

# Sustainability report 2017

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SUMMARY

# About Höganäs

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Höganäs is one of the world's leading providers of metal powder solutions and our origins date back as far as 1797. Coal mining, as well as ceramics, have played an important part of our history, but today we focus solely on metal powders.

Since the 1950s, we have developed metal powders for a wide spectrum of applications. So, when customers turn to us, they can also tap into our vast expertise in metal powder treatment in our customers' production processes, and on the design of metal powder-based applications. In 2017, we had nearly 1,900 employees and produced around 500,000 tonnes of metal powder.

**1,500**

products in the Höganäs  
product portfolio

**2,500**

customers served  
in 79 countries

**15**

production units in  
9 countries on 4 continents

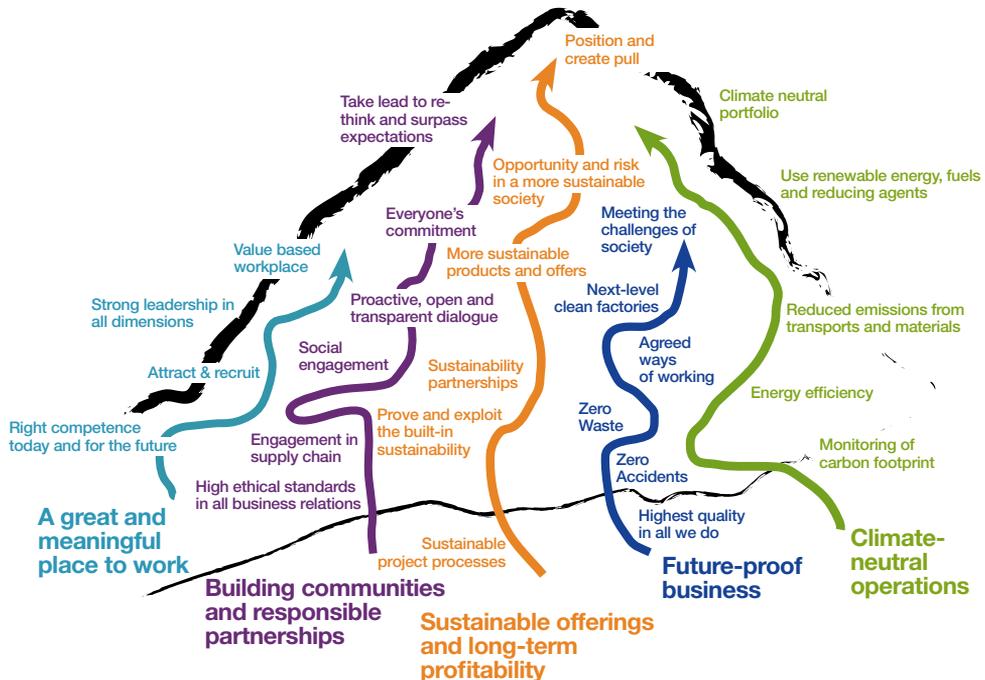
# Sustainability and Höganäs

**HÖGANÄS STRIVES TO** be a catalyst for change and become a truly sustainable business. For us, environmental and social care and business success are intertwined, and we cannot achieve one without the other. Our products – metal powders – not only enable our customers to reduce their material and energy consumption, but also help improve the efficiency and lifecycle costs of their final products. Our vision is to “Inspire industry to make more with less”. In 2017, we continued the integration of sustainability

in our business planning, sustainability is increasingly seen as a natural part of discussions throughout the company.

## Climbing Mount Sustainability

Every journey is made up of small steps, and our journey starts with Mount Sustainability. By climbing five strategic paths to the top, we hope to fulfil our ambition of becoming an industry leader when it comes to sustainability.



# A great and meaningful place to work

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**Providing a safe and supportive workplace, where people can prosper and unleash their full potential, is the essence of More Högånäs, our management philosophy.**

**HÖGANÄS ASPIRES TO** be a company that recognises and values each individual, their contribution and their potential. We believe that having people who feel acknowledged and have opportunities to develop and grow, are vital to our overall performance and continued progress.

Competence development and opportunities for career progression are fundamental, so in 2017, 76 percent of our employees had a development talk. We have introduced a number of mandatory training programmes, covering More Högånäs, sustainability, energy management, environmental protection and workplace safety. We also offer and encourage employees to undergo training in languages, communication, leadership and different powder metal technology areas.

Respect, equality and diversity are also

fundamental to More Högånäs. We are not satisfied with women making up only 16 percent of our total workforce and it is an area we need to improve. In 2017, we sent out a directive to always strive for an equal gender split when longlisting candidates during any recruitment process. We are also trying to encourage more women into key competence areas such as material, automation and process engineering, and we conduct salary mapping on a yearly basis, to identify and improve gender pay gaps.

Overall, we aspire to be a responsible employer that offers a great and meaningful place to work, where individuals and teams can fulfil their potential and ambitions, have a healthy and sustainable lifestyle, and be rewarded in a fair and adequate way based on performance and competence.

# 73%

of Höganäs employees  
are covered by collective  
bargaining agreements

**MORE HÖGANÄS** is our management philosophy. It encompasses our vision, our values, our view of leadership and our principles. This philosophy will help us to strive for sustainable business every day, where everyone can grow and develop.

#### Our four leadership principles:

- \* We are all leaders
- \* We all have potential
- \* We are interdependent
- \* We learn and develop



**“Respect, equal  
treatment and  
equality are  
fundamental for  
how we work.”**

**Ann-Sofie Räftegård,**  
Senior Vice President  
Human Resources



# Building communities and responsible partnerships

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Höganäs aims to be a good citizen wherever we operate, always upholding high standards in human rights, labour rights, anti-corruption and environmental protection. This commitment also extends to our partners.

**WE ARE A** global business, but our operations have a significant impact on many local communities. The way we see it, we thrive when the community thrives. Dialogue, transparency and partnerships are essential when interacting with the societies we do business in. We actively seek out and listen to input from the communities in which we operate, but this is still an area where we need to improve.

At all of our global production sites, we are engaged with local communities and we support local organisations. Recently, we have also started a partnership with Plan International – a humanitarian organization that advances children’s rights and equality for girls.

Höganäs is also a hub for local business – more than half of our raw materials are sourced locally within the country of operation. Moreover, we source

maintenance, consultancy and entrepreneur services locally, with only a few exceptions. Our suppliers and subcontractors play a vital role in our business, so we expect them to demonstrate high standards. However, our commitment to take the lead in creating a sustainable business has given us new perspectives on our supplier relations, and we need to strengthen our supply chain management accordingly. Therefore, in 2017, we updated our expectations and enhanced our communication with the supply chain through our new Code of Conduct for Suppliers, a new model for supply-risk identification and a tool for supplier evaluation. As we believe in the power of collaboration, we wish to work together with our upstream partners to support them in their development towards social, economic and environmental sustainability.

**Examples of community building initiatives:**

- \* Improving bicycle lanes in conjunction with a redesign of the industry harbour area in Höganäs, Sweden.
- \* Using residual heat from our production sites in Sweden to provide heating and hot water to 3,000 homes.
- \* Höganäs employees can donate their Christmas gift from the company to one of Plan International's different projects.
- \* We support the local communities in which we operate with donations, mainly to children's development, local fire departments and youth sports.

**10**

suppliers were approved according to our newly updated Code of Conduct for suppliers



**“We have a responsibility to maintain an active and transparent dialogue with the local community.”**

**Ulrika Rask-Lindholm,**  
Senior Vice President  
Communications

# Sustainable offerings and long-term profitability

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As one of the world's leading providers of metal powder solutions, we feel a duty to initiate and lead the sustainable transition necessary to meet future challenges and rapidly changing market demands.

**WE ARE CONVINCED** that metal powders can contribute to sustainable development and thereby solve many of society's pressing challenges, such as resource scarcity, shortage of clean water and conversion to renewable energy use.

For example, by using powder metallurgy, complex parts that are close to net-shape and with good part-to-part uniformity, can efficiently be mass-produced with few production steps. This leads to high material utilization, low energy consumption and reduced waste. Metal powders, such as soft magnetic composites (SMC), can maximise the utilisation of active materials in electromagnetic applications. And surface coatings made from powdered metals can improve a component's wear and corrosion resistance, and thus increase its lifetime in a sustainable way.

We can offer metal powder-based solutions for drinking water purification that can improve the lives of millions of people worldwide. Our portfolio also includes a process for industrial wastewater treatment, and media for soil and groundwater remediation. Additive manufacturing, while still under development, offers huge potential for improving resource efficiency and extending product life.

However, sustainable development is not something we can achieve alone – we need to work with others. Höganäs has a long tradition of working on projects with our customers, universities, research institutes, and other industry partners. This is a tradition that we are continuing as we tackle the industry's sustainability challenges.

**Making more with less.** We are continuously working to improve the sustainability benefits of our products. Here are some examples of recent successful initiatives:

- \* A resource-efficient solution for the popular iron-copper-carbon powder mixes.
- \* SMC-based traction motors and motors for auxiliary automotive systems, that demonstrate the material utilization advantages of using metal powders.
- \* Within surface coating, iron-based solutions to replace hard chrome plating.
- \* Iron-based media for removal of hexavalent chromium from drinking water.

**Working together on sustainability.** Some examples of university and cross-industry project work towards finding solutions for future sustainability challenges:

- \* Creation of a platform for increased usage of residual materials as a complement to virgin raw materials.
- \* Water filtration with mineral-based by-products, e.g. for removal of phosphorus.
- \* Combining different metal powder technologies to exploit powder metal's resource efficiency.
- \* Development of generic methods and models for the analysis of manufacturing economics and sustainability.



**“We believe that sustainable offerings are a prerequisite for long-term profitability.”**

**Raissa Kruse,**  
Sustainability Manager  
– Economic & Social

# Future-proof business

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**Future-proofing the business means ensuring high quality in our products and operations. Our goals are clear: The highest quality in everything we do, Zero Accidents and Zero Waste. These are ambitious goals, but we believe they are achievable.**

**WE AIM TO** achieve the highest possible quality in everything we do. A focus on quality not only reduces loss of material and energy, it also has a positive impact on the sustainability of our customers' processes.

Zero Accidents is our vision of a safety culture where dialogue and risk-elimination are key and where we never compromise on safety. We call it 'Safety First'. We have set a target to be the benchmark for the steel industry by the end of 2019. However, our track record shows that we still have a long way to go and that 'Safety First' needs to remain our priority.

In 2017, we introduced the Plant Risk Reduction Number as a key performance indicator (KPI) for the preventative work carried out. The risk reduction target was met at all sites in 2017. We also implemented a global incident and risk reporting system (MIA), which is used by all co-workers to report risk observations, near misses, incidents and accidents.



During 2017, Höganäs also continued its proactive work to, as far as possible, eliminate exposure to dust and hazardous substances in the workplace – often far beyond national regulations. Mitigation of exposure includes improving ways of working and training, but also technical improvements.

Zero Waste is our long-term goal for minimising waste in our operations. All our waste and by-products have the potential to be reused and transformed into products. In 2017, 77 percent of all our process-related side-streams were put to new use.

Water is used in our operations in a number of ways, such as for cooling metallurgical processes by heat exchange. We use 1.7 million m<sup>3</sup> of water to cover a total process need of close to 28 million m<sup>3</sup> of water yearly. We do this by recirculation and on average water is used 16 times.

### Towards Zero Accidents

#### Just some of the safety improvements implemented at Höganäs sites in 2017:

- \* In Brazil, ladders with platforms were installed to facilitate access for maintenance teams, and protective shields were installed to minimize the risk of injuries in the atomization process.
- \* A Best Practice Group with participants from all melt shops has formed, enabling implementation of best practices at all other melt shops.
- \* In North America, safety hazard mapping actively engages staff in analysing potential safety risks in the workplace.
- \* In Japan, new safety rails and floors were built at the mixing station to prevent falling when opening the valve of the bin.
- \* In Korea, a special working table was built to facilitate the sieve cleaning.

### Zero Waste

- \* In Brazil, big bags are sold for reuse or used in the production of new bags. Used lubricating oil is collected and sold to refiners. Slags are processed by magnetic separation to reuse the metal fractions, while the rest of the material is used in asphalt and concrete. Baghouse filter dust is sold instead of being discarded.
- \* In Japan, plastic reusable pallets have been introduced to handle flexbags in-house.
- \* In India, ladle refractories are reused and cyclone dust is processed in a magnetic separator, so that iron particles can go back into the process (re-melting). This results in 10 percent less dust going to landfill.
- \* In Belgium, motion detectors in bathrooms and showers have reduced water consumption by 1.1 million litres per year.



# 34%

reduction of lost time injury frequency since 2014

Höganäs has started to work in new ways due to the scarcity of water in the municipality of Halmstad. “We are testing the use of seawater to cool rest products and to reduce dust,” says Charlie Wedell, manager at the Höganäs plant in Halmstad.

# Climate neutral operations

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**As a producer of metal powders, Höganäs emits greenhouse gases and thus contributes to climate change. But we are continuously striving to reduce our climate footprint with the long-term vision of becoming climate neutral.**

**THIS VISION ENTAILS** considering the climate impact of all our direct and indirect business activities, including everything from the import of raw materials to the final delivery of our products. This means careful monitoring of our emissions, efficient use of energy and resources, choosing efficient transport, and gradually changing to renewable resources.

In 2017, Höganäs started mapping risks and opportunities to drive toward a climate neutral operation. We monitor the direct emissions of carbon dioxide within all production units. Our total direct emission of carbon dioxide from production was 269,496 tonnes during 2017.

Höganäs' direct emissions from production are dominated by the use of fossil raw materials not only as fuels but also for the reduction of magnetite and in the processing of scrap in the electric arc furnace. Therefore, finding commercially feasible renewable

alternatives for both fuel and other carbon sources is necessary to make important steps toward carbon neutral operations.

Our monitoring has shown that transportation contributes an estimated 34,000 tonnes of carbon dioxide per year, with international sea transport being the main contributor. Our indirect emissions from the purchase of electricity were around 103,000 tonnes in 2017.

The best way of minimizing our climate impact is to avoid unnecessary use of energy. Our goal, as set out in our Energy Challenge, is to reduce the energy use per produced ton of metal powder between 2010 and 2020, by ten percent. By the end of 2017, we achieved a reduction of 7.1 percent as a result of alternative ways of working, continuous improvements, installation of modern technology and process development.

**The path towards climate neutrality involves many initiatives and activities, across our sites globally. Here are some examples of the progress we're making:**

- \* The installation of solar panels at Höganäs' sites in India are set to meet around 80 percent of required electricity at the office in Pune, and about 3 percent of the total plant requirements in Ahmednagar.
- \* Since 2012, Höganäs Sweden has had a partnership with a local wastewater treatment plant, where Höganäs exchanges residual energy for biogas, thus reducing the climate impact for both parties.
- \* Höganäs pledges to use train transport instead of trucks whenever possible. This has led to us using trains between Sweden and France, which alone takes about 800 tonnes of goods off European roads.

# 222,806

European Emission Units were handed in by Höganäs in 2017 as part of the EU's Emissions Trading System.

**In November, we broke new ground in Höganäs by starting construction on the world's first plant for production of renewable energy gas and bio-coke.**



# Climbing Mount Sustainability in the years to come

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**Our goal is to be a sustainability leader, and our tool to achieve this is our strategy, Mount Sustainability. The most important steps for us to reach our goal are to continue to embed sustainability into our business plans and daily work, and to support our ambitions with more explicit targets and goals.**

## **A great and meaningful place to work**

Gender equality and equal remuneration will remain high on the agenda. The directive to strive for equal gender distribution in the longlisting of candidates is a clear signal, but needs to be further specified. Regarding equal remuneration, further analysis of the root causes of gender pay gaps is needed. We will also continue the follow-up process for the people satisfaction survey, but we already know we need to focus on leadership and communication with management; avoiding and handling stress; competence development, including sustainability, and efficiency in ways of working.

## **Building communities and responsible partners**

Following up on last year's successful test, in 2018 we will continue the introduction of our updated Code of Conduct for Suppliers, which puts more explicit demands on suppliers concerning healthy workplaces, healthy ecosystems and business ethics. We will also commence the transition to our new tool for supplier evaluation, and the re-evaluation of all direct material suppliers. During 2018, Höganäs will also launch an updated internal Code of Conduct to clarify our ambitions and provide more explicit guidelines for our own employees.

### **Sustainable offerings and long-term profitability**

In 2018, we will run an internal project to systematically map and analyse our products' generic sustainability impacts over their complete lifecycle. This will help us to set well-defined development goals in our project processes. To facilitate fact-based decision-making, we will also intensify our work with lifecycle assessment (LCA) and increase our resources for this work. The plan for 2018 includes both continuing systematic and detailed cradle-to-gate analysis of our metal powders and driving industry-wide activities.

### **Future-proof business**

Our commitment to Zero Accidents will be supported by activities such as promoting a Zero Accidents culture, continuous risk reduction, and global sharing of best practice. By 2019, our goal is to reach a lost time injury (LTI) frequency of less than three. To eliminate exposure to dust and hazardous substances, we have set ambitious reduction targets for two indicator elements to be reached by 2020 at all workplaces.

As part of our vision of Zero Waste, by 2020 we aim to put more than 85 percent of our side-stream materials to use, and more than 95 percent by 2026.

### **Climate neutral operations**

Climate neutral operations is our most ambitious vision. To get closer, cooperation with industry partners, academia and society's various actors is necessary. Our next step is to prepare a climate strategy, including targets and a timeline. One specific activity helping to reduce our climate impact is the pilot-scale plant for renewable energy gas, which is currently under construction at our site in Höganäs, Sweden. If successful, the plant will be permanently integrated into our operations and replace about 50 gigawatt hours of our energy per year from 2019.

# What you can do

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The four sustainability principles you have learnt about during the sustainability training – and which Höganas Mount Sustainability is based upon – provide a compass that can help you navigate your day-to-day decisions.

**In a sustainable society, nature is not subject to systematically increasing...**

- 1.** ...concentrations of substances from the earth's crust (such as fossil CO<sub>2</sub> and heavy metals),
  - 2.** ...concentrations of substances produced by society (such as antibiotics and endocrine disruptors),
  - 3.** ...degradation by physical means (such as deforestation and draining of groundwater tables),
- ...and in that society...**
- 4.** ...there are no structural obstacles to people's health, influence, competence, impartiality and meaning-making.

Each of us can contribute towards sustainability in the everyday choices we make, both at work and at home. Here are some questions that may help you in your daily decisions:

- \* Do I really need to buy this?
- \* Can I borrow it instead?
- \* Can I increase my efficiency in using this product or service?
- \* How or where was this item produced?
- \* Is this item durable?
- \* What am I supporting by making this purchase? Imagine living and working under the same conditions as the workforce involved in manufacturing this product.
- \* Do I really need to travel?
- \* Is there a more sustainable way for me to get there?
- \* Can I reuse or repair this?
- \* Is my trash someone else's treasure?
- \* Can I recycle this?
- \* Can I avoid producing this waste?
- \* How does my decision affect people in my neighbourhood?
- \* Who needs to know about this?
- \* How can I share?

Read the full Sustainability Report at [hoganas.com](http://hoganas.com)