



Troldtekt A/S Corporate Social Responsibility

Communication on Progress for the UN 2018

About this report

Troldtekt A/S's CSR reporting is based on the sustainable Cradle to Cradle design concept and the UN Global Compact.

This report relates to the calendar year 2018. In publishing this report, Troldtekt A/S confirms its continued support for the UN Global Compact. At the same time, the report describes the progress we have made within CSR, while also providing a status on our objectives and initiatives.

This is the fifth consecutive year that our CSR reporting is based on the Global Reporting Initiative (GRI) methodology, which has significantly enhanced the structure of our reporting and our data collection. In practice, we are inspired by the earlier GRI G4 reporting framework, which in mid-2018 was replaced by GRI Standards. This report is based on the same methodology and structured in the same way as recent reports, making it easier to compare the data.

The areas reported on have been identified following a thorough materiality analysis, which we have carried out in collaboration with the consultancy firm Carve Consulting.

Report structure

The report is divided into four sections. First, we describe Troldtekt's CSR work in general, providing a status from the Board of Management and selected highlights from 2018. Then we focus on the sustainable Cradle to Cradle design concept, which is one of the cornerstones of our strategic work with sustainability and CSR.

The third section contains several examples of specific activities in 2018. And finally, the last section of the report contains the actual data reporting under four headings: environment, labour conditions, society and human rights.

Focus on the UN's 10 principles

Troldtekt's CSR activities are anchored in the management as a strategic focal point for our business strategy which is based on the Cradle to Cradle principles. In our internal CSR policy, we have introduced requirements for our daily activities based on the ten principles of the UN Global Compact. Our CSR policy is available online at troldtekt.com under the menu item 'Environment & CSR'.

Troldtekt's cooperation with its suppliers is based on our Code of Conduct, which is also available at troldtekt.com.

Want to know more?

If you have any questions about the report, please contact Tina Snedker Kristensen, Head of Marketing and Communications at Troldtekt, by phone (+45 8747 8124) or email (tkr@troldtekt.dk). All Troldtekt's CSR reports can be found online at > www.troldtekt.com.





One of the sustainable forest plantations where trees used to produce Trolldtekt are felled.

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New ambitions and new alliances

In what was a historically busy 2018, we invested resources in a new factory line and in our operations. Consequently, for a period we had to compromise on some of our CSR activities. Now we are once again in a position to launch projects in areas such as recycling.

One project dominated 2018: The construction of a brand new factory line at a cost of DKK 180 million. A project of this size ties up many resources. We had to obtain permits and approvals, coordinate with contractors, test advanced robot technology and much, much more. However, we are very proud of the result. From the beginning of 2019, we have a high-tech and highly efficient factory, which provides a solid foundation for harvesting energy and environmental gains in the coming years.

A flatter curve

Handling and managing such a large construction project puts a medium-sized company such as Troldekt under considerable pressure. Not least given the fact that the construction industry is booming, and we had to keep up round-the-clock production on our existing production line throughout 2018.

Being busy is positive, but the flipside is that we had to pause several new CSR initiatives so as not to subject our colleagues to unreasonable workloads. After a number of years of significant progress on the CSR front, the curve for 2018 looks a bit flatter, which is also evident from our data at the end of this report.

Nevertheless, there are still a number of positive CSR stories from 2018. We continued to support inclusion in the labour market through the permanent employment of a good colleague, Patrick Mikkelsen, who is deaf. 2018 was also the year in which we extended our social responsibility from Denmark to our two new domestic markets, Sweden and Germany. In addition, we continued to focus on sustainable construction by having our own in-house DGNB (German Sustainable Building Council)



consultants. You can read about this and much more in this report.

Value from waste

After a busy 2018, we are looking forward to introducing new and ambitious CSR initiatives. For example, we are focusing on the recycling of production and construction waste. Having launched a number of take-back schemes, we have come to realise that there seems to be little inclination to recycle materials in the construction industry. We are therefore looking for alliances in other sectors that recognise the value of our waste and by-products. Read more about this on pages 16-17 of the report.

Troldekt supports the 10 principles

In 2010, we joined the UN Global

Compact, which provides a strong framework for our systematic CSR work. I would like to take this opportunity to repeat that Troldekt still wholeheartedly supports the ten principles of the UN Global Compact. This goes for our management and for all our other employees.

I would like to thank everyone at Troldekt for always upholding our responsible values when making decisions – large and small – in the course of their daily work.

A handwritten signature in blue ink, which appears to read 'Peer Leth'.

Peer Leth, CEO,
Troldekt A/S



With a brand new, state-of-the-art production line, Trolldtekt has doubled capacity.

New factory line positively impacts results

At the beginning of 2019, we inaugurated a brand new 13,000-square-metre production line in Trolldhede in western Jutland, enabling us to meet the demand for acoustic solutions from both the Danish and international markets. Construction of the new production line lasted most of 2018, and tied

up considerable resources in our organisation. This is also reflected in our CSR results.

Over the year, we saw less progress with our CSR results compared to previous years. In addition, the construction project has impacted some data specifically. For example, we saw a more than fivefold increase

in volumes of plastic packaging for disposal. The main reason for this is that all the machines for our new production line were wrapped in plastic on delivery.

In 2019 and in subsequent years, we expect to strike a better balance between growth and our CSR activities.

Dust as a raw material in cement

In 2018, we started sending offcuts from finished acoustic panels in our production to the cement producer Aalborg Portland. Here, the dust is recycled as a raw material in cement production.

> **Pages 16-17**



Full focus on FSC®

In 2018, we were approved as a supplier of products in the 'FSC 100%' (FSC®C115450) category, which means that all the wood in each panel meets the requirements for responsible forestry management.

> **Pages 22-23**

CSR initiatives in new markets

In 2018, we extended our CSR approach to our new domestic markets, Sweden and Germany. In both countries, we support NGOs that promote the circular economy.

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Consultancy on DGNB

In 2018, two of our employees completed the DGNB Consultant training programme. Consequently, we are now much better equipped to advise customers on sustainable construction.

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Deaf colleague on the team

In 2018, we took on a deaf colleague in our production for the first time. Patrick Mikkelsen is employed on normal terms, and works on a completely equal footing with his colleagues.

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Fewer industrial accidents

In 2018, there were two accidents at Troldekt, which represents a 50 per cent reduction on 2017. We remain strongly focused on ensuring a safe working environment and on preventing accidents.

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Social responsibility is a fundamental value

At Troldekt, a sustainable indoor climate is one of our guiding principles. We want to be innovative, credible and socially responsible in our work.



Troldekt has produced cement-bonded wood wool products since 1935, and today Troldekt is one of Europe's leading suppliers of acoustic solutions. Troldekt acoustic panels are still manufactured from the same sustainable materials as 80 years ago: Danish Norway spruce and Danish cement.

All production takes place in Denmark under modern, environmentally friendly conditions.

Troldekt's business strategy is founded on the Cradle to Cradle design concept, which plays a key role in securing environmental improvements towards 2022. Sustainability thus plays a crucial role in our work – because we believe that it will pay off in the long term.

Activities

Troldekt's principal activity is the manufacture and sale of acoustic cement-bonded wood wool wall and ceiling panels for all types of buildings – from private homes, schools, institutions, offices and industrial buildings to sports halls and swim-

Vision, mission and guiding principle

- Troldekt's vision is to be a trendsetting supplier of intelligent acoustic solutions.
- Our mission is to be a creator and communicator of innovative acoustic solutions.
- Our guiding principle is sustainable indoor climates.

Values



We are innovative

We create results through development. Innovation must ensure that Troldekt is a trendsetter within intelligent acoustic solutions that focus on a sustainable indoor climate.



We are credible

We do what we say, and we keep our promises. We also communicate openly about our sustainable objectives and results.



We are socially responsible

We act responsibly in all parts of our business, including in relation to the environment, society and employees. Corporate responsibility is rooted in our strategic work with Cradle to Cradle.



ming pools. The company supplies complete ceiling and wall cladding solutions which integrate good acoustics, fire protection and a healthy indoor climate with ventilation, unique design options and loudspeaker systems.

Troldtekt's production takes place at state-of-the-art facilities in the small town of Troldhede in western Jutland.

Sales, administration, marketing and technical support functions are located at the company's head office in Tranbjerg, a suburb of Aarhus. In 2015, Troldtekt opened an office in Hamburg, Germany, and in 2016 an office in Malmö in Sweden.

Troldtekt also works with a number of distributors abroad, mainly in northern Europe.

Troldtekt's role in construction

Troldtekt's direct customers are builders' merchants and DIY stores, while the company's indirect customers comprise building consultants, architects and private clients.

Markets

In Denmark, Troldtekt is a leading supplier of acoustic panels, and the domestic market plays an important role together with the Swedish and German markets. In addition, Troldtekt is primarily active on the neighbouring European markets.

Suppliers

Troldtekt's Code of Conduct forms the basis for the company's cooperation with its suppliers. This Code of Conduct is based on the general principles contained in international conventions. All Troldtekt's key suppliers are Danish, and either supply certified wood, cement, paint, packaging or wind energy.

Community activities

CSR is rooted in Troldtekt's corporate culture, and it was therefore natural for the company to join the UN Global Compact. In continuation of this commitment, Troldtekt has integrated the Cradle to Cradle concept in its business strategy.

Troldtekt plays an active role on a number of committees, in organisations and associations, including:

- Green Building Council Denmark
- The board of BIPS
- DI's special building policy committee
- Committee work in Danish Standards
- German Sustainable Building Council (DGNB)

Organisational changes

Troldtekt is seeing strong growth, and employee numbers increased further in 2018, especially as a result of the establishment of our new factory line and higher activity levels in our German and Swedish subsidiaries. No other significant changes were made to Troldtekt's organisation in 2018.

Information

For more information on Troldtekt A/S and its products, CSR activities and technical documentation, please visit www.troldtekt.com.

Troldtekt, the story

Louis Hammerich takes over the business and expands the range to include wholesale products and begins to import building materials from abroad.

The business has grown, and A/S L. Hammerich & Co. moves into modern new premises in Grønnegade in central Aarhus. Poul Hammerich, Louis' son, takes over management of the company.

Poul Hammerich decides to establish the 'Grosserer L. Hammerich og Hustru Ellen, f. Lisbergs Legat' foundation to support families and staff facing financial hardship. Poul Hammerich dies young, but the foundation is subsequently set up.

The fourth generation of the Hammerich family, Peter Hammerich, joins the company management.

Thorkild Bjerglund Andersen, who has been a member of the company's board of directors since 1973, purchases A/S L. Hammerich & Co.

Outgrowing its premises again, A/S L. Hammerich & Co. moves to the old Østergaard manor in Malling, which Thorkild Bjerglund Andersen has renovated while farming the adjoining land. Huge investments are made in streamlining and modernising production in Trolldhede.

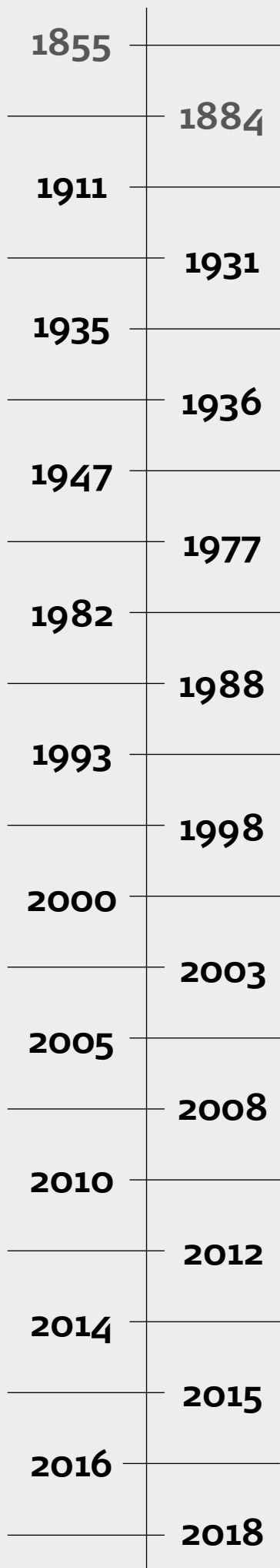
A/S L. Hammerich & Co. and A/S Trolldhede Pladeindustri merge under the name A/S L. Hammerich & Co., with sales and administration in Malling and production in Trolldhede.

Following the business succession, A/S L. Hammerich & Co. moves to more modern premises on Sletvej in Tranbjerg outside Aarhus, and the company name is abbreviated to L. Hammerich A/S.

Troldtekt qualifies for Cradle to Cradle certification in the Silver category and prepares a roadmap for developing Cradle to Cradle quality at Troldtekt through to 2022.

Troldtekt Deutschland GmbH is established in Hamburg, the company's first foreign subsidiary.

After several years of expansion and modernisation of the existing factory, Troldtekt constructs a brand new additional factory line in Trolldhede. The new production line enables Troldtekt to double capacity from 2019.



J.C. Seidelin opens the first dedicated store for building materials at Fredens Torv in Aarhus.

L. Hammerich Specialforretning i Bygningsartikler is renamed Aktieselskabet L. Hammerich & Co. The public limited company has registration number 645, and is thus one of the oldest surviving public companies in Denmark.

A/S L. Hammerich & Co. acquires A/S Trolldhede Pladeindustri in Trolldhede. Fibreboard and the cement-bonded wood wool Troldtekt® panels are manufactured here, and a registered trademark is acquired in 1936.

Svend Hammerich joins the company management and helps to rebuild the company's position following the Second World War.

The product range is extensively restructured, with a 100 per cent focus on Troldtekt and a few goods for resale. All warehouse facilities are moved to Trolldhede, while sales and administration are moved to new offices on Klamsagervej in Åbyhøj, a suburb of Aarhus. Peter Hammerich leaves the company.

A/S L. Hammerich & Co. moves to the former premises of the sawmill Aarhus Savværk at Søren Nymarks Vej in Højbjerg, south of Aarhus.

The new millennium marks the beginning of a period of strong product development. Troldtekt is no longer just acoustic panels, but acoustic solutions with integrated lighting, sound, ventilation and decoration.

Thorkild Bjerglund Andersen's heirs take over the company and carry on the family-owned enterprise under the management of a professional advisory board.

The 75th anniversary of the production of Troldtekt acoustic panels is marked by changing the company name to Troldtekt A/S. Troldtekt receives the Danish Building Industry Environment Award the same year for its focus on the environment and sustainability throughout the product's entire life cycle.

The CSR Foundation awards Troldtekt A/S the CSR Awards' Strategy Prize for its solid and strategic approach to CSR and for having rooted CSR in all parts of the business, including at executive level and in the business strategy.

The company's second foreign subsidiary, Troldtekt AB, is established in Malmö, Sweden.

Global Compact: CSR based on UN principles

Corporate social responsibility is a fundamental value for Trolldtekt, and we have signed up to the UN Global Compact. Thus, we adhere to the UN's ten principles – based on defined objectives in the areas of environment, labour conditions, society and human rights.

Environment

At Trolldtekt, we are committed to ensuring that our activities contribute positively to our shared resources. Even though Trolldtekt acoustic panels are now produced using robot technology, the ingredients are still the same all-natural materials as were used in 1935: wood and cement.

Our environmental focus is manifested through concrete initiatives within material health, reutilisation, energy and water. The four categories carry weight in the sustainable Cradle to Cradle concept, which is a cornerstone of our business strategy. Read more about Cradle to Cradle and our environmental initiatives on the following pages.

Society

At Trolldtekt, we play an active role in society and engage in dialogue with the outside world, both the immediate neighbours of our factory in Trolldhede and our suppliers. In our Code of Conduct, which suppliers are obliged to observe, we state that corruption and bribery are completely unacceptable.

We also support several associations and organisations, among others the Danish Association of the Hard of Hearing, the Danish Asthma and Allergy Association, the Danish Acoustical Society (DAS) and the German NGO Cradle to Cradle e.V.

Labour conditions

Respect, co-determination, support and diversity in the workplace are key aspects of our daily working lives.

We make a priority of retaining employees who are on sick leave, and of preventing industrial accidents



and injuries. Furthermore, we support inclusion in the labour market, among other things via work experience schemes and by taking on flexitimers.

In 1936, the then managing director and owner, Louis Hammerich, established a staff fund which provides financial support for employees past and present who are facing difficulties. The fund exists to this day.

Human rights

Trolldtekt's Code of Conduct is at the heart of our focus on supporting human rights and working actively to promote them. We maintain a keen

focus on the issue at all times in our dealings with suppliers and partners, not only our suppliers for production, but also suppliers of services such as cleaning and waste handling.

Want to know more?

Read Trolldtekt's CSR policy at trolldtekt.com under the menu item 'Environment & CSR'. On our website, you will also find our CSR reports from previous years.

Cradle to Cradle points the way

Our roadmap brings together the objectives and results of our work with the circular economy from 2012 to 2022.

Troldtekt's business strategy is based on the sustainable and internationally recognised Cradle to Cradle concept, which is all about creating healthy products that benefit people and the environment.

The aim is that the products can either be reused in the biological cycle, where the materials return to nature, or in the technical cycle through being turned into raw materials for new products – without wasting resources.

Troldtekt in closed cycles

We work systematically with the circular economy, for which closed resource cycles are a central tenet. Via our Cradle to Cradle certification, we can document that Troldtekt acous-

tic panels can be safely returned to nature as soil conditioner. Additionally, dust from the production of Troldtekt panels is used as a resource in new cement from Aalborg Portland.

Results and the way forward

Cradle to Cradle requires the continual improvement of products and processes. Through focusing on sustainability, and through massive investments in our production, we have achieved a number of value-creating milestones since Troldtekt's products first achieved Cradle to Cradle certification in 2012.

The specific results are part of our Cradle to Cradle roadmap, which is an ambitious and publicised plan for








our work with the circular economy. For each of the five Cradle to Cradle criteria categories, we have drawn up concrete action plans to ensure that we achieve the defined objectives towards 2022.

Cradle to Cradle scorecard

Theme \ Tier	Basic	Bronze	Silver	Gold	Platinum
 Material health			✓		
 Material reutilization				✓	
 Renewable energy				✓	
 Water stewardship					✓
 Social fairness				✓	

Cradle to Cradle roadmap

	Results 2012-2018	Objectives 2019/20	Objectives 2021/22
Material Health 	<ul style="list-style-type: none"> ✓ Troldektek acoustic series in natural and standard colours C2C-certified. ✓ Product development based on C2C principles. ✓ Trade goods produced as private label for Troldektek screened. <p>C2C SILVER level.</p>		<ul style="list-style-type: none"> • Optimise paint recipe so that Troldektek acoustic panels in natural and standard colours can advance to C2C GOLD level. • Trade goods produced as private label for Troldektek must have a Material Health certificate.
Material Reutilization 	<ul style="list-style-type: none"> ✓ Production waste sorted into a number of fractions to ensure that resources from production waste are recovered at the highest possible value level. ✓ Take-back scheme for collecting cement-bonded wood wool construction and demolition waste tested in the construction industry in Denmark. ✓ Scheme using dust from production as a raw material in new cement from Aalborg Portland is established. <p>C2C GOLD level.</p>	<ul style="list-style-type: none"> • Identify and establish new solutions for recycling cement-bonded wood wool in the biological cycle. • Establish a crusher for crushing panel waste to increase recycling in the biological and technical cycles. 	<ul style="list-style-type: none"> • Develop new products that contain production waste (for example cut-offs). In the longer term, develop products based on end-of-life acoustic panels from building industry.
Renewable Energy 	<ul style="list-style-type: none"> ✓ Ørsted climate partner. 100% renewable energy for electricity consumption (wind power) from 2013. ✓ New energy-efficient biomass boiler run in. ✓ 50% of diesel and gas-powered forklift trucks replaced with electric trucks. ✓ Light sources in most of the production facilities replaced with LED bulbs. <p>C2C GOLD level.</p>	<ul style="list-style-type: none"> • Replace more diesel and gas-powered forklift trucks with electric trucks, so that 60% of all trucks are replaced with electric trucks. • Map the possibility of participating in an international development project aimed at utilising waste heat. 	<ul style="list-style-type: none"> • Map possible alternative energy solutions from solar, wind or similar sources.
Water Stewardship 	<ul style="list-style-type: none"> ✓ No untreated wastewater discharge from production. ✓ Water-saving schemes established. ✓ Separate sewerage system established on new production line and in most of the other factory buildings. Rainwater is discharged to municipal reservoir. <p>C2C PLATINUM level.</p>	<ul style="list-style-type: none"> • Map the possibility of participating in an international development project aimed at utilising steam. • Establish separate sewerage system for all factory buildings. 	<ul style="list-style-type: none"> • Map the possibility of establishing an overflow reservoir with vegetation.
Social Fairness 	<ul style="list-style-type: none"> ✓ CSR reporting to UN Global Compact from 2010. ✓ CSR reporting follows the GRI G4 structure. ✓ C2C principles introduced in the organisation and value chain. <p>C2C GOLD level.</p>	<ul style="list-style-type: none"> • Introduce training for employees in new robot technology. • Provide Danish lessons for new employees. 	

How Troldektek is certified

Troldektek is Cradle to Cradle-certified at Silver level, and the certification covers the full product portfolio of Troldektek acoustic panels in natural wood, grey natural and painted in the standard colours white 101, grey 202, charcoal grey 208 and black 207. The Silver certification also cov-

ers the non-combustible Troldektek A2 panels and Troldektek agro panels.

Objectives updated annually

Our Cradle to Cradle work is dynamic, and we therefore update our roadmap every year, even though we are only Cradle to Cradle

re-certified every two years – most recently at the beginning of 2019. The annual update ensures that our roadmap always reflects our current objectives. Our roadmap is developed in a strategic partnership with Vugge til Vugge Danmark ApS (Cradle to Cradle Denmark ApS).



Material health

Through our Cradle to Cradle certification, we work systematically with the materials from which our products are made, which are thoroughly analysed. Sometimes we are faced with dilemmas – and positive as well as negative choices.

As part of Troldekt's Cradle to Cradle certification, our products are thoroughly analysed. All materials are defined down to 100 parts per million (ppm) and assessed for their impact on people and the environment. The analysis is carried out in collaboration with Vugge til Vugge Danmark, the accredited assessment body under the Cradle to Cradle Products Innovation Institute.

In practice, our systematic work with Cradle to Cradle means that we possess detailed knowledge of all substances contained in our products, right down to 100 ppm. We see this as key to safely being able to allow our products and product waste to be reused in biological and technical cycles. The aim is to use only healthy substances.

Contributes to a healthy indoor climate

Troldekt cement-bonded wood wool is produced from the natural materials wood and cement. Troldekt cement-bonded wood wool panels contribute to a healthy indoor climate, and qualify for the best Danish indoor climate labelling categories. In addition, Troldekt has achieved an Allergy Friendly Product Award from Allergy UK and an M1 certificate from the Finnish Indoor Air Association, as well as qualifying for the German Blue Angel ecolabel and the Swedish SundaHus ecolabel.

It is our objective that the goods for resale which are sold under our own Troldekt brand must carry a Material Health Certificate. Such items include screws, fittings, touch-up paint and wooden strips. A Material Health

Certificate is documentation that the material health of the products has been assessed in accordance with the Cradle to Cradle standard.

Paint poses a dilemma

In our systematic approach to material health, we sometimes encounter various dilemmas. The biggest dilemma at the moment is the paint we use for our painted acoustic panels. The paint contains small amounts of biocide to protect against rot, which is the only factor preventing us from advancing to Cradle to Cradle Gold level.

However, changing the paint recipe to dispense with the biocide would have far-reaching consequences. Due to continuous colour changes in production, we would risk having to discard large quantities of paint due to its short shelf-life. In addition, we would no longer be able to collect and reuse overspray in our painting hall, which would increase the amount of paint that would be wasted by an estimated 200,000 litres a year. The waste paint can be recycled today, precisely because of the preservatives it contains.

However, our unpainted panels – Troldekt in natural wood and natural grey – could in principle be advanced to Cradle to Cradle Gold level. However, as approximately half of our panels are subsequently painted, we have decided to stick with a single certificate for all our cement-bonded wood wool products.

Documentation prior to action

We want to make our materials even more healthy. However, we are taking

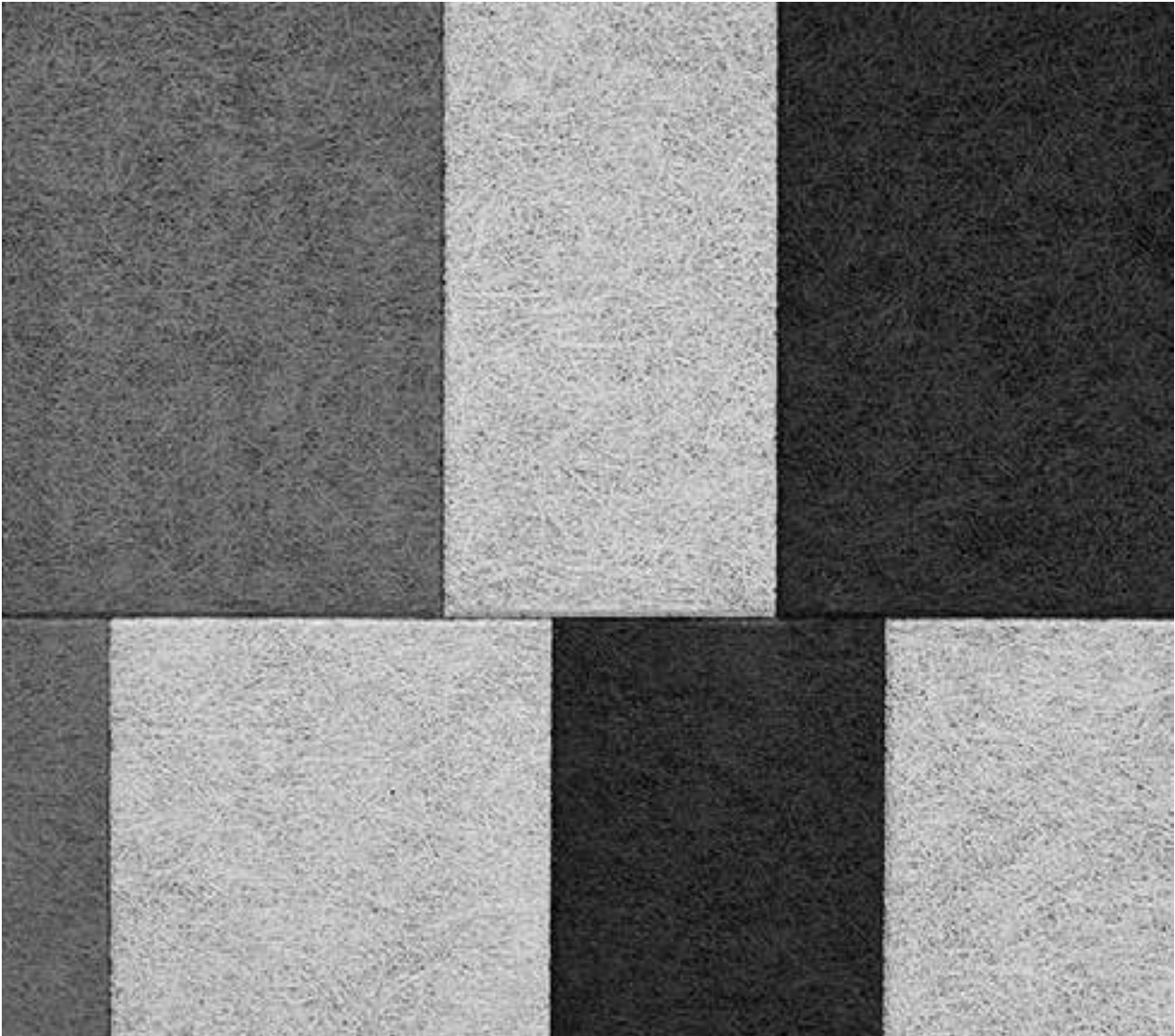
a precautionary approach in relation to Cradle to Cradle, the UN's Global Compact and the UN's SDGs. This means that every so often we decide to step back from taking a particular course of action.

Due to uncertainty about documentation, we have, for example, decided not to surface-treat our acoustic panels with titanium dioxide even though this could potentially contribute to photocatalysis and possibly removing NOx particles from the air.

The EU suspects titanium dioxide of being carcinogenic when inhaled, and as material health is of paramount importance for Troldekt, we do not want to risk treating our panels in a way that may be harmful to humans or the environment. Titanium dioxide is also found, for example, in wall paint, but here the substance is inactive, and bound in the dry paint, so it does not pose any health risk.

In addition to the uncertainty about possible health risks, photocatalysis requires a lot of light to activate the titanium dioxide. Daylight does not fall on ceilings, and the client would therefore have to make significant investments in lighting to activate the photocatalysis. Finally, it would seem that ventilation and conventional airing are much better for the indoor climate.

At the moment we are focusing on optimising our ventilation panels for diffuse ceiling ventilation. The positive effects of Troldekt ventilation are well-documented in the form of lower CO₂ levels in the room and improved learning for schoolchildren.



Teknos: Biocide-free paint is a challenge

It would be a challenge for Trolldtekt to use biocide-free paint for its painted acoustic panels. Marlene Juul Andersen, sales director at our paint supplier Teknos, explains:

“Bacterial growth starts soon in water-based biocide-free paints. Using paint without biocides places enormous demands on paint manufacture, storage and delivery as well as on the production processes and on cleaning where it is used. Once paint has been attacked by bacterial growth, it has to be discarded, and if production plant becomes infected, all the machinery has to

be disinfected. There is a high risk of biocide-free paint becoming infected, and consequently it is potentially very expensive to use the biocide-free alternatives. It compromises competitiveness.

“In Trolldtekt’s production, it would, for example, also mean that overspray and spilled paint could no longer be reused, because it would then have been contaminated,” adds Marlene Juul Andersen.

She says that Teknos is already adhering to strict requirements to supply products that live up to the requirements of Cradle to Cradle

Silver certification, and that biocide levels comply with minimum thresholds. The company is working hard to develop alternative paint products which can meet the requirements for Gold level certification and which are still competitively priced.

“Some of our engineers are engaged full-time in developing optimised paint recipes. As soon as new recipes are ready and laboratory tests show the desired results, we will test them in cooperation with manufacturers such as Trolldtekt.”

Recycling

Troldtekt can be reused in the biological and technical cycles. We are always on the lookout for new partnerships, so that production and construction waste comprising our cement-bonded wood wool can be used to create value – potentially also in other industries.

Cradle to Cradle certification ensures that the materials in Troldtekt acoustic panels are well-defined and do not contain harmful substances. Therefore, Troldtekt production waste can be returned to nature without any problem.

Troldtekt cement-bonded wood wool panels can be composted and used as soil conditioner. The cement in Troldtekt panels has a high lime content, which helps to neutralise the acids produced during composting. The wood in Troldtekt panels is organic material, and helps to prevent the compost from compacting, thereby enhancing oxygenation during the composting process so that carbon and nutrients are recirculated.

Testing new solutions

However, so as to ensure that the greatest possible value can be derived from the resources in our production waste, we are now separating the waste into several different fractions, which are being utilised in various ways. This approach enables us to test and try out different solutions in both the biological and the technical cycle.

We are continually working to find sustainable solutions for all our waste fractions, including cement-bonded wood wool waste and residual bark from debarking the Norway spruce logs.

Too few used take-back scheme

In the longer term, the aim is for several of the solutions which have been tested to be extended to include waste from building sites and demolition. We are looking at the possibility of entering into new partnerships – potentially also outside our own industry – which can help us realise our recycling ambitions.



We previously introduced a take-back scheme, where HedeDanmark offered to receive Troldtekt cement-bonded wood wool offcuts from building sites. However, very few contractors were prepared to change their routines for handling construction waste. The quantities that were received were so small that HedeDanmark was unable to maintain its offer of receiving Troldtekt waste from building sites at eight receiving stations.

From dust to new cement

One of the solutions that has been successfully launched is a collaboration with our cement supplier Aalborg Portland. In 2018, we launched a pilot project together involving the reuse of dust from our edging workshop in the production of new cement at Aalborg Portland.

The wood content of the Troldtekt dust contributes to the combustion

process (energy), while the cement content of our panels becomes a raw material in new cement. The scheme has now been made permanent, and the dust is transported to Aalborg Portland in the cement lorries that would otherwise return empty after delivering cement to the factory in Troldhede.

Cement production is a thermal process, which renders harmless any surface treatment of old panels, and in the long term the solution will therefore also be suitable for Troldtekt demolition waste.

In 2019, we plan to invest in a crusher that will enable us to coarsely crush panel waste for the biological cycle and finely crush panel waste for the technical cycle. In this way, we can, in addition to dust, also send surface-coated panel waste to Aalborg Portland – and in the longer term perhaps also demolition waste.



Aalborg Portland: Troldekt is suitable for recycling

Aalborg Portland is actively seeking circular partnerships with other companies in the industry. What usually happens is that the cement manufacturer receives residual products or waste and uses it, preferably as a raw material in cement production, but otherwise as a substitute for fossil fuels.

The scheme with Troldekt is special, because it is the first time that Aalborg Portland has been able to recycle offcuts from a finished product as raw material in new cement. Henriette Charlotte Nikolajsen, Manager Environment, Energy and QMS at Aalborg Portland, explains:

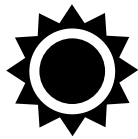
"Troldekt can be broken down into such small fractions that we can add it via existing tanks and

pipings systems, which means that we did not have to establish a completely new feeding system to start up the project. Even though our plant is large and robust-looking, this is quite sensitive. It is susceptible to changes, and adding the material is something of an art. We cannot just open the oven and tip in the dust," says Henriette Charlotte Nikolajsen.

"Even small lumps in the material can obstruct the firing and interfere with the combustion process. If we have to shut down and restart the oven, there is a high environmental price to be paid, which would mean losing the environmental benefits gained in the first place," she explains.

Sixty-two per cent of the material which Aalborg Portland receives from Troldekt is used as a substitute for raw materials, while 38 per cent of the material is used to replace fossil fuels.

"Recycling products in our cement can be something of a challenge. We carefully analyse residues and waste in order to assess the environmental impact, both in production and in relation to the cement. "The material from Troldekt is received with open arms by us, because it is a product made from natural materials and fully in line with our desire to promote circular cooperation, and thus substitute fossil fuels and conserve our natural resources."



Energy

At Troldekt, we are working systematically to reduce our energy consumption. This is done in collaboration with Ørsted, and also by switching to environmentally friendly energy sources. We are also involved in developing new energy-efficient solutions.

All the electricity used in our production is based on renewable energy as part of the Cradle to Cradle certification, and as a natural consequence of our climate partnership with Ørsted. The agreement means that, since July 2013, all our electricity has been based on wind power from the Anholt offshore wind farm. We are an Ørsted climate partner because we want stable, carbon-neutral electricity supplies.

By entering into a climate partnership agreement, we are buying a guarantee that Ørsted produces power at one of their certified wind farms that corresponds to our consumption. The guarantee takes the form of RECS certificates (Renewable Energy Certificate System). Troldekt has purchased RECS certificates up until 2021.

By entering into this partnership, we have contributed to supporting and expanding wind power as a key energy source in Denmark. Today, more than half of Denmark's electricity consumption can be met by wind power, and the proportion continues to increase. This also means that we at Troldekt need to buy certificates for a smaller proportion of our electricity consump-

tion than previously in order to realise 100 per cent wind energy.

Use of waste heat and water

From 2019, we are planning to participate in an international development project aimed at mapping how we can make better use of heating and water from our drying processes in production. The project will potentially help promote a new technology which can be used in other companies that have a similar drying process to ours.

The project specifically aims to find out whether we can condense the water vapour which the acoustic panels release during drying and thereby use both the considerable water volumes discharged as vapour as well as the heat from the vapour. Even though our drying ovens are highly efficient, and hot air is reused several times in the drying process, there are still significant energy benefits to be gained by being able to reuse the hot air being discharged.

The project will be carried out in cooperation with the German supplier of our drying ovens, Venjakob, and as part of a planned research

collaboration with a German university. Together, we are looking into the possibilities of obtaining EU funding for the project.

Switch to eco-friendly energy sources

At our factory in Troldhede, our employees use forklifts to shift heavy stacks of acoustic panels. We have now replaced more than half of our gas or diesel-powered forklifts with electric vehicles. The electricity comes from wind energy, and the switch to electric forklifts therefore reduces our carbon footprint further. Part of our objective for 2018 was for more than 50 per cent of our forklifts to be replaced with electric models, so this goal has been realised.

We are also in the process of switching to LED lighting in our production facilities. We are doing this both to improve the lighting and thus the working environment, and also to reduce our overall energy consumption. LED lighting has now been installed in much of our production, and the process is ongoing.



100 per cent of the electricity used in our production comes from wind energy.



Water

Through sewer separation and by participating in research projects, we want to protect the groundwater. Moreover, we want to support the proper management of our water resources, which are in short supply globally.



A new project will establish possible uses for using water vapour from our drying ovens.

Troldtekt wishes to protect the groundwater, and is therefore installing sewer separation systems at its site in Troldhede. This means that rainwater will now be led to a municipal overflow reservoir rather than into the existing sewer system, which has limited capacity during heavy downpours.

Excessive load on the sewer system results in overflows, causing the mixture of wastewater and rainwater to flow into lakes and streams. Wastewater contains organic matter and bacteria, and if it ends up in the natural environment, it increases oxygen consumption in streams and lakes, and the water quality deteriorates.

Separate sewers will prevent this by feeding the rainwater elsewhere, and thus creating more capacity for wastewater in the sewer system.

All over Denmark, municipalities and utilities are in the process of separating rainwater and wastewater, but so far not in Troldhede. We embarked voluntarily on the project in connection with the construction of our new production line in 2018. However, separate sewers have not just been installed under the new area, but also for the majority of the existing buildings. Outstanding is only the administration building, and the work here will be carried out in 2019.

Utilisation of water vapour

In western Jutland, where we produce our acoustic solutions, there is no shortage of water, but there is globally. We therefore want to support the Cradle to Cradle principles and the UN goals of sound water stewardship. We are doing so by looking at various technologies which it might be possible to roll out elsewhere in the world.

From 2019, we will be looking at the possibility of exploiting the large volumes of water which are discharged as vapour during the process of drying our acoustic panels. The project, which is also described on page 18, aims to reclaim the water vapour, so as to be able to reuse the water from the drying process in production. No solution has yet been found, but we are hoping to develop one in collaboration with our drying oven supplier, Venjakob, and researchers from a German university. The research project will also focus on recycling much more of the heat discharged during the drying process than our highly efficient drying ovens already do today. We are looking at the possibility of obtaining EU funding for the project.

Possibility of stormwater overflow basins

At Troldtekt, we have set ourselves a new goal. In connection with new construction projects in the coming years, we will look into the possibility of establishing stormwater overflow basins with vegetation at our factory site. In this way, Troldtekt can contribute to creating the best possible conditions for biodiversity in the area.



We are working on measures to minimise the inconvenience caused by noise and dust in production – for the benefit of our employees and out of consideration for our neighbours. In 2018, we continued our efforts to contribute to inclusion in the labour market.

For several years, Troldekt has been investing heavily in improving the physical environment at our production facilities which dominate the town of Troldehede. In particular, we are focusing a lot on dust and noise. Partly because it has a direct and positive impact on our employees' working environment, but also because it has a bearing on our surroundings.

Challenges are bound to arise when large production facilities are sited in a densely populated area. However, we have a clear goal of keeping any inconveniences for our neighbours to an absolute minimum – and we attach importance to having a close dialogue with them. This is an ongoing process, and we are not there yet. However, in 2018, we implemented a number of initiatives aimed at reducing the amount of dust and noise from production:

- We have installed noise screens on exhausts and motors.
- Waste wood from the shredding room is now stored in sealed containers.
- Sawdust is now shipped to Aalborg Portland in closed trucks, as containers have previously released dust during transport.
- We have fitted closed sides to the woodchip container which feeds our biomass boiler.
- Ash dust from the biomass boiler is now collected in a closed ash container.

Responsibility for inclusion

A second and important aspect of our CSR work is that we are consciously taking responsibility for inclusion in the labour market. We have job-trialled a number of unemployed men and women – four of whom have subsequently



In 2018, we employed Mette Damsgaard, a commercial student, in our Danish sales department.

been offered permanent employment as flexitimers, benefitting both parties. In 2018, we took on a deaf colleague, Patrick Mikkelsen, in a position on completely normal terms. His employment resulted from a work experience scheme (see the case study on page 29).

We also cooperate with the Danish Association of the Hard of Hearing and the Castberggård job and development centre, which both want to see more people who are hearing-impaired in work. People who are partially deaf, in particular, need to work in environments with good acoustics – and so there is an obvious link between

hearing problems and Troldekt acoustic solutions.

Space for tomorrow's workforce

In addition to our focus on inclusion, we also help to educate young people and prepare them for working life. In Denmark, there is generally a shortage of apprenticeships and traineeships, and this may be storing up problems for the future both for us and other Danish companies in the form of shortages of competent, skilled workers.

Troldekt currently has one apprentice in our metal workshop, and in 2018 we employed a commercial student in our Danish sales department.

Responsible production and a better life on land

Troldtekt supports the UN's Sustainable Development Goals. We have decided to focus on the two goals where we can make the biggest difference. In 2018, this resulted in a new and energy-efficient factory line and increased focus on FSC®-certified wood.



UN member countries have adopted 17 common goals to ensure the balancing of the environmental and economic dimensions of sustainable development. Since its launch in 2015, organisations and consumers have embraced the global goals, and the ambition is that they are achieved by 2030.

At Troldtekt, we have so far chosen to focus on two of the 17 goals: 'Responsible Consumption and Production' and 'Life on Land'. Under each goal, we have selected four targets on which to base our work (see fact box).

"We acknowledge all 17 goals, but as a medium-sized company, we cannot work seriously with all of them. We have therefore decided to focus our efforts on the two goals where we can make the biggest difference concurrently with realising our Cradle to Cradle strategy," says Peer Leth, CEO at Troldtekt.

Sustainable production

In 2018, we continued to invest in sustainable production, which is completely in line with UN SDG 12 on

responsible consumption and production. A brand new, additional factory line costing DKK 180 million was built over the year and will provide the foundation we need to optimise our future energy consumption.

"We have gone for the latest technology, because we don't want to find ourselves three years down the line wishing that we had done things differently from the point of view of minimising consumption even further," says Peer Leth.

"At the same time, the new factory line comes with a greatly improved working environment with fully automated processes. Moreover, we have focused intently on minimising noise and dust problems both for our employees and for our neighbours in Troldhede, for example by installing noise screens around the motors that run the ventilation system," he says.

Wood from responsible forestry operations

In terms of SGD 15 – Life on Land – Troldtekt has since early 2018 increased its use of FSC-certified Norway

spruce from local woods and forests. FSC is a guarantee of social, economic and environmental responsibility in forestry operations. We can now supply acoustic panels which are certified in the 'FSC 100%' (FSC®C115450) category. This means that all the wood in each panel is FSC-certified based on compliance with strict requirements as regards traceability and the handling of the raw wood.

"A significant proportion of the panels we produce are FSC-certified, but we want to produce even more, as an increasing number of Danish forestry owners hopefully certify their forests. Our strategy is sustainable production, and the market is ready for larger volumes of certified products," says Peer Leth.

The FSC label guarantees, among other things, that no more trees are felled than the forest can reproduce on its own – and that local workers are trained, supplied with safety equipment and are paid a decent wage.

Full focus on FSC

Troldtekt has decided to no longer certify products according to the PEFC™ standard. In future, FSC will be the only sustainable wood certification which customers, suppliers and employees will need to think about. 'Double certification' would be a heavy administrative burden, and relatively few customers ask for PEFC-certified products.

However, the raw wood we use which is not FSC-certified still comes from PEFC-certified forests in by far the majority of cases.



Troldekt was awarded FSC Denmark's wood diploma for our policy of using 100% FSC®-certified wood.

Focus on two goals and four targets

The following shows which of the UN's SDGs and targets Troldekt mainly supports:



SDG no. 12: 'Responsible consumption and production'

- **Overall goal:** Ensure sustainable consumption and production patterns.
- **Target 12.6:** Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.
- **Target 12.7:** Promote public procurement practices that are sustainable, in accordance with national policies and priorities.
- **Target 12.C:** Rationalise inefficient fossil-fuel subsidies that encourage wasteful consumption (text has been abbreviated).



SDG no. 15: 'Life on land'

- **Overall goal:** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.
- **Target 15.B:** Mobilise significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation.

CSR crosses boundaries

With Sweden and Germany as new domestic markets, it has been natural for Trolldtekt to extend its CSR activities to these two countries. In practice, we have chosen to support measures that benefit society and which are in line with our own business goals.

Trolldtekt has accelerated its international growth significantly. Therefore, we extended our CSR approach in 2018 to include support for CSR measures on our two new domestic markets: Sweden and Germany.

"In Denmark, Trolldtekt is a pioneering medium-sized company working with sustainability. Our goal is that we come to play the same role in Sweden and Germany," says Peer Leth, CEO at Trolldtekt A/S.

"We want to influence the development of the circular economy, because we are convinced that this approach will become a crucial competitive parameter for manufacturers in the construction sector. The Cradle to Cradle concept is also gaining ground in Sweden and Germany, and it is only natural for us to support organisations in both countries that are working to promote the concept," he adds.

Transparency and documentation

Most of Trolldtekt's CSR investments are made in the company's production in Troldhede. Since 2015, more than DKK 100 million has been spent on modernising the existing factory, and from the beginning of 2019 we have doubled capacity with a brand new production line at a cost of DKK 180 million. The massive investments mean that it now takes significantly fewer resources to produce each square metre of Trolldtekt than just a few years ago.

"Our sustainable principles and the use of local raw materials also benefit the international markets. Full transparency and detailed documentation are top priorities in our contribution to



sustainable building," says Peer Leth.

He adds that transporting goods to the new markets is a challenge, and one that Trolldtekt is focusing on:

"Transport impacts our sustainability performance, and this is one of the reasons why we're focusing on our neighbouring countries. In Sweden, our start-up activities have been concentrated in the south-western part of the country, while in Germany our focus has been on sales in the north of the country as well as central Germany. In this way, we are building up our exports region by region; this minimises transport and helps us achieve a number of logistical advantages.

Responsible values pay off

The philosophy of benefitting both society and our business is at the core of Trolldtekt's CSR work – also outside Denmark.

"We're acting responsibly, because it pays to do so. Perhaps not tomorrow or the next year, but definitely in the long term. We are therefore investing in helping architects to see the benefits of choosing Cradle to Cradle-certified products. This is also why we support competitions which encourage design and architecture students to think innovatively. Innovation is an important value for Trolldtekt, and the students are our potential future customers," says Peer Leth.

Four initiatives: How Troldekt takes responsibility on new markets



Cradle to Cradle e.V. (Germany)

The German NGO works to promote the circular economy and the sustainable Cradle to Cradle concept throughout Germany. Its many activities include a congress, an academy, a professional forum and an annual 'action week' with a range of initiatives.

Cradle to Cradle e.V. has more than 30 regional groups, more than 700 active members, and a partner group of companies that Troldekt joined in 2018. The partners financially support the NGO's efforts to promote Cradle to Cradle – a natural step for Troldekt, as we have been working strategically with Cradle to Cradle since 2012 in our business and in our products.

Cradlenet (Sweden)

In Sweden, the circular economy has strong backers.

Cradlenet offers inspiration and knowledge sharing across companies, organisations and people. The NGO is based in Stockholm and has regional offices in Umeå, Malmö and Gothenburg.

As a member of the organisation, Troldekt supports Cradlenet's work. This is completely in line with our strategy – that information about the circular economy should reach as many people as possible in Sweden, which is one of our new domestic markets.



SCHULBAU competition (Germany)

At the large SCHULBAU fair for investments in educational building which was held in Hamburg in January 2018, Troldekt was the main sponsor for a competition for architectural students. Here, mixed teams from several uni-

versities in Hamburg competed to plan a specific school project.

With our sponsorship, we gave tomorrow's architects an opportunity to test their skills on a real school building project.



Troldekt Award (all markets)

In 2018, and for the fifth time, Troldekt invited design and architecture students from all over the world to participate in the Troldekt Award competition. The purpose of the competition is to invite talented architects to submit proposals for new and innovative ways of using our acoustic

panels. Two well-known architects assessed the entries – and EUR 5,000 was awarded to the winning project.

Innovation is one of Troldekt's core values, which is why we also want to support innovation among talents. At the same time, the competition enables us to enter into dialogue with tomorrow's architects in new markets.

Ready with answers about sustainable points

In 2018, two Troldekt employees completed the DGNB Consultant training programme. This means that we are now even better able to advise architects and clients on certifying sustainable buildings.



Which criteria are important in a sustainable building? And how does a building earn enough points to obtain DGNB certification? These are some of the issues on which project consultant Bente Therkildsen and technical adviser Michael Christensen from Troldekt are now able to provide valuable input for architects and builders. In 2018, the two employees completed a DGNB Consultant training programme.

"In practice, it means that we now have in-depth knowledge about the certification and the five categories of certification criteria. Also, we

now have a better insight into how Troldekt's products contribute overall to what constitutes a DGNB-certified building. Among other things, it's all about making the choices that earn enough sustainable points," says Michael Christensen.

Snowball effect

As a project consultant, Bente Therkildsen finds that the level of interest in DGNB is like a snowball that is slowly rolling along and getting bigger and bigger. It takes time, but it's happening.

"Interest is growing, in particular around larger cities, and especially in connection with major construction projects. However, many stakeholders still need convincing before a client chooses to have the building certified. I hope that, as a DGNB consultant, I'm able to help the architects who still feel slightly uncertain about the scheme, and that I can shed light on the value of being certified," she says, and continues:

"I've already met builders who really prick up their ears when I introduce myself as a DGNB consultant."

Troldtekt can contribute more than half of the points

Ramboll has prepared reports and accompanying documentation packs so that it is now easier for DGNB auditors to assess Troldtekt's specific contributions to DGNB building certification.

The documentation shows that Troldtekt can contribute more than half of the points for the overall DGNB certification. Troldtekt has already been chosen for a number of DGNB-certified buildings, including the Turbinehuset office building in Copenhagen, the psychiatric hospital GAPS in Slagelse on western Zealand, and Denmark's first DGNB-certified school in Frederiksberg, also in Copenhagen.

Troldtekt provides documentation packs for both the Danish and the German versions of DGNB, and also for the Swedish Green Building Council (*Miljöbyggnad*) as well as for LEED and BREEAM.



The psychiatric hospital GAPS in Slagelse is just one example of a DGNB-certified building with Troldtekt.

What is DGNB?

- DGNB stands for 'Deutsche Gesellschaft für Nachhaltiges Bauen' (German Sustainable Building Council), and is the German sustainability certification for buildings.
- DGNB was launched in 2008, and is based on a holistic approach to sustainability.
- In Denmark, Green Building Council Denmark has chosen DGNB as the most suitable certification for adapting to Danish conditions.
- The first Danish version of DGNB was published in 2012, and has since been updated. A building can achieve DGNB certification at Silver, Gold or Platinum level.



Troldtekt A/S is a member of the Danish Green Building Council (DK-GBC) and Deutsche Gesellschaft für Nachhaltiges Bauen (DGNB).

Service check of working environment

Troldtekt's statutory workplace assessment in 2018 was carefully planned. All employees were invited to provide input on both the physical and psychological working environment.



Every corner of production was scrutinised when, in 2018, Troldtekt conducted a new workplace assessment (WPA) at the factory in Troldhede. Companies are required by law to conduct a workplace assessment every three years.

"Quite apart from being required by law, a WPA is a very good tool for working systematically with our working environment. We made a point of going for an in-depth approach, inviting all employees to provide input in order to be able to make improvements where necessary," says Renate Blom, environmental manager at Troldtekt.

She was responsible for the WPA process, which has now resulted in a specific action plan.

Enthusiastically received

First, Renate Blom and production manager Kim Snebang visited all the work functions in and around the factory in Troldhede to assess the physical working environment.

"We talked to the employees about everything from lighting, noise, dust and ergonomics to chemicals and accidents. We used a checklist to make sure that we covered everything. All our colleagues took a keen interest, and contributed very relevant input," says Renate Blom.

In addition to assessing the physical conditions, an assessment was also made of the psychological working environment. All employees had the opportunity to provide input by completing an anonymous questionnaire.

Initiatives now underway

In autumn 2018, Troldtekt's occupational health and safety committee reviewed the data and results of the process. On this basis the committee presented an action plan, which has been made available to all employees both in the canteen and online.

"In the committee, we summarised and prioritised the efforts, and have now launched initiatives in several areas. Rules for moving about the factory area and minimising dust in production are two concrete examples. In the action plan, everyone can see who is responsible for the various measures, and it is also possible to monitor progress," says Renate Blom.

Deaf colleague: From work experience to a permanent place on the team

In September 2018, Troldekt took on its first deaf worker in production. Despite his impairment, Patrick Mikkelsen is now working on an equal footing with everybody else.



In our production, it has become perfectly normal for colleagues to communicate using their smartphones, making gestures and writing messages on boards. In June 2018, a deaf colleague, Patrick Mikkelsen, became part of the team. He is 28 years old, and started on a work experience scheme in Troldekte before being offered permanent employment in the autumn as a production worker.

"I was really happy to be gaining work experience at Troldekte, and then I was thrilled when I was offered a permanent job," says Patrick Mikkelsen.

Alternative communication

Due to Patrick's hearing impairment, his colleagues have to communicate with him in special ways. Therefore, all the departments have installed whiteboards which can be used for leaving messages for Patrick, while a number

of his colleagues either write or dictate notes on their smartphones to deliver messages.

"Quite a lot of the time we don't think much about the fact that Patrick is deaf. It's become a normal part of the working day to communicate with Patrick using whiteboards or gestures, and we haven't experienced a single instance of a message getting lost," says production manager Kim Snebang.

Patrick Mikkelsen nods in recognition.

"My colleagues gave me a very kind welcome, and they've been very willing to write messages to me when we need to talk. Several of them have even learned a bit of sign language – which is very nice, and also quite fun," he says.

Good cooperation with Castberggård

Patrick's work experience was arranged in cooperation with Castberggård's

job and development centre, which is keen for more people with hearing impairments to find a job. Kim Snebang is very happy with the cooperation with Castberggård, which has resulted in a new, skilled colleague joining the company.

"At a large factory like ours, we have some pretty strict safety procedures. Even though Patrick is unable to hear, we have had no qualms about taking him on. He is very safety-conscious, and he moves around in exactly the same way as his colleagues who can hear," says Kim Snebang.

Through Castberggård, Patrick Mikkelsen has worked with a mentor, who has also talked to our employees in Troldekte about what it's like to be deaf.

A helping hand can lift the best ideas

A group of students at the Royal Danish Academy of Fine Arts, School of Architecture in Copenhagen have recreated the listed residential housing Elementbyen in Hjortekær on Zealand. Assisted by Troldekt, they produced the cement-bonded wood wool themselves for the project.



When you send the recipe for cement-bonded wood wool and a bag of wood wool off to the School of Architecture in Copenhagen, the best ideas can grow wings. At least, this is what happened in late summer 2018, when a group of students contacted Troldekt to ask for help with an assignment.

The young people were involved in a project, the purpose of which was to investigate and restore the social housing known as Elementbyen in Hjortekær north of Copenhagen.

Elementbyen was built in Kongens Lyngby back in 1947/1948, and Troldekt acoustic panels were used as plastered wall elements. The students wanted to produce their own cement-bonded wood wool, and use it to build four cross-sectional models to show the methods and materials used to construct the buildings.

"I think that being able to contact a company like Troldekt and get professional help with a student project is crucial when it comes to realising our ideas in the best possible

way. It has been extremely interesting – and challenging – learning about cement-bonded wood wool as a natural material and how to work with it. Many of us didn't know what cement-bonded wood wool was, even though we were familiar with Troldekt acoustic panels," says Anna Kirstine Stauersbøl Laustsen, one of the architecture students.

A simple production

The young people's efforts resulted in quite a successful grey Troldekt



panel. They clad it with chicken wire and plaster to make it look like the construction from the 70-year-old housing.

“Even though we had to make do with kitchen scales for weighing the materials and homemade wooden moulds, we succeeded in making a number of cement-bonded wood wool panels, which to us looked quite like the ones you can buy,” says Anna Kirstine Stauersbøl Laustsen.

Elementbyen in Hjortekær comprises 197 tenancies made up of terraced and semi-detached houses. The homes are all Grade 1-listed buildings, and were among the first in Denmark to be built using prefabricated elements. Back in the 1930s, in particular, and up until the 1950s, it was common to build walls using Troldekt panels, which were then plastered – and it is this construction that is being given a new lease of life at the School of Architecture in Copenhagen.

Troldekt participates in education

Social responsibility is a fundamental value at Troldekt. And assuming responsibility for educating young people is no exception. Each year, we receive many enquiries from students who are interested in using Troldekt in their projects. We greatly appreciate this interest.

Below follows a brief description of some of the projects we were involved in in 2018:

A student on the Digital Concept Development programme at Business Academy Aarhus used his Bachelor project to suggest what a new online presence might look like at www.troldekt.com. The assignment resulted in a report and a

digital prototype.

A group of Economics and Business Administration students at Aarhus University asked Troldekt to contribute to a large analysis of the competitive advantages companies can reap by working with Cradle to Cradle as part of their business activities. The analysis formed part of a Bachelor project.

The circular economy was the focal point for a Master's student from Edinburgh, who did a project on social structures and their significance for the successful implementation of circular practices. We contributed by agreeing to an interview.

Printed matter with a green footprint

The past decade has been an uphill struggle for the printing industry. One of the companies to have survived is KLS PurePrint, which now produces Troldekt's printed matter. The company has managed to keep going thanks to its increased environmental focus.



“This is because all the energy we use is supplied from wind farms or counterbalanced by wind power production, because all the company’s vehicles are electric, and because we have developed a previously unseen analysis model which calculates the printed matter’s CO₂ consumption from raw material to delivery,” explains Kasper Larsen.

Digitisation and the financial crisis were a bad cocktail for the printing industry. Most printers in Denmark had to close down in the years that followed, but focusing carefully on sustainability ensured KLS PurePrint’s survival.

“The financial crisis was followed by a growing environmental awareness, and it made a lot of sense for us to ride the wave,” says Kasper Larsen, managing director of KLS PurePrint.

Therefore, KLS PurePrint set itself the goal of becoming nothing less than the world’s greenest printing house, and in 2015 they were able to celebrate Cradle to Cradle certification at Bronze level.

Platinum in renewable energy

Shortly afterwards, in 2016, the Cradle to Cradle certification was raised to

Silver – which is the same level as Troldekt. Working together made perfect sense, and KLS PurePrint now produces all our brochures and other printed matter.

“Sustainability is part and parcel of everything we do, and our certification is proof that the printed matter we produce for our customers does not cause pollution, nor is it a drain on the Earth’s resources. On the contrary, it can be returned to nature’s own cycles. This means that the printed matter is neither unhealthy for humans nor the environment,” explains Kasper Larsen.

KLS PurePrint is quite special in that the company can also be one of only three companies worldwide with a Platinum certificate within renewable energy, which is one of the five Cradle to Cradle criteria.

From Silver to Gold

In spite of the impressive certifications, KLS PurePrint has by no means reached the end of its sustainable transformation. Cradle to Cradle certification requires continuous improvements to be made to both products and production processes – and KLS PurePrint is already moving ahead. Kasper Larsen hopes that the printing company will be Gold-certified in 2019.

“We have already launched a number of initiatives that will hopefully help us to achieve Gold certification. We’re focusing, in particular, on climate-friendly transport and chemical-free products, among other things by contributing to the introduction of electric cars, more bicycle paths and the development of chemical-free printing plates,” explains Kasper Larsen.

Support for a local place to shop

Thanks to citizen involvement, Trolldhede now has a modern grocery shop and petrol station. Trolldtekt has contributed financially to the establishment of the new shop, and we shop locally as often as possible.

A grocery shop can be very important for a small village community. It inevitably becomes an informal meeting place for the locals. A place where you can collect medicines and packages. And it offers the possibility of part-time jobs for young people in the village. A good, local grocer is high on the wish list of many Danish villages, and Trolldhede was no exception.

The local community therefore keenly backed the ideas of establishing a modern grocery shop as a replacement of the former grocer. The old shop building was demolished, and on 1 September 2018 a new shop in the Min Købmand (My Grocer) chain opened in brand new premises in Trolldhede. Beside the shop is a petrol station.

“It means a lot for people that they have somewhere to shop, and by building a modern shop, we have found a solution that will last for many years. Now, there is no need for families with young children and commuters to shop elsewhere, as the new shop stocks a wide range of groceries. It is also a huge benefit for the elderly who are unable to travel by bus to nearby towns,” explains Mathias Bjerg Kristensen, who runs Min Købmand in Trolldhede.

Natural to contribute

The new grocery shop is partly financed by local people buying shares in the venture. Trolldtekt also bought shares in the shop to help provide the funds needed to establish the new store. In addition, we have sponsored acoustic ceilings for the whole shop, and we buy groceries locally to the extent possible.



“Without local support, it wouldn't have been possible to open a shop in Trolldhede. It has been absolutely essential that the entire community – both citizens and businesses – has backed the project, because it takes a lot of willpower and commitment to run a shop in a small village. Things don't happen by themselves out here. If people don't choose to shop locally, then the project is doomed to fail,”

says Mathias Bjerg Kristensen.

Trolldtekt has been producing cement-bonded wood wool in Trolldhede since 1935, and following recent growth and expansion, our factory takes up even more space in the village. Several of our employees live in the village, and we make a point of playing our part in local initiatives.

Structure

In order to ensure structured CSR reporting, Troldekt uses guidelines from the international GRI G4 standard.

However, as of 1 July 2018, the GRI G4 guidelines have been replaced by GRI Standards. The CSR report for 2018 is structured in the same way as previous reports, which has resulted in a marked improvement in the quality of our content and data collection.



Environment

Troldtekt remains a dynamic, growing company. In 2018, production increased yet again. Data on the company's materials consumption therefore shows an increase in the consumption of raw materials etc.

Materials consumption

All materials are purchased from external suppliers. The data is obtained from supplier invoices or statements provided by suppliers.

	Material	2016	2017	2018	Unit	Renewable material
Raw materials	Wood	40,375	43,781	50,056	m ³	yes
	Cement, grey	2,535	1,892	1,994	tonnes	no
	Cement, white	16,880	19,777	20,604	tonnes	no
	Accelerator	135,942	202,536	188,702	litres	no
	Sodium silicate	285,915	291,414	254,782	litres	no
	Paint	412,091	409,774	454,348	litres	no
Associated process materials	Water	13,901	16,624	17,985	m ³	yes
	Asphalt cleaner	5,175	4,512	2,893	litres	no
	Mould oil	155,149	145,162	130,451	litres	no
Packaging	Cardboard	62	79	71	tonnes	yes
	Foil	19	25	35	tonnes	no
	Wood pallets	41,727	57,295	57,891	pcs	yes

Percentage of recycled materials

Material	2016	2017	2018
Total proportion of recycled materials as a percentage of total materials consumption	1.6%	1.5%	1.2%

Each Troldtekt panel contains cement, which is partially produced from recycled materials (the cement may contain ash and sand from offshore channels).

Recycled materials in grey cement: 16.88%, corresponding to 337 tonnes (298 tonnes in 2017).

Recycled materials in white cement: 1.14%, corresponding to 235 tonnes (358 tonnes in 2017).

The proportion of white cement has risen, and since it contains less recycled material than grey cement, the volume of recycled material has fallen despite the increase in total cement consumption.

Energy consumption within the organisation

The tables below provide an overview of Trolldtekt's energy consumption in 2016-2018.

Only energy consumption at the factory in Trolldhede is calculated.

	2016	2017	2018
Energy consumption (GJ)	67,906	88,633	81,553
Percentage from renewable energy sources	94%	95%	94.6%

Consumption is distributed across the following entries:

	Quantity (GJ)			Share of total energy consumption			Share of renewable energy sources	Contributes to emissions	Produced externally/internally
	2016	2017	2018	2016	2017	2018			
Electricity consumption	18,634	21,742	23,518	27%	25%	28.8%	100%	no	Externally
Biofuel	45,169	62,694	53,640	67%	71%	65.8%	100%	no	Internally + externally
Heating oil*	538	271	-	1%	< 1%	-	0%	yes	Externally
Gas (trucks)	828	1,162	1,346	1%	1%	1.7%	0%	yes	Externally
Diesel (trucks)	2,737	2,764	3,049	4%	3%	3.7%	0%	yes	Externally

*Oil is no longer used for heating.

Energy intensity

	2016	2017	2018
Energy consumption per m ² of produced panel	22.92 MJ	27.76 MJ	25.47 MJ
The development affects Trolldtekt's environmental performance	Positively	Negatively	Positively

The table 'Energy consumption within the organisation' lists which types of energy are included, and whether the energy is produced externally/internally.

Reduction of energy consumption

	2016	2017	2018
Total energy savings	13,587 GJ	-15,454 GJ	-7,336 GJ

In 2018, we focused more on the drying process, which resulted in a fall in total energy consumption.

Direct CO₂ emissions (Scope 1)

The table presents an overview of direct CO₂ emissions from sources that are owned or controlled by Trolldtekt.

Direct sources of emissions	Tonnes CO ₂		
	2016	2017	2018
Biofuels for drying*	-	-	-
Heating oil**	38	19	-
Gas for trucks	87	121	141
Diesel for trucks	189	191	211
Total	314	331	352

*Biofuels are regarded as a CO₂-neutral energy source.

**Oil is no longer used for heating.

Indirect CO₂ emissions (Scope 2)

Indirect sources of CO ₂ emissions	Tonnes CO ₂		
	2016	2017	2018
Electricity	0	0	0

Trolldtekt uses 100% wind power in the form of renewable energy from the Anholt offshore wind farm (with Climate Investment).

Other indirect CO₂ emissions (Scope 3)

This indicator covers a number of other indirect emissions of CO₂ from sources that are not owned or controlled by Trolldtekt, but where the CO₂ emissions result from the company's activities. CO₂ emissions from transport account for less than 0.5 per cent of total CO₂ emissions in Scope 3. In addition, this data is subject to considerable uncertainty. We have therefore decided not to include the CO₂ emissions stemming from transport in Scope 3.

Indirect sources of CO ₂ emissions	Tonnes CO ₂		
	2016	2017	2018
Production of purchased process materials, raw materials and packaging	22,041	25,186	26,857

CO₂ emissions intensity

This shows the intensity of CO₂ emissions per produced m² of acoustic panel both in total and broken down according to the information from the three previous tables.

	Volume (tonnes)			Kg CO ₂ /m ²			The development affects Trolldtekt's environmental performance
	2016	2017	2018	2016	2017	2018	
In Scope 1	314	331	352	0.11	0.10	0.11	Negatively
In Scope 2	0	0	0	0	0	0	Status quo
In Scope 3	22,041	25,186	26,857	7.44	7.89	8.39	Negatively
Total CO ₂	22,355	25,517	27,209	7.50	7.99	8.50	Negatively

Reduction of greenhouse gas (GHG) emissions

Increased production volume has resulted in an increase in greenhouse gas emissions.

Emissions of ozone-depleting substances

This provides information about Trolldtekt's emissions of ozone-depleting substances.

CFC-11 equivalent (kg)		
2016	2017	2018
0.0050	0.0056	0.0056

SO_x

This shows Troldekt's discharges of SO_x.

SO _x equivalent (tonnes)		
2016	2017	2018
54.7	62.6	70.7

The increase in SO_x emissions reflects the increase in production.

Total weight of waste by type and disposal method

All waste disposal is carried out by approved suppliers. Waste data has been compiled and supplied by these suppliers.

Due to our constant focus on increased sorting of all waste types, we registered more waste fractions in 2017 and 2018.

Waste types	Volume (tonnes)			Treatment
	2016	2017	2018	
Cement-bonded wood wool	5,118	5,557	4,610	Recycled
Wood wool*	-	-	118.5	Recycled
Wood	47.8	55.8	72	Recycled
Plastic packaging**	-	1.9	10.8	Recycled
Cardboard packaging	5.2	5.6	6.2	Recycled
Iron and metal	86.1	55.5	35.5	Recycled
Electronics	-	2.5	1.8	Recycled
Ash from biofuels	41.4	14.5	37.9	Recycled
Concrete	-	78.1	1	Recycled
Hazardous waste for reuse	4.7	13.3	6.2	Recycled
Wastewater from painting facility***	-	-	479	Recycling/incineration
Hazardous waste for incineration	24.2	16.0	16.7	Incineration
Garden waste	-	7.0	-	Incineration
Suitable for incineration	50.2	43.6	54.9	Incineration
Landfill****	0.1	1.4	1.5	Landfill

*Since October 2018, we have separated wood shavings and sent them to a wood pellet factory. Wood shavings were previously included in the wood wool waste fraction.

**The amount of plastic packaging has increased significantly. This is due partly to the commissioning of a new packaging machine, and partly to the establishment of a new factory line as many of the machines were supplied wrapped in plastic.

***In 2018, we started collecting the wastewater from our painting processes and sending it to a processing plant. Sludge from painting acoustic panels is sent for incineration, while the treated wastewater is discharged into the public sewers.

****Insulation material is sent for landfill. The amount is determined by the production of two-layer panels.

Extent of mitigation of environmental impacts

- Via a new system, we are driving wood wool from the shredders directly to a wood pellet factory in sealed containers. This saves time, as we no longer have to handle the wood wool manually, and the new system has also reduced dust pollution significantly.
- In January 2018, we started using our new biomass boiler. We only fire with clean wood chips.
- We have invested massively in reducing noise levels in several places in the factory.
- Dust from our edging workshop is transported in closed tankers. This has reduced dust pollution significantly.

Percentage of products sold and packaging materials recycled

	2016	2017	2018
Wood pallets delivered (qty)	65,227	73,745	79,282
Wood pallets returned (qty)	18,537	19,775	20,477
Wood pallets returned (%)	28	27	26

Sanctions for non-compliance with environmental laws and regulations

Troldtekt has not been sanctioned for failing to comply with environmental laws and regulations in the reporting period.

Percentage of screened suppliers – Environment

Troldtekt's Code of Conduct states that our suppliers must strive to minimise the environmental impact of their activities. They must also have procedures to effectively prevent and address any environmental issues and industrial accidents which may impact society and the environment.

All new Troldtekt suppliers must sign our Code of Conduct. Only if suppliers comply with the guidelines can they start doing business with us. We have been doing business with many of our suppliers for a number of years, and we generally have a low supplier turnover.

Twenty-seven of Troldtekt's main product-related suppliers have signed Troldtekt's Code of Conduct. Approx. 90 per cent of our product-related purchases thus come from suppliers who have signed our Code of Conduct.

Environmental impacts in the supply chain

No. of suppliers who have signed Troldtekt's CoC	Percentage categorised in low-risk group	Percentage categorised in medium-risk group	Percentage categorised in high-risk group
27	96%	4%	0%

All suppliers who have signed our Code of Conduct are categorised in low, medium or high-risk groups. This happens, among other things, on the basis of their specific risk of having a negative environmental impact. We have no suppliers in the high-risk group. Should this happen in future, we will maintain our relations with such suppliers in order to exert a positive influence. We visit our suppliers at regular intervals, and CSR is an important parameter in the dialogue.

Grievances about Troldtekt's environmental impacts

In 2018, we were in dialogue with neighbours about noise problems at the factory on a number of occasions. We are always open to dialogue, and we will do our utmost to accommodate our neighbours' wishes. Based on our dialogue, we have invested heavily in noise-reducing measures.

Labour conditions

Troldtekt's employees are the company's most important asset. Consequently, their safety, health and rights are the foundation stone for our business. We are always seeking to further improve the working environment and make Troldtekt an even more attractive place to work.

Social fairness is not just a high priority for our own employees – it is also important that our suppliers treat their employees well. We ensure this through our Code of Conduct.

Workforce and employee turnover

The table below is a summary of the number of employees and staff turnover in Troldhede and Tranbjerg, and how employees are distributed according to their terms of employment. Please note that the table includes apprentices, flexitimers and paid student interns, while young workers are not included.

Location	Age	Salaried employees		Hourly paid workers		New employees		Employees who have left Troldtekt	
		Women	Men	Women	Men	Women	Men	Women	Men
Tranbjerg	-30	1	0	0	0	2	0	1	0
	31-50	7	9	0	0	1	3	1	0
	51-	9	5	0	0	1	3	1	3
Troldhede	-30	0	0	0	6	0	4	0	0
	31-50	3	1	2	27	1	4	0	1
	51-	5	4	3	27	2	2	0	2

Employment	No. in Tranbjerg	No. in Troldhede
Full-time employees	27	76
Part-time employees, incl. flexitimers	4	2
Permanent employees	31	78
Short-term contracts, including paid student interns	0	0
Total	31	78

Employees in the subsidiaries are not included in the figures. Troldtekt Deutschland GmbH has taken on two salaried employees. Similarly, Troldtekt AB now also has two salaried employees.

No. of employees in formal committees

In addition to the statutory occupational health and safety committee, Troldtekt has voluntarily set up a liaison committee. Both employees and the management are represented on both. Nine per cent of our total workforce is represented in these formal health and safety committees in Troldtekt.

Industrial accidents and absence due to illness

The figures comprise the 68 hourly paid employees at the factory in Trolldhede. Absence due to illness among salaried employees is not fully registered, which is why we have chosen not to include this data in the table.

	2016	2017	2018
No. of lost-time injuries	8	4	2
Injury frequency (no. of industrial injuries/1 million hours worked)	82.6	42.43	18.13
Absence as a result of industrial injury (hours/1,000 hours worked)	5.58	9.55	1.29
Absence due to illness, total (%)	3.69	2.36	3.9

The number of lost-time injuries decreased in 2018. We have had more focus on preventative efforts. This work will continue in 2019.

Absence due to illness is up due to more employees being on long-term sick leave.

Composition of senior employees according to gender and age

The following provides a summary of the composition of senior employees in Trolldtekt broken down by age and gender in per cent.

	Women <30 yrs	Women 30-50 yrs	Women >50 yrs	Men <30 yrs	Men 30-50 yrs	Men >50 yrs
Distribution of senior employees in per cent*	0%	14%	0%	0%	57%	29%

*The figures are rounded off.

Percentage of screened suppliers – Labour rights

According to Trolldtekt's Code of Conduct, our suppliers must comply with certain guidelines within the field of labour rights. Among other things, they must comply with local legislation concerning a minimum wage, and employees must be paid a wage which ensures them a fair standard of living. Employees must also have the right to paid holiday, absence due to illness, maternity/paternity leave and trade union membership.

All new Trolldtekt suppliers must sign our Code of Conduct. Only if suppliers comply with the guidelines can they start doing business with us. We have been doing business with many of our suppliers for a number of years, and we generally have a low supplier turnover.

Twenty-seven of Trolldtekt's main product-related suppliers have signed Trolldtekt's Code of Conduct. Approx. 90 per cent of our product-related purchases thus come from suppliers who have signed our Code of Conduct.

Risk of negative labour practices in the supply chain

The status is that 96 per cent of suppliers who have signed our Code of Conduct are placed in the low-risk group, and 4 per cent are in the medium-risk group, and there are no suppliers in the high-risk group.

A single supplier accounts for the 4 per cent placed in the medium-risk group, being based in a country where good labour conditions are not enforced through statutory legislation. Trolldtekt has visited the supplier, and in this connection conducted a very satisfactory audit (on-site inspection).

There have not been any incidents among Trolldtekt's suppliers which required reprimands or other measures.

Society

At Trolldtekt, we want to make a positive contribution to the local communities in which we are present. We are continually engaged in close dialogue with local stakeholders. Moreover, we have established anti-corruption guidelines, and through thorough documentation we are doing everything in our power to make sure that our products contribute to the safety and health of our customers' buildings.

As market leader in Denmark within the production and supply of acoustic solutions, we want to lead the way and set a good example in terms of positively influencing society around us.

Anti-corruption: Screened suppliers

Trolldtekt's suppliers must neither directly nor indirectly engage in or benefit from any form of corruption or bribery. This is stated in our Code of Conduct, which all new suppliers must sign before they can start doing business with us. We have been doing business with many of our suppliers for a number of years, and supplier turnover is generally low.

Twenty-seven of our main product-related suppliers have signed our Code of Conduct. Together, the 27 suppliers represent approx. 90 per cent of our product-related procurement volumes.

Anti-corruption guidelines

All Trolldtekt's employees are informed about our CSR policy at canteen meetings, and the CSR policy is included in our staff manual. All employees have been informed about this.

In 2017, we took steps to future-proof our anti-corruption guidelines. This work continued in 2018. All new employees are introduced to the company's anti-corruption guidelines.

Cases of corruption or bribery

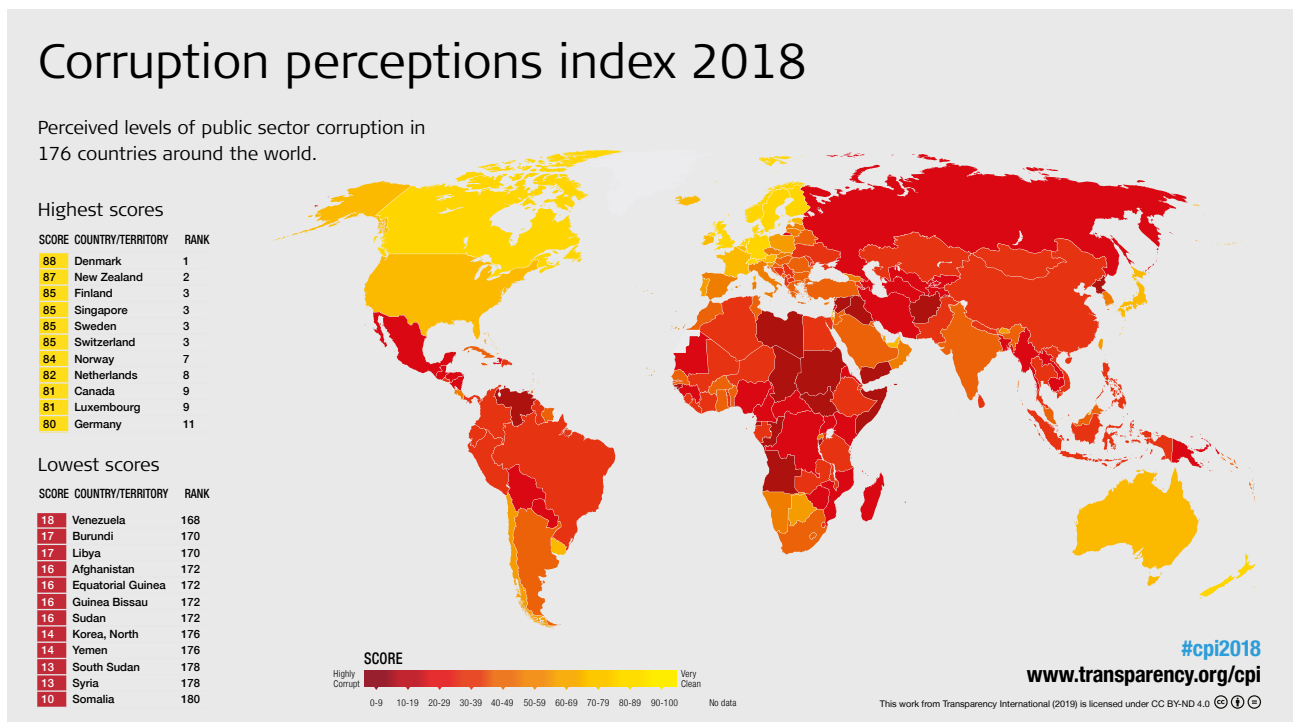
No cases of corruption or bribery were identified at Trolldtekt in 2018.

Number of suppliers screened with CoC*	Percentage categorised in low-risk group	Percentage categorised in medium-risk group	Percentage categorised in high-risk group
27	96%	4%	0%

*The figures are rounded off.

Sanctions for non-compliance with laws and regulations

Trolldtekt was not sanctioned for non-compliance with laws and regulations in 2018.



Society: Screened suppliers

Troldtekt's Code of Conduct provides guidelines for the company's cooperation with its suppliers, including criteria relating to their impact on society.

All new suppliers must sign our Code of Conduct before they can start doing business with us.

Society: Risk classification of suppliers

Twenty-six of the 27 suppliers (corresponding to 96 per cent) who have signed our Code of Conduct are placed in the low-risk group, and one supplier (corresponding to 4 per cent) is placed in the medium-risk group. There are no suppliers in the high-risk group.

The supplier in the medium-risk group is based in a country where the impact of organisations on society are regulated by law. Troldtekt has visited the supplier, and in this connection conducted a very satisfactory audit (on-site inspection).

There have not been any incidents among Troldtekt's suppliers which required reprimands or other measures.

Assessment of products

Through our strategic work with Cradle to Cradle certifications, a thorough raw materials assessment has been carried out of Troldtekt's acoustic panels.

As a result of this assessment, we have phased out harmful substances, and Troldtekt acoustic panels are therefore Cradle to Cradle-certified in the Silver category. The panels have also been recognised for their contribution to a healthy indoor climate and have, for example, been awarded the Danish indoor climate label *Indeklimamærket*, the Finnish quality label M1 and Allergy Friendly UK.

Sanctions for non-compliance with laws and regulations concerning use of products

Troldtekt was not sanctioned for non-compliance with laws and regulations concerning the provision and use of its products in 2018.

Human rights

Troldtekt wishes to promote CSR in the construction industry. An important aspect of this work is supporting and promoting human rights. Troldtekt has also made a commitment to this through joining the UN Global Compact.

With our Code of Conduct, we want to help ensure that our product-related suppliers respect human rights.

Risk of child labour

Troldtekt deems there is no risk of child labour in our organisation. Through our Code of Conduct, we take an active approach to the elimination of child labour.

Human rights: Screening of suppliers

Troldtekt's suppliers must neither directly nor indirectly be involved in using child labour. This is stated more explicitly in our Code of Conduct, which all new suppliers must sign in order to start doing business with us.

Human rights: Risk classification of suppliers

Twenty-six of the 27 suppliers (corresponding to 96 per cent) who have signed our Code of Conduct are placed in the low-risk group, and one supplier (corresponding to 4 per cent) is placed in the medium-risk group. There are no suppliers in the high-risk group.

The supplier in the medium-risk group is based in a country where there is a general risk that human rights are not respected. Troldtekt has visited the supplier, and in this connection conducted a very satisfactory audit (on-site inspection).

There have not been any incidents among Troldtekt's suppliers which required reprimands or other measures.

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Status 2018

Category	Description of objectives	Status
General	Reviewing suppliers in relation to the Code of Conduct; evaluating the current criteria for the classification of suppliers and implementing a new risk assessment.	Objectives will be transferred to 2019.
Labour conditions	Continued focus on safety. The goal is zero industrial injuries.	Realised. There has been a fall in the number of industrial accidents. The objective is continued to 2019.
Anti-corruption	Developing and implementing new anti-corruption guidelines.	Realised.
Environment	Production waste is analysed and sorted into fractions to enable each fraction to be reused at the highest possible value level.	Realised.
Environment	We want to reduce energy consumption per square metre of acoustic panel produced to max. 25 MJ.	The objective was almost achieved (25.47 MJ)
Environment	The proportion of electric forklifts increased from approx. 11 per cent to over 50 per cent.	Realised.

New objectives for 2019

Category	Description of objectives	Status
General	Reviewing suppliers in relation to the Code of Conduct; evaluating the current criteria for the classification of suppliers and implementing a new risk assessment.	
General	Initiation of supplementary training under the auspices of the Competence Development Fund of Industry (IKUF).	
Labour conditions	Continued focus on safety. The goal is zero industrial injuries.	
Environment	A crusher is being installed to crush panel waste with a view to increased recycling in the biological and technical cycles.	
Environment	Initiation of project aimed at exploiting waste heat and water vapour from the drying process.	

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About Troldtekt	Troldtekt acoustic solutions for ceiling and wall cladding are among the leading products for ensuring good acoustics, effective fire protection and a healthy indoor climate. The company's main product is Troldtekt acoustic panels which are made from wood and cement and which are Cradle to Cradle-certified in the Silver category. Troldtekt acoustic panels are the obvious choice for ceilings in most types of buildings – from offices and commercial buildings to schools, institutions, swimming pools, sports centres and private homes. Troldtekt A/S was founded in 1855 as a trading company in Aarhus. Since 1935, the company has produced Troldtekt cement-bonded wood wool in Trolldhede in western Jutland.

Certifications



Miljømærket for
energi- og klimavenslige byggevarer

