the vital issues and decisions or issues and decision which may raise doubts of shareholders – on the date enabling the participants of the General Meeting of Shareholders to read them and pass the resolution having sufficient background,</li> </ul>	Such grounds will be published, if they are prepared in accordance with provisions of the law.



Recommendation / detailed principle number	Content	Reasons for departing from the recommendation / detailed principle
I.Z.1.20.	<ul style="list-style-type: none"> <li>an audio or video recording of a general meeting.</li> </ul>	<p>CIECH S.A. does not publish audio or video recordings of a general meeting on its website, because it does not record the proceedings in such form. The Company prepares and immediately publishes information required by the law on its website, among others, the contents of the resolutions taken at the General Meeting of Shareholders, enabling the investors to read the minutes.</p>
<b>II. The Management Board and the Supervisory Board</b>		
II.Z.7.	<p>Provisions of Annexe I to the Commission Recommendation, referred to in the principle II.Z.4 shall apply with regard to tasks and operations of committees of the Supervisory Board. If the function of the Audit Committee is performed by the Supervisory Board, the above principles shall apply respectively.</p>	<p>The Supervisory Board comprises, among others, the Remuneration Committee composed of two members who do not meet the independence criterion. Both Members are highly qualified, thus the Remuneration Committee operates effectively. The independence criterion does not have an impact on the reliability of the actions implemented by the Committee.</p>
II.Z.10.1.	<p>In addition to its responsibilities laid down in the legislation, the supervisory board should prepare and present to the ordinary general meeting once per year the following:</p> <ul style="list-style-type: none"> <li>an assessment of the company's standing including an assessment of the internal control, risk management and compliance systems and the internal audit function; such assessment should cover all significant controls, in particular financial reporting and operational controls;</li> </ul>	<p>The assessment of the Supervisory Board refers to operations of control systems, risk management, compliance (policy accepted for application on 1 February 2018) and operations of the internal audit function in CIECH S.A., but not in the company itself. The standing of CIECH S.A. is presented in the financial statements, assessed by the supervisory board.</p>
II.Z.10.4.	<ul style="list-style-type: none"> <li>an assessment of the rationality of the company's policy referred to in recommendation I.R.2 or information about the absence of such policy.</li> </ul>	<p>The sponsorship and charity activities performed by CIECH have no significant effect on the operational and financial situation of the Company. In the Company's opinion, the Supervisory Board does not have to prepare and present the assessment of the rationality of the policy, referred to in the recommendation I.R.2.</p>
<b>IV. General Meeting of Shareholders and relations with shareholders</b>		
IV.R.2.	<p>If justified by the structure of shareholders or expectations of shareholders notified to the company, and if the company is in a position to provide the technical infrastructure necessary for a general meeting to proceed efficiently using electronic communication means, the company should enable its shareholders to participate in a general meeting using such means, in particular through:</p> <ol style="list-style-type: none"> <li>real-life broadcast of the general meeting;</li> <li>real-time bilateral communication where shareholders may take the floor during a general meeting from a location other than the general meeting;</li> <li>exercise of the right to vote during a general meeting either in person or through a plenipotentiary.</li> </ol>	<p>In the opinion of CIECH S.A., the shareholder structure is dispersed, but this does not justify holding general meetings using electronic communication means. In the opinion of CIECH S.A., the benefits of holding the meetings in such manner do not outweigh the risks it entails (e.g. no guarantee of complete security using IT systems). The Company will cyclically verify the ability to adapt to the above recommendations and does not exclude a change in this respect.</p>
IV.Z.2.	<p>If this is justified by the shareholder structure of the Company, the Company ensures a generally available real-time broadcast of the proceedings of the general meeting of shareholders.</p>	<p>In the opinion of CIECH S.A., the shareholder structure is dispersed, but this does not justify the necessity to ensure the generally available real-time broadcast of the proceedings of the general meeting of shareholders.</p>
IV.Z.7.	<p>A break in the general meeting of shareholders may take place only in specific situations, each time indicated in the grounds for the resolution on the break order, prepared on the basis of reasons presented by the shareholder applying for the break.</p>	<p>In accordance with the applicable law, the break in the proceedings is decided by the vote of shareholders and this is their only instruction. Thus CIECH S.A. may not guarantee the application of the above principle each time.</p>
IV.Z.8.	<p>The resolution of the general meeting of shareholders on the order of a break explicitly indicates the date of resuming the</p>	<p>In accordance with the applicable law, the date of resuming the proceedings of the general meeting of</p>



Recommendation / detailed principle number	Content	Reasons for departing from the recommendation / detailed principle
	proceedings, whereas this date may not form an obstacle for most shareholders, including the minority shareholders, to participate in the proceedings.	shareholders is decided by vote of shareholders. Thus CIECH S.A. may not guarantee the application of the above principle each time.
IV.Z.9.	The Company is committed to assure that draft resolutions of the general meeting of shareholders contained the grounds, if it helps the shareholders to pass the resolution having sufficient background. If a particular item is listed on the agenda of the general meeting of shareholders on demand of the shareholder or shareholders, the Management Board or the chairman of the general meeting of shareholders asks for the grounds of the proposed resolution. In vital cases or in cases which may raise doubts of shareholders, the Company will submit the grounds, unless it will otherwise provide the shareholders with information which allow passing the resolution having sufficient background.	CIECH S.A. is committed to guarantee that in justified cases draft resolutions of the general meeting of shareholders will comprise the grounds. However, this may not be possible, for example, if the item is put on the agenda of the general meeting of shareholders by a shareholder who submitted the draft resolution without grounds, the Management Board of CIECH S.A. may not be able to submit the justification unknown to it. Therefore, the Management Board of CIECH S.A. may not guarantee that this principle will always be applied.
IV.Z.12.	The Management Board should provide the participants of the general meeting of shareholders with the financial performance of the Company and other significant information contained in the financial statements to be approved by the general meeting.	Pursuant to the applicable law, CIECH S.A. prepares the financial statements comprising information material in the opinion of the Management Board. Documents are public (available, among others, at <a href="http://ciechgroup.com">ciechgroup.com</a> website) and the participants of the general meeting may read them. Additionally, the concept of "other material information" is too vague to declare the application of this principle.
IV.Z.13.	In the case of a demand by the shareholder for information about the Company, the Management Board of the Company is required to reply to the shareholder's demand or inform it about the refusal to give this information no later than within 30 days, if the Management Board took such decision pursuant to Article 428 §2 or §3 of the Code of Commercial Partnerships and Companies.	In accordance with the applicable law, in the course of proceedings of the general meeting of shareholders, the Management Board provides the shareholder, on its demand, with information about the Company, but only if it is justified for the purposes of the assessment of the item on the agenda, pursuant to Article 428 of the Code of Commercial Partnerships and Companies. In the opinion of CIECH S.A., if the Company undertakes to apply the aforementioned principle, it could lead to numerous frauds on the part of shareholders.
<b>V. Conflict of interest and transactions with related parties</b>		
V.Z.6.	In its internal regulations, the Company determines criteria and circumstances, which may lead to the conflict of interest in the Company, and the rules of conduct, if the conflict of interest occurs or is likely to occur. The internal regulations of the Company comprise, among others, the methods of preventing, identifying and solving conflicts of interest, and rules for excluding a member of the Management Board or the Supervisory Board from the participation in solving the issue subject to conflict of interest or at risk of such conflict.	Internal regulations of CIECH S.A. have not governed the above issues before. The Company is analysing the matter with regard to possible introduction of relevant provisions to the Regulations of the Supervisory Board and the Regulations of the Management Board, reflecting the provisions of the Law.
<b>VI. Remunerations</b>		
VI.R.1.	The remuneration of members of the company's governing bodies and key managers should follow the approved remuneration policy.	CIECH S.A. does not have a remuneration policy in the form of an official document. The remuneration of members of the company's governing bodies and key managers result from the applicable laws in conjunction with the company's Articles of Association and Supervisory Board Regulations. In the opinion of CIECH S.A., these regulations are sufficient.
VI.R.2.	The remuneration policy should be closely tied to the company's strategy, its short- and long-term goals, long-term interests and results, taking into account solutions necessary to avoid discrimination on whatever grounds.	CIECH S.A. does not have the remuneration policy, thus the principle may not applied.
VI.R.3.	If the supervisory board has a remuneration committee, principle II.Z.7 applies to its operations.	The Remuneration Committee is composed of Mr. Tomasz Mikołajczak and Mr Mariusz Nowak who do not meet the independence criterion. Owing to high

Recommendation / detailed principle number	Content	Reasons for departing from the recommendation / detailed principle
VI.Z.4.	The Director's Report of the Company comprises the report on the remuneration policy, including, at least: 1) general information about the remuneration system established in the Company, 2) information on the conditions and the remuneration level of each Management Board Member by fixed and variable components of remuneration, indicating key parameters for determining variable components of remuneration and rules for severance payments and other payments related to the termination of the employment contract, commission contract or another relationship of similar nature – separately for the Company and for each entity of the Capital Group, 3) information on non-financial components of remuneration due to particular Management Board members and key managers, 4) indication of significant changes, which were introduced in the remuneration policy in the last financial year, or information about their lack, 5) assessment of operation of the remuneration policy with regard to the implementation of its goals, in particular the long-term increase in the value for shareholders and the stability of enterprise operations.	qualifications and long experience of these two members, the Remuneration Committee operates in an efficient manner. The independence criterion does not have an impact on the reliability of the actions implemented by the Committee.  CIECH S.A. does not have the remuneration policy, thus the principle may not applied. However, in accordance with the applicable law, CIECH S.A. presents information on the remuneration of Management Board members and Supervisory Board members in its Director's Report.

### 7.3 INTERNAL CONTROL SYSTEM WITH REGARD TO THE PROCESS OF PREPARING FINANCIAL STATEMENTS

The Management Board of CIECH S.A. is responsible for the internal control system in the Company and its efficiency in the process of preparing financial statements and periodical reports developed and published in accordance with the Regulation of the Minister of Finance of 29 March 2018 on current and periodical information submitted by issuers of securities and on conditions for deeming equivalent information required by the law of a Non-Member State. The Company's effective internal control and risk management system in the financial reporting process operates through:

- preparation of procedures specifying the principles and division of responsibilities for the development of financial statements, including the guarantee of their quality,
- establishment of the scope of reporting based on applicable International Accounting Standards (IAS) and International Financial Reporting Standards (IFRS) adopted for implementation in the European Union and related interpretations announced in the form of European Commission Regulations,
- development, implementation and supervision of the use of coherent accounting principles in the CIECH Group's companies,
- semi-annual reviews and annual audits of published financial statements of CIECH S.A. and the CIECH Group by an independent auditor,
- procedures for authorization of financial statements prior to their publication.

The Management Board member responsible for financial matters supervises the process of preparing the Company's financial statements and periodical reports from the subject-matter point of view. The Finance and Accounting Division is responsible for the organization of work related to the preparation of financial statements and reports directly to the Member of Management Board of CIECH S.A. The uniformity of standards applied in the Group guarantees that all companies apply uniform accounting principles of the CIECH Group and uniform consolidation principles in accordance with IAS/IFRS.

The scope of data disclosed in published periodical reports results from the Company's accounting records and additional information submitted by individual organizational units of CIECH S.A. Companies of the Capital Group submit the required data in the form of reporting packages for the purpose of developing consolidated financial statements of the Group. The scope of data disclosed within the Capital Group is defined by the disclosure obligations specified in IAS/IFRS and results from

them. Monitoring of changes in IAS/IFRS is conducted on an ongoing basis in order to determine the necessity for updating the scope of reporting.

In accordance with applicable regulations, the Company submits its financial statements to be reviewed and audited by the independent statutory auditor.

The Supervisory Board selects the statutory auditor from a group of reputable auditing firms, guaranteeing high standard of services and the required independence.

On 16 April 2018, the Supervisory Board of CIECH S.A. resolved to extend the agreement with PricewaterhouseCoopers Polska Spółka z ograniczoną odpowiedzialnością Audyt Sp.k. (formerly: PricewaterhouseCoopers Sp. z o.o.) for the audit of the statutory financial statements of CIECH S.A. and the consolidated financial statements of the Ciech Group for the years 2018–2019. In previous years, PricewaterhouseCoopers Polska Spółka z ograniczoną odpowiedzialnością Audyt Sp.k. performed the half-year review and audited of the separate financial statements of CIECH S.A. and the consolidated financial statements of the CIECH Group for 2015, 2016 and 2017.

Procedures for authorisation of financial statements prior are specified in the Company. Reports for 1<sup>st</sup> and 3<sup>rd</sup> quarter are not verified by the auditor, and prior to their publication, they are analysed by the Audit Committee of the Supervisory Board and approved by the Management Board. Semi-annual and annual periodical reports are submitted to the Supervisory Board and Company Shareholders after the conclusion of the appropriate review or audit by the auditor. Annual reports adopted by the Management Board of the Company, after being opined by the Audit Committee and assessed by the Supervisory Board, are approved by the General Meeting of Shareholders.

Prior to the publication of annual or half-year financial statements, conclusions from the audit or review of the financial statements are presented to the Audit Committee. Representatives of the Audit Committee analyse the results of the audit and review at closed meetings with the Company auditor. The statutory auditor also presents a Letter to the Management Board, which contains recommendations for the Management Boards of Group Companies based on results of the audit or review of the financial statements in a given year. The recommendations from the auditor are discussed by the Audit Committee along with the management of the Finance and Accounting Division for the purpose of their implementation.

Financial data constituting the basis of financial statements and periodical reports comes from the finance and accounting system, where transactions are recorded in accordance with the Company's accounting policy (approved by the Management Board) on the basis of International Accounting Standards. The accounting records of CIECH S.A. are kept in the ERP integrated IT system. The modular structure of the system provides a transparent division of competences, coherence of operation records in ledgers, and inspection of reconciliation of the general ledger and subsidiary ledgers. The capabilities of the system allow it to adapt to changing accounting principles or other legal regulations on an ongoing basis. The system keeps full technical and operational documentation which is updated periodically pursuant to Article 10 of the Accounting Act of 29 September 1994 (as amended).

The access to the informational resources of the IT system is limited by appropriate authorisations for authorised employees. The employees have access only to those areas of the system that they are concerned with. The access control is present at every stage, starting with the input of source data, through data processing and ending with the generation of output information.

The effectiveness of the control and risk management procedures in the process of preparing financial statements of CIECH S.A. and the CIECH Group may be seen in the form of the high quality of these statements, as confirmed by the opinions put forth by statutory auditors from their auditing of the financial statements and by the high evaluations of the recipients of these statements. In 2018, the Report of the CIECH Group's and CIECH SA's Management Board was recognised with the award for the best directors' report in "The Best Annual Report 2017" competition.

The selection of the entity authorised to audit the financial statements of CIECH S.A. and the CIECH Group is the responsibility of the Company's Supervisory Board (after prior recommendation of the Audit Committee to the Supervisory Board), which has specified the following principles of Auditor selection for the purpose of ensuring the independence of the opinion:

- the entity authorised to audit financial statements may not conduct audits of the Company/Group for more than 5 subsequent years;
- the first agreement on the audit of financial statements is concluded for a period not shorter than 2 years;
- the entity authorised to audit financial statements may conduct the audit in the Company/Group again after at least 3 years from the end of the last audit, unless the duration of the audit order is 5 years, in which case the entity authorised to audit financial statements may conduct the audit in the Company/Group again after at least 4 years from the end of the last audit;
- a key statutory auditor may not perform financial audit activities in the Company/Group for a period of more than 5 subsequent years;



- a key statutory auditor may perform financial audit activities in the Company/Group again after at least 3 years from the end of the last audit.

## 7.4 SHAREHOLDERS OF CIECH S.A. HOLDING SIGNIFICANT BLOCKS OF SHARES

To the best knowledge of the Company, as at the day of approving this report, entities holding significant blocks of shares (at least 5%) are the entities listed below:

TABLE 51: SHAREHOLDERS OF CIECH S.A. HOLDING SIGNIFICANT BLOCKS OF SHARES

Shareholder	Type of shares	Number of shares	Number of votes at the General Meeting of Shareholders	Share in the total number of votes at the General Meeting of Shareholders	Stake in share capital (%)
<b>KI Chemistry s. à r. l. with its registered office in Luxembourg*</b>	<b>Ordinary bearer</b>	<b>26,952,052</b>	<b>26,952,052</b>	<b>51.14%</b>	<b>51.14%</b>
Nationale-Nederlanden Otwarty Fundusz Emerytalny**	Ordinary bearer	3,900,000	3,900,000	7.40%	7.40%
Other	Ordinary bearer	21,847,857	21,847,857	41.46%	41.46%

\* In accordance with information dated 9 June 2014 provided by Shareholder under Article 77(7) and Article 69(1)(1) of the Act of 29 July 2005 on Public Offering and Conditions Governing the Introduction of Financial Instruments to Organised Trading, and on Public Companies (CR 26/2014).

\*\* on the basis of the list of shareholders holding at least 5% of votes at the Ordinary General Meeting of Shareholders of CIECH S.A. on 28 January 2019, CR 5/2019 prepared and published pursuant to Article 70(3) of the Act of 29 July 2005 on Public Offering and Conditions Governing the Introduction of Financial Instruments to Organised Trading, and on Public Companies (Journal of Laws of 2009, No 185, item 1439).

## 7.5 SHAREHOLDERS WITH SPECIAL CONTROL RIGHTS

As at the publication date of the financial statements, all shares of CIECH S.A. are ordinary bearer shares. The Articles of Association of CIECH S.A. does not provide for any special control rights for the shareholders.

## 7.6 RESTRICTIONS CONCERNING THE EXERCISE OF THE VOTING RIGHTS

In CIECH S.A. there are no restrictions concerning the exercise of the voting rights, such as the voting rights of holders of a specific part or number of votes, time limits concerning the exercise of voting rights, or regulations, according to which, in the case of company's cooperation, equity rights related to securities are separated from the securities themselves. Restrictions concerning the exercise of voting rights in the Company may result only from generally applicable provisions of the law.

## 7.7 RESTRICTIONS CONCERNING THE TRANSFER OF OWNERSHIP RIGHTS TO THE ISSUER'S SECURITIES

The Articles of Association of CIECH S.A. do not impose any restrictions concerning the transfer of ownership rights to securities issued by the CIECH S.A.

## 7.8 DESCRIPTION OF RIGHTS FOR MAKING DECISIONS ON THE ISSUE OR REDEMPTION OF SHARES

The rights of managers are specified by the provisions of the Code of Commercial Partnerships and Companies and Articles of Association of the Company. Managers do not hold specific rights to take the decision about the issue or redemption of shares.

## 7.9 PRINCIPLES OF AMENDING THE ISSUER'S ARTICLES OF ASSOCIATION

The amendment of Articles of Association of the Company is introduced under the principles specified in the provisions of the Code of Commercial Partnerships and Companies. Articles of Association do not include detailed regulations with regard to the above regulations. The amendment of Articles of Association requires a resolution of the Company's General Meeting of Shareholders and an entry in the Register of Entrepreneurs. The resolution of the General Meeting of Shareholders concerning the amendment of the Company's Articles of Association is passed by a majority of three quarters of votes. After the amendment to Articles of Association is entered into the Register of Entrepreneurs, CIECH S.A. makes a current report on this, subject available to the public. The Company's General Meeting of Shareholders may authorise the Supervisory Board to determine the consolidated text of Articles of Association.

## 7.10 CORPORATE BODIES OF CIECH S.A. AND PRINCIPLES GOVERNING THEIR OPERATION

### **General Meeting of Shareholders of CIECH S.A.**

The operations of the General Meeting of Shareholders of CIECH S.A. and its rights are governed by the Company's Articles of Association and the Regulations of the General Meeting of Shareholders of CIECH S.A. These documents are available on the corporate website of CIECH S.A.: <http://ciechgroup.com/relacje-inwestorskie/tad-korporacyjny/>.

The General Meeting of Shareholders of CIECH S.A. is held as ordinary or extraordinary meeting in accordance with the provisions of the Code of Commercial Partnerships and Companies and Articles of Association under the principles specified in the Regulations of the General Meeting of Shareholders. The General Meeting of Shareholders is convened in a manner and under principles specified in the generally applicable provisions. Announcement on convening the General Meeting of Shareholders is posted on the Company's website and communicated in a current report. The announcement is to be made at least twenty six days before the date of the General Meeting of Shareholders. The Annual General Meeting is convened by the Company's Management Board. The Supervisory Board may convene the Annual General Meeting if the Management Board does not convene it by the fixed date. The following are entitled to the right to convene an Extraordinary General Meeting:

- the Management Board,
- the Supervisory Board if it deems its convening as necessary,
- Shareholders representing at least half of the share capital or at least half of the total number of votes in the Company.

A shareholder or shareholders representing at least 1/20 of the share capital may demand the convening of an Extraordinary General Meeting and may put specific items on the agenda of this Meeting. The demand should be reported to the Management Board in writing or in electronic form to the e-mail address indicated on the Company's website, along with substantiation. A shareholder or shareholders representing at least 1/20 of the share capital may:

- demand the inclusion of specific items in the agenda of the next General Meeting – such demand should be reported to the Management Board in writing or in electronic form to the e-mail address indicated on the Company's website, no later than twenty one days before the fixed date of the Meeting and is to contain substantiation or a draft of the resolution concerning the proposed item on the meeting agenda;
- submit drafts of resolutions concerning the items put on the agenda of the General Meeting or items that are to be included to the meeting agenda to the Company in writing or by means of electronic communication to the e-mail address indicated on the Company website before the date of the General Meeting.

According to the Articles of Association of CIECH S.A. the competences of the General Meeting include in particular:

- consideration and approval of the Management Board's report on Company's activities, the financial statements for the previous year, the consolidated financial statements and the report on the capital group's activities, in which the parent

company is the Company, as long as the Company prepares them, and the annual written statement of the Supervisory Board, as well as acknowledging the fulfilment of duties by Company's bodies;

- taking resolutions on the distribution of profit or covering the losses;
- adoption of Regulations of the General Meeting;
- amending the Articles of Association of the Company;
- changing the Company's business profile;
- purchase, sale or lease of, or creation of limited property rights in, the Company's enterprise or its organised part;
- appointing and dismissing the Supervisory Board members and determining the amount of remuneration for the Supervisory Board Members;
- increasing or reducing the share capital;
- passing resolutions concerning the bonds issue, including bonds exchangeable for shares;
- merger, demerger and transformation of the Company;
- dissolution of the Company;
- expressing the consent for the acquisition of shares by the Company for the purposes of their cancellation and determining the conditions of share cancellation;
- passing other resolutions provided for in the provisions of the law or in these Articles of Association.

According to § 21(2)(3) of the Articles of Association of CIECH S.A., the items raised at the General Meeting of CIECH S.A. are considered and opined on by the Supervisory Board of CIECH S.A.

Shareholders may participate in the General Meeting and exercise the voting right in person or through a representative or a proxy. The power of attorney should be granted in writing or in electronic form. A shareholder granting or revoking the proxy for participation in the General Meeting in electronic form will inform the Company by e-mail to the address [wza@ciechgroup.com](mailto:wza@ciechgroup.com).

According to the Regulations of the General Meeting of CIECH S.A., the General Meeting is attended by the participants of the General Meeting and members of the Management Board and the Supervisory Board, in composition which allows them to provide factual answers to questions asked during the Meeting. In addition, the following persons may take part in the Meeting:

- experts, advisers and Company's employees, the presence of which is deemed purposeful by the Management Board, Supervisory Board;
- persons servicing the General Meeting;
- representatives of mass media invited by the Company's Management Board, as long as the General Meeting does not object to their presence by way of resolution;
- persons referred to Article 370 § 3 and Article 395 § 3 sentence 2 of the Code of Commercial Partnerships and Companies;
- the statutory auditor of the Company invited by the Company's Management Board.

The Chairman of the Meeting is selected from the participants of the Meeting. The Chairman directs the course of the Meeting in accordance with the adopted meeting agenda, provisions of the law, Articles of Association and Regulations of the General Meeting, ensuring an efficient course of the Meeting with respect to the rights and interests of all Shareholders.

The Chairman of the General Meeting may independently order breaks at the meeting other than the breaks ordered by the General Meeting pursuant to Article 408 § 2 of the Code of Commercial Partnerships and Companies. Breaks should be ordered by the chairman in such a way, that the Meeting can be concluded on the day of its commencement.

Participants of the General Meeting may place substantive applications concerning the matters included in the meeting's agenda, ordinal applications and an application for convening an extraordinary general meeting.

1. Substantive motions, submitted in a written form to the Chairman of the General Meeting, may concern:

- amendments to draft resolutions,
- removal of a specific issue from the agenda,
- rearrangement of the agenda,
- appointment and removal of Supervisory Board members.

2. Procedural motions may be submitted to the Chairman of the General Meeting orally.

The Articles of Association do not provide for the possibility of participating and expressing opinion by means of electronic communication in the course of the Meeting.

Drafts of resolutions proposed for acceptance by the General Meeting are uploaded to the Company website. Resolutions of the General Meeting are adopted by an absolute majority of votes, unless the provisions of the Code of Commercial Partnerships and Companies or the Articles of Association provide for stricter terms of adoption.

The Regulations of the General Meeting of Shareholders do not provide for the possibility of voting by correspondence as referred to in Article 411 of the Code of Commercial Partnerships and Companies.

Voting is carried out by open ballot. A secret ballot is ordered in cases provided for in the Code of Commercial Partnerships and Companies and the Company's Articles of Association. A secret ballot is also ordered when a Participant in the General Meeting requests the adoption of a resolution by means of a secret ballot.

The results of the vote are announced by the Chairman of the General Meeting. Once the results of the vote are announced, the Chairman of the General Meeting allows the participants in the General Meeting to submit their objections with a brief justification to be included in the minutes on the General Meeting which are drawn-up by a notary in the form of a notarial deed.

A Participant of the General Meeting who is a member of the Company's governing authorities may take part in the vote on the acknowledgement of fulfilment of duties by other members of that authority of the Company that he/she is a member of.

### Supervisory Board

Pursuant to § 20(1) of the Company's Articles of Association, the Supervisory Board consists of five to nine Members appointed by the General Meeting. The number of Supervisory Board members is determined by the General Meeting by way of a resolution. The joint term of the Supervisory Board Members lasts three years.

The Supervisory Board of CIECH S.A. operates on the basis of the regulations passed by the Supervisory Board and approved by the General Meeting. The Supervisory Board appoints the Chairman of the Supervisory Board from among its members and, if necessary, his deputy and secretary. The Supervisory Board supervises the Company's operations.

The competences of the Supervisory Board include:

- 1) the assessment of the Management Board's report on the Company's activity and financial statements for the previous financial year and the consolidated financial statements and the Board's report on the activity of the Group, in which the Company is a parent company as long as the Company develops them in respect of their compliance with ledgers and documents and the factual state and Management Board's motions, concerning the distribution of profit or covering of losses and the submission to the General Meeting of an annual written report on the results of these assessments;
- 2) giving opinions on the Company's activity programs developed by the Management Board;
- 3) considering and giving opinions on matters that are to be the subject of resolutions of the General Meeting;
- 4) adopting the Supervisory Board's regulations;
- 5) approving the Management Board's regulations;
- 6) appointing and dismissing the Management Board Members, including the President of the Management Board;
- 7) determining the rules for remuneration and their levels for the Management Board Members, including the President of the Management Board;
- 8) selecting the statutory auditor to carry out an audit of the Company's financial statements and of the consolidated financial statements of the Capital Group;
- 9) granting consent to purchase or dispose of real property, perpetual usufruct right to, or interest in real property;
- 10) granting consent to dispose of rights or assume liabilities exceeding the amount of PLN 20 million, excluding:
  - a. purchase and sales of raw materials, intermediate goods, and products related to the operations of the Company;
  - b. assuming liabilities related to the main operations of the Company in the amount not exceeding 10% of the Company's equity;
  - c. activities requiring the consent of the General Meeting.
- 11) giving opinions about the candidates for the members of supervisory boards of companies, in which the Company is a partner or a shareholder;
- 12) approving drafts of annual business plans and budget of the Company, Capital Group and their amendments;
- 13) granting consent to charge assets of the Company with the amount (sum of security) exceeding PLN 10 million, in the form of one-off transaction or a series of related transactions;
- 14) granting consent to the Company's granting sureties and guarantees to entities other the subsidiaries within the meaning of the Code of Commercial Partnerships and Companies;
- 15) granting consent to make the payment of interim dividend;
- 16) granting consent to exercise by the Company of the ownership rights awarded to it as the partner and shareholder of the subsidiary, to the extent determined in item 10 above.

The Supervisory Board passes resolutions with an absolute majority of votes in the presence of at least half of the members of the Supervisory Board and in the event of a tied vote the Supervisory Board Chairman's vote is decisive. According to the Articles of Association of CIECH S.A., the Supervisory Board may pass resolutions without convening a meeting, by way of written vote or vote by means of direct communication at a distance, however in order for the adoption of a resolution to be effective in such a case, it is necessary to inform all Supervisory Board members of the content of the draft of the resolution. Supervisory Board Members may participate in the adoption of resolutions by the Supervisory Board by casting their vote in writing through another Supervisory Board Member. Casting of a vote in writing may not be concerned with matters introduced to the agenda during a meeting of the Supervisory Board. Supervisory Board meetings are held as needed, however, no less frequently than once per quarter.

Every year, the Supervisory Board of CIECH S.A. prepares and submits a report on the Activity of the Supervisory Board for the given financial year to the Annual General Meeting of the Company. The report contains a detailed discussion on the activity of the Supervisory Board, discussion on the implementation by the Company's Management Board of action plans, the assessment of the Company's Management Board report on the activity of the Company and the CIECH Group, financial statements of the Company and the CIECH Group and the motion of the Company's Management Board concerning division of profits or covering of losses.

Having in mind of the highest standards and best practices and in order to provide the possibility for reliable assessment of the Company by shareholders, the Supervisory Board of CIECH S.A. makes a concise assessment of the situation of CIECH S.A. This assessment is presented annually during the Annual General Meeting of the Company, at a time allowing CIECH S.A.'s shareholders to become acquainted with the document.

**Between 1 January and 22 June 2018, the Supervisory Board consisted of the following members:**

- Sebastian Kulczyk – Chairman of the Supervisory Board
- Tomasz Mikołajczak – Vice Chairman of the Supervisory Board
- Piotr Augustyniak
- Dominik Libicki
- Mariusz Nowak
- Artur Olech.

**After 22 June 2018, the Supervisory Board consisted of the following members:**

- Sebastian Kulczyk – Chairman of the Supervisory Board
- Tomasz Mikołajczak – Vice Chairman of the Supervisory Board
- Piotr Augustyniak
- Dawid Jakubowicz
- Mariusz Nowak
- Artur Olech.

On 10 September 2018, the Supervisory Board of CIECH S.A. delegated Mr Dawid Jakubowicz – a member of the Supervisory Board of CIECH S.A. – to temporarily perform the function of the President of the Management Board of CIECH S.A., i.e. for a period of three months. On 5 December 2018, Mr Dawid Jakubowicz submitted his resignation from the office in the Supervisory Board of CIECH S.A., with immediate effect.

**As at 31 December 2018, the Supervisory Board consisted of the following members:**

- Sebastian Kulczyk – Chairman of the Supervisory Board
- Tomasz Mikołajczak – Vice Chairman of the Supervisory Board
- Piotr Augustyniak
- Mariusz Nowak
- Artur Olech.

On 28 January 2019, the Extraordinary Shareholders' Meeting of CIECH S.A. appointed Mr Marek Kośnik as a new member of the Supervisory Board of CIECH S.A.

The body responsible for establishing the levels of remuneration for the Supervisory Board members is the General Meeting. Detailed information on amounts of remuneration paid to particular Members of the Supervisory Board is provided in note

9.3.4 to the Consolidated Financial Statements of the CIECH Group for 2018 and in note 9.3.4 to the Financial Statements of CIECH S.A. for 2018.

Detailed information about CIECH S.A. Supervisory Board Members is presented below.

TABLE 52: CIECH S.A.'S SUPERVISORY BOARD AS AT 31 DECEMBER 2018

<b>SEBASTIAN KULCZYK</b> Chairman of the Supervisory Board of CIECH S.A. since 8 October 2015	<p>A graduate in management and marketing from the Faculty of Law of the Adam Mickiewicz University in Poznań. He studied at the London School of Economics.</p> <p>Since 2010 he has been associated with Kulczyk Investments Group, and since December 2013 he has been Chief Executive Officer of Kulczyk Investments S.A. For many years, he has been investing in and developing new-tech ventures.</p> <p>Sebastian Kulczyk does not conduct any activities that are competitive to the business of CIECH S.A.</p>
<b>TOMASZ MIKOŁAJCZAK</b> Deputy Chairman of the Su- pervisory Board of CIECH S.A. since 10 July 2014, Supervisory Board Member since 7 July 2014.	<p>Since 1980, a private investor, who has conducted his business activity mainly through a holding company Towarzystwo Inwestycji Kapitałowych S.A., through which short- and medium term investments of the private equity type are made. He mainly invests in the sectors of real estate, telephony and IT, construction and industrial automatics, as well as in companies dealing with infrastructure design and construction. Since the beginning of his activity, Tomasz Mikołajczak has implemented several privatization processes as a strategic investor, he also participated in acquisitions of many businesses and in restructuring processes. He is a mentor and promoter of many young entrepreneurs, who successfully operate in many areas of the Polish market. A member of Supervisory Boards of Kulczyk Investments S.A., Kulczyk Holding S.A., Polenergia S.A. and Polenergia Holding S.à.r.l., as well as the Chairman of the Audit Committee of the Polish Business Round table.</p> <p>Tomasz Mikołajczak does not conduct any activities that are competitive to the business of CIECH S.A.</p>
<b>PIOTR AUGUSTYNIAK</b> Supervisory Board Member of CIECH S.A. since 7 July 2014	<p>Graduate of Warsaw University, Faculty of English Philology and Faculty of Management. He is entered on the list of recommended candidates for professional members of Supervisory Boards by the Polish Institute of Directors.</p> <p>Piotr Augustyniak is an independent financial advisor. In 1994-2011, he was associated with Enterprise Investors (EI), a private equity fund operating in Poland as well as Central and Eastern Europe, as an analyst, investment director and vice-president. In 2006-2011, he collaborated with EI as a partner. During that period, he was responsible for monitoring and introducing companies to the WSE and for transactions of the sale of the significant blocks of shares of EI portfolio companies on the public and private markets. Piotr Augustyniak represented EI as a member of Supervisory Boards in the following companies: Polfa Kutno S.A., Energoaparatura S.A., Elektrobudowa S.A., Wizów S.A., Sfinks S.A., CSS S.A., Bauma S.A., Comp Rzeszów S.A. (at present: Asseco Poland S.A.), Agros Nova S.A., Teta S.A., Opoczno S.A., AB S.A., Siveco Romania S.A. (Romania), STD Donivo a.s. (Slovakia), AVG Technologies N.V. (the Netherlands).</p> <p>In the period from June to December 2001, he served the role of the President of the Management Board of Energoaparatura S.A. In 1993–1994, he was employed by the Ministry of Ownership Transformation, first as a project manager and then as a manager of the privatization team. In 1992-1993, he was employed as an assistant of the financial officer in the Ownership Transformation Foundation at the Ministry of Ownership Transformation. In 1991-1992, he worked at New York Times (Warsaw) as a translator.</p> <p>Piotr Augustyniak does not conduct any activities that are competitive to the business of CIECH S.A.</p>
<b>MARIUSZ NOWAK</b> Supervisory Board Member of CIECH S.A. since 7 July 2014	<p>A graduate from the University of Szczecin, the Faculty of Economy and the Faculty of Cybernetics and Computer Science. He holds an MBA from the Ecole Nationale des Ponts et Chaussees in Paris.</p> <p>He is a specialist in finance, accounting and management. In 2012, he was hired by Kulczyk Investments and Kulczyk Holding. Previously, from March 2010, he served as Financial Director of Kulczyk Pon Investments and President of the Management Board of Magro International. In 1991-2010, he worked in various positions for Wavin Group, in which he was appointed Managing Director of Wavin Ekoplastik in 2007. Mariusz Nowak is member of several Supervisory Boards — PEKAES S.A., PEP S.A., Autostrada Wielkopolska S.A., Autostrada Wielkopolska II S.A., Autostrada Eksploatacja S.A., AWSA Holland II BV. and Polenergia S.A.</p> <p>Mariusz Nowak does not conduct any activities that are competitive to the business of CIECH S.A.</p>



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**ARTUR OLECH**  
**Supervisory Board Member**  
**of CIECH S.A. since 7 July**  
**2014**

A graduate from the Faculty of Law at the University of Warsaw and from the Faculty of Finance and Banking at the Warsaw School of Economics. He attended numerous training sessions for top management, including training at the Harvard Business School, Kellogg School of Management and Chicago GSB.

He is an expert in business process management. Founder and President of the Management Board of a technology and consulting company, hiPRO Sp. z o.o., since October 2016.

Until August 2016, he was the President of the Management Board of Pocztove Towarzystwo Ubezpieczeń Wzajemnych S.A. and Pocztove Towarzystwo Ubezpieczeń na Życie S.A.

President of the Management Board of Pocztove Życie Sp. z o.o. (currently: Centrum Rozliczania Ubezpieczeń Sp. z o.o.) between September 2014 and February 2015. From October 1998 to February 2014, he was a member of the Management Board of the Generali Group where, in 2008-2010, he served as the Vice President of the Management Board, responsible for life and pension insurance. In 1997-1998, he was the Director of Volkswagen Bank Polska/Volkswagen Leasing Polska-Warszawa. In 1996-1997, employed as an analyst by the Polish Institute of Management (PIM Sp. z o.o.). In 1994-1997, employed in the position of a Foundation Project Manager by CASE Consulting (Fundacja Centrum Analiz Społeczno-Ekonomicznych) in Warsaw. In 2012, he was granted the Personal Award for Top Manager in Insurance Industry (by Wprost magazine). Responsible for the project entitled: "Exit Processes in Transitional Economy" on behalf of the World Bank, implemented within CASE Consulting under the supervision of Prof. Leszek Balcerowicz.

Artur Olech does not conduct any activities that are competitive to the business of CIECH S.A.

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On 28 January 2019, Mr Marek Kośnik became a member of the Supervisory Board. He is a graduate of the Faculty of Management at the University of Warsaw and MBA studies at Harvard Business School. He works in a private equity fund – CVC Capital Partners – as a Senior Managing Director with responsibility for assessing investment projects, supervising the portfolio and implementing digital strategies. In the past, he worked for such companies as Bain & Company, Terra Firma Capital Partners and McKinsey & Company. He has gained experience in building company strategies, investment processes, restructuring and digital transformations. An investor in new technologies projects.

He does not conduct any activities that are competitive to the business of CIECH S.A.

#### Committees of the Supervisory Board of CIECH S.A.

The following Committees operate within the framework of the Supervisory Board of CIECH S.A.: Audit Committee of the Supervisory Board of CIECH S.A. and Remuneration Committee of the Supervisory Board of CIECH S.A.

#### Audit Committee

The Audit Committee of the Supervisory Board of CIECH S.A. was appointed by Resolution No 57/IV/2005 from 16 February 2005. The Committee is an advisory and consultative body to the Supervisory Board and is appointed to improve the effectiveness of the supervision of the correctness of financial reporting of the Company, financial results of the Company, effectiveness of internal control, including internal audit and risk management, exercised by the Supervisory Board.

The Audit Committee is composed of at least three Members of the Committee, including the Chairman of the Audit Committee. A majority of Members of the Audit Committee, including its Chairman, should meet the independence criteria set forth in Article 129(3) of the Act.

According to the Audit Committee Regulations the tasks of the Audit Committee include in particular:

- monitoring:
  - ✓ the financial reporting process;
  - ✓ effectiveness of the internal control system, as well as risk management and internal audit systems, also with regard to financial reporting;
  - ✓ performance of financial auditing activities, in particular auditing by the audit firm, taking into consideration any applications and determinations of the Audit Oversight Commission resulting from the control carried out in the audit firm;
- control and monitoring of independence of the statutory auditor and the audit firm, especially, if the audit firm provides to the public interest entity services other than auditing;
- informing the Supervisory Board about audit results and explanation of how this audit contributed to reliability of financial reporting in the Company, as well as what was the role of the Audit Committee in the audit process;

- assessment of independence of the statutory auditor and expressing consent to for his/her provision of acceptable services other than audits in the Company;
- preparation of the policy of selecting the audit firm to conduct the audit;
- preparation of the policy of providing acceptable services other than auditing by the audit firm conducting the audit, its affiliates and by a member of the audit firm's network;
- determination of procedures of selecting the audit firm by the Company;
- presentation of a recommendation concerning the appointment of the audit firm to the Supervisory Board, in accordance with the policies referred to in items e) and f) above. In this recommendation, the Audit Committee:
  - ✓ suggests the audit firm to conduct the statutory audit;
  - ✓ states that the recommendation is free of influences of third parties;
  - ✓ states that the audited public interest entity did not conclude any contracts containing the clauses referred to in Article 66(5a) of the Accounting Act;
- in the case when the selection referred to in item 8 not apply to extension of the contract for auditing the financial statements, the recommendation of the Audit Committee contains at least two selection options for selecting the audit firm, along with a substantiation, and indication of reasonable preference of the Audit Committee towards one of them;
- annual review of the internal audit schedule;
- assessment of the results of internal controls, including internal audits, and schedules of elimination of errors detected;
- reviews of material agreements concluded with related parties;
- preliminary assessment of the annual financial plan prepared by the Management Board as well as of the report on its implementation;
- submission of recommendations aimed at ensuring reliability of the financial reporting process in the Company.

The Audit Committee elects its Chairman from among its members in a secret ballot. The Chairman of the Audit Committee manages the Committee's work, supervises the preparation of agenda, organisation of document distribution and preparation of minutes of Audit Committee meetings.

The Audit Committee of the Supervisory Board of CIECH S.A. submits an annual report on its activity which is a part of the Report on the activity of the Supervisory Board of CIECH S.A. provided to Shareholders during the Annual General Meeting of CIECH S.A.

As at 1 January 2018, the composition of Audit Committee was as follows:

- Piotr Augustyniak – Chairman of the Committee;
- Mariusz Nowak – Committee Member;
- Artur Olech – Committee Member.

On 24 July 2018, following the appointment of the Supervisory Board of CIECH SA as of 22 June 2018 for a new term of office, the Supervisory Board appointed the Audit Committee in the following composition:

- Piotr Augustyniak – Chairman of the Committee;
- Mariusz Nowak – Committee Member;
- Artur Olech – Committee Member.

On 24 July 2018, the Audit Committee appointed Mr Piotr Augustyniak to perform the duties of the Chairman of the Audit Committee. Until 31 December 2018, the composition of the Audit Committee has not changed.

#### Remuneration Committee of the Supervisory Board of CIECH S.A.

The Remuneration Committee was appointed by Resolution No 66/IV/2005 of the Supervisory Board of CIECH S.A. According to the Remuneration Committee Regulations, the primary task of the Committee is to advise the Supervisory Board on matters related to the establishment of the principles and amounts of remuneration of the CIECH S.A.'s Management Board members.

In particular the Committee's tasks include:

- presenting the Supervisory Board with proposals of the principles of remuneration of CIECH S.A.'s Management Board members, which should account for all forms of remuneration, in particular as regards: base remuneration, remuneration system based on results, retirement system and severance payments
- presenting the Supervisory Board with regarding the amounts of remuneration for each CIECH S.A.'s Management Board member

- presenting the Supervisory Board with drafts of agreements, regulating the performance of responsibilities CIECH S.A.'s Management Board members
- discussion (with or without the involvement of the Management Board) of all problems or reservations that may arise in matters related to the remuneration of CIECH S.A.'s Management Board
- consideration of all other matters to which the Committee or Supervisory Board has paid attention
- informing the Supervisory Board of all significant matters in the general context of the Committee's activity.

The Remuneration Committee of the Supervisory Board of CIECH S.A. elects a Chairman from among its members to manage the Committee's work.

The Remuneration Committee of the Supervisory Board of CIECH S.A. submits an annual report on its activity, which is a part of the Report on the activity of the Supervisory Board of CIECH S.A., provided to Shareholders during the Ordinary General Meeting of CIECH S.A.

As at 1 January 2018, the composition of the Remuneration Committee was as follows:

- Tomasz Mikołajczak – Chairman of the Committee;
- Mariusz Nowak – Committee Member.

On 24 July 2018, following the appointment of the Supervisory Board of CIECH SA as of 22 June 2018 for a new term of office, the Supervisory Board appointed the Remuneration Committee of the Supervisory Board of CIECH S.A. in the following composition:

- Tomasz Mikołajczak – Chairman of the Committee;
- Mariusz Nowak – Committee Member;
- Dawid Jakubowicz – Committee Member.

Following Mr. Dawid Jakubowicz's resignation from the Supervisory Board of CIECH SA as of 5 December 2018, he also ceased to be a member of the Committee as of that date.

As at 31 December 2018, the Remuneration Committee was composed of the following two members:

- Tomasz Mikołajczak – Chairman of the Committee;
- Mariusz Nowak – Committee Member.

### **Management Board**

According to § 23(1) of the Company's Articles of Association, the Management Board consists of at least two members. The Supervisory Board appoints the Chairman of the Management Board and other Board members. The Supervisory Board determines the number of Board Members. The joint term of the Management Board members lasts three years.

The term of office of a Management Board Member expires at the close of the General Meeting approving the financial statements for the last full financial year in which the Management Board Member held his position in the Company's Management Board during the term of office for which this Member was appointed.

The Management Board's competences include all matters and economic decisions and other decisions not reserved by the regulations of the Code of Commercial Partnerships and Companies or the stipulations of the Company's Articles of Association as belonging solely to the General Meeting or Supervisory Board.

Two Board Members jointly or one Board member together with an proxy are authorized to make declarations of will and to sign them on behalf of the Company.

The current joint term of the Company's Management Board commenced on 22 June 2017. The Company applies the policy of internal distribution of powers among Board Members, in terms of managing the affairs of the Company. A detailed description of segregation of powers of individual Board Members has been specified in the resolution of the Management Board. Within the scope of ordinary activities of the Company, each Board Member is obliged and authorised to independently manage the Company's affairs falling under his/her powers, in accordance with the distribution determined by the Management Board.

The Management Board of CIECH S.A. operates on the basis of the regulations passed by the Management Board and approved by the Supervisory Board. Resolutions of the Management Board are passed by an absolute majority of votes cast with a quorum of at least half of the Management Board members. In the case of a voting tie, the President of the

Management Board has the casting vote. In accordance with the principles of best practices, Management Board Regulations state that in the event of a conflict of the Company's interest with the personal interests of a Board Member, his spouse, relatives or kinsman of the second degree or persons with whom he has a personal relationship, he should abstain from participation in the settlement of such matters, and request for this to be noted in the Board's meeting protocol.

Management Board's resolutions are required only in respect of matters exceeding the scope of ordinary Company's activities including in particular:

- the approval and amendment of the Management Board's Regulations;
- the approval and amendment of the Company's Organisational Regulations;
- adoption of motions addressed to the Supervisory Board or the General Meeting;
- convening General Meetings and determining their agendas;
- the acceptance of annual and long-term financial plans and development strategies for the Company;
- the grant of proxy or general power of attorney;
- taking out credit and loans;
- granting loans and donations;
- the disposal of a right or assumption of a liability exceeding the amount of PLN 500 thousand, excluding purchase and sales of raw materials, intermediate goods, and products related to the operations of the Company up to the value of PLN 6 million in a single transaction or series of related transactions;
- application for bank guarantees, assumption of liabilities under promissory notes, the grant of all types of guarantees and the establishment of other securities.

A Management Board's resolution is also required in matters not exceeding the scope of ordinary Company's activities if its passing is requested by any of the Management Board's Members.

As of 1 January 2018, the composition of the Company's Management Board was as follows:

- Maciej Tybura – President of the Management Board
- Artur Król – Member of the Management Board
- Artur Osuchowski – Member of the Management Board.

He Supervisory Board of CIECH S.A. appointed Mr Krzysztof Szlaga as a Member of the Management Board of CIECH S.A. with effect as of 12 March 2018. Next, following the resignation of Mr Artur Król from the Management Board of CIECH S.A. as of 31 August 2018 and the resignation of Mr Maciej Tybura from the Management Board of CIECH S.A. as of 10 September 2018, on 10 September 2018, the Supervisory Board of CIECH S.A. delegated Mr Dawid Jakubowicz – a member of the Supervisory Board – to temporarily perform the function of the President of the Management Board of CIECH S.A., i.e. for a period of three months, and appointed Mr Mirosław Skowron as a Member of the Management Board of CIECH S.A. On 26 November 2018, Mr Krzysztof Szlaga submitted his resignation from the Management Board of CIECH S.A.

The President of the Management Board of CIECH S.A., Mr Dawid Jakubowicz, was appointed by the Supervisory Board of CIECH S.A. on 5 December 2018.

As at 31 December 2018, the composition of the Management Board of CIECH S.A. was as follows:

- Dawid Jakubowicz — President of the Management Board;
- Artur Osuchowski – Member of the Management Board;
- Mirosław Skowron — Member of the Management Board.

The body responsible for establishing the principles and level of remuneration for the Management Board members is the CIECH S.A. Supervisory Board.

TABLE 53: CIECH S.A.'S MANAGEMENT BOARD AS AT 31 DECEMBER 2018

**DAWID JAKUBOWICZ**

President of the Management Board of CIECH S.A. since 10 September 2018

He has completed a Program for Leadership Development (PLD) at the Harvard Business School in Boston and holds the MBA title from the Georgia State University and the University of Economy in Poznań. A graduate of the Faculty of Economy at the University of Economy in Poznań.

Mr Dawid Jakubowicz is a member of the management board of Kulczyk Investments S.A. where, since 2010, he has been responsible for the supervision of the investment portfolio. He is an esteemed expert with the international operational experience in building the value of companies from the chemical, mining, energy, automotive and new technologies sectors. Enlisted as a qualified auditor by the National Chamber of Statutory Auditors since 2014. In the past, he worked for international company KPMG Audit, where he was responsible for audit of separate and consolidated financial statements of entities from many sectors.

Scope of responsibilities in CIECH S.A. – supervision over organisational units:

- Strategy and Innovation Division
- Human Resources Department
- Audit and Control Department
- Legal and Compliance Department
- Assets Management Department
- Security Office
- Finance and Accounting Division
- Independent position: OHS Coordinator, Representative of the Management Board for Investor Relations, Director of the Reshape Project, Adviser to the Management Board, Business Analysis Manager.
- AGRO Business Unit.

**ARTUR OSUCHOWSKI**

Member of the Management Board of CIECH S.A. since 2 April 2008

Graduate of the Private Higher School of Business and Administration in Warsaw, Faculty of Economics, majored in Finance and Banking.

Completed professional courses in management of company value, appraisal of companies on the capital market, restructuring of company's activity. Holder of the scholarship of the "Die Zeit" weekly, American Council of Germany, Dreager Foundation.

In 1996-1997, the analyst in the Management Accounting Department at Raiffeisen Bank Polska.

From 1998 to 2001, senior consultant in the Corporate Finance department at Ernst & Young (responsible for mergers and acquisitions on the capital market and strategic projects related to restructuring and reorganization of companies' operations).

In 2001-2003, he was senior consultant at the Corporate Finance Department at Capgemini. Responsible for mergers and acquisitions on the capital market and strategic projects related to restructuring and reorganization of companies' operations.

In 2003-2008, he acted as the manager at KPMG Advisory in the Economic Consulting Department. Responsible for the development of services in the scope of strategic projects, reorganization of companies' operations and projects related to the financing of operations, as well as the support of direct investments.

Scope of responsibilities in CIECH S.A. – supervision over organisational units:

- Project Management and Entities Supervision
- Marketing and Communication Department
- Supply Chain Management Division, including:
  - Logistics Department
- IT Department
- Independent positions, including: Coordinator of the Management Board for the Integrated Quality and Information Security Management System Representative of the Management Board for the Integrated Quality and Information Security Management System Press Officer.
- Business Units: Salt, Soda, Resins, Foams, Silicates and Glass.



**MIROSŁAW SKOWRON**  
Member of the Management  
Board of CIECH S.A.  
since 10 September 2018.

Mr Mirosław Skowron graduated from the Wrocław University of Technology, holds the MBA diploma and completed a course of Strategic Leadership Academy at the ICAN Institute, organised by the Harvard Business Review.

In the past, Mr Mirosław Skowron, among other functions, served as the president of management boards of such companies as Przedsiębiorstwo Budowy Kopalń S.A. forming a part of the KGHM Group, Polimex-Energetyka Sp. z o.o., Energa Elektrownie Ostrołęka S.A. and Energa Invest S.A., as well as PGE Elektrownia Opole S.A.

Scope of responsibilities in CIECH S.A. – supervision over organisational units:

- Investment Management Department
- Facilities Maintenance Department
- Purchase Division, including:
  - Raw Materials Purchase Department
  - Investment and Technical Purchases Department
  - Administration and IT Purchase Department
- Energy Department
- Environmental Department
- Grain Project Team.

## 7.11 REMUNERATION FOR THE MANAGEMENT AND SUPERVISORY BODIES

Information on the remuneration for the management and supervisory bodies is provided in note 9.3.4 to the Consolidated Financial Statements of the CIECH Group for 2018 and note 9.3.4 to the Financial Statements of CIECH S.A. for 2018.

## 7.12 INFORMATION ABOUT AGREEMENTS SIGNED BETWEEN THE ISSUER AND PERSONS IN MANAGEMENT POSITIONS

If the Employer terminates the employment contract with a member of the Management Board upon notice, the Member is entitled to compensation in the amount of six months' remuneration. The non-competition agreement with Board Members after the termination of the employment provides a compensation in the amount of 50% of monthly remuneration for a period that does not exceed 24 months. Apart from those listed above, other agreements were not signed between the Company and Members of the Management Board of CIECH S.A.



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## GLOSSARY OF ABBREVIATIONS AND TERMS

ASEAN	Association of South-East Asian Nations
CAGR	Compound Annual Growth Rate
CEE	Central and Eastern Europe
CIT	Corporate income tax
CO <sub>2</sub>	Carbon dioxide
CSR	Corporate Social Responsibility
Dual listing	Listing of a company's shares on two or more stock exchanges
COMFORT – type jars	Glass latch lid jars
EBITDA	Earnings before interest, taxes, depreciation and amortization
EBITDA (A)	EBITDA excluding one-off events
EPS	Earnings per share
ER	Epoxy Resin
EURIBOR	Euro Interbank Offered Rate
EV/EBITDA	Ratio of enterprise value (EV) and earnings before interest, taxes, depreciation and amortization (EBITDA)
Free float	Diversified shareholding of a public enterprise. This is the ratio of the number of shares beyond the possession of large investors holding over 5% of the company's shares to the total number of shares - otherwise all freely available shares in the public market
GMO	Genetically modified organism
WSE	Warsaw Stock Exchange
Greenfield	Investments on areas with no prior industry or service facilities (e.g. farmlands or woodlands).
GUS	Central Statistical Office
Currency hedging	Strategy used to mitigate foreign exchange risk
S&G	Silicates and Glass — one of key operating segments of the CIECH Group
IFRS	International Financial Reporting Standards
P/BV	Price/book value ratio — allows to compare a company's current market price to its book value, that is, the difference between balance sheet assets and total liabilities of a company listed on a stock exchange
P/E	Price-earnings ratio — indicates how attractive a share is relative to other shares. Calculated by dividing the market value per share by earnings per share
GDP	Gross Domestic Product
PUR	Polyurethane foams
Rating	Evaluation of the credit risk of a securities issuer
ROA	Return on assets
ROE	Return on equity
ROS	Return on sales
REACH Regulation	Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
SO <sub>2</sub>	Sulphur dioxide
SPR	Saturated Polyester Resin
CPC	Crop protection products
Ticker	Three-letter abbreviation used on a stock exchange to uniquely identify each company
UPR	Unsaturated Polyester Resin
EU	European Union
WIBOR	Warsaw Interbank Offered Rate
CIS	Commonwealth of Independent States

## RATIO CALCULATION METHODOLOGY

### Principles of ratio calculation (according to the data for continuing operations):

<b>EBITDA (%)</b>	(operating profit + amortization/depreciation for a given period)/ net revenues from sales of products, services, goods and materials in a given period
<b>Adjusted EBITDA (%)</b>	EBITDA excluding one-off events, the more important of which were described in item 4.2.1 / net revenues from sales of products, services, goods and materials for a given period
<b>gross return on sales</b>	gross profit on sales for a given period / net revenues from sales of products, services, goods and materials for a given period
<b>return on sales</b>	profit for a given period / net revenues from sales of products, services, goods and materials for a given period
<b>EBIT margin</b>	operating profit for a given period / net revenues from sales of products, services, goods and materials for a given period
<b>EBITDA margin</b>	(operating profit + amortization/depreciation for a given period)/ net revenues from sales of products, services, goods and materials in a given period
<b>adjusted EBIT margin</b>	operating profit for a given period excluding one-off events, the more important of which were described in section 4.2.1 / net revenues from sales of products, services, goods and materials for a given period
<b>adjusted EBITDA margin</b>	EBITDA excluding one-off events, the more important of which were described in section 4.2.1 / net revenues from sales of products, services, goods and materials for a given period
<b>net return on sales (ROS)</b>	net profit for a given period / net revenues from sales of products, services, goods and materials for a given period
<b>return on assets (ROA)</b>	net profit for a given period/total assets at the end of a given period
<b>return on equity (ROE)</b>	net profit for a given period/total equity at the end of a given period
<b>debt ratio</b>	the ratio of current and non-current liabilities to total assets; measures the share of external funds in financing of a company's activity
<b>long-term debt ratio</b>	the ratio of non-current liabilities to total assets; measures the share of non-current liabilities in financing of company's activity
<b>debt to equity ratio</b>	the ratio of total liabilities to equity
<b>equity to assets ratio</b>	the ratio of equity to total assets; measures the share of equity in financing of a company's activity
<b>net financial liabilities</b>	liabilities from loans, bonds, borrowings (plus overdraft) and other debt instruments (finance lease + liabilities from negative valuation of derivatives calculated separately for each derivative + factoring liabilities) less cash and cash equivalents
<b>gross financial liabilities</b>	liabilities from loans, bonds, borrowings (plus overdraft) and other debt instruments (finance lease + liabilities from negative valuation of derivatives calculated separately for each derivative + factoring liabilities)



## REPRESENTATION OF THE MANAGEMENT BOARD

This Management Board Report on activities of the CIECH Group and CIECH S.A. in 2018 was approved by the Management Board of the Company on 26 March 2019.

Warsaw, 26 March 2019

*(signed on the polish original)*

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**Dawid Jakubowicz — President of the Management Board of CIECH Spółka Akcyjna**

*(signed on the polish original)*

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**Artur Osuchowski — Member of the Management Board of CIECH Spółka Akcyjna**

*(signed on the polish original)*

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**Mirosław Skowron — Member of the Management Board of CIECH Spółka Akcyjna**