



Nordkalk & Sustainability 2015

Not just lime, but responsibility for a sustainable tomorrow.

Contents

Sustainability	1
Environmental Sustainability	3
The many aspects of limestone	3
Pure and natural	3
Part of everyday life	3
Lime leads to high biodiversity	4
Culture as a side product	4
Second life of a mine	4
Positive net balance	5
Reducing dust, noise, vibration	6
Continuous improvements	6
Noise barrier at Miedzianka	7
Securing access to raw material	8
Efficient use of natural resources	9
Continuous improvement of energy efficiency	10
Biofuel tested at Ignaberga in Sweden	10
Nordkalk warms up the town of Köping	12
Planned water management	13
Wellness efforts as part of the treatment of Klinthagen quarry	14
Many possibilities in restoration	15
Elevator testing and mine museum underground	15
Sustainable development is based on profitability	17
Investments: granulation plants in Poland and Sweden	17
Financial Year 2015	18
Improved EBITDA-margin through cost efficiency	18
Social sustainability: taking care of people	20
Supply Chain	21
Same rules apply to everyone	21
Efficient logistics	22
Safety is always topic number one	23
Safety first – Nordkalk’s long-term goal is zero accidents, and safety is an integral part of everything we do.	23
Safest workplace in town	23
Health & Safety data	24
Same rules apply to everyone	25
Together we can move mountains!	26

Personnel development in 2015 _____	27
Wellbeing at work and personnel development _____	27
Co-operation with communities and schools _____	28
Nordkalk Future - our internal training program _____	28
Personnel data _____	29
Part of the Community _____	31
Co-operation with schools _____	31
Water and heat to communities _____	32
Sponsoring focuses on local and environmental causes _____	32
Limestone for generations _____	32
Nordkalk warms up the town of Köping _____	33
The town of Lohja acquires water from Nordkalk _____	33
Lime stops phosphorous runoff _____	34

Our values

- OPENNESS
- FAIRNESS
- MODESTY
- TRUST AND RESPECT

*Profitable
business in a
responsible
manner.*

Sustainability

Nordkalk aims at long-term profitable business in a responsible manner. We are committed to a high standard of business ethics and integrity, as described in the Nordkalk Code of Conduct that applies to all employees.

Nordkalk complies with the laws of the applicable legal system including legal requirements and local rules. In addition, internal Rettig policies and Nordkalk guidelines specify how we operate in daily business. We refrain from any dealings with our competitors or other actors that could be harmful to our customer's interests. Training in competition compliance is offered on a regular basis in order to guarantee the personnel's knowledge and awareness of competition regulations.

We treat people with respect, and give them equal opportunities.

Nordkalk supports the United Nations' Universal Declaration of Human Rights and treats people with respect. We give them all equal opportunities for personal growth and professional development, regardless of their gender, age, race, ethnicity, disabilities, nationality, sexual orientation, religious beliefs, political affiliations, marital or economic status, or position within the company.

Nordkalk complies with recognised international labour standards as defined by ILO and the UN Global Compact covering human rights, labour, the environment and anticorruption. We do not under any circumstances accept child or forced labour at any of our operations or activities. We do not tolerate corruption or bribery.

We strive to outperform the demands set by legislation.

Nordkalk complies with environmental legislation and strives to outperform the demands set by the legislation. We endeavour to limit the negative impacts on the environment derived from our activities by means of continuous improvement, and by using the best available methods and techniques.

Nordkalk's success depends on the success of our customers. Understanding their businesses and needs leads to continuous improvement of our own as well as the customers' performance.

We aim at co-operation and good communication in the local communities where we act.

Nordkalk's limestone-based products contribute to the basic prerequisites of life: clean water and air and fruitful soil. We provide several industries with raw materials, without which our modern society would not exist.



Environmental Sustainability

The many aspects of limestone



Limestone can only be extracted in areas where limestone deposits exist. Before mining can start, geological studies establish the suitability of the deposit, followed by a thorough permit process to ensure control of environmental impacts. The mining stage can continue for decades, but after-care is taken into account from the beginning. Once mining has ended, either fully or in parts of the mine, after-care opens up new opportunities.

Pure and natural

Limestone is a pure and natural substance. It consists almost solely of calcium carbonate and can be used crushed or ground, or it can be refined into calcium oxide (quicklime) or calcium hydroxide (slaked lime).

Part of everyday life

Limestone is a versatile and mainly irreplaceable raw material that plays a role in the production of many essential products that are necessary for maintaining our current standard of living. Every day we use products that could not have been made without limestone-based products. In environmental applications, they are needed to provide society with the basic prerequisites for life – clean air, pure water and fertile soil.



Lime leads to high biodiversity



Mining areas provide an excellent environment for plants thriving in lime-rich soil, where several rare plants, such as orchids, can be found. While extraction is going on, rare species can be moved and replanted in new areas that correspond to natural conditions near the quarry, and later on re-established in the post-mining areas. Former mine areas can serve as new environments, or neo-landscapes, favouring unique biodiversity. For example, truffle cultivation has been tested in Pargas and on Gotland.

Culture as a side product



Some quarries offer such dramatic scenery as to make them popular touristic attractions. The Pargas quarry has also served as a unique concert venue for the Rowlit festival. Another concert venue is the Sipoo plant area, where an annual jazz concert is organised. Nordkalk's areas are used for photo sessions, TV programmes and even movies. The most famous of these is probably the show *Amazing Race*, which visited the underground Tytyri mine.

Second life of a mine



At Storugns on Gotland, a motorsports track has been built in an abandoned part of the quarry, and close by, land has been assigned to a wind power plant.

In Nordkalk's underground mine in Tytyri, Finland, in the parts where mining operations have ceased, there is a museum, an exhibition area and a festival hall. Some of the empty mine shafts in Tytyri are used for the final storage of power plant ash, and the former mine also features a test laboratory for high-rise elevators.

Positive net balance

Limestone-based products are needed to keep the world going, and we believe that the benefits of limestone clearly outweigh the negative impacts of operations. We have defined major environmental aspects and targets for proactive and protective measures. Read more about our environmental work:

- *Reducing environmental impacts*
- *Securing access to raw material*
- *Efficient use of natural resources*
- *Improving energy efficiency*
- *Planned water management*
- *Many possibilities in restoration*

Reducing dust, noise, vibration

Our operations are regulated by legislation and the limit values defined by authorities in permits, and by the company's own environmental objectives. They are part of Nordkalk's continuous improvement process in accordance with the ISO 14001 environmental management system. The surrounding environment and the employees' working environment are always taken into consideration in production planning.

Continuous improvements

Nordkalk has mines and production at 27 locations. Limestone is extracted and processed into crushed and ground limestone, calcium oxide (quicklime) and calcium hydroxide (slaked lime), as well as special products.

The operations can cause dust, noise and vibration. Nordkalk minimises these e.g. by using best available technologies (BAT) in investments and repairs.

Dust emissions can be controlled effectively. The air emitted by the grinding plants and lime kilns is purified using filters, which are also used at loading areas. Enclosed conveyor solutions prevent dust dispersion. Production areas and roads are asphalted in order to make cleaning as efficient as possible. Roads and stored stone material are watered during dry periods.

Sound insulation is improved by constructing noise barriers, planting trees and using various noise-damping materials at crushing plants, conveyor belts and loading places. In locations near residential areas, there are restrictions on night-time operations to avoid disturbances to the local residents.

Residential areas are taken into account when planning and carrying out blasting.

Vibration caused by blasting is measured; at Tytyri in Lohja, Finland, e.g. continuous measuring is carried out at three locations near the mine and at several temporary measuring points. On the basis of the results, necessary changes are made to blasting methods in order to reduce the amount of vibration.

Nordkalk has ensured the readiness of its production facilities for the demands of the EU's Industrial Emissions Directive (IED), set to enter into force in 2017, by making significant investments in Best Available Techniques (BAT).

Noise barrier at Miedzianka

Noise barriers or acoustic baffles are the best way to "fight" noise, which is emitted by transport, trucks, trains and loaders. In 2015, the Miedzianka Plant in Poland finished building 700 metres of wall baffles along its traffic routes.

The seven metres high walls are made of sound-absorbing material. They are located on the side of the plant closest to the private houses.



The measurements that were carried out after the installing of acoustic baffles fulfilled the requirements of the contract concerning the reduction of noise emissions. In 2016, additional actions are taken in order to further reduce noise emissions at night.

Mining is strictly regulated

by laws that have to do with

- ♦ mining
- ♦ environmental and nature protection
- ♦ water
- ♦ land use
- ♦ building
- ♦ occupational safety
- ♦ use of chemicals
- ♦ environmental impact assessments.

Securing access to raw material

Access to raw materials is at the heart of Nordkalk's operations. Prospecting – searching for new reserves – is continuous work, in order to secure stone reserves for generations to come.

Nordkalk has mines at 21 locations in five countries. The deposits represent different geological periods, varying in age from 180 million years to 1900 million years. This results in the stone having a variety of physical and chemical characteristics, enabling Nordkalk to offer the most suitable quality for each application.

Nordkalk extracts more than 14 million tonnes of stone yearly. It represents a small percentage of known reserves, but new ones need to be secured in the long term. A local limestone supply is necessary, because so many industries and environmental applications depend on it. Bringing in limestone from far away would be expensive and cause unnecessary emissions, and could lead to a retreat of industries from the Nordic countries.

Mining is strictly regulated, and the permit process can easily take several years. Permit applications involve extensive environmental studies to guarantee that negative impacts on the environment are kept to a minimum.

One aspect of opening a new mine, or the expanding operations, is the social acceptance of the plan. Prior to filing a permit application, Nordkalk organises meetings with the community, neighbours and authorities in order to address people's concerns and to take them into account .

Despite the clear benefits of the products - the absolute need for limestone - and protective environmental measures during operations, social acceptance is not easily gained. On the island of Gotland, Nordkalk has been preparing to open a new quarry since 2006.

Material efficiency target 100%

Result in 2015: 94.3%

Target in 2016: >95%

Efficient use of natural resources

Nordkalk strives to use all of its raw materials, aiming for 100% material efficiency, which is sound from both financial and environmental point of view.

The material-efficiency efforts include using all by-products: wall rock that is extracted in addition to regular limestone, fine sand produced in the flotation process, filter dust, which builds up in all lime kilns and at grinding plants and residues created in lime burning and slaking. Nordkalk also assists its customers by handling their process by-products in a sustainable way.

In 2015, Nordkalk was able to raise the material efficiency rate from 90.9% to 94.3%, thanks to focus on sales of lime kiln dust and especially of wall rock.

Wall rock is used to build infrastructure, e.g. foundations for roads, airports and windmill parks.

In addition to the Finland's domestic market, stone

products are shipped e.g. to the Baltics and Russia for infrastructure projects.



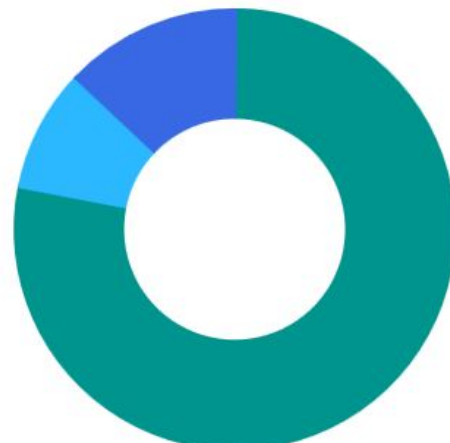
All of Nordkalk's stone material is CE marked, which supports sales, as does the growing environmental awareness in the society. Paying a price for the transportation of stone is to be compared to starting to extract stone in untouched areas near construction sites and at the same time dumping previously quarried stone elsewhere.

Wall rock is typical of Finnish quarries for geological reasons. In the Lappeenranta and Pargas quarries, wall rock represents approximately one third of all quarried stone products.

Material Efficiency

Material Efficiency

- Processed and sold stone
- To storage and disposal
- Utilised by-products



Improvements in 2015

The most significant energy efficiency improvements in 2015 were related to

- the optimisation of the kiln process in Köping
- implementing new waste heat recovery from the atomising air compressors at the kiln in Verdal
- installation of a new washer unit in Miedzianka
- renewal of the heat recovery unit at the rotary kiln in Tytyri
- renewal of quarry vehicles in Lappeenranta and Pargas.

Continuous improvement of energy efficiency

The production processes of the mining and lime industry are energy intensive. Quarrying, crushing, grinding and calcination of limestone all require significant amounts of energy. Nordkalk continuously strives for improved energy efficiency, which can be reached through optimised processes and capacity utilisation, and by making reduced energy consumption a priority in new investments and repairs.

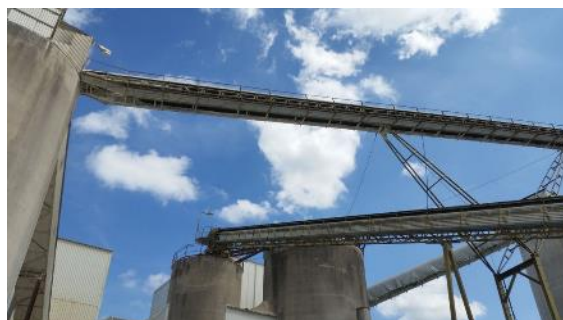
Reduced energy consumption through optimised processes and capacity utilisation.

In 2015, Nordkalk carried out energy audits at several sites. In addition to finding potential areas for improvement, these audits also help Nordkalk to meet the requirements set out in the European Energy Efficiency Directive (EED). It establishes a set of binding measures in order for the EU to reach its 20% energy efficiency target by 2020.

We are also promoting alternative fuels with a decreased environmental footprint as well as the adoption of new, advanced energy solutions.

Biofuel tested at Ignaberga in Sweden

In 2015, Nordkalk tested the use of biofuel at its facility in Ignaberga. The fuel is a surplus product from ecological feed production. The tests have given good results for both the environment and Nordkalk. Therefore an investment will be made to adjust the production and equipment for the switch from fossil fuels to biofuels.

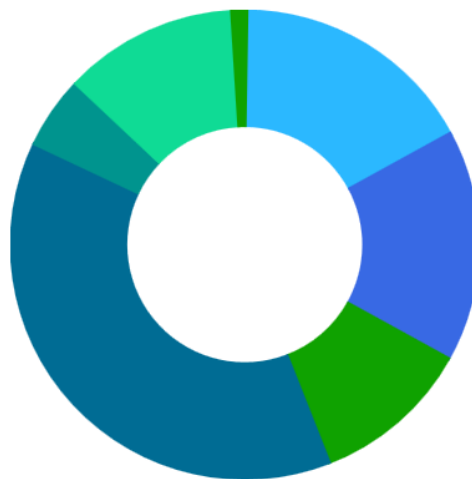
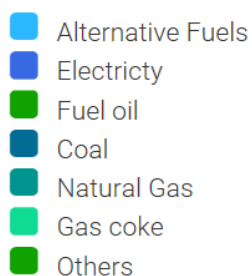


The tests have given good results for both the environment and Nordkalk.

Nordkalk was granted climate investment support for the Ignaberga project by the Swedish Environmental Protection Agency in December 2015. The support was granted in the context of the Climate Leap (Klimatklivet), an effort to reduce greenhouse gas emissions. Nordkalk is one of twelve companies receiving support for "measures that demonstrate the greatest sustained reduction of greenhouse gas emissions per crown invested".

[Read also how residual heat from lime kilns is used in district heating](#)

Energy Sources



About a third of the energy Nordkalk consumes comes from coal, which is used in lime burning, as are oil, natural gas and coke oven gas. Electricity is used for crushing and grinding, and fuel oil, natural gas and liquid petroleum gas for the drying process.

Nordkalk warms up the town of Köping

Since December 2013, Nordkalk in Köping has been supplying recovered residual heat to the town's district heating network. This heat allows the town to reduce its consumption of fuels for heating, which also reduces emissions.

During winter 2014/2015, as much as 65 per cent of district heat consumed within the town of Köping consisted of residual heat delivered by Nordkalk and Yara. This is a record in Köping, and shows how local industry can contribute to the circular economy.

A heat recovery unit installed in the flue gas channel of the rotary kiln makes it possible to utilise the residual heat from the kiln. Depending on operation conditions, up to 14 MW can be delivered to the district heating network. In 2015, Nordkalk delivered 41,000 MWh, which equals the amount of energy in about million litres of heating oil.

Pure water is one of life's essentials

Limestone-based products play an important role in water treatment, in the preparation of drinking water as well as in cleaning waste and process waters and treating natural waters.



Planned water management

Water is linked to Nordkalk's production, even though the limestone industry is not a big consumer of water in comparison with metals mining, which has processes requiring large quantities of water. Because limestone is used for water cleaning, any water relating to limestone processing is not dangerous to nature.

In quarries, water collects on the bottom as groundwater seeps in through cracks in the bedrock. Rain and melt water from nature also end up in the quarry. Thanks to the composition of limestone, this water is clean. Tytyri in Lohja in Finland and Miedzianka in Poland deliver water to the municipal water utilities.

If a quarry extends deeper than groundwater level, it can have an impact on groundwater levels in the surrounding environment. Many of Nordkalk's quarries are shallow and do not affect the groundwater level.

In Lappeenranta in Finland, calcite and wollastonite are processed in a flotation plant that recycles its water. The amount of water circulating in the closed system is about six million cubic metres. The system includes sedimentation ponds, where the flotation sand, a useful by-product of the process, settles to the bottom, and cleared water is reused in the process.

At some of the plants, it is necessary to wash stones to remove clay, for example. Also yards and vehicle wheels are often washed, for the purpose of reducing dust emissions.

Nordkalk sites have Water Management Plans. The guiding principle in each quarry is to carry out operations with an absolute minimal negative impact on both the surface water and groundwater.

An arched bridge has been built for more trout to be able to play further up the Klinthagen creek.



Wellness efforts as part of the treatment of Klinthagen quarry

Today, the lake in Klinthagen quarry holds about 2.5 million cubic metres of water. When the quarry is fully broken out and the lake completely filled, the lake will accommodate about five million cubic metres and be Gotland's deepest lake and the second largest lake in terms of volume after Lake Bästeträsk.

In the autumn of 2015 a two-kilometre-long ditch was built to dewater the northern and central part of the quarry. When the pit is broken out ditches will also be constructed to carry water to the pit exit point and onward to Klinthagen creek. The ditches create a self-regulating system with natural sedimentation of the water extraction.

From the exit point the water will be transported to an area of maximally active wetland vegetation for further cleaning of the water downstream from the Klinthagen quarry and into the creek. Any limestone particles, clay particles and nitrogen resulting from limestone quarrying are removed, so that the water is crystal clear and has the same concentration levels as the natural creek water.

Fish conservation efforts will be carried out in the creek, to promote spawning fish and other aquatic organisms. Spawning gravel has been deployed and ditches adjacent to the sea and farmland have been cleared. An arched bridge has been constructed under a minor road so that more trout will be able to spawn further up the creek. To promote the fry's hatching period, small flows will be pumped out into the creek from April to midsummer. Information on how the trout's spawning territories evolve over time, will be collected by counting the numbers of spawning pockets every autumn until two years after completion of quarrying.

3000 trees

birches and pines, were planted in 2015 on the external overburden heaps in connection with reclamation works carried out in Miedzianka in Poland.

Many possibilities in restoration

One aspect of mining is its effect on the landscape: open pit mines are visible in nature. Nordkalk has a restoration plan for each of its mines. In some quarries it is possible to landscape areas that are no longer in use simultaneously with extraction in other parts; for example in the Karinu quarry in Estonia and Ignaberga and Uddagården in Sweden.

Once extracting has ended, the quarry can completely disappear from the scenery after it has been levelled out and vegetation takes over.

In deeper quarries, the aim of reclaiming is, besides safety, to contribute to the surrounding landscape and take the needs of the community into consideration. Old mine areas can serve as recreational or even nature conservation areas.



Elevator testing and mine museum underground

Many activities take place in Nordkalk's underground mine in Tytyri, Finland, in the parts that are no longer in mining use. The globally operating Finnish KONE Corporation has had a test site for high-rise elevators in the mine since 1998. There are nine test shafts, five of which were built recently. Two shafts have a depth of 317 metres. The test site is an important part of KONE's development activities.

The city of Lohja operates a mining museum in the mine, including a museum area and a festival hall. It makes for a unique venue to organise an event - 80 metres below the surface. [More information on the museum's website.](#)

At Storugns on Gotland, a motorsports track has been built in an abandoned part of the quarry, and close by land has been set aside for a wind power park.

Sustainable development is based on profitability

Our mission

The mission of Nordkalk's owner, Rettig Group, is to produce "value for generations".

Nordkalk contributes to this by fulfilling its mission of delivering "more clean air and water, food, and essential raw materials with less resources and emissions", and by reaching the financial targets set for the Rettig Group business areas:

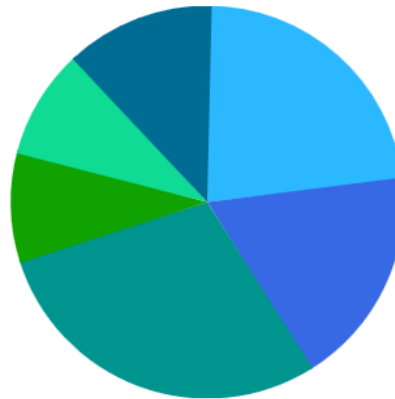
- ◆ EBITDA growth of >5 % p.a.
- ◆ ROCE >9%

Profitability is the prerequisite for sustainable development that benefits all stakeholders. It means not only jobs and income; it enables companies to improve, invest and focus on innovation – to create knowledge and products that answer to the global issues of climate change and growing population requiring more resources.

Limestone is a versatile and often irreplaceable raw material. It is needed in several industrial fields as well as in environmental care and agriculture. The variety of applications helps us to balance economical fluctuations.

Sales by application

- Construction
- Metals and mining
- Pulp and paper
- Environment
- Agriculture
- Others



Investments: granulation plants in Poland and Sweden

A new granulation plant in Sławno in Poland (photo below) is one of the major current investments. It was brought on stream in the spring 2016, starting to serve the growing agricultural market in Central European area. The plant will give work to 30 new employees.

Also in Landskrona in Sweden, a granulation plant started to work in the early summer 2016. It will produce granules for flue gas desulphurisation (FGD) onboard vessels and small industries faced with new emission limits.



Year 2015 highlights

- ◆ New operations model to unify processes and implement best practices.
- ◆ Continuous improvement process, CIP, led to significant savings.
- ◆ Good cost control and more active sourcing.
- ◆ Improved energy efficiency.
- ◆ Despite challenging markets, EBITDA percentage improved.

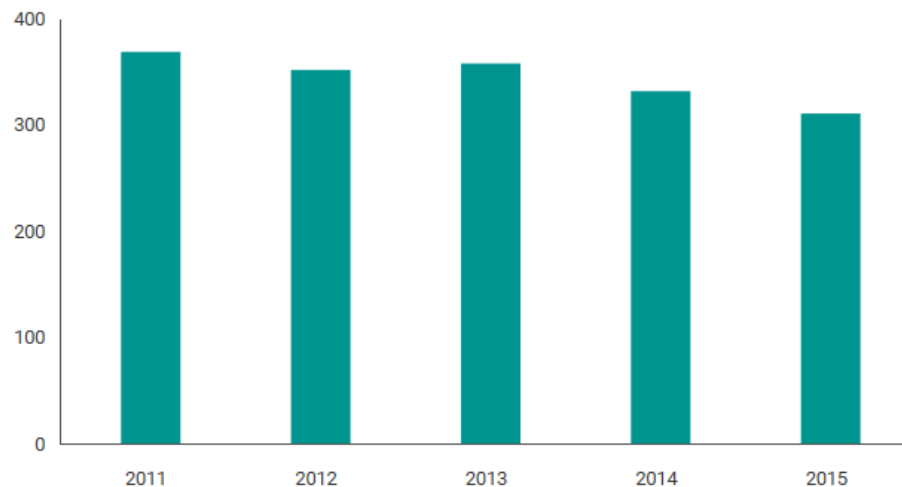
Financial Year 2015

Improved EBITDA-margin through cost efficiency

The general economic situation on Nordkalk's key markets remained challenging throughout 2015, which led to decreased demand for limestone-based products.

Demand in Nordkalk's biggest market, Finland, continued to be flat and was partly affected by the European Union's trade embargo on Russia and the weak rouble. While the Scandinavian market was slightly stronger, the central European area performed better, supported by Nordkalk's investments in quality and services in this highly competitive market. Sales to Nordkalk's three largest customer segments – Construction, Metals & Mining and GCC (paper pigment produced by the subsidiary Suomen Karbonaatti Oy) – remained on the same level as the year before.

Turnover 2011 - 2015



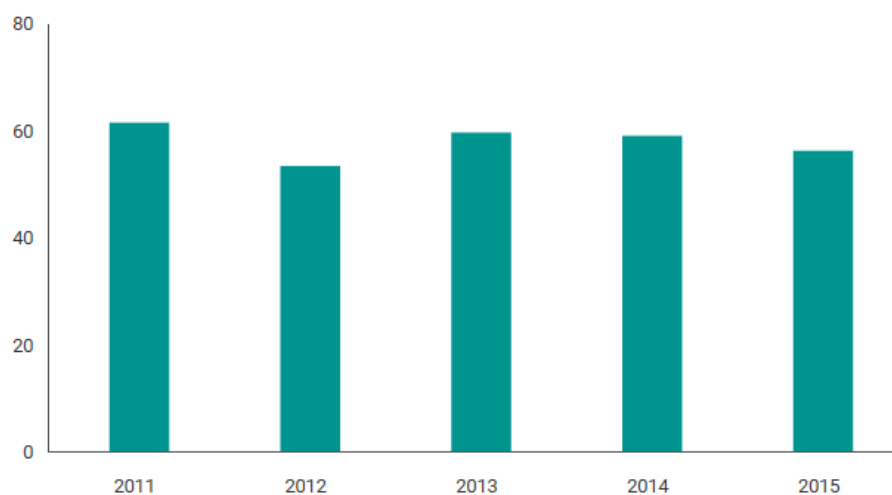
In challenging market conditions, Nordkalk continued to focus on its strategic key actions:

- improved cost efficiency
- new business innovation
- profitable growth

To support the strategic actions a new process-based operations model was implemented in April, focusing on unified processes and implementation of best practices.

In order to safeguard Nordkalk's and its customers' competitiveness, expenses were under scrutiny during 2015. Both fixed and variable costs decreased, thanks to e.g. more active sourcing, improved energy efficiency and lower energy prices. The continuous improvement activities and cost-efficiency measures led to a higher EBITDA percentage than in 2014.

EBITDA 2011 - 2015



Life evolved around the company

"If one employed somebody, one's duty was to take care of him", This was the principle applied by Emil Sarlin, Managing Director of Pargas Kalkbergs Aktiebolaget in 1905-55. In the first half of the 20th century, life in Pargas evolved around the company. It build roads, houses, and sports places; maintained schools, supported a hospital and social activities. The social facilities built in 1933 for the employees included a barn, a bathhouse, washing room, bakery, library and a handicraft room, among other things.

Social sustainability: taking care of people

Nordkalk's success depends on the success of its customers and satisfaction of all stakeholders: employees, owners, suppliers and authorities who grant permits for the operations. Neighbours want to have a clean and safe business next door, society at large benefits of the availability of needed products and the financial stimulus created by a productive company.

Stakeholder groups consist of people who have different expectations towards Nordkalk. We treat all people according to our values, which apply in the whole Rettig Group: we believe in openness and fairness, and trust and respect are the most fundamental elements of our interaction and communication with different stakeholders. The fourth value, modesty, is the principle applied in listening to and understanding divergent views and opinions.

Nordkalk complies with local and international laws and regulations, such as international labor standards defined by ILO and UN Global Compact covering human rights, labor, the environment and anticorruption. We do not under any circumstances accept child or forced labor at any of our operations or activities. We do not tolerate corruption or bribery.

- Personnel
- Health and Safety
- Community
- Supply Chain

Supply Chain

Nordkalk's preference is to use local suppliers; approximately 80 per cent of Nordkalk's purchases take place in its countries of operations. The environmental impact of the short transportation distances is smaller and Nordkalk is better able to successfully monitor its supply chains.

Same rules apply to everyone

All purchasing for Nordkalk Group is performed complying with Nordkalk's Purchasing Guidelines. When starting a contracting process with a new supplier, a supply evaluation process will be performed: The supplier's background and reliability, ethical and financial, will be checked before the tender process can begin.

Suppliers are expected to commit to Nordkalk's environmental care and sustainability requirements, a high standard of business ethics and integrity. A supplier is expected to comply with the requirements set out in Nordkalk's Supply Code of Conduct, which the supplier is to sign as a part of the purchase agreement. Nordkalk expects all of its suppliers to work in the spirit of Nordkalk's values – Openness, Fairness, Modesty, Trust and respect.



Transportation is an important part of supply chain. Same health and safety rules and regulations apply to everyone who visits Nordkalk premises.

[Read what driver Timo Koivula from E. Seppälä Transports thinks about that.](#)

Efficient logistics

Nordkalk offers its customers extensive and economical logistics services. Our logistics chain is effective, fast and reliable.

Our products are transported by ships, trucks and trains. We administer ourselves the transports of about 60% of our total volume. We use many industrial harbours and our terminal network covers our whole area of operations in Northern Europe. The vessels that we are using are designed especially for the transport of quicklime. Thanks to their closed loading and discharging arrangements, work can proceed in any weather conditions. We have many contract transport companies offering the best possible equipment for transporting lime and we take care of both trailer and container transports around Europe.

We are experts on transporting lime.

Targets in 2016

- ◆ Accident rate* (LTA1**) **under 6**
- ◆ Number of safety observations **more than 3** per employee

*accident rate = accidents per million work hours of own employees

**LTA1 = accidents causing one or more days of sick leave.

Result in the end of 2015:

- ◆ Accident rate 7.4
- ◆ 3.5 safety observations /person

Safety is always topic number one

Safety first – Nordkalk’s long-term goal is zero accidents, and safety is an integral part of everything we do

The focus is on safety thinking, making employees more aware of how their attitude affects their own and that of their co-workers’. Safety management, processes and routines are constantly developed, as required by the OHSAS 18001 standard that Nordkalk complies with.

All Nordkalk employees are encouraged to pay attention to the work environment and report safety observations at work and when travelling. All safety observations are studied, and eventual corrective actions are taken within two months at the latest. Occupational accidents are reported within 24 hours in all Nordkalk countries. Health and safety is always topic number one at internal meetings.

Safest workplace in town

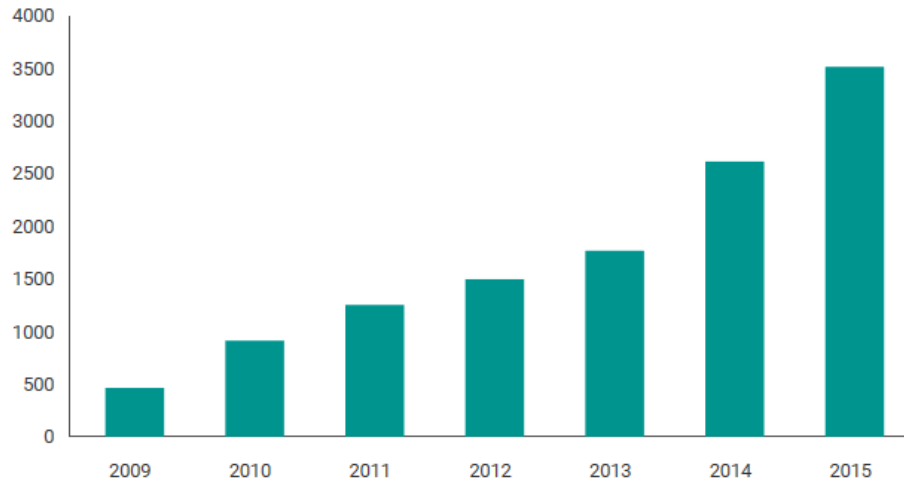
In Lohja in Finland, the Tytyri mine and plant have operated for 1.100 days without accidents (situation at the beginning of June 2016). The unit was publicly recognised for its achievements already in 2015, in a local competition for the safest workplace in town. Nordkalk was the winner in two of the four competition categories, showing best safety development and least accidents. In 2016, the company was again awarded for not having had any accidents, and for its safety management system. The representatives of the lot to do with having the right attitude.

Health & Safety data

Highlights in 2015

- ◆ accident rate improved to 7.4 from 9.9 in 2014 (based on the number of LTA1 accidents per million work hours by own employees)
- ◆ number of total accidents decreased to 34 from 43 in 2014 (including accidents of subcontractors).
- ◆ record number of safety observations: average 3.5 per employee (2.4 in 2014)
- ◆ a weekly safety tip introduced in Finland to improve information sharing
- ◆ campaign "Safety begins with me" was created, drawing attention to attitudes

Safety observations



Same rules apply to everyone

The health and safety rules and regulations are the same to Nordkalk's own personnel and all visitors to the Nordkalk premises.

In Finland, there is an on-line safety video guiding in detail what is expected at the site e.g. in safety gear wise, which everybody entering Nordkalk's production sites shall watch, either online beforehand or at site.

An instructions booklet to chauffeurs is delivered to all transport companies and other contractors during e.g. audits conducted by Nordkalk. In case a person arrives at a Nordkalk site without the necessary safety gear, it will be provided to the person. Nordkalk personnel is obligated to react immediately to any breach of safety regulations and guide anybody on the premises about the safe way of working. All such incidents will be reported and included in the safety statistics.



Chauffeur **Timo Koivula** from E. Seppälä Transports visits Nordkalk's Pargas unit twice a day to pick up a load of powdered limestone. Timo is wearing all the by Nordkalk required safety gear i.e. helmet, goggles, safety footwear and high vision clothing.

- Safety gear is a modern day phenomena, to wear it is a given, says Timo, who thinks that investing in H&S issues is a very good thing.

Targets

- ◆ Activity in development discussions: 100 %
- ◆ Minimum 3 safety observations per person

Together we can move mountains!

At Nordkalk, we believe that our success depends on each of us, because we together as individuals are what make up Nordkalk.

We are proud of our professional competence and continuously develop our knowledge and skills. We aim for a good and safe work environment and the better well-being of our personnel. We are all responsible for creating a positive and innovative workplace atmosphere. We take care of the environment and work safely towards our common goals.

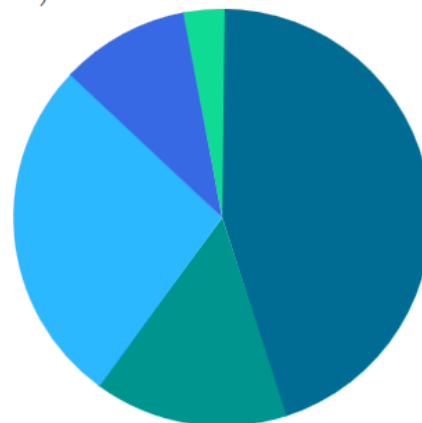
We are all responsible for creating a positive and innovative workplace atmosphere.



At Nordkalk, the development of wellbeing at work is methodical and is guided by quarterly changing themes. One of the central themes in 2015 was “Activity Brings Joy”, through which the personnel was encouraged to lead a more active life both at work and at home. The above photo was taken during a break at a Nordkalk management meeting.

Personnel/ country (total ca 1000)

- Finland
- Sweden
- Poland
- Estonia
- Others



Personnel development in 2015

One of the highlights in 2015 was the launching of the new One Nordkalk operations model, with which the modes of operation were unified and simplified. Nordkalk's personnel showed great commitment to the new model working actively for the common goals.

Due to the changed organisation, connection between Human Resources and Health and Safety deepened further as they were joined together under one function. A safe and healthy work environment is a goal, which will be emphasized in all development work.

Wellbeing at work and personnel development



In 2015, Nordkalk continued investing in wellbeing at work and personnel development. Lectures on wellbeing and different wellbeing activities were arranged in all Nordkalk countries, special emphasis was paid on development of supervisor skills.

As a way of encouraging activity during the working day, exercise breaks were promoted. An exercise program was installed in majority of computers in Finland in 2015. It offers short exercise videos to the user at an interval chosen by the user e.g. once an hour. The program was utilised also at meetings introducing the participants a bit different and more active breaks.

It was not only the office workers that had exercise breaks during the working day; also the production personnel participated. For example in Lappeenranta in Finland, the quarry personnel had exercise breaks led by a physiotherapist. The exercise breaks helped the bodies to be in better shape for work and it helped ease the tensions so that any possible strain injuries to support and mobility organs would stay under control. The positive feedback encouraged to introducing the exercise break concept to other countries in 2016. So, in the future, the entire Nordkalk will exercise!

Co-operation with communities and schools



Sense of community and school co-operation were highlighted in 2015. In both Estonia and Poland, a family picnic gathered together Nordkalk's personnel and their families. These annual events include different health & safety promoting activities.

Nordkalk has active co-operation with schools and universities. Miedzianka in Poland welcomed 15 student groups from Poland and abroad during 2015. In Rakke in Estonia, Nordkalk has cooperated with a local school for four years. In 2015 Nordkalk was involved in giving monthly lessons in e.g. chemistry, geology and social science to the pupils.

In Finland, cooperation with schools started with a summer work scholarship program. The program was directed at students at the age of 16-17 with an aim of offering the young valuable work experience instead of solely monetary compensation. A designated sponsor was appointed to guide and supervise the students at the workplace. The students worked with tasks improving health and safety and cleanliness by e.g. painting fences, steps and other risky places with safety colours and arranging tools into correct places.

Nordkalk Future - our internal training program



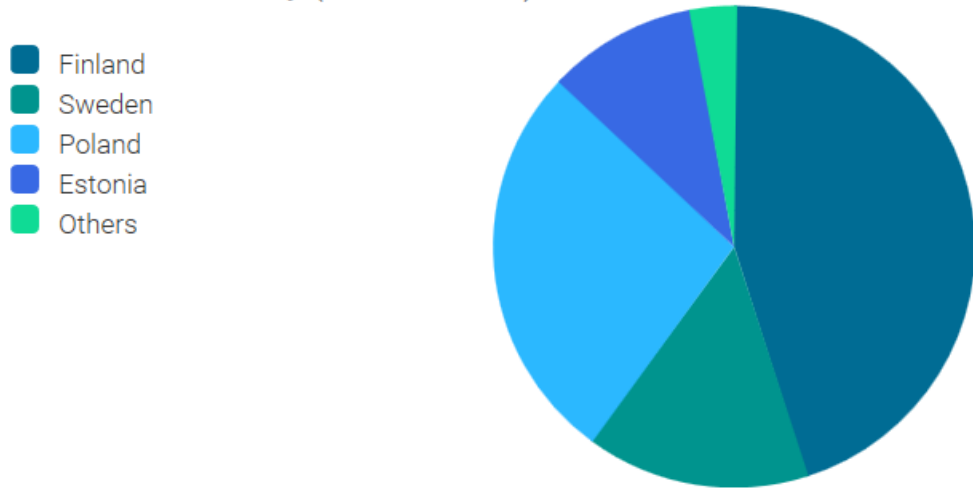
Nordkalk's own internal training program Nordkalk Future was finalised in the spring of 2015. Sixteen people graduated from the program gaining tools for e.g. strategic and innovative thinking, leadership and interaction. This international program was arranged for the third time, now in cooperation with Turku University's Turku School of Economics.

Year 2015 highlights

- ♦ Launching One Nordkalk operations model
- ♦ Human Resources and Health and Safety joined in one function
- ♦ Lectures on wellbeing and wellbeing activities
- ♦ Community and school cooperation highlighted
- ♦ Own internal training programme Nordkalk Future finalised

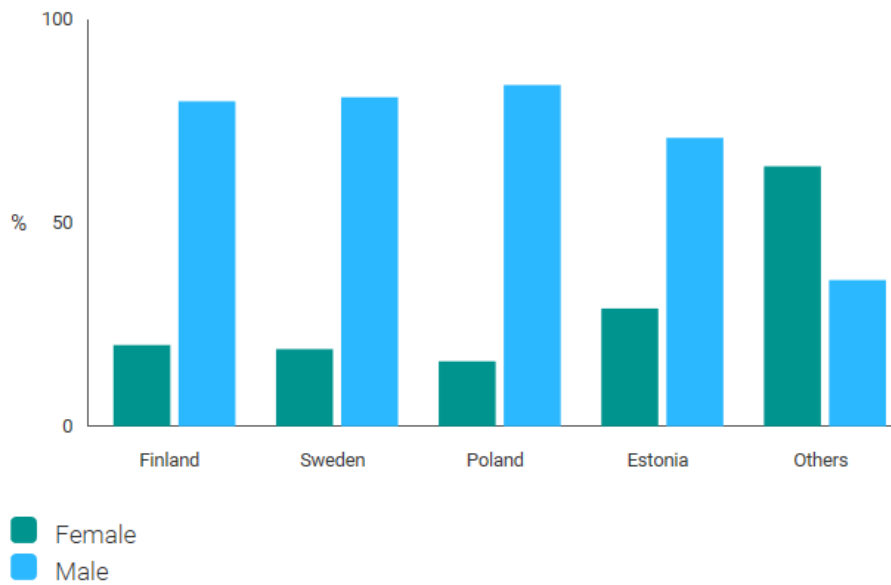
Personnel data

Personnel/ country (total ca 1000)

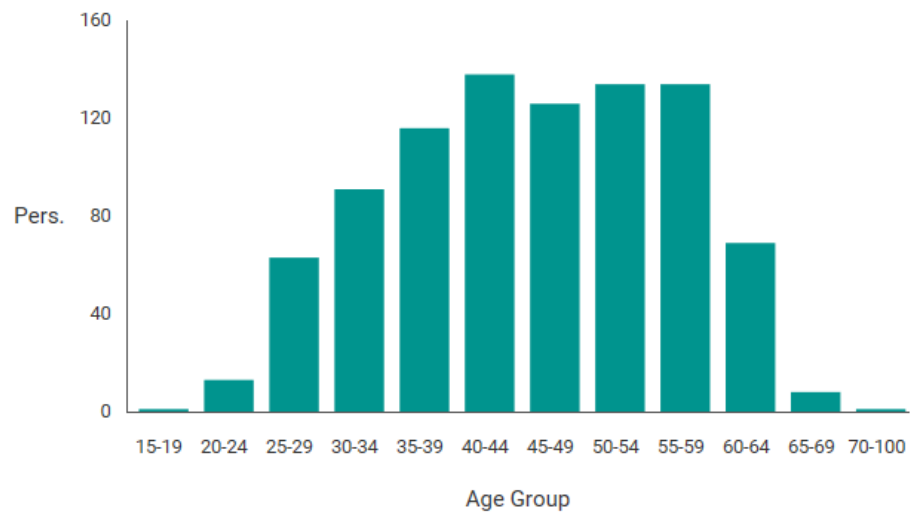


The number of personnel was 971 in the end of 2015. In the beginning of 2016, new personnel has been hired in Poland, where a new plant is scheduled to open in the spring, bringing the total number of personnel to approximately 1000

Personnel by gender (%) in 2015



Personnel by age in 2015



Part of the Community

Rettig Group's value of openness is the foundation for Nordkalk's communications with neighbours, local communities and society at large. We believe that by showing people what we do and who we are, we gain and strengthen social acceptance of our activities.

The best way to meet neighbours is to organise community events and meetings – open doors to the public. The biannual, international event European Minerals Day (EMD) is a



good example of this kind of co-operation. In 2015, EMD took place on the last weekend of September. Along with more than 130 minerals industry sites in 25 countries, Nordkalk participated in the event in Estonia, Finland and Sweden. Hundreds of visitors used the opportunity to learn about us, limestone and mining.

Co-operation with schools



Nordkalk co-operates with a number of schools and universities by e.g. organising excursions to our plants, offering internships to students and by enabling research work, as well as offering job opportunities during vacation times. In Rakke in Estonia, one form of cooperation with a local school involves Nordkalk's specialists giving monthly lessons in e.g. chemistry and geology.

In Finland, a summer work scholarship programme was started in 2015, directed at students at the age of 16-17. One of the students employed was Ella Hytönen who worked in Pargas, in the photo with her designated sponsor Jerker Söderblom.

Water and heat to communities



Companies provide society with needed products and services, and their surrounding communities with employment opportunities. In Nordkalk's case, some communities also benefit from by-products created in production. In Pargas and Tytyri in Finland, as well as in Köping in Sweden, Nordkalk delivers recovered residual heat to the district heat network.

Sponsoring focuses on local and environmental causes



Nordkalk's sponsoring activities focus on the local communities where the company operates. The spotlight is on children and youth and supporting their leisure activities, mostly sports.

Our sponsoring activities extend to environmental projects, in collaboration with research institutions or organisations. In 2012, Nordkalk made a 5-year-long commitment to the [Baltic Sea Action Group \(BSAG\)](#). Nordkalk's objective is to

reduce the phosphorus burden on the Baltic Sea with the help of the Nordkalk Fostop® products.

Limestone for generations



Limestone mining is a long-term business, and many of Nordkalk's sites have been in operation for decades. Communities have grown around the mines and keep prospering thanks to them. Our society depends on the supply of limestone, which Nordkalk guarantees by continuously prospecting for new reserves. In Sweden, preparations for opening a new limestone quarry in Bunge on Northern Gotland have been going on for more than ten years, due to a prolonged legal process.

Nordkalk warms up the town of Köping

Since December 2013, Nordkalk in Köping has been supplying recovered residual heat to the town's district heating network. This heat allows the town to reduce its consumption of fuels for heating, which also reduces emissions.

During winter 2014/2015, as much as 65 per cent of district heat consumed within the town of Köping consisted of residual heat delivered by Nordkalk and Yara. This is a record in Köping, and shows how local industry can contribute to the circular economy.

A heat recovery unit installed in the flue gas channel of the rotary kiln makes it possible to utilise the residual heat from the kiln. Depending on operation conditions, up to 14 MW can be delivered to the district heating network. In 2015, Nordkalk delivered 41,000 MWh, which equals the amount of energy in about million litres of heating oil.

The town of Lohja acquires water from Nordkalk



More than one million cubic meters of groundwater is pumped up yearly from the underground mine. About half of the water is delivered to the municipal waterworks, where it represents 23 per cent of all raw water received. It is filtered through a sand bed before being led to the water distribution system.

The Tytyri plant itself uses some 30.000 m³ of water annually, also from the mine, but through a separate pumping station. The surplus water – about half a million cubic meters – is directed to the nearby lake Lohjanjärvi. This is mostly groundwater, but it includes a small portion of storm water gathered from the plant area. Yearly quality measurements show that the water released into the lake corresponds to household water quality.

Further services to the community of Lohja include a mining museum operated by the city and visited by more than 10.000 people annually.

KONE Corporation's high-rise elevator test laboratory is located in old mine shafts. Currently KONE is expanding the laboratory by five new elevator shafts.



Lime stops phosphorous runoff

In 2012, Nordkalk joined the Baltic Sea Action Group (BSAG) in preserving the Baltic Sea with a 5-year-long commitment with the goal of reducing the phosphorus burden on the Baltic Sea.

In agriculture, liming reduces the soil's acidity, which improves the plants' living conditions and allows them to use nutrients more efficiently, resulting in bigger crops and reduced nutrient runoff into watercourses.

In addition to traditional soil-improvement lime, Nordkalk's Fostop® concept tackles the challenge of phosphorous runoff. Fostop is used for the structure liming of fields, the stabilisation of sludge, and for lime filters and drains that help to reduce leakage and contribute to the recycling of phosphorus. This is extremely important because world's phosphorus reserves are estimated to last only for a few more decades.

In Sweden, where the state grants environmental subsidies to farmers for curbing phosphorus runoff, Nordkalk's Fostop Structure is a well-established method. One of Nordkalk's many phosphorus-related research projects is also under way in Sweden. It involves structure liming and testing Fostop filter drains in the fields surrounding lake Bornsjön near Stockholm. The project is being carried out in co-operation with Stockholm Water.

