



BorsodChem Zrt. Sustainability Report 2018







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Introduction

In today's world, sustainability has become the basis of responsible economic and modern social thinking. The success of BorsodChem is also increasingly determined by our pursuit of sustainability.

For BorsodChem, sustainability is not only a tool for continuously improving and strengthening our competitiveness. In agreement with our customers, our Company is committed to transparent and decent business conduct and is responsible for protecting and sustaining our customers, employees, neighboring residents, and the natural environment, all of which have shaped our Company's history. We are actively looking for innovative and forward-looking solutions to reduce our energy consumption and environmental impact.

At BorsodChem we are proud that a leading international rating agency has recently recognized our outstanding sustainability efforts. Regarding sustainability, the commitment of our employees is also a decisive factor in achieving our results and is a fundamental condition for the successful development of BorsodChem.

In 2018, we organized a stakeholder forum for our business partners so we could hear about their expectations regarding sustainable business processes.

In 2017 and 2018, BorsodChem operations were outstandingly stable, which enabled us to take advantage of the opportunities offered by market circumstances. While we delivered a large production volume, we were also able to control the risks arising from the high utilization of our plants by introducing new systems, thus making our production both more stable and more reliable. Consequently, we achieved outstanding financial results in 2017 and 2018 and started the year 2019 with a solid financial base.

As a chemical company we need to continuously develop while maintaining high levels of safety, environmental protection and trouble-free operations.



About the Report



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We are pleased to publish BorsodChem's second Sustainability Report, in which we summarize the key results of our business year 2018 (from 1 January to 31 December 2018), while also discussing the main events and changes that happened in 2017.

As one of the largest companies in Hungary and a member of the global Wanhua Group, we are committed to sustainable, responsible operations. By publishing our sustainability performance indicators, we want to showcase our commitment and ensure the transparency of our Company, which can also help to improve general opinions about our industry.

We published our first Sustainability Report of the year 2016 in order to provide a detailed and comprehensive overview about our operations and our economic, environmental and social impacts, to our owners, business partners, employees and other stakeholders. We are proud that in 2018 we won the Deloitte Green Frog Award special prize for the best first report. This achievement is a confirmation us to continue on the road that have started.

This year's report was developed in accordance with the "Core" application level of the Global Reporting Initiative (GRI) Standards framework, with professional support from KPMG Advisory Ltd. The content of the report was determined by the results of our Materiality Assessment conducted in 2016, for which we engaged our most important stakeholder groups.

The information and data contained in the report all refer to BorsodChem Zrt. Content reliability is ensured by our use of databases supported by IT-systems and by multi-level management verification. Since the publication of our previous report, there have been no significant changes in our business operations or the environment in which we operate. The report contains one restatement of data which is indicated in a footnote at the relevant disclosure. The report was approved by the management of BorsodChem on 27 June 2019. The report was not assured by a third-party.

It remains a priority for us in the future to present our progress by regular reporting. We report our performances following a two-year reporting cycle.

We would like to thank you for your interest in the sustainability performance of BorsodChem. If you have any questions or comments about this report, please feel free to contact our Sustainability Officer.





Message from the CEO

Dear Reader,



László Kruppa
CEO – BorsodChem Zrt.
(since 1 March 2019)

I am proud that BorsodChem Zrt., a member of the Wanhua Group, is publishing its Sustainability Report for the second time, demonstrating our commitment to a more sustainable world and chemical industry. In this Report we introduce our Company and detail our endeavours towards economic, environmental and social sustainability, in accordance with the reporting standard developed by the Global Reporting Initiative (GRI).

Thanks to our business successes, we continue to be one of the most determined companies in the region, and we wish to reflect this with the level of responsibility we take. As a responsible Company, we consider it is our duty to take part in solving problems experienced on a global and regional scale. The Sustainable Development Goals (SDGs) adopted by the United Nations in 2015 provide a starting point; they identify the common focus areas for sustainable development up until 2030. It is important for us to support these global endeavours with our activities, while at the same time, addressing local challenges and the needs of our local communities.

The business years since our 2016 report were the two most successful years in BorsodChem's history. The Company's integration into the Wanhua Group was successfully completed, and this will improve the competitiveness and global embeddedness of BorsodChem. Our sales revenue showed marked growth, we were able to expand our workforce, and in addition to the multifarious development of the existing production technologies, we started to expand our MDI and PVC production capacity and to invest in new plant developments. We completed our new Membrane Cell Chlorine plant, and our Aniline plant investment was approved by the European Union, and this will lead us to significantly reducing the emissions generated by our supply chain, while the production potential of our Company and the country will also increase. In the coming years, development and innovation will continue to be decisive factors for BorsodChem, as we are planning new investments and product innovations.



As a chemical company, we must always consider the environmental impacts of our activities with particular care. In addition to our various projects aiming to reduce our energy intensity and emissions and to promote the responsible use of natural resources, we are dedicated to protecting the natural resources of our surrounding area. Besides the ongoing recultivation of the Salty Lagoons and Old Sludge area, we have successfully completed the landscaping and recultivation of the Berente landfill site.

As one of the largest employers in the region, we have a significant impact on the lives of our employees and their families. For them, BorsodChem offers a stable and long-term workplace. In addition to our efforts to increase our employees' satisfaction, it is our top priority to achieve an ever-higher level of occupational safety by the continuous development of our safety culture. We are dedicated to ensuring that our "Safety First" principle is never be overwritten by business interests. Besides our comprehensive regulatory and management systems, we installed many awareness campaigns that helped BorsodChem to achieve an outstanding safety performance in the last two years.

I am also pleased that in recent years we started to support the work of various educational institutions. We cooperate with an increasing number of public and higher educational institutions, and beyond theoretical knowledge, we provide practical experience for students. Furthermore, we also created our own educational center with state-of-the-art technology that also provides significant assistance to our own training programs.

It is motivating to see that more and more market players, including our own customers and suppliers realize the importance of sustainable operations – And I am proud that BorsodChem Zrt. is one of these companies. Every day we work for a more sustainable and successful chemical industry and company, and we are delighted to present our results in the following chapters.



Dear Reader,



Liu Junchang
Former CEO – BorsodChem Zrt.
(until 1 March 2019)

Publishing the first Sustainability Report of BorsodChem in 2017 marked an important milestone in the Company's life. However, disclosing the second Report now is also an important step: in this way, BorsodChem seeks to reassure others that it is committed to sustainable, responsible operations and continuous development in the long run.

In the last couple of years, we set some ambitious long-term goals both in terms of business and sustainability. For BorsodChem, social and environmental responsibility is a top priority, it was constantly embedded in our everyday thinking and activities, and was always there when we made decisions. Our achievements detailed on the following pages also underline how BorsodChem is building the future of a successful and responsible company.

So, I would like to thank our employees, owners, business partners and all of our stakeholders with whom we have continued to cooperate in a fruitful way over the last seven years, and hence they also contributed to the success and sustainability endeavours of our organization.

I am confident that by continuing on this path, BorsodChem will remain an exemplary, pivotal and competitive company that creates value for future generations.





“*Nowadays, as a chemical company, we face enormous challenges both because of the tightening regulatory environment and the increasing importance of sustainability. At the same time, however, these challenges bring opportunity. We believe that focusing our attention on sustainability is more important than ever before. This approach fosters our continuous development, increases our cost efficiency and reduces risks in our supply chain. With the combined energy and knowledge of our 2 850 employees and by improving our products and technology, we are striving to further expand our contribution to sustainable development. We are convinced that our business decisions should never override considerations of health and safety and the environment. Our second Sustainability Report provides an excellent framework in which to present our efforts towards sustainable and continuous development and the steps we take to meet the high expectations of our stakeholders. The Report highlights how we work for sustainability. I hope this Report will give you interesting and valuable insights into the operations of our Company, providing you with new information and proving our commitment to sustainability and continuous development.*

Tibor Klement
Director EHS

Our Achievements in 2018





21%

decrease in our pollutant emission intensity compared to the previous year



Our energy to net sales intensity ratio improved by

15%



2 838
employees



EUR

136 000
spent to support local communities

48%

of new employee hires were under the age of 30



We delivered **88 734** hours of training courses to our employees



1 000 000
tons of strategic raw materials purchased



We invested EUR **215 million**



5 ISOPA audits were performed in the interest of our clients' safety

We passed **100 percent** of our clients' audits



- PRODUCTION SITE
- TECHNICAL CENTER
- OFFICE





BorsodChem: Chemistry from a Modern Perspective

About Our Company

BorsodChem Zrt. is one of the leading plastic raw material and inorganic chemical producers in Europe, and a member of the Wanhua Chemical Group Co. Ltd. since 2011. We supply high-quality MDI, TDI, PVC and chloralkali products to downstream industries, particularly the construction, automotive, furniture and clothing industries. Our products are present in everyday life, people of all ages use them in various areas of life.

Our headquarters and the center of our Hungarian production activities are located at our site in Kazincbarcika, where the majority of our employees work. In addition to the Kazincbarcika site, we have a production unit in Ostrava in the Czech Republic, and sales subsidiaries and offices in 6 European and non-European countries, some of them operate with independent legal status.¹

The majority of our products are sold in Western Europe, but we also supply significant amounts to clients in Central and Eastern Europe. Furthermore, as a global supplier we are present in North and South American, African and Middle East and Far Eastern markets too. As a member of the Wanhua Group, BorsodChem Zrt. is committed to sustainability. Thanks to the favourable market dynamics and efficient operations, our Company is becoming more and more effective, providing opportunities for further development.

Since our last report in 2016, the restructuring process of the Wanhua Group has been completed, the sole owner of BorsodChem Zrt. is the Chinese Mount Tai Chemical Holding Company. As a result of this integration, the structure of our group has been simplified, our subsidiary company MDI Production Ltd. and our former parent company First Chemical Holding Vagyonkezelő Kft. merged into BorsodChem Zrt. in 2017.

Financial results	2015	2016	2017	2018
Operating Profits/Revenues (%)	2.2%	8.4%	26.4%	26.8%
Return on assets (%)	1.9%	6.4%	26.2%	24.6%
Investments (million EUR)	48.3	31.4	83.1	131.9

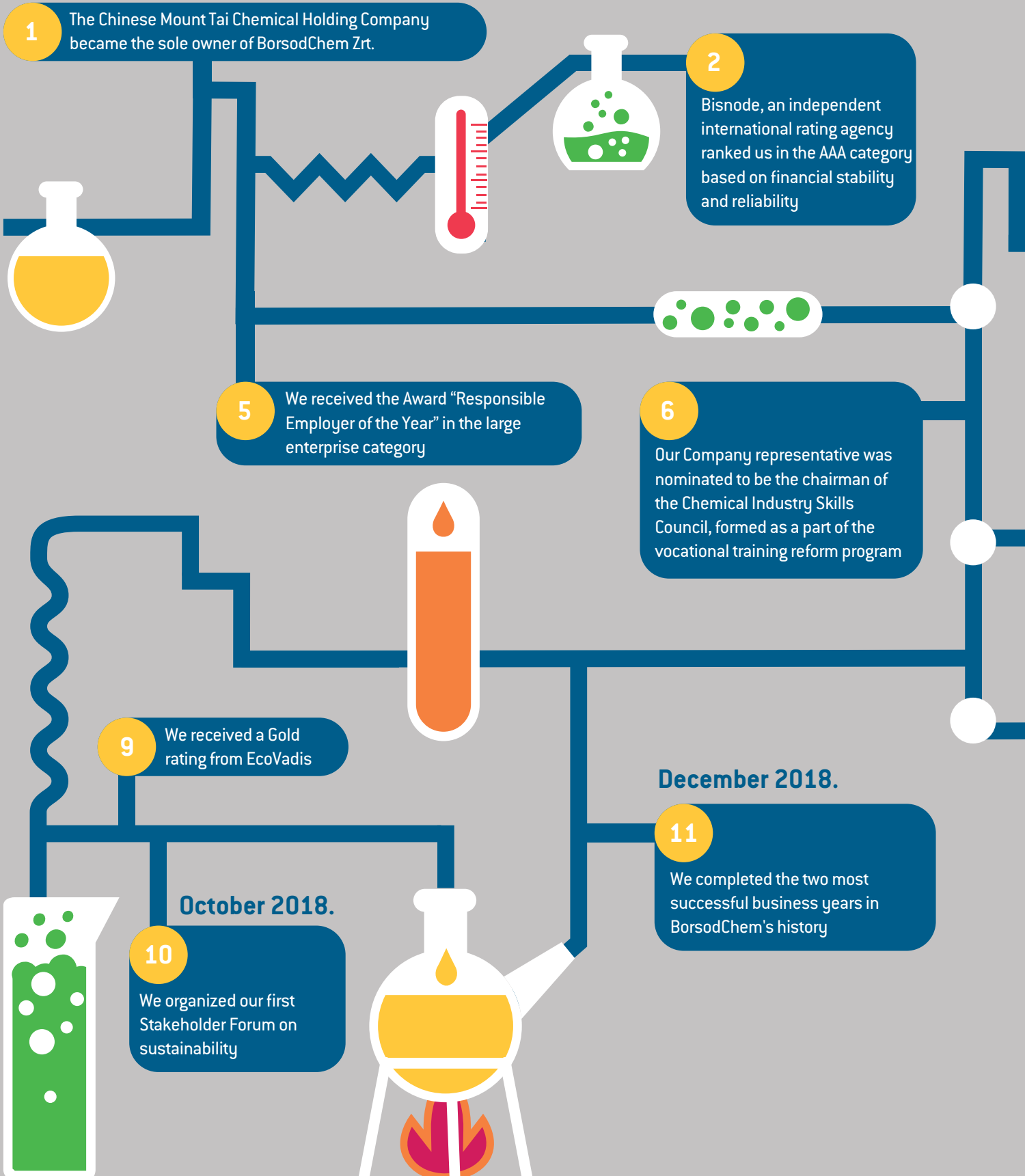
Financial indicators (thousand EUR)	2015	2016	2017	2018
Total assets	1 615 313	1 837 645	1 699 147	1 912 867
Equity	595 826	714 991	680 443	1 123 434
Liabilities	1 019 488	1 122 654	1 018 704	789 434

¹ The scope of the report does not cover the operations of the subsidiary companies. The production facility in Kędzierzyn-Kozłéban, Poland was sold in 2017.



What Has Happened at BorsodChem Since Our 2016 Report?

2017.





3

The 10-year recultivation process at the Berente landfill was completed

We founded the EHS Committee at our Company

4

2018.

7

The European Commission approved state aid for us to build our new aniline plant, recognizing the environmental and economic benefits of the investment

8

Our new membrane cell chlorine plant was completed, and we carried out capacity expansions at several plants

2017-2018

12

Our first Sustainability Report won the Deloitte Green Frog Award special prize for the Best First Sustainability Report

13

February 2019.

The Wanhua Group capital structure reforming process ended, Wanhua Chemical Group Co Ltd. became our Parent Company





Products and Services

We produce isocyanates, PVC resin, chlor-alkali and special chemical products.






Isocyanates

Our ONGRONAT® isocyanates (methylene diphenyl diisocyanate – MDI and toluene diisocyanate – TDI) are the raw materials for polyurethane (PU) production. Polyurethanes are

versatile plastic materials that contribute to a more comfortable and environmentally friendly life with a wide variety of applications.



Read further information about our products and services on our website, or on pages 27-30 of our Sustainability Report of 2016.

Industry	Attributes	Impact
 Automotive	<ul style="list-style-type: none"> – Decreased noise and vibration in the passenger compartment – Leather-like surfaces 	<ul style="list-style-type: none"> – Thanks to its low unit weight, PU significantly reduces the total weight of vehicles, resulting in emissions reduction
 Wood	<ul style="list-style-type: none"> – Strong adhesive effect on wood fibre and chipboard with different hardness 	<ul style="list-style-type: none"> – Does not contain toxic and carcinogenic substances – Provides fast bonding, strong and waterproof adhesion
 Furniture	<ul style="list-style-type: none"> – Leather-like surface – Adhesive material 	<ul style="list-style-type: none"> – Making industrial waste foams and materials (e.g. carpets) reusable
 Construction	<ul style="list-style-type: none"> – Adhesive, bonding, insulating PU foams with lower thermal conductivity compared to similar materials and delivering the same performance throughout their lifecycles – Can be produced in spray form – Sandwich panels, pipe insulations 	<ul style="list-style-type: none"> – As an insulating material, it results in energy savings of 16-25% – The spray can be applied to any surface – In addition to thermal insulation, it inhibits the penetration of air, moisture, dust and pollens
 Textile and clothing	<ul style="list-style-type: none"> – Various uses due to its formability – Laminating effect on waterproof fabrics – Used in sportswear due to its resistance 	<ul style="list-style-type: none"> – The use of plasticizers and solvents in shoe production can be significantly reduced or replaced by PU solutions



PVC

Our ONGROVIL® PVC product range offers solutions for the production of flexible and rigid products. It can be variously used in the construction industry (primarily for manufacturing pipes and fittings, window and door profiles, industrial films and floor coverings), for manufacturing cable insulations and

electronic assemblies, as well as certain packaging materials, such as foil and bottles. The durability and excellent technical parameters of end-products make the scope of applications extremely wide.

Industry	Attributes	Impact
 <p>Construction (window and door profiles, fittings)</p>	<ul style="list-style-type: none"> – Long lifespan, weather resistance, UV stability – Easier mounting, cleaning – The appearance can be adapted to modern architectural and aesthetic solutions – Lightweight construction – Selective collection and multiple recycling are possible 	<ul style="list-style-type: none"> – Reduction in maintenance costs – Does not require protective coating, painting – Lower costs and cost-benefit ratio – More efficient thermal insulation of buildings – Replacing wood and metal solutions
 <p>PVC pipes and fittings</p>	<ul style="list-style-type: none"> – Long lifespan – Resistant to corrosion and limescale – Resistant to chemicals – Hygienic solution, easier cleaning – Easier mounting, low weight – Manufacturing and assembly pipe waste can be recycled 	<ul style="list-style-type: none"> – Reduction of maintenance costs for both indoor and outdoor applications – Replacing communal concrete and metal / steel pipes – Versatile usability – Cheaper shipping, handling and assembly costs – An affordable, cost-effective solution for drinking water and wastewater transport in areas with underdeveloped infrastructure



 <p>Cable manufacturing and other electronic fittings</p>	<ul style="list-style-type: none"> – Excellent electrical insulation properties – Easy installation, good workability – Favourable costs of production – Heat and water resistance, good chemical resistance – Self-extinguishing in regards of flame resistance – Durable coating resistant to environmental effects – Wide range of operating temperature 	<ul style="list-style-type: none"> – Improved fire safety of electrical cables and equipment – Reliable operation – Wide range of indoor and outdoor applications
 <p>Other applications: flooring: Flexible and Rigid Packaging</p>	<ul style="list-style-type: none"> – Excellent abrasion resistance and cleanability, flexible surface against cold coatings – Chemically cleanable surface – Water resistance, insulation – Well-formable: varied colours and surfaces to suit client needs – Low noise of steps – Easy to process, shape and colour 	<ul style="list-style-type: none"> – Durable, hygienic and aesthetic coverings at affordable prices for both the private and public sectors – Due to its natural appearance, replacing wood and stone tiles with increased user comfort
 <p>Flexible and Rigid Packaging Materials (Films, Trays, Boxes, Tubes, Wallpapers)</p> <p>Waterproof membranes</p> <p>PVC sheets</p>	<ul style="list-style-type: none"> – Has good mechanical properties 	<ul style="list-style-type: none"> – Packaging material that is easy to handle – The process of recycling is only partially solved and requires improvement (collection, cleaning, processing)

Chlor-alkali products

In addition to plastic materials, our Company produces hydrochloric acid, sodium hydroxide solutions and sodium hypochlorite products.

The main applications of chloralkali products are industrial water treatment, e.g. regeneration of ion exchange resins, cleaning of industrial waters, pH adjustment, and the production of water treatment agents. Hydrochloric acid is also an important raw material for manufacturing chemical products and detergents, it used for metal etching, surface cleaning, various textile and food applications.

Sodium hydroxide is an important raw material for the organic and inorganic chemical industry, an excellent detergent and solvent. Major users include the paper industry, alumina production, food and textile industry. In addition it is used for water treatment and also serves as an important raw material for other chemical and cleaning products.

Sodium hypochlorite is purchased by customers in the chemical and textile industries as well as companies working with water treatment because of its high disinfectant effect and efficacy against bacteria and microorganisms.



Services

We provide professional and technical services related to our isocyanate and PVC products. The services and quality control are carried out in cooperation with the Vinyl Technology Department and the PVC Plant. The Technical Service and Technological Development Unit at Gödöllő serves as a product development laboratory as well as a technical demonstration room, and our employees working there provide technical and product development services to our clients.



Strategy and Values

As a member of the Wanhua Group, our goal is to further strengthen our role as a leading plastic raw material and chemical manufacturer in Europe, acting in line with our Core Values. To realize the market potential within and beyond the European Union, our Company carries out new investments, and capacity enhancements, continuously improving the quality of our products and we develop the ability to respond to customer needs flexibly.

In order to achieve our goals, we secure the necessary human resources for high quality operations, and with new investments we introduce new technologies to our production processes, and continuously monitor and reduce our environmental impacts.

-  **Capability of and willingness to change**
-  **Being practical**
-  **Commitment to excellence**
-  **Customer orientation**
-  **Performance orientation**
-  **Team work**



More information about our strategy and values on our website or on pages 20-23 of our Sustainability Report 2016.

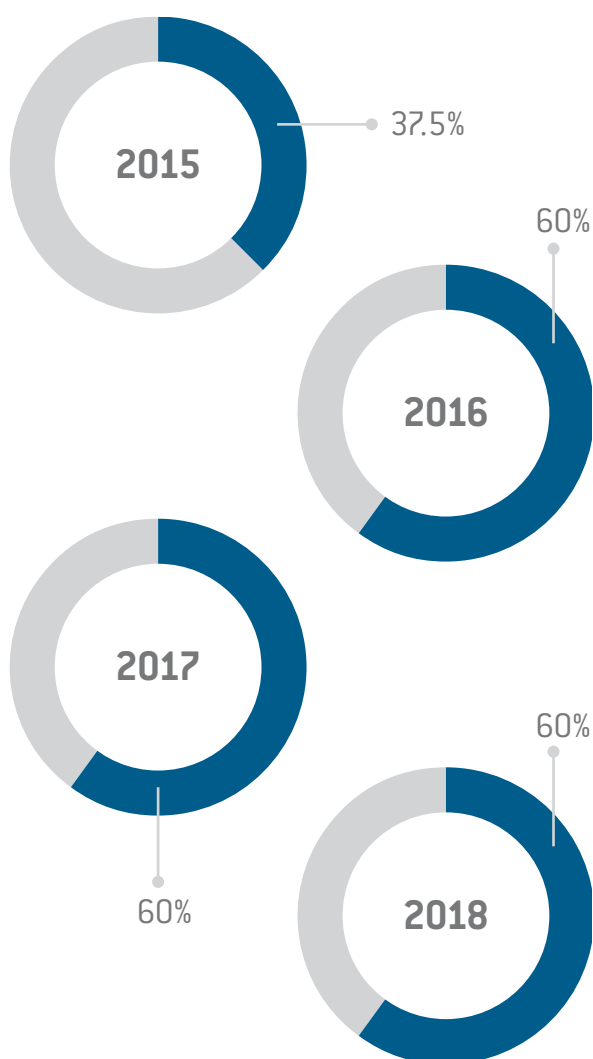


Corporate Governance

The governing body of the Company is the Board of Directors, which is responsible for all decision-making related to BorsodChem's management. Our Company is structured by functions, which serves the efficient realization of our strategic goals. Managers of organizational units are responsible for implementing the corporate strategy and coordinate operational processes.

By the end of 2018, 60 percent (six persons) of our senior executives were Hungarian citizens.

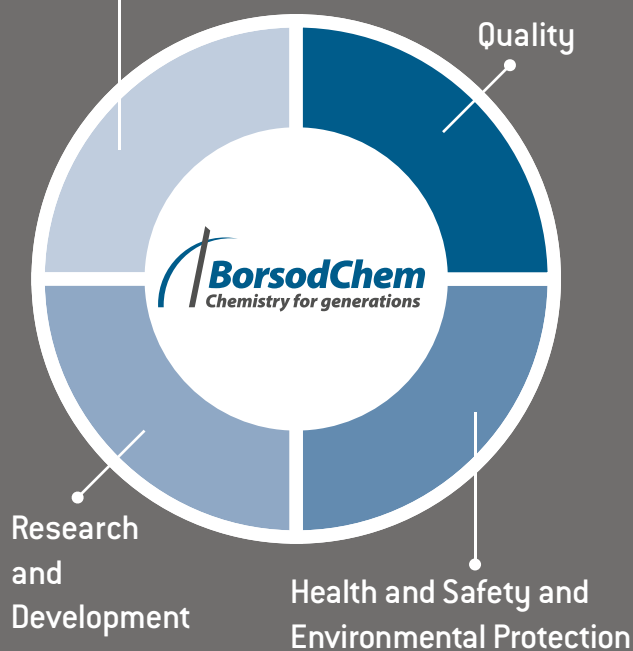
Ratio of local senior executives at the end of the year



Our Strategy

- 1. Energy Efficiency** – In our operations, we constantly strive to reduce energy intensity, energy consumption, emissions, waste production and water use.
- 2. Quality** – We deliver our products and services at high quality, maintaining the image of a reliable partner with our customers.
- 3. Research and Development** – We continuously optimize our production technology, and expand our site and operation capacities. In addition, we place great emphasis on the development of our employees.
- 4. Health and Safety and Environmental Protection** – The safety and health in the workplace and of our people, as well as the protection of the environment are of key importance, issues which can never be overwritten by business interests.

Energy Efficiency





Our Leadership:



Lu Hongjie
Chairman of the Board



Liu Junchang
Chief Executive Officer



Li Junyan
Vice President Finance and IT



István Hegedűs
Chief Financial Officer



Csaba Kohajda
Chief Operation Officer



László Kruppa
Chief Commercial Officer



Tamás Purzsa
Vice President & Chief General Engineer



János Szabó
Vice President Procurement

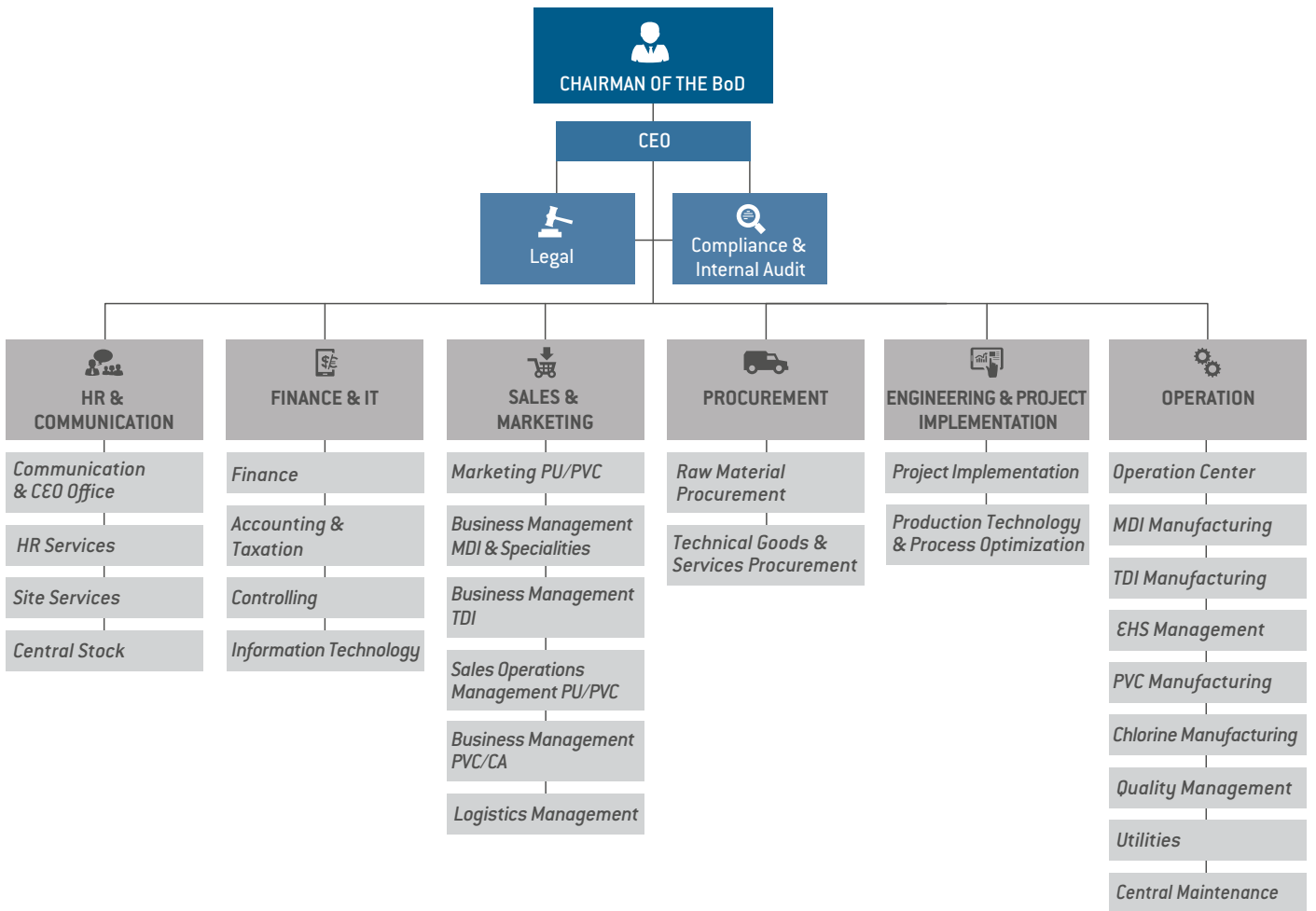


Vladimír Karkoska
Vice President Strategic Projects



Béla Varga
Vice President HR and Communication

In order to maintain the ownership mentality and ethical operations, we developed our Code of Ethics which is available in Hungarian and English. The Code contains guidelines covering 10 subject areas. Any potential violation of the Code or our policies can be reported through our Ethics Line by our employees and our contractors.



In order to maintain the ownership mentality and ethical operations, we developed our Code of Ethics which is available in Hungarian and English. The Code contains guidelines covering 10 subject areas. Any potential violation of the Code or our policies can be reported through our Ethics Line by our employees and our contractors.

Read more about our Code of Ethics on pages 22-23 of our Sustainability Report 2016



BorsodChem's responsible, effective and sustainable operation is grounded on a well-designed integrated corporate governance system that includes quality management, health and safety, energy, and environmental management. This integrated management system also ensures our compliance with ethical and legal provisions.

Our product quality goals are realized through the ISO 9001 Quality Management System (QMS), which has been operating for more than 20 years. Our environmental goals are supported by the third-party certified ISO 14001 Environmental Management System (EMS). Both of these systems were successfully recertified in 2018. In order to preserve the health of our employees – one of our most important values -, we have been operating the OHSAS 18001 Occupational Health and Safety Assessment Series (OHSAS) system since 2010. The ISO 50001 Energy Management System (EnMS) that drives efficient energy use forms a part of our integrated management system since 2016.

Bearing in mind the rational management of environmental resources and the efficiency of the Company, it is in the interest of each production manager to reduce the specific material, energy, and water consumption required to produce a unit product, and to minimize the amount of waste generated. Performance indicators based on such objectives are the basis for evaluating managers.

New ways of risk management at BorsodChem

Our Company introduced a new comprehensive risk management system in 2018. Each organizational unit assessed the potential risks within their area of competence, for which a unique risk sheet and a list of risk mitigating measures has been prepared. The risks identified were integrated into a standardized category system by the Management Systems Office (MSO).

The managers of the units must annually assess and evaluate the risks and the mitigation measures related to their internal and external environment, as well as to their stakeholders. During these risk identification and assessment processes, the units involved reveal and assess their potential risks using SWOT analyses, identify risk levels, and make recommendations for risk management measures.

The risks identified by the OHSAS system and the environmental impact risks identified by the operation of the EMS system are also included in the corporate risks. The results are aggregated by the MSO, grouped according to the nature of the risk and the level of the risk value, and then shared with process owners involved in the nature of the risk, and reported to the senior management in a report.

At the end of 2018, we identified 51 new risks compared to the previous half year, and because of these measures, we were able to reduce the risk classification of 8 risks. At the end of 2018, our risk system contained a total of 241 identified risks, of which 83 were low, 89 medium and 69 high level.





Sustainability at BorsodChem

Our Sustainability Commitments and Progress

Goal	End date
Status	Progress as planned Development needed Fall-back Achieved

HSE COMMITMENTS:



Decreasing our CO₂ footprint

2021



By 2021, we will start building our MNB / Anilin Plant, saving more than **14 000 tons of GHG emissions** from raw material transport. The project is in progress.

2030



By 2030, we will **reduce our specific GHG emissions by 40%** compared to 2013. Based on current data, reduction between 2013 and 2018 was 9%.



Recultivation

2019



Recultivation of our Salty Lagoon area by 2030. Elimination of 2 pools (M4 and M6) in the first phase by 2019. Recultivation of the M4 and M6 pools was successfully completed in 2018.

2034



Recultivation of the Old Sludge Area by 2034 in 3 phases (cassette No 1 by 2023, cassette No 2 by 2027, and cassette No 3 by 2034) We have obtained permits for the waste recovery for the recultivation, and we have started to create a temporary sealing layer for Cassette 1.



Water usage

2021 & 2030



The amount of **water withdrawn from the Sajó** will be reduced by **3% in 5 years compared to 2015 and by 10% by 2030.**

The amount of water withdrawn from the Sajó increased by 10.67% from 2015 to 2018, due to the increase in production volume. We have launched programs to develop water recycling technology.



Workplace safety

2021 & 2030



We will reduce the number of incidents caused by the improper use of **personal protective equipment by 20% in 5 years and by 40% by 2030 compared to 2015.**

We ran a communication campaign to prevent accidents. There were 10 incidents in 2016, 5 in 2017 and 3 in 2018 following violation of regulations.

2021 & 2030



Lost time injury rate at the workplace will be reduced by **25% in 5 years and by 50% up to 2030 compared to 2015.**

There were 5 496 lost hours in 2016, 5 096 in 2017 and 1 912 in 2018.

ETHICAL COMMITMENTS:



Trainings

Continuous



We will continuously increase the proportionality of management and employees participating in annual ethics and anti-corruption training courses.

By 2017, we quadrupled the number of participants in training courses, and in 2018 the same number of people were trained.



Business relations and communication

Continuous



We will raise communication with our business partners about ethics and anti-corruption topics, covering our whole value chain from our regular suppliers to our customers.

We have added a clause to our supplier contract regarding respect for Borsod-Chem's Code of Ethics.



DEVELOPING EMPLOYEES:



Introducing e-learning

2021



Within 5 years we will introduce e-learning in our Company as one of the most effective forms of knowledge transfer and sharing. At the same time, we can run training processes more easily and transparently with IT support.

In 2018, we started to introduce the SAP SuccessFactors training module, which provides comprehensive IT support for all of our training processes. As part of this, we plan to make most of our classroom courses e-learning in the future. The actual launch of SuccessFactors is expected in the second quarter of 2019.



IT training courses for plant managers

2018



When using process control systems for plants, it is necessary to have appropriate IT literacy. By the end of 2018, the knowledge assessment of the plant managers will be completed, and all the plant managers who do not possess the necessary level of skills will be invited to IT training courses.

In 2018, we assessed the computer skills of plant managers, which provided the basis for the training courses started in 2018, and this will be continued in 2019.



Developing the system operator training course

2017



The basic training of new entry-level system operators will be increased from the current 40 hours to a minimum of 200 hours within one year, and the theoretical training will be supplemented by practical training, using demonstration and simulation tools.

From the beginning of 2018, all new entrant system operators take part in a 240-hour primer training that includes both chemical, mechanical and safety knowledge. The course is held by our professional trainers and in-house specialists, and is based at the newly established educational center, which also bears educational tools and equipment to support educational activity..



Expanding the mentor program

2019



In 2016, 60% of new hire workers were given mentoring. This ratio will be increased by 50% within 3 years by extending the mentoring process to all new employees.

In 2017, we extended the mentoring opportunity to all new hires. In two years, the number of employees who receive mentoring increased by 21%. Although more and more people are taking the opportunity, in the future we are planning to make the participation in mentoring compulsory for all new entrants.



SOCIAL RESPONSIBILITY:



Continuous



Organizing volunteer groups

We organize activities for the well being of local communities without expecting any benefits from them. Organizing volunteer groups strengthen the team spirit, solidarity and trust. “Let’s do something good and feel better by helping someone.”

In December 2018, as a team building event, the HR team cooked 120 meals and delivered them to people in need.

Our employees and their families regularly participate in tree planting both at our site and in the neighboring area.

We organized a Christmas fundraising with our employees, and donated the collected gifts to two institutions that care for the poor.

INCREASING WORKERS' QUALITY OF LIFE:



Continuous



30-day challenges

Setting organizational **30-day challenges** that are related to some kind of exercise or a healthy lifestyle with the purpose of promoting regular movement, the **culture and lifestyle of health.**

In the second quarter of 2018, we launched challenging programs aimed at promoting the importance of sport and a healthy lifestyle. At the end of the year, the best-performing organization was awarded the title of “Fittest Organization of the Year”.



2020



Health inspections

By 2020, in addition to compulsory health inspection, we will organize employee screening programs in the framework of health promotion projects (e.g.: screening stations, etc.)

In 2018 we signed an agreement with our health insurance service provider to provide regular screenings for our employees, and also extended our Medicover health insurance to all of our employees.



BorsodChem actively supports the implementation of the Sustainable Development Goals (SDGs) that were developed by the UN in 2015. These goals represent an important step towards a common understanding of and fight against global challenges, and need to be addressed worldwide to

achieve a sustainable development. In light of our profile and economic size, we also want to contribute to several of these global goals. In our report, we emphasize how we can facilitate the realization of the global sustainability goals with our activities.

1 NO POVERTY




- We offer a fair wage and a stable workplace
- We contribute to the development of the local economy and education

Chapter:

- We create value
- BorsodChem as an employer
- Training and education

2 ZERO HUNGER



- We offer a fair wage and a stable workplace
- We contribute to the development of the local economy

Chapter:

- We create value
- BorsodChem as an employer

3 GOOD HEALTH AND WELL-BEING




- We consider preserving our employee's health and security as a priority
- The security of our clients is a top priority in our processes

Chapter:

- Responsibility for our colleagues
- Responsibility for our clients

4 QUALITY EDUCATION



- We run widespread educational activity for students in public and higher education
- We educate our employees with up-to-date knowledge material in our internal training system

Chapter:

- Training and education

5 GENDER EQUALITY




- We ensure equal opportunities and treatment

Chapter:

- Diversity and equal opportunities

6 CLEAN WATER AND SANITATION




- We have a responsible water and waste water management
- We strive to decrease our specific water usage

Chapter:

- Water consumption
- Waste water and waste management

7 AFFORDABLE AND CLEAN ENERGY




- We strive to reduce our specific energy usage and to improve our energy efficiency

Chapter:

- Energy management

8 DECENT WORK AND ECONOMIC GROWTH



- We contribute to the economic development of the national economy and our region
- We offer stable jobs as one largest employers of the region

Chapter:

- We create value
- BorsodChem as an employer



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



- We implement innovative technological investments
- We contribute to the expansion of industrial production in Hungary

Chapter:

- We create value
- Indirect economic impact

10 REDUCED INEQUALITIES



- We support local communities
- We contribute to the elevation of the Northern-Hungarian region
- We ensure equal opportunities and treatment

Chapter:

- Responsibility for local communities
- Indirect economic impact
- Diversity and equal opportunities

11 SUSTAINABLE CITIES AND COMMUNITIES



- We support local communities
- We contribute to the support of the Northern-Hungarian region

Chapter:

- Responsibility for local communities
- Indirect economic impact

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



- We aim for sustainable raw material procurement and production
- We encourage responsible and sustainable operations throughout our value chain

Chapter:

- Environmental performance

13 CLIMATE ACTION




- We strive to continuously reduce our GHG emissions and air pollutants
- We optimize and shorten our procurement routes
- Our products contribute to climate-friendly solutions

Chapter:

- Emissions to air
- Products and services
- Sustainable application of raw materials

14 LIFE BELOW WATER




- Reducing environmental risks by shortening and optimizing intercontinental procurement routes

Chapter:

- Sustainable application of raw materials

15 LIFE ON LAND



- We take an active role in preserving nature conservation areas

Chapter:

- Biodiversity

16 PEACE, JUSTICE AND STRONG INSTITUTIONS



- We act responsibly in line with our values

Chapter:

- Strategy and values
- Corporate Governance

17 PARTNERSHIPS FOR THE GOALS



- We participate in industry cooperation

Chapter:

- Together for a sustainable chemical industry




Materiality Assessment

In accordance with the GRI guidelines, this year's Report covers topics that are relevant to our stakeholders and our business operations. Our material topics were determined as a result of our materiality assessment conducted in 2016 with the professional support of KPMG Tanácsadó Kft. The topics we identified in 2016 provide the basis of this Report.

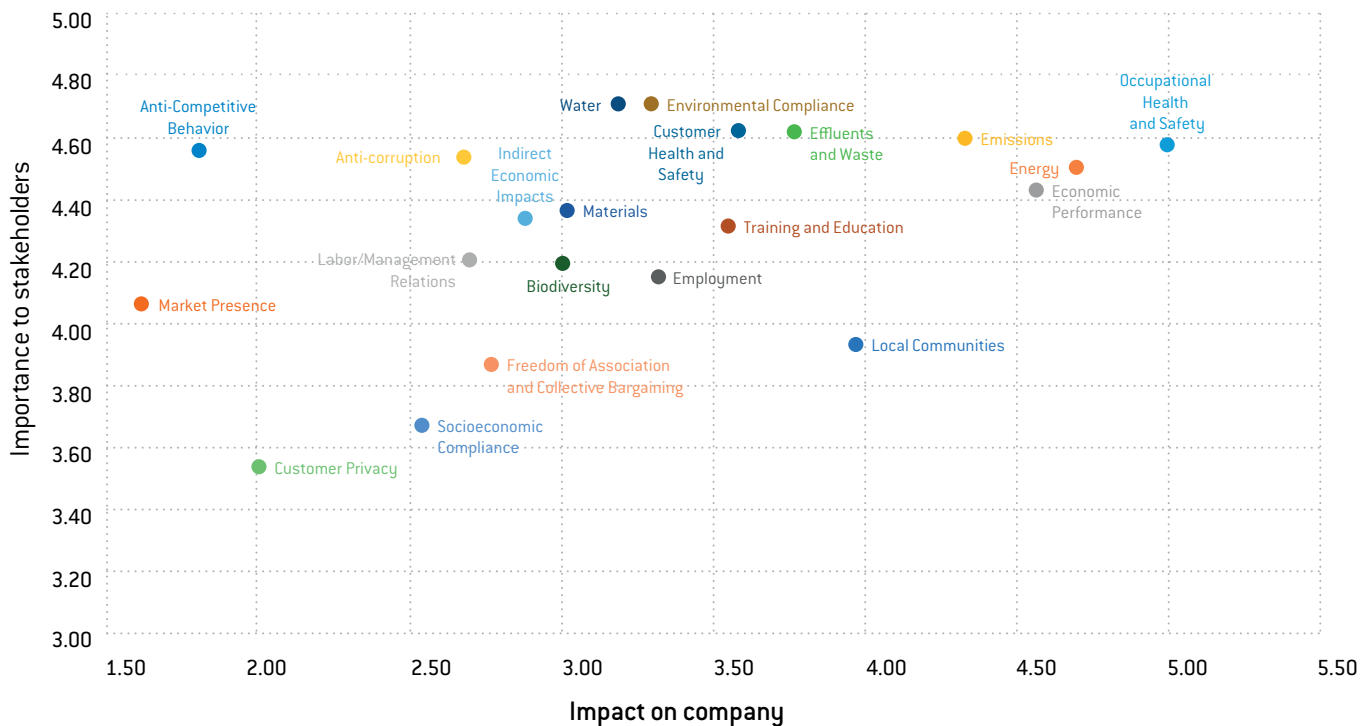
Relationship with Our Stakeholders

As a raw material producer, our activities have various impacts on the economy, society and the environment. The quality of our relationship with our stakeholders has a significant impact on our operations and success. We consciously nurture our relationships with our stakeholders in order to strengthen the positive and reduce any interactions.



















Bővebben a lényegességi felmérés folyamatáról a 2016-os Fenntarthatósági Jelentésünk 8-9. oldalán olvashat

Materiality Assessment - BorsodChem Zrt. 2016





Stakeholders	Methods of engagement	Frequency	Topics in 2017-2018
 Employees	<ul style="list-style-type: none"> – Intranet, information displays – Negotiations with representative bodies – Roundtable discussions with executives, HR Let's Chat programs on site – Employee forums, CEO Coffee-time Meeting 	<ul style="list-style-type: none"> – Continuous – Monthly – Quarterly – Annually 	<p>Measures to raise income, informative presentations on new benefit elements, introducing trial period for 12-hour work schedule, health promotion and team buildings</p> <p>Corporate achievements, goals and challenges, development strategies, investments, Wanhua Group integration</p>
 Owners	Business reports, non-financial reports	 Continuous	Financial and non-financial performance of the Company, finalization of the legal integration
 Suppliers	Daily business relationship, supplier audits	 Regular	Quality of raw materials, security of supplies
 Customers	Customer forum; Customer satisfaction survey; Sustainability Stakeholder forum	 Regular	Product quality and product safety, ethical corporate behaviour, circular economy, sustainability reporting
 Regulatory bodies	Open day, forum, authority requests and checks, permitting	 Regular	Describing the impact of new investments, developments, environmental activities and compliance
 Local communities	Residential forum; HSE week: green tour; Open day, support and attendance for various events	 Regular	Informing about the impacts of new investments, environmental protection activities, corporate social responsibility, informing about the everyday activities of BorsodChem
 Media	Occasional requests, press releases	 Occasional	News regarding the operations and initiatives of BorsodChem
 Educational institutions	Professional consultations, cooperation agreements (e.g. dual training), running/cooperating with external university departments, organizing plant visits	 Continuous	Increasing the number of students, especially in chemistry education, career guidance initiatives
 Students, potential future employees	Dual training, career guidance days, vocational training, scholarships	 Continuous	Delivering professional knowledge, introducing career opportunities in the chemical industry and BorsodChem, career guidance initiatives





Economic Performance



We Create Value

In 2017 and 2018, we worked to improve ourselves further and create value for our owners, employees and society. The strategy defining our economic performance has been developed by the Owner, while the Chief Financial Officer (CFO) is responsible for the financial results. We perform accounting in line with Hungarian accounting rules. In addition, accurate accounting and financial reports are guaranteed by our accounting policies, our cost accounting policy and our management accounting policies. Managing cross-company transactions, involving market risks is ensured by our transfer pricing, financial risk management and competition law policy. Our economic performance is monitored by controlling and profitability analysis, business planning and continuous benchmarking. In order to ensure effective and fair competition, our goal is to comply with our own policies and legislation assured by regular internal and external audits.

The past two years were the most successful years in BorsodChem's history, we were able to significantly increase our performance and cost efficiency, expand our capacity, expand our market presence, and further develop our products and technologies.

In 2018, our Company achieved EUR 444 million profit after tax, which was 9% higher than in 2017 and almost four times more

than in 2016. Since our last report in 2016, our operating costs have decreased by 4.4%, wages and benefits paid to our employees increased by 39%, payments (taxation) to government increased by 223%, and our community investments increased by 40%. However, these expenditures represent only a part of our increased revenues: since 2016, our Company's debt has fallen by nearly 30%, EUR 333 million. Thanks to the funds scheduled to debt reduction, we now have a sustainable and healthy debt to equity ratio, by the end of 2018 our equity exceeded our debt amount, accounting for 142% of it.

Due to our results, during this period we have been able to implement a number of plant development and capacity expansion projects. One of these projects was financed through development loans, while in the case of all the other projects we were able to carry out the investments using exclusively our own resources.

Our successful financial performance was recognized externally as well. In 2017 Bisnode, an independent international company rating agency granted us the AAA classification based on our financial stability and reliability. Only 0.6% of Hungarian companies receive this rating. We are proud that our Chief Financial Officer, Mr. István Hegedűs won the CFO Master 2018 award.



Income and expenditures (million EUR)	2015	2016	2017	2018
Income	1 464.11	1 449.88	1 712.26	1 774.61
Net revenues	1 398.35	1 406.46	1 683.40	1 757.93
Other revenues	65.76	43.42	28.86	16.68
Expenditures	1 420.84	1 334.66	1 303.27	1 330.75
Operating costs	1 352.60	1 261.45	1 182.47	1 206.04
Employee wages and benefits	58.54	60.60	77.73	84.20
Payments to government	9.60	12.51	42.97	40.37
Community investments	0.10	0.10	0.10	0.14
Profit after tax	43.27	115.22	408.99	443.86





As an industry leader, we use high-level and innovative technologies, constantly striving for product and technology developments, as well as better efficiency, while we aim to handle environmental concerns. The capital granted by our Chinese Owner provides a basis for expanding our production capacity and the introduction of new, more efficient technologies. By combining the production technology of BorsodChem and Wanhua, we are able to significantly increase our cost efficiency. Mutual knowledge sharing contributes to technology and product development, while global market presence strengthens our market positions and leads to the production of higher value-added products.

BorsodChem Zrt. has sales offices in Istanbul and Zagreb, and sales subsidiaries in Italy, Brazil, Russia and China. With the external sales offices, we are directly present in the regions, so with our in-depth market knowledge we can cultivate a closer relationship with our customers and respond more effectively to the market changes and new challenges.

Thanks to our hydrochloric acid conversion plant operating since 2016, we have been able to increase our raw material independence and reduce our environmental footprint caused by transporting. The construction of our Membrane Cell Chlorine Plant. was completed-production began in 2018, and it replaced our mercury cell electrolysis plant. With this development, we have successfully switched to one of the most up-to-date and best technologies available, that also has the lowest environmental risk of all the best available technologies. By using the new membrane cell technology, we can realise significant energy savings, hence reduce our CO₂ emissions and maintain a more water-saving operation.

In addition to our existing product capacities, we are planning to expand our product range, while conducting investments aiming to increase raw material security. We started major investments in 2018, we are planning to install aniline, nitrobenzene and nitric acid plants at the Kazincbarcika site, which is further described in Chapter 4.2 (*Sustainable application of raw materials*) of this report.

With the involvement of our colleagues and the help of LEAN and ESP ideas, we are further optimizing our processes, thus reducing the environmental load while increasing our economic performance.



Indirect Economic Impacts

Just like any other company in the chemical industry, our operations generate indirect economic impacts that can be identified in the wider economy and the labor market.

Impact on the national economy

BorsodChem has a positive impact on public finances, primarily through the amount of tax paid. In addition, most of our products are sold abroad, so we also improve the foreign trade balance of the country. In the past two years, we have made several efficiency-improving and capacity-expanding investments that will have positive long-term impact on both our Company's economic performance and on the national economy.

Our Company offers continuous work and livelihood to people living in the region, on the one hand to our employees, and on the other hand, to our suppliers and partners.

In addition to supporting the development of local businesses, BorsodChem supports local communities as well as cultural and sporting events. For example, we contributed to the building of roundabouts and related traffic safety developments at the junction of road No. 26 and No. 27 at Sajószentpéter.

Impact on the labor market

The successful operations of our Company have a significant impact on the social mechanisms of the region, since we contribute to the livelihood of many families as one of the largest employers in the region. In a region that is one of the most disadvantaged both in Europe and in Hungary, we consider it particularly important to provide a predictable and stable workplace for the population.

The new plants and our continuous development require us to increase the number of our employees, therefore we create



new jobs. BorsodChem actively supports the secondary and higher education that contributes to the provision of adequately skilled labor in the region in the long term, as well as the economic development and social integration of the region.



Responsible and Ethical Business Operations

Sustainability throughout the supply chain

We want to foster sustainable thinking along our Company's entire value chain, including in our business relationships. Due to strict quality requirements, it is important for us to purchase from reputable and qualified suppliers. We expect our suppliers to establish and maintain a transparent, fair partnership, therefore our agreements include the prohibition of corruption, and involves our Code of Ethics, as well as safety, health and environmental considerations. Just like our customers, our Company sees sustainable operations as a fundamental goal, so we expect mutually responsible operation and compliance with ethical standards.

All suppliers have an equal opportunity at our tenders. Before we engage a new supplier or contractor, we carry out a pre-assessment to ensure that they can meet our expectations and requirements. This includes a questionnaire on the maturity of the management systems at the supplier company, and a request for product specification and test delivery.

We carry out an annual assessment of our suppliers and contractors, on the basis of which we classify our partners into categories (A, B, C, D, F). If possible, we take the results into consideration during future contracting too.

If we experience a deterioration in quality or performance from any of our partners, or if we consider it necessary for

any other reason, the organizational unit that has a contractual relationship with the partner can initiate an on-site audit. Such an audit is carried out by a group managed by the lead auditor, and composed of representatives from the organizational unit using the product or service. We have been conducting on-site audits for more than 20 years, with 7 on-site audits performed in 2017 and 8 in 2018. Our goal is to increasingly integrate sustainability principles into the site audits at partners beyond our Company boundaries.

Our own operational compliance with sustainability requirements is also increasingly under scrutiny by our partners. We report about these audits to the management as part of the quarterly reports on the results of our integrated management system.

In recent years, we have received several customer requests regarding ethical business conduct, social responsibility and environmental compliance practices. Emphasizing the principles of SA 8000, BorsodChem, as a responsible employer, rejects child and forced labor, considers workplace health and safety as a priority, does not restrict workers' freedom of assembly, and does not discriminate its employees. The standard contains the essence of all the guidelines (Hotline, Anti-Fraud Policy, Code of Ethics, Collective Agreement, HSE Policy, qualification of suppliers and service providers) that support BorsodChem's responsible and sustainable corporate endeavours.

SA 8000

The SA 8000 international certification standard is designed to enable companies to develop and apply socially acceptable workplace practices. The standard includes the

conventions of the International Labor Organization, the Universal Declaration of Human Rights and the United Nations Children's Rights. BorsodChem has complied with SA

8000 in the audit carried out by SGS in 2016. This demonstrates our commitment to responsible and sustainable operation to our employees and customers.



Fair competition

Our goal is to provide an example to other organizations and society at large regarding transparent operations. In line with this effort, we wish to become Europe's leading plastic producer in fair competition. When working together with our partners, we put great effort into compliance with competition laws, and our management receives training courses on this topic.

As stated in our Code of Ethics, our employees are obliged to report any competition-related risks identified. Potential reports are received and processed as defined in our internal Regulation based on Ethics Line Policy. It is the responsibility of our Legal Department to ensure legal compliance with fair competition rules, as well as any other compliance areas. We continuously monitor needs and requirements to ensure that all resources, such as training courses, are available.

No legal action was launched against BorsodChem regarding anti-competitive behaviour or violations of anti-trust and monopoly legislation in 2018 or in the five previous years. Therefore we did not receive any fines or non-monetary sanctions. We attribute this to our corporate culture and strong oversight of our internal regulations.

Stand against corruption

Our ethical commitment is just as important as our business performance, so the generally accepted ethical standards and rules of business life are always respected throughout our operations. We work against all forms of corruption and we expect our employees and partners to do so, and to comply with our norms for effective and fair operation. Our goal is to prevent any corruption associated with the Company, thus contributing to a transparent economy and practices.

Corruption (and other ethical issues) is managed by Compliance and Internal Audit with the supervision of their Director. The independence of the investigation is ensured by direct reporting to the CEO.

An internal regulatory background helps us in preventing corruption, including the Anti Fraud Policy, the Ethics Line Policy approved by the Chief Executive Officer. We shape our corporate culture and internal courses relative to this subject according to these policies.

In our staff course about ethics we also cover the prevention of corruption (all our employees participate up to director level). Each new entrant must complete the course at the beginning of their company career. In 2018 a total of 220 people attended this training course.







Environmental Performance



Due to the size, nature and social perception of our industry, we place great emphasis on minimizing the negative environmental impacts of our operations and on strengthening the positive effects. We prioritize the efficiency development of our materials and energy use.

Sustainable Application of Raw Materials

Procuring and handling raw materials

The supply chain of BorsodChem is based on the logic of obtaining the sufficient quantity of raw materials of appropriate quality in order to ensure uninterrupted production, from the lowest possible geographical distance. Most of our raw materials (ethylene, toluene, aniline) are petrochemical products.

As the number of petrochemical complexes are limited in our region, our goal is to make the most of the available resources. Another group of raw materials (methanol, ammonia, nitric acid) can be obtained by processing natural gas. In this case we also strive for direct purchase from a local producer. In volume, rock salt is the most significant raw material we use. Its quality is of utmost importance due to the sensitivity of the electrolysis technology.

Our strategic goal is to increase the vertical integration of our supply chain and to reduce the proportion of supplied raw ma-

terials by developing our site in order to produce raw materials here. Thus, this would enable us to reduce our costs and the environmental impact caused by the transportation of raw materials. Hence, we can make our operations more predictable, because the potential problems occurring at our suppliers may affect our production and business operations.

In order to achieve vertical integration, we are planning to establish many new plants in the near future, the permit processes for aniline and nitric acid plants have already begun. The Director of Raw Material Procurement, the Raw Material Procurement Department and the Purchaser responsible for the purchased material are in charge of managing sustainable raw material procurement.

The purchaser manages the supply and the inventory according to the plant's needs and the annual production plan, taking into account sustainability considerations (e.g., promoting optimal stock levels, avoiding unnecessary movement of goods).

The incoming materials are used in BorsodChem's integrated production system, the essence of which is that the technologies of our plants are built upon each other. The materials involved in or generated by the processes are used to the maximum extent possible for the production of our products, thus minimizing our losses, logistics costs, energy consumption and the amount of waste generated during production.



“Sustainable Procurement is really a priority topic among sustainability areas. For chemical industry it means a great challenge. BorsodChem is committed to strict requirements towards environmental protection, health, safety and economic rationality. As our high EcoVadis rating from 2018 shows, BorsodChem has already stepped on a road towards increasing sustainability. Procurement is doing their best to successfully implement Sustainable Development issues into daily businesses. Our procurement priorities are evolving and expanding with more and more sustainability aspects.”

Zoltán Hubay

*Director Raw Material Procurement,
BorsodChem Zrt.*

We are building a new aniline plant, leading to safer purchasing

One of our main products is MDI; its key raw material is aniline, which is currently only available from abroad or partly from outside Europe in an appropriate quality and quantity. However, the distance is not optimal due to the time and environmental load of the delivery.

As a new investment, we will create an aniline, nitrobenzene and nitric acid plant at our site, which will enable us to cover our raw material needs from 2021 and reduce our greenhouse gas emissions by 14 000 tonnes per year. The on-site production not just increases the security of supply, but reduces the risk arising from chemical transportation, and this is environmentally important. The plant will also create 50 new jobs. When we were choosing the area of the new establishment, we took into account the opinion and safety of the surrounding residents, so we chose the most remote possibility from populated regions. This site is an old plant that was left behind by the coal industry, and its re-cultivation is also in line with EU environmental objectives.

The importance of the investment is illustrated by the fact that the Hungarian Government supported the implementation of the project with a tax allowance of EUR 45 million with the approval of the European Commission, and the project was declared to be a brownfield investment of outstanding economic importance. The Commission's assessment concluded that the aid will contribute to the development of the region without undue distortion of competition within the single market and it will reduce environmental risks.



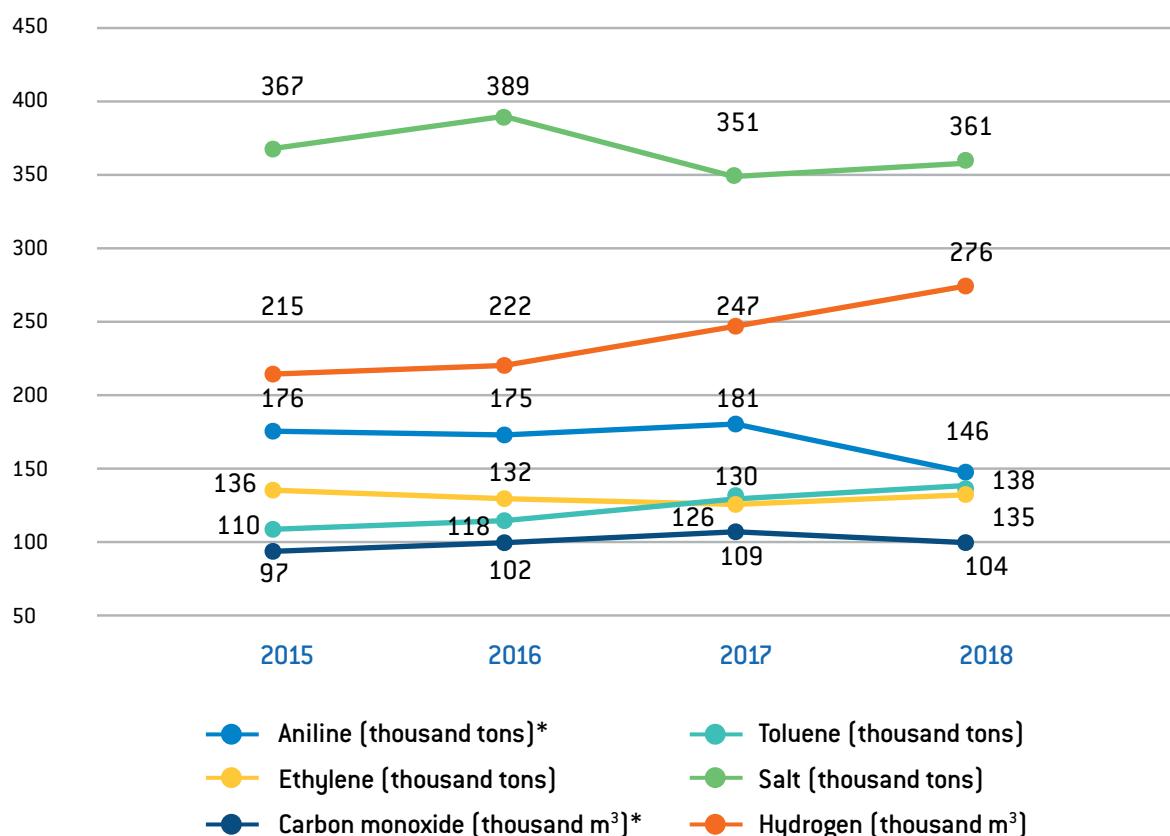
Given our activity, we have to use a large amount of non-renewable raw materials, which in many cases are considered dangerous. This is an exceptional responsibility for our Company. We consider it our fundamental duty to perform our purchasing activities in line with the above-mentioned guidelines and to meet the challenges at a high level.

In 2018, the turnover of strategic raw materials was close to 1 million tonnes and almost reached the value of half a billion euros. We have worked with 44 large raw material suppliers, of which 16 are Hungarian. The aniline used for the MDI pro-

duct range, the toluene used for TDI products, the ethylene used for the PVC resin product, and the industrial salt were purchased in very high quantities.

We buy raw materials only from qualified suppliers. In cases of involving suppliers, timely and rigorous control of the quality of the raw material is of paramount importance, avoiding the unnecessary environmental load of returning or destroying the hazardous material, contributing to sustainable operations. In addition, we strive to maintain an optimum level of stock stored on site, as safely as possible.

Non-renewable materials used



* Data on the use of aniline and carbon monoxide have been republished compared to the report 2016. In 2017, our subsidiary, MDI Termelő Ltd, which was taking part in aniline purchasing and carbon monoxide usage, merged with BorsodChem Zrt. So the purchase of the raw material is now done directly by our Company. Accordingly, the aniline use previously associated with MDI Termelő Ltd. are merged into the amounts of the table.

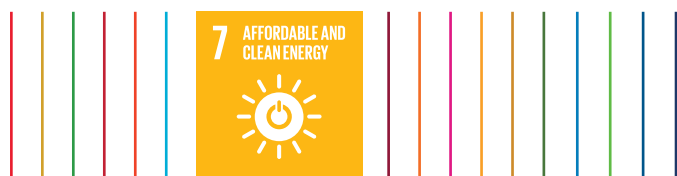


Our strategic raw materials come in bulk form by rail, and one of the raw materials (ethylene) arrives via pipeline to our site. Our products are also sold in bulk, but they are available in smaller proportions in packaged form also adjusting to the needs and opportunities of our customers. The hazardousness of our products requires the use of high-security packaging

technology and special packaging materials, so we can only use renewable or recycled materials in this area, also to a limited extent.

In the case of material handling, we always try to choose the most environmentally friendly method of transport. We prefer rail transport to road.

Purchased packaging materials	2015	2016	2017	2018
Renewable materials				
Wooden pallets (pcs)	229 647	216 190	205 196	235 493
Non-renewable materials				
Big-bag (pcs)	71 203	74 806	72 847	73 922
Labels (pcs)	689 974	706 103	707 843	815 316
Metal drums, cans (pcs)	365 847	316 969	340 024	363 463
IBC barrel (pcs)	12 152	14 400	12 840	13 155
Plastic can, barrel (pcs)	783	2 135	469	1 690
Paper bags (pcs)	2 382 915	2 656 330	2 189 980	3 033 030
PE-film (kg)	127 586	147 570	123 167	150 649



Energy Management

BorsodChem is one of Hungary’s largest chemical plants and a major energy consumer, so our production is based on the use of energy-consuming technologies. The amount of energy consumed to produce our key products affects our Company’s competitiveness and its environmental burden.

The head of the Utilities Accounting Department is responsible for managing the energy consumption, our energy policy is public². Our performance related to energy consumption is monitored specifically by plants; however, we will present it for the entire Company in this report.

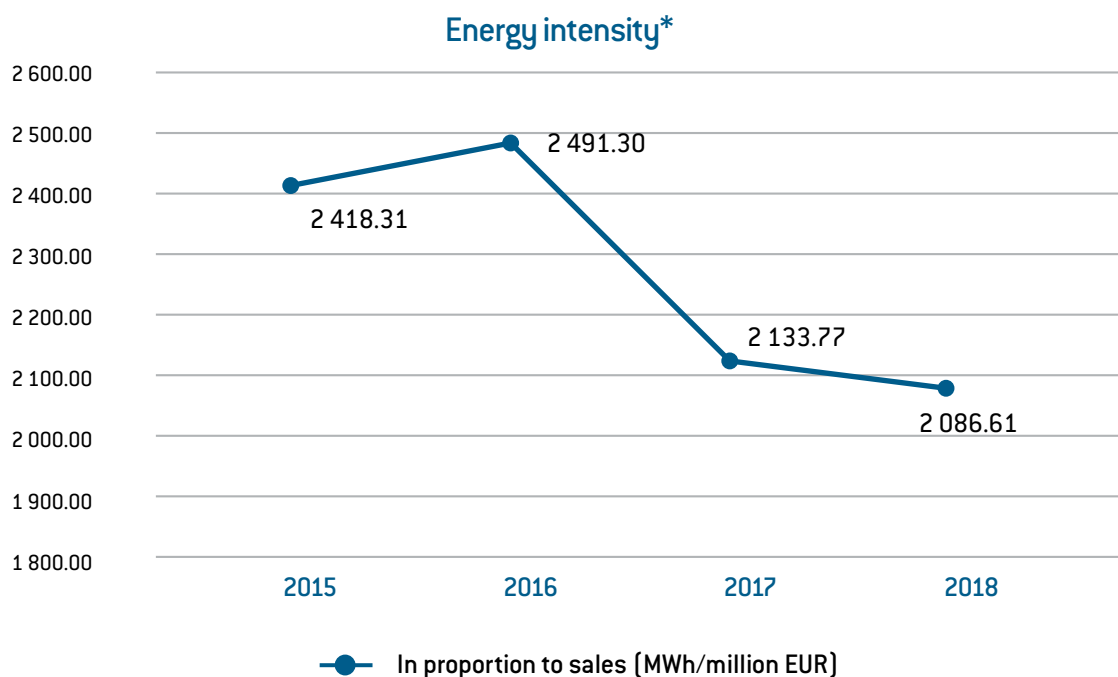
When planning our future investments, we have always put great emphasis on monitoring and optimizing our energy consumption, since we are working in an energy intensive industry.

As part of this effort, we decided to take the ownership of electricity production and a significant part of steam production at our site.

We could not achieve our 2018 target of 6% improvement in energy efficiency compared to the 2015 base because of the energy demand of the newly introduced production technologies. However, many of our initiatives have supported our goal of achieving a steady improvement in performance in this area in the long term.

In our DNT plant the system used for the reconcentration of nitric acid was replaced by a vacuum system based on an existing technology, thanks to this the same performance can be achieved at a lower temperature, thus it requires less steam (saving 300-350 kg steam per hour).

Under the framework of another initiative, we monitor and optimize the rotational speed of the MDA condensing mixers, saving 44 000 kWh per year. By reviewing our production technologies and methods and with similar initiatives, we are planning a number of energy saving projects in the future.



* Our energy intensity indicator is calculated as the ratio of natural gas and electricity purchased by BorsodChem Zrt. to the revenue. (MWh/m EUR).

² <http://www.borsodchem-group.com/Our-policies/Energy.aspx>



Beside our investment and development of processes, we are also improving the energy-conscious mindset of our employees.

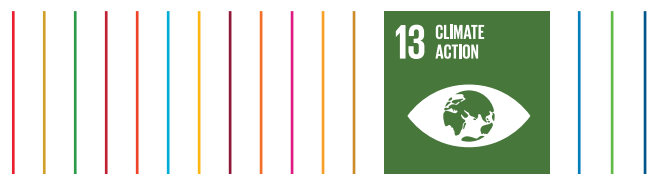
We reduce our primary energy consumption during production by using modern production technologies, transferring thermal energy coming from chemical processes among plants, performing preventive maintenances, and using energy performance indicators, thereby we reduce direct and indirect emissions.

Managing our environmental impacts

BorsodChem regularly identifies and monitors its impact on environmental elements, which are measured using multilevel systems. Emission limit values, emission reduction targets and steps to achieve them, and our energy policy, are all defined by the ISO 14001 Environmental Management System (EMS) which has been in operation since 1998 and the ISO 50001 Energy Management System (EnMS) which has been in operation since 2016. The system supports continuous development, identification and correction of negative effects by the PDCA cycle. The effectiveness of the EnMS is verified by an internal and annual audit. Emissions are measured, monitored, and tracked in accordance with internal standards which are based on the standards listed above. In addition to keeping our emissions under IPPC licenses, our goal is to continuously reduce our environmental load.

The head of the Department of Health, Safety and the Environment, (Director EHS), the head of the Utilities Accounting Department (Manager of Utilities Accounting) and the Manager of Steam, Water and Gas Distribution are responsible for reducing air and wastewater emissions, reducing the amount of waste generated, and improving energy efficiency and complying with legislations, respectively. In addition to environmental investments, EMS and EnMS programs, human resources are provided by the Environment Department, HSE coordinators, the Technology Development Department and the Utilities Accounting Department.

It is essential for us to comply with the relevant environmental regulations at the highest possible level. Compliance is the responsibility of the Chief Operation Officer, Director EHS and plant managers. Compliance is ensured by development-linked allocated resources.



Emissions to Air

We use a multilevel system to monitor the impact of BorsodChem on current and long-term air quality.

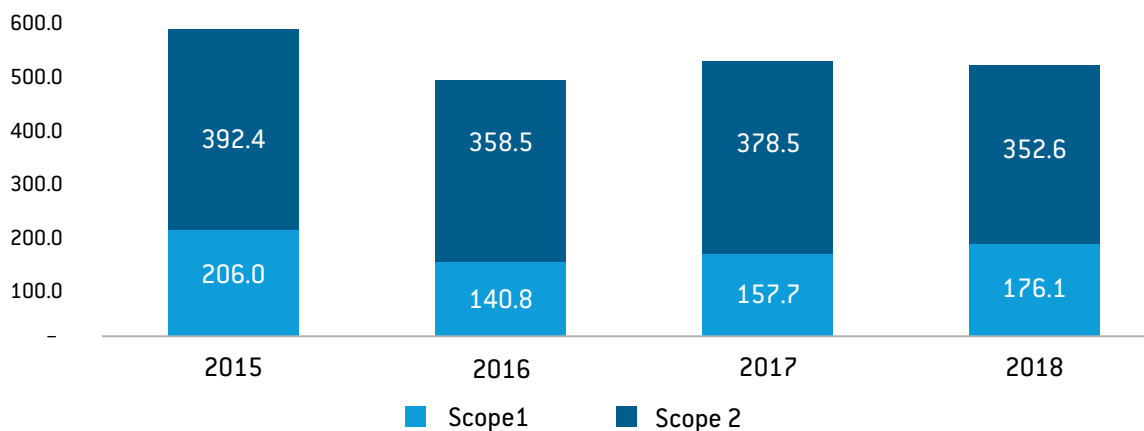
We measure the waste gas emissions of the individual technologies, the ambient air quality at five points, and the greenhouse gas (GHG) emissions are measured and calculated, and the direct effect of ambient air on living organisms is also measured with bioindicators (lichen flora survey).

BorsodChem's greenhouse gas emission comes from direct and indirect sources. Direct loading occurs from some production technologies (including carbon dioxide, nitrous oxide, methane emissions), and from using energy sources (energy generation, production and transportation).

The production of purchased electricity indirectly results in emissions. BorsodChem's technologies are significantly energy intensive, that's why our Scope 2 emissions from the generation and use of electricity are crucial. In this report, we show our direct (Scope 1) and indirect (Scope 2) emissions, based on carbon dioxide equivalent.



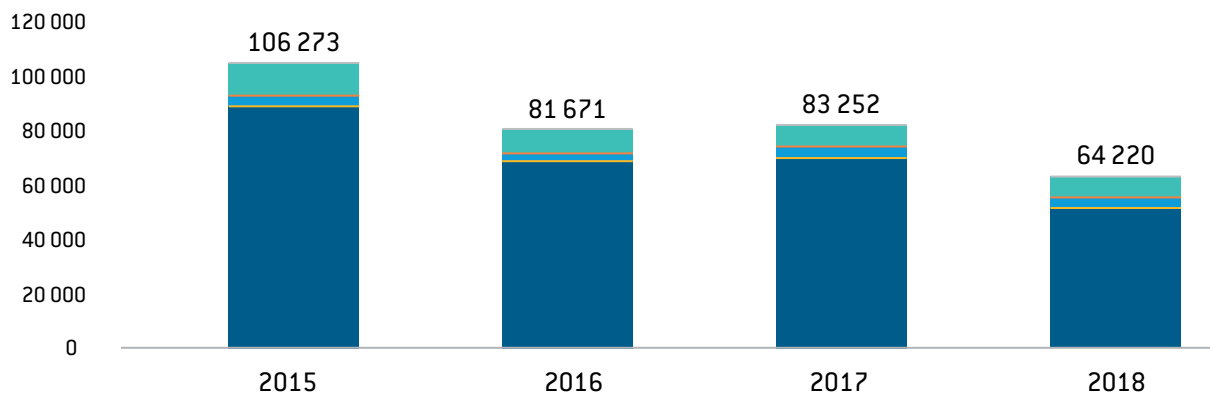
Specific emission of GHG (kg CO₂e / tons of product)



We are monitoring our energy performance indicators and emission continuously. On-line measuring equipment are placed at some of our point sources, and these can measure various air pollutants (e.g. nitrogen oxide, carbon monoxide, hydrogen chloride, organic carbon, various solid materials). Occasional accredited emission measurements are performed more frequently than required by law.

As a voluntary commitment, we monitor the quality of ambient air too. In addition to the quarterly measurement of generic pollutants, air quality control also includes annual inspections of substances in production technologies.

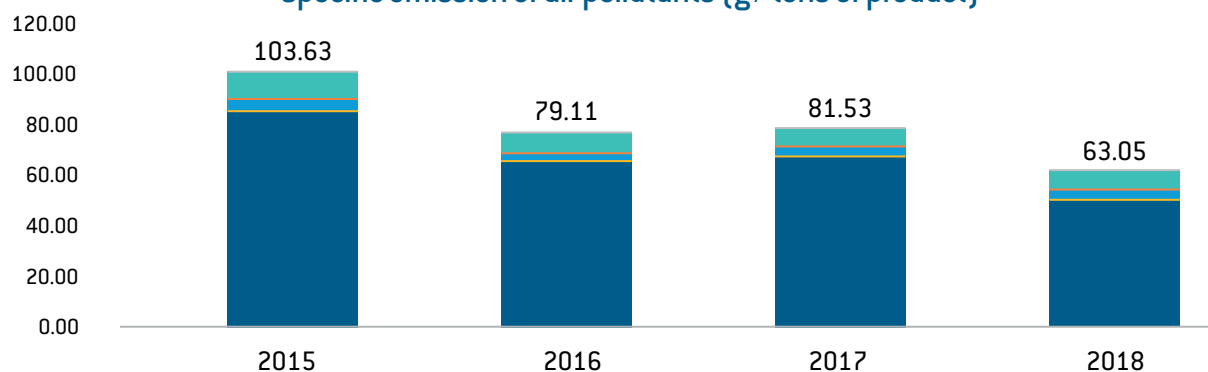
Emission of air pollutants (kg / year)



Type	2015	2016	2017	2018
NOX	89 963	69 518	70 678	52 059
SO2	8.46	6.09	6.89	104.34
PM	3 969	2899	4 297	3 947
POPs	0.0000016	0.0000018	0.0000244	0.0000102
VOC	12 201	9 111.1	8 043.7	8 048.4
HAP	131.61	136.73	226.23	61.03
HAP	106 273	81 671	83 252	64 220



Specific emission of air pollutants (g / tons of product)



Type	2015	2016	2017	2018
NOX	87.72	67.34	69.22	51.11
SO2	0.0083	0.0059	0.0067	0.1024
PM	3.87	2.81	4.21	3.87
POPs	0.000000002	0.000000002	0.000000024	0.000000010
VOC	11.90	8.83	7.88	7.90
HAP	0.13	0.13	0.22	0.06
HAP	103.63	79.11	81.53	63.05

We are in favour of full transparency regarding our emissions activities. For this reason, we measure the impact of our emissions into the air with various biological indicators. The results of the study are published on a quarterly basis in various channels, including an annual open day with a presentation to local residents. The measurement results are also available in the Hungarian Environmental IT System.

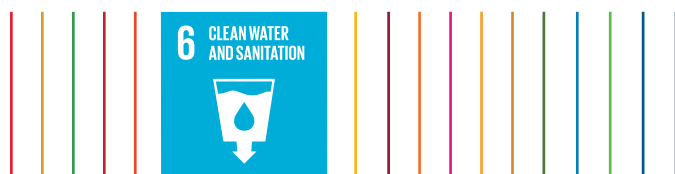
In accordance with CWW BAT³ laid down by the European Union, BorsodChem's primary goal is to take advantage of the possibilities – recycling and reducing exhaust gas emissions – occurring in integrated production. Within this framework, during waste gas pre-treatment processes we also strive for producing a marketable product instead of emissions. For example, we produce hydrochloric acid from the flue gas of by-product incineration, then it is recycled for our own production technology or sold. The salty water formed from the neutralization reactions during pre-treatment is recycled as a raw material. This solution is quite unique.

Under the framework of another self-developed program, we installed a self-designed alkaline absorbing system for the spent sulphuric acid-regeneration (SAR) block of our DNT plant. The new system operates in cases of possible operational problems, absorbing the NO_x gas that is produced during malfunctions.

As a result of our technological developments and maintenance innovations, we have been able to significantly reduce our total and specific emissions of air pollutants in recent years. Since the previous Sustainability Report in 2016 we have reduced our total air pollutant emission by 21.5% and our specific air pollutant emission by 20.5%

Considering that BorsodChem Zrt. is one of Hungary's largest energy users, reducing our emissions poses significant challenges to our Company. In 2018, we paid an environmental charge of HUF 37.08 million for our released materials.

3 Best Available Techniques (BAT) Reference Document for Common Waste Water and Waste Gas Treatment/Management Systems in the Chemical Sector – A summary of the best available technology solutions for the treatment of wastewater and gas



Water Consumption

For our technological processes at our Kazincbarcika site we need large amounts of water, which we get from the Sajó River. Our water extraction from the Sajó is kept within the water quota established by the General Directorate of Water Management. Our Company adheres to the legal obligations regarding water use, the Responsible Care Principles of the European Chemical Industry Council⁴, and the European Union’s Water Framework Directive, which aim to achieve good condition of surface water and groundwater and prevent quality deterioration⁵.

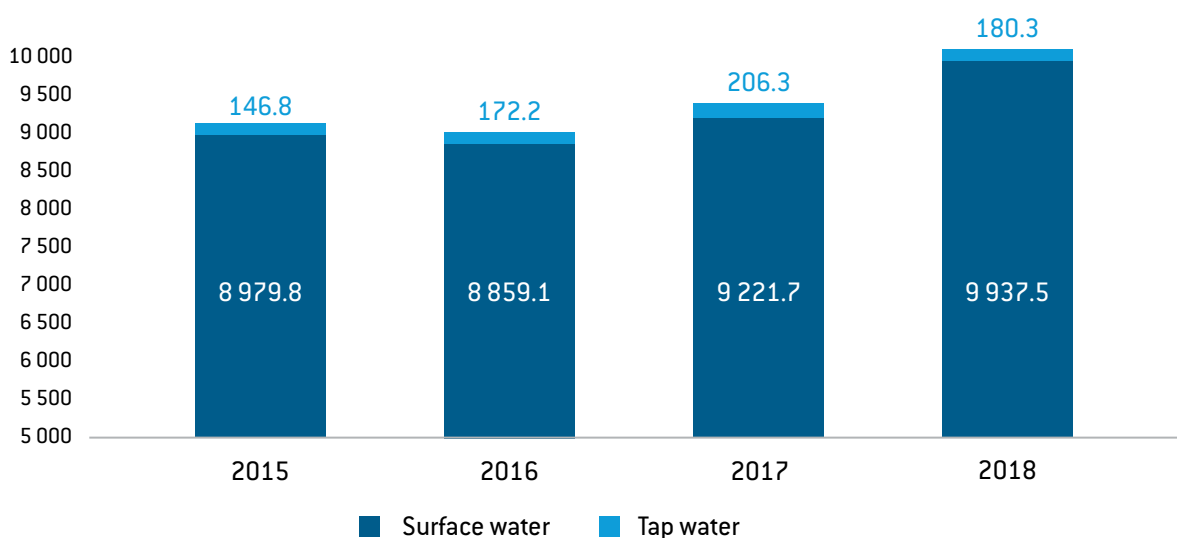
During the use (pre-treatment, technological use, cleaning) of water extracted from the Sajó, we examine the water quality continuously. We ensure efficient water use with performance indicators in each plant and aim for continuous production technology improvements. The implementation of our water saving program and its related technologies are an integral

part of our HSE target system. We try to re-use most of the ‘technological’ water needed for production, which reduces our environmental impact. As part of this, we strive for multiple water transfer among technologies and we optimize the use of cooling water. An example of this is the heating of our office buildings, where the heating is provided by the cooling circuit of our DNT plant. In addition to re-using the cooling water, we have saved significant amounts of energy by replacing the water heating.

The used and cleaned water is returned to nature in quality and quantity that meets legal requirements, thereby minimizing the impact on the ecological status of the Sajó river. In order to monitor the status of Sajó river, we have been carrying out a voluntary ecological health check annually since 2008. The head of the HSE Department and the head of the Steam, Water and Gas Distribution Plant are the major responsible staff for achieving these goals. Plant managers are responsible for exploring the possibilities of the consumption reduction, the extent of use, and reporting.

The consumption of drinking water is not related to industrial activity, it is used only for communal purposes. Our environmental consciousness campaigns include the reduction of the use of tap water.

Water withdrawal in Kazincbarcika (thousand m³)



4 <http://www.cefic.org/Responsible-Care/>

5 <http://euvki.hu/>

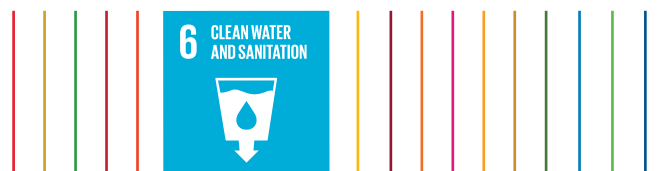


Water consumption	2015	2016	2017	2018
Recycled and re-used water (thousand m ³) [estimation]	374 669	374 711	374 141	374 213
Total water consumption (thousand m ³)	9 126	9 031	9 428	10 117
Number of 1 m ³ of water reuse	41	41	39	37

Firstly, we make soft water from the raw water of the Sajó river and then from some of it we prepare demineralized water for further industrial use. The soft water is mainly used in the water circuits of the cooling towers, the demineralized water for steam production. Our long-term goal is to develop a water management system that allows the re-use of rainwater and purified wastewater as soft water with the appropriate treatment processes.

The total volume of our cooling systems is close to 24 000 m³, in which the water is constantly circulating, while the losses from evaporation and sludge separation are constantly made up for. One of our main water loss factor is via the evaporation of water in cooling towers, which is further exacerbated by the temperature increase caused by climate change. Our long-term goals include the implementation of water-saving cooling towers.

From among the industrial technologies of BorsodChem the operation of the cooling water, the collection and use of condensate water, the re-generation of steam and the recovery of salty water are the main systems with significant water re-circulation. The amount of circulated water in the cooling circuit is estimated by plants based on the data of pump operating hours and load levels. The amount of additional water that is necessarily fed into the system is greatly influenced by the weather. Quantitative changes in salty water and condensate water are measured daily. The amount of water varies depending on the production level.



Waste Water and Waste Management

Proper waste and wastewater treatment are in the common interest and responsibility of all our colleagues, and the quality of waste and wastewater, which generated at the plant level, is the responsibility of the plant manager. Significant amounts of money are spent every year on the operation and development of the wastewater treatment plant and on the disposal of waste.

Complaints related to wastewater and waste management are handled according to the rules for investigating and managing incidents and for dealing with stakeholders in HSE activities.

Waste water management

Similarly to the monitoring of emissions into the air, the analysis of our wastewater emissions is a multilevel process. The quality parameters are tracked in the following cases:

- water withdrawal from the Sajó
- soft and demineralized water used in the technologies
- wastewater coming from technologies



Wastewater emission data ⁶	2015	2016	2017	2018
Total water discharge (1 000 m ³)	6 740.7	6 925.9	7 206.5	7 735.6
BOD (ton)	38.1	31.8	46.1	60.3
TSS (ton)	209	148.1	161.4	126.9

Soil and groundwater protection

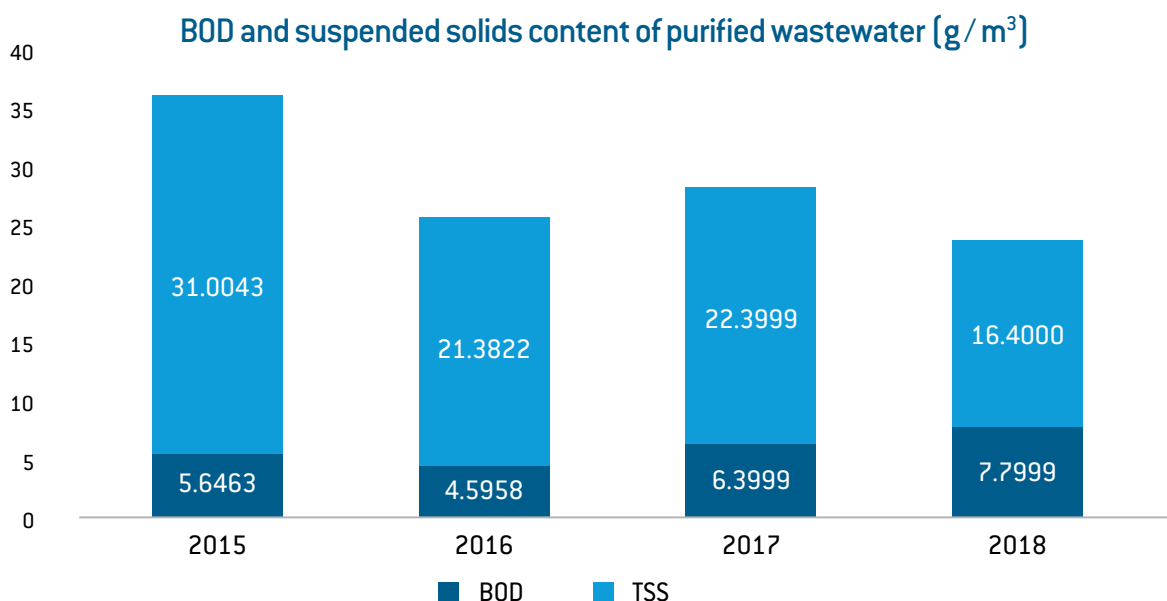
BorsodChem pays special attention to the protection of environmental elements, therefore the continuous monitoring of the quality of groundwater is our important task. Water chemistry tests are carried out in more than 100 monitoring wells at the site of BorsodChem and at the Company's impact area. These results are used for environmental use studies, to monitor the impact of our plants on groundwater, so we analyse parameters that can be linked to specific production processes.

- purified wastewater released into the Sajó
- monitoring the water of the Sajó after the release point of the treated wastewater

By monitoring the ecological state of the Sajó river, we examine the effects of BorsodChem on living organisms.

The generated wastewater and the collected rainwater from the technological area must be handled at the Central Wastewater Treatment Plant within the BorsodChem Waste and Wastewater Treatment Plant. The system was designed that

means, untreated wastewater cannot leave the Company's area in any way. In addition to increasing the efficiency of selective wastewater treatment, we also maximize the amount and utilization of biogas from anaerobic wastewater treatment technology, thus reducing the wastewater treatment plant's natural gas consumption. This biogas is used to dry the sludge generated in the wastewater treatment process. The resulting sludge containing 92% dry matter, which is used for recultivation. The purified wastewater is returned to the Sajó river. Due to well-run technologies, unplanned wastewater discharges have not occurred yet. The release of the total



⁶ We use BOD and TSS to measure the purity of wastewater. BOD (Biological Oxygen Demand) expresses the content of biodegradable organic matter in water. TSS (Total Suspended Solids) means all the suspended solids content of the dissolved, filterable materials.



amount of purified waste water takes place in a controlled and monitored system.

The level of pollutant concentration in our cleaned and released wastewater is influenced by the production of operating technologies, the efficiency of organic matter degradation, the composition of wastewater (possible inhibitory components), and the degree of algae reproduction.

The concentration of the parameters measured in the purified wastewater does not exceed the legal limit for any single component.

In 2016, our voluntary HSE targets included the reduction of salt water volume stored in Salty Lagoon area by 70 000 m³ by 2018, while at the same time we aimed to start the recultivation and landscaping of the empty lagoons. The salty water with alkaline pH from the lagoons is used at the Waste and

Wastewater Treatment Plant to neutralize acidic waste water. This cost-effective solution reduces the amount of carbide sludge, which we used for neutralization.

Developments and new investments are expected to cause an increase in the volume of wastewater to be treated. In order to meet the growing demand for wastewater treatment in the future, the capacity expansion of the Central Wastewater Treatment Plant started in 2018, the cost of which exceeded EUR 500 000.

Waste management

Within the BorsodChem Waste and Wastewater Treatment Plant, the Waste Treatment Plant carries out the collection and pre-treatment of waste, such as sorting and preparing for re-use or disposal.

Our goal is to reduce the amount of generated wastes and to continuously increase the proportion of reusable waste. In accordance with the waste policies, the aim is to avoid the waste generation, to recycle the material of waste generated, to recover energy and ultimately to dispose of it by landfilling. In order to achieve this, we operate a KPI system in which all our employees who are influenced by the generation of waste have performance indicators to measure their achievement, such as specific waste values associated with technologies, recovery rates or waste disposal costs.

In 2018, we handled nearly 59 000 tonnes of waste during our environmental activity, most of it (~ 56 300 tons) was non-hazardous waste, and the minority (~ 2 700 tons) was hazardous waste.

In 2017, we completed the recultivation of the 3-hectare hazardous waste landfill in Berente with a total cost of nearly EUR 1.3 million. This had been in progress since 2008. Our Company will continue to monitor the area for the next 20 years, as required by the law. The amount of waste generated in our development center in Gödöllő is less significant than our site in Kazincbarcika. In the last four years, just a small proportion of all waste was generated in Gödöllő. Due to the low proportion, we disregard the presentation of figures by location.

Landfill construction with recultivation activity in Múcsony

The adequate closure of the landfill site for hazardous waste in Múcsony has been a problem for two decades for BorsodChem Zrt. In the end, our Company has set itself the goal of recultivation with the construction of a non-hazardous landfill for cost-effective solutions.

During the project a non-hazardous landfill was developed in Basin III, and we have started the recultivation of the Basin I and II, where we utilize non-hazardous waste from BorsodChem's plants (e.g. sludge from water softening, brine sludge, demolition waste from the demolition of old industrial technologies, etc.).

During construction, with the appropriate relocation and re-use of waste (as building material), we replaced approx. 100 000 m³ of building material. During the project we built a 3 km long asphalt road using materials from demolitions. On this route the waste can be transported to the area safely and without any environmental impact. The Old Sludge Area project is a cost-effective and sustainable way to solve an environmental problem that has been around for decades.



The significant increase in the amount of recovered waste was caused by various demolition work and excavation works resulting from the preparatory activity for new development areas. This is also reflected in the increase of total waste.

Natural materials extracted during investment or construction work are sent to composting.

In 2017 and 2018, BorsodChem started to build new technologies and the necessary service facilities and we utilized the demolition waste from construction and demolition in the re-

cultivation of Basin I in the Old Sludge area. Construction and demolition waste were previously disposed of in landfills, but in recent years we have been recycling it in the Old Sludge area and been reused in new investment areas.

Most of the incinerated non-hazardous waste was waste water sludge. From May 2018, we have been utilizing this in the recultivation process of the Old Sludge area. Metal waste is handed over to metal trading partners for recycling.

Hazardous waste (ton)	2015	2016	2017	2018
Recycled	450	427	1 420	845
Incinerated	610	834	661	911
Landfill	117	201	747	1 004

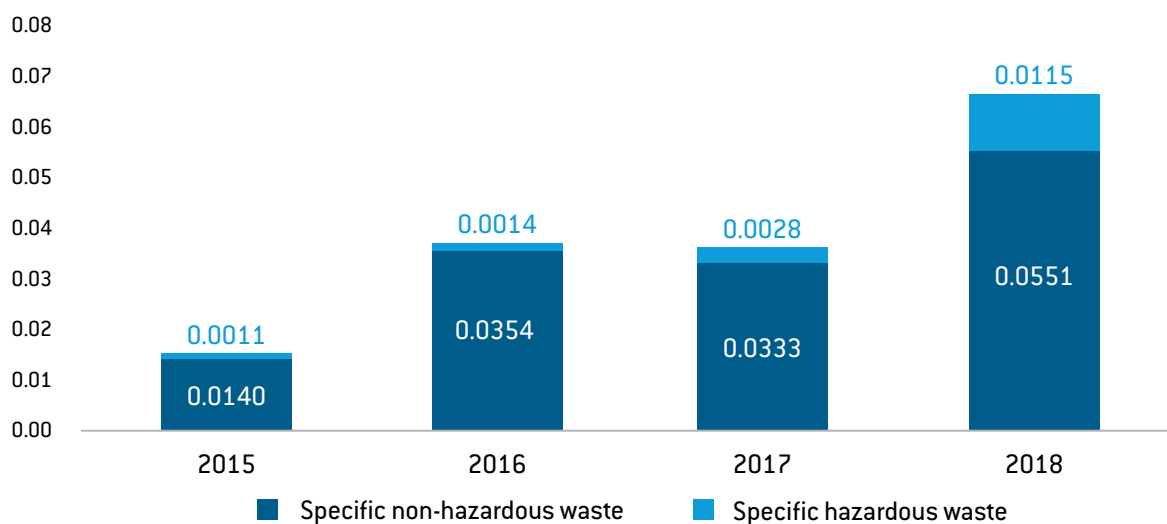


Non-hazardous waste (ton)	2015	2016	2017	2018
Recycled	1 204	2 255	21 305	49 238
Compost	148	182	154	200
Incinerated	827	950	887	550
Landfill	12 188	13 990	11 631	6 178

Certain hazardous wastes, including used oil, oil-containing waste and plastics, are passed to various partners for recycling, others (used catalysts containing precious metal(s)) for recovery. The remaining hazardous waste is disposed of by incineration or landfilling via our specialized external partners. The increased amount of hazardous waste disposed of this way in 2017 and 2018 can be linked to the previously mentioned intensive demolition works.

In order to re-use raw materials and minerals, the valuable metal content of our spent catalyst is recovered by our partners. The reason for the increase in the amount of waste disposed of in 2017 is that at the end of 2016, the recovery partners were struggling with licensing problems, so we could only hand over the more than normal quantities for recovery in 2017.

Waste volume tons of product





Biodiversity

There are Natura 2000 sites⁷ within 1 km of our Gödöllő and Kazincbarcika sites. While a 4 km² part of the Natura 2000 area of the Sajó Valley is close enough to the Kazincbarcika plant's impact area, the area adjacent to the site of Gödöllő is only 1.28 km². For these areas, we also take into account their important role as an ecological corridor. Our Kazincbarcika activity has an impact on land and water environments, as well as on the wildlife of areas adjacent to operation sites.

The effects of production related substances entering the air on living organisms were evaluated when assessing the ecological status of lichens. Salt-tolerant plants have become naturalized in the surrounding areas of saline water pools at the site. The industrial activity of the Kazincbarcika area provides a unique resting place for many migratory birds in the area.

Based on the biological investigations carried out in our area of impact, there is an increasing amount of knowledge of biodiversity in the area. Our monitoring system has expanded in recent years to study aquatic wildlife, continental flora, fauna, the lichens' ecological health survey and migration areas of birds.

Lichens, as sensitive atmospheric indicators, are investigated every three years with the involvement of external experts, including the Green Action Association (Zöld Akció Egyesület) in Miskolc.

Our goal is to preserve the biological condition of the Sajó Valley and Sajó River, and to work with environmental organizations to effectively investigate our impact on different organisms. For this purpose, the quality of Sajó's water and the bird population is monitored annually with the help of Aggtelek National Park and Bioaqua Pro Ltd.

These studies help our Company to improve the ecological status of the Sajó Valley, protect the Natura 2000 sites, and continuously to reduce our environmental impact. Complaints about biodiversity are handled based on our HSE policy by involving the competent manager.

⁷ A coherent European ecological network established by the EU in order to ensure the protection, maintenance and restoration of biodiversity by protecting the natural habitats and the species of wild fauna and flora.

Aggtelek National Park Directorate

"The Aggtelek National Park Directorate has been conducting surveys on the wastewater reservoir pools of BorsodChem Zrt. since the mid-2000s. These are priority bird habitats, where several specially protected bird species nest (e.g. pied avocet, black-winged stilt, etc.). We view the conservation of these habitats as of importance, which can only be accomplished with the close cooperation of BorsodChem Zrt. The Company strongly supports our efforts, the recultivation of pools is carried out by our specialists in order to enable the rare birds' nesting sites to survive in the long term. To this end, the most important bird basin will not be eliminated and the other basins will be and have been liquidated with the maximum consideration of nature conservation aspects."



We plant trees for future generations



Our Company regularly organizes tree planting programs involving our employees and local residents. In 2017, with the Municipality of Berente, 70 Norway maples, and Hungarian as well as common ash trees were planted in the Kiserdő of Berente. The event was very popular, the saplings were planted by colleagues, kindergarteners and older people together.

As a second round of the program, we planted 22 common birch trees and 23 Hungarian ash with the help of our colleagues within our establishment site.

In 2018, we continued our tradition of planting trees. This year, we planted 70 red-leaf plum tree saplings with the help of the people of Berente.

We will continue this initiative in the future.



Recultivation of Salty Lagoon

In the case of the recultivation project of Salty Lagoon, the maintenance and growth of biodiversity in the area is considered vital, beside landscaping tasks. In the course of the eradication of the M4 basin, in cooperation with the Aggtelek National Park, we developed a wetland habitat for the bird population that prefers saline areas, where the National Park staff regularly perform ornithological observations. The saltwater mud area in the M3 basin is a nesting site for several protected bird species, therefore, in close cooperation with the National Park, our Company decided to maintain the current state of the basin. During the recultivation, we continue to consider the breeding period of the birds and carry out construction work only outside this period.

3D map for efficient noise protection

In 2012, the North Hungarian Inspectorate for Environmental Protection, Nature Conservation and Water Management due to non-compliance with the noise limit value obliged BorsodChem to prepare a noise protection action plan in line with noise protection limits and policies. In order to solve this problem, we started a complex project covering noise protection. As a first step, we prepared a 3D noise map covering our entire site in Kazincbarcika. Based on this noise map, we developed a 3-phased action plan, which aims to reduce noise in our entire production site within 10 years. The amount spent on our completed and ongoing noise protection measures exceeds EUR 500 000.

In the first phase of the project, we identified and assessed the types and locations of noise sources, which were exceeding the limit, then based on the results, we created a 3D model of our production site and their surroundings. The software model allows the preliminary assessment and planning of various noise sources and impact, as well as effective monitoring.

The first phase closes at the end of 2019. After each phase, we prepare a comprehensive expert report to evaluate and review the action plan for noise reduction and to verify the compliance with the various regulations and requirements.

Environmental Compliance

We give priority to compliance with statutory requirements, including compliance with environmental regulations. Environmental compliance is an integral part of EMS, every manufacturing technology unit have IPPC permit. We are constantly observing the legal environment and preparing for change in advance. Our emissions are kept below the prescribed limits, through improvements and compliance with BAT regulations to continuously improve our environmental performance. In some cases, we use internal norms more stricter than the regulatory requirements. Our performance is analyzed through self-monitoring and independent laboratory tests. Our goal is to prepare for the legal changes and EU directives with our activities.

Every year we report our actual emissions data, we communicate the extent of possible fines to our management and in the financial report as well. In cases of complaints received via our hotline or other channel, we engage with the affected parties to find a solution.





The new Membrane Cell Chlorine Plant

In 2018, following the publication of the EU Decision of 2013/732/EU our Company shut down its mercury-based chlorine unit, which had been operating since the '70s. At the same time, production began in our new Membrane Cell Chlorine Plant.

The total amount of metallic mercury used for electrolysis in the mercury-based electrolysis technology was then discharged and delivered to our disposal partner in 2018, in accordance with the relevant legislation and the most stringent HSE standards. In order to replace the chlorine production of mercury-based electrolysis technology, BorsodChem chose one of the best available technologies and constructed a new Membrane Cell Chlorine Plant. This modern technology can cover more than the production of the mercury-based chlorine unit. Thanks to the new membrane cell project, in addition to the technology change, we also implemented capacity expansion and specific energy consumption reduction beside the reduction of environmental loads, and the improvement of safety and production stability.



“The transition from mercury to membrane technology in chlorine production has significant environmental impacts. As a direct effect, the use of mercury in industrial chlorine production technology has been abolished, in accordance with the provision of the Minamata Convention.

Decommissioning of the mercury-based technology has taken place according to targeted schedule, and the waste is recycled and disposed of in accordance with the EuroChlor directives after proper cleaning and pre-treatment processes.

Thanks to the technology change, electricity consumption is significantly reduced in line with the recommendation of BAT, which indirectly reduces the specific emissions of carbon dioxide during chlorine production.

With the development of electrolysis cells and membranes, the demand for electricity can be further reduced.”

Zsolt Bukszár

Director Chlorine Manufacturing,
BorsodChem Zrt.







Social Responsibility



Responsibility Towards Our Colleagues

BorsodChem as an employer

Employees of BorsodChem

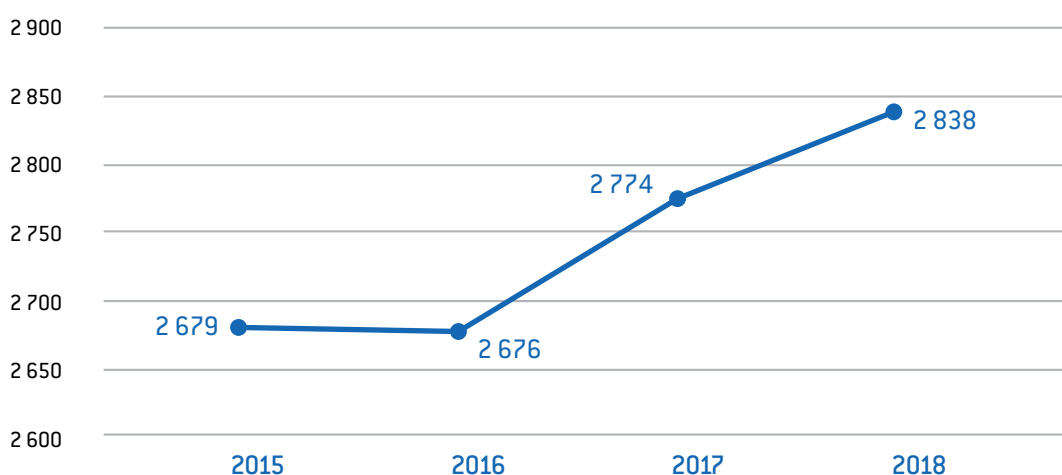
For our Company’s success it is important to recruit and retain a motivated, committed and highly skilled workforce. This is why we aim to create a safe and secure working environment, and we employ colleagues in suitable jobs, and increase their efficiency, satisfaction and commitment. Our goals are also supported by conscious employer branding and our Collective Bargaining Agreement, which includes more favourable employment and remuneration terms than the Labor Code. We are

proud that as a recognition of our efforts, in 2017 we received the “Responsible Employer of the Year” award in the large enterprise category.

Due to the profitable operation and development of our Company, the number of our employees have been steadily increasing in recent years.

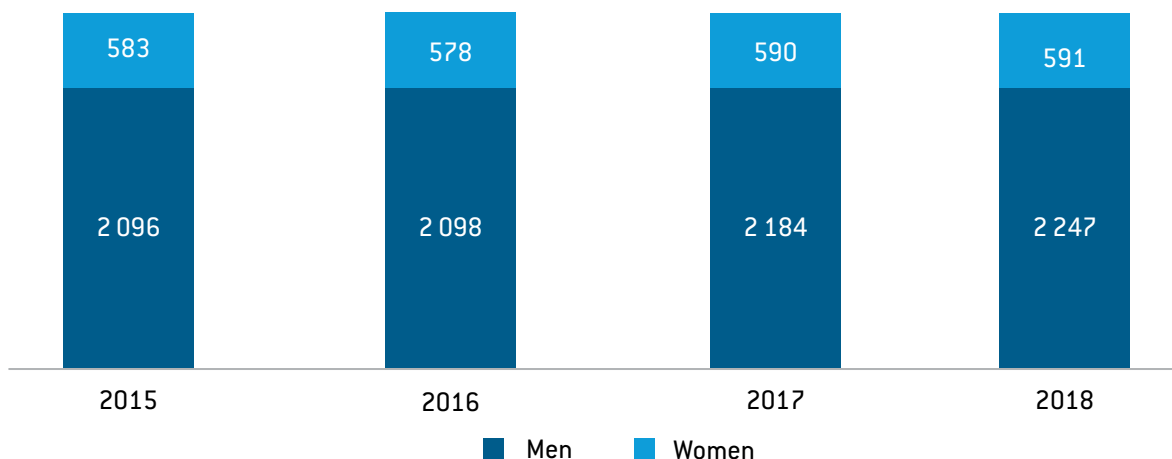
The reason behind the outstanding growth in the number of employees in 2017 was the merger with MDI Termelő Kft.

Number of BorsodChem's employees





Number of employees by gender



Similarly to previous years, in 2018 the vast majority of our employees worked in full-time positions with a contract for indefinite term at our Kazincbarcika site. In line with our employment practices, new hires are usually employed with a definite-term employment contract during the first year of their employment after which their contracts become permanent.

One of the key strengths of BorsodChem as an employer is that we provide long-term, secure workplace for our employees. At the Company the average length of service is 15.69 years. A significant proportion of our employees found their first job at BorsodChem, and spent their entire professional careers at the Company. Almost 20 percent of our colleagues have more than 30 years of experience. Additionally, recruitment and talent acquisition are of particular importance in our HR Strategy.

2018 — Total headcount: 2 848

Permanent contract: 550 Temporary contract: 41 Full-time: 584 Part-time: 7			Permanent contract: 2 103 Temporary contract: 144 Full-time: 2 241 Part-time: 6
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2017 — Total headcount: 2 774

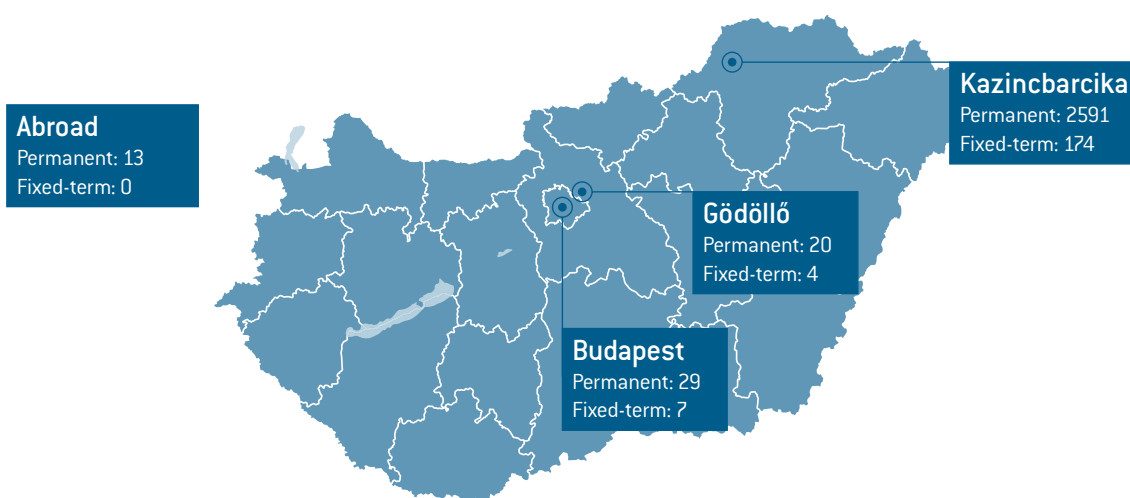
Permanent contract: 537 Temporary contract: 52 Full-time: 582 Part-time: 8			Permanent contract: 2 044 Temporary contract: 141 Full-time: 2 181 Part-time: 3
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2016 — Total headcount: 2 676

Permanent contract: 540 Temporary contract: 38 Full-time: 573 Part-time: 5			Permanent contract: 1 988 Temporary contract: 110 Full-time: 2 095 Part-time: 3
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2015 — Total headcount: 2 679

Permanent contract: 547 Temporary contract: 36 Full-time: 580 Part-time: 3			Permanent contract: 2 006 Temporary contract: 90 Full-time: 2 094 Part-time: 2
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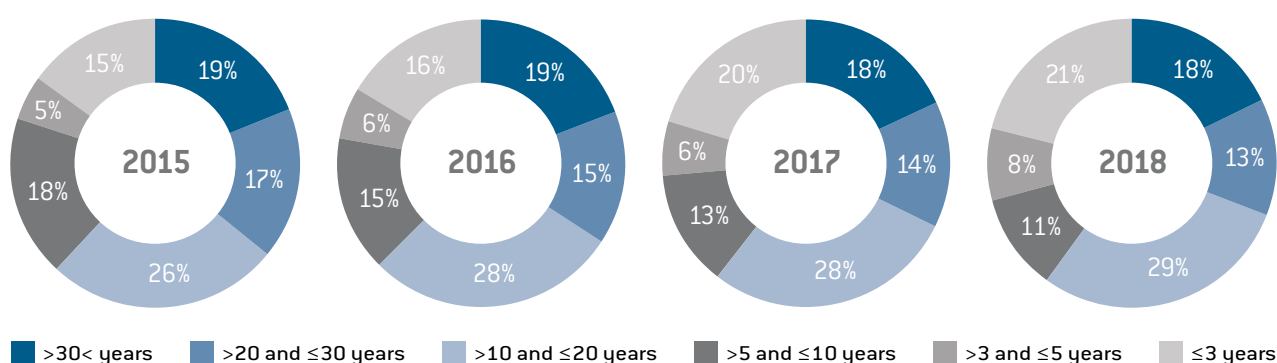


Contract type	2015	2016	2017
Kazincbarcika	2 617	2 616	2 701
Permanent	2 494	2 473	2 518
Fixed-term	123	143	183
Gödöllő	22	26	23
Permanent	22	24	20
Fixed-term	0	2	3

Contract type	2015	2016	2017
Budapest	35	32	37
Permanent	32	29	30
Fixed-term	3	3	7
Abroad	5	2	13
Permanent	5	2	13
Fixed-term	0	0	0

Our permanent growth poses challenges for our Company, especially in terms of hiring young and well-qualified new employees. In order to counteract the shortcomings of the vocational education system, we organize a number of self-financed retraining and further training programs, which we elaborate on in our *“Training and Education”* chapter.

In addition to training courses, our Company is committed to making BorsodChem an attractive workplace, supported by the introduction of new incentives and the annual revision of benefits systems. For example, we have an employee recommendation system, we encourage the operators to expand their knowledge, and we provide career-starter support benefit package for young employees.





“ More than 20 years have passed since we first entered the BorsodChem’s gate. As graduate students at the University of Veszprém, we visited the Company for the first time during a factory visit.

After graduation, we wanted to work in the chemical industry and our choice was BC. It was a good decision! Over the past 20 years, we have been able to build new plants, participate in investments, and with training courses and factory visits abroad we became more and more experienced every day.

In line with our original idea, we both stayed in our field of specialization (chemical engineering), and our love towards our profession increased over the years.

It was a great help to return to my original job after the birth of my three children, and although we come from a remote corner of the country, we very soon got to like Kazincbarcika, and settled here with the support of the Company.”

Tímea Réti

*Manager Chloralkali Loading,
BorsodChem Zrt.*

József Réti

*Officer Process Engineering,
BorsodChem Zrt.*

Replacing our retiring employees is another key challenge. The expertise of our long-term employees represents a significant value; therefore we introduced a leadership role transfer program. In this seven-year process, our managers are preparing for the pre-retirement transfer of knowledge and responsibilities, and our leaders work closely together with the designated successors for years.

Turnover

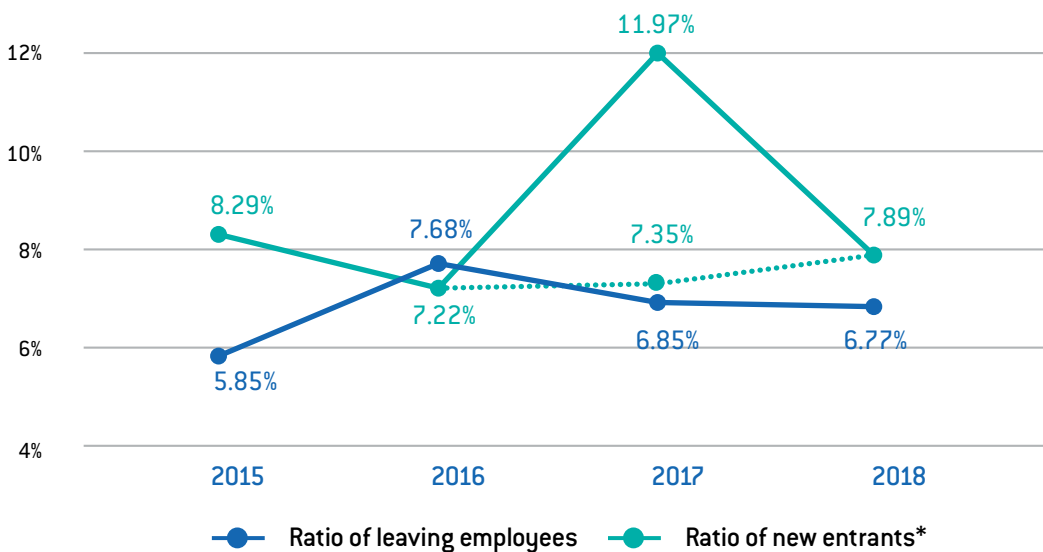
Nowadays it is a general challenge to secure the necessary number of employees. As a developing company, it is essential to expand our workforce, while other internal processes (such as the retirement of the older generation, as mentioned before) have an impact on this aspect. In addition to internal factors such as labor migration, there are significant external impacts such as inadequate vocational education for the chemical sector and the lack of appreciation for the profession. One way to deal with the problem is for our Company to increase the efficiency of retention by reducing the level of voluntary turnover.

We consider it as a great success that since our 2016 report we managed to reduce and stabilize the turnover rate at around 7%, which is below the national and the industry average. Voluntary turnover was more typical among engineers and employees working in production; especially chemical, mechanical and electrical engineers. Our labor market attractiveness is highlighted by the fact that last year more former BorsodChem employees applied for a job again to us than the number of employees that left voluntarily.

In 2017, MDI Termelő Kft. merged with BorsodChem Zrt., hence 128 employees from the former subsidiary joined our Company. On the graph showing the ratio of new and leaving employees, the ratio is presented together with the 128 employees, and also separately, but in the figures showing the age distribution we include them every time.

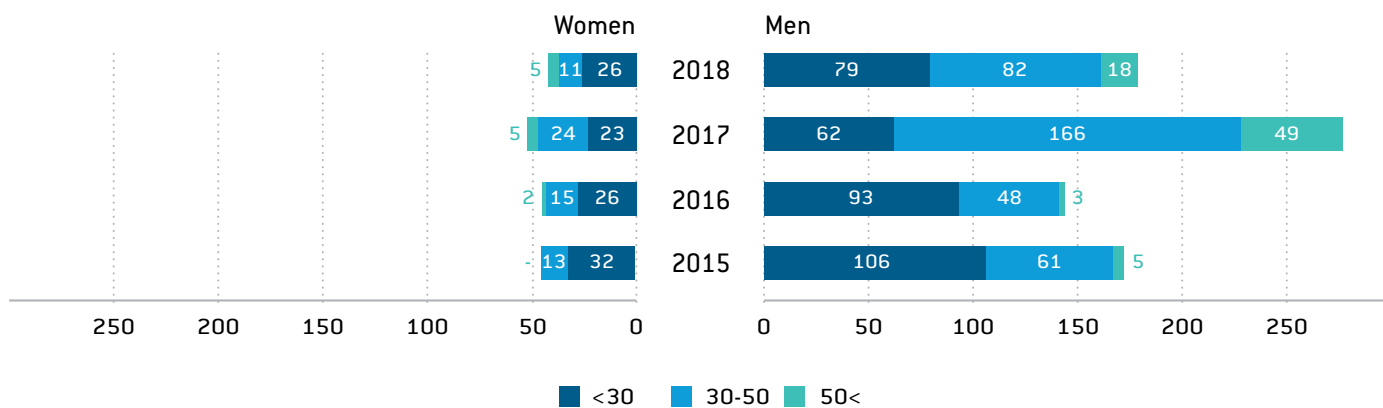


Ratio of new and leaving employees (%)

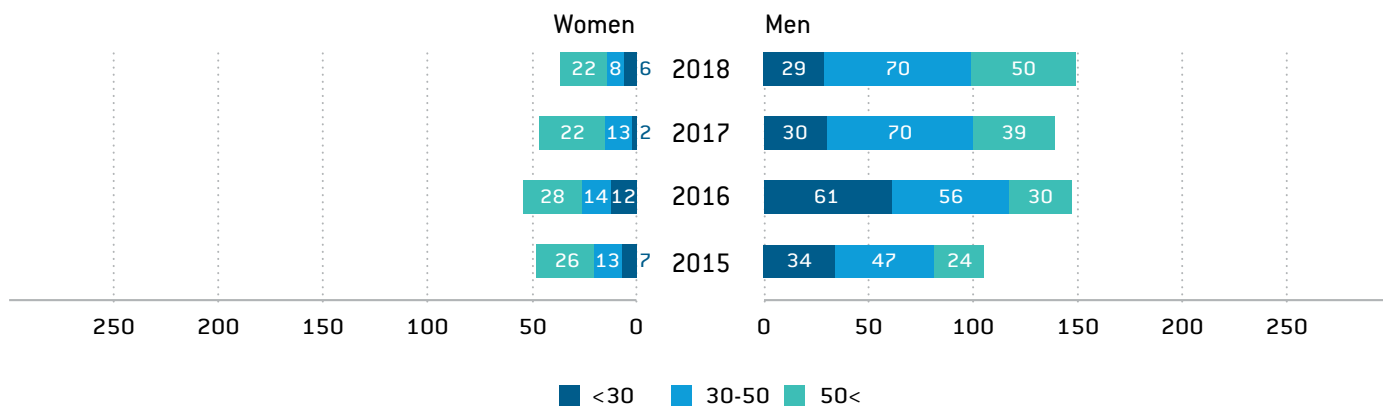


* The dashed line in the figure shows the ratio of new entrants calculated by excluding the former employees of MDI Termelő Kft., while the solid line includes those 128 new employees.

Number of new entrants*



Employees leaving*



* The number of new entrants and employees leaving is presented only in respect of our Kazincbarcika site.



In cases of each colleague leaving the Company, we hold an exit interview. The results of these interviews are regularly analyzed and used to develop our programs to strengthen BorsodChem's employer branding and our ability to retain employees.

Diversity and equal opportunities

With the help of our employees, our objective is to integrate the sense of responsibility for each other in our high-quality workplace culture, as well as the aspects of equality, togetherness and security. It is the responsibility of all our managers to achieve this goal together with full legal and ethical compliance.

We consider the protection of human rights, diversity and equality important with regards to our employees, job applicants

and partners, therefore we expect them to adhere to the Code of Ethics and other related policies containing these principles. We are committed to the SA 8000:2014 guidelines, and we pay special attention to avoiding any negative discrimination, whether based on gender, racial, religious, political or other attributes. We apply the principles of equal treatment during the recruitment process, performance evaluation and dismissal of our employees, which is also included in our Collective Bargaining Agreement. Getting to know our Code of Ethics is a fundamental part of the induction training course, thus our employees can already familiarize themselves with the guidelines and expectations regarding diversity and equal opportunities during the first period of their employment.

We are proud that in 2018 we successfully passed all thirteen customer audits, and the customers involved could be reassured that our ethics system is implemented effectively.

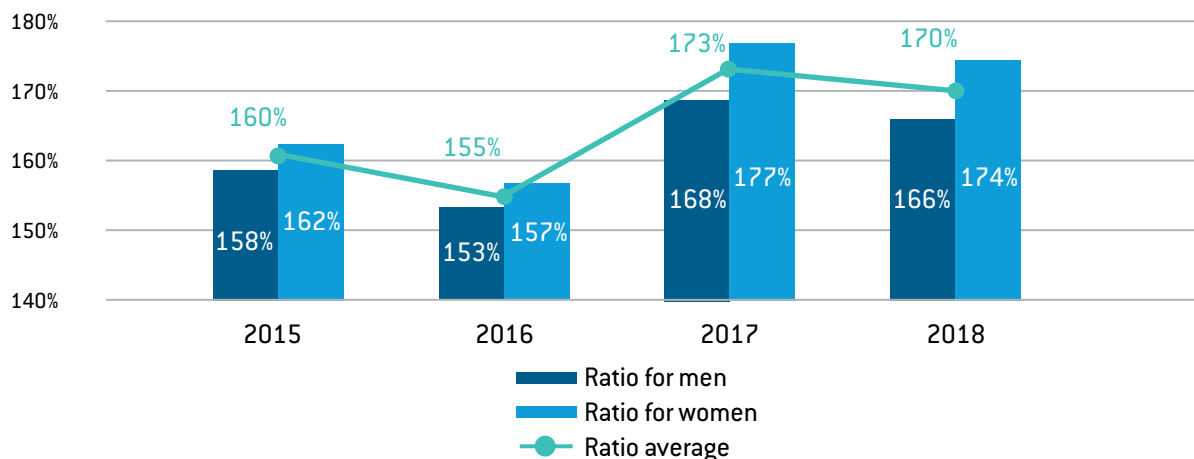


In order to protect human rights and equal opportunities, we provide various communication channels for the submission of complaints. Any complaint about diversity or equal opportunities is handled based on the provisions in our Code of Ethics, the Anti-Fraud Policy and the Ethics Hotline Policy. Complaints are handled by the Compliance and Internal Audit Office. Alleged or actual complaints reported through our two interest representation organizations are investigated jointly with the HR Services Department. Ethical investigations are carried out in

compliance with the relevant applicable laws and with respect for the dignity of those involved.

Regarding our diversity and equal opportunity data, it is important to note that in the field of production, in accordance with the occupational health policy, we can employ females only in a small proportion of positions. As such, plant operator positions – except control rooms – can only be taken by male workers.

Ratio of entry-level wages and the guaranteed minimal wage by gender



Diversity 2018	Production	Services	Sales	Management
Age (year)				
<30	17%	12%	14%	0%
30-50	53%	55%	65%	62.5%
50 <	30%	33%	21%	37.5%
Gender				
Men	89%	62%	43%	87.5%
Women	11%	38%	57%	12.5%



	Blue-collar workers	White-collar workers with secondary education	White-collar workers with higher education	Lower-level managers	Line managers	Middle managers	Executives
Age (year)							
<30	16%	14%	24%	2%	0%	0%	0%
30-50	54%	50%	54%	59%	75%	68%	62.5%
50 <	30%	36%	23%	39%	25%	32%	37.5%
Gender							
Men	98%	42%	59%	94%	68%	82%	87.5%
Women	2%	58%	41%	6%	32%	18%	12.5%

The proportion of women's basic salaries and remuneration to that of men by business area:

Proportion of women's basic salaries and remuneration to that of men				
Production	2015	2016	2017	2018
Blue-collar workers	93%	90%	95%	91%
White-collar workers with secondary education	81%	82%	84%	84%
White-collar workers in higher education	96%	93%	92%	91%
Lower-level managers	91%	106%	113%	97%
Line managers	90%	91%	89%	*
Middle managers			*	
Executives			*	

* Due to the small sample size we cannot ensure anonymity, therefore we do not publish the data



Proportion of women's basic salaries and remuneration that of men				
Services	2015	2016	2017	2018
Blue-collar workers	80%	78%	80%	78%
White-collar workers with secondary education	87%	86%	87%	86%
White-collar workers with higher education	105%	97%	105%	97%
Lower-level managers	104%	98%	104%	98%
Line managers	82%	96%	82%	96%
Middle managers		*		

* Due to the small sample size we cannot ensure anonymity, therefore we do not publish the data

Proportion of women's basic salaries and remuneration that of men				
Sales	2015	2016	2017	2018
Blue-collar workers	*	*	*	*
White-collar workers with secondary education	*	*	*	*
White-collar workers in higher education	87%	81%	71%	74%
Lower-level managers	*	*	*	*
Line managers	80%	102%	102%	101%
Middle managers		*		
Executives		*		

* Due to the small sample size we cannot provide anonymity, therefore we do not publish the data



Employee Retainment and Well-being

Wage policy

We appreciate our well-qualified colleagues, and we aim to establish a long-term cooperation with them. To this end, from the beginning of their employment, we aim to reward their work appropriately. Therefore every year we determine the entry-level salaries at a higher level than the current guaranteed minimum wage.

In 2018, in employee groups with especially high turnover we implemented a salary raise higher than the annual average.

In 2018 the tax increase on the cafeteria benefits affected our system noticeably. The details of the new system have not yet been finalized, but in the interest of our employees,

our Company voluntarily took on half of the tax burdens increments. In addition, we also introduced an extra night shift allowance.

Employee satisfaction

Our HR Services Department continuously analyses the workforce management indicators and monitors international benchmarks. Independent audits and feedback from employee satisfaction surveys are also taken into account when making decisions affecting employee groups. These results help us to revize the HR strategy annually, as well as to define organizational and individual goals.

Each year, our Company measures the level of employee satisfaction in various areas (see table). In the questionnaire

Employee satisfaction survey results

Assessed category	Company average 2018 (1 – Not at all satisfied 6 – Very satisfied)	Change in the average score compared to 2017
Commitment, retainment	4.96	+0.05
State of health	4.80	+0.04
Work environment	4.70	+0.06
Content of work	4.65	+0.07
Training and education	4.51	+0.07
Work-life balance	4.46	+0.06
Interpersonal relationships	4.42	+0.10
Flow of information	4.41	+0.02
Career opportunities	4.33	+0.11
Workplace stress	4.29	+0.05
Remuneration	4.18	+0.15



employees can indicate their satisfaction on a scale of zero to 6. Based on employee feedback, we develop an action plan with the aim of increasing their satisfaction next year. In 2018 we measured higher levels of satisfaction in every category compared to last year's results, which reflects the success of our employee retention initiatives.

The survey also assessed our employees' satisfaction with the managers, for whom there was also a consistent improvement over the previous year.

We aim to improve the level of satisfaction of our employees with many additional programs. Previously we supported our colleagues with summer camp assistance for their children, but in 2018 we launched a self-organized daytime summer camp free of charge in two shifts. Besides numerous games, skill-based and craft activities, we organized programs to

show the interesting features of the chemical industry and the environment from a child's perspective. During the camps, children could also visit the Fire and Disaster Protection Department of our Company.

Labor-management relations

We believe that satisfied teams that work constructively and fairly represent the fundamental condition to realize our strategic goals. As such, we work in partnership with our colleagues and their representative bodies. Our cooperation is characterized by openness, constructiveness and honesty. We aim to maintain these good relationships, this being the primary responsibility of the Vice President HR and Communication and the HR Services Department – any complaints about the

Employee satisfaction survey results

Assessed category regarding managers	Company average 2018 (1 – Not at all satisfied 6 – Very satisfied)	Change in the average score compared to 2017
Professional preparedness	4.82	+0.15
Taking responsibility	4.64	+0.18
Organization of work	4.60	+0.16
Motivating	4.53	+0.15
Team-building	4.44	+0.18

Our efforts in 2017-2018 that helped BorsodChem to become a more attractive company to work for:

- We are constantly increasing our employees' salaries
- We improved our mentoring program
- We extended the system operator onboarding program to 6 weeks
- We are continually expanding our education and training activities, thanks to its partnership with us, the University of Miskolc is about to launch a Chemical Engineering Bachelor Program
- We improved our internal training system and expanded our leadership training program
- We launched our leadership role transfer program
- We established our Educational Center with equipment necessary for our own practical courses.



relationship between employees and the management can be raised with either them or the Internal Audit Office.

Involving our employees and their representative advocacy bodies is a basic feature of our operations. Our Collective Bargaining Agreement has been in place for more than 30 years, and regulates the framework of cooperation in order to uphold the principles of honesty, reciprocity and good faith. The rules governing the relationship between the management and employees were developed jointly with organizations overseeing or representing the relevant interests. We are constantly communicating with the organizations and directly with our employees in various forums and during the HR 'Let's Chat' events.

We strive to nurture consensus on matters concerning employee benefits, working conditions and relationships. The guiding principle of the management is to provide transparent information within appropriate timeframes and in a suitable way on all issues that affect more than 30 employees. If trade unions initiate a consultation on such an employer measure, decision or plan, we may not implement the planned measure within 7 days of the initiative.

Employee-related complaints are handled according to the Collective Agreement and the Code of Ethics. Complaints about performance appraisals are handled in line with the rules of the performance management system for subordinates and executives. The two interest representation organizations (unions) in the Company also play an important role in the dialogue between employees and management, and in related decision making.

Freedom of Association and Collective Bargaining

In accordance with the principles of SA 8000, our employees have the right to found associations representing employee interests, and to join or abstain from such organizations. BorsodChem also respects the right of collective bargaining and ensures that union members are not exposed to discrimination, harassment, intimidation or retaliation.

We consider these principles to be present in our suppliers' and clients' policies, so the acceptance of the Code of Ethics is required for those involved in our procurement business processes. Violation of the Code is considered a serious offense, which may result in the termination of a contract. However, we do not know about any cases when the freedom of association or collective bargaining has been harmed at any of our partners.

Regulation concerning notice period		Notice period
Employee resignation		30 days
Collective lay-off		30 days
Termination of employment		30 days
In cases of termination of employment, depending on the years spent in the employment relationship with BorsodChem Zrt.	3 years	35 days
	5 years	45 days
	8 years	50 days
	10 years	55 days
	15 years	60 days
	18 years	70 days
	20 years	90 days



Read further information about our employee complaint handling system on page 51 of our Sustainability Report of 2016



Training and Education

Having a well-trained professional and managerial staff is one of the prerequisites for safe, long-term effective and successful operations. Accordingly, we place a great focus on the development of our employees, but we also run or arrange many training and education activities outside the Company.

Our external educational activities

We try to support young people studying in public and higher education with our external training activities.

We have career orientation programs starting from primary school; for instance, a chemistry club for 8th grade students. We regularly participate in career orientation events targeting the younger age groups. In 2017, we were part of the national Girls' Day event, where teenage girls receive career orientation sessions, especially in the field of technology and science. In addition, we run a scholarship program for high-performing secondary and higher education students.

Taking the interests of the Company into consideration, we are playing an increasingly important role in the vocational education of the chemical industry, so we provide professional practice opportunities for people in secondary vocational education and higher education.

In 2018 we co-launched a chemistry faculty at Szalézi Szent Ferenc Secondary School, which prepares students for further study in the chemical industry as part of the curriculum. As part of this, our Company provides professional support for curriculum development, raw materials for various experiments, and factory visit opportunities for the students.

As a dual training site, we participate in the engineering education at three universities (Miskolc, Debrecen and Pannon). The students concerned take part in practical training at our

Company in line with the dual curriculum of the given faculty. In 2018, our Company established an off-site chemistry department with the University of Debrecen, which further strengthened our professional and educational relationship. In addition to supporting the education of material engineers in cooperation with the Department of Chemical Technology at the University of Miskolc, in collaboration with the county's chemical companies, we successfully contributed to the launching of a chemical engineering bachelor's education at the Faculty of Materials Science and Engineering, starting in September 2019.

In response to the typically experienced problems of vocational training, the Ministry of National Economy launched the transformation of vocational education and training systems in 2017-18 and created sectoral skills councils. As a recognition of our VET activity, members of the Chemical Industry Skills Council have elected a representative of BorsodChem as Chairman.

However, our educational activity does not stop at the level of school-based training. In order to address our previously mentioned hiring problems, we run retraining programs at our own expense for job seekers with different backgrounds, and by 2019 we will double the number of retraining courses launched compared to the number three years ago. We pay special attention to the training of new entrants of our Company, and this includes a 6-week training program that precedes the plant-specific training period.

In order to increase the efficiency of the courses, we created our own Education Center, equipped with demonstration tools required for practical training. In addition to the retraining programs, the center is home to many of our in-house courses and practical work for secondary school students.



The external training and development programs of our Company:

Number of participants
(in 2018)

Chemistry club

A club for 8th grade students of Kazincbarcika, which aims to inspire the basics of chemistry amongst interested students using gamification

15 people

Chemistry faculty

Raise the interest of 11-12 grade students of Szalézi Szent Ferenc Secondary School in the chemical industry and prepare them for chemistry matriculation.

10 people

Career orientation days

Career guidance programs organized for different groups (primary school, secondary, girls, youth groups, etc.), sometimes attended by our organization, sometimes organized by us.

4-500 people
per year

Chemical system operator retraining course

System operator retraining course, where BorsodChem covers the full cost of the training, the travel expenses, and provides monthly financial support to the participants.

approx. 50 people
per year

Professional practice programs

Various professional practice programs for secondary school and university students

Secondary school: 58 people
Higher education: 35 people

Scholarship program

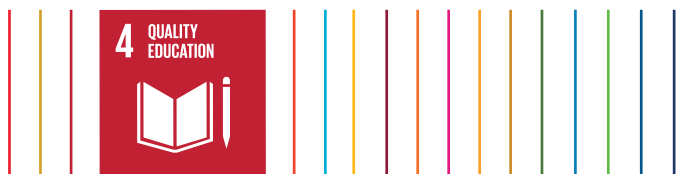
Scholarship program for secondary and higher education students with outstanding academic performance

Secondary school: 8 people
Higher education: 12 people

Dual training

Dual training cooperation with 3 universities

12 people



Training and development of our employees

Training and development

In BorsodChem's training curriculum, both internal and external training courses can be found to provide the training for each job, as required by the authorities.

We put great focus on the development of our new employees from their first day at the Company. In 2016, we introduced a one-day-long training program for all our new entrants, which aims to give a comprehensive view of the Company's activities and policies. After entering, our new employees receive a designated mentor to help them to fit into the professional and social culture of the Company. We are proud that our mentor program won second place in the national Mentor Oscar competition in 2017.

Decisions about the training of employees are made, on the one hand by the departments themselves, with the training budget allocated to them, but on the other hand, we also operate target group-specific development programs organized and operated at company level.

The regulation of our training system is extraordinarily wide, ranging from training planning, organization, preparation of training materials, remuneration for trainers for internal courses, and support for integration in the workplace. Based on the results of the satisfaction surveys from the participants of training courses and feedback from the annual employee satisfaction survey and the evolution of operational needs, we continuously expand our internal and external training offerings. The effective operation of our training system is ensured by the Training Policy that defines not only the organizational ordering of the courses and the encouragement of participation, but also the documentation methodology. Our courses are regularly reviewed by external audits as well. The results and availability of training programs are continually reported through internal communication platforms.



Ágnes Piaszkóné Szokircsák
Head of Chemical Faculty,
Szalézi Szent Ferenc
Secondary School

"Starting from September 2017, after consulting the experts at BorsodChem, Szalézi Szent Ferenc Secondary School launched its two-year-long chemistry faculty, for which the 11th grade students of the school can apply. [...] The chemistry faculty prepares for the middle-level and advanced chemistry leavers' exam and provides practical knowledge as well. The aim of the lessons is to prepare the students for the chemistry leavers' exam, and also to provide up-to-date practical laboratory skills that can be used as a chemical expert. The courses also provide a good basis for further education in engineering and chemical engineering, but may also benefit the students who apply for medicine. [...]"

[...] Chemistry faculty students are becoming confident in the laboratory. They are not afraid to handle the equipment, ignite the Bunsen burner. Our aim is to raise the interest of the future generation in the chemical industry, and we hope that the good relationship between BorsodChem and Szalézi Szent Ferenc Secondary School will become even closer in the future."





**Prof. Dr. Árpád Bence
Palotás**

University teacher, Dean

University of Miskolc, Faculty
of Materials Science and
Engineering Technology

“The successful cooperation of the University of Miskolc and BorsodChem Zrt. has decades of history. In addition to supporting the education of mechanical engineering, the Company is also an active participant in material engineering training. In our practice-oriented training, the firm plays an important role through its institute at the Department of Chemistry of the Faculty of Materials Science in both traditional and dual forms.

The commitment of the Company leaders to higher education is proven by active support, which made the launch of chemical engineering Bachelor's in the autumn of 2019 possible. The Faculty of Materials Science considers BorsodChem Zrt as a strategically and considers it a priority to ensure the supply of chemical specialist.

Our instructors and researchers, in cooperation with the Company's experts, work regularly on research, development and innovation projects. We are proud of our successful technology development projects that reduce environmental load and ensure sustainable development.”

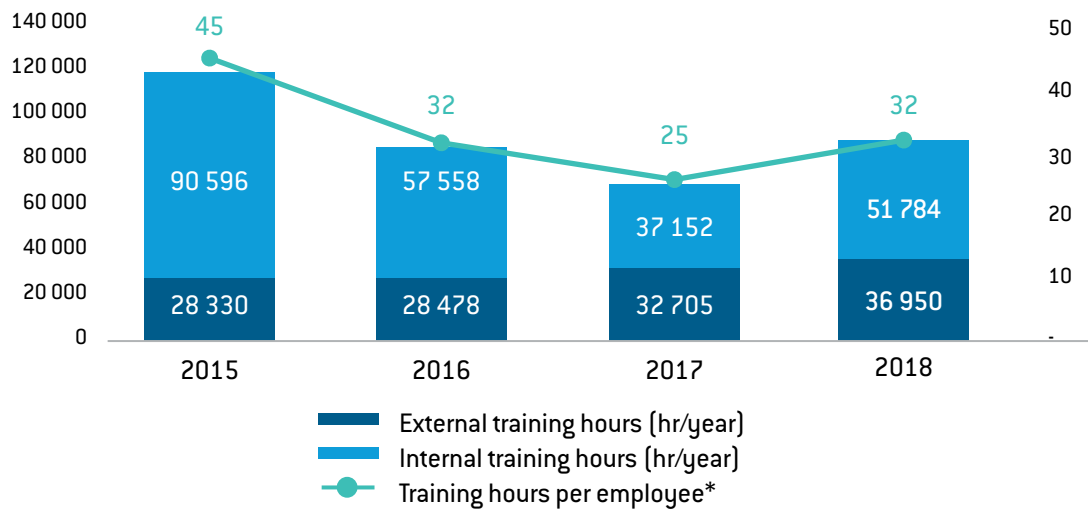
We pay special attention to the development of our talented employees and managers as well. In 2016, we launched our Leadership Academy training series, and in 2017, we launched a skill development program for our foremen, in which HR experts are actively involved with the goal of continuous knowledge sharing about leadership skills. In 2018, we launched our Career Program, which is a one-and-a-half-year program of mentoring, development and team building for leadership education. The success of these programs is reflected in the fact that, based on our satisfaction questionnaire, the satisfaction with our managers has improved. In addition, we are continuously developing the electronic support of our training processes.

Our unique technologies made it necessary in the past years to progressively develop our own curricula and training staff besides offering external courses. Therefore in these years while the number of external training hours decreased, we emphasized the development of internal professional and on-the-job training. As a result, in 2018, our employees completed a total of 88 734 hours of training (31 hours/person*), excluding the hours of on-the-job training. The number of hours run by external trainers is about half the number of hours of internal courses.

One of the most exciting examples of our on-the-job development opportunities is realized via our close relationship with our Parent Company. Thanks to our rotation program, groups of our employees can make regular visits to Wanhua's Chinese sites, where they can learn about the operation of our Parent Company in diverse areas for 1-2 weeks, gaining valuable knowledge and experience.



Training hours



* The training hours/person was counted using the average headcount





Gergely Horváth
Ex-scholarship winner,
employee of
BorsodChem Zrt.

“I first heard about the BorsodChem Scholarship Program at the University of Pannon. My interest was mainly raised by the Company’s long-standing reputation, the diversity of the professional opportunities it offers, and the existence of various financial benefits to help young workers, so I decided to submit my application. Looking back at the program, I find its great advantage is that even before getting my degree I was exempt from the stressful atmosphere of job interviews, which may take several months. During my university years I already received a lot of help in my professional development, as both my thesis and my individual design work were written on an important industrial topic for BorsodChem. I also gained professional experience at the Company, where I got a lot of positive insights and surely confirmed that I was right when I chose BorsodChem for long-term work.”

Performance evaluation system

Our Company considers the training and development of our employees very important, therefore, in addition to providing opportunities for participation in professional training and competence development trainings, we place great emphasis on our performance evaluation system as well. The essence of our training philosophy is to develop all of our employees with tailor-made training plans based on their performances, adjusted to their personal development plan. Our goal is to help our employees maximize their development potential through regular performance evaluation feedback and our training system based on continuous development.

The core of our performance management system is to break down our corporate goals into organizational unit level goals (Key task) and individual key performance indicators (KPIs), taking into account HSE goals. The performance targets of the departments are reviewed and evaluated on a quarterly basis to ensure that projects emerging from the economic and

We improve efficiency with digitalization

It is vital for our organization that we use state-of-the-art technologies to support our employees just as with our production activities. Therefore, we have replaced our IT system supporting our HR processes with SAP and the cloud-based SuccessFactors system and are planning further innovations.

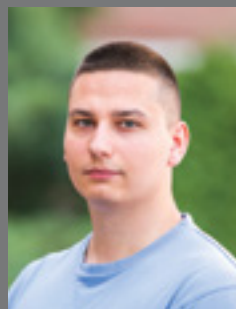
The previous system based on multiple, parallel-use software was replaced by an integrated system that made the work of all HR sub-organizations more efficient. There was also a qualitative renewal in the areas of recruitment selection, training system, HR administration and HR controlling. Many of our previously paper-based processes have been replaced by electronic processes, with which our HR organization has taken a major step towards sustainable and more efficient operations.



environmental challenges during the year can be included in key tasks. The performances of employees on individual key tasks play a major role in their career path. All employees of our Company are subject to the performance management system, whereby they receive feedback from their performance manager on an annual basis.

For the training and performance evaluation processes, the Vice President HR & Communication and the HR Services Department are responsible. Within a comprehensive performance management system, performance managers are responsible for defining the performance goals of their employees in general, assessing their performance, conducting feedback discussions, and defining development directions. Our employees may consult the Performance Management Committee with their comments and complaints on performance evaluation for investigation and remediation.

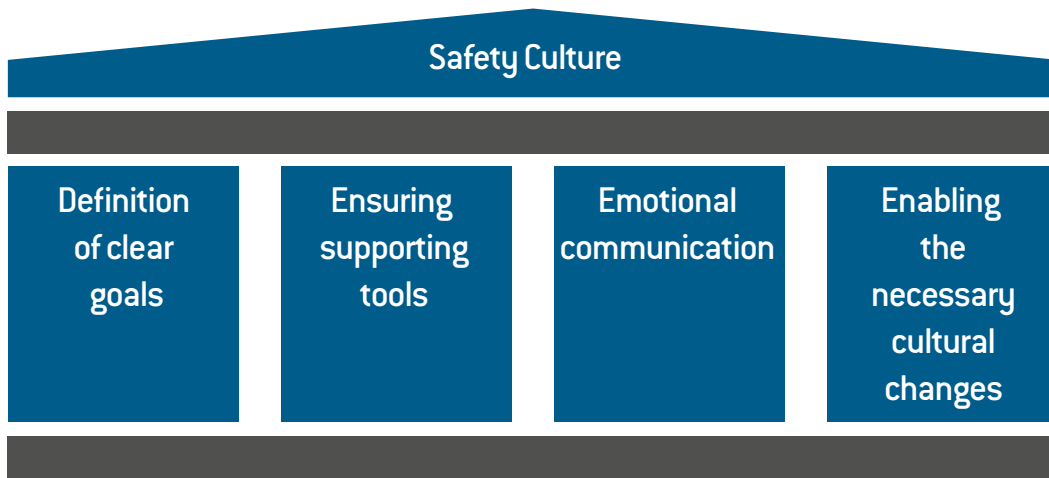
Our goal for 2019 is to show sustainability at the individual level of our performance evaluation system.



Dániel Török
Scholarship winner,
student in
the dual education

“BorsodChem offers very good opportunities for both career starters and newly enrolled university students. I take part in a dual training program, which is a new program for the university and the Company as well. This is primarily a practice-oriented program that can help to develop and use the theoretical knowledge learned at university almost immediately in practice. In addition to this, the Next Generation Program and the BorsodChem scholarship also greatly help students and career starters to integrate into company life and provide the right practical experience.”





Health and Safety

While manufacturing our products, we work with hazardous materials in industrial conditions. The basis of our corporate values is that we are all responsible for each other's health and safety. It is our job to minimize the risks we face in our working environment and to reduce the number of accidents to zero. In order to achieve our goals, we implemented the PSRM (Process Safety and Risk Management) system in 2018 and also OSHAS 18001 Health and Safety Management System and our own safety regulations serve our goals too.

BorsodChem's approach: Safety First

Everyone in the Company is responsible for maintaining safe working conditions and minimizing risks. Raising the awareness of our "Security First" motto is the basis of the trust we want to strengthen among our colleagues, partners and within the local

community. Our goal is to maintain a stable safety culture, and by doing this our managers have a clear role, so we encourage their active engagement with a number of measures.

At company level, the Director EHS is responsible for the development and operation of the HSE system for creating safe working conditions. All employees (from the CEO to the lowest level of hierarchy) are assessed on the basis of the performance indicators assigned to the goals. The work of the leaders is assisted by a larger group than the number of employees defined in the Occupational Safety Act, their task is to integrate the provisions of the labor protection legislation into the internal regulation system of the Company and to supervise and operate our internal system, double-checking the safe work of our employees.

In our plants, HSE coordinators with work and/or fire safety training help our work, and we provide them with up-to-date training in order to maintain their professional knowledge. In addition, the



Central HSE Commission started its operation in 2017 with the aim of facilitating the flow of HSE information within the organization, informing senior management about corporate-level HSE issues to prepare and support the decision.

The BorsodChem Occupational Safety Committee represents workers in all fields. Our cooperation with trade unions is also successful in several ways. Open communication and reconciliation of interests are always guaranteed in substantive decisions.

Regional safety representatives are involved in accident and incident investigation processes, and in carrying out risk assessments. Labor safety committee elections are conducted jointly with trade unions, establishing a successful cooperation in the field of safety and health.

During the preparation phase of our new investments, stakeholders are always fully informed about the safe operation of the new facility. Knowledge of the properties of our chemicals is also a basic requirement for safety. This is served by the REACH database, which contains rules for the safe handling of materials, it is available to all employees within the Company.

Protecting the health of our employees

In 2018, BorsodChem as a responsible employer, set a strong focus on the development of health awareness by supporting the enhancement of employee safety awareness. To this end, and in the spirit of employer care, we have been offering our employees a new form of **healthcare service** (health insurance) from January 2018. This benefit element provides an opportunity for our employees to get free use of private health services that help to maintain health, prevent and detect illnesses, and make professional medical care easily and quickly available in cases of illness.

During the decommissioning activity of the mercury cell chlorine plant employees work in an environment containing mercury. In 2018, we purchased a device for controlling the mercury exposure of the workers, which was placed at the medical centre of BorsodChem. With the help of this equipment,

the examination of the employees has been significantly accelerated and simplified. As a result more regular and rigorous monitoring is possible. According to legislation, every worker who is exposed to mercury is required to participate biological examination in every six months. However, our Company performs more frequent checks on all employees involved, that is why we can detect a possible exposure much earlier than we would using the legal frequency, and we can handle the problem at an early stage.

In 2018, a total of 2 470 people underwent various health examination tests within the framework of occupational health services, 379 of our colleagues received vaccinations and 1 009 workers underwent ultrasonic examination.

However, our prevention supporting activities are not limited to different medical examinations. In order to promote a healthy lifestyle, our Company offers free sports opportunities to its employees, including access to a swimming pool, gym, and shaping gymnastics.

In 2018, in addition to our “30 Day Challenge” series of events, we launched a year-round challenge program where our employees can earn points for their organizational units every quarter (e.g. running, cycling, hiking). At the end of the year, we announced the award of “Fittest Organization Unit of the Year”. In order to promote healthy eating, we organize fruit days, which provide seasonal fruit for our employees.

Health Week at BorsodChem

In 2018, we organized the BorsodChem Health Week for the first time linked to the challenging series of programs announced in the context of a healthy lifestyle, and awareness raising for our employees. Our employees could take part in different programs every day: screening test and lifestyle counselling, getting to know the basics of health-conscious eating, sustainable consumption and stress management during lectures, yoga classes, and trying out different forms of physical and therapeutic movement.



Safe workplace and operational safety

Our Company strives to create a safe workplace environment and safety in many areas.

The Company maintains an on-site fire department, the majority of which consists of full-time firefighters. The task of the fire brigade is to immediately handle and prevent emergencies and to protect the health and safety of our employees, and to provide emergency first aid with rescue vehicles in case of an emergency situation in the Company. Our firefighters work with modern equipment that enables extremely fast intervention. According to our plans, in line with the development of the Company, we will expand the fire brigade in the coming years and build another barracks, because of the establishment of extended plants, the fire brigade will have to serve a larger area. In 2018, two of our firefighters received a prestigious award at the Hungarian Firefighting Association's national celebration for years of outstanding performance and successful work. Ferenc Hanász received the award of the

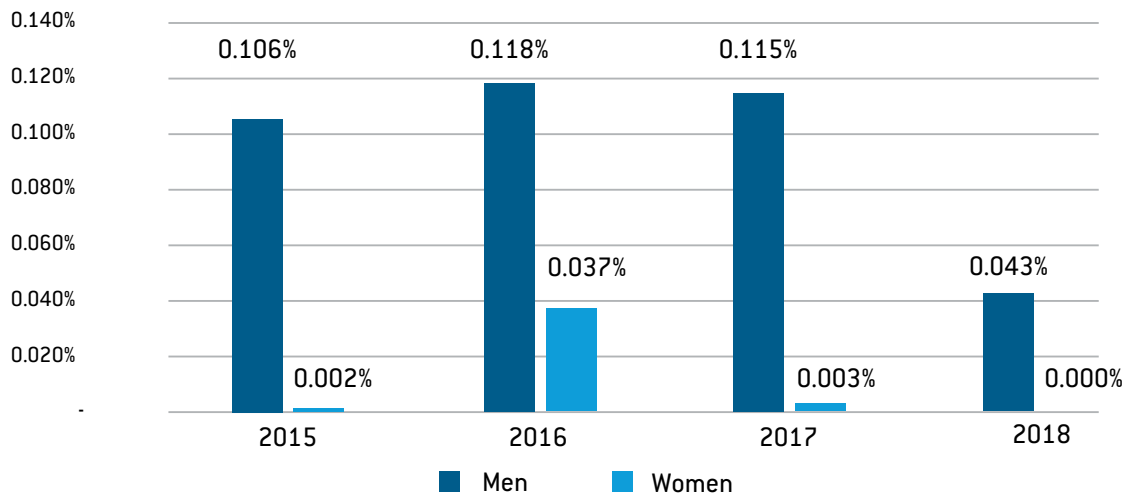
Interior Minister, while Pál Haskó received the award of Gróf Ödön Széchenyi.

Minimizing the number of harmful events is also based on the safety of equipment and production. We use the latest, safest technologies in design and construction. Existing equipment is regularly inspected, and we carry out more special tests than is required by law.

In addition to the security of our employees, we pay special attention to the safety of contractors and suppliers who work in our area. Our activities are strictly controlled, and before the start of the work, the construction companies receive a safety technology course where they learn about the company's HSE rules, local conditions and risks.

Our safety and health performance is analyzed through external and internal audits and through our security statistics. Based on the results, we launch campaigns in the areas to be developed.

Injury rate (number of lost days / total planned working days)





As a result of the commitment of our colleagues and leadership, our work safety statistics are outstanding in the region.

In 2018, a total of 37 injuries occurred at our Company, which represents a 10% decrease compared to the previous year. Everybody in our industry is aware of the importance of a safe workplace environment. Thanks to this, we regularly consult with many industry stakeholders at various conferences, sharing our good security practices. In the last year, we participated and gave presentations in the security organization conferences of the following organizations: Association of Hungarian Chemists, National Association of Plant Fire Brigades, Hungarian Chemical Industry Association, Hungarian Tank Technology and Pressure Equipment Association and Mechanical Engineering Association.

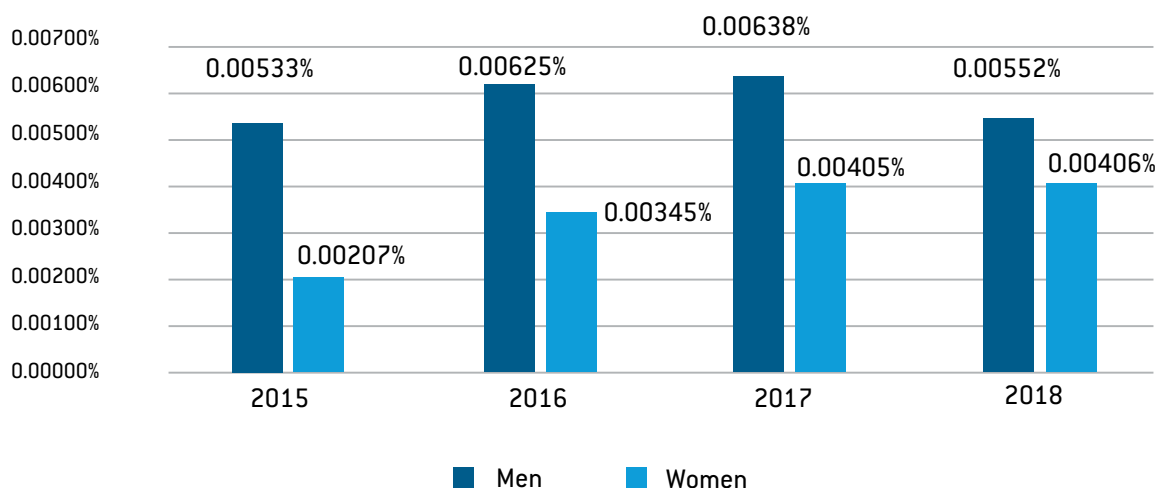
Week of Health, Safety and Environment

Our Company have been organizing a program series, the HSE (Health, Safety and Environment) week since 2014.

Our employees can choose from a variety of programs every year. In addition to educational presentations, they can participate in fire and safety practices, professional exchange programs and shows. Participants can learn about the natural environment of BorsodChem under the framework of "Green Walk", and they can become a part of environmental protection on organized tree planting. In the HSE week, we run a drawing competition for kindergarteners and pupils of primary school, and a photo contest for our employees. The best drawings and photographs are awarded prizes.

Every year we organize a family and sports day, where our employees and family members can participate in various programs and screening tests, and the organizational units strengthen their team spirit by team cooking.

Injury rate (injuries / total planned working days)





Good practices recognized by EU-OHSAS at BorsodChem

The European Agency for Safety and Health at Work (EU-OH-SAS) named our case study as a 'good practice' and published it. The case study was about information and education on chemicals at our Company.

In 2018, in response to a request from the Office of the Chief Medical Officer of State, we presented our material/practices detailing our multi-level education system, and presented a system of "half-page" extracts from the chemical safety data sheet, which is designed to enable our employees to access key information about chemicals.

Based on the document, and then on a personal visit, the Office assessed our practice as unique and forwarded the description to the European Agency, which recognized the BorsodChem system at European level.

The BorsodChem case study is publicly available on the website of *OHSAS*.

Responsibility Towards Our Clients

The long-term success and good reputation of our Company and our industry depend on our relationships and quality of cooperation with our partners. That is why we also apply our sustainability approach to customer health and safety, and data protection.

Our Company conducts a customer satisfaction survey every 2 years, the recommendations of which are integrated into our operations. Based on the results of our 2017 questionnaire, our customers are satisfied with the quality of BorsodChem products. The performance of our Company had to be evaluated on a scale of zero up to 10 points, only 6.7% of respondents ever gave lower than 7 points. Respondents highlighted the high quality of our products, our commitment and the excellence of our communication with customers.

In the questionnaire, the satisfaction of our customers was measured with a separate focus on each product group. Although overall satisfaction is high, our experience shows that our MDI and PVC products have lower customer satisfaction, so we will focus on future process developments of these products.





One Step Ahead

The OSA program targets the isocyanate users and distributors of the African and Middle Eastern regions, and provides alternatives on the safe handling and use of the chemical products through by providing tailor-made solutions. Our goal is to participate in as many OSA events as possible.

ISOPA Audit

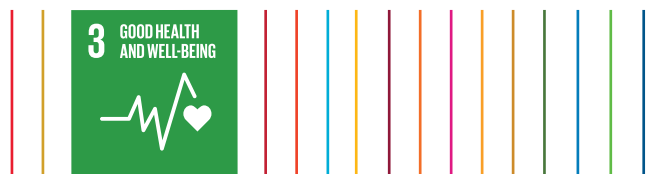
Based on the professional recommendation of the organization, we carry out on-site audits at the customer plants, where after testing the unloading and product management practices, we make suggestions when necessary in order to improve the processes for enhance safety and health.

Some of our customers commented on the length of the complaint handling process. Based on the feedback, we apply stricter internal deadlines for conducting the complaint handling process and expand the number of complaint handling employees.

If a customer experiences a discrepancy in the quality of our product, service or perceive any health or safety endangering incident, they are encouraged to indicate this to us.

We investigate all customer reports according to our internal regulations, and we provide feedback to our partners about the outcome of the investigation and the preventive actions taken with the coordination of the Sales Manager. The Quality Management Department reports such complaints on a weekly basis, and we hold monthly meetings about reclamations. On request, we investigate the complaint at the customer's premises. The topic of health and safety is also examined in the customer satisfaction surveys. We also report on such complaints in the quarterly report of the integrated management system.

Complaint management is important in Procurement processes. Managing complaints related to raw materials or means of transport is the responsibility of the material purchaser. Depending on the degree of the complaint, the purchaser officer may decide about claim adjustment and managing the complaint. It is our goal to close every complaint within a month. We run a separate internal system for managing complaints, where interested parties can follow the process. Complaints are also considered when we perform the annual evaluation of our suppliers.



Health and safety

Most of our products are potentially dangerous items or materials, so their handling requires special attention and expertise from us and the customer too. The issue of product safety goes beyond the boundaries of our Company; our customers also need the appropriate theoretical and practical skills to protect health and safety. Based on our policies, all the products we sell are supplied with a Safety Data Sheet (SDS) in the customer's language. If needed, technical data sheets (TDS) are also attached. Our policies are in accordance with ISO 9001, 14001 and OHSAS 18001 standards.

The delivery of TDSs and SDSs to customers is the responsibility of the contact salesperson. The delivery is tracked through our dedicated IT interface. The REACH⁸ Coordination Office is responsible for managing the SDS database. Our isocyanate products can only be delivered by a driver with an ISOPA license. In cases of unfavourable events during transport, our customer can request assistance via a multi-language helpline operated by SGS, our contractual service provider.

In 2017, a higher level of chlorobenzene content was found in a TDI product of a co-producer of ours, resulting in mistrust on the market among our customers. Although the content of chlorobenzene in our product was in line with the standards so far, we have further reduced its in order to meet customer expectations as much as possible.



Jörg Palmersheim
Secretary general
of ISOPA

“ISOPA, the European Diisocyanates and Polyols Producers Association is proud to have had BorsodChem as a member company for decades.

The excellent support and contribution of BorsodChem towards ISOPA enables the association to develop answers and solutions for the important topics such as a circular economy and product stewardship. ISOPA look forward to engaging further with stakeholders to promote the benefits of polyurethanes, building on the support of BorsodChem and the other member companies.”

Increased customer distrust in chemical products and increasingly stringent requirements for production are not uncommon. As a result, over the past two years, we have had several customers who audited our production conditions and systems before ordering. We successfully passed all of these audits.

For the sake of safe product handling, our sales managers inform our customers about BorsodChem’s ISOPA audit and Walk the Talk services. We completed 10 ISOPA audits, 15 on-site audits, 21 customers’ audits, 10 Walk the Talks, and conducted 10 logistic screening in the last 2 years. The audits are carried out by our ISOPA certified staff.

Data protection

Confidentiality is a basic requirement in business, serving the interests of ourselves and our partners alike, as leakage of information can negatively affect fair competition. Just as we expect it from our partners and competitors, we do not attempt to obtain unfair and unlawful information about our competitor’s businesses.

We give our customers discreet and non-discriminatory treatment, including the application of legitimate business practices and the protection and confidentiality of information received from them. At BorsodChem, all partner information is considered confidential on the basis of the Information Security Policy and the Information Security Code.

The handling of potential complaints is based on BorsodChem’s Code of Ethics. In the last four years, we have been aware of a total of three data misuses the incidence of which have always occurred to our client because of its inappropriate data management practices. In 2017-2018 we did not receive any complaints about data issues via our Ethical Line.



Responsibility Towards Local Communities

As one of the leading companies in the region and Hungary, BorsodChem is responsible for local communities, whose welfare is beneficial to both parties. Since local people are of strategic importance and since mutual respect is paramount, the whole top management is responsible for maintaining a good relationship with them. Our policy governing social responsibility and the support policy cover the funding of social community initiatives, but the final decision is made by the CEO taking into account a committee's suggestion. The initiatives for local communities are always sponsored from a predefined budget (approved by the CFO), including corporate tax subsidies.

Our social engagement is based on traditions and the commitment of our employees. We are committed to the economic well-being of the region; in particular, we support the municipalities around our sites of operation, but we also stay in touch with several educational institutions in the country in order to establish professional cooperation.

Through our social responsibility goals we enrich the cultural life of Kazincbarcika and the surrounding settlements, including the promotion of Chinese culture among local communities, and the support of environmental protection projects. We promote healthy lifestyles within and outside the Company. We are proud of our social sensitivity and that we support education. At Christmas, we regularly organize fundraising for the Children's Home of Nagybarca and the Social Service Center of Kazincbarcika. Beside this, in

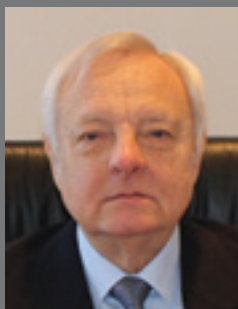
Social Responsibility for Equal Opportunities

"The Association of Disabled People of Kazincbarcika was founded in 1995. Its main objective is to promote the social integration of disadvantaged people with disabilities. The association asked for and received help, and support from BorsodChem Zrt., during its establishment already since our income consisted of only a small membership fee. This good relationship still exists today; we have received a lot of support for our programs, especially the Equal Opportunities Day. Many thanks for this generous, selfless support that contributes to equal opportunities for disabled people.

Our motto: *"What is essential to us is convenient for everyone else!"*

Mária Tomkóné Kiss
President, Association of
Disabled People of Kazincbarcika





Dr Péter Faragó
Mayor,
Sajószentpéter

Relationship of Sajószentpéter and BorsodChem

“Our municipality is committed to protecting the environment. For the purpose of sustainable development, the town joined the Climate and Energy Covenant of Mayors, adopted the Sustainable Energy and Climate Action Plan of the city, just like the Green Infrastructure Development and Maintenance Action Plan, which is implemented in a close cooperation with BorsodChem Zrt.

The use of renewable energy, energy efficiency and the enrichment of green areas of our settlement play an important role in our development activities.

In order to achieve the development of sustainable transport in Sajószentpéter and to reduce the emissions of pollutants we built the new roundabout at the junction of traffic routes No. 26 and No. 27, using EU funds in a consortium with Magyar Közút Nonprofit Zrt., supported by the state of Hungary and BorsodChem Zrt. as well. As the gateway to the Sajó Valley, this is where BC Zrt. arranges most of its raw material and commodity transport.

For many years, BorsodChem Zrt. has contributed to the participation of inhabitants of our settlement at various cultural events.

My congratulation to the Company on its dynamic development and achievements, and I am convinced that the partnership between Sajószentpéter and BorsodChem Zrt. will continue to be characterized by environmentally conscious thinking, responsibility for the locals, and positive cooperation.”

Open Day

In order to maintain an informal, open relationship with residents living near our Company, we organize an annual open day for the public to get an insight into the operation of BorsodChem and to get to know our health, safety and environmental activities. The participants are informed about the activities of our Company. In 2017, Mr. János Szabó (Vice President of Procurement and Project Implementation), among other things, talked about the future development plans of BorsodChem, Mr. Béla Varga (HR Vice President, HR and Communication), introduced our CSR activities, emphasizing our efforts to build the future generation of chemists while Mr. Tibor Klement (Director EHS) presented our sustainability approach and our compliance with regulatory requirements.

After the lectures, in the form of an informal conversation the participants can share their comments and ask questions to the management.

the past two years we have supported the Association of Disabled People of Kazincbarcika, the Color Festival of the Municipality of Kazincbarcika, the Medicopter Foundation, the National Ambulance Foundation, the Child Health Center of the BAZ County Hospital and the Ambulance Station of Kazincbarcika.

Feedback on subsidies and initiatives are important to us, because this way we get information about the correctness of our actions, or they highlight potential new directions of development. Financially supported organizations have a reporting obligation about the usage of resources, moreover, after their events and programs we take into account the participants' feedback. When planning subsidies for the upcoming period, we take into account any new considerations, and make the necessary changes.

The results of our efforts for the local community are proudly communicated within and beyond the organization, in reports, newsletters, message boards and through social media. The amount spent on community support was increased by 5% in 2017 and by 36% in 2018 compared to the previous years.



As part of the environmental licensing for our core activity, we inform the public about all major developments and capacity expansions, and we listen to their views when conducting impact assessments. In order to maintain transparency and public confidence, all of our licenses are public.

In the statutory public hearings related to IPPC licenses, BorsodChem's officials inform the public about the Company's operations, the expected impacts and results of the new investments. The purpose of these events is the sharing of information and open dialogue.

If the members of representatives of local communities wish to complain or enquire about our Company's activities, they can do it either verbally or in writing. Complaints are handled according to the provisions of the Hotline Policy. We investigate all residential notifications related to our operations.



Together for a Sustainable Chemical Industry

As a responsible chemical company, BorsodChem has joined several professional organizations. Our memberships allow us to collaborate with and grow alongside other companies and learn from each other.



Iván Budai
Director of the Hungarian
Chemical Industry
Association

“BorsodChem Zrt., as one of the founders of the Hungarian Chemical Industry Association (MAVESZ) and as an active member for nearly three decades, the firm contributes to strengthening the competitiveness of our industry (they provide many solutions and a range of products in order to achieve the sustainability goals), and its recognized position in the single market of the European Union.

On the one hand, BorsodChem, as a highly important and responsible player in the Hungarian chemical industry, has significantly reduced the emissions of GHG and other pollutants by using new technologies through its R&D activities and investments, and also reduced the amount of hazardous waste generated during production by 90% in less than a decade, and also it foresees important measures for environmental protection, occupational health and industrial accident prevention for the coming years.

The widespread use of modeling techniques and the motivation of environmental awareness among employees at BorsodChem Zrt. stand as a great example for achieving these goals.

As a member of MAVESZ, BorsodChem plays a pioneering role in our projects for sustainability, climate policy and environmental goals, in other words, beside corporate-level tasks, it takes part in programs that support the industry as a whole and underpin the Alliance's advocacy activities.

Mr. Tibor Klement, Director of HSE Department at the Company as President of MAVESZ between 2014-2018, and after finishing his mandate in 2018, as Vice President of the Association for Environmental and Industrial Security Affairs, works to identify and effectively represent our industry on important topics such as the implementation of REACH / CLP regulations or the SEVESO regulation for industrial safety in Hungarian chemical facilities.

Emphasizing the importance of achieving sustainability goals beyond corporate and national levels, the global chemical industry has launched the Responsible Care® program, the implementation of which in Hungary is now one of MAVESZ's key priorities. In the program, companies and national federations commit themselves to taking measures beyond the statutory requirements to continuously improve their sustainability indicators and the effective management of chemical companies. BorsodChem Zrt. is actively cooperating with our alliance and member companies in this matter as well, and its excellent sustainability performance proves its commitment to the implementation of these efforts.”

We are members of the following professional organizations

- European Diisocyanate and Polyol Producers Association (ISOPA)
- Internationalé Isocyanate Institute (III)
- PU Europe / BING
- Euro Moulders
- European Panel Federation
- Euro Chlor
- Oxy Vinyls
- The European Petrochemical Association (EPCA)
- AC-Fiduciare
- French rigid PU foam association
- Dutch rigid PU foam association
- Austrian Wood Industrial association
- Hungarian Chemical Industry Association (member of CEFIC) (MAVESZ)





- Hungarian Chemical Society (MKE)
- Confederation of Hungarian Employers & Industrialists (MGYOSZ)
- Hungarian Association for Innovation (MISZ)
- Hungarian Hydrological Association Borsod region (MHT)
- Association of On-site Fire Brigades Fire Brigades (LTSZ)
- Hungarian Internal Auditors Association
- Chamber of Commerce & Industry BAZ County (BOKIK)
- Federal of the North Hungarian Industrialists
- Hungarian Credit Management Association
- Hungarian Private Wagons Association
- VPU Industrieverband Polyurethan-Hartschaum e. V.
- Insulation Manufacturers Association Limited (IMA)
- MNB&DNT Safety Conference (MDSC)
- Skill Council of the Chemical Industry











Recognition

Company Recognition

	<p>Mentor Oscar Award – 2nd place (2017)</p> <p>We were awarded with the prize for our corporate mentoring program, operating since 2013, an award which was awarded for the sixth time to organizations that have achieved significant results in disseminating and applying mentoring and coaching approach in leadership.</p>
	<p>“Responsible Employer of the Year 2017” title – large enterprize category (2017)</p> <p>BorsodChem won the title of “Responsible Employer of the Year 2017” at the competition of the National Employment Non-Profit Ltd. under the supervision of the Ministry of National Economy for firms of more than 500 employees. The award can be won by companies who show quality job creation, family-friendly attitudes, community-building, development and advancement opportunities, training and development, team building, health promotion, and the improvement of local communities and society as a whole.</p> <p>We are especially pleased that the professional review body declared our Company to be a pioneers in all aspects.</p>
	<p>Bisnode certificate for financial stability (2017)</p> <p>Following evaluation by Bisnode, an independent international firm rating company, BorsodChem received a Bisnode AAA (Triple A) certificate, which indicates that the financial risk of forming a business relationship with our Company is extremely low.</p>
	<p>Maecenas Award – Kazincbarcika (2018)</p> <p>At the “Stars of Barcika” event our Company received a Maecenas Award for the exceptional support for spectacular team sports.</p>



EcoVadis Golden rating (2018)

For our sustainability performance, in 2018 we won a gold EcoVadis award. EcoVadis is an independent, international evaluator organization. EcoVadis assess and rate companies with a unique method in terms of environment protection, fair employment, human rights, ethics and sustainable procurement. Our Golden result placed BorsodChem to the top 3% of the companies in chemical industry.



Green Frog Award for the Best First Sustainability Report (2018)

Our first sustainability report published in 2017 won the Hungarian Green Frog award for the best first sustainability report and so we automatically qualified for the Central-European regional contest. The evaluators highlighted how well structured, perspicuous and industry specific our report was, and how all the relevant information was easy to find, while it had a clear composition.





Employee Recognitions

Award of the Hungarian Chemical Society (2017)

An employee of BorsodChem, Ms. Hella Tóthné Gaál, Manager REACH Coordination received the Ignác Pfeifer Memorial medal of the Hungarian Chemical Society, for her long term exemplary, and fruitful work for the society.

CFO Master 2018 recognition (2018)

At the Business and Finance Summit 2018, the CFO of BorsodChem, Mr. István Hegedűs received the CFO Master 2018 award, for which only companies with an outstanding business performance are eligible, and who met requirements regarding complex investment and financial activity.

“Maintenance Expert of the year 2017” Award (2018)

At the XXX. International Technician Conference, Mr. Lajos Szabó, Director of Central Maintenance received the Maintenance Expert of the year 2017 Award.





GRI Index

GRI Disclosure

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Read further information about our values at our website: <http://www.borsodchem-group.com/About-us/Values.aspx>

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<p><i>We re-use onsite or sell for further re-use certain tools and materials. Since these tools and materials does not count as waste by legal definition, we do not track their quantity in our waste management system, therefore exact figures for 2017-2018 are not available.</i></p>		
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Glossary

Best Available Technics Reference Documents for Common Waste Water and Waste Gas Treatment/Management System in the Chemical Sector (BAT)	The technology that can be applied under technological and economic conditions and the most effective for protecting the environment.
BOD	Biological oxygen demand expresses the water's biodegradable organic matter content. It helps to estimate the water's organic nutrient load indirectly.
CO ₂ e	Carbon dioxide equivalent: a quantity of greenhouse gases equivalent to one tonne of CO ₂ or other GHG with equivalent global climate change potential.
CWW BAT	Best Available Techniques (BAT) Reference Document for Common Waste Water and Waste Gas Treatment/Management Systems in the Chemical Sector
EBITDA (earnings before interest, taxes, depreciation and amortization)	Earnings before interest, taxes, depreciation and amortization. It shows the current business performance of companies.
GDP	Gross Domestic Product: The value of all goods produced for final use in the given area over a given period of time.
Global Compact	Global Compact is the world's largest corporate responsibility initiative created by the United Nations.
Global Reporting Initiative (GRI)	A Dutch NGO is preparing and developing an internationally accepted reporting standard.
Global warming potential (GWP)	It is used to quantify the greenhouse effect of gases. Compared with the same weight of carbon dioxide, its value is usually determined over a period of 100 years
Greenhouse gases (GHG)	Greenhouse gases are those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of infrared radiation emitted by the Earth's surface, the atmosphere and clouds.
IED – Industrial Emissions Directive	Directive 2010/75 / EU on industrial emissions.
Integrated pollution prevention and control (IPPC)	Integrated Pollution Prevention and Control Directive 96/61 / EC.
Intermodal Transportation	Combined transport in which most of the distance is covered using railway, inland waterway or short sea shipping, and the distance taken on road is as short as possible.
ISO 14001	The standard stipulates the rules that companies can use to create an efficient environment-oriented approach. It serves as a guide to the development of the environmental management system.
ISO 50001	The standard includes requirements for the design, maintenance and development of energy management systems. Its purpose is to enable organizations to continuously improve their energy performance.
ISO 9001	The standard contains requirement regarding the Quality Management System



Isocyanates	Organic compounds containing isocyanate. In the isocyanates there may be several isocyanate groups, the compounds containing two isocyanates are called diisocyanate. The diisocyanates are used together with polyhydric alcohols for the production of polyurethanes.
LEAN	For a LEAN corporation, the basis is the value for the client. What does not create value for the client is considered as a loss (waste). The efficiency of workflows is improved by the prevention, elimination and minimization of these losses.
MDI	Methylene Diphenyl Diisocyanate
Natura 2000	A coherent European ecological network established by the European Union. It ensures the conservation, maintenance and restoration of biodiversity through the protection of habitats, and plant and animal species.
NOx	Nitrogen oxides: Summary names of compounds with different ratios of nitrogen and oxygen. Their role is decisive in the formation of photochemical smog, probably contributing to ozone depletion.
OHSAS 18001	The standard encompasses security obligations and tasks for companies in the area of work, health and fire protection. The central element of the standard is the definition of danger, risk assessment and the planning of how to handle them.
PDCA	Plan-Do-Check-Act: Cyclical, four-step management method.
Particulate matter (PM)	Particulate matter
PU	Polyurethane: the collective name of plastics resulting from the copolymerization of di- and polyisocyanates or di- and polyol units.
PVC	Polyvinylchloride
REACH	Regulation of the European Parliament and of the Council of 2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals.
SA 8000	The purpose of the international standard is to make companies use socially acceptable workplace practices.
Safety data sheet (SDS)	Provides users with information on the effects and safe use of chemicals and dangerous substances. Content requirements are regulated by REACH.
Sustainable Development Goals (SDG)	Goals accepted in the 2015 Climate Summit of the United Nations based on the Millennium Development Goals.
TDI	Toluene Diisocyanate
Technical data sheet (TDS)	The document provides information on the recommended uses, advantages and physical properties of (chemical) products.
Total Organic Carbon (TOC)	Total organic carbon content: all organic carbon bound in water.



TSS	Total suspended solids: a metric used to determine water quality.
VCM	Vinyl Chloride (or monochlorethylene) is an organic compound, a chlorine-containing derivative of ethylene.
Volatile Organic Compounds (VOC)	Volatile Organic Compounds: Natural or synthetic organic compounds whose vapor pressure is normally high enough to evaporate.





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