Borealis Annual Report 2016

BOREALIS

Keep Discovering

Cover image: Borealis polypropylene production plant in Schwechat, Austria

Contents

Our Business

Borealis Innovation Headquarters in Linz, Austria

Executive Board

MARTIJN ARJEN VAN KOTEN
Executive Vice President Operations, Projects & Technical Support and Health, Safety & Environment

MARK TONKENS
Chief Financial Officer

MARK GARRETT
Chief Executive

ALFRED STERN
Executive Vice President, Polyolefins and Innovation & Technology

MARKKU KORVENRANTA
Executive Vice President, Base Chemicals

2016 Milestones

1.

Safety first: yet another step closer to Goal Zero with a TRI rate per million hours worked of 0.9 in 2016

2.

Record net profit of EUR 1.1 billion in 2016

3.

Borouge 3 now running at full capacity of 4.5 million tonnes/year after successful start-up of cross-linked polyethylene (XLPE) plant

4.

Borealis in industry pole position with respect to the circular economy through acquisition of leading German post-consumer waste plastics recyclers mtm plastics and mtm compact

5.

Navigator Gas agreement ensures long-term security of ethane supply for Borealis production facilities in Stenungsund, Sweden, via the long-term charter of new vessel "Navigator Aurora"

6.

Feasibility study commissioned for construction of world-scale dehydrogenation plant in Kallo, Belgium

7.

EUR 55 million invested in the turnaround of the Ottmarsheim, France, production location. Investments of EUR 80 million announced for the melamine and fertilizer production location in Linz, Austria

8.

EUR 40 million upgrade for cracker in Porvoo, Finland

9.

Agreement signed to build new power plant in Kilpilahti/Porvoo, a joint project with Neste and Veolia

10.

K Fair 2016 showcases Borealis' value-creating polyolefin innovations developed in collaboration with local partners for the global market

11.

New Borstar®-based Full PE Laminate solution gives polyethylene-based packaging materials a second life, as the Company takes another step in the circular economy

12.

Borceed™ becomes new brand name for the Queo™ platform, whose portfolio of plastomers is simultaneously extended

Mission and Strategy

CONTINUITY COMBINED WITH THE FLEXIBILITY TO SEIZE NEW OPPORTUNITIES

Our mission

To be **THE** leading provider of innovative plastics, chemical and fertilizer solutions that create value for society.

We will

- Grow our PO business with a focus on **advanced applications** and **differentiated products,** strengthen our European base and ensure cost competitiveness from feedstock to customer.
- Pursue excellence and optimise **Borouge** in the Middle East and Asia, including **leveraging into Europe.**
- Continue to maximise the value of **Base Chemicals**, with a focus on **growth in Fertilizers** and **strengthening the cracker asset base** with increased feedstock flexibility.
- Realise **growth opportunities** in other geographies/related businesses.
- Pursue **operational excellence** and a **Goal Zero** mindset.
- Achieve a step change in **innovation.**
- Exceed in serving our customers with a focus on **quality** and **reliable execution**.
- Continue to develop our cross-cultural **organisational capability** and a **learning organisation**.
- **Drive sustainability,** explore and realise business opportunities from the **circular economy**.

Outperform financially

11%+
average return on capital employed (ROCE) after tax

40–60%
debt
to equity ratio

Our Values

Responsible

We are leaders in Health, Safety and the Environment

We are good neighbours wherever we operate

We do business according to high ethical standards

Respect

We involve people and communicate in a straightforward way

We work together – helping and developing each other

We are 'One Company' – building on diversity

Exceed

Our customers' and owners' success is our business

We win through commitment and innovation

We deliver what we promise – and a little bit more

Nimblicity™

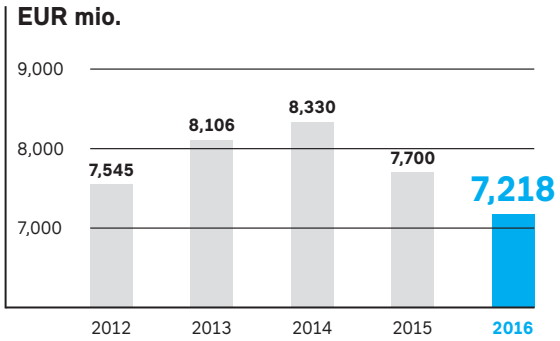
We are fit, fast and flexible

We create and capture opportunities

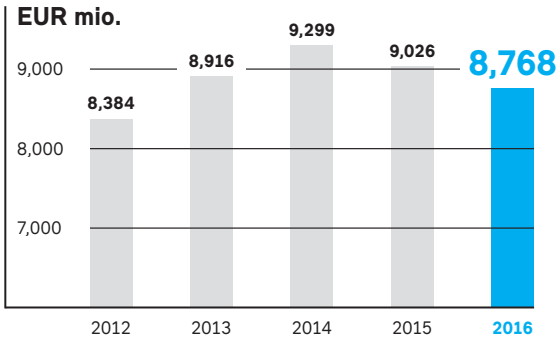
We seek the smart and simple solutions

2016 at a glance

NET SALES

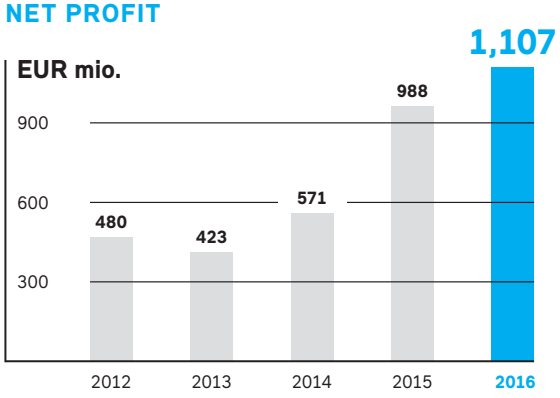


TOTAL SALES*

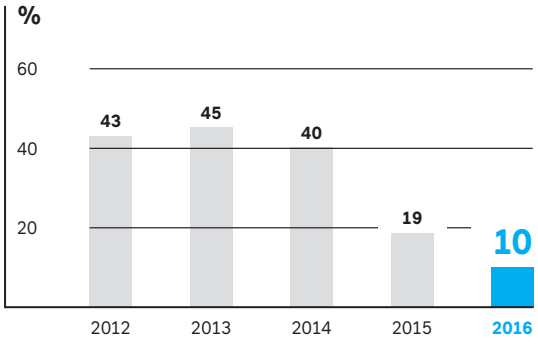


* Total net sales of Borealis and pro-rata sales of at equity consolidated companies

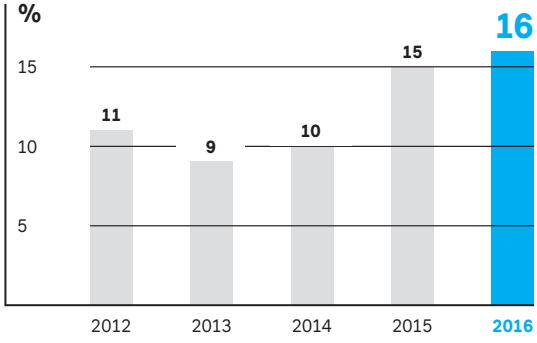
NET PROFIT



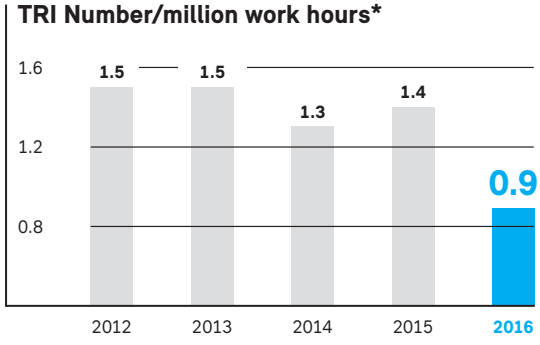
GEARING



ROCE

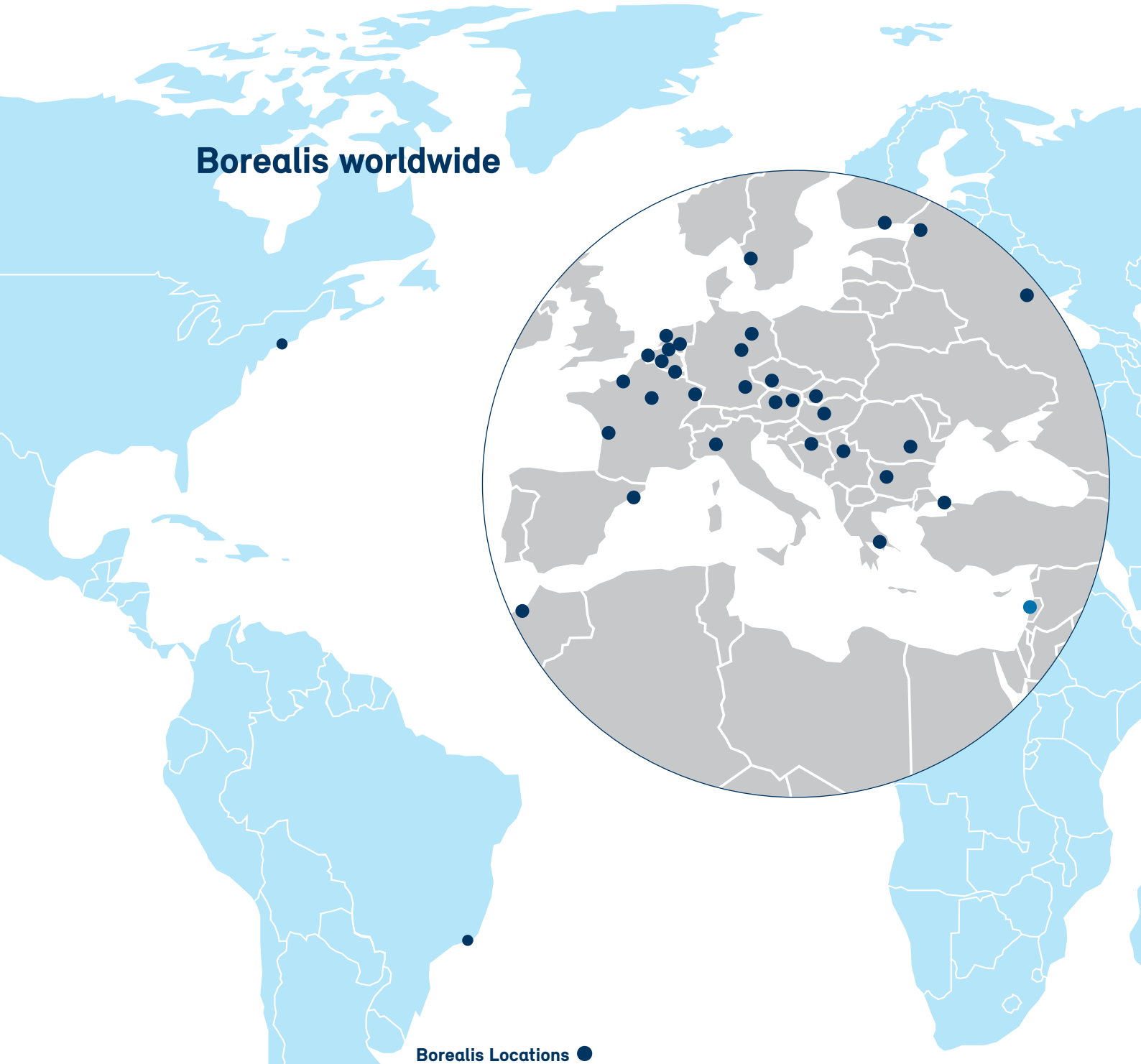


OCCUPATIONAL SAFETY PERFORMANCE



* Includes own employees and contractors

Borealis worldwide



Borealis Locations

Head Office
Borealis AG
Wagramer Strasse 17–19
A-1220 Vienna, Austria
Tel. +43 1 22 400 300
Fax +43 1 22 400 333
www.borealisgroup.com

Customer Service Centres
Austria, Belgium, Brazil, Finland, Turkey, United States

Production Plants
Austria, Belgium, Brazil, France, Finland, Germany, Italy, Sweden, The Netherlands, United States

Innovation Centres
Austria, Finland, Sweden

Representative Offices
Morocco, Russia, Spain, UAE

Borealis L.A.T Locations
Austria, Bulgaria, Croatia, Czech Republic, France, Greece, Hungary, Romania, Serbia, Slovakia

Borealis Rosier Locations*
Belgium, The Netherlands

Borouge Locations

Head Offices
Abu Dhabi (UAE), Singapore

Innovation Centre
UAE

Production Plants
China, UAE

Sales Offices/Representative Offices
China, India, Indonesia, Japan, Lebanon, Singapore, Thailand, UAE, Vietnam

Logistics Hubs
China, Singapore, UAE

The purpose of this visualisation is of representational nature only. Though it was prepared with the greatest possible attention to detail, simplified illustrations may have been applied.

Statement of the Supervisory Board

In 2016, Borealis achieved the strongest financial result in its history, supported by favourable polyolefins market conditions. At the same time, Borealis achieved one of the company's best years in terms of safety performance. Safety is, and always will be, the top priority for Borealis, with the ultimate goal of zero accidents.

The record financial result was achieved in a market environment with low growth and increasing geopolitical uncertainty. The annual average feedstock prices in 2016 followed the annual average Brent Crude oil price drop of 17% versus 2015; in contrast the polyolefin prices reduced less in 2016 due to continuing solid market demand resulting in stronger margins. The Base Chemicals segment delivered a lower result compared to 2015 due to a difficult market environment for fertilizers in which prices dropped as a result of an unfavourable supply-demand balance. The successful start-up of the cross-linked polyethylene plant in May 2016 marked the completion of the Borouge 3 project. With all plants running at full capacity, the contribution of Borouge to the Borealis result improved further.

Further investments in Borouge

In addition to the optimisation programme for Borouge 1, 2 and 3 in progress, another polypropylene plant is planned to be operational by around 2020. Borealis and ADNOC, as owners of Borouge, have now embarked on the investigation of another Borouge extension project, Borouge 4. This ambitious project involving the construction of a facility for naphtha and mixed feed cracking would be the most complex petrochemical project ever undertaken by Borealis or ADNOC.

Commitment to the circular economy

Borealis announced the acquisition of German plastic recyclers mtm plastics GmbH and mtm compact GmbH, the technology leader in post-consumer waste recycling and producer of post-consumer polyolefin recyclates. This acquisition underlines Borealis commitment to the circular economy. It also puts Borealis in the industry pole position with regard to plastics recycling, and enables the company to more aggressively pursue business opportunities in the area of post-consumer polyolefin recyclates.

Strategic long-term investments

The so-called "Linz Fitness" programme executed between 2010 and 2014 will be followed by another EUR 80 million investment in the fertilizer and melamine plants in Linz, Austria. The new "Linz 2020" programme shall ensure the long-term competitiveness of the Borealis' Linz location.

In May 2016, Borealis signed a contract with Navigator Gas for the long-term time charter of the newly-built "Navigator Aurora". With a total cargo tank size of 35,000 m^3 and an ethane load capacity of up to 20,000 tonnes, it is currently the biggest ethane-capable vessel serving the global market. The new vessel will ensure reliable and cost-efficient ethane supply to Borealis' production facilities in Sweden in the long term.

In Porvoo, Finland, Borealis will invest EUR 40 million to upgrade the steam cracker in order to further enhance its performance and improve energy efficiency. The upgrade of the cracker will increase the production capacity of propylene by 30 kilotonnes per annum while simultaneously upgrading the quality of all produced propylene to polymer grades.

In September 2016, Borealis announced the launch of a feasibility study for a new propane dehydrogenation (PDH) plant at its production site in Kallo, Belgium. The new PDH plant would have a capacity of 740 kilotonnes per calendar year, making it one of the largest and most efficient facilities of its kind in the world. This investment ensures Borealis' competitiveness as an innovative supplier of polypropylene.

Improved safety performance and corporate social responsibility

Borealis realised a very strong safety performance in 2016. The Total Recordable Injuries (TRI) rate improved significantly from 1.4 in 2015 to 0.9 in 2016. Focus on safety will be enhanced in all areas of Borealis operations, and the goal of zero accidents for both employees and contractors will remain the number one priority.

Borealis and Borouge continued their strong commitment to corporate social responsibility through initiatives like Water for the World™ and the Borealis Social Fund. Launched in 2007, Water for the World aims to secure access to safe water and adequate sanitation around the world, while the Borealis Social Fund continues to support multiple social welfare projects in Europe, Asia and the Middle East. Throughout 2016, a number of significant donations were made by way of this fund.

Record financial performance

Building on the previous record year of 2015, Borealis realised its best-ever financial result in 2016. The result was driven by a strong contribution from Polyolefins, which benefitted from record-high industry margins in 2016. While Base Chemicals also made a solid contribution, Fertilizer results were negatively impacted by the unfavourable market environment and some operational challenges. Following the completion of the Borouge 3 project, the Borouge contribution to the Borealis financial result further improved compared to 2015.

Strong foundation as the leading provider of chemical and plastic solutions

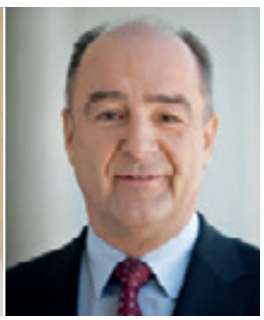
Borealis' management and its employees remain committed to being the leading provider of chemical and plastic solutions. Borealis' success is based on the four pillars of innovation, operational excellence, commercial excellence and safety. Thanks to its key investments and acquisitions, Borealis is well positioned to continue to grow and build on the record results achieved in the past three years. The geopolitical situation in Europe and beyond remains challenging, and its impact on the economic climate is uncertain. By staying committed to the company's mission of being the leading provider of chemical and plastic solutions that create value for society, both the Supervisory Board and Borealis' management are confident that Borealis will again deliver solid results in 2017.

SUHAIL MOHAMED FARAJ AL MAZROUEI
Chairman

RAINER SEELE
Vice Chairman

MURTADHA AL HASHMI
Board Member

RASHED SAUD AL SHAMSI
Board Member



MANFRED LEITNER
Board Member

"CONSTANCY TO PURPOSE WILL ALWAYS BE A MAINSTAY OF BOREALIS' STRATEGY."

Mark Garrett, Chief Executive

Looking back at the year 2016, what stands out most from your perspective as Borealis Chief Executive?

The most impressive achievement of 2016 is clearly our outstanding financial performance. For the first time in the history of the company, we've been able to cross the threshold of EUR 1 billion net profit. Back in 1994, I'm sure that many people who started the journey with Borealis would never have dreamt that one day, we would have a net profit in the 10-figure range.

This shows just how far the company has come. Over the last ten years, profit has gone up four to five times. Product volume has quadrupled. Sales – if you incorporate our share of Borouge sales – have gone up two and a half times. This means that profit intensity has also increased dramatically. So to end 2016 with such a result has been a remarkable journey.

The other major highlight of 2016 is the finalisation of the Borouge 3 start-up. The world's biggest integrated polyolefins complex is now up and running and is performing to our original expectations.

Yet to be fair, there have also been some lowlights. We continue to struggle to run our fertilizer assets as reliably as our olefin and polyolefin assets. The sharp downturn in the fertilizer market has complicated matters. The combination of these two factors resulted in less net profit being generated by these assets. And while this is a lowlight, we can't claim it is unexpected. Our businesses are indeed cyclical and run on different cycles. This is why we invest in these different businesses. Only a couple of years ago, fertilizers were throwing off ten times the profit of polyolefins, now, it's the other way around. Yet we would have liked to have done better, particularly on the Operations side, the running of our plants. We clearly have our work cut out for us in 2017.

You mentioned the start-up of Borouge 3 as a 2016 highlight. What are the next steps in Abu Dhabi?

There is still a lot going on. We are particularly excited about three important opportunities: first, debottlenecking, a major opportunity to optimise Borouge 1, 2 and 3. Second, we also intend to build another polypropylene (PP) plant, PP5. If all goes according to plan, and the project is approved in 2017, PP5 should be up and running by around 2020. Third, we know that the UAE would like to further monetise, that is, to find ways to create more value by stretching the oil barrel, for example going further downstream. This means cracking naphtha and perhaps other mixed feeds, and converting these to downstream products. Cracking would be done in a facility called "Borouge 4". Borouge 4 would be an extremely challenging project and by far the most ambitious petrochemicals project that we, or ADNOC, have ever undertaken. Why ambitious? Because – as we know from our own facilities in Porvoo and Stenungsund – mixed feed cracking is very complex. The complexity is much higher because there are many different streams, and in Ruwais, UAE, there must be even better integration with the refinery. The margin for error coming off largely market-based feedstock, not advantaged feedstock, is very fine. While we had more leeway on Borouge 2 and Borouge 3, there is no room whatsoever for error on Borouge 4. We've never done anything of this nature before in the UAE.

What's the Borouge 4 project timeline?

Our final investment decision would likely be taken in the period around the end of 2017 to the beginning of 2018. Product would start hitting the market only five years after that. While Borouge 4 is a massive undertaking, debottlenecking and PP5 should, however, happen more quickly.

From a more general perspective, what else stands out in 2016?

I believe that the secret to success is constancy to purpose. Thus for me personally, it is very rewarding to have been able to realise a goal I set back in 2012: that Borealis should earn EUR 500 million at the bottom of a cycle, and EUR 1 billion at the top of a cycle. So I am gratified that we have been able to prove this is possible, especially given the fact that at the time, some were quite sceptical about this goal.

Constancy to purpose will always be a mainstay of Borealis' strategy. We are not a company that changes its strategy from one day to the next; ours has been pretty consistent for the last 13 to 14 years.

If you want to be good at anything, you have to practice. Yet we continually update and "refresh", acknowledging the bits that work well, but adding new things. For example, we've augmented our strategy with the aim to expand in other geographies and seek growth alternatives outside of Europe and the Middle East. What might be the biggest change to our strategy is our stated aim to expand our production footprint geographically, particularly in areas with advantaged feedstock.

We have also made sustainability a cornerstone of our strategy. Sustainability has always been inherent in what Borealis does, but we are now being even more explicit in stating our aims and we back our words with actions. Our June acquisition of mtm, the German technology leader in post-consumer polyolefins recycling, is the most recent example of putting our money where our mouth is. We are proving our commitment to the circular economy.

Overall, while we have refreshed our strategy, there is no radical change from what we were doing before. If you're a right-handed tennis player, it's probably best to stay a right-handed one, and not change to the left hand. Borealis is in basic chemistry, and we stick to what we know and do best.

Looking ahead: could you give us a preview of focus areas in 2017?

First and foremost: safety. In 2016, the company, and in particular Martijn van Koten's team in Operations, have rallied to improve our safety performance. I'm pleased to report that 2016 has been one of the best years in the history of the company in terms of safety. Frontline leader and middle management training in Operations continues to pay off, but our efforts must be intensified. We must remain vigilant at all times, in all contexts, and all countries where we do business.

We will also focus on our path to growth. The challenge will be to successfully combine organic and non-organic growth. We have no shortage of organic growth opportunities, such as the Borouge projects mentioned previously, but also in other areas of the world. However, organic opportunities deliver only after three to five years, thus we also need to look at merger and acquisition opportunities that deliver much earlier.

"It's a two-way street: the company values the people and the people value the company."

Mark Garrett, Chief Executive

In terms of financial performance, while I don't expect to break our 2016 record, I do expect 2017 to be a good year. Some people – especially those who are relatively new to Borealis – may be disappointed if we achieved a net profit of EUR 800 million for 2017, because they saw EUR 988 million in 2015 and EUR 1.1 billion in 2016. It's important for us to manage expectations. We have to realise that if we achieve "only EUR 800 million" it shall put us in the top echelon of profitable companies in the entire country. Borealis is a veritable "hidden champion" in Austria in addition to being one of the most successful companies within the entire IPIC group. If our goal is between EUR 500 and EUR 1 billion, EUR 800 million is still at the better side of the range. What especially pleases me is that the Borealis net profit is what it is: you won't find any asterisks, disclaimers or fudged numbers on our profit and loss or balance sheet.

What are your expectations for the industry in the longer term?

Towards the end of 2017, a lot of capacity is going to come on stream in North America. This will make 2018 much tougher, because the North American market will not be able to absorb this capacity. It has to go somewhere else; some of it is already going to Asia. Several plants have already been started up, with more to come in the second half of 2017. They will start to impact the market at the beginning of 2018, likely resulting in lower polymer margins in both 2018 and 2019. These will last until the excess capacities have been absorbed by the market.

It would therefore be naïve to think that this won't affect us; it's simply the nature of our cyclical business. In our industry, capacity doesn't come on nicely and steadily, but rather in clumps. What is more, our competitors tend to heat up the market until it crashes because they all invest at the same time, when the market is good. Our challenge at Borealis is to invest smartly, to counter the cyclicality. For example, Borouge 3 was the only plant to have started up in 2015–2016, and we were able to profit from that, because we were able to get all the product into the market relatively easily.

Regardless of industry and market developments, what gives me great confidence for the long term is our people. I appreciate all the hard work of Borealis' employees and never take their efforts for granted. Our internal surveys show a high level of job satisfaction among Borealis' employees. It's a two-way street: the company values the people, and the people value the company. Borealis is quite a wonderful and unique place to be.

"The Borealis' commitment to developing talented employees is most visible in our leadership and expert talent programmes, in which we focus on cultivating an environment of empowerment, ownership and mutual trust. Our highly engaged employees have ample opportunities to grow, and are encouraged to actively contribute to the Borealis culture. This has proven very effective in attracting and retaining top talent."

Kerstin Artenberg, Vice President HR & Communications

Borealis at a glance

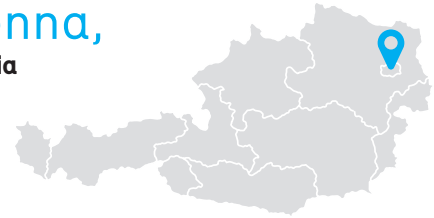
2nd largest polyolefin (PO) producer in Europe

6,600 employees
+3,500 in Borouge

Joint Venture Borouge operates world's largest integrated PO site in Ruwais, UAE

EUR 7.2 billion
sales revenue in 2016 (EUR 8.8 billion with Borouge, pro-rata share)

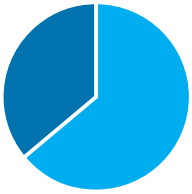
Head office in Vienna, Austria



EUR 1.1 billion
net profit for 2016

Production and sales of polyolefins and base chemicals

Ownership structure

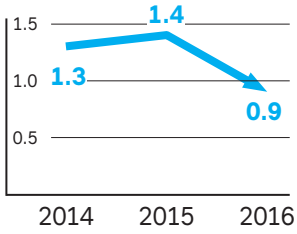


36 OMV, Austria

64 IPIC, Abu Dhabi

Operates in over 120 countries on 5 continents

Total TRI frequency



"SUSTAINABLE GROWTH IS THE CORNERSTONE OF OUR LONG-TERM SUCCESS."

Mark Tonkens, Chief Financial Officer

"We will continue to drive the operability of our assets with the goal of being the most competitive company in our industry."

Mark Tonkens, Chief Financial Officer

As Borealis Chief Financial Officer, how would you summarise the year 2016 in brief?

A stellar achievement: with 1.1 billion net profit, Borealis has had its best-ever full year result. While 2016 was a very strong year from a financial perspective, only twelve months ago we could not have anticipated these outstanding results. Olefins and polyolefins continue to enjoy peak-of-the-cycle industry margins in what I suspect may be the longest peak cycle we will see for many, many years. However, even though Borealis has had a great financial year, we shouldn't rely on the markets alone. We need to keep our eye on the ball and continue to improve efficiency, remain cost aware, and strive for excellence in all areas. We cannot rely on consistently strong industry margins, even though these are great to see.

Can you offer some specific examples of ways in which Borealis strives for excellence?

Firstly, safety remains our top priority. I am pleased to report that in 2016, our Total Recordable Injuries (TRI) rate improved to 0.9 over last year's 1.4. We have made further strides on our Goal Zero journey to zero accidents.

Secondly, we have also made good progress in improving asset operability by continuing to invest. In a cyclical industry like ours, the tide can turn quickly, as it did for example in the Fertilizers business in 2016.

Keeping assets in good shape is one of the cornerstones of success in our industry. Focus on this must be maintained throughout the cycle. By continuing to improve our own assets throughout the cycle, including the peak, we differentiate ourselves from the competition. Through turnarounds, for example. I am energised by the turnaround in Ottmarsheim, France, in 2016. Its success bodes well for other important turnarounds planned in 2017. We have also achieved more flexibility in olefins. By investing in a new storage tank, ethane terminal, and cracker upgrade in Stenungsund, Sweden, we can now import and store ethane more cost-effectively and reliably.

We have also optimised our assets in Porvoo, Finland, and we have invested in a new liquefied petroleum gas (LPG) cavern which further increases our feedstock flexibility. Upgrading our crackers generates more value and improves overall economic viability, regardless of the price environment of oil and gas. Thus, overall, we are better positioned vis-à-vis our competitors thanks to our strategic investments.

How would you describe the state of Borealis' business areas outside of Polyolefins?

Looking to the other business areas, I would single out our "small but beautiful" melamine business. While not very material from a top-line perspective, melamine has generated very good results over the last year. On the one hand, the market environment is good. But more importantly, we optimised this business over the last years by closing down the less productive assets and streamlining the overall organisation. As the number two player on the European market, we now have a very powerful melamine business.

That brings us to Fertilizers, a clear example of industry cyclicality. As recently as the end of 2015, we predicted a further improvement in fertilizer profitablity, but the market downturn and imbalance in supply and demand led to sharply reduced margins starting in the second quarter of 2016. Our overall Fertilizers performance is currently not strong, break-even at best. At the same time, we have taken steps to improve asset operability, for example through the previously mentioned turnaround in Ottmarsheim. We have also embarked on our EUR 80 million "Linz 2020" programme and investment programmes for our French assets aimed at boosting the competitiveness of Borealis' largest fertilizer production facilities.

Tell us more about Borealis developments and activities outside Europe.

Borouge has had a fantastic year, with Borouge 3 now fully ramped-up. The start-up of our cracker, Borstar® polyolefin plants, the new cross-linked polyethylene (XLPE) facility and in particular the low density high pressure plant proceeded even faster than we had planned and is recognised as one of the most successful start-ups of its kind. Together with Borouge we have been able to nearly double our volume output in the course of less than two years. This is a tremendous achievement, the scope of which would be difficult to emulate in Europe. Yet there are lessons to be learnt from this project that can embolden us in our efforts to achieve sustainable growth in all areas of the world. For instance, to think more often outside the box. To exercise more Nimblicity™, one of our four values. To be more courageous, and daring, yet without cutting corners, especially when it comes to safety.

In a growing industry, you must keep pace, provided your own growth is sustainable. At Borealis we are focussed on our growth agenda. We spend considerable time and resources evaluating both organic growth – by which I mean building and debottlenecking assets – and inorganic sources of growth, meaning acquisitions. We need both types of growth in order to remain a relevant player in our markets, or to become an even more important player. Our strong balance sheet means we can be flexible when it comes to acquiring companies or investing ourselves. Sustainable growth is the cornerstone of our long-term success.

On the organic side, we maintain and upgrade a broad portfolio of assets, such as those mentioned previously in Austria, Belgium, Finland, France and Sweden. It is essential to keep investing in order to be in even better shape in the years to come. Because we aim to move from being a predominantly European company with a very strong joint venture in the Middle East, Borouge, to being a truly global company, our steps outside of Europe are important. To this end, we are in the process of developing a world-scale ammonia project in Texas in order to expand our base in the United States.

What about growth through mergers and acquisitions?

In the past several years, we have made important deals, but none that would radically alter the face of our company. We scan the market for opportunities and possibilities, and carefully assess each and every one in light of the returns we can generate going forward, and the price we are willing to pay. At present, money is cheap: being able to get debt out of the market at very low interest rates makes some parties willing to pay inflated prices for certain acquisitions. At Borealis, we have to be sure that when we invest in a company, or when we acquire part or even all of a company, we will get the returns we, and our owners, expect.

A recent acquisition particularly suited to driving our sustainable growth agenda is that of leading German plastics recyclers, mtm plastics and mtm compact. Delivering plastics recycling solutions is essential to ensure the future of our industry, and to provide our customers and consumers with the products they need. We are committed to the principles of the circular economy, and intend to accelerate our efforts – to move more daringly and nimbly – to increase the resource efficiency of plastics. Thinking outside the box will help us hit our sustainable growth targets.

From a finance perspective, what is the outlook for 2017?

There will likely be a downturn in olefins and polyolefins in either late 2017 or 2018 due to excess supply coming onto the market, predominantly from the US, where many new assets are currently being built and soma are nearing completion. This will put pressure on margins, and we must be prepared. It's not a bad thing; it is simply a fact of this industry. To prepare for the inevitable downturn, we continue to focus on improved productivity and efficiency and on excellence in all we do. We will continue to drive the operability of our assets with the goal of being the most competitive company in our industry whilst further optimising the returns by also focusing on commercial excellence. I still expect the year 2017 to be a solid year in all aspects, including the financial one.

Any final thoughts you would like to share?

First off, I would be thrilled if we could acquire a sizeable company that fits well into our portfolio in a deal that is done on the right economic terms. Second, it is imperative to carry out our 2017 turnarounds safely and efficiently. Third, in the past six to nine months we have seen some exciting changes in Abu Dhabi in conjunction with ADNOC and Borouge. Further growth through a new production complex, Borouge 4, and further optimisation of Borouge 1, 2 and 3 will ensure a great future for Borouge. In conclusion: 2017 will be an exciting year.

"OUR AIM IS TO BE THE MOST INNOVATIVE AND RELIABLE PARTNER IN THE POLYOLEFINS INDUSTRY."

Alfred Stern, Executive Vice President, Polyolefins and Innovation & Technology

How would you summarise the year 2016 for Borealis Polyolefins and Innovation & Technology?

In terms of overall performance, this year was once again a strong one. Robust growth in our specialty business, combined with good industry margins, helped us produce consistently good results. And because the European market's supply and demand situation improved this year, we were pleased to see that our customers could achieve better results as well.

There were several major highlights in 2016. For example, in the second quarter we successfully started up the last remaining new facility in the Borouge 3 project, the cross-linked polyethylene (XLPE) plant. This means we have not only boosted our global polyolefins capacity to 4.5 million tonnes, but have also expanded our capabilities in the production of innovative and differentiated Borstar® polyethylene (PE), polypropylene (PP) and Borlink™ products. In July, we stepped up our involvement in, and commitment to, the circular economy through our acquisition of the German plastics recyclers mtm plastics and mtm compact. Most recently, at the K Fair in October, we shone the spotlight on some of our most exciting value-creating polyolefin solutions.

While the past two years have been good ones for polyolefins in Europe, the industry does face certain challenges. How is Borealis addressing them?

It is indeed true that we, and the industry as a whole, have achieved significantly improved results in the past two years. However, there are certain long-term issues of fundamental concern in Europe: high feedstock prices, at least in comparison to non-European markets. Higher energy and labour costs, and overall lower growth rates. Due to the lack of reinvestment in Europe for an extended period of time, the continent has now become a polyolefins net importer, and no longer a net exporter. This means long-term, local partnerships are even more important. Borealis is committed to Europe as a core region, and to our Value Creation through Innovation strategy. We believe that we can remain a strong European partner by investing and innovating: in fact, our aim is to be the most innovative and reliable partner in the polyolefins industry. Through ongoing investments in our state-of the art production assets, we ensure that they stay that way in the years to come. We also invest in our assets in order to gain better feedstock flexibility, and ensure supply reliability.

Ongoing innovation is crucial to maintaining partnerships that yield long-term success for both Borealis and our customers. A good example of our investment in innovation is the roll-out and expansion of our already broad portfolio of non-phthalate PP grades based on our proprietary Sirius technology.

How does the acquisition of a plastics recycling company fit to Borealis' long-term strategy?

We believe that enhancing plastics sustainability is an industry imperative. We are inspired by the enormous innovation potential of the circular economy, which aims at nothing short of redesigning our future. Borealis is determined to take the lead in transforming the plastics industry in this respect and we have identified the circular economy as one of the three focus areas in our sustainability strategy. Entering the recycling industry via our acquisition of German recyclers mtm plastics and mtm compact is one of our first major steps. We have since taken further decisive steps in redesigning the future of plastics. With Plastics Europe and other leading European organisations we initiated the foundation of the Polyolefin Circular Economy Platform (PCEP), and have gotten involved in the New Plastics Economy initiative led by the Ellen MacArthur Foundation.

Our plastics products and solutions have a positive impact on society in so many ways: by transporting water and energy more efficiently; by helping carmakers manufacture lighter vehicles; or by using intelligent packaging to reduce the amount of wasted food – to name just a few. Yet we must find solutions to better use plastic waste as a valuable resource: reduce the landfilling of plastics. Help avoid marine littering and leakage into all natural environments. Plastics are valuable raw materials – far too valuable to be thrown away! They are ideal

for recycling. Yet we in the industry have to rethink our approach from the bottom up, and along the entire value chain, in order to start contributing meaningfully to the coming industry transformation. With our actions this year, we are already doing so.

Borealis has an impressive track record in launching innovative and sustainable solutions at the K Fair. What were this year's highlights?

Because the K Fair is clearly this year's most important trade event in polyolefins, Borealis, Borouge and NOVA Chemicals put in a lot of effort to ensure we would make a splash. We invited our customers and partners to "Join our Journey" – and they did, from the very start. Beginning with the pre-K press conference at Borealis' Innovation Headquarters in Linz, participation broke all previous records. At our interactive stand in Düsseldorf, attendance was up 12% versus 2013. The response to our product and service offerings was extremely positive. The common thread uniting our displays was innovation, but we also highlighted our global supply and local service capabilities.

For example, we were very excited to showcase at our stand the use of our materials in the 2016 European Car of the Year, the new Opel Astra. There is around 35 kg of low-density Borealis PP in this model, variants of which weigh as much as 200 kg less than models in the previous generation. Our Daplen™ and Fibremod™ solutions were used to achieve uniform, well-balanced interior solutions in accordance with the manufacturer's extremely stringent technical specifications. Thanks to our global reach and local service capabilities, Borealis and Borouge can supply PP compounds in all the regions where this vehicle is manufactured: in Europe, the US, Brazil and China.

We also displayed a potentially ground-breaking replacement for expanded polystyrene and paper/cardboard cups: a single-use drinking cup solution based on Daploy HMS PP foam. As a monomaterial PP solution, this application – which has been developed in collaboration with Taiwanese partners – is fully recyclable. Another popular stand demonstration at the K Fair involved our Borstar-based Full PE Laminate solution, which was developed and tested with a consortium of partners along the value chain. This monomaterial PE for flexible packaging gives packaging materials a valuable second life, because it makes recycling easier, and produces higher quality recyclate in the process.

"We are excited by the growth opportunities presented by the circular economy. We are convinced that Europe will be the cradle of the cutting-edge plastics innovations driving it. Thanks to our long-term partnerships and dynamic networks, Borealis is in the best imaginable place to transform the plastics industry together with our valued customers and partners."

Maria Ciliberti, Vice President Marketing and New Business Development, Polyolefins

What is the outlook for 2017 and beyond in Polyolefins, Innovation & Technology?

The K Fair displays mentioned underscore our commitment to working with our partners and customers to deliver Value Creation through Innovation. Only by establishing and nurturing long-term partnerships will we be able to create more value for society as a whole. For Borealis Polyolefins, the circular economy and the further growth of our recycling business will be central topics. We also intend to invest in areas which we believe can create even more value in the market; for this reason we are currently exploring growth opportunities through the debottlenecking of some of our European plants. Our work on Borstar 3G in Porvoo will continue as we evaluate and test the high-performance products coming off this new technology platform. Increasing the use of non-phthalate catalysts is another important focus. And finally, we continue to explore growth opportunities on a global scale. Our new automotive compounding line in the US will be the foundation for growth in our North American automotive business.

"OUR FAR-REACHING FERTILIZER DISTRIBUTION NETWORK CONTINUES TO GROW IN SCOPE AND STRENGTH."

Markku Korvenranta, Executive Vice President, Base Chemicals

How would you describe the year 2016 in Base Chemicals?

The short answer is that performance varied among Base Chemicals businesses. But in more detail: our integrated polyolefins business, including upstream hydrocarbons, performed solidly. Melamine also performed well, at the cyclical peak. In Hydrocarbons and Energy, our monomer and cracker co-product business was strong; favourable margins were further bolstered by the high operating rates of our Borealis assets and full utilisation of feedstock flexibility. Yet on the downside, Fertilizers hit a rough patch as supply exceeded demand across the globe.

Can you point to any specific highlights within Borealis Base Chemicals in 2016?

We finalised the modifications to our ethane terminal and cracker in Stenungsund, Sweden. This helps us further exploit the advantages of shipping ethane from the US. In Porvoo, Finland, the liquefied petroleum gas (LPG) cavern excavation was also completed. This means we will be able to start importing from the US around the middle of 2017. By then, the requisite terminal and pipeline investments in the US should be completed. Taken together, these projects boost our competitiveness in the cracker business because they increase our feedstock flexibility and ensure supply security.

Other important ongoing projects include the furnace revamp in Stenungsund, and the construction of a new power plant in Porvoo. Borealis has a 20% share in the latter project. These projects will not only improve the reliability of our operations, but will also enhance energy efficiency and reduce our carbon footprint.

"Taken together, our projects in Stenungsund and Porvoo boost our competitiveness in the cracker business because they increase our feedstock flexibility and ensure supply security."

Markku Korvenranta,
Executive Vice President, Base Chemicals

Are there other projects in the works in the near future?

This year we announced our intention to build a new, world-scale propane dehydrogenation (PDH) plant at our existing polypropylene (PP) production site in Kallo, Belgium. We have based our plans on a detailed pre-study that examined the technical and commercial merits of producing an additional 740 kilotonnes of PP each year. A feasibility study is now underway. We expect to take the decision to progress to the next study phase around the middle of 2017. Plant start-up would then be planned for the end of 2021. Given a green light, this investment would be the largest Borealis has ever made in Europe. It would send a very strong signal of our long-term commitment to our propylene customers and the PP industry.

You mentioned that Fertilizers has had a difficult year. Which market factors are at work in this industry?

Last year was indeed a challenging one for the global fertilizer industry. The key fertilizer nutrients nitrogen, phosphorous, and potash, or potassium, (N, P, and K) were in ample supply, yet agricultural producers suffered from very low market prices for crops, dairy and livestock. And while the price of natural gas in Europe was relatively low, it was still

not enough to compensate the lower sales prices across the portfolio. The market for complex NPK fertilizers was particularly weak, with demand down by as much as 30% in some markets as farmers tried to optimise cash flow.

Yet we do have good news to report. Our far-reaching fertilizer distribution network continues to grow in scope and strength, most recently with our market entry in Greece in 2016. Our product portfolio is especially well suited to meet the specific demands of Greek farmers. We also improved our plant operations versus 2015, which softened the market blow. However, operability did not quite reach the ambitious improvement targets we had set, so there is ample room for improvement in the coming year.

In 2016, we also continued to invest in the long-term upkeep and care of our assets. For example, in Ottmarsheim, France, we had the largest ever site turnaround, with a capital spend exceeding EUR 55 million to cover the turnaraound and related projects. In Linz, the largest such project is the rock phosphate storage renewal. Improvements to this facility will significantly reduce dust emissions to the nearby communities.

On the US Gulf Coast we have continued to develop the world-scale ammonia project through Gulf Coast Ammonia LLC (GCA). The currently low ammonia price has slowed down the process, but this has also given us time to optimise plant configuration and costs in order to ensure attractiveness under all market conditions.

What are the trends and developments affecting the melamine industry?

Demand for melamine continues to grow, creating market pull. Towards the end of the year, Chinese prices increased rapidly, the effect of which has been seen in other parts of the world as Chinese material was in short supply.

> "...The investment in a new world-scale propane dehydrogenation plant would be the largest Borealis has ever made in Europe... It would send a very strong signal of our long-term commitment to our propylene customers and the PP industry."

Markku Korvenranta,
Executive Vice President, Base Chemicals

As the global supply-and-demand balance tightens, the market will have room for moderate capacity increase, even beyond the currently announced projects.

In fact, we have also announced a new project: in November, Borealis signed a memorandum of understanding (MOU) with Asmidal of Algeria to study the construction of a new, 45-kilotonnes melamine plant that would be adjacent to one of the country's existing ammonia complexes.

Is there anything you would like to add about Borealis and corporate culture?

I have the pleasure and honour of serving as the Executive Board sponsor for our Behavioural Excellence project dedicated to driving team performance. Our aim is to work together as one team with a shared mindset. I am truly convinced that initiatives like these differentiate Borealis from our competitors. They are a steady source of positive employee morale and engagement in our highly cyclical industries.

“WHAT STANDS OUT MOST IN 2016 IS OUR IMPROVED SAFETY PERFORMANCE.”

Martijn Arjen van Koten,
Executive Vice President
Operations, Projects & Technical Support
and Health, Safety & Environment

From an Operations perspective, what were the main highlights of 2016?

Overall, the entire team should be proud of a strong performance in 2016. What stands out most is our improved safety performance. A close second is the satisfactory operational excellence in Polyolefins and Hydrocarbons that made it possible to better serve our customers and complete a number of major projects.

"We strive for consistent and improved professionalism in how we operate, maintain and develop our plants."

Martijn van Koten,
Executive Vice President
Operations, Projects & Technical Support
and Health, Safety & Environment

To expand on our highlights in a bit more detail: our reliability performance in Polyolefins was strong, particularly in polypropylene production. Combined with the cost efforts we have undertaken over the last several years, this has enabled us to extend our lead over our competitors. Recent benchmarking results demonstrate this visibly. Another focus area in 2016 was bolstering production for our energy business from the Stenungsund LD5 and connected plants. We accomplished this by making changes to the plants that made it possible to produce a record annual production volume while improving quality and increasing yields. Our olefins units in Stenungsund, Sweden, Porvoo, Finland, and Kallo, Belgium, performed very well. Our ethane project in Stenungsund has now been completed and commissioned, and we are already seeing clear benefits in unit throughput and feedstock flexibility.

Operations performance in Melamine and Fertilizers was inconsistent. We had a strong year in Linz, Austria, with record overall production volumes. In contrast, the availability of our French fertilizer plants in Grand-Quevilly and Grandpuits did not perform to plan; performance must be improved in 2017. On a positive note, we were able to successfully apply our Turnaround Excellence approach to the major turnaround in Ottmarsheim, France. This huge endeavour was executed safely and with a satisfactory overall result. We will further leverage this approach in 2017. The coming year is set to be a very eventful one, with five turnarounds in Europe, and one in Borouge in the United Arab Emirates (UAE).

How would you sum up Borealis' 2016 performance in terms of health and safety?

At Borealis, our goal will always be zero accidents and zero incidents in the course of conducting business and operations. This is what we refer to as our Goal Zero journey. All members of the team – and the team includes not only Borealis staff, but our contractors' people, too – remain vigilant in their efforts to continually improve safety and process safety performance. I am proud to confirm that our Total Recordable Injuries (TRI) rate, a key health and safety performance metric, is 0.9 in 2016. This is an improvement of the 1.4 TRI in 2015, and a clear sign of progress. Prioritising safety in the field has been the key to improving overall safety performance. Another pivotal element is concentrating on risk mitigation and good practice. To this end, we have stepped up the frequency of activities such as observation tours, which we call "engagement tours" going forward, to highlight that it is important that people come together to exchange experience and concrete ideas when it comes to making our operations safer.

We have employed a process safety dashboard in all our locations and plants to improve our process safety performance. These dashboards track performance in relation to the Loss of Primary Containment (LOPC) safety pyramid. They include both reactive performance indicators such as the actual number of incidents; and proactive performance indicators like the number of alarms per console. They also gauge performance levels in accordance with Management of Change (MOC) and bypass management. Thanks to the enhanced focus on all areas of process safety management, we have achieved reductions in the number of incidents for the third year in a row.

Borealis is at the forefront of the European plastics industry's efforts to minimise the environmental impact of operations. Which programmes are making a difference at Borealis?

Borealis was one of the first to sign on to the Operation Clean Sweep® programme in 2012, and is also involved in the Austrian "Zero Pellet Loss Pact" sponsored by the Association of the Austrian Chemical Industry. We have come a long way in our efforts to prevent unintentional loss or spillage of pellets from our operations. In 2016 we drafted, then implemented, a best-practice manual and a supplementary audit catalogue to help reinforce mindfulness when it comes to environmental responsibility and sustainability in our own operations. These tools also extend to our dealings with suppliers, partners and the larger customer supply chain.

Our proactive approach has also led to progress in our energy efficiency improvement programme. In 2016, for example, we took the final investment decision to build a new and more environmentally efficient power plant in Kilpilahti/Porvoo. We have also piloted operator energy "trend boards" in Burghausen, Germany, and Schwechat, Austria. These trendboards display the past best energy performance in comparison to current performance and allow the operator to "steer" the plant to the optimum energy efficiency point at the actual conditions. We have implemented a new approach to learning from flaring incidents in Kallo/Antwerp in Belgium. These activities will be rolled out on a broader scale in 2017.

What does 2017 and beyond hold for Operational Excellence?

In 2016, we extended the Manufacturing Excellence approach that leverages our shared work processes and best practices. We strive for consistent and improved professionalism in how we operate, maintain and develop our plants. In production excellence, we applied this approach by implementing best practices for things like shift handovers, alarm management, decommissioning and recommissioning. An equally essential activity was to define what "good" means in the context of maintenance execution and project implementation. Over the next three years, we will focus on effective implementation of these common work practices.

We are also investing in improving both individual and team capabilities as well as leadership skills. In addition to our established technical and expert training programmes, we have now created what we call a frontline leader curriculum consisting of modules such as behavioural safety, process safety, Operational Excellence and leadership. In 2016, over 450 of our frontline leaders successfully completed one or more of these modules. In November, we organised the first Borealis "Middle Manager" programme, at which 25 managers from Operations, HSE, PTS and InnoTech came together to exchange and debate best practices.

I find it personally very exciting to see the enthusiasm with which these programmes are both developed and attended. Their success is due in large part to the high quality of the materials developed by the instructors. Because all programmes are based on a train-the-trainer approach, the instructors are in fact our own shift team leaders and managers. In fact, I am certain that by leveraging our best practices and investing in the professionalism of our people and teams, we will be able to deliver even stronger results in Operational Excellence.

"Borealis invested around EUR 55 million and nearly 300,000 person-hours to make this crucial Ottmarsheim turnaround and related projects – the biggest in this site's history – a success. During the 88-day process, anywhere from 400 to 800 people were involved in this massive effort. That we carried it out safely and efficiently is testimony to excellent Operations teamwork, from start to finish."

Ludovic Boulais, Operations Manager & Location Leader, Borealis Ottmarsheim

OUR BUSINESS

ENVIRONMENTAL RESPONSIBILITY

SOCIAL RESPONSIBILITY

Further details about the programmes and initiatives mentioned in this interview can be found in the 'Environmental Responsibility' section.

Cornerstones of Sustained Success in 2016

Borealis continues to evolve from a European plastics manufacturer to a global provider of innovative plastics and chemicals solutions. With operations in Europe, the Middle East and Asia, and a growing presence in North and South America, Borealis is built on a strong foundation of Polyolefins, Base Chemicals, and its joint venture, Borouge. This structure ensures stability and continued success, even in an era of global market volatility and political uncertainty. The year 2016 produced the strongest financial result in Borealis' history, and was one of the company's best years in terms of safety performance.

Yet the global market environment will remain challenging. For this reason, Borealis continues to invest in its existing infrastructure and assets to improve efficiency, expand capabilities, and address sustainability concerns. It seeks to identify and then develop growth opportunities on a global scale, and in particular, those enabling it to deepen its commitment to the principles of the circular economy. Borealis' dedication to Value Creation through Innovation in all business areas is underscored by its constant efforts to develop and enhance proprietary technologies, such as the current upgrade of its Borstar® technology to the third generation.

Polyolefins

In 2016, Borealis Polyolefins demonstrated a consistently strong performance owing to higher industry margins and lower feedstock costs. Through continuous optimisation of its organisational set-up, Borealis has been able to ratchet up collaboration with customers and industry partners in order to develop tailored specialty solutions based on proprietary Borealis technologies. The innovations originating from such cooperations have been a solid source of Polyolefins' growth, as so clearly demonstrated at the K Fair 2016. Along with its stand partners Borouge and NOVA Chemicals, Borealis highlighted singular examples of Value Creation through Innovation produced by exploiting global reach and capabilities on the one hand, while cultivating local partnerships on the other. For instance, the low-density polypropylene (PP) compounds used in the new Opel Astra which help reduce weight and improve energy efficiency; or the Borstar-based Full PE Laminate solution that gives polyethylene-based packaging materials a second life by improving their recyclability. Borealis also promoted its recently sealed cooperation with a Taiwanese converter that aims to explore lightweight, recyclable applications based on Borealis' Daploy™ high melt strength (HMS) PP foam material, and presented a new grade in its pioneering portfolio of PP random crystalline temperature (PP-RCT) pipes.

While inviting customers to "Join Our Journey" at the K Fair, Borealis also made good on its commitment to the principles of the circular economy. Its acquisition of leading German plastics recyclers mtm plastics GmbH and mtm compact GmbH in June not only catapults Borealis to the pole position in the industry with regard to plastics recycling, but also enables the company to more aggressively pursue business opportunities and accelerate its activities in the area of post-consumer polyolefin recyclates.

Borealis also continues to transform important former acquisitions, such as Borealis Plastomers. In June, the company announced the extension of the Queo™ plastomers portfolio with three new polyolefin elastomer grades, and the rebranding of its Compact technology to Borceed™. Other significant launches and extensions in Polyolefins in 2016 include the extension of the Fibremod™ technology portfolio with carbon fibre reinforced PP grades; the introduction of PP composite-based, lightweight solutions for automotive applications; and the concomitant expansion of production capacity on the long glass fibre reinforced polypropylene (PP-LGF) production line in Monza, Italy. In its Energy industry segment, Borealis launched Visico™ flame retardant (FR) systems for building and photovoltaic cables, and continued to develop the leading-edge Borlink™ grades for high voltage direct current (HVDC) and extra high voltage (EHV) applications.

Borealis and Borouge

Borouge, Borealis' joint venture with the Abu Dhabi National Oil Company (ADNOC) in the UAE, delivered the first shipment of Borlink compounds for Energy applications from Borouge 3 in 2016, thus passing the final milestone in the start-up of this massive expansion project. The world's largest

cracker, two Borstar PE, two Borstar PP, one low density polyethylene (LDPE), and the final plant to come on stream, the cross-linked polyethylene (XLPE) plant, have all proven design capacity. Total production has increased to 4.5 million tonnes polyolefins, making Borouge the largest integrated olefins/polyolefins complex in the world. In addition to increased capacity in terms of volume, Borouge 3 also expands the range and depth of innovative and differentiated Borstar PE, PP and Borlink products that can be offered.

Borealis and Borouge have now embarked on an optimisation programme across all Borouge sites that includes debottlenecking of Borouge 1, 2 and 3. Pending final approval at the end of 2017, the construction of a fifth PP plant, PP5, will begin, with start-up planned for 2020. Further investment plans include the next phase, Borouge 4. If approved around the beginning of 2018, this enormously complex undertaking would involve the construction of a facility for mixed feed cracking and conversion to downstream products.

Base Chemicals

Borealis' various Base Chemicals businesses exhibited mixed performance in 2016. Hydrocarbons & Energy performed quite well. Monomer and cracker operations were strong thanks to operational efficiency achieved through recent and ongoing investments in existing Borealis infrastructure. For instance, Borealis announced in June that it would invest EUR 40 million in its steam cracker in Porvoo, Finland, in order to effect higher production capacities for propylene and crude C4, enable a higher propylene production quality, and enhance energy efficiency. At the same time, a EUR 160 million project is underway to upgrade and revamp four cracker furnaces in Stenungsund, Sweden. As in Porvoo, the goal is to become more energy efficient, but also to fulfil the highest current standards of process safety. Another crucial Stenungsund project passed an important milestone in May with the Navigator Gas agreement and the christening of the vessel "Navigator Aurora", a new 35,000-m^3 ethane carrier. This state-of-the-art ship will ensure the cost effective, safe and reliable transport of ethane to Stenungsund in the long term, and augments the ongoing construction of new ethane storage and loading facilities.

Borealis' long-term commitment to maintaining its position as an innovative European supplier of PP and propylene was made clear by way of its June announcement of plans to build a new world-scale propane dehydrogenation (PDH) plant. A feasibility study has been commissioned for this plant which would be located at existing Borealis production facilities in Kallo, Belgium. With a targeted annual production capacity of 740 kilotonnes per calendar year, it would be one of the largest and most efficient facilities of its kind in the world.

In March, Borealis announced the successful financial close of a new combined heat and power plant in Kilpilahti/Porvoo, Finland, to replace the existing facility. The total investment will be around EUR 400 million; the project is being carried out jointly among the partners Borealis, Neste, and Veolia.

Melamine developed very satisfactorily in 2016 thanks to good industry margins and the streamlining of Borealis' organisational assets in recent years. As worldwide demand for melamine increases, Borealis – the second largest producer of high-quality melamine in Europe – is well positioned to deliver. The EUR 80 million "Linz 2020" investment package shall boost the long-term competitiveness of melamine and fertilizer production facilities in Linz, Austria. In November, a memorandum of understanding was signed with Asmidal to study the construction of a new, 45-kiloton-capacity melamine plant in Algeria, a project aimed at expanding the global reach of this business.

In 2016, Borealis Fertilizers stumbled as global demand for fertilizers faltered in the face of oversupply and low prices. However, keeping the cyclicality of this segment in mind, the long-term global growth of fertilizers is assured thanks to population growth, ongoing changing consumption habits, and the need to deliver innovative crop nutrients in a more environmentally sustainable way. To this end, Borealis continues to invest in its existing production infrastructure in order to make its operations more cost and energy efficient. In 2016, the Borealis L.A.T distribution network in Europe expanded to include Greece, and the innovative diagnostics tool N-Pilot® was successfully launched in Germany and Romania. The device is now available in five countries.

Our Business

Borealis is a leading provider in the fields of polyolefins, base chemicals and fertilizers.

Polyolefins

The polyolefin products manufactured by Borealis form the basis of many valuable plastics applications that are an intrinsic part of our daily lives. Borealis works closely with its customers and industry partners to provide innovative and value-creating plastics solutions that make end products safer, lighter, more affordable and adaptable. Advanced Borealis polyolefins have a role to play in saving energy along the value chain and promoting more efficient use of natural resources.

Borealis provides services and products to customers around the world in collaboration with Borouge, a joint venture with the Abu Dhabi National Oil Company (ADNOC).

The areas of polyolefins applications are wide-ranging and diverse. At Borealis, these areas are called Energy, Automotive, Consumer Products, and Pipe. New Business Development explores novel and potentially significant polyolefin products and applications. Circular Economy Solutions seeks to identify and realise new growth opportunities that enhance the resource efficiency of plastics.

Energy

Borealis is a leading provider of polyolefin compounds for the global wire and cable industry. A broad range of sophisticated extra high, high and medium voltage cable applications, semi-conductive products as well as low voltage energy transmission and distribution cable solutions are made possible by Borealis' proprietary technologies. Cutting-edge innovations based on Borlink™ developed for the wire and cable industry make power grids more robust and reliable, help eliminate wastage, and make it possible to transport energy from renewable sources more efficiently and over longer distances.

Borealis' unique polymer manufacturing technologies make the wires and cables used in the construction and automotive industries safer, and improve the efficiency of data and communication networks. Borealis is also a leading supplier of polypropylene (PP) material solutions for capacitor film products. Exhibiting exceptional cleanliness standards, these materials help achieve outstanding electrical properties, and their consistent processing behaviour enables the production of extremely thin films.

Automotive

Borealis is a leading supplier of innovative polyolefin plastic materials for engineering applications in the automotive industry. In vehicles, Borealis' leading-edge polyolefin plastic materials are used in a wide range of exterior, interior, and under-the-bonnet applications. These include bumpers, body panels, trims, dashboards, door claddings, climate control and cooling systems, air intake manifolds and battery cases.

Proprietary Borealis technologies offer ideal replacement solutions for conventional materials like metal, rubber and engineering polymers. Working closely with key value chain partners, Borealis develops new materials for specific composite applications such as structural carriers. Borealis material solutions help facilitate lightweight construction and thus play an important role in enhancing energy efficiency. Over the lifespan of an automotive application like a bumper, for instance, eight kg of carbon emissions can be avoided by the use of one kg of PP.

Borealis grades with post-consumer recycled (PCR) plastics content meet growing industry and end-user demand for high quality materials that make better use of natural resources. Combining PCR and virgin material to produce high-end grades of consistent quality translates into less resource waste.

Consumer Products

With over 50 years' experience in the industry, Borealis is an innovative and reliable supplier of superior polyolefin plastic materials used in consumer products, advanced packaging and fibre. White goods (from washing machines to refrigerators and air conditioning units) and small appliances (from toasters to power tools) are made more robust yet lighter, more energy efficient yet visually appealing, thanks to Borealis' advanced PP solutions. Superior and proprietary Borealis technologies also make advanced applications possible in flexible packaging

(including lamination film, shrink film, stand-up pouches); rigid packaging (caps and closures, bottles, thin wall and transport packaging); and non-woven and technical fibres (filtration systems, hygiene products, technical textiles).

These value-added packaging and fibre innovations play a role in safeguarding the quality and safety of consumer and industrial products, but also fulfil demand for enhanced functionality and convenience. Plastic food packaging, for example, helps protect and preserve food from farm to fork. Spoilage is avoided thanks to efficient filling systems and leak-resistant packaging. Food stays fresher longer, and less must be thrown away. What is more, the consumer has a wider range of choices when it comes to convenient and appealing packaging formats.

Pipe

As a trusted partner to the industry for over 25 years, Borealis supplies advanced polyolefin pipe system materials that help the industry better serve a variety of projects and communities around the world. Using its proprietary Borstar® technology as a base, Borealis offers pipes used in many different industries: water and gas supply; waste water and sewage disposal; irrigation; plumbing and heating; and oil and gas, including multi-layer coating solutions for onshore and offshore oil and gas pipelines. As a one-stop shop for the oil and gas industry, Borealis provides reliable and high-quality solutions from one end of the pipeline to the other.

By offering more durable and reliable pipes, Borealis' step-change innovations continue to boost the sustainability of pipe networks by making them safer and more efficient, by helping eliminate wastage and loss whilst at the same time offering energy savings. Water and sanitation systems can be made more efficient and reliable by using proprietary Borealis materials. Compared to conventional materials, such modern polyethylene (PE) systems reduce water losses by a factor of eight. Trenchless technology reduces installation costs by up to 60%.

New Business Development

Borealis' impressive track record in Value Creation through Innovation and its close cooperation with customers enables it to develop innovative products and solutions in the areas of Healthcare, Plastomers and Foamable Materials based on its proprietary technologies. Importantly, as global suppliers, Borealis and Borouge can ensure the security of supply and provide technical support tailored to the specific and stringent requirements of the market.

In Healthcare, the ever-growing Bormed™ polyolefins portfolio offers superior technical performance for medical devices, pharmaceuticals, and diagnostic packaging. Borealis innovations help make healthcare packaging and medical devices safer and more affordable whilst improving usability, a key criterion in today's ageing society. Disposable syringes, insulin injection devices, unbreakable transparent bottles and single-dose eye drop dispensers, among other products, have all been enhanced by advanced polyolefins made by Borealis.

In Plastomers, Borealis continues to expand its wide range of attractive solutions with its brand Queo™ to meet or even surpass the most demanding requirements in sealing, flexibility, compatibility and processability. In foamable materials, Borealis' high melt strength (HMS) PP-based products fulfil the varying and sophisticated needs of both converters and consumers in the packaging, automotive and construction industries.

Circular Economy Solutions

Borealis' acquisition of mtm, a leading German plastics recycling company in 2016 is the first major milestone in its journey to contribute more significantly to the circular economy (CE), which Borealis recognises as an industry imperative. Adherence to CE principles is a key element in Borealis' sustainability strategy, which seeks to promote profitable growth through deeper exploration and subsequent realisation of CE business opportunities, primarily in the area of mechanical recycling of plastics.

Base Chemicals

At Borealis, Base Chemicals is a solid foundation to build upon. Borealis produces a wide range of base chemicals such as melamine, phenol, acetone, ethylene and propylene for use in numerous and diverse industries, as well as fertilizers and technical nitrogen products. Fully committed to international Base Chemicals activities as the bedrock of its overall business, Borealis will continue to develop this profitable area with its unique feedstock capabilities, logistics and integration strengths.

Borealis' Base Chemicals business consists of three units: Hydrocarbons & Energy, Melamine and Fertilizers.

Hydrocarbons & Energy

Borealis sources basic feedstocks such as naphtha, butane, propane and ethane from the oil and gas industry and converts these into ethylene and propylene through its olefin units. Steam crackers in Finland, Sweden, and Abu Dhabi, the latter operated by Borouge, produce both ethylene and propylene, while propylene is also produced in a propane dehydrogenation plant in Kallo, Belgium. Feedstock and olefins required for Borealis and Borouge plants are either sourced from its owners or purchased from the markets. A range of co-products from the steam cracking process, including pygas and butadiene, are also sold to international markets.

Phenol, benzene and cumene as well as acetone are produced in Finland and sold mainly to the adhesive, fibre, epoxy resin and polycarbonate industries in Northern Europe.

In the Nordic and Baltic regions, Borealis is the leading producer of phenol, which is used in adhesives, construction materials, carpets, CDs, DVDs, mobile phones and household appliances. Acetone is commonly used in solvents for paints, acrylics, fibres and pharmaceuticals. Benzene and cumene are feedstocks for other chemical processes.

As a leading fertilizer company in Europe, Borealis is helping make farming more efficient in order to help feed more people and livestock.

Melamine

As the second-largest producer of high-quality melamine in Europe, Borealis produces melamine at its plants in Linz, Austria, and at its facility in Piesteritz, Germany. Melamine is converted from natural gas and has itself become an essential material for the global production of synthetic resins. Around 80% of Borealis' melamine production is destined for the wood-based panel industry, for example for decorative surface coatings of wood-based materials. In the manufacture of everyday objects used in the kitchen or around the house, melamine also plays an important role, for example as one component used to make handles for pots and pans.

Fertilizers

Efficient and effective use of fertilizers has become more essential than ever. The world's population is expected to rise from today's 7.3 billion to over 9.6 billion by 2050, and an increasing number of people will live in densely populated urban areas. As incomes in emerging nations rise, more meat is consumed and thus more grain to feed livestock must be produced. Biofuels also generate demand for increased yields. Because space for agricultural expansion is limited, yields must be optimised. At the same time, in developed nations there is a heightened environmental awareness of the need to promote fertilizers with low carbon footprints, to maintain healthy soil environments, and reduce run-off from fields.

As one of the leading fertilizer producers in Europe, Borealis is helping make farming more efficient in order to feed more people and livestock. Borealis supplies around a million tonnes of fertilizers and technical nitrogen products each year via its Borealis L.A.T distribution network. With more than 60 warehouses across Europe and an inventory capacity of over 700,000 tonnes, Borealis L.A.T promotes a broad fertilizer portfolio: nitrogen-based straight fertilizer; complex fertilizer – a combination of nitrogen (N), phosphate (P) and potassium (K) as well as speciality fertilizers; and a range of other technical nitrogen products, from ammonia and ammonium nitrates to nitric acid and urea solutions. The roll-out of the N-Pilot®, an innovative diagnostic tool to help optimise nitrogen fertilizer application, began in Europe in 2014.

Lighter weight, reduced CO_2 emissions

A stellar example of how customised lightweight polypropylene (PP) compounds solutions can enable significant weight savings is the new Opel/Vauxhall Astra, the 2016 European Car of the Year. Containing around 35 kg of low density PP supplied by Borealis and Borouge, this successful new model weighs up to 200 kg less than its predecessor. Replacing conventional materials with innovative, lighter weight polyolefins helps the automotive industry maintain stringent performance and aesthetic criteria while simultaneously fulfilling stricter CO_2 emissions regulations. By helping manufacturers reduce fuel consumption in their models, Borealis and Borouge are supporting efforts to improve the overall environmental footprint of automotive fleets.

Improving the recyclability of flexible plastic packaging

In the past, the complex structure of flexible plastic packaging made recycling of this material less efficient, and thus less viable. Borealis and Borouge's recently launched Full PE Laminate solution is a step-change concept in flexible plastic packaging. Based on the proprietary Borstar® bimodal polyethylene (PE) technology in combination with machine direction oriented (MDO) processing technology, this novel monomaterial solution offers a second life to PE-based packaging as valuable end products, with no compromises when it comes to product efficiency or integrity. Innovations like these are important steps on the Borealis journey of participating in the circular economy (CE) and pursuing opportunities for business growth in the area of plastics recycling.

The N-Pilot®: precise, effective, convenient – and newly enhanced

Borealis L.A.T launched the N-Pilot® in Austria in 2014. This innovative diagnostic tool has since been introduced in other key European markets, including France, Germany, Hungary, and Romania. In 2016 the functionality of the N-Pilot was expanded from winter grains to include rapeseed, a vital crop for many Borealis L.A.T customers. A hand-held device used in the field, the N-Pilot® helps farmers quickly and conveniently identify the current nitrogen requirements of crops. It provides specific analyses and recommendations to ensure precise fertilizer application during the growing season, thus optimising yields and profitability while at the same time minimising environmental impact.

Innovation Centres

The beating heart of innovation at Borealis is best felt at its Innovation Headquarters (IHQ) in Linz, Austria, or at one of the three satellite Innovation Centres in Sweden, Finland and the UAE. At the IHQ Linz research facilities, newly-developed products are tested by and with international experts on so-called application machines. The main R&D focus lies on polymer design and compound research for polymer applications in the infrastructure, automotive, advanced packaging and healthcare segments.

Another research focus at IHQ Linz is the surface aesthetics of plastics. Plastic surfaces free of flow marks, so-called "tiger stripes", as well as primerless paint systems for exterior plastic applications are among the latest innovations developed for the automotive industry. The Borealis Sirius catalyst plant is also located in Linz. Schwechat is home to another Borstar® pilot plant.

The "Driving Tomorrow" initiative aims to reduce overall fuel consumption thanks to the use of lighter weight components in vehicles. In the Innovation Centre in Sweden, focus is on polymer design, scientific services and R&D in the area of energy and infrastructure industry solutions.

With catalyst scale-up facilities and fully integrated Borstar® PE and PP pilot plant lines, the Borealis Innovation Centre in Finland is the site of advanced catalyst and process research, collaborating closely with both Finnish and international universities and research institutes. The Borouge Innovation Centre in Abu Dhabi cooperates closely with its European partners to explore enhanced infrastructure, automotive and advanced packaging application solutions. What the IHQ Linz and Borouge Innovation Centres have in common is the shared pursuit of innovative solutions that provide added value for customers and end users.

Supply Chain and Procurement

To manufacture its products, Borealis purchases feedstock, energy, raw materials, technical equipment, technical services, general services and packaging materials, from around 10,000 vendors. Approximately 74% of the procurement volume relates to feedstock and energy, around 7% to technical procurement, 7% to raw materials and packaging, 6% to logistics and 6% to business and other services.

When purchasing goods and services, Borealis aims to get the best value by applying the Total Cost of Ownership philosophy. This requires the Group to consider the full costs it will incur during the lifetime of the product or service, rather than looking only at the up-front cost. This supports Borealis' competitiveness and business continuity, by ensuring its purchasing decisions take account of operational excellence, quality, reliability and safety. When defining and adopting sourcing strategies, Borealis also considers market and technology intelligence and supplier innovation potential.

Borealis' suppliers are obliged to uphold the Group's ethical principles and a compliance clause is included in all contract templates. Specific detailed clauses for agency agreements have been developed, which include training and audit rights.

In 2016, Borealis has developed a Responsible Sourcing Policy, in line with its Ethics Policy and Sustainability Strategy. The policy is available on the Group's website and will be rolled out to suppliers in the first quarter of 2017.

Raw Materials & Packaging Materials (RMP)

A dedicated team handles RMP procurement. The main categories of raw material that Borealis purchases are polymer additives, fillers and reinforcers, alkyls, peroxides, silanes, minerals, process chemicals, catalysts, carbon black, co-monomers and polymers. The major packaging categories are Form Fill Seal (FFS) bags, octabins, big bags and pallets.

Borealis sources RMP globally, primarily from suppliers in Europe, North America, Japan, China and Korea. The Group maintains an approved list of approximately 700 RMP suppliers which are categorised as high, medium or low strategic suppliers. High strategic suppliers are those with which Borealis spends at least EUR 2 million a year and which make an important contribution to the Group's current and future business success. They represent around 80–85% of the total yearly spend on RMP.

All suppliers must be pre-qualified, based on Borealis' quality and compliance requirements. They must apply processes and tools such as supplier self-assessment, document review and on-site audits. For the major strategic suppliers, Borealis has implemented supplier performance measures, which include criteria such as supply

reliability, quality, claim management, innovation potential and strategic fit. Borealis assesses supplier compliance with ethical standards and the European Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) on an annual basis.

Based on the assessment results, Borealis will consider supplier inspections, audits or requalification. Results are communicated to suppliers through an annual performance letter to the supplier. Where necessary, the Category Manager agrees on an action plan with the supplier within four weeks of sending the annual performance letter. Assessing risk and defining mitigating actions is part of Borealis' approach to supplier performance management.

Packaging material consumption

In recent years, Borealis has further improved packaging material efficiency and quality. The Group considered several options, taking into account their potential positive impact on energy and material efficiency versus costs and packaging quality. Quality is an important factor in avoiding packaging waste and pellet spills. During the past few years, Borealis has reduced the thickness of form fill seal (FFS) material from 130 µm to 120 µm, with a further reduction ongoing to 110 µm in 2016 and 2017, cutting the quantity of material used by a further 8.3%.

In 2016, Borealis started to develop a packaging report for the packaging used to transport its Polyolefin products. The report will be completed during 2017, adding data for the packaging used for Fertilizer and Melamine products. This will provide the basis for analysing further material efficiency opportunities.

	2016	2015	2014
Carton	13.82	13.87	14.15
Form Fill Seal (FFS)	4.42	4.40	4.46
Big Bags	3.90	3.86	3.87
Other materials	1.07	1.16	1.17
Total	**23.21**	**23.28**	**23.65**

Fig. 1: Packaging consumption based on 1,000 kg produced polyolefin material

– Not included in the table are materials such as labels, straps, paper sheets and wooden pallets.

– Other packaging materials include: bottom and top sheets for palletised products, in liners, stretch films to cover packed materials, and carton box liners.

Technical procurement

The Technical procurement area encompasses all services and equipment related to investing in or maintaining Borealis' assets. This includes equipment, materials, services and spare parts, covering:

– static equipment, rotating equipment, automation, furnaces, pipe materials, valves, electrical equipment and logistic equipment,
– civil works, steel works, piping works, mechanical works, electrical and automation works, scaffolding, insulation and industrial cleaning; and
– facility management and waste management.

Borealis sources technical equipment globally. Services related to capital expenditure are sourced globally (e.g. engineering services for big investment projects) and maintenance services are sourced within Europe, as they require suppliers with permanent locations in the proximity of Borealis' sites.

The supplier base covers thousands of suppliers, from which Borealis has identified its strategic suppliers. These suppliers are subject to the corporate Supplier Relationship Management programme, to drive continuous improvement for these relationships. Supplier performance management takes place at the end of each contract or on a continuous basis.

The supplier selection process is split into technical and commercial bid phases. Suppliers must follow an ethics qualification process and ethical standards are part of each supplier contract.

Feedstock & Energy

Borealis sources basic feedstocks such as naphtha, butane, propane and ethane from the oil and gas industry and converts these into ethylene and propylene through its olefin units. Steam crackers in Finland and Sweden produce both ethylene and propylene, while propylene is also produced in a propane dehydrogenation plant in Kallo, Belgium. Feedstock and olefins required for Borealis' plants are either sourced from Borealis' owners or purchased in the market.

In 2016, the company sourced 5,015,329 tonnes of feedstock for its Polyolefins production. This includes Ethane, Propane, Butane, LPG-mix (Liquified Petroleum Gas), Naphtha, Ethylene and Propylene. Natural gas is used both for production of energy and as a raw material for the production of ammonia. Natural Gas consumption is reported

in the chapter on Energy. Feedstock sourced for Fertilizer and Melamine production will be provided in the next year's report.

2016	2015	2014
5,015,329	3,928,431	4,203,198

Fig. 2: Feedstock sourced for Polyolefin Production in metric tonnes

Transportation

The main sustainability impacts of transporting Borealis' products and materials are potential accidents and spills, and greenhouse gas emissions (CO_2). Borealis requires its logistics suppliers for polyolefins to be Safety & Quality Assessment System (SQAS) certified. In the Fertilizer business, logistic service providers transporting dangerous liquid cargo are also required to have such a certification. In both of its main businesses, Borealis uses a carrier performance rating system which helps monitor service quality and follow-up on non-compliance.

Transportation safety is key for Borealis. The Group requires all its logistic partners to report the following accidents:

- any injury or fatality (own personnel as well as third parties);
- any damage to property of any party involved in the accident;
- all material damage while transporting Borealis' goods to the final customer;
- any public disruption; and
- any intervention by the emergency services.

Within 24 hours of an accident, the logistics partner must send a report to Borealis, which includes information on the cause of the accident. Distribution incidents within and outside of Borealis' locations are also documented and investigated in Synergi, the Borealis risk register.

Borealis' Polyolefins and Fertilizer businesses transport a combined volume of more than eight million tonnes of raw materials and finished products to the Group's sites or customers' premises. Wherever possible and economically feasible, the Group seeks to transport products off-road via rail, barges or vessels. Even so, around 50% of Borealis' Polyolefin and Fertilizer products are still transported by road. Melamine volumes are mainly sold into core markets with a high share of intermodal transport.

In 2016, Borealis started to set-up a tool to track the CO_2 emissions of its downstream transportation. While the tool for tracking emissions of Fertilizer and Melamine transportation was not finalised at the date of publication of this report and will be communicated next year, analysis of the Polyolefin transportation has shown that Borealis' downstream transportation of polyolefin products results in a total of 136 kilotonnes of CO_2 emissions. These are calculated based on the transport mode (trucks, train, barges, vessels or intermodal) as well as the transported volume and distance.

Spills

Preventing pellet spill during transportation is key to stopping pellets from ending up in rivers and ultimately the ocean. Borealis is committed to achieving zero pellet loss in and around its operations and has set a range of measurements to achieve this. The Group has started to engage with the value chain, including logistic providers, to promote zero pellet loss measurements and will continue this effort in 2017.

Borealis has a truck driver manual in place at all sites, which includes guidelines for safe loading and unloading of material. During 2016, ECTA and CEFIT also developed comprehensive guidelines for safe loading and unloading of pellets in bulk. These have been communicated to all of Borealis' logistic service providers and shared with the Group's sales team, for communication to customers. The objective is to increase awareness regarding the safety, quality and environmental aspects of bulk unloadings.

Borealis' approach to sustainability

Borealis defines sustainability as the ability to understand the consequences of the Group's activities and decisions on the Triple bottom line, or "3Ps": People, Planet and Profit. The 3Ps are equally important and all must be considered in every decision the Group takes. Applying the "rule of the 3Ps" will ensure that Borealis takes responsible and fact-based decisions, fosters true sustainability and avoids green-washing.

To ensure its decisions consider all of the 3Ps, Borealis has included sustainability aspects in its major policies and decision processes. For example, the Group's innovation portfolio and investment projects are now evaluated according to their contribution to these 3Ps.

Responsibility

Responsibility has always underpinned how Borealis does business. The Group's commitment to sustainability is rooted in its core values (Responsible, Respect) and its vision and mission "to be THE leading provider of innovative plastics, chemical and fertilizer solutions that create value for society." This means that Borealis recognises its responsibility to protect the health and safety of all employees and to offer them career development and fair remuneration. Borealis is also committed to conducting its business ethically and to ensuring production processes and products are safe for people and the environment. As well as reflecting Borealis' core values, this approach is laid down in the Group's ethics policy and its commitment to Responsible Care®.

Business Imperative

Business is increasingly affected by the growing complexity of social, environmental and economic challenges. These include new and more demanding regulations, and political, economic and social instability, as well as the need to respond to rising stakeholder expectations. Borealis needs to sustainably manage constrained resources, such as finite feedstock and energy, as well as controlling its emissions and preventing pollution. Minimising its environmental impact also enables Borealis to be more resilient and efficient, to reduce costs and mitigate long-term business risks. Borealis has established programmes to respond to all these needs.

New challenges are also emerging. For example, there is increasing public concern about the potential for chemicals to harm people and the environment. It is Borealis' responsibility to fully understand the potential risks of certain chemicals, to closely follow the latest scientific findings and potentially replace these chemicals with improved alternatives.

Business Opportunity

Sustainability also means ensuring the Group's profitability. Responding to social challenges and stakeholder expectations provides an opportunity to innovate and discover growth opportunities. Many Borealis products and solutions address the United Nations (UN) Sustainable Development Goals, such as access to water and sanitation, energy, food and healthcare, as well as reducing climate change and increasing resource efficiency. Borealis sees clear business opportunities by addressing emerging challenges, such as the need to reduce plastic waste and increase recycling rates. In 2016, Borealis therefore announced its ambition to be an active participant in enabling a circular economy of plastics. Two important milestones have been reached on this journey: the acquisition of two post-consumer waste recycling companies based in Germany (mtm plastics GmbH and mtm compact GmbH), and the announcement of the partnership with the Ellen McArthur Foundation.

Borealis' sustainability strategy

Borealis has undertaken a strategic assessment to identify the aspects requiring greatest focus and to build its sustainability strategy and roadmap. This was a three-step process:

1. Identification of issues

The journey started in 2012, with a comprehensive survey among more than 500 stakeholders, including customers, suppliers, academia, non-governmental

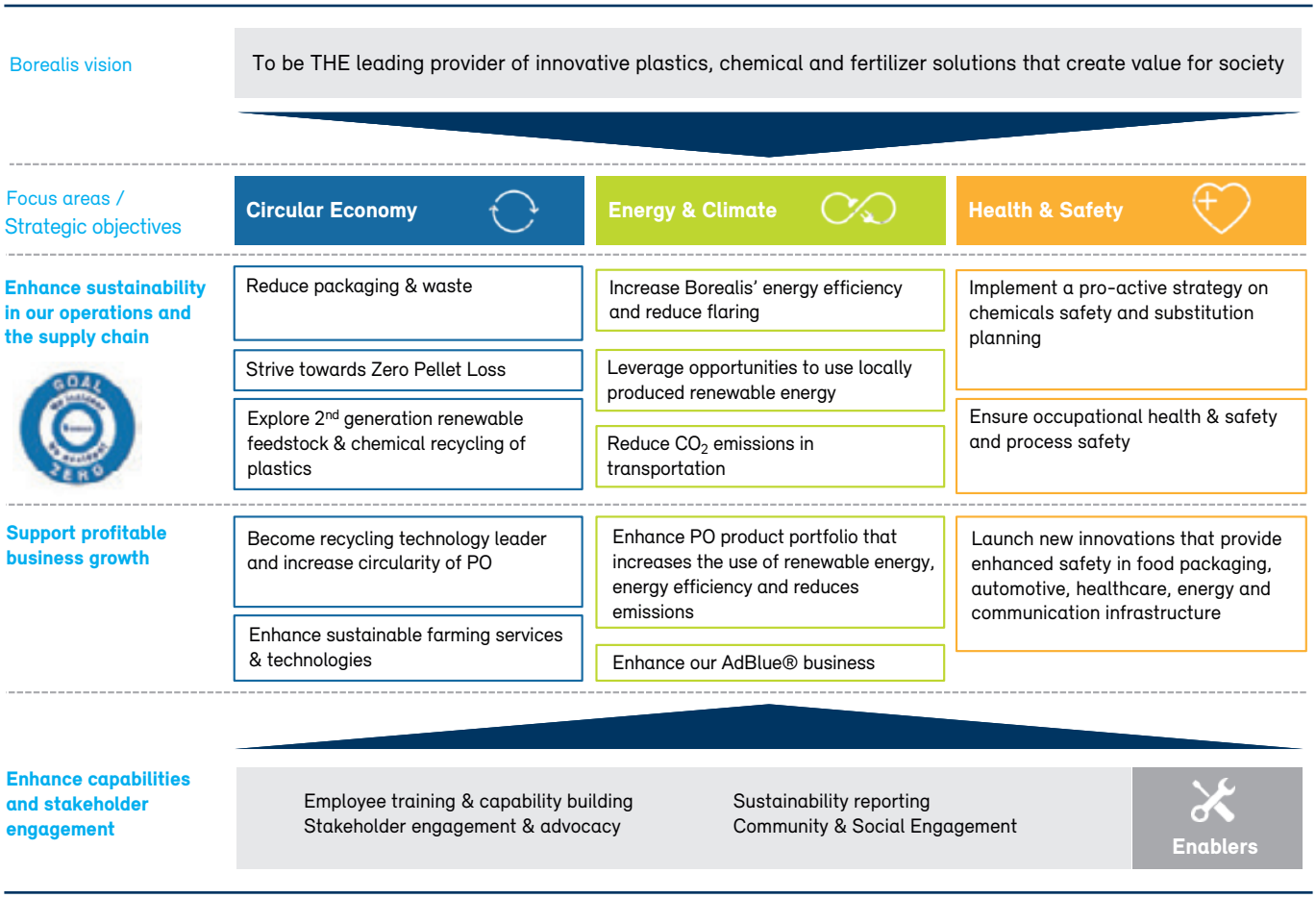


Fig. 3: Borealis sustainability strategy and deliverables

organisations (NGOs) and investors. These lessons were fine-tuned through face-to-face interviews and dialogues with key value chain partners, as well as with selected individuals from NGOs and authorities. In addition, during the Group strategy refresh in 2016, Borealis carried out a mega trends analysis and built the findings into the Group strategy and the materiality analysis.

2. Prioritisation of issues

The Group prioritised issues based on their importance and relevance for Borealis as well as for external stakeholders, based on information gathered from stakeholders during the issue identification step. This analysis was driven by a risk and opportunity assessment, to identify those issues where Borealis needed to perform better or increase its focus. As a result, Borealis has defined three main focus areas in its strategy and roadmap:

– Circular Economy
– Energy & Climate
– Health & Safety

For each of these focus areas, clear deliverables have been defined.

3. Building the Borealis sustainability strategy

The sustainability strategy and roadmap was built around Borealis' strategic objectives and the three focus areas (see fig. 3). The focus areas clearly respond to the main external stakeholder concerns: use of finite resources, plastic waste and safety of chemicals. For each of these focus areas, Borealis has defined flagship projects.

Responsible Care®

Borealis is committed to implementing the guidelines of the Responsible Care® Global Charter, the chemical industry's voluntary initiative which aims for continuous improvement in HSE performance. The guidelines contained in the charter, such as efficient use of natural resources and efforts to avoid the production of waste, are also among the central principles guiding Borealis.

Responsible Care® commits Borealis to:

– A corporate leadership culture which proactively supports safe chemical management through the global Responsible Care® initiative.

– Safeguarding people and the environment by continuously improving the environmental, health and safety performance and security of Borealis' facilities, processes and technologies, and by driving continuous improvement in chemical product safety and stewardship throughout the supply chain.

– Strengthening chemicals management systems by participating in the development and implementation of lifecycle-oriented, science- and risk-based chemical safety legislation and best practices.

– Influencing business partners to promote the safe management of chemicals within their own operations.

– Engaging stakeholders, understanding and responding to their concerns and expectations for safer operations and products, and communicating openly on Borealis' performance.

– Contributing to sustainability through improved performance, expanded economic opportunities and the development of innovative technologies and other solutions to societal challenges.

Borealis Sirius Catalyst Plant in Linz

Stakeholder Engagement

Collaborating with internal and external stakeholders is intrinsic to Borealis' ability to create value through innovation and is anchored in the Group's commitment to Responsible Care®. Stakeholder dialogue also helps Borealis to learn about and address their concerns and expectations, to better anticipate business risks and opportunities, and to develop the right solutions to respond to them.

Borealis systematically maps risks and issues, and carries out stakeholder mapping and analyses in all locations and in its major application markets. This enables the company to maintain the ongoing dialogue at a variety of levels, with its increasingly complex range of local and global stakeholders.

Borealis interacts with its key stakeholders in numerous ways. These include face-to-face meetings, online surveys, participating in committees and task forces, and attending conferences, round tables and other industry events.

Borealis' stakeholders and examples of engagement

Academia and science
Ongoing cooperation in R&D with leading universities; regular participation in symposia, conferences and fairs.

Customers
Face-to-face meetings; customer visits to Borealis; customer feedback surveys; customer satisfaction surveys; trade fair activities and conferences.

Employees
Regular evaluation and feedback between employee and line manager, within the framework of the Borealis performance management system; biennial Borealis employee survey; regular town hall meetings, and many more.

General public
Interactions through events such as Open Door Days at Borealis' plants and the ZOOM exhibition in Vienna, Austria, as well as through dialogues with representatives of the general public such as consumer associations.

Industry and trade associations
Active membership of, or leadership positions in, numerous national, European and international associations, as well as industry, trade and networking organisations and their affiliated working groups (see below).

Investors & capital providers
Borealis Bankers & Investors Day; participation at industry conferences and events for exchanging experience; ongoing dialogue with financial analysts and investors.

Local communities
Ongoing dialogue with communities in which Borealis has production facilities, through channels best suited to local needs, such as face-to-face meetings with community representatives, regular newsletters and Open Door Days.

Media
Frequent interaction with the media via established communications channels: media interviews, events, press releases, corporate website.

NGOs
Regular participation in symposia, conferences and trade fairs; memberships of associations and alliances; collaboration on specific projects.

Owners
Regular Supervisory Board meetings and owners controllers meetings, as well as individual face-to-face interactions at executive level, project level (for example, where working on joint projects) or expert level, to exchange experience or use synergies.

Regulatory authorities/Policy makers
Support for policy developments at EU and national levels in three important areas: Energy & Climate, The Circular Economy Package (legislative & Strategy on Plastics), and the new Fertilizers Regulation (Circular Economy for fertilizers). Borealis also co-chairs the Advisory Group of Social Challenge 5 (Climate action, environment, resource efficiency and raw materials) of EU's Horizon 2020, to help define the 2018–2020 programme.

Suppliers and contractors
Regular face-to-face meetings; annual industry conventions for experience exchange and relationship management; implementation of a Supplier Relationship Management (SRM) programme.

Works councils
Regular meetings of the Corporate Co-operation Council (CCC), a dialogue platform between employee representatives, works councils and top management.

2016 Highlights

Investor relations
The foundation of Borealis' funding model has always been its strong and long-term relationships with its banks and investors. Today, Borealis has a group of around 20 core banks and a number of strong relationships with specialty finance institutions. The Group's funding needs have grown as it has increased its global activities and developed new businesses. Since 2008, Borealis has actively diversified its funding strategy, opening up the debt capital markets and other sources of finance.

In October 2016, Borealis invited a group of 25 bankers and investors to explore Europe's largest industry fair, 'K 2016' in Düsseldorf, where Borealis showcased its latest innovations and strong position in the industry value chain. In addition, Borealis regularly holds bankers and investor days, the most recent being in Abu Dhabi in 2015.

Corporate Co-operation Council (CCC)
The CCC is a forum for exchanging information between Borealis' employees, top management and owners. It was established before the European Works Council legislation came into force in 1994.

The CCC includes 15 employee representatives from European countries in which Borealis has production plants. Members are nominated by the local plants for at least two years and the Chairman and Vice-Chairman rotate every year. In addition to the employee representatives, two members of the Executive Board, the Vice President of Human Resources and the Communications Director, attend the regular meetings.

Four meetings are held each year, with two at the Group's head office and two at different locations.

Fixed items on the agenda are: business and financial updates, HSE updates, and sufficient time for open discussion. This gives the employee representatives an opportunity to address topics they believe are relevant for management.

When necessary, the CCC sets up a special working group consisting of three to four members to discuss specific topics. The CCC therefore goes a step further than required by the European Works Council legislation. The CCC also holds a conference once a year.

Fire Safe Europe Round Table Events
In 2015/16, Fire Safe Europe organised five round table events at the European Parliament. These were hosted by different Members of the European Parliament and supported by Borealis, to raise awareness of fire safety issues and to encourage the EU to address them. The issues discussed at these events included the health effects of smoke toxicity from building fires, outdated testing methods and the need for an EU fire safety strategy. Approximately 70 stakeholders participated in each event and different experts presented their views and research, including firefighters, health experts, European Commission officials and fire scientists.

Working with academia to improve pellet containment
Borealis is committed to taking a leading role in the journey towards zero pellet loss. Therefore, the Group is working on new measurement methods with independent scientific institutes to determine the plastic content in total suspendable solids as a basis for setting new standards for water protection. Borealis is also closely involving the Environmental Agency Austria, the federal body in charge of overseeing and regularly monitoring the implementation of measures.

Austrian Chancellor Christian Kern meets Borealis Chief Executive Mark Garrett in Linz, Austria

Austrian Chancellor Christian Kern visited the Borealis Innovation Headquarters in Linz on 9 September 2016. A tour of Borealis' main Research & Development (R&D) hub highlighted polyolefin innovations but also the greater innovative power of Austrian science and industry.

f.l.t.r.: Austrian Chancellor Christian Kern with Borealis CEO Mark Garrett at Borealis Innovation Headquarters in Linz

High level environmental delegation visiting Borealis production facility in Schwechat, Austria

On 3 June 2016, a high-level environmental delegation visited Borealis' production facilities in Schwechat. The delegation included Karmenu Vella, EU Commissioner Environment; Andrä Rupprechter, Austrian Federal Minister of Agriculture, Environment and Water Management, Maritime Affairs and Fisheries; and Mag. Georg Rebernig, Managing Director, and Dr. Karl Kienzl, Deputy Managing Director of the Environmental Agency Austria.

f.l.t.r.: Alfred Stern, Borealis Executive Vice President; EU Commissioner Karmenu Vella; Minister Andrä Rupprechter

The purpose of the visit was to demonstrate how Borealis had implemented the Austrian Zero Pellet Loss Pact, which has been signed by more than 20 Austrian plastic producers and converters, at its site in Schwechat. Borealis had already implemented these measures before signing the pact. In addition, the company also installed additional filters in the waste water systems and trained truck drivers and operators to avoid spillages and to immediately remove spilled pellets if spillages still occur. The visit was an important step in ensuring the trust and confidence of key stakeholders in Borealis' commitment and capability to protect the environment.

Polyolefin customer satisfaction survey

The Polyolefin Customer Loyalty Programme is a major source of customer insight. An e-survey takes place each quarter to collect the feedback of approximately 1,200 customers worldwide. The average response rate is meaningful, at 30% to 35%. The Customer Satisfaction Index (CSI) summarises Borealis' performance on topics such as innovation, sales, technical services, supply chain and products. The CSI ranges from one (poor) to ten (good), with a target of eight. This feedback is analysed and improvement actions are set.

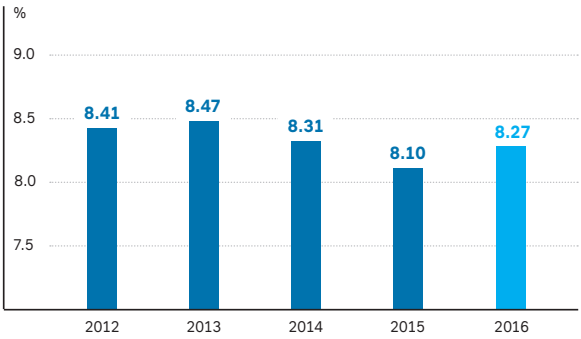


Fig. 4: Borealis customer satisfaction index 2012–2016

In 2016, the CSI improved by 0.17 points to 8.27, although it is not yet back to its highest level of 8.47 in 2013. The improvement in 2016 was driven by a reversal of trends in the supply chain and performance. This makes Borealis a top performer for customer satisfaction in the PO industry, demonstrating the Group's rigorous implementation of its differentiated business model and its ambition to be the supplier of choice to the PO industry.

Memberships

Borealis has active membership or leadership positions in numerous national, European and international associations, as well as in industry, trade and networking organisations and their affiliated working groups. This enables Borealis to take part in policy debates, to exchange expertise and experience, and to monitor trends and developments. Memberships also enable Borealis to support industry efforts to implement programmes such as the European Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), to promote best practices and enhanced standards, and to contribute constructively to the development of a more sustainable society.

List of organisations and associations of which Borealis is a member

(in alphabetical order; list not exhaustive)

- APA (Aromatics Producer Association, a sector group within Petrochemicals Europe)
- CEFIC (European Chemical Industry Council)
- C.I.R.A. (Cercle Investor Relations Austria)
- Cool Farm Alliance
- ECMA (European Catalyst Manufacturers Association, sector group within CEFIC)
- Ellen MacArthur Foundation "The New Plastics Economy"
- EMPA (European Melamine Producer Association)
- EPCA (The European Petrochemical Association)
- Essenscia (Belgium, Federation for Chemistry and Life Sciences industries)
- Europacable (as associated industry partner)
- Europen (European Organisation for Packaging and the Environment, active in task force on food waste)
- FARM REACH Consortium
- Fertilizers Europe
- FSEU (Fire Safe Europe)
- IFA (International Fertilizer Industry Association)
- IPLOCA (International Pipe Line & Offshore Contractors Association)
- IV (Vereinigung der Österreichischen Industrie, the Federation of Austrian Industries)
- IVA (Industrie Verband Agra, German agrochemical industry association)
- Kemianteollisuusry (The Finnish Chemical Industry Federation)
- LOSG (Lower Olefins Sector Group, a sector group within Petrochemicals Europe)
- MedPharmPlast Europe (a sector group of EuPC)
- MPPE (MedPhamPlast Europe)
- PCEP (Polyolefins Circular Economy Platform)
- Petrochemicals Europe (petrochemicals industry sector within CEFIC)
- PlasticsEurope
- PRE (Plastics Recyclers Europe)
- TEPPFA (The European Plastic Pipes and Fittings Association)
- UNIFA (Union des Industries de la Fertilisation, the association of the French fertilizer industry)
- VDT (Verband Deutscher Treasurer e.V.)
- WBCSD (World Business Council for Sustainable Development)
- WKO (Wirtschaftskammer Österreich, the Austrian Federal Economic Chamber)
- WPC (World Plastics Council)

In 2016 Borealis joined the following organisations:

The Polyolefins Circular Economy Platform (PCEP)
Borealis encouraged the creation of the PCEP, which was launched in October 2016 by three plastics industry organisations: Plastics Europe, European Plastic Converters and European Plastic Recyclers. The platform brings together all members of the value chain for the first time, to remove bottlenecks and overcome barriers to a circular economy in polyolefin packaging. The aim is to increase the resource efficiency of plastics, ensure their recovery and prevent any waste leaking into the marine environment. The PCEP will work to a five to ten year time horizon, to deliver effective, science-based solutions.

Ellen MacArthur Foundation – The New Plastics Economy
Borealis was the first prime plastics producer to join the New Plastics Economy initiative. This project is led by the Ellen MacArthur Foundation and brings together a broad group of stakeholders including companies, cities, philanthropists, policymakers, academics, students, NGOs and citizens. Over the next three years, the initiative intends to redesign the future of plastics, starting with packaging. It will drive collaboration across the value chain, guide innovation to support the creation of effective markets, mobilise "moonshot" innovations, develop robust evidence to inform improvement and debate, and engage with stakeholders.

Fire Safe Europe (FSEU)
FSEU is a broad and unique cross-sectorial alliance of fire experts, fire fighters, European associations and international companies. Its mission is to improve fire safety in buildings for European citizens, for example by raising awareness, sharing expertise and contributing to the regulatory debate about fire safety.

MedPharmPlast Europe
This is a sector group of EuPC focusing on issues regarding plastics for medical devices and pharmaceutical packaging.

Plastics Recyclers Europe (PRE)
PRE was created in 1996 to represent plastics recyclers in Europe. It promotes mechanical recycling of plastics and conditions that enable profitable and sustainable business.

Public Affairs

Borealis' ambition is to enable policymakers to shape legislation that supports true sustainable development. This requires well-informed policy-makers at both national and EU levels. Borealis therefore engages with those stakeholders to share its expertise and positions, and supports policymakers as they develop sustainable legislation and programmes.

Examples of Borealis' public affairs activities in 2016 include the following:

- Borealis participated in a number of EU Commission public consultations, to share its views on issues such as energy and climate policy, registration of nanomaterials under REACH or the proposal for a new Fertilizers Regulation.
- Horizon 2020 is the biggest-ever EU research and innovation programme. Borealis co-chaired the Societal 'Challenge 5 Climate Action, Environment, Resource Efficiency and Raw Materials' Advisory Group, which recommended strategic priorities for 2018 to 2020.
- Borealis contributed to the CEFIC initiative looking at the challenges and opportunities for an energy efficient Europe, and was a panelist at the BusinessEurope High Level Conference on New Energy Markets Design.
- Borealis and the PRE joined a delegation of EU Commission Officials on a tour at K 2016, in Düsseldorf, Germany. This included meeting the key players in the recycled plastics value chain to understand the challenges and opportunities. The officials are currently developing a "Strategy on Plastics" which is part of the EU Circular Economy Package.

Two Borealis employees support these efforts: the Head of Sustainability & EU Affairs, based in Brussels, and the recently appointed Group Public Affairs Director, located in Austria. In addition, Borealis' experts at Group and regional levels liaise with national and/or EU policymakers on a case by case basis.

In line with the company's Ethics Policy, Borealis does not join political parties or make financial contributions to them or their candidates. However, Borealis holds dialogues with policymakers and opinion leaders, in accordance with EU Transparency Register guidelines, in order to debate and inform about its views on subjects of legitimate interest to Borealis. The areas of activity and the total monetary value of dedicated resources are reported in the EU Transparency Register (Borealis AG identification number 24298121313-54).

Corporate Governance

Principles and Structure

Good corporate governance is the foundation upon which Borealis builds trusting relationships with customers, business partners and other key stakeholders.

Borealis' principles for good corporate governance are based on the Group's core values of Responsible, Respect, Exceed and Nimblicity™. These principles run through the Group at all levels, starting at the top with the Borealis Supervisory Board. The Supervisory Board governs the Borealis Group and consists of members of the two companies that own Borealis, IPIC and OMV.

The Supervisory Board currently comprises the chairperson, the vice-chair and three additional board members. It has established an Audit Committee and a Remuneration Committee and delegated respective responsibilities to those sub-committees. The Supervisory Board currently meets six times per year and the Audit and Remuneration Committees have at least two regular meetings planned.

The Supervisory Board appoints the members of the Borealis Executive Board, whose members manage Borealis' business activities. The five Executive Board members lead their respective areas of responsibility and hold monthly meetings to align on recent activities and decide on strategic matters and key investments. Each member may also oversee one or more cross-functional committees, focused on areas such as Product Stewardship, Responsible Care®, Quality Management or Energy & CO_2.

Key Committees & Forums

In addition to regular management meetings, Borealis has several committees to provide governance and ensure continuous improvement in defined areas. Selected committees report directly to the Executive Board, while others are held at the most relevant level of the organisation, to ensure their oversight is embedded into Borealis' operational activities. Examples of these committees are outlined below.

The **Quality Committee**, chaired by Borealis' CFO, sets the Group's quality management priorities and drives implementation of all quality management programmes and initiatives. The committee evaluates the effectiveness and efficiency of the integrated management system each year and develops continuous improvement actions where needed. In particular, the committee discusses market requirements, customer feedback and changes of applicable industry standards, as input for related improvement programmes.

The **Energy & CO_2 Committee** is Borealis' governing body for energy and carbon management. It develops and implements Group-wide energy and emission targets, strategies and guidelines, and measures performance using key performance indicators (KPIs). Among other tasks, it reviews and evaluates CO_2 emissions, coordinates the Group's energy initiatives, identifies opportunities to optimise energy costs and efficiency, reviews market and regulatory trends, and provides strategic input on preferred energy suppliers and new technologies. The committee is headed by the Executive Vice President Operations, Projects & Technical Support (PTS) and Health, Safety & Environment (HSE).

The **Borealis Responsible Care® Committee** comprises all the Executive Board members and is chaired by Borealis' Chief Executive. The committee oversees implementation of the Group's Responsible Care® policy and programmes and monitors overall HSE performance using KPIs. Should serious HSE incidents occur, the committee carries out an assessment to help avoid future risk to human safety and the environment.

The **Product Stewardship Committee** evaluates and manages the use of high-risk chemicals. Chemical safety is a top priority for Borealis, and the committee has a crucial role in ensuring chemical safety at Borealis and across the entire value chain. The committee brings together experts from across the Group, including product stewardship, ethics, innovation, technology, all Borealis' business sectors,

and operations. This ensures that the committee's risk assessments take a holistic perspective, considering market needs, legal and technological requirements and stakeholder views. The committee has the power to amend and update the Borealis Banned Substances List and selects the substances to be evaluated within the Borealis Risk Matrix, which is a proprietary ranking tool to evaluate risks in detail, including hazardous substances. The assessments yielded by this systematic approach enable Borealis to identify, mitigate and manage the risks posed by hazardous chemicals.

The **Audit Coordination Forum**, headed by the Director of Internal Audit and Risk Management, coordinates the separate audits carried out by the HSE, Quality, and Internal Audit and Risk Management departments in order to achieve the best possible synergies.

Borealis has **Process Safety Committees** at Group and location levels which are described in the related sections of this report.

Sustainability Governance

The Executive Board is Borealis' highest governance body for sustainability. It approves the Group's overall sustainability strategy, reviews the related strategy implementation and performance annually, and approves the Group's position on key sustainability issues.

The Head of Sustainability and EU Affairs develops the Group's sustainability strategy, in close coordination with relevant departments.

Reporting to the Senior Vice President Strategy & Group Development, who reports to the Chief Executive, this function is also responsible for embedding sustainability into the Group's management processes and strategies, and for building internal capabilities.

In this role, the Head of Sustainability and EU Affairs works closely with project owners across the Group at local and Group levels, and acts as the interface for relevant committees and forums, such as the Energy & CO_2 or Product Stewardship Committees.

In addition, Borealis has a Sustainability Advisory Team (SAT). The SAT reviews progress and provides guidance on objectives, deliverables and key projects, proposes targets, identifies gaps and proposes new areas of involvement. It consists of senior management representatives from key areas such as the Polyolefins (PO) and Base Chemicals (BC) Business, Health, Safety & Environment (HSE), Innovation & Technology, Procurement, Human Resources (HR) and Communications.

Borealis Management System

The Borealis Management System (BMS) documents the company governance, including the standards and ways of working, valid at all Borealis entities, subsidiaries and affiliates. It encompasses Borealis Group policies, procedures, instructions, process descriptions, and committee and meeting charters. At the highest governance level, Borealis' ten Group Policies include the Authority Schedule owned by the Chief Executive. This schedule defines how authority is delegated in all business and functional areas, and establishes approval levels delegated to senior management in key processes such as internal control systems and risk management processes.

The ten Group Policies are the following:

– Authority Schedule
– Commercial Policy
– Communication Policy
– Ethics Policy
– Innovation Policy
– People Policy
– Project Policy
– Quality Policy
– Responsible Care Policy
– Risk Management Policy

Each Group Policy is owned by the Chief Executive or CFO and is issued by the Executive Vice President, (Senior) Vice President or Director responsible for compliance with the policy throughout the Group. Any change to a Group Policy must be approved by either the Chief Executive or CFO as the policy owner, and subsequently by the Borealis Supervisory Board.

The Borealis Management System is a combination of the Group BMS and local BMSs, which are

implemented at each Borealis location and specify the local way of working. The Group Policies and all other Group governance documents are managed in the Group BMS and are available in a centrally controlled document management database. The Group Policies and governance documents have defined electronic approval workflows and are revised at least every three years. To ensure Group documents are followed locally, each location synchronises changes to the Group BMS with their local BMS, in the local language. This ensures that all employees have immediate access to the latest approved documents without any language barrier.

Compliance with the integrated management system is ensured by regularly monitoring performance indicators and by conducting internal audits and management system reviews. The management system reviews are performed annually by the Executive Board at Group level, and by Location Leadership teams at location level.

Compliance related to management systems is also certified externally via the relevant ISO standard certifications. These include ISO 9001 (quality management system), ISO 14001 (environmental management system), OHSAS/ISO 18001 (safety management system), ISO 50001 (energy management system) and ISO TS 16949 (quality management system for automotive suppliers), as well as Fertilizer Europe.[1]

Compliance and Ethics

The compliance and ethics function is headed by the Group Compliance and Ethics Officer, who reports directly to the Chief Legal and Procurement Officer and indirectly to the Chief Executive and the Audit Committee. The Audit Committee receives an annual report on compliance and ethics issues.

The Compliance and Ethics Officer and Data Protection Manager report to the Group Compliance and Ethics Officer and are further supported by a comprehensive network of around 80 Ethics Ambassadors from different functions and locations.

Based on the principles of a state of the art compliance system, the Compliance and Ethics function has both a preventive and a controlling role, acting on prevention, risk mitigation, reaction and lessons learned in Borealis.

Risk Management

Borealis' Risk Management Policy is owned by the CFO. Like the Authority Schedule, it is one of the ten Group Policies established at the highest governance level. Its objective is to establish sound risk management practices in all business areas and in all places where Borealis operates.

Borealis applies the "three lines of defence" approach to risk management. This recognises that each line of defence has a distinct role in identifying, assessing and mitigating risk, and overseeing the effectiveness of these processes.

The three lines of defence are:

1. **Operational management**, which is responsible for maintaining effective internal controls and for carrying out risk and control procedures on a day-to-day basis.
2. **Risk management and compliance functions**, which ensure that the first line of defence is well designed and working effectively.
3. **Internal audit**, which provides independent and comprehensive assurance about the effectiveness of governance, risk management and internal controls, including how well the first and second lines of defence are achieving their risk management objectives.

This risk management process ensures that all parts of the Group routinely identify and assess their risks, and develop and implement appropriate mitigating actions. Key risks across the Group are periodically discussed on a Group-wide level and consolidated to produce the Group's overall risk landscape. Executive Board members review these key risks each quarter, validate the risk tolerance levels, monitor the implementation of mitigating actions and ensure they are integrated into strategic planning.

While every Borealis employee is responsible for managing risk within his or her own area of activity, the Executive Board owns the Group-wide risk landscape and frequently reports on it to the Supervisory Board. The Supervisory Board reviews the effectiveness of Borealis' risk management practices and processes, the Group's risk exposure and the effectiveness of mitigating actions. The Supervisory Board delegates some of these responsibilities to the Audit Committee.

1) A full list of certificates can be found on www.borealisgroup.com

Internal Control Systems and Audits

Borealis has established a system of internal controls in line with EU regulations. These controls assess the robustness of the Group's systems and processes, and support monitoring, management and reporting of related risks. The system of internal control is owned by the Chief Executive and senior management. The Audit Committee is responsible for monitoring its effectiveness.

Borealis' system of internal control identifies core processes, drawing on guidance from external auditing firms. Internal controls are defined for these processes and require control owners to complete self-assessments. Internal Audit supports and monitors these self-assessments to ensure compliance, while external auditors assess the effectiveness of Borealis' internal controls.

Borealis has an independent Internal Audit function, headed by the Director of Internal Audit and Risk Management who reports directly to the Audit Committee. The Audit Committee reviews the effectiveness of Internal Audit and Risk Management and approves the annual internal audit plan. All audit results are reported to and discussed by the Audit Committee.

An international team of internal auditors performs regular risk-based audits, in accordance with Institute of Internal Auditors standards. Approximately 20 audits are scheduled each year. In 2016, 16 audits were carried out, as well as internal control reviews for seven processes. The audits covered the Polyolefins and Base Chemicals businesses and included ethics and management control audits in Romania and France, a compliance audit in Brazil, and further audit topics related to sourcing, hedging and pricing. Prevention and risk management and process safety related audits were also conducted in Borealis' Operations.

Ethics

Maintaining the highest standard of integrity is essential for securing the trust of customers, business associates and the general public. In turn, it brings security for the Group and its employees. Borealis' commitment to ethical business conduct is firmly rooted in its core values of Responsible, Respect, Exceed and Nimblicity™. Every Borealis employee is expected to:

– Be responsible for his or her actions and for upholding the highest standards of ethical behaviour at all times.

– Respect the importance of upholding ethical principles, human rights and diversity within Borealis, among its business partners and in all the communities in which it operates.

Borealis Ethics Policy

The Borealis Ethics Policy is the foundation for the Group's approach to ethical business. It applies to Borealis employees and all others working on its behalf, including suppliers and contractors.

The policy is available for all employees and for external stakeholders on the Borealis website. It is provided in 18 different languages and offers guiding principles, practical tools and advice on how to make the right decision when confronted with questions of compliance, ethics and business conduct.

Key aspects of the Ethics Policy are:

– **Competition**: Borealis is committed to healthy, lawful, equitable and ethical competition. Its policy is to ensure full compliance with competition laws, wherever it does business.

– **Bribery and corruption**: Borealis forbids offering, giving or accepting bribes in any form. The Borealis Ethics Policy offers guidance on how to correctly handle situations where bribery might occur. The Group's zero tolerance for corruption means that violations result in disciplinary actions for employees and in the termination of contracts with suppliers and contractors.

– **Gifts and hospitality**: The Borealis Ethics Policy prohibits offering or accepting any gift or hospitality, regardless of value, that aims to unduly influence or appears to demand something inappropriate in return. However, Borealis employees can give and receive modest gifts and hospitality that have a valid business rationale. If a person receives more than EUR 100 of gifts and hospitality from any particular counterparty over a period of twelve months, these gifts must be internally approved and registered in the Borealis Gift and Hospitality Register. Gifts and hospitality should never affect doing business in or with Borealis.

– **Human rights**: Borealis ensures there is awareness of human rights issues throughout the Group.

> "There is no right way to do the wrong thing. Doing business ethically is a vital contribution to our good reputation and continued success. We all want to work for a company of which we can be proud."
>
> **Mark Garrett,** Chief Executive

Any reported allegations that refer to any kind of human rights violations within the Group's sphere of influence are taken seriously and are dealt with by the department of Compliance and Ethics. Borealis has implemented the requirements of the Modern Slavery Act.

Commitment to Ethics

The activity of Compliance and Ethics is supported by a comprehensive network of around 80 Ethics Ambassadors from different functions and locations.

In September 2016, the Ethics Ambassador Network met in Vienna for two days of training and interaction. The highlight of the meeting was a presentation given by a former executive of a leading European cargo airline, on the importance of compliance and what can go wrong when it is not taken seriously. Borealis' Senior Leaders also participated in this session.

Borealis' commitment to ethics extends beyond its employees. Agents, suppliers, contractors and distributors are also obliged to uphold ethical principles. There is a compliance clause included in all our contract templates. Borealis has also developed detailed clauses for agency agreements, which include training and audit rights.

Ethics Training

Ethics Ambassadors hold general ethics trainings for employees. They also provide tailored workshops for high-risk functions or particular countries, on topics such as competition and bribery.

Employees must complete the Group's "CodeOne" e-learning programme within the first few weeks of employment. Classroom training on ethics is mandatory for all employees during their first full year of employment.

Depending on the employee's role, additional classroom and online training courses may be mandatory throughout their employment with Borealis. In 2016, there was a special focus on sales and procurement employees, with 40 classroom trainings reaching 810 employees. These employees were trained specifically on competition law and anti-corruption, in interactive classroom sessions.

Classroom training on Respect has been held at all major locations. An e-learning course called "Mutual Respect in the Workplace", which was initially rolled out to limited employee groups in 2015, was rolled-out to a wider audience in 2016.

In 2016, Borealis introduced two new e-learning courses. These were "Global Information Security" and "Financial Integrity: Fraud Prevention".

Whistleblowing

The Borealis QuestionLine was established to enable people inside and outside Borealis to report unethical behaviour or to raise concerns with full confidentiality. All notifications are registered, evaluated, documented and, if necessary, investigated, and appropriate action is taken. On average, the QuestionLine is contacted 130 times each year with requests for information or advice, as well as with reports of unethical behaviour.

Employees are also requested to escalate compliance and ethics issues through line management, directly to senior management or to a local Ethics Ambassador. External requests are also addressed to the Communications Department or directly to Borealis' customer service centres. Most of these contacts are requests for advice and very few instances of suspected severe violations are reported. The most common complaints are regarding respect in the working environment, including interactions with fellow employees, suppliers and customers.

Such reports have led to disciplinary measures, including dismissal. Every valid report of unethical behaviour is investigated and the findings are reported to the Executive Vice President of the business area concerned. No reports have been made with respect to child labour or corruption and there has been no need for legal action. No legal sanction (including fines) was taken against Borealis or a Borealis employee for non-compliance with competition or anti-bribery laws.

Environmental Responsibility

This section of the Annual Report 2016 excludes data of the newly acquired mtm plastics GmbH and mtm compact GmbH.

Energy

Borealis recognises the global challenge to become more energy efficient and addresses this challenge through its continuous efforts to reduce its energy footprint, as well as by developing innovative solutions that save energy along the value chain. These solutions range from lightweight plastics to chemicals used for renewable energy solutions and accurate fertilizer dosing in farming.

The Energy & CO_2 Committee leads Borealis' energy reduction and carbon management efforts. It is a standing committee of the Executive Board and is chaired by the Executive Vice President Operations, Projects & Technical Support and Health, Safety & Environment.

Energy consumption accounts for around 53% of Borealis' greenhouse gas emissions, with flaring losses and N_2O emissions representing 13% and process emissions from ammonia production representing 34%. Improving energy efficiency is clearly the most effective way to reduce the Group's direct carbon footprint, cut energy costs and increase its competitiveness.

Borealis' Group-wide certification to ISO 9001 and ISO 14001 covers almost all locations and has energy as an integral part of the environmental management system. To further strengthen its energy management, in 2015 Borealis started the process of certifying all its European entities in accordance with ISO 50001. Plants that process raw materials for the automotive industry are also certified and regularly audited to ISO/TS 16949. The full list of certificates can be found on Borealis' website. Borealis' ambition is to improve energy efficiency by 10% by 2020, using 2015 as a baseline. In 2015, Borealis added a new leading indicator, to measure its progress towards gaining 10% energy efficiency improvements (or 2400 GWh) in 2020 compared to 2015. At the end of 2016 about half of the improvement ambition has been identified with measures being implemented or further elaborated towards the end of 2020.

2016 Highlights

Sourcing renewable energy in Beringen, Belgium
Bionerga, a specialist in recovering energy from waste, will be constructing a municipal waste incineration plant in Beringen. Once the plant is running, Bionerga will supply Borealis with electricity and recovered heat, reducing both Borealis' natural-gas-fired steam production and the amount of electricity Borealis draws from the local grid. The project will contribute to the Flemish region's renewable energy ambitions and paves the way to providing heat to other organisations in the neighbouring industrial area.

Implementing ISO 50001
To sustain its energy step change efforts, Borealis is implementing an energy management system certified to ISO 50001. Based on a gap analysis conducted in 2015, the Group made the necessary changes to its management system. These changes were closed off with an audit. This marked the start of the implementation at location level, coupled with efforts to further strengthen Borealis' energy efficiency culture.

To support the implementation at location level, five regional energy efficiency conferences were held in the first half of 2016, as well as several webinars. These meetings brought together colleagues from Borealis' operational locations as well as Group functions, to update them on progress with the implementation. The sessions allowed attendees to exchange experiences and align on the energy efficiency improvement process.

In November, Borealis' site in Grand-Quevilly, France, was the first location to be ISO 50001 certified. Further locations will follow in 2017, with full Group-wide certification in 2018.

Emissions to air

Borealis' emissions to air result from its production processes and from combustion for energy generation. Although emissions linked to production are an important starting point for assessing the potential for improvement, it is necessary to understand the total environmental impact of products during their complete life cycle.

– CO_2 emissions from fuel combustion to produce heat;
– CO_2 emissions from reactors, cracker furnaces and ammonia production plants;
– CO_2 emissions from flaring in polyolefin plants and crackers;
– N_2O (nitrous oxide) emissions from nitric acid production plants;
– NO_x (nitrogen oxides) emissions created by the burners in steam boilers and furnaces;
– fugitive emissions of hydrocarbons, known as volatile organic compounds (VOCs); and
– dust emissions from handling solid material in fertilizer plants.

Emissions to air can have differing effects on the environment. For example:

– CO_2 is a major greenhouse gas contributing to climate change;
– N_2O is also a potent greenhouse gas;
– VOC emissions contribute to the generation of ground-level ozone, particularly in combination with traffic-generated emissions; and
– NO_x emissions are also related to ozone generation, as well as contributing to nitrogen ending up in water and soil.

Emission management is an integral part of the Borealis Health, Safety and Environment management system, which complies with the ISO 14001 standard. This means that the Group identifies its emissions and assesses and monitors risk. Borealis evaluates and implements control measures, depending on the significance of the emission and according to ISO 14001 standards and regulatory requirements.

Borealis uses Teams SR, an environment and energy data management and reporting software package. This ensures the traceability and transparency required for EU Emissions Trading System reporting. All Borealis production entities and office locations are connected to this tool.

2016 Performance

Energy consumption accounts for about 70% of Borealis' greenhouse gas emissions. This means that improving energy efficiency is the most effective way of reducing the Group's direct carbon footprint. In mid-2014, Borealis established its ambitious Energy Roadmap for 2020. The Group's ongoing efforts to achieve a step change reduction in energy use are accompanied by the implementation of an energy management system meeting ISO 50001 by 2018.

CO_2 emissions

In 2016, Borealis had 4,600 kilotonnes of CO_2 equivalent emissions. This compares to 4,270 kilotonnes in 2015. Absolute CO_2 equivalent emissions are related to Borealis' overall production volumes, which were higher in 2016 than in 2015 due to fewer turnarounds. The Group is committed to continuously improving its energy efficiency and thereby reducing its CO_2 equivalent emissions, while increasing production volume and ensuring plant reliability. This remains a challenging journey.

Flaring

Flaring is a necessary safety measure used in refineries and petrochemical operations. In flaring, excess gases which cannot be recovered or otherwise recycled are safely burned. However, the noise and emissions caused by flaring affect surrounding communities and flaring also incurs costs for the Group. Borealis strives to reduce the need for flaring and continuously improves its plants' operational performance, reducing the number of plant interruptions and incidents.

Flaring losses in 2016 were 38.7 kilotonnes, down from the 47.7 kilotonnes measured in 2015. This improvement can be attributed to fewer technical disturbances and fewer turnarounds. Borealis also achieved reduced flaring at the Stenungsund Cracker.

For Borealis, the emissions with the most significant environmental impacts are VOC, N_2O and NO_x emissions. The Group regularly monitors these pollutants and compares their emissions to annual targets. Deviations from the norm are reported within the Borealis incident management system, and then investigated and addressed through corrective actions.

High-risk items and proposals with significant potential for improvement are regularly discussed and addressed by senior management committees, such as the Energy & CO_2 Committee and the Responsible Care Committee.

Volatile organic compound (VOC) emissions
In 2016, the company had VOC emissions of 3,599 tonnes, compared to the 3,055 tonnes recorded in 2015. The increase is due to the full integration of the latest plant's acquisition into the environmental reporting. By detecting and repairing leaks quickly, Borealis continues to reduce its overall VOC emissions.

Nitrogen oxide (NO_x) emissions
Absolute NO_x emissions in 2016 were 3,330 tonnes, compared to 4,055 tonnes in 2015, due to operational performance of ammonia plants.

Nitrous oxide (N_2O) emissions
N_2O emissions from nitric acid plants increased from 978 tonnes in 2015 to 1,207 tonnes in 2016. Some nitric acid plants changed catalysts during 2014, which contributed to an improvement during 2015. In 2016, the emission of N_2O was correlated to production balance and to the ageing of catalysts.

Water, effluents and waste

Water

Water is an essential natural resource for Borealis' operations. Industrial water is required for cooling, steam generation and product handling; sanitary water for consumption and cleaning; and service water for sanitary, cleaning and firefighting purposes. All Borealis locations are connected to wastewater treatment installations, consisting of internal treatment units, external plants, or both. The company carefully monitors wastewater flows and contaminants, to ensure that all parameters are within permitted levels.

Borealis' water consumption in 2016 was 722 million cubic metres, compared to 300 million cubic metres in 2015. Surface water, including water from wetlands, rivers, lakes and seas, represented around 98% of this consumption. The consumption of Sea water was not yet included in the 2015 report, which explains the increase for 2016.

Effluents & Waste

Waste management is integral to Borealis' health, safety and environment management system. The Group manages waste flows in all of its locations by following the "4R" rules: reduce, reuse, recycle and recover. Borealis regards waste as a resource and re-uses it in the production process when possible. If waste cannot be re-used, the Group's preference is to recycle it, taking into account relevant regulations and environmental aspects.

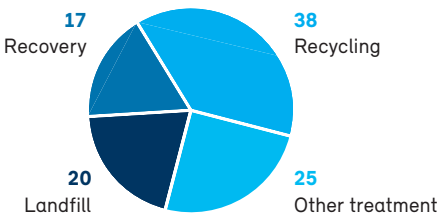


Fig. 5: Waste treatment type, in percent

Borealis monitors waste production and recovery at all locations. The Group evaluates and implements control measures, based on the significance of the volumes and the requirements of regulations and ISO 14001 standards.

Effluents
The volume and nature of liquid waste water generated depends on the type of production at Borealis' locations. Each production process uses specific chemicals, with the result that waste water may contain nitrate and ammonium from fertilizer plants, heavy hydrocarbons from crackers or solid material from polyolefin plants. Borealis therefore installs water treatment techniques that are appropriate for each plant's production process. These techniques can include filtration, neutralisation, osmosis, gravimetric and biological water treatment.

Deviations from the norm, hazardous situations and other incidents such as spills are reported, analysed and followed up with corrective actions. Borealis' actions always focus on the safety and the environmental aspects of the situation.

Industrial waste

Borealis generates waste during production and through plant turnarounds. Turnarounds are regularly scheduled events during which a plant is temporarily taken out of operation in order to carry out important maintenance work and inspections. The most common types of waste produced in Borealis' operations include excavated soil, waste water treatment sludge, solvents, mixed industrial waste and inert construction material.

Borealis has waste management plans for each location, which are coordinated by local environmental experts. The Group only employs accredited contractors for handling its waste streams.

In 2016, approximately 38% of Borealis' waste volume has been recycled, 17% was recovered and 45% was disposed of, with 20% going to landfill and 25% receiving a different treatment.

2016 Performance

In 2016, Borealis took another step towards effective waste management at all locations, by identifying areas of improvement to prevent waste production and by increasing waste recovery. The Group's total waste volume was 53,600 tonnes, compared to 157,000 tonnes generated in 2015, which included 112,000 tonnes of exceptional and non-recurrent quantities of rock mined from a cavern building.

Towards Zero Pellet Loss

Plastic pellets released unintentionally during the production process can end up in streams, rivers and oceans. Preventing spillage is a core responsibility for the industry. Borealis is committed to achieving zero pellet loss in and around its operations and was therefore an early signatory to Operation Clean Sweep® (OCS), an international programme initiated by the Society of the Plastics Industry and the American Chemistry Council and rolled out in Europe by PlasticsEurope. Borealis is also a signatory of the Austrian "Zero Pellet Loss Pakt".

Achieving zero pellet loss is challenging and requires continuous effort and investment. During 2016, Borealis continued to live up to its OCS pledge. Together with Total, the Group developed a comprehensive audit catalogue, covering the assessment of all factors relevant to pellet loss, such as assurance of legal compliance, availability of appropriate procedures, training and awareness of employees, availability of suitable containment systems and tools, as well as performance monitoring. Based on answers to related questions, performance is rated and classified as basic, advanced or world class. All of Borealis' European locations were audited during 2016. The results of this audit were included in the individual sites' business plans and discussed in a best practice sharing workshop. As a result, the Group has a clear picture of its current strengths and improvement areas at each location and has developed an action plan accordingly.

In addition to introducing a uniform approach and standards, the audit catalogue has proved ideal for fostering cross-learning and sharing of best practices. Borealis has also shared the assessment tool, lessons learned and best practices within PlasticsEurope to help the industry achieve the goal of zero pellet loss.

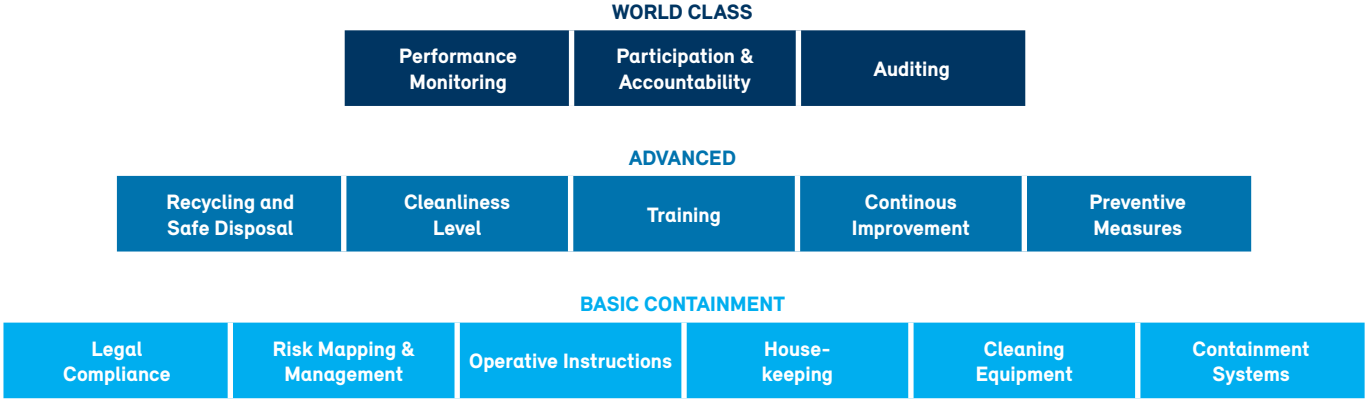


Fig. 6: Operation clean sweep maturity model

As part of Borealis' commitment to leading the journey towards zero pellet loss, it is working with independent scientific institutes on new ways of measuring the plastic content in total suspendable solids, as a basis for setting new standards for water protection. The Group also welcomed a high-level environmental delegation to its production facilities in Schwechat, Austria, to demonstrate Borealis' progress with implementing OCS. The delegation included the EU Commissioner for Environment, the Austrian Federal Minister of Agriculture, Environment and Water Management, Maritime Affairs and Fisheries, and representatives of the Environmental Agency Austria.

Issue	Definition	2016	2015	2014	2013	2012
Flaring losses	tonnes	38,700	47,690	38,000	38,000	57,900
Volatile organic compound emissions	tonnes	3,599	3,055	3,250	3,660	2,940
NO_x emissions	tonnes	3,330	4,055	3,400	1,460	1,675
Water consumption	m^3 (million)	722	300	316	161	185
Waste generation	tonnes	53,600	157,000	44,600	19,000	17,900
Primary energy consumption	GWh	24,100[2]	22,600[2]	31,400[1]	22,100	21,700
EU ETS CO_2 emissions	kilotonnes	4,600	4,270	4,250	2,480	1,480
N_2O emissions	tonnes	1,207	978	1,160	159	169

1 Includes the consumption of gas used for the production of ammonia as a raw material
2 Does not include the consumption of gas used for the production of ammonia as a raw material

Definitions

Flaring losses: All streams sent to the flare, except streams that assure a constant flame (e.g. fuel gases to pilot burners, fuel gas purges to flare lines for safety reasons, steam, nitrogen).

Volatile Organic Compound (VOC) emissions: Emission of all organic compounds (from C1 to Cn) with a vapour pressure of 0.01 kilopascal (kPa) or more at either room temperature or at actual temperature when processed. The quantification is based on measurements and estimates.

Nitrogen Oxide (NO_x) emissions: Emissions of all nitrogen oxides from all relevant sources, including flares. The emissions are quantified as NO_x. When NO_x measurements are not done, emission factors correlated to the fuel type and heating value are used.

Water consumption: Total amount of fresh water withdrawn from surface or groundwater sources for any type of usage (e.g. cooling, steam generation, cleaning, sanitation).

Waste generation: Generation of all waste at company locations during normal operation as well as during special projects. Any substance or object that is to be discarded is included in the definition of waste. Exceptions are atmospheric emissions, liquid effluents and by-products with commercial value.

Primary energy consumption: Consumption of all energy vectors (i.e. fuels, electricity and steam). Electricity and steam are converted into primary energy with standard conversion factors of 40% (electricity) and 90% (steam).

EU Emission Trading Scheme (ETS) CO_2 emissions: All greenhouse gas emissions (GHG) as per the European ETS expressed in CO_2 equivalents (since 2009 this indicator has replaced the reporting of direct carbon dioxide emissions).

Nitrous Oxide (N_2O) emissions: Emissions of N_2O (also known as laughing gas) are generated by the production of nitric acid in the fertilizer plants. N_2O is a GHG with a global warming potential (GWP) 310 times higher than CO_2.

Fig. 7: Key Environmental Performance Indicators

Social Responsibility

Porvoo, Finland

Human Resources

Our People

Borealis is a "people company", where human and cultural aspects play a key role in the way we do business. The Borealis Values of Respect, Responsible, Exceed and Nimblicity™ are integral to daily life in Borealis, with more than 80% of employees saying in the last People Survey that the values are consistently lived. In addition, a core element of Borealis' strategy is to continue to develop cross-cultural organisational capabilities and become a true learning organisation, since a motivated and committed workforce is crucial for achieving Borealis' strategic goals.

"Borealis' culture is a real asset, just like its production plants, technologies and market knowledge. It helps Borealis to embrace an ever-changing world and to ensure safety and ethics in all it does."

Mark Garrett, Chief Executive

Borealis has several initiatives to develop its culture. These include its Wellbeing programme and Winning Together project, both of which are described in the Organisational Development section below.

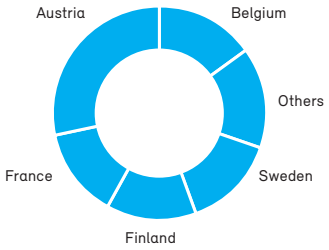
The Behaviour Excellence initiative, which began Borealis' cultural development in 2011, runs in full sync with the Winning Together initiative. Behaviour Excellence fosters individual behaviours that increase interaction with people, with the aim of learning from one another and openly sharing feedback, as well as implementing these lessons in daily life.

To further enhance people engagement, the well-established People Survey was evaluated and refreshed. A new concept will be implemented in 2017. This will provide a more granular analysis of the drivers and obstacles to achieve overall excellence. The survey is conducted every two years.

The aim of all these efforts is to develop Borealis in a sustainable way, ensuring diversity, inclusion and the appreciation of different viewpoints, in order to make the right decisions.

Borealis' Employees

Borealis employs 6,600 people across 30 locations, representing 70 nationalities. The countries with major operations are Austria, Belgium, Sweden, Finland and France.



Austria	28.1%
Belgium	15.2%
Others	15.2%
Sweden	14.2%
Finland	13.7%
France	13.6%

Fig. 8: Significant locations of Borealis operations

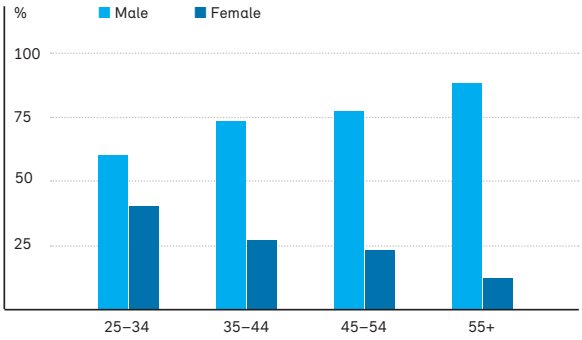
The workforce includes around 100 employees on temporary employment contracts who, for example, are substituting for colleagues on temporary leave, such as parental leave.

Only 20% of Borealis' employees are female. This reflects the fact that women have not found the industry and technical careers attractive in the

past and have therefore chosen not to study technical subjects. Efforts are made across the Group to attract more women into Borealis, especially those with a higher technical education.

Borealis takes part in job fairs and school visits, and in activities such as Technikqueens, as described in the section on Corporate Social Responsibility. These efforts are showing a positive trend with recruitment of more female experts and specialists.

Borealis consistently monitors and addresses its employee gender distribution. Although there are no targets for women in line management, the Group looks to increase the number by focusing on succession planning and by learning from women in senior positions about how Borealis can better facilitate careers.



Age in years	Male	Female
25–34	60%	40%
35–44	73%	27%
45–54	77%	23%
55+	88%	12%

Fig. 9: Age distribution among experts/specialists showing a more equal recruitment in the younger age groups.

The Group value Respect includes respecting employees who wish to organise themselves and be represented by unions or works councils. Collective Labour Agreements (CLAs) exist in most countries where Borealis operates and each CLA defines the employee coverage. Some countries with fewer than 100 employees do not currently have a CLA.

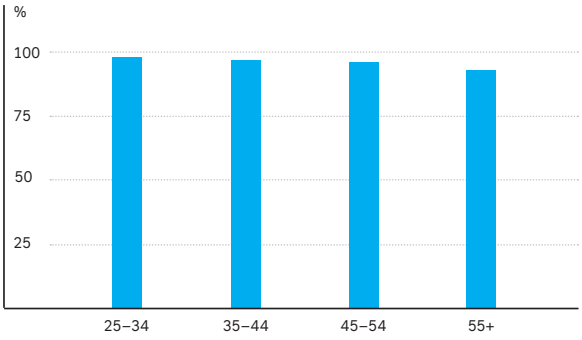
Diversity & Equal Opportunity

"Borealis fosters both team and individual performance, as well as leaders who enable others to succeed. We strongly believe that diverse teams are more creative, resourceful and knowledgeable, and generate broader perspectives, ideas and options that result in better outcomes. Diversity, in its broader sense, is therefore integral to Borealis' open culture. It enriches the work environment and is therefore an important driver of better performance. We aim to reflect the societies we operate in and help all our employees to feel included and enjoy their work."

Kerstin Artenberg, Vice President HR & Communications

Remuneration

Borealis is committed to providing fair and transparent reward packages for all employees.



Age in years	Male
25–34	98%
35–44	97%
45–54	96%
55+	93%

Fig. 10: Female annual base salary in relation to male whereby the male salary is defined as 100%, per age categories

Every employee reward package consists of a base salary, incentive compensation and additional benefits aligned to the local market. Individual performance and behaviour can influence the size of the reward package.

Each reward package is based on the systematic evaluation of roles, using an external evaluation methodology linked to the internal grading structure. This requires up-to-date role descriptions which define core activities and responsibilities. The reward package is evaluated regularly, in light of market data and developments. This approach ensures the reward package is both internally and externally competitive.

An annual merit review process allows management to adjust pay, for example for inflation or performance reasons, and also enables each country to request funds for eliminating any pay gaps among employee groups. Employees are also entitled to information about how their salary compares to the respective market.

The annual People Day process is a mandatory event that Borealis undertakes each year. Its purpose is to identify potential among employees and it is therefore integral to each business group's organisational review. It is also the prime activity for diversity monitoring, assessing whether gender diversity has improved and proposing initiatives for promoting under-represented employee groups.

People Engagement

Training & People Development

To attract and retain highly skilled and qualified employees from different cultures, it is essential to offer meaningful careers and the means to unlock their potential.

The Group-wide Talent Management Process focuses on attracting, identifying, promoting and grooming talents for leadership and expert positions. Leadership Talent Management was introduced in 2010 and has since secured an internal succession rate of more than 85% for key positions. Expert Talent Management was piloted from 2013 and introduced as a Group-wide process in 2015.

Technical Competence Management defines the skill-set and expertise required for technical positions. Annual assessments evaluate expertise levels and recommend steps for closing any gaps.

The Learning Solution is an IT platform promoting continuing education and training. It is linked to the Borealis Business Academy (BBA), an online educational platform that offers training programmes for employees. The BBA's offering ranges from introductory courses for newcomers to advanced courses for experienced staff. In 2016, around 2000 classroom and e-learning courses were offered, with almost all Borealis employees participating at least in one such training. Courses are designed and led by Borealis experts and leading experts in their fields.

The Performance and Development System, myPDS, is available to all Borealis employees. It facilitates regular developmental dialogue, covering performance feedback and goal setting, as well as career aspiration, mobility and development.

Leadership and High Potentials Development

The Borealis and Borouge joint Senior Leader development programme was launched in 2011 and so far has supported the development of more than 160 leaders. The companies have since launched the Tajheez Attachment programme. This offers high-potential Emiratis an eight-week training and exchange programme in key Borealis locations, where they meet their functional peers to establish global collaboration.

The Tajheez group in Schwechat, Austria

The Borealis People Survey

The Borealis People Survey is a crucial organisational development and feedback tool. It allows every employee to contribute to 'building a better Borealis' by giving feedback on core organisational criteria including leadership, values and culture.

Teams throughout Borealis use the findings to define, communicate and implement actions focused on improvement and development. The implementation of these action items is tracked closely and progress is shared openly, in a continuous improvement cycle.

In 2015, after more than eleven years, Borealis began to review the People Survey tool in order to benefit from new reporting technologies and to cover recent employee engagement trends. The next People Survey cycle will be launched in 2017 and while participation will be voluntary, Borealis aims to continue to achieve a high response rate, building on the 82% achieved in the last survey in 2014.

Organisational Development

Extending Organisational Capabilities – Winning Together!

As part of the Group's Winning through Excellence programme, Human Resources helped to define Borealis' distinct organisational focus areas. Using the results of an internal survey and a far-reaching investigation of emerging industry trends, Culture, Collaboration and Leadership were identified as the key enablers of Borealis' growth ambitions.

In 2016, Borealis defined its vision for these capabilities with the help of an "Idea Factory" in which over 100 employees from all areas, levels and locations participated. The collected ideas have been converted into major themes laid down in an organisational roadmap, to be developed and executed in the coming years.

A better and stronger Borealis depends on acknowledging everyone's contribution. Only then can culture, collaboration and leadership be embedded into the Group's DNA. By creating an atmosphere of trust, encouraging empowerment and fostering ownership, Borealis ultimately includes the full contribution of all its employees and makes the organisation the best it can be.

Wellbeing

A holistic "Wellbeing" approach was rolled-out across all Borealis locations in 2016. The concept focuses on four areas of wellbeing – health, job engagement, competence and work and private life balance. It highlights the joint responsibility of the Group, its leaders and its employees and their representatives, in establishing a work environment in which wellbeing is supported throughout an employee's career with Borealis.

The concept was developed in 2015 and strengthened in 2016, as the Borealis Executive Board selected it as the common theme for one of the "People Actions" in the Organisational Development dimension of the Group Scorecard. Accordingly, wellbeing initiatives have been tracked for the key organisational units, with progress and lessons learned reported to the Executive Board and communicated via the Group Scorecard. To support this, many units have held wellbeing workshops in 2016.

Nine organisational capabilities that are fundamental to the Borealis growth strategy have been identified and clustered in three key future capabilities:

Leadership

The Company must ensure it has strong and capable leaders on all levels and people ready and able to become the next generation of leaders.

Collaboration

Employees should Connect, Learn and Implement (the 'CLI Mindset') to foster cooperation across the interfaces between departments, locations and with external parties.

Culture

The growing number of employees and subsidiaries within Borealis are unified by a shared culture based on the company's distinct set of values and behaviours.

Fig. 11: Three key future capabilities fundamental to Borealis' growth strategy

Occupational Health and Safety

Management Approach

Chemicals operations involve highly flammable and hazardous substances. Health and safety therefore always comes first at Borealis. For many years, Borealis has achieved a world-class track record in health and safety, but the Group is always vigilant. To keep its safety culture at the top of people's minds, Borealis constantly promotes the motto "If we can't do it safely, we won't do it at all."

The Responsible Care® charter sets Borealis' framework for excellence in health and safety. The Responsible Care® Committee, headed by the Chief Executive, monitors overall health and safety performance based on Key Performance Indicators (KPIs), reviews serious health and safety incidents, and enacts measures to improve performance.

Borealis proactively prevents accidents by developing risk management tools, implementing control measures, awareness campaigns and safety training, and regular audits for both employees and contractors. Learning from incidents (LFI) is an important process. Every quarter, "major incidents" are reported and discussed throughout the organisation.

High management visibility and contact with employees and contractors is maintained through regular observation tours, which are now called engagement tours. An engagement tour puts much more focus on effective dialogue, by using open questions and really listening to what is said, as well as what is not said. The aim is to truly engage employees in Borealis' Goal Zero journey. Each year, around 16,000 such tours take place throughout all the Group's plants and offices. The tours are designed to spot safety risks, promote dialogue between management and employees, and encourage positive changes in daily work routines.

Borealis implements risk control measures in the workplace and coordinates emergency planning with external medical and public health experts. Detailed exposure controls are implemented as part of Borealis' corporate standards.

Borealis' Goal Zero journey aims to develop a "Zero" accident mindset. The intention is to develop Borealis' Health, Safety and Environment (HSE) culture from a calculative level (where safety is based on having systems in place to manage hazards) via a more proactive level (where safety leadership and values drive continuous improvement) towards generative, where health and safety becomes "how we do business". This will result in ever-longer intervals between accidents, with the ultimate goal of creating an accident-free workplace.

Effective field leadership is a key enabler of success on this journey. In addition, each Borealis employee has a shared responsibility for others. "Care for my colleague" means encouraging employees to report

Goal Zero – Field Leadership

Field presence		Engagement/setting expectations		Leverage field presence
– 24/7, geography, activities, safety and process safety – Joint with Front Line Leader (FLL), Contractor management/FLL	X	– Engage in conversations – Correct unsafe behaviour/situation – Coach Field Leadership (FL) in field – Drive continuous improvement and set expectations on FLLs to follow-up/take the lead	X	– Feedback in control room to the whole team – Feedback to Plant OPEX team (POT) – Use stories of the engagement tours to set and clarify expectations – Motivate management and FLLs to take the lead

=

Effective leadership in the field

Fig. 12: Goal Zero aims to develop a "Zero" accident mindset

incidents, actively participate in investigations and contribute to making Borealis safer for all.

It is common to start meetings in Borealis with health and safety and at many meetings it is a mandatory topic, including at every Corporate Co-operation Council (CCC) meeting. This allows employee and work council representatives to discuss health and safety issues with Borealis' senior management.

HSE committees communicate HSE issues throughout the organisation, promoting continuous improvement in employees' attitudes to HSE, as well as their behaviour and skills. Borealis' top HSE committee is the Executive Board's Responsible Care® Committee. There is also a committee for each of the Executive Board Member areas, chaired by the respective Executive Vice President (EVP). The principle of integrated HSE committees goes down to location or department levels, whilst feedback goes up, ensuring two-way communication.

Promoting employees' health and wellbeing

Borealis promotes and protects its employees' health and wellbeing in several ways. The Group offers physical examinations and subsequent check-ups, periodic screenings and evaluations. Employees may also participate in voluntary health counselling programmes to identify and monitor health problems. Detailed chemical exposure monitoring is carried out in accordance with demanding global standards.

The Group's employee health initiatives vary depending on local needs, but they typically include addressing issues such as back pain, blood pressure and weight management. Employees can receive on-site flu vaccinations, learn about stress prevention, find help to quit smoking and consult a psychologist. Borealis also encourages healthy eating by providing fresh fruit and healthy meals in many locations.

Borealis also conducts a Group-wide workplace health survey every five years to evaluate hazards in operational and office environments. Alongside the prevention of health and safety risks, occupational illnesses and accidents, the health surveys place considerable focus on the psycho-social aspects of work and work-life balance.

See more information in the HR section.

2016 Highlights

In 2016, Borealis completed an extensive training programme for front line leaders, who are responsible for leading people in Borealis' front line operations. About 550 people were trained in the "social psychological impact on behaviour". The training focused on behaviour and where it comes from, factors influencing behaviour and how to influence the unconscious mind to change behaviour. At the end of 2016, Borealis started a similar Group-wide programme for middle management. This will be a permanent course, as part of the Borealis Business Academy.

Continuous improvement is achieved through systematic learning. This includes creating "What you need to know about ..." training packages, to raise employees' competence in areas such as: confined space entry, sedentary behaviour, fall protection, high pressure cleaning, stress, ladder and stepladder safety, stairs, hand protection, excavation, defensive driving, arc flash, back injury prevention, forklifts, legionella and human error.

At the end of 2016, Borealis moved from "observation tours" to "engagement tours", as outlined under Management Approach above. Another highlight of the year was that in February 2016, Borealis' HSE Group was recertified to OHSAS 181001.

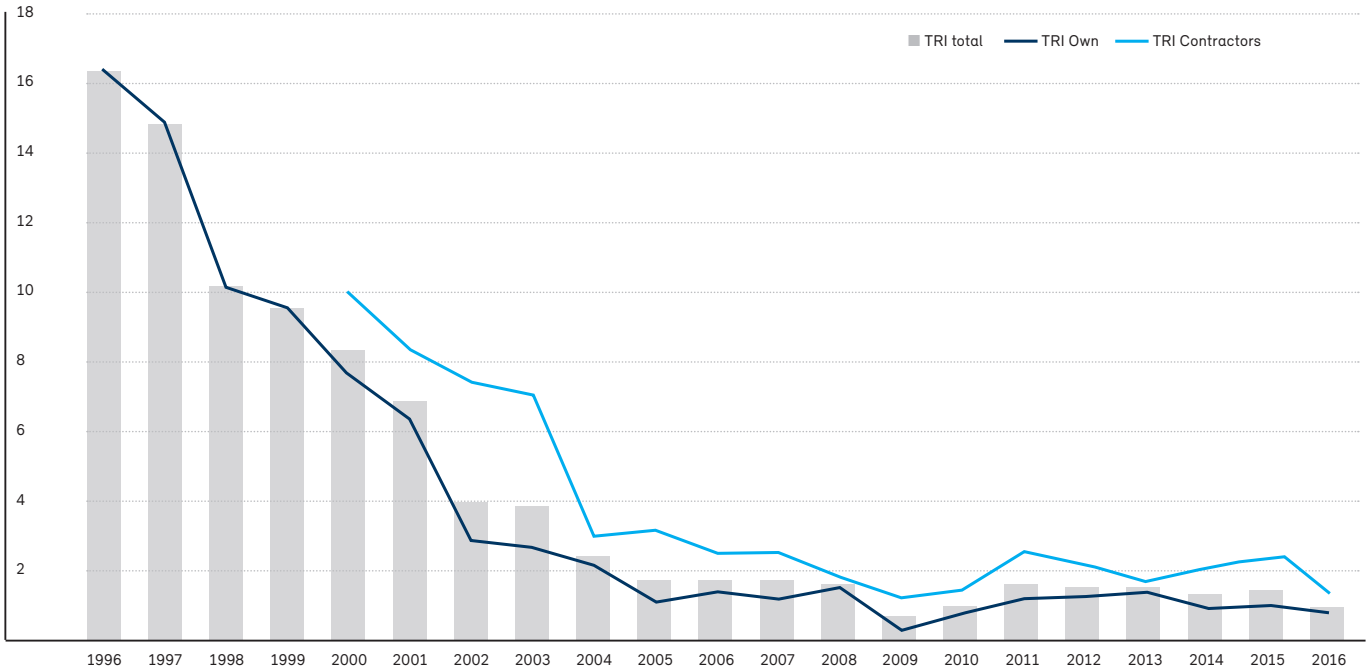
2016 Performance

Total Recordable Injuries (TRI) per million working hours has been a Borealis Group Scorecard KPI for many years. Recordable injuries are those that require medical treatment, restrict work, or result in lost working hours. Both Borealis employees and contractors are tracked. A TRI frequency of two or less is considered world-class in the industry.

Borealis has set an ambitious TRI target of 1.1 and continuously works towards zero TRI. In 2016, Borealis' total TRI frequency was 0.9, compared with 1.4 in 2015. The TRI frequency for Borealis' employees was 0.8, against 1.0 in 2015, while that of its contractors was 1.3, which was a significant improvement from 2.4 in 2015.

The Group uses Synergi® as a central database for incident reporting and investigation. This enables Borealis to identify potential safety risks early, to investigate and mitigate them, and to install preventative measures in a timely manner.

The sick leave rate is another important occupational health and safety indicator. Borealis targets a rate of 3.2% or less, which is below the industry average in countries where Borealis operates. Following a relatively poor performance in 2013, during which the rate increased to 3.5%, Borealis introduced an expanded programme including more country-specific measures. This helped improve the rate to 3.3% in 2016.



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
TRI total	16.3	14.8	10.1	9.5	8.3	6.9	4.0	3.8	2.4	1.7	1.7	1.7	1.6	0.7	1.0	1.6	1.5	1.5	1.3	1.4	0.9
TRI Own	16.3	16.8	10.1	9.5	7.6	6.3	2.8	2.7	2.2	1.1	1.4	1.2	1.5	0.3	0.8	1.2	1.3	1.4	0.9	1.0	0.8
TRI Contractors					9.9	8.3	7.4	7.0	3.0	3.1	2.5	2.5	1.8	1.2	1.4	2.5	2.1	1.7	2.2	2.4	1.3

Fig. 13: TRI Frequency, Own vs Contractors 1996 – December 2016

Process Safety

Borealis' operations involve processing large amounts of flammable materials under high pressure and temperatures. Leaks, fires and explosions could have potentially devastating consequences in a worst case scenario. As a result, process safety is of primary importance to ensure the health and safety of Borealis' employees and neighbours, and to protect the environment. Borealis has a moral duty to invest in preventing process safety incidents and to properly design, maintain and operate its plants. As a member of the European Process Safety Centre, the Group also actively supports industry-wide efforts to enhance process safety.

Borealis has a dedicated Process Safety department, which has developed special tools that enhance risk identification. For example, an incident and fire severity rating tool ranks incidents as high, medium or low severity, or as a near miss. With these tools, every process safety incident is assessed, investigated and reviewed, and preventive actions are taken. The resulting actions are monitored at Borealis Group level. A Loss of Primary Containment pyramid (see fig. 14) has been introduced to ensure incidents and actions are followed up and to monitor action response rates. It also includes leading indicators such as:

- Status of safety critical inspections
- Status of critical interlock testing
- Audits focusing on action closing rate
- Critical process self-assessment compliance check for Safety
- Management of change status
- Bypassing of interlocks

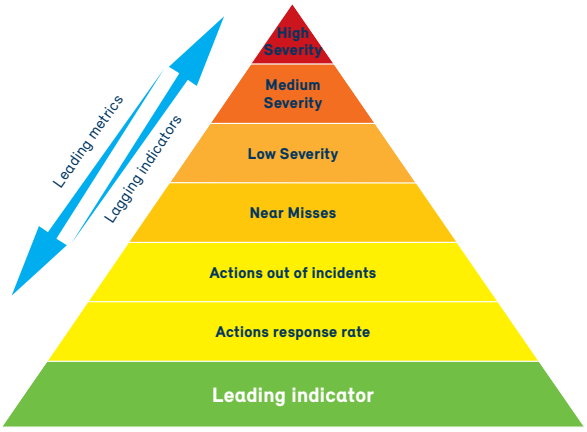


Fig. 14: LOPC Pyramid – The Loss of Primary Containment Pyramid helps Borealis to rank incidents, ensure they are appropriately followed up and to monitor response rates.

2016 Highlights

Borealis conducts process safety training and safety management courses throughout the Group. During 2016, Borealis organised two Process Safety training courses for Shift Supervisors, 38 Process Safety awareness courses for a broad audience and 69 workshops for operators, frontline leaders and process engineers, relating to the specific top risks for their plant. In total, during 2015 and 2016 Borealis held 310 different sessions related to process safety, attended by approximately 1,000 employees.

During 2016, Borealis completed its third four-year cycle of safety audits for all plants. These audits are known as Blue Audits and they focus on Operations, Plant Availability and Engineering, and Health and Safety. In this cycle, all new locations in countries such as France and Belgium were integrated into the audit process. Four Blue Audits were carried out in 2016, in the Group's Innovation Headquarters in Linz (Austria), and the production sites in Grand-Quevilly and Ottmarsheim, France. In 2017, Borealis will begin the fourth cycle of Blue Audits.

To achieve its objective of recording zero accidents, Borealis launched the Goal Zero programme, which is a key deliverable of the Group's sustainability strategy. As Borealis employees are encouraged to see Goal Zero as a journey to be taken together, the programme helps establish a collective health and safety mindset.

Several Process Safety critical processes were standardised in 2016, and minimum requirements were defined. These related to shift hand over, high-risk hot works, bypassing of critical interlocks (see below), alarm management, de- and re-commissioning (safely bringing the plant down and restarting it) and the work permit system. A gap analysis was carried out and a programme to close gaps was initiated, with a target of closing all gaps by the end of 2018.

Several Process Safety critical processes were reviewed, improved and updated during 2016, such as hazard analyses during the projects' Management of Change process. A consolidated process was also developed for physical isolation and Lock Out, Tag Out and Try Out (LOTOTO), which is a process to ensure that it is safe to perform maintenance or to open installations for inspection. The same process of gap analysis and gap closing will be rolled out during 2017.

2016 Performance

Process safety performance at Borealis is measured using two principal metrics:

– the number of reported low-, medium- and high-severity process safety incidents; and

– the process safety response rate, which is the percentage of corrective actions completed within a defined time period.

Borealis is committed to ongoing reductions in the number of medium and high-severity cases. The Group's targets for 2015 to 2016 are as follows:

– 2015: 0 high-severity and 20 medium-severity, including fires

– 2016: 0 high-severity and 18 medium-severity, including fires

High-severity incidents are incidents with significant consequences rated above 300 in Borealis' severity rating tool. No high-severity incidents were reported in 2016. There were also no high-severity spill incidents reported in 2016.

Medium-severity incidents are those resulting in a loss of containment, with medium consequences towards people, planet and profit. There were 14 medium-severity incidents reported in 2016, a significant improvement on the 24 incidents in the previous year. This shows the clear effect of Borealis' intensive awareness campaign and the roll out of improved Process Safety processes. One example of a medium-severity incident was a pump failure in Kallo, Belgium. This resulted in the level of polyaromatic hydrocarbons in waste water being above the permitted thresholds. The authorities were notified immediately, the pump was repaired and additional preventive actions were agreed with the authorities, which are currently being implemented.

Low-severity incidents are those with a release of substances but which result in a very low to zero impact, and which are rated below a severity factor of 130 in the Borealis rating severity tool. During 2016, 720 low-severity process safety incidents were reported. As general process safety awareness increases due to Borealis' educational initiatives and campaigns, more low-severity incidents are being reported. Accident learning is also being more actively shared throughout the Group.

The process safety response rate remains the same at 97%. Taking into account the continued integration of new locations, maintaining this rate was a clear safety process achievement for Borealis. A total of 1,500 actions have been implemented in response to low- and medium-severity incidents.

Process Safety Committee

The Group-level Process Safety Committee is chaired by the Executive Vice President Operations. The Committee's members are directors and departmental leaders from all relevant Operational streams: Safety; Plant Availability and Turnaround; Operations Polyolefins; technical development and engineering; and Base Chemicals.

The Committee meets monthly and is a key driver of Borealis' process safety performance and programmes. It steers the Group's process safety Goal Zero roadmap, reviews progress and provides input regarding priorities, key activities and performance measures.

Process Safety Sub-Committee

In addition to the Group-level committee, each production location has its own Process Safety Sub-Committee. Each Sub-Committee is chaired by a nominee appointed by local management. Its members come from different areas in the location and include a member of the Process Safety Group, to ensure cross-learning and link to Group developments. The Sub-Committees meet quarterly and are responsible for enhancing the location's process safety performance, in line with Borealis' overall goals for Process Safety.

Product Safety

Borealis is committed to the principles of Responsible Care® and enforces high Product Stewardship standards to ensure that its products do not pose any risk to any of its stakeholders, consumers or the environment, at any stage along the value chain.

Borealis' Product Stewardship procedures cover the health, safety and environmental (HSE) aspects of a product throughout its lifecycle, from raw material sourcing, through the production process, conversion and use, to their recycling, recovery or disposal. These processes encompass all Borealis products and cover the requirements of applicable chemicals- and use-specific national and international legislation and standards, as well as social and ethical aspects.

The Group has adopted a hazardous chemicals strategy, which takes into account the level of hazard, risk, developments to the regulatory framework and stakeholder concerns. All incoming chemicals are assessed using a sophisticated Incoming Material System before the Product Stewardship team approves them for use by Borealis. This system ensures that the Group does not purchase any substance before the Product Stewardship team has controlled and approved it. In addition to being risk assessed, all materials are documented. This documentation is based on Borealis' knowledge of the exact composition of a raw material, or on detailed information on the material's hazardous constituents. This allows Borealis to provide high-quality product statements on its website.

All newly developed or changed products undergo mandatory HSE assessments, to ensure they are suitable for use in the countries where they are sold, and that they comply with all applicable legislation. Borealis also closely monitors legislative initiatives, so it can anticipate and take measures to maintain the products' legal compliance after their implementation.

All Borealis sites that manufacture products with sensitive hygiene requirements are regularly audited by expert external organisations and customers. This includes products for use in drinking water, food contact, hygiene and medical applications, which represent about 50% of Borealis' polyolefin products.

Employees play an important role in ensuring product safety. Borealis therefore provides regular training programmes to ensure employees are up to date on chemical policies and regulations. The Group has also developed a range of tools to increase employees' competence levels. These include "The Chemical Review", a quarterly newsletter that keeps employees informed about the latest developments; regular Product Stewardship training sessions; and e-learning for employees, tailor-made for their specific needs.

The Group actively participates in industry associations and standardisation groups to stay at the forefront of regulatory and public requirements. These include Plastics Europe's working groups on food contact materials, and "European Drinking Water" on regulatory schemes for drinking water pipes and fittings. Borealis is a member of various chemical industry consortia and several European chemical industry council sector groups, including the Lower Olefins Sector Group; the Aromatics Producer Association; Fertilizers Europe; the European Melamine Producer Association, and more.

The European Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) is a comprehensive and stringent European Union regulation on the production and use of chemical substances, and their potential impacts on both human health and the environment. Borealis is an active member of the Plastics Europe REACH team. The Group works closely with its own experts, customers and suppliers, engages in experience exchange at REACH conferences and other activities, and assists small and medium-sized companies in meeting their REACH obligations.

The Classification, Labelling and Packaging of substances and mixtures regulations (CLP) require companies to classify, label and package their hazardous chemicals appropriately before placing them on the market. The classification and labelling of hazardous chemicals is based on the Globally Harmonised System (GHS) agreed by the United Nations. According to the CLP, hazardous substances must be made known to the European Chemical Agency's (ECHA) Classification and Labelling Inventory. The relevant substances manufactured or imported by Borealis were reported accordingly. Internal audit teams and external bodies (including authorities) regularly perform audits at Borealis' sites to ensure compliance with REACH and CLP.

Working with suppliers

Borealis' regularly audits raw material suppliers for compliance with, for example, their legal and hygiene requirements. There is a special focus on new and strategic suppliers.

The Group requires its suppliers to provide and keep up to date documentation for each raw material. This includes the information required by applicable national chemical inventory control laws, CLP and REACH. This enables Borealis to issue the respective safety data sheets (SDSs) for its customers (see below).

Working with customers

Borealis provides information and support to its customers in a number of ways. These include documentation that covers REACH information, CLP classifications, and product information sheets, which provide technical data such as physical properties and performance in application, recommendations for safe handling and storage, and specific guidance regarding product uses. Borealis fully revised all related SDSs and product safety information sheets in 2015. New or changed classification requirements are now continually monitored and implemented, and about 10% of Borealis' SDSs and PSISs were subject to revision in 2016. All SDSs and PSISs are available for download on the Borealis website.

If product modifications will influence their safety or require additional testing of finished articles, Borealis informs customers or authorities in due time before the modifications are made. Borealis also informs customers in advance when legislative changes have consequences for them.

Borealis offers training and education to customers. The Healthcare application segment is one of the most sensitive areas in terms of reliability, hygiene and product consistency. Sharing Product Stewardship Polyolefin expert knowledge with value chain partners is therefore an important contribution to helping Borealis' customers continuously meet the highest product quality standards. Borealis shares this knowledge via formal training sessions (ten in 2016) and through technical dialogues that take place throughout the year.

In the area of Fertilizers, Borealis offers education and awareness activities for farmers. This informs them about proper use of chemical fertilizers and how to avoid pollution of groundwater or soil.

Substances of Very High Concern (SVHC)

Borealis' Product Stewardship group takes a precautionary approach, monitoring developments in regulations and also public perception for all relevant hazardous chemicals that either fulfil, or are suspected to fulfil, SVHC criterion[1]. Using a tailor-made tool, the substances are ranked by their overall risk for the Group, including HSE risks, regulatory risks and public perception risks. Data about the highest-risk substances are collected and analysed and a case is presented to the Product Stewardship Committee.

Substances with the highest identified risk are assessed by the Product Stewardship Committee, comprising members from business, innovation and operations. The Committee discusses if a risk mitigation project should be started, with the goal of minimising the identified risk.

Open communication to internal and external stakeholders is one of the cornerstones of Responsible Care®. Borealis takes this obligation very seriously. The Borealis website allows anyone to find information about substances that the Group has banned for use in its production processes and products (the Borealis Banned Substances List), as well as examples of successful substitutions of hazardous chemicals and some position statements regarding "hot topics". Current hot topics include endocrine disruptors and oligomers.

In recent years, consumers have been concerned by studies showing hormone-like substances leaching from packaging materials into food, endangering the health of infants in particular. To clarify whether its polymers contain such endocrine disruptors, Borealis participated in the "Xenohormone-project" initiated by the Austrian testing institute OFI (Österreichisches Forschungsinstitut für Chemie und Technik).

The project developed a standardised screening method, using human cell based bioassays (CALUX). This method can be used to determine if endocrine active substances migrate from packaging materials to food.

A representative number of Borealis polyethylene (PE) and polypropylene(PP)-grades were tested in respect of their endocrine activity.

1) SVHC (Substances of Very High Concern) criteria as defined in Article 57 of the REACH Regulation: CMR (carcinogenic category 1A or 1B, germ cell mutagenic category 1A or 1B, toxic for reproduction category 1A or 1B), PBT (persistent, bio accumulative and toxic), vPvB (very persistent and very bio accumulative), and substances that give rise to an equivalent level of concern (e.g. endocrine disruptors)

This showed that the Borealis' polyolefins used for food and drinking water contact materials are not a source of endocrine active substances and thus of endocrine disruptors.

The potential for mineral oil residues to transfer from recycled carton board food packaging to food has also received increased public attention in recent years. This attention has since extended to the chemically related oligomers which are formed during the polymerisation reaction and are an unavoidable part of all polymers. As oligomers can migrate from plastics packaging materials to food, their toxicological properties had to be evaluated.

Borealis therefore participated in a joint study with Plastics Europe member companies and Fraunhofer Institut für Verfahrenstechnik u. Verpackung. The goal was to identify and quantify the oligomers in a set of representative polyolefin samples (PP, PE-LD, PE-HD, PE-LLD). The study only identified linear and branched alkanes and alkenes, but no cyclic or aromatic compounds were found, which are those suspected to show some negative health effects. In an additional screening, these results were confirmed for a large number of Borealis polyolefin grades, representing the Group's whole portfolio for food packaging materials.

Based on available toxicity data from REACH registrations and OECD assessments, a working group of toxicologists from PlEur member companies concluded that oligomers from polyolefin plastics food packaging are not a safety concern for human health, provided the maximum overall migration limit of 60 mg/kg food is respected.

2016 Highlights

Application for Authorisation

In March 2016, Borealis submitted its very first Application for Authorisation according to the REACH regulation. The application covers the use of a chromium (VI) substance, sodium dichromate, as a corrosion inhibitor. Although the volume used is very low, the application was done in full accordance with the guidance, including a detailed risk assessment, socio-economic analysis and assessment of alternatives.

Development of the global regulatory follow-up and the next steps of implementation

Regulations governing chemical management continue to develop around the world. The GHS hazard classification scheme is being adopted by more countries every year and regulations similar to REACH are also emerging in several countries. Borealis' Global Product Stewardship development programme continues to enhance the Group's systems, so it can meet these new requirements. During 2016, Borealis successfully met deadlines in Taiwan, regarding phase 1 registration, and in Korea, regarding the annual reporting obligation. Work also continues to develop SDSs in the different regions.

Issue	Definition	2016	2015	2014	2013	2012
Total Recordable Injuries (TRI)	number/million work hours	0.9	1.4	1.3	1.5	1.5
Sick leave rate	% of total hours worked	3.3	3.2	3.1	3.5	3.2
Incident action completion rate	% of finalised action in due time	98.4	98	–	–	–
Response rate on process safety incidents	% actions completed on time	97	97	97	96	96

Definitions

Total Recordable Injuries (TRI): Accidents resulting in absence from work, the need to do a different type of work or any other case in which medical treatment is required. The frequency is calculated as the number of accidents per million working hours. Borealis employees and contractors working on company premises are included in this calculation.

Sick leave rate: The sick leave rate indicates the amount of time employees were absent from work due to sickness or injury. The overall sick leave rate is calculated as a percentage of the total number of planned working days in the current year.

Response rate of HSE incidents: Major or minor HSE incidents, near misses, unsafe acts and unsafe conditions that lead to, or can lead to, an accident of any kind are recorded, and decisions on actions for follow-up are made, establishing an approved case. Incident cases are closed once actions have been implemented. The response rate of HSE incidents is measured as the ratio (%) of approved and closed incident cases.

Incident action completion rate: This monitoring parameter is focusing on action completion in due time. It is calculated on a monthly basis and is looking at the actions due in the past months for all incidents reported, regardless of their consequences, with a risk factor ≥8. The parameter represents the percentage of actions finalised in due time. The incident action completion rate includes all incidents reported on the incident management module including HSE, Quality and Operational incidents.

Response rate of process safety incidents: Process safety incidents of a certain severity or risk potential are recorded and investigated through root cause analysis. Corrective actions are defined to prevent re-occurrence. The response rate of process safety incidents is measured as the ratio (%) of corrective actions completed within a defined time period.

Fig. 15: Health & Safety Performance Indicators

Social Engagement

Businesses can only grow sustainably in a healthy environment and stable society. Borealis therefore considers investments in social welfare and development as a means to foster a stable society. In 2007, Borealis established the Borealis Social Fund and launched a programme called Water for the World™. In addition, Borealis supports initiatives targeted to the specific needs of the communities in which it operates.

To increase the impact of its engagement and to align Borealis' corporate social responsibility (CSR) activities with its sustainability strategy, the Group refined its CSR concept in 2016 and defined three areas of engagement:

1) **Education & Social Integration,** with the following focus:
   - nurturing interest in chemistry and science;
   - supporting the education system to meet future challenges; and
   - integrating marginalised, poor and underprivileged people.

2) **Water & Sanitation** (Water for the World™), with the following focus:
   - providing access to safe water and sanitation;
   - supporting preservation of water resources; and
   - raising awareness and promoting best practices.

3) **Waste & Resource Efficiency/Prevention of Marine Litter,** with the following focus:
   - supporting research and innovation;
   - supporting social innovation and business models that address marine litter and plastic waste; and
   - raising awareness and encouraging behaviour change.

By selecting these three core areas, Borealis' CSR activities contribute to the following United Nations (UN) sustainable development goals:

Education and Social Integration

Education

Young people's ideas, creativity and skills will determine the future of the economy and social stability. Educational systems need to respond to this challenge and adopt a framework and practices that enable young people to develop the right skills. By stimulating enthusiasm for science and chemistry at an early age, today's young and inquisitive minds will also become tomorrow's leading scientists and innovators. Borealis therefore supports programmes that motivate children and young people to learn more about science and to consider a scientific career.

Borealis co-finances and provides technical expertise to experimental laboratories in the countries that are home to its Innovation Centres – Austria, Finland and Sweden. The JKU Open Lab, for example, is a hands-on laboratory for children and young adults, co-sponsored by Borealis and the province of Upper Austria. Guided by trained supervisors, young visitors can carry out experiments to experience and understand the exciting world of chemistry first-hand. Borealis also supports the Molekylverkstan Science Centre in Sweden and the Gadolin Chemistry Lab in Finland. In 2016, Borealis confirmed its support for the installation of an experimental laboratory at the TGM technical school (TGM) in Vienna, Austria. Borealis has supported TGM for several years through a scholarship programme and as sponsor of the TGM Diploma Award.

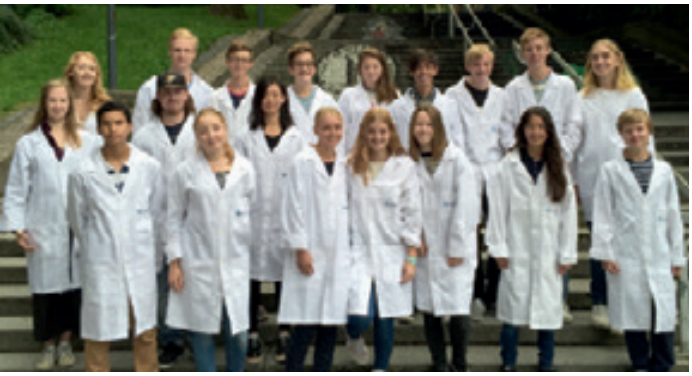
The Technikqueens of 2016

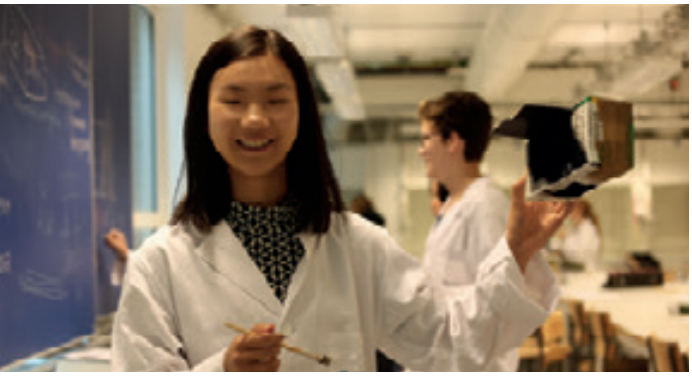
Borealis supports Technikqueens, an initiative launched by OMV to encourage 14 to 16-year-old girls in Austria to pursue careers in science and engineering. Nearly 90% of Austrian companies have

difficulties finding skilled people in this field, and women currently fill only 15% of such jobs. In addition to financial support, Borealis provides content for the programme and one of Borealis' female researchers serves as a jury member to select the Technikqueens. She also mentors the Technikqueens during a six-month mentoring programme, which includes shadowing days and a visit to the Borealis Innovation Headquarters in Linz, Austria.

In partnership with Unga Forskares, the Swedish Federation of Young Scientists, Borealis ran the first Borealis & Unga Forskares Summer Research School in Gothenburg, Sweden, in August 2016. Twenty students aged 15 to 16 spent one week in the laboratories of the University of Gothenburg, performing advanced experiments in modern facilities and getting a flavour of life as a researcher. The students learned through problem solving and case studies, and were coached by college students, providing attendees with role models and a sense of community. The theme of the 2016 school was "discover the solutions of the future". Students were inspired by experiments such as programming a robot and manufacturing photographic paper and cameras.

In 2016, Borealis established the Borealis Scholarships endowment to motivate and reward top students at Webster Vienna Private University. The scholarships help students to receive a world-class education, regardless of their financial background. Over the next five years, Borealis will fund: one need-based scholarship, providing full tuition coverage for four years; three merit-based Borealis Excellence Grants, covering three years of tuition costs for undergraduate students earning a perfect grade point average in their freshman year; and three merit-based Borealis Excellence Awards for three consecutive years, to partially cover tuition fees for top-performing undergraduate students.





Unga Forskares Summer Research School in Gothenburg, Sweden

Social Integration

In light of the refugee situation in Europe, Borealis has supported a number of initiatives to help refugees arrive and integrate into Austria in the long term. One of the projects supported through the Borealis Social Fund is the construction of a playground for refugee children at the asylum centre in Traiskirchen, Austria. Designed and implemented by Architektur2000, the colourful and exciting playground will give children the chance to enjoy themselves, be children again and forget – at least for a few moments – their desperate and often dangerous escape from their homes in crisis regions. For the adults, the area serves as a meeting place to connect and build relationships with other refugee families.

Borealis has also donated to SOS Kinderdorf (Children's Village) and Caritas Austria. The money is being used to provide homes for unaccompanied refugee children, to help refugees learn German and prepare for school and the labour market, to support integration, and to organise cultural awareness dialogue sessions.

In June, Borealis also announced a donation to the Emirates Red Crescent, to support refugee relief efforts in Lebanon, Jordan and Iraq.

In addition, Borealis confirmed a new round of support to leading social organisations in the UAE, through the Borealis Social Fund. During a ceremony held in Abu Dhabi on 1 November 2016, Mark Garrett, Borealis Chief Executive, handed cheques to the Emirates Foundation of Youth Development, the UAE Disabled Sports Federation and the Emirates National Schools.

Working with partners from the private and public sector, the Emirates Foundation has developed and implemented a range of programmes and special projects for young people, aimed at promoting social inclusion, community engagement, leadership and empowerment.

Picture above: Playground at the refugee asylum centre in Traiskirchen, Austria
Picture below: Borealis Social Fund donation to Emirates Red Crescent

The UAE Disabled Sports Federation was established to promote better awareness of disabled people's needs and to encourage their active integration into society. The Federation supports athletes participating in a wide range of disciplines, who regularly compete in regional, national and international events. In September, Federation athletes took part in the 2016 Paralympics in Rio de Janeiro, Brazil, where they won medals in athletics, shooting and power-lifting.

Since 2002, the Emirates National School has offered world-class educational programmes from day care centre through to grade twelve, to prepare students for post-secondary studies. Approximately 9,200 students are enrolled in the 2016–17 school year, at five campuses sharing a common curriculum.

Water & Sanitation

Billions of people around the world lack access to clean water and adequate sanitation. Water for the World™ is a joint Borealis and Borouge initiative launched in 2007. It supports sustainable solutions for this global problem, by drawing on Borealis and Borouge's expertise and network of partners. A full list of Water for the World's projects can be found at www.waterfortheworld.net.

Access to hygienic washing facilities at a School in Gedera, Ethiopia
In 2015, Water for the World completed a project in the village of Gedera in Ethiopia, to provide 3,000 people with access to fresh water. In 2016, the project was extended to include the construction of a shower block serving more than 1,100 students and staff at the Gedera Elementary School who, in most cases, have no hygienic washing facilities at home. By funding this project, Water for the World will enable the school to make best use of the village water supply project and particularly encourage greater school attendance by teenage girls, who frequently miss classes at certain times of the month. Two of the shower cubicles will be available to local villagers, whose small but regular payments will help pay for the block's operation and maintenance and ensure its sustainability.

Affordable and safe drinking water for urban poor areas in Nairobi, Kenya
Water for the World was one of four partners who completed a two-year project to bring safe, affordable drinking water to more than 50,000 of the poorest residents in Nairobi, Kenya. The initiative was co-funded by Water for the World and the OPEC Fund for International Development, and implemented by Water and Sanitation for the Urban Poor, in cooperation with NCWSC, the local water utility.

Many of Nairobi's population live in informal settlements, with little access to water and sanitation. In the two residential areas of Korogocho and Kahawa, most residents buy water from street vendors, at much higher prices than for piped supplies. The initiative installed a network of high-quality polyethylene (PE) pipes and pre-paid water dispensers, to provide water at one tenth the price of buying from vendors. PE pipes are resilient, so less water is lost to leakage and residents receive clean water they can afford.

Waste & Resource Efficiency/ Prevention of Marine Litter

Efficient waste management is a worldwide problem. By dedicating a portion of the Borealis Social Fund to projects addressing proper waste management and marine litter prevention, Borealis can help accelerate innovation and remove societal, technological and market barriers to creating a circular economy for plastic waste. This is a new focus area for the Borealis Social Fund and potential projects are currently being scoped, with the aim of starting the first projects in 2017.

Financial Report

Auditor's Report*

We draw attention to the fact that the English translation of this auditor's report according to Section 274 of the Austrian Commercial Code (UGB) is presented for the convenience of the reader only and that the German wording is the only legally binding version.

Report on the Consolidated Financial Statements

Audit Opinion

We have audited the consolidated financial statements of Borealis AG, Vienna, and its subsidiaries (the Group), which comprise the consolidated balance sheet as at 31 December 2016, the separate consolidated income statement, the consolidated statement of comprehensive income, the consolidated statement of cash flow and the consolidated statement of changes in equity for the fiscal year then ended, and the notes to the consolidated financial statements.

In our opinion, the accompanying consolidated financial statements comply with legal requirements and give a true and fair view of the financial position of the Group as at 31 December 2016, and of its financial performance and cash flows for the year then ended in accordance with the International Financial Reporting Standards (IFRSs) as adopted by the EU and the additional requirements under Section 245a Austrian Commercial Code.

Other Matter

The consolidated financial statements of Borealis AG, Vienna, and its subsidiaries for the fiscal year ended 31 December 2015 were audited by another auditor who issued an unqualified auditor's report on these consolidated financial statements dated 15 February 2016.

Basis for Opinion

We conducted our audit in accordance with Austrian generally accepted auditing standards. Those standards require the application of the International Standards on Auditing (ISAs). Our responsibilities under those provisions and standards are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements" section of our report. We are independent of the Group in accordance with Austrian Generally Accepted Accounting Principles and professional requirements and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the fiscal year. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

We have structured key audit matters as follows:

- Descriptions of individual key audit matters
- Audit approach and findings
- Reference to related disclosures

Tax litigations

Descriptions of individual key audit matters

Several group companies of Borealis AG, Vienna, are currently subject to routine tax audits performed by their respective (national) tax authorities. In some of the audits, specific emphasis is put on business restructuring and transfer pricing. The most significant tax litigations relate to the reassessment of taxable income by the Finnish Tax Authorities (FTA) of:

Borealis Polymers OY for 2009. According to the reassessment decision the taxable income increases by EUR 364,000 thousand, leading to an additional requested payment of EUR 152,500 thousand, consisting of additional income taxes, penalties and interests.

Borealis Technology OY for 2008 and 2010. According to the reassessment decision the taxable income increases by EUR 801,000 thousand, leading to an additional requested payment in a total amount of EUR 297,000 thousand, consisting of additional income taxes, penalties and interests.

The management of Borealis AG, Vienna, is of the opinion that the companies were and are in compliance with all applicable regulations. Given the preliminary nature of the proceedings, potential impacts, if any, cannot be currently reliably estimated.

Audit approach and findings

We have discussed the individual legal matters with the internal tax department of Borealis AG, Vienna, and evaluated the information available so as to assess the likelihood of a negative outcome of the tax cases for the subsidiaries of Borealis AG, Vienna. In doing so, we have consulted with international transfer pricing experts within the PwC network. We have further confirmed the status of the cases with the legal representatives of Borealis AG, Vienna.

Our audit procedures included the assessment of the appropriateness of management's judgements and the appropriate accounting treatment in the consolidated financial statements as at 31 December 2016.

Reference to related disclosures

Management has disclosed this key audit matter in note nine of the consolidated financial statements.

Responsibilities of Management and the Audit Committee for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with International Financial Reporting Standards (IFRSs) as adopted by the EU, and the additional requirements under Section 245a UGB, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The audit committee is responsible for overseeing the Group's financial reporting process.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Austrian generally accepted auditing standards, which require the application of ISAs, will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with Austrian generally accepted auditing standards, which require the application of ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit.

We also:

- identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risks of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.

– evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

– conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.

– evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

– obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the audit committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the audit committee with a statement that we have complied with all relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the audit committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on Other Legal and Regulatory Requirements

Comments on the Management Report for the Group
Pursuant to the Austrian Commercial Code, the management report for the Group is to be audited as to whether it is consistent with the consolidated financial statements and as to whether the management report for the Group was prepared in accordance with the applicable legal requirements.

Management is responsible for the preparation of the management report for the Group in accordance with the Austrian Commercial Code.

We conducted our audit in accordance with Austrian Standards on Auditing for the audit of the management report for the Group.

Opinion
In our opinion, the management report for the Group was prepared in accordance with the applicable legal requirements, includes accurate disclosures pursuant to Section 243a UGB and is consistent with the consolidated financial statements.

Statement
Based on the findings during the audit of the consolidated financial statements and due to the obtained understanding concerning the Group and its circumstances no material misstatements in the management report for the Group came to our attention.

Other information
Management is responsible for the other information. The other information comprises the information included in the annual report, but does not include the consolidated financial statements, the management report for the Group and the auditor's report.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsible Engagement Partner

Responsible for the proper performance of the engagement is Peter Pessenlehner, Austrian Certified Public Accountant.

Vienna, 15 February 2017

PwC Wirtschaftsprüfung GmbH

Peter Pessenlehner
Austrian Certified Public Accountant

* This report is a translation of the original report in German, which is solely valid. Publication and sharing with third parties of the consolidated financial statements together with our auditor's opinion is only allowed if the consolidated financial statements and the management report for the Group are identical with the German audited version. This audit opinion is only applicable to the German and complete consolidated financial statements with the management report for the Group. For deviating versions, the provisions of Section 281 (2) UGB apply.

Group Management Report

Worldclass safety performance

The year 2016 was one of the company's best years in terms of safety performance. Borealis' safety performance measured by the number of Total Recordable Injuries (TRI) per million working hours improved to 0.9 in 2016 compared to 1.4 in 2015. A TRI frequency below two is considered as being world-class in the industry. The improved TRI score in 2016 came as a result of the continuous focus on safety and the goal of zero injuries. Borealis continues to maintain the goal of an accident-free work environment for both employees and contractors and continuously works hard towards achieving this goal.

Record polyolefin industry margin in 2016

The Brent Crude oil price fluctuated from 32 to 55 USD/bbl in 2016. The Brent Crude oil price bottomed at the beginning of the year with oil markets reacting to oversupply and growing concerns over economic growth. The OPEC announcement to restrict oil production at the end of October pushed the Brent Crude oil price up reaching a peak of 55 USD/bbl at the end of 2016. The annual average Brent Crude oil price of 45 USD/bbl in 2016 is down 17% from the average of 54 USD/bbl in 2015. Feedstock prices followed the Brent Crude oil price development by more or less the same magnitude. In comparision to the lower feedstock prices, the polyolefin prices reduced less in 2016 due to continuing solid market demand. The polyethylene price averaged 2% lower in 2016 compared to 2015 while the polypropylene price averaged 11% lower in 2016 compared to 2015.

In the Fertilizer business, margins decreased compared to last year as a result of global oversupply and weak demand. CAN sales prices bottomed in the third quarter of 2016. Increased urea prices in the last quarter of 2016 led to a recovery of the CAN sales price towards the year-end.

Continuing sustainable growth

The solid foundation for sustainable growth was further strengthened by a continuous focus of the organisation on achieving excellence in every aspect of Borealis' operations through a number of projects. Important steps were taken to further improve asset efficiency and reliability by way of investments, training and knowledge sharing across locations. Further work is required to reach the desired level of reliability in the fertilizer segment.

Borealis signed a contract with Navigator Gas LLC for the long-term time charter of the vessel Navigator Aurora. With a length of 180 m, the newly-built Navigator Aurora has a total cargo tank size of 35,000 cubic metres (cbm) and can hold ethane loads of up to 20,000 tonnes, making it the biggest ethane-capable vessel serving the global market. The new vessel will ensure long-term, reliable, cost-efficient ethane supply to Borealis' production facilities in Sweden. The vessel will sail between the Marcus Hook refinery in Pennsylvania, US, and Borealis' production facility in Stenungsund, Sweden. As a dual-fuel vessel, it can run on both diesel fuel and liquefied natural gas (LNG) meeting increasingly stringent environmental regulations.

Borealis entered into a cooperation with Taiwan-based convertor Reach Plastic Industrial Co., Ltd. This cooperation allows Borealis to explore the development of market applications based on Borealis' Daploy™ high melt strength (HMS) PP foam material. Daploy HMS PP foam is 100%-recyclable and is suitable for a wide range of applications where an improved environmental footprint is sought, as well as lightweighting, insulation and a unique surface feel. These applications can be used in a broad spectrum of industries, such as automotive, building & construction as well as packaging and food service.

In November, a Memorandum of Understanding was signed by Borealis and Asmidal. It reflects the parties' interest in evaluating opportunities to jointly develop a melamine production project in Algeria. A feasibility study for this project will be carried out and a final investment decision is expected to be taken in 2017.

Commitment to the circular economy

As an industry leader, Borealis is committed to discovering and realising the opportunities presented by the circular economy. By fully acquiring the German plastics recycler mtm plastics GmbH and mtm compact GmbH in June 2016, Borealis took its engagement in the circular economy to the next level. Based in Niedergebra, Germany, mtm plastics GmbH is regarded as a technology leader in the recycling of mixed post-consumer plastic waste and as one of Europe's largest producers of post-consumer polyolefin recyclates. Plastic recycling provides a circular business opportunity in a growing market within a broader sustainability agenda.

Feasibility study of a new, world-scale propane dehydrogenation plant

In September, Borealis announced to study the feasibility of a new, world-scale propane dehydrogenation (PDH) plant to be located at the existing Borealis production site in Kallo, Belgium. The feasibility study is being carried out over nine months with a final investment decision expected to be taken in the third quarter of 2018. The potential start-up of the plant is scheduled for the second half of 2021. The new PDH plant would have a targeted annual production capacity of 740 kilotonnes, making it one of the largest and most efficient facilities in the world. The Borealis Kallo location has been chosen due to its excellent logistical position and its experience in propylene production and handling. This investment is targeted to strengthen Borealis' long-term commitment to be the innovative polypropylene and propylene supplier that is meeting the needs of its customers today and in the future.

Investing for the future

Borealis announced a new round of investments in its melamine and fertilizer production facilities in Linz, Austria. The heart of the so-called "Linz 2020" programme is a EUR 80 million investment package to boost the overall long-term competitiveness of the Linz location. Programme goals include improving plant efficiency and achieving better environmental performance by installing and implementing state-of-the-art equipment and processes. This latest round of investment follows on the heels of the "Linz Fitness" programme, in which EUR 145 million were invested in plant modernisation between the years 2010 and 2014. During 2016 the Ottmarsheim fertilizer production location in France saw the largest ever site turnaround with a capital spend exceeding EUR 55 million including turnaround related projects.

In June 2016, Borealis announced a EUR 40 million investment to upgrade its steam cracker in Porvoo, Finland. The upgrade of the cracker, one of the most flexible, fully-integrated crackers in Europe, will further enhance its performance by boosting capacity and improving energy efficiency. The project is scheduled for completion in the third quarter of 2017. The production capacity of propylene and crude C4 will increase by 30 kilotonnes per annum and 10 kilotonnes per annum, respectively. The project will also upgrade the quality of all produced propylene to polymer grade, thereby increasing value as well as productivity in the adjacent polypropylene production plant.

The joint project between Neste, Veolia and Borealis to build a new power plant in Kilpilahti, Porvoo, Finland was confirmed. In the arrangement, Neste transferred its existing power plant to Kilpilahti Power Plant Limited (KPP). The company will build a new combined heat and power plant in Porvoo to match the needs of Neste and Borealis. Neste and Veolia both own 40% of KPP, and Borealis owns 20%. The steam generation capacity of the new power plant is 450 MW, and its electricity generation capacity is 30 MW. The plant, to be operated by Veolia, is scheduled for commissioning in 2018. The environmental benefits from replacing the existing power plant are significant. The new power plant is being constructed in accordance with the latest environmental regulations, including the European Commission's Industrial Emissions Directive (IED), and is notably expected to reduce carbon dioxide emissions by approximately 20% compared to the current situation.

Borouge

Borouge started up its new cross-linked polyethylene (XLPE) plant in the second quarter of 2016. With this final start-up, the Borouge 3 plant expansion project has been brought to a successful close, with the production capacity of Borouge having more than doubled to 4.5 million tonnes. Borouge is now the world's largest integrated polyolefins complex. Together, Borealis and Borouge now have an annual polyolefin production capacity of 8 million tonnes.

Borouge has embarked on a programme optimising Borouge 1, 2 and 3 and building another polypropylene (PP) plant, PP5. Pending approval of the project in 2017, PP5 could be up and running by around 2020. Borouge will also focus on finding ways to create more value by stretching the oil barrel. For Borouge this means the cracking of naphtha and perhaps of other mixed feeds, and converting these to downstream products. Cracking would be done in a facility called "Borouge 4" which would be a challenging and by far the most ambitious petrochemicals project that Borealis or ADNOC, have ever undertaken.

Record financial performance

Borealis reached a record net profit of EUR 1,107 million in 2016, improving on the previous record of EUR 988 million achieved in 2015. The improved result was particularly driven by better polyolefins margins, which reached a record level in 2016. The base chemicals segment had a solid performance but contributed less in 2016 compared to the previous year driven by the weak conditions of the

Fertilizer market. Borouge's contribution improved compared to last year due to the sales volume ramp-up as a result of the successful close of the Borouge 3 plant expansion project.

Borealis saw its polyolefins sales volume increase by 1% year-on-year, at the same pace as the European polyolefins market, maintaining its 2015 market share of 14% in 2016. Fertilizer sales volumes were at a comparable level in 2016 as in 2015.

In 2016, the polyolefin industry margin reached a record level. Despite lower feedstock costs, polyolefin prices did not retreat to the same extent due to a tight market as a result of solid demand. As a result, the olefin and polyolefin clean industry margin reached record levels. The profit contribution delivered from the polyolefins business segment further improved compared to last year.

In the fertilizer business, the margins were lower in 2016 compared to 2015, particularly in the second half of the year. The global oversupply and weak demand resulted in a significant drop in the CAN sales price. The fertilizer result was further negatively impacted by operational issues and the impairment of the urea production plant in Grandpuits resulting in a 2016 performance not meeting expectations.

Return on capital employed (ROCE) after tax increased to 16% in 2016 from 15% in 2015. The increase in ROCE is a reflection of the improved business result, particularly from the European assets. The completion of ongoing investment programmes as well as the focus on operational and commercial excellence will ensure Borealis to realise the targeted ROCE level of 11% through the cycle.

In 2016, Borealis reduced its net debt by EUR 445 million, which resulted in a gearing ratio of 10% at the end of 2016, compared to 19% at the end of 2015. Borealis benefits from a well-diversified financing portfolio and a balanced maturity profile. The company will look to maintain access to a wide range of funding options, including capital markets and bank funding as well as private placements going forward.

Finnish tax case

In January 2017, Borealis received the two decisions of the Finnish Board of Adjustment in regard to Borealis Technology Oy. The Board of Adjustment has confirmed the Finnish tax authority's view that the license arrangements, entered into between Borealis Technology Oy and Borealis AG in 2008 and 2010 should be considered as a sale of businesses. They changed the amount of taxable income of TOY downward from EUR 700 million to EUR 541 million in the year 2008 and from EUR 340 million to an amount of EUR 260 million in the year 2010. This leads to a requested additional total payment of EUR 297 million, comprising taxes, late payment interest and penalties. Borealis believes that this decision fails to properly apply Finnish and International tax law and does not adequately consider the relevant facts of the case. Borealis will therefore appeal this decision to the Helsinki Administrative Court and has obtained a suspension of payment until the final decision.

In December 2015, Borealis received a re-assessment decision from the Finnish tax authority for its Finnish subsidiary Borealis Polymers Oy in regard to the year 2009. The authority is requesting Borealis to pay an additional EUR 153 million, an amount comprising taxes, late payment interest and penalties. Borealis believes that this decision fails to properly apply Finnish and International tax law and does not adequately consider the relevant facts of the case. Borealis appealed the re-assessment decision to the Finnish tax authority's Board of Adjustment in February 2016. The decision of the Board of Adjustment is expected for the first half of calendar year 2017. A suspension of payment has been obtained pending the decision.

Commitment to R&D

Borealis' commitment to innovation is firm. With three state-of-the-art Innovation Centres located in Linz, Porvoo and Stenungsund, supported by several smaller research groups in other locations, Borealis has over 500 employees in the R&D organisation supporting innovations for all business groups. Innovation projects are conducted in close collaboration with key customers as well as with the Borouge Innovation Centre in Abu Dhabi and many other partners in Borealis' Open Innovation eco-system.

In June 2016, Borealis launched three new polyolefin elastomer (POE) grades resulting in the extension of its Queo™ polyolefin plastomers (POP) portfolio. The Compact technology, which is now known as Borceed™, was rebranded. Borceed technology enables flexible materials exhibiting both plastic and elastomeric properties and is the platform supporting Borealis' Queo products. The Queo portfolio expansion further enhances Borealis' product offering of high-value specialty polyethylene (PE) products for the high-end segments of the automotive, consumer packaging, housewares, and wire and cable industries.

In October 2016, a step-change concept in flexible plastic packaging, the Full PE Laminate solution, was showcased at the K Fair 2016 in Düsseldorf. Based on the proprietary Borstar® bimodal polyethylene (PE) technology in combination with machine direction oriented (MDO) processing technology, this novel monomaterial solution offers a second life to PE-based packaging as valuable end products, without

compromising on product efficiency or integrity. This Full PE Laminate solution was developed and tested in cooperation with a consortium of leading partners along the value chain.

Borealis launched a new grade in its portfolio of polypropylene random crystalline temperature (PP-RCT) pipes in October 2016. The improved performance and properties of this grade fulfil market demand for sophisticated applications in industrial heating and cooling, including building risers as well as heating, ventilation and air-conditioning (HVAC) systems. The overall improved performance and hydrostatic pressure resistance of PP-RCT pipes, especially at elevated temperatures, results in a range of advantages for the entire value chain such as longer durability making operations safe and reliable in the long-term. Moreover, the increased pressure resistance brings significant benefits for both pipe producers and building designers.

Improving energy effectiveness

Borealis is committed to reducing its environmental footprint by lowering CO_2 emissions and increasing energy efficiency. Improving energy efficiency is the most effective way of reducing the company's direct carbon footprint, as well as cutting the company's energy costs. In 2014, Borealis established its ambitious Energy Roadmap which highlights the key focus areas for Borealis until 2020/2021. The programme has identified, amongst others, the optimisation of equipment and process operations, technology changes and site optimisation as the elements for success.

To sustain its energy step change efforts, Borealis is implementing an energy management system certified to ISO 50001. Based on a gap analysis conducted in 2015, Borealis made the necessary changes to the Group-wide management system. These changes were closed off with an audit marking the start of the implementation at location level, coupled with efforts to further strengthen Borealis' energy efficiency culture. In November 2016, Borealis' site in Grand-Quevilly, France, was the first location to be ISO 50001 certified.

At the Borealis location in Beringen, Belgium, Bionerga, a specialist in recovering energy from waste, is constructing a municipal waste incineration plant. Once the plant is running, Bionerga will supply Borealis with electricity and recovered heat, reducing both Borealis' natural-gas-fired steam production and the amount of electricity Borealis draws from the local grid. The project will contribute to the Flemish region's renewable energy ambitions and paves the way to providing heat to other organisations in the neighbouring industrial area.

Wellbeing concept

Wellbeing is a topic that needs to be managed pro-actively across all generations in an environment where retirement ages are rising in many European countries and working longer is a reality. As individuals, we all want to be healthy, recognised, and able to develop our own competences and to have a balance in work and private life. As an employer, Borealis wants to support its employees to be healthy, engaged and productive and to drive the company towards excellence in everything it does.

In Borealis, the Wellbeing concept is aimed to contribute to being the Employer of Choice for employees of all generations. Borealis has identified four Wellbeing areas – Health, Job Engagement, Competence and Work & Private Life Balance – and ongoing activities take place in all of its locations to ensure motivated and healthy employees.

Outlook

Management expects 2017 to be a solid year for Borealis. Despite less favourable market conditions expected in polyolefins compared to 2016, Borealis is well positioned for the future thanks to the actions taken in the past few years. Improvements in operational reliability and the establishment of a commercial and operational excellence mindset are embedded in the organisation. The committed investments in 2017 and beyond will further strengthen Borealis' three profit centres, Polyolefins, Base Chemicals and Borouge.

Increased results in the fertilizer business, driven by an improvement in market conditions and enhanced operational performance, is expected. Uncertainty remains around the additional polyolefin capacity that is going to come on stream in North America in the second half of 2017. As this additional capacity is not expected to be absorbed by the local market, it will impact Borealis' European polyolefins business. 2017 will also be challenging due to the intensive turnaround schedule, involving 5 locations.

Review of results

Sales

The European polyolefins industry saw an increase in total sales volumes of 1% in 2016, compared to a 5% increase in 2015. Borealis sold 3.7 million tonnes of polyolefins in 2016 (+1% vs. 2015). Fertilizer sales reached 4.6 million tonnes, unchanged from 2015. Melamine sales volumes increased by 1% from 138 kilotonnes in 2015 to 140 kilotonnes in 2016.

Cost development
With the lower price environment the production costs decreased in 2016 compared to 2015, despite higher sales volumes. Sales and distribution costs of EUR 653 million in 2016 increased from EUR 642 million in 2015, administration costs increased by 1% to EUR 230 million. Research and development costs amounted to EUR 114 million in 2016, unchanged from 2015. The number of full-time equivalent employees (FTE) as per year-end 2016 was 6,494, an increase of 228 compared to last year, mainly due to the acquisition of mtm plastics GmbH and mtm compact GmbH.

Operating profit
Operating profit amounted to EUR 938 million compared to EUR 718 million in 2015. The improved result is mainly attributable to a higher contribution from the Polyolefins business segment compared to 2015.

Return on capital employed
The return on capital employed after tax increased to 16%, compared to 15% in 2015, mainly as a result of the improved business performance.

Financial income and expenses
Net financial expenses amounted to EUR 77 million, an increase from EUR 69 million in 2015, mainly as a result of increased foreign exchange adjustments compared to 2015.

Taxes
Income taxes amounted to EUR 241 million, an increase of EUR 110 million from tax charges of EUR 130 million in 2015. The overall tax charge in 2016 increased mainly due to an improved profitability. In addition, the year 2015 tax charge was positively influenced by capitalisation of previously unrecognized tax losses due to improved profitability forecasts. Borealis paid income taxes in the amount of EUR 82 million in 2016, compared with EUR 22 million in 2015.

Net profit and distribution of dividend
The net profit for the year amounted to EUR 1,107 million, compared to a net profit of EUR 988 million in 2015. During 2016, Borealis distributed a dividend of EUR 425 million to its shareholders.

Financial position

Total assets/capital employed
At the year-end, total assets and capital employed stood at EUR 9,932 and EUR 7,927 million, respectively, compared to EUR 9,261 and EUR 7,359 million at year-end 2015.

The solvency ratio was 64% at year-end 2016, compared to 60% at year-end 2015. The gearing ratio decreased to 10% at year-end 2016, compared to 19% in 2015, as there was a significant decrease in net debt and a significant increase in equity.

Cash flows and liquidity reserves
Cash flow from operations was EUR 1,145 million, driven by a solid operating profit. Liquidity reserves, composed of undrawn, long-term committed credit facilities and cash balances, amounted to EUR 1,928 million at year-end 2016, compared to EUR 1,714 million at year-end 2015.

Net interest-bearing debt decreased to EUR 651 million at year-end, down from EUR 1,096 million at the end of 2015. The change in net interest-bearing debt is analysed in the following table.

EUR million	2016	2015
Change of net interest-bearing debt		
Cash flow provided by operating activities	1,145	1,103
Capital expenditure	-384	-391
Capital contribution to associated companies/joint ventures	-6	0
Dividends/repayment of capital contribution by associated companies/joint ventures	144	123
Acquisition of new companies and purchase price adjustments	-18	1
Other (mainly relating to foreign exchange differences)	-11	-34
Dividend paid	-425	-100
Total decrease/increase	**445**	**702**

Capital expenditure
Investments in tangible fixed assets amounted to EUR 333 million in 2016, compared to EUR 336 million in 2015. The largest portion of the total investment relates to the light feed modification of the cracker in Stenungsund, the site turnaround in Ottmarsheim, the upgrade and revamp of four cracker furnaces in Stenungsund and the construction of a LPG cavern in Porvoo. HSE capital expenditure amounted to EUR 20 million, compared to EUR 23 million in 2015. Depreciation and amortisation amounted to EUR 400 million, compared to EUR 348 million in 2015.

Shareholders' equity
The shareholders' equity at year-end 2016 was EUR 6,496 million.

EUR million	2016	2015
Equity development		
Net result attributable to the parent	1,109	988
Exchange and fair value adjustment (net)	115	298
Gross increase/decrease	1,224	1,286
Dividend paid	-425	-100
Contribution by shareholders	0	0
Net increase/decrease	799	1,186
Opening equity	5,697	4,511
Ending equity	**6,496**	**5,697**

Risk
Borealis has a documented risk management process that ensures that all parts of the Group routinely identify and assess their risks and develop and implement appropriate mitigation actions. The company's overall risk landscape is periodically consolidated, reported and reviewed. Borealis distinguishes between strategic and operational risks.

Strategic risks are risks that may severely impact Borealis' strategy or reputation. In most cases, strategic risks are related to unfavourable long-term developments, such as market or industry developments, a change in the competitive environment, or a threat to the reputation of the Group.

Operational risks usually refer to unfavourable and unexpected short-term or mid-term developments, and include all risks that may have a direct impact on the Group's daily business operations. All operating risks are assessed according to documented guidelines and procedures that are administered by the respective business functions. The list below reflects some of the company's operational risks, but is not exhaustive:

Financial risks can be associated with liquidity, interest rate, foreign exchange rate, credit, commodity price, and insurance. The assessment of financial risk management is described in detail in note 16 of the consolidated financial statement. The Director Treasury and the General Counsel shall be responsible for reporting and for coordinating the management of all financial risks.

Health Safety and Environment risks are assessed according to the procedures and framework described in the Borealis' Risk-Based Inspection Manual. The Director HSE shall be responsible for managing all HSE-related risks and shall report Borealis' HSE risk landscape periodically to the Executive Board.

Project related risks are assessed in Borealis' project approval process. All key risks related to an individual project, including financial, market, technical, legal, patent infringement, strategic, operational, country risk, and political factors, are assessed. The risk assessment shall also reflect the probability that the project will be completed within the estimated time frame and with the estimated resource requirements as well as the probability that the key project objectives will be achieved. Project related risks shall be managed by the Project Manager and reported to the Project Steering Committee.

Information security risk relates to confidentiality, integrity and availability of critical company information. The Director IT and the General Counsel support line managers with the assessment of information security risk and the development and implementation of risk mitigation actions.

The Executive Board periodically reviews the Group's key risks, defines the Group's risk tolerance levels, monitors the implementation of mitigation actions and reports the key risks and mitigation steps to the Supervisory Board. The Executive Board safeguards the integration of the risk assessment into the strategic planning.

The Supervisory Board is responsible for reviewing the effectiveness of Borealis' risk management practices and processes, the risk tolerance levels, the risk exposure of the Group, and the effectiveness of mitigation actions. The Supervisory Board delegates some of these responsibilities to the Audit Committee, which is a sub-committee of the Supervisory Board.

All Borealis employees shall be responsible for managing risk, within their authority, in their field of work to ensure that risk management is properly embedded in the organisation and is reflected in the day-to-day decision-making process.

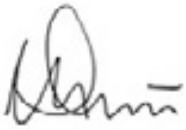
		2016	2015	2014	2013
Health, Safety & Environment					
Total Recordable Injuries	number/million workhours	0.9	1.4	1.3	1.5
EU ETS CO_2 emissions	kilotonnes	4,600	4,270	4,250	2,480
Number of employees (Full-time equivalent)		6,494	6,266	6,290	6,227
Income and profitability					
Net sales	EUR million	7,218	7,700	8,330	8,106
Operating profit	EUR million	938	718	280	195
Operating profit as percentage of net sales	%	13	9	3	2
Net profit	EUR million	1,107	988	571	423
Return on capital employed, net after tax	%	16	15	10	9
Cash flow and investments					
Cash flow from operating activities	EUR million	1,145	1,103	428	482
Investments in tangible fixed assets	EUR million	333	336	370	264
Financial position					
Net interest-bearing debt	EUR million	651	1,096	1,798	1,770
Equity attributable to owners of the parent	EUR million	6,496	5,697	4,511	3,882
Gearing ratio	%	10	19	40	45

Definitions

Capital employed	=	Total assets less non-interest-bearing debt
Return on capital employed	=	Operating profit, profit and loss from sale of operations, net result in associated companies plus interest income, after imputed tax, divided by average capital employed
Solvency ratio	=	Total equity less goodwill divided by total assets
Gearing ratio	=	Interest-bearing debt, including subordinated loans, less cash and cash equivalents divided by total equity
HSE	=	Health, Safety and Environment

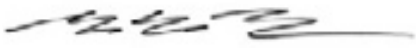
Vienna, 15 February 2017

Executive Board:



Mark Garrett
Chief Executive

Mark Tonkens
Chief Financial Officer



Markku Korvenranta

Martijn Arjen van Koten

Alfred Stern

Consolidated Financial Statements

Consolidated Income Statement

EUR thousand	2016	2015	Note
Net sales	**7,217,576**	**7,699,945**	1
Production costs	-5,286,107	-5,996,529	5, 12, 13
Gross profit	**1,931,469**	**1,703,416**	
Sales and distribution costs	-652,650	-642,443	5, 12, 13
Administration costs	-229,870	-228,153	5, 12, 13
R&D costs	-114,303	-114,383	2, 5, 12, 13
Other income	3,561	0	29
Operating profit	**938,207**	**718,437**	
Net results in associated companies and joint ventures after tax	487,347	469,027	7
Financial income	8,893	9,135	17
Financial expenses	-86,368	-78,310	17
Profit before taxation	**1,348,079**	**1,118,289**	
Taxes on income	-240,694	-130,311	9
Net profit for the year	**1,107,385**	**987,978**	
Attributable to:			
Non-controlling interest	-1,615	94	
Equity holders of the parent	1,109,000	987,884	

Consolidated Statement of Comprehensive Income

EUR thousand	2016	2015	Note
Net profit for the year	**1,107,385**	**987,978**	
Items that may be reclassified subsequently to the income statement			
Net gain/loss on translation of financial statements of foreign operations	132,632	307,099	
Reclassifications during the period to the income statement	0	0	
Tax effect recognised in other comprehensive income	0	0	
Net gain/loss on long-term loans to foreign operations	-2,275	1,245	18
Reclassifications during the period to the income statement	0	0	18
Tax effect recognised in other comprehensive income	569	-311	
Net gain/loss on loans and financial contracts to hedge investments in foreign operations	-11,250	-66,152	18
Reclassifications during the period to the income statement	0	0	18
Tax effect recognised in other comprehensive income	2,813	16,538	
Fair value adjustments of cash flow hedges	53,789	-34,525	18
Reclassifications during the period to the income statement	5,063	52,898	18
Tax effect recognised in other comprehensive income	-14,713	-4,593	
Fair value adjustments of available for sale assets	166	-277	18
Reclassifications during the period to the income statement	0	0	18
Tax effect recognised in other comprehensive income	-42	69	
Items that will not be reclassified to the income statement			
Actuarial gains and losses	-70,988	29,778	13
Tax effect recognised in other comprehensive income	20,682	-5,785	
Net income/expense recognised in other comprehensive income	**116,446**	**295,983**	
Total comprehensive income	**1,223,831**	**1,283,961**	
Attributable to:			
Non-controlling interest	125	-2,166	
Equity holders of the parent	1,223,706	1,286,127	

Consolidated Balance Sheet

EUR thousand	31.12.2016	31.12.2015	Note
Assets			
Non-current assets			
Intangible assets	374,964	364,101	2, 3
Tangible assets			4
Production plants	2,536,914	2,587,743	
Machinery and equipment	30,647	30,265	
Construction in progress	270,449	244,509	
	2,838,010	2,862,517	
Investments in associated companies and joint ventures	3,772,758	3,284,487	7
Other investments	24,400	29,923	8, 27
Other receivables and other assets	35,579	20,909	8, 20, 26, 27
Deferred tax assets	57,586	174,847	9
Total non-current assets	**7,103,297**	**6,736,784**	
Current assets			
Inventories	1,048,980	993,326	10
Receivables			
Trade receivables	541,066	532,463	25, 26, 27
Receivables from associated companies	80,205	90,218	26, 27, 30
Income taxes	21,300	9,445	
Other receivables and other assets	374,463	350,433	20, 26, 27
Total receivables and other assets	1,017,034	982,559	
Cash and cash equivalents	762,421	547,938	
Total current assets	**2,828,435**	**2,523,823**	
Total assets	**9,931,732**	**9,260,607**	

Consolidated Balance Sheet

EUR thousand	31.12.2016	31.12.2015	Note
Total Equity and Liabilities			
Shareholders' equity			
Share capital and contributions by shareholders	1,599,397	1,599,397	11
Reserves	382,769	268,063	
Retained earnings	4,513,488	3,829,488	
Shareholders' equity	6,495,654	5,696,948	
Non-controlling interest	18,704	18,579	
Total equity	**6,514,358**	**5,715,527**	
Liabilities			
Non-current liabilities			
Loans and borrowings	1,045,189	1,399,524	19, 20, 27
Deferred tax liabilities	189,889	215,336	9
Employee benefits	420,275	350,415	13
Provisions	58,552	50,771	14
Government grants	16,378	18,587	15
Other liabilities	17,761	24,391	20, 27
Non-current liabilities	**1,748,044**	**2,059,024**	
Current liabilities			
Loans and borrowings	367,811	244,327	19, 20, 27
Trade payables	722,262	735,982	20, 27, 30
Income taxes	169,673	106,519	
Provisions	7,708	4,017	14
Other liabilities	401,876	395,211	20, 27
Current liabilities	**1,669,330**	**1,486,056**	
Total liabilities	**3,417,374**	**3,545,080**	
Total equity and liabilities	**9,931,732**	**9,260,607**	

Consolidated Statement of Changes in Equity

EUR thousand	Share capital* and contributions by share-holders	Reserve for actuarial gains/losses recognised in equity	Hedging reserve	Reserve for unrealised exchange gains/losses and other**	Retained earnings	Total attributable to the equity holders of the parent	Non-controlling interest	Total equity
Balance as of 31 December 2014	**1,599,397**	**-164,358**	**-58,890**	**193,068**	**2,941,604**	**4,510,821**	**20,745**	**4,531,566**
Net profit for the year	0	0	0	0	987,884	**987,884**	94	**987,978**
Other comprehensive income	0	23,992	13,780	260,471	0	**298,243**	-2,260	**295,983**
Total comprehensive income	0	23,992	13,780	260,471	987,884	**1,286,127**	-2,166	**1,283,961**
Dividend payment to equity holders of the parent	0	0	0	0	-100,000	**-100,000**	0	**-100,000**
Balance as of 31 December 2015	**1,599,397**	**-140,366**	**-45,110**	**453,539**	**3,829,488**	**5,696,948**	**18,579**	**5,715,527**
Net profit for the year	0	0	0	0	1,109,000	**1,109,000**	-1,615	**1,107,385**
Other comprehensive income	0	-50,306	44,139	120,873	0	**114,706**	1,740	**116,446**
Total comprehensive income	0	-50,306	44,139	120,873	1,109,000	**1,223,706**	125	**1,223,831**
Dividend payment to equity holders of the parent	0	0	0	0	-425,000	**-425,000**	0	**-425,000**
Balance as of 31 December 2016	**1,599,397**	**-190,672**	**-971**	**574,412**	**4,513,488**	**6,495,654**	**18,704**	**6,514,358**

* Share capital of Borealis AG (parent company) amounts to EUR 300,000.00 (EUR 300,000.00)
** Reserves for unrealised exchange gains and other include reserves relating to available for sale assets

Consolidated Cash Flow

EUR thousand	2016	2015	Note
Cash flows from operating activities			
Payments from customers	7,212,846	7,711,185	
Payments to employees and suppliers	-5,905,647	-6,511,777	
Interest received	1,302	905	17
Interest paid	-56,919	-59,221	17
Other financial expenses paid	-24,305	-16,423	17
Income taxes paid	-81,779	-21,637	9
	1,145,498	**1,103,030**	
Cash flows from investing activities			
Investments in tangible assets	-333,090	-336,220	4
Investments in intangible assets	-50,459	-54,967	3, 8
Acquisitions of subsidiaries net of cash	-18,272	0	6
Acquisitions of other financial investments	-1,796	0	
Purchase price adjustment of acquisition of subsidiaries	0	951	6
Dividends / capital repayments of associated companies	144,003	123,322	7
Acquisitions and capital contributions to associated companies and joint ventures	-5,802	0	7
Proceeds from sale of tangible assets	2,250	0	
Proceeds from sale of non-current financial assets	0	2,444	
	-263,166	**-264,470**	
Cash flows from financing activities			
Long-term loans obtained	5,716	12,685	19
Short-term loans repaid	-249,336	-245,810	19
Dividends paid	-425,000	-100,000	
	-668,620	**-333,125**	
Net cash flow of the period	**213,712**	**505,435**	
Cash and cash equivalents as of 1 January	547,938	42,425	
Effect of exchange rate fluctuations on cash held	771	78	
Cash and cash equivalents as of 31 December	**762,421**	**547,938**	

Notes to the Consolidated Financial Statements

Reporting entity
Borealis AG (the "Company" or Group) is a company domiciled in Austria. The address of the Company's registered office is Wagramer Strasse 17–19, 1220 Vienna, Austria. Borealis is a leading provider of chemical and innovative plastics solutions.

In the Polyolefins segment Borealis focuses on the application areas Energy, Automotive, Consumer Products, Pipe, New Business Development and Circular Economy Solutions.

Base Chemicals is the second segment and includes the following product ranges: melamine, phenol, acetone, ethylene, propylene, fertilizer and technical nitrogen.

Statement of compliance
The consolidated financial statements have been prepared in compliance with International Financial Reporting Standards issued by the IASB as adopted by the EU and additional Austrian disclosure requirements. The financial statements were authorised for issue by the Executive Board on 15 February 2017.

Basis of preparation

The consolidated financial statements are presented in Thousand Euro (EUR), rounded to the nearest thousand, hence rounding differences may arise. The consolidated financial statements are prepared on the historical cost basis except for the following assets and liabilities, which are stated at their fair value: derivative financial instruments, available for sale assets and investments held for trading. Recognised assets and liabilities that are hedged are stated at fair value in respect of the risk that is being hedged.

Consolidation principles
The consolidated financial statements include the accounts of Borealis AG, the parent company, and all the companies over which it has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Companies in which the Group has significant influence (interest of 20% or more) but no control nor joint control are considered associated companies. A joint venture is a type of joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint venture. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

The consolidated financial statements are based on audited financial statements of the parent company and of each individual subsidiary. The accounts have all been prepared in accordance with the Group's accounting policies. Items of a similar nature have been combined. Intra-group transactions (revenues and costs), unrealised intra-group profits, internal shareholdings, and intra-group balances have been eliminated.

Acquired subsidiaries, associated companies and joint ventures are included in the consolidated financial statements from the date of control respectively significant influence and until control or significant influence ceases. A revaluation of the acquired net assets is made at the date of acquisition. Any remaining positive difference between the fair value of the assets and liabilities and the purchase consideration is capitalised as goodwill and is subject to an annual impairment test. Any gain from a bargain purchase is recognised in the income statement. Investments in associated companies and investments in joint ventures are recorded under the equity method in the consolidated financial statements.

Significant accounting judgements, estimates and assumptions
The preparation of the Group's consolidated financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, and the disclosure of contingent liabilities, at the end of the reporting period. However, uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying value of the asset or liability affected in future periods. The judgements, estimates and assumptions relate mainly to the useful life and impairment of intangible and tangible assets (note 3 and note 4), value of tax assets and liabilities and unused tax losses (note 9), actuarial assumptions for employee benefits (note 13), future cash-outflows for provisions (note 14), allowance for impairment in respect to trade receivables (note 26) and are included in the description of the respective note to the position.

Foreign currency

Transactions and balances
Monetary assets and liabilities denominated in foreign currencies have been translated into Euro (EUR) at the exchange rates quoted on the balance sheet date. Non-monetary items that are measured at historical costs in a foreign currency are translated using the exchange rate as at the date of transaction.

All foreign exchange related gains and losses, both realised and unrealised, are recorded as financial items in the income statement. However, the exchange adjustments arising from the following items are recognised in other comprehensive income: conversion of the net assets of foreign entities and associated companies as of 1 January using the closing rate on 31 December, translation of long-term intra-group receivables that are considered part of investments in subsidiaries or associated companies, conversion of long-term loans hedging net assets of foreign subsidiaries and associated companies or intra-group receivables considered part of investments in subsidiaries and associated companies, and conversion of the net income of foreign entities calculated on monthly rates to figures converted using the exchange rates applicable at the balance sheet date.

Group companies
Consolidated financial statements are presented in Euro (EUR), the functional currency of the parent.

Financial statements of foreign entities in functional currencies other than EUR have been translated at the exchange rates quoted on the balance sheet date for assets and liabilities. The income statements of foreign entities have been translated on the basis of monthly exchange rates. The exchange differences arising from the translation are recognised in other comprehensive income.

Income statement

Revenue recognition
Revenues from sales of goods are recognised in the income statement when the significant risks and rewards of ownership have been transferred to the buyer.

Net sales comprise sales invoiced during the year, excluding value-added tax and after deduction of goods returned, discounts and allowances.

Research and development
Research costs are charged to the income statement in the year they are incurred.

Development costs relating to a definable product or process that is demonstrated to be technically and commercially feasible are recognised as an intangible asset to the extent that such costs are expected to be recovered from future economic benefits. The expenditure capitalised includes the costs of materials, direct labour and an appropriate proportion of overheads.

Other development costs not meeting these criteria are recognised in the income statement as an expense when incurred.

Results from associated companies and joint ventures
The proportionate share of the net profit or loss after tax of these companies is included in the consolidated income statement.

Net financial items
Interest income and expenses are included in the income statement using the effective interest rate with the amounts relating to the financial year.

Net financial items also include borrowing costs, costs incurred on finance leases, realised and unrealised gains and losses from exchange and price adjustments of financial instruments, investments and items in foreign currencies.

Taxes on income
The income tax charged to the income statement comprises expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted at the balance sheet date, adjusted for the change in deferred tax assets and liabilities for the year and for any tax payable in respect of previous years. Income tax that relates to items recognised in other comprehensive income is recognised in other comprehensive income as well.

Balance sheet

Intangible assets

Intangible assets are stated at cost, less accumulated amortisation and impairment losses.

Goodwill arising from an acquisition represents the excess of the purchase consideration over the fair value of the net identifiable assets acquired. Goodwill is not amortised but is subject to an annual impairment test.

Licences and patents externally acquired are stated at cost, less accumulated amortisation and impairment losses. Amortisation is calculated according to the straight-line method based on an estimated useful life of 3–10 years.

Capitalised development costs are stated at cost, less accumulated amortisation and impairment losses. Amortisation is charged to the income statement on a straight-line basis over the expected useful life of the asset of 3–10 years. Development costs not yet amortised are subject to an annual impairment test.

Costs to purchase and develop software for internal use are capitalised and amortised on a straight-line basis over 3–7 years.

Emission rights are reported as intangible assets. They are measured at cost, if purchased in the market, or at fair value, if received through government grants. A liability to return emission rights for actual emissions made is recognised as well.

Tangible assets

Tangible assets are valued at cost, less accumulated depreciation and impairment losses. Cost comprises purchase price, site preparation and installation. Day-to-day servicing expenses are not included in the cost of the assets. If certain conditions are met, the costs of major inspections and overhauls are recognised in the carrying value of the property, plant and equipment.

Production plants include land, buildings, related non-movable machinery and equipment. Assets held under finance leases are also included. Machinery and equipment are recognised at purchase price and any directly attributable costs.

Depreciation is made on a straight-line basis over the expected useful life of the components of the assets. The useful lives of major assets are determined individually, while the lives of other assets are in respect of groups of uniform assets. Land is not depreciated. Buildings are depreciated over 20–40 years, production facilities over 15–20 years and machinery and equipment over 3–15 years.

The determination of whether an arrangement is or contains a lease is based on the substance of the arrangement and classified to operating and finance lease in accordance with IAS 17. Assets leased under finance leases are recognised in the balance sheet and depreciated over the shorter of the lease period or useful life. The cost of assets leased under finance leases are stated at the lower of fair value and the present value of the future minimum lease payments at the time of acquisition.

The present value of the expected cost for the decommissioning of the asset after its use is included in the cost of the respective asset if the recognition criteria for a provision are met. The estimated future costs of decommissioning are reviewed annually and adjusted as appropriate. Changes in the estimated future costs or in the discount rate applied are added to or deducted from the cost of the asset. Borrowing costs directly attributable to the acquisition, construction or production of a qualifying asset are capitalised as part of the cost of that asset.

Impairment losses

The carrying values of both tangible and intangible assets, other than inventories, deferred tax assets and certain financial assets, are reviewed at each balance sheet date to determine whether there is any indication of impairment. If any such indication exists and for annual impairment tests of goodwill and intangible assets with an indefinite useful life, the asset's recoverable amount is estimated as the greater of net selling price and value in use. An impairment loss is recognised whenever the carrying value of an asset or its cash-generating unit exceeds its recoverable amount. Impairment losses are recognised in the income statement. Production facilities clustered into technologically equivalent groups, e.g. polypropylene or cracker etc., are considered as cash generating units.

Leases

A lease is classified at the inception date as a finance lease or an operating lease. A lease that transfers substantially all the risks and rewards incidental to ownership to the Group is classified as a finance lease.

Finance leases are capitalised at the commencement of the lease at the inception date fair value of the leased property or, if lower, at the present value of the minimum lease payments. Lease payments are apportioned between finance charges and reduction of the lease liability so as to achieve a constant rate of interest on the remaining balance of the liability. Finance charges are recognised in finance costs in the statement of profit or loss.

A leased asset is depreciated over the useful life of the asset. However, if there is no reasonable certainty that the Group will obtain ownership by the end of the lease term, the asset is depreciated over the shorter of the estimated useful life of the asset and the lease term.

An operating lease is a lease other than a finance lease. Operating lease payments are recognised as an operating expense in the statement of profit or loss on a straight-line basis over the lease term.

Non-current assets held for sale and discontinued operations
Non-current assets (or disposal groups comprising assets and liabilities) that are expected to be recovered primarily through sale rather than through continuing use are classified as held for sale. Immediately before classification as held for sale, the assets (or components of a disposal group) are re-measured in accordance with IFRS 5. Thereafter, generally the assets (or disposal group) are measured at the lower of their carrying value and fair value, less cost to sell. Any impairment loss on a disposal group first is allocated to goodwill, and then to remaining assets and liabilities on a pro rata basis, no loss is allocated to inventories, financial assets, deferred tax assets and employee benefit assets, which continue to be measured in accordance with the Group's accounting policies. Impairment losses on initial classification as held for sale and subsequent gains or losses on re-measurement are recognised in the income statement. Gains are not recognised in excess of any cumulative impairment loss.

Associated companies and joint ventures
Associated companies and joint ventures are accounted for using the equity method. The consolidated financial statements include the Group's share of the comprehensive income of equity accounted investees.

Cash and cash equivalents
Cash and cash equivalents comprise cash in bank and liquid short-term deposits.

Inventories
Inventories are stated at the lower of cost and net realisable value, taking into account future price developments. Costs incurred are based on the first in, first out principle (FIFO method), and comprise direct costs such as materials, utilities, salaries and wages, and a systematic allocation of fixed and variable production overhead costs. Valuation of raw materials and spare parts is based on the weighted average cost method.

Government grants
Government grants include grants for research and development as well as investment grants. Investment grants are recognised in the balance sheet as non-current liabilities and recognised as income over the useful life of the asset. Other grants are recognised in the income statement on a systematic basis to offset the related cost.

Provisions
A provision is recognised if, as a result of a past event, the Group has a present legal or constructive obligation against third parties that can be estimated reliably and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions reflect the present value of future cash outflows. The cash flows are discounted at a current pre-tax rate that reflects the risks specific to the liability. The unwinding of the discount is expensed as incurred and recognised in the income statement as a finance cost.

Deferred tax
Deferred tax assets and liabilities are computed individually for each company in accordance with the balance sheet liability method, providing for temporary differences between the carrying values of assets and liabilities for financial reporting purposes and the amounts used for tax purposes. Deferred tax is measured at the tax rates that are expected to be applied to the temporary differences when they reverse, based on the laws that have been enacted or substantively enacted at the balance sheet date.

A deferred tax asset is recognised only to the extent that it is probable that future taxable profits will be available, against which the temporary differences and unused tax loss carryforwards can be utilised within a period of five years, based on a three year business plan and a long-term projection for further two years. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realised.

The uncertain tax positions, for example tax disputes, are accounted for by applying the most likely amount. The most likely amount is the single most likely amount in a range of realistically possible options. The company evaluates the unit of account related to the uncertain tax positions on a case-by-case basis.

Reserves
A reserve has been established under the consolidated equity for unrealised exchange differences related to deferred foreign exchange gains and losses on intercompany loans, hedge loans and the equity of foreign operations. The hedging reserve contains fair value adjustments to financial instruments held for hedging purposes. The reserve for actuarial gains/losses recognised in equity contains the actuarial gains and losses on employee benefit plans.

Employee benefits

Defined contribution plans
Obligations for contributions to defined contribution plans are recognised as an expense in the income statement as incurred.

For defined contribution plans, the Group pays contributions to publicly or privately administered pension insurance plans on a mandatory, contractual or voluntary basis. The Group has no further payment obligations once the contributions have been paid. The contributions are recognised as employee benefit expense when they are due. Prepaid contributions are recognised as an asset to the extent that a cash refund or a reduction in the future payments is available.

Defined benefit plans
The Group's net obligation in respect of defined benefit pension plans and other post-employment benefit plans is calculated separately for each plan by estimating the amount of future benefits that employees have earned in return for their service in the current and prior periods. The benefit is discounted to determine the present value of it, and the fair value of any plan assets is deducted. A qualified actuary, using the projected unit credit method, performed the calculation.

The discount rate used in the actuarial valuations is determined with a reference to long-term yields of AA-rated corporate bonds. In countries where no deep market for such bonds exists, market yield of government bonds is used.

The Group has the following plans in place: defined benefit pension plans, post-employment medical plans, severance plans and other long-term employee benefit plans. Pension plans in place are both funded and unfunded. The plan asset funds are kept predominantly in a form of insurance contracts.

The parameters of the pension promises vary from country to country; there are both plans open and closed to new entrants, contributory as well as non-contributory.

Post-employment medical plans cover the medical expenses of retirees in Belgian companies. They are non-contributory and closed to new entrants. The expected costs of these benefits are accrued over the period of employment using the same accounting methodology as used for defined benefit pension plans.

Severance plans cover employees of Austrian companies who started their service before 1 January 2003. They are entitled to receive severance payments upon termination of their employment or on reaching their pension age. Furthermore the Group operates severance plans in France and Italy. The benefits depend on the years of service and remuneration level. These plans are non-contributory and unfunded.

Other long-term employee benefits include jubilee schemes and pre-pension benefits. Jubilee schemes entitle the members to benefits in form of a payment and/or additional paid holiday when reaching a defined time of service. These plans are non-contributory and unfunded.

All actuarial gains and losses relating to post-employment benefit plans are recognised in other comprehensive income. Actuarial gains and losses related to other long-term services are recognised in the income statement.

Past-service costs are recognised immediately in the income statement.

Fair value
Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either in the principal market for the asset or liability, or in the absence of a principal market, in the most advantageous market for the asset or liability.

The principal or the most advantageous market must be accessible to the Group. The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest. A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period. For the purpose of fair value disclosures, the Group has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained in note 27.

Financial instruments
Purchases or sales of financial assets are recognised on the trade date, which is the date that the Group commits to purchase or sell the assets.

Derivative financial instruments
In accordance with its treasury procedure, the Group uses derivative financial instruments only to reduce its exposure to foreign exchange, interest rate and commodity risks arising from operational, financing and investment activities. Derivatives that do not qualify for hedge accounting are accounted for as trading instruments.

Derivative financial instruments are recognised at fair value. Recognition of any resulting gain or loss depends on the nature of the item being hedged.

The fair value of interest rate swaps is the estimated amount that the Group would receive or pay to terminate the swap at the balance sheet date, taking into account current interest rates and the current creditworthiness of the swap counterparties. The fair value of forward exchange contracts is their quoted market price at the balance sheet date, being the present value of the quoted forward price. The fair value of feedstock and energy contracts is their quoted market price at the balance sheet date.

Cash flow hedges
Where derivative financial instruments are designated as a hedge of the variability in cash flows attributable to a recognised liability or receivable, a firm commitment or a highly probable forecasted transaction, the effective part of any gain or loss on the derivative financial instrument is recognised in other comprehensive income. When realised, the cumulative gains or losses are removed from the hedging reserve and recognised in the income statement together with the hedged transaction. When the firm commitment or forecasted transaction results in the recognition of a non-financial asset or liability, the cumulative gains or losses are removed from hedging reserve and included in the initial measurement of the asset or liability.

The ineffective parts of any unrealised gains or losses are recognised in the income statement immediately. Any gain or loss arising from changes in the time value of the derivative financial instruments is excluded from the measurement of hedge effectiveness and is recognised in the income statement immediately.

When a hedging instrument or hedge relationship is terminated, but the hedged transaction is still expected to occur, the cumulative gain or loss at that point remains in equity and is recognised in accordance with the above policy when the transaction occurs. If the hedged transaction is no longer probable, the cumulative unrealised gain or loss in equity is recognised in the income statement immediately.

Hedge of monetary assets and liabilities
When derivative financial instruments are used to hedge the foreign exchange exposure of a recognised monetary asset or liability, no hedge accounting is applied, and any gain or loss on the hedging instruments is recognised in the income statement.

Fair value hedges
Where derivative instruments are designated as a hedge of an exposure to changes in fair value of a recognised asset or liability, the hedged item is adjusted for changes in fair value attributable to the risk being hedged with the corresponding entry in the income statement. When an unrecognised firm commitment is designated as a hedged item, the subsequent cumulative change in the fair value of the firm commitment attributable to the hedged risk is recognised as an asset or liability with a corresponding gain or loss recognised in the income statement. Gains or losses from re-measuring the associated derivative are also recognised in the income statement.

Hedge of net investment in foreign operation
Where a foreign currency liability hedges a net investment in a foreign operation and fulfils the requirements for hedge accounting, foreign exchange differences arising on translation of the liability are recognised in other comprehensive income.

Offsetting of financial instruments
Financial assets and financial liabilities can be offset and the net amount is reported in the consolidated statement of financial position if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, or to realise the assets and settle the liabilities simultaneously.

Other investments and other assets
Other investments and other assets include available for sale assets and are valued at fair value or at cost if fair value cannot be reliably estimated. The changes of available for sale assets in their fair value are recognised in other comprehensive income.

Trade and other receivables
Receivables are stated at amortised cost, less impairment losses. For short-term receivables, it is assumed that the effect of the discounting is not material. Therefore, Borealis deems the carrying value to be equal to fair value.

An impairment is made in case of indications that debtors are experiencing significant financial difficulties and where a decrease of future cash flows is expected. The carrying value of the asset is reduced through the use of an allowance account and the loss is recognised in the income statement. Receivables are written off when there is no realistic prospect of future recovery.

Trade and other payables
Payables are recorded at fair value and subsequently measured at amortised cost.

Loans and borrowings
Interest-bearing borrowings are recognised initially at fair value, less attributable transaction costs. Subsequent to initial recognition, interest-bearing borrowings are stated at amortised cost applying the effective interest method.

Cash flow statement

The consolidated cash flow statement shows the Group's cash flow provided by/used in operating, investing and financing activities. The cash flow from operating activities is calculated using the direct method. The cash flow from investing activities comprises payments made on the purchase and disposal of operations and the purchase and disposal of tangible and intangible assets. The cash flow from financing activities comprises changes in the Group's share capital, as well as loans, repayments of principals of interest-bearing debt and payment of dividends. Cash and cash equivalents consist of cash and bank deposits.

Segment reporting

A segment is a distinguishable component of the Group that is engaged in business activities from which it may earn revenues and incur expenses, whose operating results are regularly reviewed by the Executive Board (chief operating decision maker) and are taken to make decisions about resources to be allocated to the segment and assess its performance and for which separate financial information is available (reportable segment).

Moreover, a geographical segment is based on risks and rewards of a particular economic environment (geographic region). The Executive Board concluded to show next to the reportable segment also the net sales by the geographical segment.

The Executive Board has identified two reportable segments:

Polyolefins – this part of the business manufactures and markets polyolefin products. Although the Automotive, Energy, Consumer Products, Pipe and New Business Development operating segments provide separate reports on their performance, they have been aggregated into one reportable segment, as they have similar long-term growth rates and raw material economics, as well as demonstrate similarities in other aspects required by the Standard.

Base chemicals – Borealis produces and markets a wide range of base chemicals, such as melamine, phenol, acetone, ethylene, propylene, fertilizer and technical nitrogen. The operating segments Hydrocarbons & Energy, Melamine and Fertilizer provide separate reports on their performance, but based on their similar economic characteristics, being similar average EBIT margins, growth rates and raw material economics, next to similarities in other aspects as required by the Standard, they have been aggregated into one reporting segment.

All other segments – Corporate, Middle East and Asia and Research & Development are not reportable segments, as they are either not separately included in the reports provided to the Executive Board or contain only results of the associated companies. The results of these operations are included in the Non-Allocated column (see note 1).

New accounting standards

New and amended standards/interpretations adopted by Borealis

In 2016, the following accounting standards and interpretations became effective and have been adopted by Borealis, whereas effective means effective for annual periods beginning on or after that date (as endorsed by the EU):

Standards/interpretations		IASB effective date	EU effective date
Amended standards and interpretations			
IAS 19	Defined Benefit Plans: Employee Contributions	1 July 2014	1 February 2015
Misc.	Annual Improvements to IFRSs 2010–2012 Cycle	1 July 2014	1 February 2015
IAS 16, 38	Clarification of Acceptable Methods of Depreciation and Amortisation	1 January 2016	1 January 2016
IAS 16, 41	Bearer Plants	1 January 2016	1 January 2016
IFRS 11	Accounting for Acquisitions of Interests in Joint Operations	1 January 2016	1 January 2016
Misc.	Annual Improvements to IFRSs 2012–2014 Cycle	1 January 2016	1 January 2016
IAS 1	Disclosure Initiative	1 January 2016	1 January 2016
IAS 27	Equity Method in Separate Financial Statements	1 January 2016	1 January 2016
IFRS 10, 12, IAS 28	Investment Entities – Applying the Consolidation Exception	1 January 2016	1 January 2016

The amendments to IAS 19 Employee Benefits: Employee Contributions apply to contributions from employees or third parties to defined benefit plans. The objective of the amendments is to simplify the accounting for contributions that are independent of the number of years of employee service, for example, employee contributions that are calculated according to a fixed percentage of salary.

The IASB's annual improvements process deals with non-urgent, but necessary clarifications and amendments to IFRS. The annual improvements to IFRSs 2010–2012 cycle clarifies IFRS 2 Share-based Payment, IFRS 3 Business Combinations, IFRS 8 Operating Segments, IAS 16 Property, Plant and Equipment, IAS 38 Intangible Assets and IAS 24 Related Party Disclosures.

The amendments to IAS 16 and IAS 38 Clarification of Acceptable Methods of Depreciation and Amortisation clarify that the use of revenue-based methods to calculate the depreciation of an asset is not appropriate because revenue generated by an activity generally reflects factors other than the consumption of the economic benefits embodied in the asset.

The amendments to IAS 16 and IAS 41 Bearer Plants change the financial reporting for bearer plants, such as grape vines, rubber trees and oil palms, which now should be accounted for in the same way as property, plant and equipment.

The amendment to IFRS 11 Accounting for Acquisitions of Interests in Joint Operations gives new guidance on how to account for the acquisition of an interest in a joint operation that constitutes a business.

The IASB's annual improvements process deals with non-urgent, but necessary clarifications and amendments to IFRS. The annual improvements to IFRSs 2012–2014 cycle clarifies IFRS 5 Non-current Assets Held for Sale and Discontinued Operations, IFRS 7 Financial Instruments: Disclosures, IAS 19 Employee Benefits and IAS 34 Interim Financial Reporting.

The amendments to IAS 1 Presentation of Financial Statements are designed to further encourage companies to apply professional judgement in determining what information to disclose in their financial statements. For example, the amendments make clear that materiality applies to the whole of financial statements and that the inclusion of immaterial information can inhibit the usefulness of financial disclosures. Furthermore, the amendments clarify that companies should use professional judgement in determining where and in what order information is presented in the financial disclosures.

The amendment to IAS 27 Equity Method in Separate Financial Statements allows entities to use the equity method to account for investments in subsidiaries, joint ventures and associates in their separate financial statements.

The amendments to IFRS 10, IFRS 12 and IAS 28 Investment Entities: Applying the Consolidation Exception clarify the requirements when accounting for investment entities.

The adoption of the new and amended standards and interpretations stated above is included in the consolidated financial statements. This did not have a material impact on the financial position or performance of Borealis.

New and amended standards/interpretations not yet effective

A number of new standards and amendments to standards are issued but not yet effective (as adopted by the EU). Borealis will adopt the standards on the effective date. Effective means effective for annual periods beginning on or after that date (as endorsed by the EU).

Standards/interpretations		IASB effective date	EU effective date
New standards and interpretations			
IFRS 9	Financial Instruments	1 January 2018	1 January 2018
IFRS 14	Regulatory Deferral Accounts	1 January 2016	will not be endorsed*
IFRS 15	Revenue from Contracts with Customers including amendments to IFRS 15: Effective date of IFRS 15	1 January 2018	1 January 2018
IFRS 16	Leases	1 January 2019	
Amended standards and interpretations			
IFRS 10, IAS 28	Sale or Contribution of Assets between an Investor and its Associate or Joint Venture	Deferred indefinitely	
IAS 12	Recognition of Deferred Tax Assets for Unrealised Losses	1 January 2017	
IAS 7	Disclosure Initiative	1 January 2017	
IFRS 15	Clarifications to IFRS 15 Revenue from Contracts with Customers	1 January 2018	
IFRS 2	Classification and Measurement of Share-based Payment Transactions	1 January 2018	
IFRS 4	Applying IFRS 9 Financial Instruments with IFRS 4 Insurance Contracts	1 January 2018	
Misc.	Annual Improvements to IFRS Standards 2014–2016 Cycle	1 January 2018/ 1 January 2017	
IFRIC 22	IFRIC Interpretation 22 Foreign Currency Transactions and Advance Consideration	1 January 2018	
IAS 40	Transfers of Investment Property	1 January 2018	

*The European Commission has decided not to launch the endorsement process of this interim standard and to wait for the final standard.

IFRS 9 replaces the existing guidance in IAS 39 Financial Instruments: Recognition and Measurement. IFRS 9 includes revised guidance on the classification and measurement of financial instruments, a new expected credit loss model for calculating impairment on financial assets and new general hedge accounting requirements. It also carries forward the guidance on recognition and derecognition of financial instruments from IAS 39. While Borealis has yet to undertake a detailed assessment of the classification and measurement of financial assets, the Group does not expect the new guidance to have a significant impact on the classification and measurement of its financial assets. There will be no impact on the Group's accounting for financial liabilities, as the new requirements only affect the accounting for financial liabilities that are designated at fair value through profit or loss and the Group does not have any such liabilities, except for derivative financial instruments, where no changes are expected either. The new impairment model requires the recognition of impairment provisions based on expected credit losses (ECL) rather than only incurred credit losses as is the case under IAS 39. It applies to financial assets classified at amortised cost, debt instruments measured at fair value through other comprehensive income, contract assets under IFRS 15 Revenue from Contracts with Customers, lease receivables, loan commitments and certain financial guarantee contracts. While the Group has not yet undertaken a detailed assessment of how its impairment provisions would be affected by the new model, based on the amount of financial assets in scope and the credit loss experience, it may result in an earlier recognition of credit losses with immaterial effects.

IFRS 14 Regulatory Deferral Accounts is designed as a limited scope standard to provide an interim, short-term solution for rate-regulated entities that have not yet adopted International Financial Reporting Standards (IFRS). Its purpose is to allow rate-regulated entities adopting IFRS for the first-time to avoid changes in accounting policies in respect of regulatory deferral accounts. This standard is not expected to have any impact on the Group's consolidated financial statements.

The new standard IFRS 15 Revenue from Contracts with Customers introduces the core principle that revenue must be recognised when the goods or services are transferred to the customer at the transaction price. Any bundled goods or services that are distinct must be separately recognised, and any discounts or rebates on the contract price must generally be allocated to the separate elements. When the consideration varies for any reason, minimum amounts must be recognised if they are not at significant risk of reversal. Costs incurred to secure contracts with customers have to be capitalised and amortised over the period when the benefits of the contract are consumed. Borealis runs an evaluation project to assess the impact of the new standard. At this stage, Borealis expects that the new standard will not have significant impact on the consolidated financial statements, as the business model of the entity does not contain the core topics that IFRS 15 intends to address. Borealis will conduct a more detailed assessment of the impact of the new disclosure requirements over the next six months.

The IASB issued IFRS 16 Leases in January 2016. IFRS 16 sets out the principles for the recognition, measurement, presentation and disclosure of leases. The new standard brings most leases on-balance for lessees under a single model, eliminating the distinction between operating and finance leases. Lessor accounting remains largely unchanged and the distinction between operating and finance leases is retained. The standard will affect primarily the accounting for Borealis' operating leases. As at the reporting date, Borealis has non-cancellable operating lease commitments of EUR 238,662 thousand (see note 28). However, Borealis has not yet determined to what extent these commitments will result in the recognition of an asset and a liability for future payments and how this will affect the Group's profit and classification of cash flows. Some of the commitments may be covered by the exception for short-term and low-value leases and some commitments may relate to arrangements that will not qualify as leases under IFRS 16.

The amendments to IFRS 10 and IAS 28 Sale or Contribution of Assets between an Investor and its Associate or Joint Venture address an inconsistency between the requirements in IFRS 10 and those in IAS 28 in dealing with the sale or contribution of assets between an investor and its associate or joint venture. As a consequence, a full gain or loss is recognised when a transaction involves a business and a partial gain or loss is recognised when a transaction involves assets that do not constitute a business, even if these assets are held by a subsidiary. In December 2015, the IASB postponed the effective date of this amendment indefinitely pending the outcome of its research pipeline project on the equity method of accounting. Borealis does not expect a material impact of this amendment on the consolidated financial statements.

The IASB issued amendments to IAS 12 Income Taxes in January 2016. The amendments, Recognition of Deferred Tax Assets for Unrealised Losses, clarify how to account for deferred tax assets related to debt instruments measured at fair value. Borealis does not expect a material impact of this amendment on the consolidated financial statements.

The IASB has published amendments to IAS 7 Statement of Cash Flows in January 2016. The amendments are intended to clarify IAS 7 to improve information provided to users of financial statements about an entity's financing activities. Provided the EU endorsement Borealis will complement its financial statements with additional disclosures on changes in liabilities arising from financing activities (as per EU effective date).

On 12 April 2016, the IASB issued amendments to IFRS 15, clarifying some requirements and providing additional transitional relief for companies that are implementing the new Standard. The amendments clarify how to identify a performance obligation in a contract; how to determine whether a company is a principal or an agent and how to determine whether the revenue from granting a licence should be recognised at a point in time or over time. In addition to the clarifications, the amendments include two additional reliefs to reduce cost and complexity for a company when it first applies the new Standard. At this stage, Borealis expects that the new standard will not have significant impact on the consolidated financial statements.

The objective of the amendments to IFRS 2 is to provide guidance on three issues: the effects of vesting conditions on the measurement of a cash-settled share-based payment, the classification of share-based payment transactions with net settlement features for withholding tax obligations and the accounting for a modification to the terms and conditions of a share-based payment that changes the classification of the transaction from cash-settled to equity-settled. This standard is not expected to have any impact on the Group's consolidated financial statements.

The amendments to IFRS 4 Applying IFRS 9 Financial Instruments with IFRS 4 insurance Contracts address the concerns related to the misalignment of the effective

dates of IFRS 9 and the future insurance contracts standard. Borealis does not expect a material impact of this amendment on the consolidated financial statements.

The IASB's annual improvements process deals with non-urgent, but necessary clarifications and amendments to IFRS. The annual improvements to IFRSs 2014–2016 cycle clarifies IFRS 1 First-time Adoption of International Financial Reporting Standards, IFRS 12 Disclosure of Interests in Other Entities and IAS 28 Investments in Associates and Joint Ventures. Borealis does not expect a material impact of this amendment on the consolidated financial statements.

IFRIC 22 clarifies which exchange rate to use when reporting revenue transactions denominated in a foreign currency in accordance with IAS 21 The Effects of Changes in Foreign Exchange Rates, in cases where a customer has paid for the goods or services in advance and that payment is not refundable. At this stage, Borealis is not able to estimate the impact of the new standard on the consolidated financial statements.

The amendments to IAS 40 Transfers of Investment Property address the question whether property under construction can be transferred from inventory to investment property when there is an evident planned change in use. This standard is not expected to have any impact on the Group's consolidated financial statements.

Amounts

All amounts are in EUR thousand unless otherwise stated. The amounts in parentheses relate to the preceding year.

1. Segment reporting

	Polyolefins		Base Chemicals		Non-Allocated		Consolidated	
EUR thousand	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Net sales by business								
Total sales	4,812,592	5,056,181	5,010,127	5,711,170	211,288	126,097	10,034,007	10,893,448
Group internal sales	-	-	(2,816,431)	(3,193,503)	-	-	(2,816,431)	(3,193,503)
	4,812,592	**5,056,181**	**2,193,696**	**2,517,667**	**211,288**	**126,097**	**7,217,576**	**7,699,945**

Prices for Group inter-segment sales are based on monthly market prices for ethylene and propylene contracts.

Result								
Operating profit	719,561	493,388	402,206	439,817	(183,560)	(214,768)	938,207	718,437
Net result in associated companies and joint ventures					487,347	469,027	487,347	469,027
Net financial items					(77,475)	(69,175)	(77,475)	(69,175)
Taxes on income					(240,694)	(130,311)	(240,694)	(130,311)
Non-controlling interest					1,615	(94)	1,615	(94)
Net profit for the year attributable to equity holders of the parent							**1,109,000**	**987,884**
Other information								
Segment assets	3,180,960	2,882,479	2,361,010	2,375,853	4,389,762	4,002,276	9,931,732	9,260,607
thereof Austria	1,772,938	1,504,817	1,141,653	1,192,443	4,084,891	3,781,264	6,999,482	6,478,524
Segment liabilities	-	-	-	-	3,417,374	3,545,080	3,417,374	3,545,080
Investment in tangible assets	71,759	99,386	243,630	231,025	17,701	5,809	333,090	336,219
Depreciation and amortisation	149,647	144,029	197,678	145,646	52,401	57,826	399,726	347,502

Over 90% of the above relate to segment EU countries.

Net sales by geographic segment (by delivery destination)								
EU countries	3,399,199	3,600,853	1,942,921	2,240,583	116,926	36,941	5,459,046	5,878,377
thereof Austria	147,215	178,167	138,826	202,993	31,022	22,565	317,063	403,725
Non-EU countries in Europe	556,010	566,307	72,975	74,158	3,042	2,052	632,027	642,517
USA	162,019	132,693	28,979	28,878	1,505	(706)	192,503	160,864
Middle East and Asia	310,306	328,858	51,723	73,010	89,815	87,361	451,844	489,229
Other regions	385,058	427,470	97,098	101,038	-	450	482,156	528,959
	4,812,592	**5,056,181**	**2,193,696**	**2,517,667**	**211,288**	**126,097**	**7,217,576**	**7,699,945**

2. Research and development

At the end of the year, 504 FTEs were engaged in research and development, compared with 511 in 2015. The total cost of these activities amounted to EUR 114,303 thousand (EUR 114,383 thousand). Internal development costs amounting to EUR 29,157 thousand (EUR 29,134 thousand) were capitalised as intangible assets.

3. Intangible assets

	Goodwill		Development costs		Capitalised software		Others	
EUR thousand	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Cost								
As of 1 January	126,518	127,575	298,837	265,269	76,881	63,462	199,032	196,229
Exchange adjustments	0	0	0	0	54	78	-800	319
Additions	0	0	29,765	33,568	6,923	7,138	31,217	37,780
Changes in consolidation scope	20,746	-1,057	0	0	259	0	0	0
Disposals	0	0	0	0	-374	-220	-47,179	-35,621
Transfers	0	0	-916	0	4,937	6,423	939	325
	147,264	**126,518**	**327,686**	**298,837**	**88,680**	**76,881**	**183,209**	**199,032**
Accumulated amortisation								
As of 1 January	0	0	176,615	156,278	49,925	41,122	110,627	103,107
Exchange adjustments	0	0	0	0	22	34	-162	-73
Changes in consolidation scope	0	0	0	0	253	0	0	0
Disposals	0	0	0	0	-271	-220	-3,229	-4,580
Amortisation and impairment	0	0	14,249	20,337	10,286	8,989	13,560	12,173
	0	**0**	**190,864**	**176,615**	**60,215**	**49,925**	**120,796**	**110,627**
Carrying value as of 31 December	**147,264**	**126,518**	**136,822**	**122,222**	**28,465**	**26,956**	**62,413**	**88,405**

The goodwill arising from business combinations in 2016 refers to the acquisition of mtm plastics GmbH and mtm compact GmbH (together "mtm", see note 6).

The Group tests whether goodwill has suffered any impairment need on an annual basis. The recoverable amount of a cash-generating unit (CGU) is determined based on value in use calculations which require the use of assumptions. The calculations use cash flow projections based on financial budgets covering a five-year period. Key assumptions of the forecasted cash flows are volumes sold and underlying industry margins. These are estimated on industry reports and experience. Cash flows beyond the five-year period are extrapolated using the estimated growth rates stated below. These growth rates are consistent with forecasts included in industry reports specific to the industry in which each CGU operates. For all impairment tests performed, the recoverable amount was based on the value in use, except for the CGU recyclates, as the purchase price of mtm is considered to correspond to the CGU's fair value in 2016.

The allocated goodwill for each CGU as well as parameters influencing the calculation of the value in use can be seen in the following table:

	Goodwill impairment test parameters 2016				
Cash generating unit	**Polyethylene**	**Fertilizer & Melamine**	**Polypropylene**	**Recyclates**	**Brazil**
Allocated goodwill in EUR thousand	50,687	47,375	22,000	20,746	6,456
Post tax discount rate	8.6%	9.5%	8.6%	n/a	11.5%
Growth rate	1.2%	1.5%	1.3%	n/a	3.4%

	Goodwill impairment test parameters 2015				
Cash generating unit	**Polyethylene**	**Fertilizer & Melamine**	**Polypropylene**	**Recyclates**	**Brazil**
Allocated goodwill in EUR thousand	50,687	47,375	22,000	n/a	6,456
Post tax discount rate	10.1%	9.8%	10.1%	n/a	10.1%
Growth rate	1.5%	1.5%	1.5%	n/a	1.5%

Post tax discount rates reflect specific risks relating to the relevant segments and the countries in which they operate.

Long-term growth rate is the weighted average growth rate used to extrapolate cash flows beyond the budget period. The rates are consistent with forecasts included in industry reports.

Additionally to the parameters above, sensitivities regarding discount rates and feedstock prices are taken into consideration. None of the calculated cases showed need for an impairment.

Other intangible assets contain mainly patents and licences as well as emission rights.

Additions arising from internal development amounted to EUR 29,157 thousand (EUR 29,134 thousand). Intangible assets received by the way of government grant as allowances for emissions (EU Emissions Trading System) amounted to EUR 22,406 thousand (EUR 30,266 thousand). No additional emission rights were acquired from external parties. An equivalent of EUR 24,137 thousand (EUR 29,699 thousand) was returned to the respective EU ETS regulatory authorities for the emitted emissions in 2015. The carrying value of other intangible assets is in line with their fair value.

4. Tangible assets

EUR thousand	Production plants		Machinery and equipment		Construction in progress	
	2016	2015	2016	2015	2016	2015
Cost						
As of 1 January	6,318,613	6,087,235	143,448	142,479	244,509	255,058
Exchange adjustments	-65,134	30,468	-303	105	-7,087	2,461
Additions	133,744	171,143	3,005	1,650	219,566	173,295
Changes in consolidation scope	13,152	0	1,155	0	2,410	0
Disposals	-38,340	-148,235	-1,739	-2,341	0	0
Transfers	179,435	178,002	4,553	1,555	-188,949	-186,305
	6,541,470	**6,318,613**	**150,119**	**143,448**	**270,449**	**244,509**
Accumulated depreciation						
As of 1 January	3,730,870	3,553,123	113,183	107,173	0	0
Exchange adjustments	-47,207	21,119	-319	136	0	0
Changes in consolidation scope	2,378	0	783	0	0	0
Disposals	-35,738	-141,328	-1,553	-2,173	0	0
Depreciation and impairment	354,253	297,956	7,378	8,047	0	0
	4,004,556	**3,730,870**	**119,472**	**113,183**	**0**	**0**
Carrying value as of 31 December	**2,536,914**	**2,587,743**	**30,647**	**30,265**	**270,449**	**244,509**

The figures for production plants include capitalised finance leases with a net value of EUR 800 thousand (EUR 375 thousand) comprising acquisition costs of EUR 3,413 thousand (EUR 2,613 thousand) and accumulated depreciation of EUR 2,613 thousand (EUR 2,238 thousand). The lease obligation is included in loans and borrowings (see note 19).

In 2016, borrowing costs amounting to EUR 2,449 thousand (EUR 3,120 thousand) have been capitalised, using a 3.0% (2.8%) interest rate. There were no material additions to tangible assets that were not paid at the end of the reporting period.

Major projects advanced in 2016 relate to the enhanced ethane cracking & storage construction in Stenungsund, Sweden, the upgrade and revamp of four cracker furnaces in Stenungsund, Sweden, and the turnaround project in Ottmarsheim, France.

At 31 December 2016, Borealis' contractual commitments amounted to EUR 110,297 thousand (EUR 96,603 thousand) for the acquisition of tangible assets (see Note 20).

Assets pledged

Assets pledged amounted to EUR 14,540 thousand (EUR 13,843 thousand) and relate to tangible assets. The liabilities covered by the above assets amounted to EUR 4,899 thousand (EUR 4,796 thousand) at the end of the year.

5. Depreciation, amortisation and impairment

Depreciation, amortisation and impairment are allocated as follows in the income statement.

EUR thousand	2016	2015
Production costs	328,148	271,672
Sales and distribution costs	11,718	12,528
Administration costs	25,453	26,027
Research & development costs	34,407	37,275
Total	**399,726**	**347,502**

The 2016 depreciation charge includes an impairment of EUR 39,193 thousand (EUR 0 thousand) tangible assets. The main part of the impairment is for production lines and auxiliary equipment, included in the production costs of the Base Chemicals segment, as a result of a decision to decommission an Urea production plant in Grandpuits, France. The fixed assets were written down to the value in use of EUR 0 thousand, using a weighted average cost of capital of 10% (10%).

The depreciation charge further includes an impairment of EUR 1,507 thousand (EUR 4,767 thousand) of intangible assets for which the carrying value exceeds the present value of future cash flows. The impairment of intangible assets is related to the non-allocated segment and is included in research & development costs.

6. Business Combinations

Borealis has made one acquisition in 2016, which is described below:

6.1. Acquisition of mtm plastics GmbH and mtm compact GmbH

On 30 June 2016, Borealis (via Borealis AG, Vienna, Austria) acquired the shares of mtm plastics GmbH, Niedergebra, Germany and mtm compact GmbH, Niedergebra, Germany (together "mtm") from TyBB Beratungs- und Beteiligungs GmbH, Pergo Services GmbH and pla-con Systeme Beratungs- und Beteiligungs GmbH (the sellers).

As an industry leader, Borealis is committed to discovering and realising the opportunities presented by the circular economy. By fully acquiring mtm, Borealis took its engagement in the circular economy to the next level.

mtm plastics processes secondary raw materials into high-quality regrinds and compounds for further plastics processing. The procedure includes the reception, processing and recycling of the used waste plastics as well as the sale and the distribution of the output materials at a later stage. mtm plastics' production facilities are in Niedergebra, Thuringia (Germany).

mtm compact focuses on producing hard plastic pellets which are generally used as a reduction input material in the production of steel in blast furnaces. mtm compact has its production facilities in Fürstenwalde, Brandenburg (Germany).

The acquisition has been accounted for using the acquisition method. The acquisition date fair value of the acquired assets and liabilities is preliminary in the items tangible and intangible assets, linked to that also deferred tax assets, and may be adjusted as additional information is obtained. The consolidated financial statements include the results of mtm for the six-month period from the acquisition date.

Assets acquired and liabilities assumed

The fair value of the identifiable assets and liabilities of mtm as at the date of acquisition were:

EUR thousand	Fair value recognised on acquisition	Note
Assets		
Tangible and intangible assets	7,571	3, 4
Other investments	39	
Deferred tax assets	834	9
Inventories	2,560	
Trade receivables	1,317	
Other current receivables and other assets	518	
Cash and cash equivalents	331	
Total assets acquired	**13,170**	
Liabilities		
Non-current provisions	403	14
Non-current loans and liabilities	1,750	
Trade payables	1,554	
Other current liabilities	2,915	
Total liabilities	**6,622**	
Total identifiable net assets at fair value	**6,548**	
Total purchase consideration	27,294	
Goodwill arising on acquisition	**20,746**	3
Percentage acquired	**100%**	

The total acquisition costs of 100% of the share capital of mtm comprised an initial cash payment in June 2016 of EUR 18,000 thousand, a subsequent increase of EUR 603 thousand in October 2016, contingent considerations of EUR 8,691 thousand and costs of EUR 238 thousand directly attributable to the acquisition. The cash acquired with this acquisition amounted to EUR 331 thousand, resulting in net cash outflow on the acquisition of EUR 18,272 thousand in 2016. The transaction costs have been expensed and are included in administrative expenses in the income statement and are part of operating cash flows in the statement of cash flows.

Borealis agreed with the sellers to transfer this additional consideration up to a maximum amount of EUR 8,000 thousand to the sellers if the agreed earnings target as of 31 December 2016 is met. The additional consideration shall be transferred to the sellers no later than 30 June 2017. Borealis assumed to achieve the earnings target and accounted the contingent consideration liability at the nominal value, as the liability is short-term. As of 31 December 2016, the performance of mtm showed that the preliminary earnings did not fully reach the earnings target. Therefore an amount of EUR 1,311 thousand has been recognised in the income statement.

A second contingent consideration liability in the amount of EUR 691 thousand has been recognised as part of the purchase consideration, which has to be paid to the sellers, if a claim regarding subsidies will be successful. This amount has to be paid if the claim will materialise within 42 months after the acquisition date.

The fair value of the trade receivables acquired through the business combination amounted to EUR 1,317 thousand, and have fully been collected during the year. From the date of the acquisition until the year end, mtm has contributed EUR 7,168 thousand of revenue and EUR 1,043 thousand to the net result of the Group. If the combination had taken place at the beginning of the year, the revenue contribution from mtm would have been EUR 17,952 thousand and the contribution to the net result would have been EUR 1,536 thousand.

The goodwill of EUR 20,746 thousand comprises the value of the expected synergies and other benefits from combining the assets and activities of mtm with those of Borealis and has been allocated to the cash generating unit recyclates. None of the recognised goodwill is deductible for income tax purposes.

6.2. Other changes

In 2016, three new 100% subsidiaries were established: Borealis US Holdings LLC, Port Murray, New Jersey, United States of America, Borealis RUS LLC, Moscow, Russia, and Borealis L.A.T Greece Single Member P.C., Athens, Greece. Furthermore, Poliolefinas Borealis España S.A., Barcelona, Spain, was renamed to Borealis Quimica España S.A.

7. Investments in associated companies and joint ventures

	Shares in associated companies and joint ventures	
EUR thousand	**2016**	**2015**
Cost		
As of 1 January	332,398	332,398
Investments	5,802	0
As of 31 December	338,200	332,398
Adjustments		
As of 1 January	2,952,089	2,305,796
Exchange adjustments	139,125	300,588
Dividends received	-14,248	0
Capital repayments of associated companies	-129,755	-123,322
Net result of associated companies and joint ventures, after tax	487,347	469,027
As of 31 December	3,434,558	2,952,089
Carrying value as of 31 December	**3,772,758**	**3,284,487**

The Group presents the investments in associated companies and joint ventures as follows:

EUR thousand	2016	2015
Material associated company (Abu Dhabi Polymers Company Limited (Borouge))	3,704,084	3,236,819
Non-material associated companies	55,610	40,031
Non-material joint ventures	13,064	7,637
Carrying value as of 31 December	**3,772,758**	**3,284,487**

Investments in associated companies and joint ventures are part of the non-allocated segment.

The Group has the following investments in associated companies:

		Ownership in %	
Associates	**Country**	**2016**	**2015**
Abu Dhabi Polymers Company Limited (Borouge)	United Arab Emirates	40.00	40.00
Borouge Pte. Ltd.	Singapore	50.00	50.00
FEBORAN OOD***	Bulgaria	40.00	40.00
Kilpilahti Power Plant LTD*	Finland	20.00	-
Chemiepark Linz Betriebsfeuerwehr GmbH*	Austria	47.50	47.50
AZOLOR S.A.S.*	France	34.00	34.00
Société d'Intérêt Collectif Agricole par Actions Semplifiée de Gouaix (SICA de Gouaix)*	France	25.00	25.00
Société Industrielle Commerciale et Agricole de Maiziéres La Grande Paroisse S.A.S. (SICAM)*	France	33.99	33.99
Société Champenoise pour le Développement des Engrais Liquides S.A.S. (SCEL)**	France	-	49.98
Société d'Intérêt Collectif Agricole Laignes Agrifluides (SICA Laignes Agrifluides)*	France	49.90	49.90
Franciade Agrifluides S.A.S. (FASA)*	France	49.98	49.98
Société Centre Ouest Agrifluide S.A.S. (SOCOA)*	France	49.98	49.98

* Excluded from consolidation at equity due to immateriality
** Sold per 8 November 2016
*** Legal form of company changed from AD to OOD as of 2 December 2016 | Excluded from consolidation at equity due to immateriality

Abu Dhabi Polymers Company Limited (Borouge) is a leading provider of innovative, value creating plastic solutions for infrastructure, automotive and advanced packaging applications.

The following table illustrates the summarised full financial information of the Group's investment in Abu Dhabi Polymers Company Limited (Borouge):

EUR thousand	2016	2015
Current assets	2,155,660	1,747,909
Non-current assets	8,732,598	8,810,262
Current liabilities	-849,422	-611,021
Non-current liabilities	-768,458	-1,839,063
Equity	**9,270,378**	**8,108,087**
Share of Borealis	40%	40%
Share of net assets	3,708,151	3,243,235
Adjustments	-4,067	-6,416
Carrying value as of 31 December	**3,704,084**	**3,236,819**
Net sales	3,595,087	3,282,037
Net profit for the year	1,171,929	1,207,883
Other comprehensive income	0	0
Total comprehensive income	1,171,929	1,207,883
Dividends received by Borealis from Borouge	14,248	0
Repayments of shareholder loan received by Borealis from Borouge	129,755	123,322

Summary in financial information for non-material associates, adjusted for the ownership by the Group:

EUR thousand	2016	2015
Net profit for the year as share of ownership by the Group	15,551	-15,643
Other comprehensive income	0	0
Total comprehensive income as share of ownership by the Group	15,551	-15,643

The Group has the following investments in joint ventures:

		Ownership in %	
Joint ventures	**Country**	**2016**	**2015**
PetroPort Holding AB*	Sweden	50.00	50.00
GCA Holding LLC*	US	50.00	-
BTF Industriepark Schwechat GmbH*	Austria	50.00	50.00

* Excluded from consolidation at equity due to immateriality

8. Other investments and other non-current assets

Other investments mainly include interests in infrastructure companies in Germany and distribution and blending entities in France and Eastern Europe. The other non-current receivables and other non-current assets mainly consist of long-term deposits for statutory and tax requirements.

9. Taxation

EUR thousand	2016	2015
Taxes		
Income tax payable	130,650	46,924
Change in deferred tax	107,667	58,044
Adjustment to prior year's tax charge	2,377	25,343
Taxes on income	**240,694**	**130,311**

Calculation from tax expense at statutory rates to accounting tax expense at the effective group tax rate.

EUR thousand	2016		2015	
Tax expense at statutory rates (weighted average tax rate of the Group)	**25%**	**338,435**	**24%**	**273,239**
Tax effect of result in associated companies	-9%	-121,837	-10%	-117,257
Tax effect of permanent differences	0%	-2,533	0%	2,094
Adjustment of valuation allowance/re-assessment of unrecognised tax assets	2%	28,463	-4%	-53,150
Change due to changes in tax rates	0%	47	0%	42
Prior year's adjustments and other	0%	-1,881	2%	25,343
Taxes on income	**18%**	**240,694**	**12%**	**130,311**

	Balance sheet		Income statement	
EUR thousand	**2016**	**2015**	**2016**	**2015**
Deferred tax assets				
Tangible assets	20,279	4,647	15,632	179
Intangible assets	5,671	6,373	-702	-1,820
Adjusted depreciation for tax purposes	**25,950**	**11,020**		
Revaluation of cash flow hedges	3,266	15,285	5,236	-61
Net gain on hedge of a net investment	30,943	25,066	-4	0
Valuation of inventories for tax purposes	13,623	13,648	-25	4,702
Fair values compared to tax values	**47,832**	**53,999**		
Employee benefits	85,157	64,742	73	-6,174
Other provisions	9,603	5,036	4,567	1,070
Other assets and liabilities	13,250	8,015	5,235	-4,288
Other timing differences	**108,010**	**77,793**		
Losses available for offsetting against future taxable income	**60,756**	**187,587**	-126,541	-20,829
Netting with deferred tax liabilities	**-184,962**	**-155,552**		
Deferred tax assets	**57,586**	**174,847**	**-96,529**	**-27,221**

	Balance sheet		Income statement	
EUR thousand	**2016**	**2015**	**2016**	**2015**
Deferred tax liabilities				
Tangible assets	-234,011	-238,315	-2,511	9,557
Intangible assets	-47,433	-42,206	-5,227	-2,266
Accelerated/adjusted depreciation for tax purposes	**-281,444**	**-280,521**		
Revaluation of cash flow hedges	-5,187	0	-5,187	0
Valuation of inventories for tax purposes	-22,954	-21,603	-1,492	-1,773
Fair values compared to tax values	**-28,141**	**-21,603**		
Employee benefits	-691	-3,981	3,290	1,416
Other provisions	-20,949	-23,589	2,640	-9,590
Other assets and liabilities	-43,626	-41,194	-2,651	-28,167
Other timing differences	**-65,266**	**-68,764**		
Netting with deferred tax assets	**184,962**	**155,552**		
Deferred tax liabilities	**-189,889**	**-215,336**	**-11,138**	**-30,823**
Net tax asset/liability	**-132,303**	**-40,489**	**-107,667**	**-58,044**

In addition to the tax assets capitalised, the Group has unrecognised tax losses amounting to EUR 305,208 thousand (EUR 170,314 thousand) and unrecognised temporary differences amounting to EUR 58,557 thousand (EUR 111,880 thousand), where current forecasts indicate insufficient future profits, thus resulting in unrecognised tax assets of EUR 108,308 thousand (EUR 97,075 thousand).

EUR thousand	2016	2015
Deductible temporary differences	20,144	38,487
Tax losses carried forward	88,164	58,588
Total unrecognised net tax assets	**108,308**	**97,075**

The tax losses carried forward have no expiry date.

The recognised deferred tax assets are expected to be utilised against future profits based on internal projections in the relevant jurisdictions. The benefit arising from previously unrecognised tax losses, tax credits or temporary differences of prior periods amounts to EUR 0 thousand (EUR 62,679 thousand). Dividend payment to Borealis AG by its subsidiaries has no tax effect for Borealis AG. The temporary differences related to subsidiaries amount to EUR 114,992 thousand (EUR 112,876 thousand), for which no deferred tax liability has been recognised in accordance with IAS 12.39 Income Taxes.

Tax contingencies

Borealis Polymers Oy

On 30 December 2015, Borealis Polymers Oy (BPOY), a Finnish subsidiary of Borealis AG (BAG), received a re-assessment decision by the Finnish Tax Authority (FTA) regarding the year 2009. Based on this re-assessment decision the taxable income of BPOY has been increased by an amount of EUR 364,000 thousand; leading to an additional requested payment of EUR 152,500 thousand (EUR 94,640 thousand as additional income tax, EUR 57,860 thousand for penalties and interests).

The re-assessment decision relates to a license arrangement and other agreements entered into between BPOY and BAG in connection with the conclusion of a toll manufacturing agreement, whereby BPOY's contractual status was amended from that of a full-risk manufacturer to one of a toll manufacturer. The purpose of the toll manufacturing agreement was to align the contractual allocation of risks and responsibilities between BPOY and BAG with the commercial reality of a centralised group management structure of the Borealis group that had gradually evolved over the years.

The FTA claims that the license agreement concluded between BPOY and BAG on 19 December 2008 together with the other connected agreements should be considered a sales agreement constituting a transfer of intangibles (including goodwill).

Borealis appealed the re-assessment decision to the FTA's Board of Adjustment on 29 February 2016. The decision of the Board of Adjustment is expected for the first half of calendar year 2017. The management of Borealis believes that the FTA's decision is unjustified and is confident that the decision of the FTA will be reversed in one of the next phases of the proceeding.

Borealis Technology Oy

On 29 December 2014, the management of Borealis Technology Oy (TOY), a Finnish subsidiary of BAG, which owns intellectual property (IP) for both polyolefin and catalyst technologies, has received a re-assessment decision by the FTA regarding polyolefin IP. Based on this re-assessment the taxable income of TOY in the year 2008 has been increased by an amount of EUR 700,000 thousand. This led to a requested additional total payment of EUR 281,747 thousand, comprising taxes, late payment interest and penalties.

On 9 June 2015, TOY received from the FTA a second re-assessment decision requesting TOY to pay an additional amount of EUR 124,600 thousand in taxes, penalties and interest regarding catalyst IP. The claimed amount is based on an additional taxable income in the year 2010 of EUR 340,000 thousand.

Borealis believes both decisions are unfounded and has filed claims at the FTA's Board of Adjustment both for the re-assessment decision concerning the year 2008 (on 27 February 2015) and for the decision concerning the year 2010 (on 13 November 2015).

On 5 January 2017, the management of TOY received two decisions from the FTA's Board of Adjustment. The Board of Adjustment has confirmed the opinion of the FTA that the license arrangements, entered into between TOY and BAG in 2008 and 2010 should be considered as a sale of businesses.

The FTA's Board of Adjustment did however change the amount of taxable income of TOY downward from EUR 700,000 thousand to EUR 541,000 thousand for the year 2008 and from EUR 340,000 thousand to EUR 260,000 thousand for the year 2010 without providing any detail of the rationale for these downward adjustments.

Also the penalties were reduced from 5% of the tax base increase in the re-assessment decision to 3% of the tax base increase in the decisions of the FTA's Board of Adjustment.

This leads to a requested additional total payment of EUR 297,000 thousand compared to an additional payment of EUR 406,347 thousand earlier claimed by the FTA. This amount includes taxes, late payment interest and penalties.

Borealis believes that these decisions fail to properly apply Finnish and International tax law and do not adequately consider the relevant facts of the case. Borealis will therefore appeal this decision to the Helsinki Administrative Court. A suspension of payment has been obtained until the final decision.

Several other Borealis group companies are currently subject to tax audits performed by their respective tax authorities. In some of the audits, specific emphasis is put on business restructuring and transfer pricing. Management's opinion is that the company is in compliance with all applicable regulations. Given the preliminary nature of the proceedings, potential impacts, if any, cannot be currently reliably estimated.

10. Inventories

EUR thousand	2016	2015
Finished products	819,895	774,378
Raw materials and consumables	229,085	218,948
Total	**1,048,980**	**993,326**

The costs for the consumption of inventories recognised during the period in the income statement amounted to EUR 4,182,215 thousand (EUR 5,010,664 thousand), including impairment cost of EUR 18,339 thousand (EUR 17,710 thousand).

11. Share capital and contributions by shareholders

	Share capital		Contributions by shareholders	
EUR thousand	2016	2015	2016	2015
Balance as of 1 January	300	300	1,599,097	1,599,097
Capital increase (decrease)	0	0	0	0
Balance as of 31 December	**300**	**300**	**1,599,097**	**1,599,097**

The share capital of Borealis AG (parent company) amounts to EUR 300,000.00 (EUR 300,000.00) and is divided into 300,000 (300,000) shares, none of which have special voting rights.

The contributions by shareholders amounted to EUR 1,599,097 thousand (EUR 1,599,097 thousand).

Borealis AG is owned 61% by IPIC Beta Holdings GmbH, Wagramerstrasse 17–19, 1220 Vienna, Austria, 3% by International Petroleum Investment Company, IPIC Square, Muroor (4th) Road, PO Box 7528, Abu Dhabi, United Arab Emirates, 33% by OMV Refining & Marketing GmbH, Trabrennstrasse 6–8, 1020 Vienna, Austria, and 3% by OMV AG, Trabrennstrasse 6–8, 1020 Vienna, Austria. The ultimate controlling party until 18 January 2017 was International Petroleum Investment Company (IPIC) PJSC, Abu Dhabi, United Arab Emirates. Since 19 January 2017 Mubadala Investment Company PJSC, Abu Dhabi, United Arab Emirates is the ultimate controlling party. None of the shares have special rights. Distribution of dividends to its shareholders does not have any tax effect for Borealis AG.

The Group's objectives are to safeguard the entity's ability to continue as a going concern and to provide an adequate return to its shareholders. The Group monitors capital on the basis of the gearing ratio. This ratio is calculated as net interest-bearing debt, including subordinated loans divided by total equity. The Group's target is to keep the gearing ratio within a range of 40%–60% to meet the business needs of the Group. As per year-end the gearing stands at 10% (19%), significantly below the target range due to the strong performance of the Group.

12. Personnel

EUR thousand	2016	2015
Costs		
Salaries and wages	482,290	468,814
Costs of defined contribution plans	33,623	29,362
Costs of defined benefit plans and other long-term employee benefits	31,482	22,774
Social security costs	118,439	109,889
Other personnel expenses	21,294	19,007
Total	**687,128**	**649,846**

Costs of defined benefit plans and other long-term employee benefits are recognised in the production costs with EUR 19,451 thousand (EUR 14,093 thousand), sales and distribution costs with EUR 4,186 thousand (EUR 3,002 thousand), costs of administration with EUR 5,374 thousand (EUR 3,868 thousand) and research & development costs with EUR 2,471 thousand (EUR 1,811 thousand).

Number of employees (FTEs*) by country as of 31 December	2016	2015
Austria	1,750	1,710
Belgium	1,081	1,063
Finland	883	895
France	908	905
Germany	391	282
Sweden	906	900
Other	575	511
Total	**6,494**	**6,266**

* FTEs: Full-time equivalent

The remuneration of former and current management included in personnel costs is shown in the table below:

EUR thousand	2016	2015
Salaries and wages management (Executive Board)	7,323	6,215
Pension and severance costs management (Executive Board)	552	530
Salaries and wages other key management	1,578	1,245
Pension costs other key management	86	87
Total	**9,539**	**8,077**

From the pension and severance costs of the Executive Board of EUR 552 thousand (EUR 530 thousand), EUR 0 thousand (EUR 0 thousand) were paid to former members of the Executive Board.

No loans were granted to current or former members of the Executive Board. The remuneration paid to members of the Supervisory Board amounted to EUR 856 thousand (EUR 856 thousand).

13. Employee benefits

Most Group companies operate post-employment and other long-term benefit plans. The forms and benefits vary with conditions and practices in the countries concerned. The plans include both defined contribution plans and plans that provide defined benefits based on employees' years of service and estimated salary at retirement. A summary is shown below.

EUR thousand	2016	2015
Pensions and other post-employment benefit plans		
Present value of funded defined benefit pension plans	352,217	255,200
Fair value of plan assets	-211,676	-156,563
Deficit of funded defined benefit pension plans	140,541	98,637
Present value of unfunded defined benefit pension plans	160,141	143,785
Total deficit of defined benefit pension plans	300,682	242,422
Medical plans	16,369	11,147
Severance plans	70,246	65,497
Pensions and other post-employment benefit plans	**387,297**	**319,066**
Other long-term employee benefits	32,978	31,349
Net liability recognised in the balance sheet	**420,275**	**350,415**

The Group operates defined post-employment benefit plans in the EU, UAE and Norway under broadly similar regulatory frameworks. These comprise pension plans, severance plans as well as post-retirement medical plans.

Defined benefit pension plans

The pension plans typically are final salary pension plans which provide benefits to members in the form of a guaranteed level of pension payable for life. The level of benefits provided depends on members' length of service and their salary in the final years leading up to retirement. The pensions in payment are generally updated in line with the retail price or a similar index. The benefit payments related to funded plans are from insurance funds, however, there are also a number of unfunded plans where the company meets the benefit payment obligation as it falls due.

The movement in the benefit pension obligation over the year is as follows:

EUR thousand	2016	2015
Defined benefit obligation as of 1 January	**398,985**	**462,213**
Net current service cost	13,524	14,773
Interest cost on defined benefit obligation	9,271	9,377
Past service cost	1,869	-411
Gains (-)/losses due to settlements	0	-45,947
Total amount recognised in profit or loss	24,664	-22,208
Gains (-)/losses due to changes in demographic assumptions	18,643	14,207
Gains (-)/losses due to changes in financial assumptions	35,935	-33,306
Experience gains (-)/losses	10,933	-7,766
Total amount recognised in other comprehensive income	65,511	-26,865
Actual benefits paid directly from the plan assets	-10,247	-10,456
Actual benefits paid directly by employer	-5,172	-5,904
Actual plan participants' contributions	16	41
Actual expenses/taxes and premiums paid	-1,169	-1,138
Other changes	43,609	1,420
Exchange rate gains (-)/losses	-3,839	1,882
Defined benefit obligation as of 31 December	**512,358**	**398,985**
Fair value of plan assets as of 1 January	**156,563**	**194,305**
Interest income on plan assets	3,578	3,865
Gains/losses (-) due to settlements	0	-40,690
Actual admin expenses paid	-260	-266
Total amount recognised in profit or loss	3,318	-37,091
Return on plan assets excluding amounts included in interest income	5,353	-2,719
Total amount recognised in other comprehensive income	5,353	-2,719
Actual benefits paid directly from the plan assets	-10,247	-10,456
Actual plan participants' contributions	16	41
Actual employer contributions	14,057	13,818
Actual taxes paid	-1,169	-1,138
Other changes	43,609	0
Exchange rate gains/losses (-)	176	-197
Fair value of plan assets as of 31 December	**211,676**	**156,563**

The plan assets in 2016 and 2015 consist mainly of insurance contracts.

Other changes contain pension liabilities and pension assets of newly included pension plans related to Belgian companies. These plans are operated as defined contribution plans, however due to a residual statutory indexation commitment of the employer, they qualify for defined benefits plans. In the low discount rate environment of 2016 their resulting net liability became significant for disclosure.

Medical plans

Medical plans reimburse certain medical costs for retired employees mainly in Belgium. The movement in the medical obligation over the year is as follows:

EUR thousand	2016	2015
Defined benefit obligation as of 1 January	**11,147**	**13,134**
Net current service cost	510	495
Interest cost on defined benefit obligation	250	261
Total amount recognised in profit or loss	760	756
Gains (-)/losses due to changes in demographic assumptions	-926	-924
Gains (-)/losses due to changes in financial assumptions	2,578	-575
Experience gains (-)/losses	2,929	-1,141
Total amount recognised in other comprehensive income	4,581	-2,640
Actual benefits paid directly by employer	-119	-103
Defined benefit obligation as of 31 December	**16,369**	**11,147**

Severance plans

Severance plans are operated in the Austrian group companies and cover employees who started their service before 1 January 2003. Furthermore the Group operates severance plans in France, Italy and UAE. The movement in the severance obligation over the year is as follows:

EUR thousand	2016	2015
Defined benefit obligation as of 1 January	**65,497**	**70,237**
Net current service cost	1,610	1,716
Past service cost	295	0
Interest cost on defined benefit obligation	1,469	1,389
Total amount recognised in profit or loss	3,374	3,105
Gains (-)/losses due to changes in demographic assumptions	21	0
Gains (-)/losses due to changes in financial assumptions	5,305	-2,980
Experience gains (-)/losses	923	-12
Total amount recognised in other comprehensive income	6,249	-2,992
Actual benefits paid directly by employer	-5,178	-5,297
Other changes	294	431
Exchange rate gains (-)/losses	10	13
Defined benefit obligation as of 31 December	**70,246**	**65,497**

Other long-term employee benefits

Other long-term employee benefits provided by the Group companies include items such as jubilee payments and pre-pension benefits. The movement in the other long-term benefit obligation over the year is as follows:

EUR thousand	2016	2015
Defined benefit obligation as of 1 January	**31,349**	**31,651**
Net current service cost	1,689	2,077
Interest cost on defined benefit obligation	601	567
Past service cost	618	2,294
Gains (-)/losses due to changes in demographic assumptions	110	155
Gains (-)/losses due to changes in financial assumptions	1,837	-1,163
Experience gains (-)/losses	1,147	100
Total amount recognised in profit or loss	6,002	4,030
Actual benefits paid	-4,373	-4,415
Other changes	0	83
Defined benefit obligation as of 31 December	**32,978**	**31,349**

Discount rates, projected future salary, pension increases and expected rates of return on plan assets vary for the different defined benefit plans, as they are determined in light of local conditions. Assumptions regarding future mortality are based on published statistics and mortality tables. The principal assumptions used were as follows (expressed as weighted averages):

	2016	2015
Discount rate	1.7%	2.3%
Projected future salary growth	3.1%	3.1%
Expected pension increase	1.8%	1.8%

The sensitivity of the defined benefit obligation for pensions and other post-employment benefit plans to changes in the principal assumptions is:

		Impact on defined benefit obligation	
	Change in assumption	Increase in assumption	Decrease in assumption
Discount rate	0.5%	Decrease by 6.8%	Increase by 7.9%
Salary growth rate	0.5%	Increase by 4.1%	Decrease by 3.8%
Pension growth rate	0.5%	Increase by 4.8%	Decrease by 4.4%

The above sensitivity analyses are based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. When calculating the sensitivity of the defined benefit obligation to significant actuarial assumptions, the same method (present value of the defined benefit obligation calculated with the projected unit credit method at the end of the reporting period) has been applied as when calculating the pension liability recognised within the statement of financial position.

Expected contributions to post-employment benefit plans for the year ending 31 December 2017 are EUR 28,026 thousand (EUR 23,522 thousand). The weighted average duration of the defined benefit obligation is 14.4 (14.0) years. The defined benefit plans expose the Group to actuarial risks, mainly the longevity risk, interest rate and market (investment) risk.

14. Other provisions

	2016					
EUR thousand	**Restructuring**	**Decommissioning**	**Legal**	**Environmental**	**Other**	**Total**
As of 1 January	1,855	14,999	4,791	7,271	25,872	54,788
Additions	0	16,071	124	15	21,213	37,423
Changes in consolidation scope	0	0	0	0	403	403
Utilised	-729	0	-846	-122	-9,060	-10,757
Reversed	0	0	-205	-472	-3,885	-4,562
Reclassifications	0	0	0	0	-11,181	-11,181
Interest expense	0	138	0	0	0	138
Exchange adjustments	38	0	5	0	-35	8
Balance as of 31 December	**1,164**	**31,208**	**3,869**	**6,692**	**23,327**	**66,260**
Other provisions current	782	0	506	4,100	2,320	7,708
Other provisions non-current	382	31,208	3,363	2,592	21,007	58,552
Balance as of 31 December	**1,164**	**31,208**	**3,869**	**6,692**	**23,327**	**66,260**

	2015					
EUR thousand	**Restructuring**	**Decommissioning**	**Legal**	**Environmental**	**Other**	**Total**
As of 1 January	5,361	15,729	3,106	23,095	17,929	65,220
Additions	0	205	3,859	344	16,929	21,337
Utilised	-1,424	-764	-447	-100	-7,033	-9,768
Reversed	-2,037	-291	-1,720	-16,068	-1,961	-22,077
Interest expense	0	137	0	0	0	137
Exchange adjustments	-45	-17	-7	0	8	-61
Balance as of 31 December	**1,855**	**14,999**	**4,791**	**7,271**	**25,872**	**54,788**
Other provisions current	1,098	0	1,109	100	1,710	4,017
Other provisions non-current	757	14,999	3,682	7,171	24,162	50,771
Balance as of 31 December	**1,855**	**14,999**	**4,791**	**7,271**	**25,872**	**54,788**

Restructuring
Provisions for restructuring cover estimated costs for the ongoing restructuring programmes mainly in Norway and Germany.

Decommissioning
Provision for decommissioning cover the expected clean-up and dismantling costs for plants situated on rented land in Germany and Belgium. It is expected that EUR 11,048 thousand will be used until 2024, EUR 4,349 thousand until 2027 and EUR 15,811 thousand until 2049.

Legal
Legal provisions represent litigation provisions in different areas.

Environmental
Environmental provisions cover several environmental exposures in the Group.

Other
Other provisions cover numerous types of long-term obligations including long-term incentive plans. The reclassifications are items, that do not fulfil the definition of a provision anymore and are therefore reclassified to the balance sheet item current other liabilities.

The provisions are generally based on the past events and commitments arising thereon. The timing of the cash outflows cannot be determined for all provisions with certainty.

15. Government grants

In 2016, Borealis received government grants for research and development and for investments in new production plants. During the year EUR 7,746 thousand (EUR 7,778 thousand) was recognised in the income statement.

The EU ETS emission allowances for 2016 were granted in 2016 and amount to EUR 22,406 thousand (2015: EUR 30,266 thousand for the year 2015).

16. Financial risk management

The objective of financial risk management is to support the core businesses of Borealis. It operates within the framework of the treasury procedure. Borealis aims to minimise effects related to foreign exchange, interest rate, liquidity, credit, commodity price and refinancing risks. The use of any financial instrument is based on actual or forecasted underlying commercial or financial cash flows or identified risks as defined in the policy. Note 21 provides an overview of the financial instruments used by Borealis to manage risk.

Financial risk management is centralised in the Treasury and Funding department.

The foreign exchange risks related to short-term commercial cash flows are hedged and limits for long-term foreign exchange exposures are established. Interest rate risks are managed through a duration benchmark.

Foreign exchange translation differences relating to long-term investments in subsidiaries are recognised in other comprehensive income. The exposures are partly hedged by long-term borrowing and foreign exchange contracts in the same currencies. Hedges are generally placed in the legal entities where the underlying exposure exists. When certain conditions are met, Borealis applies IAS 39 hedge accounting principles to foreign exchange, interest rate and commodity hedges.

Borealis' cash balances are deposited in the money market or invested in liquid instruments. Counterpart credit risks are managed by mandatory credit limits and external credit rating requirements. A real-time treasury system is used to monitor exposures and risk limits.

Commodity price risk is managed by the feedstock and energy traders and monitored by Trade Support and Risk Management. The commodity price risk exposure is calculated by a trading software. On a daily basis, Trade Support and Risk Management make a snapshot of all data in the trading system and retrieve the daily position from the system. The position is analysed and compared with the trading limits. Traders are allowed to use financial derivatives (i.e. financial swaps) in order to stay within the limits.

A credit limit is determined for every customer, based on an assessment of the financials of the company and past trading experiences. The credit exposure is calculated daily.

Group worldwide insurance programmes are established for risk related to property damage and business interruption, liability exposures, cargo, and for our employees when travelling for Borealis.

Hedging policies of the Group
Where possible, Borealis applies hedge accounting in order to recognise the offsetting effects on profit or loss of changes in the fair value of the hedging instrument and the hedged items. Borealis has the following hedging relationships:

Fair value hedging: In order to protect the fair value of its feedstock firm commitments, Borealis enters into derivative contracts (forward sale) and recognises an asset or a liability equal to the fair value of these commitments. In this way, and to the extent that the hedges are effective, the changes in fair value of the firm commitments offset the changes in fair value of the hedging instruments in the income statement.

Cash flow hedging: Based on regular cash flow forecasts, Borealis hedges its foreign exchange exposure coming from forecasted sales and purchases, and from committed investment projects. Details about the hedging instruments used, notional amounts and maturities can be found in notes 21 and 22.

Borealis manages its interest rate risk through a modified duration benchmark. An important part of the borrowings are based on a floating interest rate, but is transformed into fixed interest rate loans after the application of interest rate swaps. Details regarding the hedging instruments used, notional amounts and maturities can be found in notes 21 and 23.

Borealis hedges its forecasted energy purchases using electricity and natural gas swaps. Details regarding the hedging instruments used, notional amounts and maturities can be found in notes 21 and 24.

Borealis hedges some of its forecasted feedstock purchases and finished product sales through feedstock swaps. Cash flow hedge accounting is applied to those derivatives, except for the derivatives that are used to limit the price risk on the inventory held for immediate consumption. Details about the hedging instruments used, notional amounts and maturities can be found in notes 21 and 24.

Net investment hedging: Borealis has hedged its investment in an associated company, which has USD as its functional currency, through a combination of entering into USD loans and currency derivatives. The EUR/USD impact on the valuation of both the loan and cross currency interest rate swaps is recognised in other comprehensive income. Details can be found in note 22.

Financial assets and liabilities are not offset in the consolidated balance sheet and are included separately in assets and liabilities.

17. Financial income/expenses

EUR thousand	2016	2015
Interest income from		
Cash and cash equivalents	1,302	905
Derivatives	3,384	3,983
Interest expenses to		
Finance institutions	-56,919	-59,221
Derivatives	-4,160	-4,706
Capitalised interest	2,449	3,120
Exchange adjustments, net	-5,392	3,309
Other financial expenses and income	-18,139	-16,565
Net financial items	**-77,475**	**-69,175**

18. Gains and losses from financial instruments

EUR thousand	2016	2015
Recognised in profit or loss		
Change in fair value of commodity derivative contracts	-7,079	8,499
Change in fair value of foreign exchange derivative contracts	-1,478	3,085
Realised result on commodity derivative contracts	-4,081	-18,072
Realised result on foreign exchange derivative contracts	-4,929	-708
Financial assets and liabilities at fair value through profit or loss	**-17,567**	**-7,196**
Change in fair value of commodity derivative contracts for feedstock for fair value hedges	0	-743
Amounts recognised in profit or loss for realised cash flow hedges		
Commodity derivative contracts	-579	-20,444
Interest derivative contracts	-714	-525
Foreign exchange derivative contracts	-3,770	-31,929
Hedging instruments	**-5,063**	**-53,641**
Interest income from available for sale assets	113	210
Available for sale financial assets	**113**	**210**
Interest income on cash and deposits	1,310	905
Foreign exchange effects on cash and deposits	-461	2,072
Foreign exchange effects on receivables	7,867	15,306
Impairment losses on receivables	-4,634	-4,617
Gains (losses) from sale of non-current financial assets	0	2,444
Loans and receivables	**4,082**	**16,110**
Interest expenses and other expenses on financial liabilities	-75,171	-75,995
Foreign exchange effects on financial liabilities	-6,391	-16,446
Financial liabilities	**-81,562**	**-92,441**

The amounts recognised in the income statement for the commodity and foreign exchange derivative contracts are booked as a correction to the net sales income or mainly production costs that are being hedged. The amounts recognised in profit or loss for interest rate derivatives and the foreign exchange effects on non-derivative financial assets and liabilities are reported as part of the financial income and expenses. Impairment losses on receivables are reported in sales and distribution costs.

EUR thousand	2016	2015
Recognised in other comprehensive income		
Commodity derivative contracts designated as cash flow hedge	70,769	-27,002
Interest derivative contracts outstanding designated as cash flow hedge	-833	-250
Foreign exchange derivative contracts designated as cash flow hedge	-16,147	-7,273
Foreign exchange effects on receivables part of net investment in foreign operations	-2,275	1,245
Foreign exchange effects on financial liabilities and derivatives designated as hedge of investment in foreign operations	-11,250	-66,152
Available for sale assets	166	-277
Amounts reclassified to the income statement		
Commodity derivative contracts	579	20,444
Interest derivative contracts	714	525
Foreign exchange derivative contracts	3,770	31,929
Total recognised in other comprehensive income	**45,493**	**-46,811**

19. Loans and borrowings

The composition of interest-bearing loans and borrowings (short and long-term debt) at the year-end was as follows:

Maturities (EUR thousand)		2016					
Due		**Total**	Term loans	Utilised uncommitted facilities	Export credits	Finance leases	Unutilised committed facilities
After	5 years	**181,129**	181,129				
Within	5 years	**156,413**	156,413				930,000
	4 years	**101,866**	101,851			15	70,000
	3 years	**429,995**	429,941			54	
	2 years	**175,786**	175,453			333	
Total long-term debt		**1,045,189**	**1,044,787**	**0**	**0**	**402**	**1,000,000**
Total short-term debt		**367,811**	367,324	0	0	487	166,000 [1)]
Total debt		**1,413,000**	**1,412,111**	**0**	**0**	**889**	**1,166,000**

[1)] Borealis maintains EUR 166,000 thousand in export credit facilities (these facilities were fully undrawn at 31 December 2016). These facilities are economically evergreen in nature, but include a one year notice for cancellation.

Maturities (EUR thousand)		2015					
Due		**Total**	Term loans	Utilised uncommitted facilities	Export credits	Finance leases	Unutilised committed facilities
After	5 years	**337,502**	337,502				
Within	5 years	**99,943**	99,943				1,000,000
	4 years	**425,840**	425,840				
	3 years	**172,829**	172,829				
	2 years	**363,410**	363,410				
Total long-term debt		**1,399,524**	**1,399,524**	**0**	**0**	**0**	**1,000,000**
Total short-term debt		**244,327**	243,931	0	0	396	166,000[2)]
Total debt		**1,643,851**	**1,643,455**	**0**	**0**	**396**	**1,166,000**

[2)] Borealis maintains EUR 166.000 thousand in export credit facilities (these facilities were fully undrawn at 31 December 2015). These facilities are economically evergreen in nature, but include a one year notice for cancellation.

The Group's financing mainly comprises of committed credit lines (largely syndicated), term loans, bonds, private placements and export credits. The loans and borrowings are all measured at amortised cost.

Borealis continues to maintain a strong liquidity position through its EUR 1 billion fully committed revolving credit facility of which EUR 1 billion remained undrawn at the end of December 2016 and by terming out its debt through diverse funding channels.

In 2016, Borealis reduced its net debt by EUR 445,333 thousand, which resulted in a gearing ratio of 10%. The EUR one billion Syndicated Revolving Credit Facility, based on a five-year tenor with two one-year extension options at lenders' discretion, that was originally refinanced in 2014, was extended the second and final time by one additional year, with EUR 930,000 thousand of the participating relationship banks consenting to a final maturity date of 2021. EUR 70,000 thousand remain at the previously agreed final maturity date of 2020. In March 2016, the off-balance sheet project financing of the Kilpilahti Power Plant Ltd. Company in Porvoo, Finland, structured as a joint project between Neste, Veolia and Borealis, to arrange power plant operations and build a new power plant, was closed. The total investment value of the power plant was in excess of EUR 400,000 thousand. The environmental benefits from replacing the existing power plant are significant and a good example of resource efficiency and circular economy since more than 80% of the fuels that will be used in the new power plant are side streams of the refinery and petrochemical plant. The project has been funded on a long-term basis by the European Investment Bank (EIB), the Nordic Investment Bank (NIB) and five commercial banks from Borealis' relationship bank group.

In August 2016, Borealis concluded a R&D financing with the Österreichischen Forschungsförderungsgesellschaft mbH in Austria for the project into green polyolefins in the amount of EUR 418 thousand.

Borealis benefits from a well-diversified financing portfolio and a balanced maturity profile. The company will look to maintain access to a wide range of funding options, including capital markets and bank funding as well as private placements going forward.

At year-end, the Group has committed long-term credit facilities of EUR 1,166,000 thousand (EUR 1,166,000 thousand) of which EUR 0 thousand (EUR 0 thousand) have been utilised. Some loan agreements have financial covenants which are based on maintaining certain gearing and solvency ratios.

The finance leases obligation amounts to EUR 889 thousand (EUR 396 thousand) and relates to payables within one year of EUR 487 thousand (EUR 397 thousand) and payables between one and five years of EUR 402 thousand (EUR 0 thousand) less financial charges of EUR 0 thousand (EUR 1 thousand).

Currency Mix (EUR thousand)	2016	Percent	2015	Percent
USD	279,388	20%	342,397	21%
EUR	1,087,945	77%	1,253,694	76%
GBP	35,030	2%	40,725	2%
BRL	10,637	1%	7,035	1%
Interest bearing total	**1,413,000**	100%	**1,643,851**	100%

20. Liquidity risk

Liquidity is managed on a daily basis to ensure the Group's liquidity requirement and is covered at all times with the lowest possible level of working capital. The following are the contractual maturities of non-derivative financial liabilities, including forecasted interest payments, and derivative financial assets and liabilities. All carrying values exclude the outstanding interest accruals at year-end. Cash outflows are reported with a negative sign, cash inflows with a positive sign.

EUR thousand	2016						
Non-derivative financial liabilities	Carrying value	Contractual cash flows	6 months or less	6–12 months	1–2 years	2–5 years	More than 5 years
EUR floating rate loans	-175,790	**-179,550**	-6,436	-17,824	-47,527	-88,557	-19,206
EUR fixed rate loans	-911,266	**-993,790**	-281,347	-17,801	-146,802	-517,437	-30,403
EUR financial leases	-889	**-889**	0	-487	-333	-69	0
USD floating rate loans	-75,074	**-75,128**	-75,128	0	0	0	0
USD fixed rate loans	-204,314	**-271,159**	-5,780	-5,780	-11,559	-91,125	-156,915
GBP fixed rate loans	-35,030	**-51,494**	-1,646	-1,646	-3,293	-44,909	0
BRL floating rate loans	-10,184	**-13,322**	-1,645	-1,523	-2,921	-7,233	0
BRL fixed rate loans	-453	**-522**	-58	-57	-110	-297	0
Trade payables	-722,262	**-722,262**	-722,262	0	0	0	0
Total	**-2,135,262**	**-2,308,116**	**-1,094,302**	**-45,118**	**-212,545**	**-749,627**	**-206,524**

EUR thousand	2015						
Non-derivative financial liabilities	Carrying value	Contractual cash flows	6 months or less	6–12 months	1–2 years	2–5 years	More than 5 years
EUR floating rate loans	-227,700	**-235,639**	-1,361	-56,598	-23,000	-108,128	-46,552
EUR fixed rate loans	-1,025,598	**-1,144,932**	-30,272	-120,973	-300,591	-567,276	-125,820
EUR financial leases	-396	**-396**	0	-396	0	0	0
USD floating rate loans	-134,121	**-136,719**	-1,066	-63,091	-72,562	0	0
USD fixed rate loans	-208,276	**-284,395**	-5,778	-17,388	-11,136	-92,292	-157,801
GBP fixed rate loans	-40,725	**-63,693**	-1,914	-1,914	-3,828	-11,484	-44,553
BRL floating rate loans	-6,670	**-10,338**	-482	-517	-2,235	-5,502	-1,602
BRL fixed rate loans	-365	**-442**	-11	-11	-93	-252	-75
Trade payables	-735,982	**-735,982**	-735,982	0	0	0	0
Total	**-2,379,833**	**-2,612,536**	**-776,866**	**-260,888**	**-413,445**	**-784,934**	**-376,403**

EUR thousand	2016						
Derivative financial assets and liabilities	Carrying value	Contractual cash flows	6 months or less	6–12 months	1–2 years	2–5 years	More than 5 years
Interest rate swaps							
Liabilities/outflow	-1,583	**-71,015**	-6,031	-5,952	-12,083	-35,363	-11,586
Assets/inflow	0	**69,288**	5,769	5,769	11,538	34,637	11,575
Cross currency interest rate swaps							
Liabilities/outflow	-1,885	**-51,122**	-1,485	-1,485	-2,969	-45,183	0
Assets/inflow	0	**49,234**	1,646	1,639	3,251	42,698	0
Foreign exchange contracts							
Liabilities/outflow	-12,335	**-441,904**	-278,781	-163,123	0	0	0
Assets/inflow	1,262	**430,842**	272,261	158,581	0	0	0
Feedstock contracts							
Liabilities/outflow	-31,351	**-31,421**	-18,599	-11,749	-1,073	0	0
Assets/inflow	31,185	**31,243**	19,478	11,393	372	0	0
Electricity contracts							
Liabilities/outflow	-13,940	**-13,906**	-4,389	-4,206	-3,941	-1,370	0
Assets/inflow	35,934	**35,853**	16,468	5,614	9,507	4,264	0
Natural gas hedges							
Liabilities/outflow	-2,924	**-2,917**	-1,030	-879	-822	-186	0
Assets/inflow	2,270	**2,262**	611	483	814	354	0
Total	**6,633**	**6,437**	**5,918**	**-3,915**	**4,594**	**-149**	**-11**

EUR thousand	2015						
Derivative financial assets and liabilities	Carrying value	Contractual cash flows	6 months or less	6–12 months	1–2 years	2–5 years	More than 5 years
Interest rate swaps							
Liabilities/outflow	-1,496	**-107,219**	-321	-36,082	-12,116	-35,463	-23,237
Assets/inflow	0	**105,613**	9	35,818	11,538	34,889	23,359
Cross currency interest rate swaps							
Liabilities/outflow	-4,044	**-48,509**	-2,083	-46,426	0	0	0
Assets/inflow	0	**44,350**	1,914	42,436	0	0	0
Foreign exchange contracts							
Liabilities/outflow	-2,746	**-523,560**	-369,756	-153,804	0	0	0
Assets/inflow	4,323	**525,132**	370,758	154,374	0	0	0
Feedstock contracts							
Liabilities/outflow	-40,315	**-40,380**	-28,943	-11,264	-173	0	0
Assets/inflow	46,273	**46,403**	27,579	14,098	4,726	0	0
Electricity contracts							
Liabilities/outflow	-43,513	**-43,514**	-15,126	-13,759	-10,827	-3,802	0
Assets/inflow	3,677	**3,677**	1,929	1,731	17	0	0
Natural gas hedges							
Liabilities/outflow	-7,965	**-7,965**	-2,568	-2,320	-2,350	-727	0
Assets/inflow	1,431	**1,431**	428	315	503	185	0
Total	**-44,375**	**-44,541**	**-16,180**	**-14,883**	**-8,682**	**-4,918**	**122**

EUR thousand	2016					
Off balance sheet liabilities	Contractual cash flows	6 months or less	6–12 months	1–2 years	2–5 years	More than 5 years
Contingencies provided by the entity	32,603	324	264	1,524	20,303	10,188
Operating lease payables	238,662	17,174	15,822	27,809	61,926	115,931
Capital commitments – tangible assets	110,297	82,330	21,289	1,828	4,850	0

EUR thousand	2015					
Off balance sheet liabilities	Contractual cash flows	6 months or less	6–12 months	1–2 years	2–5 years	More than 5 years
Contingencies provided by the entity	33,726	19,014	636	0	2,052	12,024
Operating lease payables	116,198	10,991	10,447	16,843	24,568	53,349
Capital commitments – tangible assets	96,603	51,739	30,643	14,127	94	0

For details in respect to off balance sheet liabilities please see note 4, note 28 and note 31.

21. Cash flow and fair value hedges

The following table indicates the period in which the cash flows associated with derivatives that are cash flow hedges are expected to occur and impact profit and loss.

All carrying values exclude the outstanding interest accruals at year-end. Cash outflows are reported with a negative sign, cash inflows with a positive sign.

EUR thousand	2016						
Cash flow hedges	Carrying value	Contractual cash flows	6 months or less	6–12 months	1–2 years	2–5 years	More than 5 years
Interest rate swaps							
Liabilities/outflow	-1,583	**-71,015**	-6,031	-5,952	-12,083	-35,363	-11,586
Assets/inflow	0	**69,288**	5,769	5,769	11,538	34,637	11,575
Cross currency interest rate swaps							
Liabilities/outflow	0	**0**	0	0	0	0	0
Assets/inflow	0	**0**	0	0	0	0	0
Foreign exchange contracts							
Liabilities/outflow	-12,280	**-358,601**	-195,478	-163,123	0	0	0
Assets/inflow	800	**347,130**	188,549	158,581	0	0	0
Electricity, feedstock and natural gas contracts							
Liabilities/outflow	-35,476	**-35,434**	-16,766	-12,349	-4,763	-1,556	0
Assets/inflow	58,561	**58,473**	28,829	14,333	10,693	4,618	0
Total	**10,022**	**9,841**	**4,872**	**-2,741**	**5,385**	**2,336**	**-11**

As of 31 December 2016, no fair value hedges existed.

EUR thousand	2015						
Cash flow hedges	Carrying value	Contractual cash flows	6 months or less	6–12 months	1–2 years	2–5 years	More than 5 years
Interest rate swaps							
Liabilities/outflow	-1,496	**-107,219**	-321	-36,082	-12,116	-35,463	-23,237
Assets/inflow	0	**105,613**	9	35,818	11,538	34,889	23,359
Cross currency interest rate swaps							
Liabilities/outflow	-4,044	**-48,509**	-2,083	-46,426	0	0	0
Assets/inflow	0	**44,350**	1,914	42,436	0	0	0
Foreign exchange contracts							
Liabilities/outflow	-2,732	**-335,100**	-181,296	-153,804	0	0	0
Assets/inflow	3,658	**336,018**	181,644	154,374	0	0	0
Electricity, feedstock and natural gas contracts							
Liabilities/outflow	-85,011	**-85,186**	-41,246	-26,061	-13,350	-4,529	0
Assets/inflow	39,432	**39,748**	21,384	12,932	5,247	185	0
Total	**-50,193**	**-50,285**	**-19,995**	**-16,813**	**-8,681**	**-4,918**	**122**

As of 31 December 2015, no fair value hedges existed.

22. Foreign currency risk

Borealis incurs foreign currency risk on sales, purchases and borrowings that are denominated in currencies other than EUR. The currencies giving rise to risk are primarily USD, SEK, GBP and HUF, in order of volume.

Borealis hedges its trade receivables, trade payables, cash positions and forecasted positions denominated in the foreign currencies. At any time, Borealis may also hedge its long-term commercial exposures up to a predefined level and duration. Borealis normally hedges the currency positions using forward exchange contracts and foreign exchange options. The total notional value of outstanding foreign exchange forwards as of 31 December 2016 was EUR 443,793 thousand (EUR 527,764 thousand) of which EUR 360,124 thousand (EUR 339,147 thousand) relate to foreign currency hedging and EUR 83,669 thousand (EUR 188,617 thousand) relate to liquidity management. The total notional value of outstanding foreign exchange options as of 31 December 2016 was EUR 0 thousand (EUR 0 thousand) measured at the strike rate.

Of the foreign exchange cash flow hedges gains (losses), EUR -3,770 thousand (EUR -31,929 thousand) were removed from hedging reserve during 2016 and were reclassified to the income statement and included into net sales.

There was no partial ineffectiveness of the foreign exchange cash flow hedges, therefore no losses were recognised in financial expenses at year-end 2016 and 2015.

Firm commitments and forecasted transactions
Borealis classifies its foreign exchange forward contracts and options, which are hedging a forecasted currency position, as cash flow hedges and states them at fair value. The net fair value of foreign exchange forward contracts used as hedges of firm commitments and forecasted transactions as of 31 December 2016 was EUR -11,480 thousand (EUR 926 thousand).

EUR -11,480 thousand (EUR 926 thousand) have been recorded in other comprehensive income at year-end of which EUR 800 thousand (EUR 3,658 thousand) have been recognised in other assets (thereof EUR 0 thousand (EUR 0 thousand) in non-current assets) and EUR -12,280 thousand (EUR -2,732 thousand) in other liabilities (thereof EUR 0 thousand (EUR 0 thousand) in non-current liabilities).

Hedges of net investments in foreign operations
Borealis designates certain external loans, cross currency interest rate swaps and foreign exchange forwards as hedges of the Group's investments in its foreign operations. The designated USD hedge loans amounted to EUR 279,388 thousand (EUR 342,397 thousand) as of 31 December 2016. As of 31 December 2015, a USD/GBP cross currency interest rate swap of notional EUR 44,598 thousand, was partly classified as net investment hedge and matured in July 2016. A foreign exchange loss of EUR -4,278 thousand has been recognized in the income statement for the part not designated as net investment hedge. A foreign exchange loss of EUR -11,250 thousand (EUR -58,737 thousand) was recognised in other comprehensive income during 2016 on the translation of these USD liabilities to EUR (including the currency element of the fair value of cross currency interest rate swaps and foreign exchange forwards).

Recognised assets and liabilities
Changes in the fair value of forward exchange contracts that hedge monetary assets and liabilities in foreign currencies and the forward legs of currency swaps used in liquidity management, for which no hedge accounting is applied, are recognised in the income statement. Both changes in the fair value of the forward contracts and the foreign exchange gains and losses relating to the monetary items are recognised as part of the financial expenses. The fair value of forward exchange contracts used as hedges of monetary assets and liabilities in foreign currencies and the forward legs of currency swaps used in liquidity management for which no hedge accounting is applied as of 31 December 2016, was EUR -1,477 thousand (EUR 651 thousand). Thereof EUR 408 thousand (EUR 651 thousand) are related to forward legs of currency swaps and EUR -1,885 thousand (EUR 0 thousand) are related to the cross-currency-swap.

EUR 462 thousand (EUR 665 thousand) was recognised in other assets and EUR -1,939 thousand (EUR -14 thousand) in other liabilities.

Sensitivity analysis
The Group's exposure to the risk of changes in foreign exchange rates relates primarily to the Group's operating activities, invoicing mainly in EUR and purchasing raw materials mainly in USD, and the Group's net investments in associated companies mainly denominated in USD.

The sensitivity analysis has been prepared on the basis that the financial instruments in foreign currencies and all other parameters apart from changes in foreign exchange rates themselves are constant and on the basis of hedge designations in place at 31 December 2016. The Group assumes that the prevailing polyolefin market pricing mechanisms reduce the foreign exchange risk in practice.

As of 31 December 2016, the Group shows a net payable (prior year: net receivable) position of USD, therefore it is estimated that a general strengthening of one percentage point of the USD against the EUR would have decreased Borealis' profit before tax by approximately EUR -156 thousand (increase of EUR 98 thousand). The effect of a weakening of one percentage point of the USD against the EUR on Borealis' profit before tax would have been approximately EUR 153 thousand (decrease of EUR -96 thousand).

As of 31 December 2016, the Group shows a net receivable position in SEK. Therefore it is estimated that a strengthening of one percentage point of the SEK against the EUR would have increased Borealis profit before tax by approximately EUR 1,553 thousand (EUR 473 thousand). The effect of a weakening of one percentage point of the SEK against the EUR on Borealis' profit before tax would have been approximately EUR -1,523 thousand (EUR -464 thousand).

A general strengthening of one percentage point of the USD against the EUR would have increased the Group's equity by EUR 34,128 thousand (EUR 28,404 thousand), a weakening of one percentage point of the USD against the EUR would have decreased the Group's equity by EUR -33,452 thousand (EUR -27,842 thousand). The impact on the Group's equity is mainly related to its net investment and net investment hedges.

A general strengthening of one percentage point of the SEK against the EUR would have increased the Group's equity by EUR 5,930 thousand (EUR 6,496 thousand). A weakening of one percentage point of the SEK against the EUR would have decreased the Group's equity by EUR -5,812 thousand (EUR -6,368 thousand). The impact on the Group's equity is related to its net investments in SEK.

23. Interest rate risk

Borealis adopts a policy of managing its interest rate risk through the modified duration of its loan portfolio. Average modified duration is allowed to deviate within a predefined range. Interest rate derivatives denominated in EUR have been entered into to achieve this objective. All interest rate derivatives are on terms following the maturity and re-pricing terms of the underlying loans or future loan requirements.

Of total interest-bearing debt, approximately 82% (78%) have a fixed interest rate, and 18% (22%) are based on a floating interest rate before applying interest rate swaps. Approximately 87% (84%) have a fixed interest rate and 13% (16%) are based on a floating interest rate after applying interest rate swaps. The floating interest rates are set by adding a spread to the reference rates (mainly EURIBOR and LIBOR).

As of 31 December 2016, Borealis had one outstanding interest rate derivative for a notional amount of EUR 69,231 thousand (EUR 105,000 thousand) with an interest rate of 0.6% (0.6% to 0.7%) and maturity in 2022.

Borealis does not account for any fixed rate financial assets and liabilities at fair value through profit or loss, and does not designate derivatives (interest rate swaps) as hedging instruments under a fair value hedge accounting model. Therefore, a change in interest rates for fixed rate financial assets and liabilities at the reporting date would not affect profit and loss.

Borealis classifies the interest rate derivative as a cash flow hedge and states it at fair value. The total net fair value of the interest rate derivative as of 31 December 2016 was EUR -1,583 thousand (EUR -1,496 thousand) comprising liabilities of EUR -1,583 thousand (EUR -1,496 thousand) and assets of EUR 0 thousand (EUR 0 thousand). These amounts were recognised in other liabilities, thereof non-current liabilities EUR -1,583 thousand (EUR -1,315 thousand).

The cross currency interest rate swaps are included as held for trading and stated at fair value. As of 31 December 2016, the fair value was EUR -1,885 thousand (EUR 0 thousand) comprising liabilities of EUR -1,885 thousand (EUR 0 thousand) and assets of EUR 0 thousand (EUR 0 thousand), thereof non-current EUR -1,885 thousand (EUR 0 thousand). In 2015, a cross currency interest rate swap which matured in 2016 has been reported as cash flow hedge (as of December 2015 EUR -4,044 thousand). Of the interest rate swaps, a loss of EUR -714 thousand (EUR -525 thousand) was realised in financial expenses during 2016. Two interest rate swaps matured during 2016. Of the interest rate swaps which are used as cash flow hedges no net gain (loss) was recognised in financial income and expenses at year-end due to partial ineffectiveness.

Effective interest rate

In respect of interest-bearing financial liabilities, the following table indicates their effective interest rates at the balance sheet date.

EUR thousand	2016		2015	
	Effective interest rate	Carrying value	Effective interest rate	Carrying value
EUR floating rate loans	0.7%	175,790	0.9%	227,700
Effect on interest rate swaps	0.0%		-0.1%	
EUR fixed rate loans	3.7%	911,266	3.6%	1,025,598
EUR financial leases	2.3%	889	2.8%	396
USD floating rate loans	1.0%	75,074	1.4%	134,121
USD fixed rate loans	5.6%	204,314	5.5%	208,276
GBP fixed rate loans	9.4%	35,030	9.4%	40,725
BRL floating rate loans	10.5%	10,184	9.4%	6,670
BRL fixed rate loans	6.0%	453	6.0%	365
Total interest bearing debt		**1,413,000**		**1,643,851**

Sensitivity analysis

In managing interest rate risks Borealis aims to reduce the impact of short-term fluctuations on its earnings. Over the long term, permanent changes in interest rates will have an impact on consolidated earnings. The sensitivity analysis has been prepared on the basis of the amount of net debt, the ratio of fixed to floating interest rates of the debt and the derivatives are as per 31 December 2016. As of 31 December 2016, it is estimated that a general increase of one percentage point in interest rates would have decreased Borealis' profit before tax by approximately EUR -1,034 thousand (EUR -2,367 thousand) and would have increased Borealis' equity by approximately EUR 320 thousand (EUR 529 thousand). The effect of a decrease of one percentage point in interest rates is expected to increase Borealis' profit before tax by approximately EUR 676 thousand (EUR 2,385 thousand) and would have decreased Borealis' equity by approximately EUR -322 thousand (EUR -533 thousand).

24. Commodity risk

Feedstock contracts: At the balance sheet date, Borealis had commodity derivative contracts with maturities up to 18 months (24 months) forward to manage the price risk of feedstock. The gross notional volume of contracts held on 31 December 2016 was 1,150,000 tonnes (1,226,000 tonnes). Part of the contracts, 660,000 tonnes (810,000 tonnes), has been designated as cash flow hedges for future sales and purchases. The total fair value of these contracts at the balance sheet date was EUR 1,746 thousand (EUR 791 thousand). No hedge accounting is applied for the remaining contracts. The net fair value of all derivative contracts for feedstock as of 31 December 2016 was EUR -165 thousand (EUR 5,958 thousand). EUR -31,350 thousand (EUR -40,315 thousand) have been recognised in other liabilities, thereof EUR -1,002 (EUR 0 thousand) in non-current liabilities, and EUR 31,185 thousand (EUR 46,273 thousand) in other assets, thereof in non-current assets EUR 372 thousand (EUR 4,412 thousand).

Electricity contracts: Borealis hedges its forecasted electricity purchases with maturity up to 2019 using electricity swaps. The notional volume of the contracts held at 31 December 2016 was 6,823 GWh (5,616 GWh) with an average maturity of 19 months (19 months). Cash flow hedge accounting has been applied for these contracts. The net fair value of the electricity swap contracts used as hedges for forecasted transactions as of 31 December 2016 was EUR 21,994 thousand (EUR -39,836 thousand), comprising liabilities of EUR -13,940 thousand (EUR -43,513 thousand), thereof non-current EUR -5,345 thousand (EUR -14,628 thousand) and assets of EUR 35,934 thousand (EUR 3,677 thousand), thereof non-current EUR 13,852 thousand (EUR 17 thousand). These amounts were recognised in other liabilities, other assets and in other comprehensive income.

Natural gas contracts: Borealis hedges its forecasted natural gas purchases with maturity up to 2019 using natural gas swaps. The notional volume of the contracts held at 31 December 2016 was 675 GWh (934 GWh) with an average maturity of 19 months (19 months). Cash flow hedge accounting has been applied for these contracts. The net fair value of the natural gas swap contracts used as hedges for forecasted transactions as of 31 December 2016 was EUR -655 thousand (EUR -6,534 thousand), comprising liabilities of EUR -2,925 thousand (EUR -7,965 thousand), thereof non-current EUR -1,015 thousand (EUR -3,076 thousand) and assets of EUR 2,270 thousand (EUR 1,431 thousand), thereof non-current EUR 1,176 thousand (EUR 688 thousand). These amounts were recognised in other liabilities, other assets and in other comprehensive income.

Of the commodity cash flow hedges, losses amounting to EUR -579 thousand (EUR -20,444 thousand) were removed from hedging reserve during 2016 and were reclassified to the income statement and included into the production costs.

There was no partial ineffectiveness of the commodity cash flow hedges, therefore no losses were recognised in production costs at year-end 2016 and 2015.

Sensitivity analysis

Commodity price risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in commodity prices. Borealis states its inventories at the lower of cost and net realisable value, taking into account future price developments.

The sensitivity analysis has been prepared for all derivative financial instruments on the basis that the amount of the feedstock held and all other parameters besides commodity prices (in particular sales prices) are constant and on the basis of the hedge designations in place at 31 December 2016. The Group assumes that the prevailing market pricing mechanisms reduce the commodity price risk in practice.

As of 31 December 2016, it is estimated that a general increase of one percentage point in commodity prices would have decreased Borealis' profit before tax by approximately EUR -44 thousand (EUR -231 thousand) and would have increased Borealis' equity by approximately EUR 2,115 thousand (EUR 1,668 thousand). The effect of a decrease of one percentage point in commodity prices is expected to increase the profit before tax by approximately EUR 44 thousand (EUR 231 thousand) and would have decreased Borealis' equity by approximately EUR -2,115 thousand (EUR -1,668 thousand).

25. Securitisation

Borealis has a securitisation programme under which the company sells certain trade receivables to external parties. The Group does not retain any major interest in the trade receivables and thus accordingly derecognises the receivables sold. Borealis continues to administer the relationship with debtors and has to transfer all receivables collected and previously sold to the purchaser under this programme. Several reserves are deducted from the nominal value of the sold receivables and will be released upon transfer of the respective collected receivables to the purchaser.

As of 31 December 2016, receivables worth EUR 316,713 thousand (EUR 322,618 thousand) were sold to the purchaser under the securitisation programme. The reserves deducted from the nominal value of the sold receivables amounted to EUR 25,425 thousand (EUR 24,506 thousand) as of 31 December 2016 and are included in other short-term receivables.

26. Credit risk

Trade receivables credit risk (incl. associated companies)
A credit control procedure is in place. Credit risk is monitored on an ongoing basis. Credit risk of a specific counterparty is the sum of all outstanding trade receivables and is compared to the individual credit limit allocated to that counterparty. Credit limit evaluations are performed on a daily basis and all customers are at least reviewed annually. Approval and escalation limits are used to authorise the available credit limits to customers. At the balance sheet date, Borealis has no large concentrations of credit risks representing more than 10% of the total outstanding trade receivables. No credit risk is retained in trade receivables sold under the securitisation programme (note 25).

The maximum exposure to credit risk for trade receivables at the reporting date by geographic region was:

EUR thousand	2016	2015
EU Countries	320,803	352,929
Non-EU in Europe	42,992	38,438
USA	21,985	15,022
Middle East and Asia	178,007	27,494
Other regions	57,484	98,580
Total	**621,271**	**532,463**

The maximum exposure to credit risk for trade receivables at the reporting date by type of segment and group of customers was:

EUR thousand	2016	2015
Polyolefins	384,960	309,978
Base Chemicals	209,001	196,741
Non-Allocated	27,310	25,744
Total	**621,271**	**532,463**

All customers are classified in risk categories based on criteria, such as their financial strength, ownership, size, payment behaviour and country of domicile.

The following categories exist:

Risk category 1: preferred customers, customers with excellent credit standing and financial strength

Risk category 2: medium-size customers with good reputations

Risk category 3: financially sound customers, but with history of slow payments

Risk category 4: customers with repetitive slow payments or with a weak financial situation

Risk category 5: customers paying cash in advance

Risk category 6: customers with secured payment terms (L/C or other)

Risk category 7: all new customers

	Gross	Impairment	Gross	Impairment
EUR thousand	**2016**		**2015**	
Risk category 1	122,929	0	56,199	0
Risk category 2	122,912	0	134,149	0
Risk category 3	92,430	0	59,287	0
Risk category 4	229,393	-13,371	231,925	-9,853
Risk category 5	118	0	11,521	0
Risk category 6	66,860	0	48,497	0
Risk category 7	0	0	738	0
Total	**634,642**	**-13,371**	**542,316**	**-9,853**

The ageing of trade receivables at the reporting date was:

	Gross	Impairment	Gross	Impairment
EUR thousand	**2016**		**2015**	
Not past due	550,554	0	452,416	0
Past due 0–30 days	57,032	0	77,649	-266
Past due 31–90 days	4,620	0	2,270	0
Past due 91–120 days	167	0	321	0
Past due 121–180 days	320	0	0	0
Past due over 180 days	21,949	-13,371	9,660	-9,587
Total	**634,642**	**-13,371**	**542,316**	**-9,853**

The movement in the allowance for impairment in respect of trade receivables:

EUR thousand	2016	2015
Balance as of 1 January	9,853	7,497
Impairment loss recognised	4,634	4,617
Written off	-1,055	-1,908
Recoveries	-61	-353
Balance as of 31 December	**13,371**	**9,853**

In 2016, the Group did not renegotiate the terms of trade receivables.

The total guarantees received (including bank guarantees and parental guarantees) in respect of the above receivables amount to EUR 163,847 thousand (EUR 149,740 thousand).

Other credit risk

Borealis' cash balances are deposited with relationship banks or are invested in liquid securities with counterparties that fulfil a certain predefined credit rating threshold. Counterparty credit risks for long-term financial treasury transactions are managed by mandatory credit limits and external credit rating requirements or have undergone a special approval process. A real time treasury system is used to monitor exposures and risk limits. The Executive Board does not expect any counterparty to fail to meet any of its current obligations.

	Credit risk		Impairment losses recognised	
EUR thousand	2016	2015	2016	2015
Available for sale financial assets	12,389	10,593	0	0
Financial assets at fair value through profit or loss	11,290	12,613	0	0
Loans and receivables				
Deposits and other receivables	7,803	5,021	0	0
Other investments	24,400	29,923	0	0
Trade receivables	541,066	532,463	13,371	9,853
Receivables from associated companies	80,205	90,218	0	0
Cash and cash equivalents	762,421	547,938	0	0
Derivative financial assets for which hedge accounting is applied	59,361	43,090	0	0
	1,498,935	**1,271,859**	**13,371**	**9,853**

27. Fair values

The fair values of financial assets and liabilities and the fair value measurement hierarchy level, together with the carrying values shown in the balance sheet, are as follows:

EUR thousand	2016			2015		
	Carrying value	Fair value	Fair value hierarchy level	Carrying value	Fair value	Fair value hierarchy level
Assets						
Other investments						
Other investments	24,400	24,400	n/a*	29,923	29,923	n/a*
Loans and receivables	**24,400**			**29,923**		
Trade receivables						
Trade receivables	541,066	541,066	n/a*	532,463	532,463	n/a*
Loans and receivables	**541,066**			**532,463**		
Receivables from associated companies						
Receivables from associated companies	80,205	80,205	n/a*	90,218	90,218	n/a*
Loans and receivables	**80,205**			**90,218**		
Other receivables and other assets (current and non-current)						
Long-term deposits for tax requirements	12,389	12,389	1	10,593	10,593	1
Available for sale financial assets	**12,389**			**10,593**		
Derivative financial instruments for which hedge accounting is applied	59,361	59,361	2	43,090	43,090	2
Hedging instruments	**59,361**			**43,090**		
Derivative financial instruments for which hedge accounting is not applied	11,290	11,290	2	12,613	12,613	2
Financial assets at fair value through profit or loss	**11,290**			**12,613**		
Deposits and other receivables	7,803	7,803	n/a*	5,021	5,021	n/a*
Loans and receivables	**7,803**			**5,021**		
Other non financial assets	319,199	n/a	n/a	300,025	n/a	n/a
Total other receivables and other assets (current and non-current)	**410,042**			**371,342**		

* According to IFRS 7.29 the fair value of these items is estimated to equal the carrying amount. Therefore, no fair value hierarchy level was stated.

EUR thousand	2016			2015		
	Carrying value	Fair value	Fair value hierarchy level	Carrying value	Fair value	Fair value hierarchy level
Liabilities						
Loans and borrowings (current and non-current)						
Floating rate loans and borrowings	261,048	261,048	2	368,491	368,491	2
Fixed rate loans and borrowings	1,151,952	1,292,393	2	1,275,360	1,456,975	2
Financial liabilities	**1,413,000**			**1,643,851**		
Trade payables						
Trade payables	722,262	722,262	n/a*	735,982	735,982	n/a*
Financial liabilities	**722,262**			**735,982**		
Other liabilities (current and non-current)						
Derivative financial instruments for which hedge accounting is applied	49,338	49,338	2	93,283	93,283	2
Hedging instruments	**49,338**			**93,283**		
Derivative financial instruments for which hedge accounting is not applied	14,680	14,680	2	6,795	6,795	2
Financial liabilities at fair value through profit or loss	**14,680**			**6,795**		
Contingent consideration	11,260	11,260	3	3,781	3,781	3
Interest accruals	17,810	17,810	n/a*	18,673	18,673	n/a*
Financial liabilities	**29,070**			**22,454**		
Other non-financial liabilities	326,549	n/a	n/a	297,070	n/a	n/a
Total other liabilities (current and non-current)	**419,637**			**419,602**		

* According to IFRS 7.29 the fair value of these items is estimated to equal the carrying value. Therefore, no fair value hierarchy level was stated.

The Group measures fair values using the following fair value hierarchy that reflects the significance of the inputs used in making the measurements:

Level 1: Quoted market price (unadjusted) in an active market for an identical instrument.

Level 2: Valuation techniques based on observable inputs, either directly or indirectly. This category includes instruments valued using quoted market prices in active markets for similar instruments, quoted prices for identical or similar instruments in less active markets, or other valuation techniques, where all significant inputs are directly or indirectly observable from market data.

Level 3: Valuation techniques using significant unobservable inputs. This category includes all instruments where the valuation technique includes inputs not based on observable data and the unobservable inputs have a significant effect on the instruments' valuation. This category includes instruments that are valued based on quoted prices for similar instruments where significant unobservable adjustments or assumptions are required to reflect differences between the instruments.

In 2016, no transfers between the different levels took place.

Other investments

The carrying value of other investments is not materially different from their fair value.

Trade and other receivables and assets

The fair value of trade and other receivables and assets and receivables from associated companies is estimated to equal the nominal values less impairments (= carrying value). Therefore, no fair value hierarchy level was stated.

Deposits and other non-current receivables have no due date and are therefore not discounted.

Derivatives
The fair value of forward exchange contracts is estimated by discounting the difference between the contractual forward price and the current forward price for the residual maturity of the contract using market interest rates at the reporting date.

The fair value of interest rate swaps is estimated by discounting estimated future cash flows based on the terms and maturity of each contract and using market interest rates for a similar instrument at the reporting date. The credit quality of counterparties did not lead to a significant change in the fair values.

The fair value of commodity derivative contracts is estimated by discounting the difference between current forward price and contractual forward price.

Other non-financial assets and liabilities
Other non-financial assets and liabilities are shown solely for reconciliation purposes.

Non-derivative financial liabilities
It is estimated that the carrying value of the long- and short-term loans and borrowings that are based on variable interest rates equals fair value as it corresponds to the current market rate of interest.

Fair value for fixed rate loans and borrowings is calculated based on the present value of future principal and interest cash flows discounted at the market rate of interest at the reporting date. All fair values are excluding the outstanding interest accruals as at 31 December 2016. The own non-performance risk as at 31 December 2016 was assessed to be insignificant.

The fair value of trade and other payables is estimated to equal the carrying value. Therefore, no fair value hierarchy level was stated.

Contingent Consideration
The fair value of the contingent consideration for the acquisition of Borealis Plastomers amounts to EUR 3,880 thousand as of 31 December 2016 (EUR 3,781 thousand) and has been estimated by applying a discounted cash flow technique. The assumed production target of Borealis Plastomers is, apart from the discount rate, the most significant valuation input for the determination of the contingent consideration liability. The financing rate for this acquisition has been determined as the applicable discount rate. A significant increase (decrease) in the production target of Borealis Plastomers would result in a higher (lower) fair value of the contingent consideration liability, while a significant increase (decrease) in the discount rate would result in a lower (higher) fair value of the liability. The fair value was re-measured in 2016 in the amount of EUR -99 thousand (EUR -97 thousand) and is included in the administrative costs in the income statement.

The fair value of the contingent consideration for the acquisition of mtm amounts to EUR 7,380 thousand as of 31 December 2016 and has been estimated based on mtm's preliminary earnings for 2016. The forecasted earnings of mtm for 2016 are the most significant valuation input for the determination of the contingent consideration liability. An increase (decrease) in the earnings of mtm would result in a higher (lower) fair value of the contingent consideration liability. The fair value was re-measured in 2016 in the amount of EUR 1,311 thousand and is included in the other income in the income statement.

28. Operating leases

The Group has operating leases relating to certain operational assets. Total rental during the non-terminable periods amounts to:

EUR thousand	2016	2015
1 year	32,996	21,438
1–5 years	89,735	41,411
Thereafter	115,931	53,349
Total	**238,662**	**116,198**
Operational lease payments during current year	29,075	36,899

The Group leases mainly machinery, means of transport and real estate under operating leases. The leases typically run for an initial period of 3 to 5 years, with an option to renew the lease after that date.

Borealis has no intention to terminate contracts for which contractual termination payments would materially affect the Group's financial position.

29. Other income

In 2016, other income consisted of release of contingent consideration in relation to business combinations amounting to EUR 1,311 thousand and proceeds from sale of fixed assets amounting to EUR 2,250 thousand. Other income in 2015 amounted to EUR 0 thousand.

30. Transactions with related parties

EUR thousand	2016							
	Goods and Services				Financing			
	Purchases from	Sales to	Receivables from	Payables to	Loans	Borrowings	Interest received	Interest paid
Associates	337,208	367,151	80,205	84,141	0	0	0	0
Parent company	0	159	80	0	0	0	0	0
Companies with significant influence	1,024,989	37,168	5,006	97,155	0	0	0	0
Key management personnel	0	0	0	0	0	0	0	0
Other related parties	41,509	8,025	365	0	0	0	0	0
	1,403,706	**412,503**	**85,656**	**181,296**	**0**	**0**	**0**	**0**

EUR thousand	2015							
	Goods and Services				Financing			
	Purchases from	Sales to	Receivables from	Payables to	Loans	Borrowings	Interest received	Interest paid
Associates	308,781	432,225	90,218	73,003	0	0	0	0
Parent company	386	0	0	0	0	0	0	0
Companies with significant influence	1,284,883	41,411	3,966	101,335	0	0	0	0
Key management personnel	0	0	0	0	0	0	0	0
Other related parties	35,558	1,148	221	1,320	0	0	0	0
	1,629,608	**474,784**	**94,405**	**175,658**	**0**	**0**	**0**	**0**

The sales to associates include mainly sales of finished goods and services. Purchases from companies with significant influence mainly relate to purchase of feedstock and utilities from OMV group companies at market rates. Purchases from associates mainly include purchases of finished goods produced in Borouge and sold in Europe. Payables to related parties are included in the trade payables. For details with respect to remuneration of key management personnel please see note 12.

31. Commitments and contingent liabilities

Legal claim contingencies
While the Group has certain lawsuits pending, it is the Executive Board's opinion that these proceedings will not materially affect the Group's financial position.

Financial guarantees
The Group has EUR 32,603 thousand (EUR 33,726 thousand) of financial guarantees outstanding by the end of the year. They consist mainly of commercial bank guarantees which serve as assurance that Borealis will make payment to a beneficiary in the event that it fails to fulfil its financial obligation. The guarantees have various maturity dates. The outstanding amount by the end of the year is equal to the maximum credit risk exposure.

Furthermore, the Group is subject to numerous national and local tax laws and regulations concerning its sales and environmental activities. These laws and regulations may require the Group to issue guarantees to respective authorities for the Group's payment obligations. These guarantees have been provided to the extent the authorities have requested them.

The Group has committed several rental guarantees mainly for own rental agreements. The Group will be responsible if the tenant or Borealis itself fails to pay rent or causes any damages to the property. No material losses are expected to arise from such contingent liabilities.

32. Subsequent events

Borealis has had no significant events after the balance sheet date.

33. Subsidiaries included in the consolidated accounts

Company name	Country, City	Currency	Issued share capital	Percentage of shares owned
Borealis AG				
■ Borealis Sverige AB	Sweden, Stenungsund	SEK	1,063,000	100
■■ Borealis AB	Sweden, Stenungsund	SEK	65,000,000	100
■■■ Etenförsörjning i Stenungsund AB	Sweden, Stenungsund	SEK	5,000,000	80
■■■ KB Munkeröd 1:72*	Sweden, Stenungsund	SEK	0	100
■■■ Borealis Group Services AS	Norway, Bamble	NOK	1,000,000	100
■ Borealis Polymers Oy	Finland, Porvoo	EUR	108,321,644	100
■ Borealis Technology Oy	Finland, Porvoo	EUR	43,728,860	100
■ Finphenol Oy*	Finland, Porvoo	EUR	2,500	100
■ Borealis Financial Services N.V.	Belgium, Mechelen	EUR	99,189,000	100
■ Borealis Polymers N.V.	Belgium, Beringen	EUR	61,500	100
■■ Borealis Kallo N.V.	Belgium, Kallo	EUR	40,575,176	100
■■ Borealis Antwerpen N.V.	Belgium, Zwijndrecht	EUR	11,277,054	100
■ Borealis Plastomers B.V.	The Netherlands, Geleen	EUR	1	100
■ Rosier S.A.	Belgium, Moustier	EUR	2,550,000	77
■■ Rosier Netherlands B.V.	The Netherlands, Sas Van Gent	EUR	11,141,000	100
■■ Rosier France S.A.S.	France, Beaumetz-Les-Loges	EUR	516,600	100
■ Borealis Brasil S.A.	Brazil, Itatiba	BRL	94,743,513	80
■ Borealis Poliolefinas da América do Sul Ltda*	Brazil, Itatiba	BRL	16,000	100
■ Borealis UK Ltd	UK, Manchester	GBP	15,000	100
■ Borealis Funding Company Ltd	Isle of Man, Ramsey	EUR	10	100
■ Borealis Insurance A/S	Denmark, Copenhagen	DKK	52,795,000	100
■ Borealis France S.A.S.	France, Courbevoie	EUR	109,477,216	100
■■ Borealis Services S.A.S.*	France, Courbevoie	EUR	5,000	100
■■ Borealis Produits et Engrais Chimiques du Rhin S.A.S.	France, Ottmarsheim	EUR	20,010,000	100
■■ Borealis L.A.T France S.A.S.	France, Courbevoie	EUR	752,500	100
■■ Borealis Chimie S.A.S.	France, Courbevoie	EUR	220,000,000	100
■■■ AGRIPRODUITS S.A.S.*	France, Courbevoie	EUR	952,000	100
■■■ GIFIAM G.I.E.*	France, Courbevoie	EUR	0	100
■■■ STOCKAM G.I.E.*	France, Grand-Quevilly	EUR	0	100

* Excluded from the consolidation due to immateriality

Company name	Country, City	Currency	Issued share capital	Percentage of shares owned
■ Borealis Química España S.A.	Spain, Barcelona	EUR	60,101	100
■ Borealis Chile SpA*	Chile, Santiago de Chile	CLP	4,000,000	100
■ Borealis Chimie S.A.R.L.*	Morocco, Casablanca	MAD	219,986	100
■ Borealis Colombia S.A.S.*	Colombia, Bogota	COP	84,000,000	100
■ Borealis s.r.o.*	Czech Republic, Prague	CZK	500,000	100
■ Borealis Polska Sp. Z.o.o.*	Poland, Warsaw	PLN	50,000	100
■ Borealis Polymere GmbH	Germany, Burghausen	EUR	18,407,000	100
■ Borealis Polyolefine GmbH	Austria, Schwechat	EUR	46,783,928	100
■ Borealis Plasticos S.A. de C.V.*	Mexico, Mexico City	MXN	50,000	100
■ Borealis Asia Ltd*	Hong Kong, Hong Kong	HKD	500,000	100
■ Borealis Italia S.p.A.	Italy, Monza	EUR	7,570,600	100
■ Borealis Compounds Inc.	US, Port Murray	USD	2,000	100
■■ Borealis US Holdings LLC	US, Port Murray	USD	0	100
■ Borealis Plastik ve Kimyasal Maddeler Ticaret Limited Sirketi*	Turkey, Istanbul	TRL	10,000	100
■ Borealis RUS LLC*	Russia, Moscow	RUB	3,600,000	100
■ Borealis Agrolinz Melamine GmbH	Austria, Linz	EUR	70,000,000	100
■■ Borealis Agrolinz Melamine Deutschland GmbH	Germany, Wittenberg	EUR	500,000	100
■ Borealis L.A.T GmbH	Austria, Linz	EUR	35,000	100
■■ Borealis L.A.T d.o.o. Beograd	Serbia, Belgrade	RSD	63,282,000	100
■■ Borealis L.A.T Hungary Kft.*	Hungary, Budapest	HUF	500,000,000	100
■■ Borealis L.A.T Bulgaria EOOD*	Bulgaria, Sofia	BGN	10,000	100
■■ Borealis L.A.T Hrvatska d.o.o.*	Croatia, Klisa	HRK	21,200	100
■■ Borealis L.A.T Czech Republic spol. s.r.o.*	Czech Republic, Budweis	CZK	2,000,000	100
■■ Borealis L.A.T Romania s.r.l.*	Romania, Bucharest	RON	18,392,320	100
■■ Borealis L.A.T Slovakia s.r.o.*	Slovakia, Chotin	EUR	497,909	100
■■ Borealis L.A.T Greece Single Member P.C.*	Greece, Athens	EUR	50,000	100
■ mtm plastics GmbH	Germany, Niedergebra	EUR	26,000	100
■ mtm compact GmbH	Germany, Niedergebra	EUR	26,000	100

* Excluded from the consolidation due to immateriality

34. Auditor's fees

The following fee information relates to the auditors of the Group (including their related networking firms):

EUR thousand	2016	2015
Audit of Borealis AG's subsidiaries	938	776
Audit of consolidated and standalone financial statements of Borealis AG	259	256
Other audit related services	62	61
Other services	627	73
Total	**1,886**	**1,167**

Thereof the following fees for 2016 relate to the Group auditor, PwC Wirtschaftsprüfung GmbH, Vienna, Austria (prior year Group auditor Ernst & Young Wirtschafts-prüfungsgesellschaft m.b.H., Vienna, Austria): audit of consolidated and standalone financial statements amounting to EUR 259,300 (EUR 256,423), other audit related services amounting to EUR 61,800 (EUR 61,250) and other services amounting to EUR 17,206 (EUR 3,700).

35. Executive Board and Supervisory Board

Executive Board
Mark Garrett, Mark Tonkens, Markku Korvenranta, Martijn Arjen van Koten, Alfred Stern

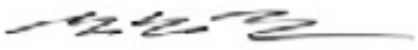
Supervisory Board
Suhail Mohamed Faraj Al Mazrouei (Chairman), Rainer Seele (Deputy Chairman),
Mohamed A. Al-Azdi (until 25 February 2016), Mohamed H. Al Mehairi (until 25 February 2016),
Murtadha Al Hashmi (since 25 February 2016), Rashed Saud al Shamsi (since 25 February 2016),
Manfred Leitner

Vienna, 15 February 2017

Executive Board:

Mark Garrett
Chief Executive

Mark Tonkens
Chief Financial Officer



Markku Korvenranta

Martijn Arjen van Koten

Alfred Stern

Statement of the Executive Board according to § 82 (4) Z 3 Vienna Stock Exchange Act

We confirm to the best of our knowledge that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group as required by the applicable accounting standards and that the group management report gives a true and fair view of the development and performance of the business and the position of the Group, together with a description of the principal risks and uncertainties the company faces.

Vienna, 15 February 2017

Executive Board:

Mark Garrett
Chief Executive

Mark Tonkens
Chief Financial Officer

Markku Korvenranta

Martijn Arjen van Koten

Alfred Stern

Report of the Supervisory Board of Borealis AG

In the year under review, the Supervisory Board received a comprehensive overview of the activities of the Management of Borealis AG and performed its duties and exercised its powers under the law and the articles of association in six plenary sessions.

The Management informed the Supervisory Board regularly, in a timely fashion and comprehensively, both in writing and verbally, on all the relevant issues of business development as well as on the state and strategy of the company and the important group companies, including risk conditions and risk management.

The Management of Borealis AG submitted the financial statements as of 31 December 2016 including the management report, and the consolidated financial statements as of 31 December 2016, including the consolidated management report, to the Supervisory Board and explained it thoroughly.

The financial statements of Borealis AG were drawn up in accordance with the applicable provisions of the (Austrian) Business Code (Unternehmensgesetzbuch), and PwC Wirtschaftsprüfung GmbH issued the unqualified audit opinion (uneingeschränkter Bestätigungsvermerk) on the financial statements.

Further, the consolidated financial statements of Borealis AG were drawn up in accordance with the International Financial Reporting Standards (IFRS), and PwC Wirtschaftsprüfung GmbH, issued the unqualified audit opinion (uneingeschränkter Bestätigungsvermerk) on the consolidated financial statements.

The (consolidated) financial statements documents and the audit reports were submitted to the Audit Committee and the Supervisory Board in due time. After a thorough examination and discussion by the Audit Committee and by the Supervisory Board, the Supervisory Board reached the final agreement that no material objections shall be raised, and the drawn up financial statements, the management report, the proposal for the appropriation of the retained earnings, the proposal for the appointment of the auditor for the Financial Year 2017, the consolidated financial statements, and the consolidated management report were approved/acknowledged.

Vienna, 23 February 2017

Suhail Mohamed Faraj Al Mazrouei
Chairman of the Supervisory Board

Annex

Table of figures

Content owner: Borealis AG
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Borealis AG
Wagramer Strasse 17–19 · A-1220 Vienna · Austria
Tel. +43 1 22 400 300 · Fax +43 1 22 400 333
www.borealisgroup.com

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