


# Troldekt A/S Corporate Social Responsibility

Troldekt®   
Natural acoustic solutions

Report on CSR for UN 2013





– At Troldekt A/S, we understand corporate social responsibility as the work with social, ethical and environmental issues that goes beyond our statutory obligations.

Peer Leth, CEO of Troldekt

**Leadership, vision and values**

CSR should be part and parcel of company strategy.  
Read more about our leadership visions for responsibility.

Page 4

**Marketplace activities**

At Troldekt, we are committed to giving our customers peace of mind.  
See how we document sustainability and environmental impact

Page 8

**Workforce activities**

Prevention, retention and fairness are keywords at Troldekt.  
Find out about activities that ensure job satisfaction and well-being.

Page 12

**Supply chain activities**

The supplier's production conditions are reflected in the end product.  
Read how we promote best practice throughout our supply chain.

Page 15

**Stakeholder engagement**

Knowledge-sharing, openness and dialogue are important tools for Troldekt in looking after the interests of its stakeholders. Read why.

Page 18

**Community activities**

No company is an island. Meet Troldekt's business partners for whom acoustics are especially important.

Page 21

**Environmental activities**

Troldekt works sustainably throughout the entire product life cycle.  
Read about our environmental initiatives.

Page 25



## CSR cannot be statutory

For several years, the ten principles of the United Nations Global Compact have been the starting point for Trolldtekt's annual report on its CSR objectives and results. The ten principles fall within four focus areas: Human rights, labour rights, the environment and anti-corruption.

In Denmark we accept neither corruption nor infringements of human rights. This is the case both culturally and in legislation. At Trolldtekt A/S, we therefore understand corporate social responsibility as the work with social, ethical and environmental issues that goes beyond our statutory obligations.

### Workplace assessments

Labour rights are one aspect of the UN Global Compact initiative. An important area which has been passed into law in Denmark. For example, workplace assessments are an extremely useful tool for managing the working environment and taking a systematic approach on site. Trolldtekt A/S obviously acknowledges the importance of regular reviews of its working environment efforts. The

workplace assessment helps to maintain a healthy and good working environment for our employees. Some would say that drawing up a workplace assessment is interesting in connection with the annual CSR report. As the workplace assessment is compulsory, it does not make sense for us to call it a CSR measure. At Trolldtekt, it happens as a matter of course.

### Cradle to Cradle Denmark

In 2013, we extended our partnership with Cradle to Cradle Denmark. Trolldtekt A/S wants to be at the forefront of developments, and devotes considerable resources to implementing sustainable solutions throughout the organisation. Cradle to Cradle Denmark advises us on how to do so in the best possible way. Here, Trolldtekt goes beyond the environmental measures required by Danish legislation. This is why we report on our close cooperation with Cradle to Cradle Denmark.

Thus, our philosophy is that we report on our work with social, ethical and environmental issues that

### Trolldtekt's values

- A ACTING RESPONSIBLY**  
We are positive, helpful and respectful of others
- C CUSTOMERS ARE KINGS**  
We ensure our customers a truly sound experience
- O ONGOING DEVELOPMENT**  
We actively incorporate innovation and improvements
- U UNIFORM QUALITY**  
We maintain a consistent and high quality while focusing on improvements
- S SERVICE IS TOP OF OUR AGENDA**  
We provide superior service and consulting
- T TRUSTWORTHY AND LOYAL**  
We stand by what we say and do
- I INNOVATION CREATES VALUE**  
We create results
- C CONSULTING**  
We provide professional guidance
- S SOLUTIONS**  
We develop state-of-the-art solutions

goes beyond what is required by Danish law. This is completely in line with Trolldtekt's own vision of being a trendsetter within intelligent acoustic solutions that focus on a sustainable indoor climate.

This and much more is described in detail in our new CSR report.

We hope you enjoy reading it.  
CEO, Trolldtekt  
Peer Leth

# Leadership, vision and values

CSR should be part and parcel of company strategy. Read more about our leadership visions for responsibility, and how Trolldtekt is systematising sustainability.

## OBJECTIVE AND STATUS FOR LEADERSHIP, VISION AND VALUES

---

### Objectives 2012-13

- > At Trolldtekt, we will take a targeted approach to incorporating social, ethical and environmental initiatives into all parts of our business and supply chain. In other words, it must be possible to trace our global responsibility in our daily work routines as well as in our long-term strategic decisions.

### Status 2012-13

- > In 2013, we adopted the long-term objective of becoming a Cradle to Cradle company in 2022. Our new Cradle to Cradle road map shows which steps we need to take to reach this goal within six focus areas.

### Objectives 2013-14

- > Same as in 2012-2013

## REGULAR ACTIVITIES

---

- > Working on the basis of the ACOUSTICS values / [page 3](#)
- > Is affiliated to the UN Global Compact (CSR report) / [page 5](#)
- > CSR activities anchored at executive level
- > Takes a targeted approach to three strategic beacons:
  - Vision:** Trendsetter in intelligent acoustic solutions
  - Mission:** Creator and provider of innovative acoustic solutions
  - Guiding principle:** Sustainable indoor climate
- > [Read more at trolldtekt.com](#)

## FOCUS OF THE CSR REPORT 2013

---

- > Reporting Trolldtekt's CSR efforts on the basis of the UN Global Compact initiative / [page 5](#)
- > Extended partnership with Cradle to Cradle Denmark and Trolldtekt's new Cradle to Cradle road map / [pages 6-7](#)

# Global principles – local responsibility



The UN Global Compact is the world's biggest voluntary initiative for corporate social responsibility with 8,700 member enterprises and organisations in more than 130 countries. Troldekt joined in 2010.

The aim of the UN Global Compact initiative is a worldwide strengthening of businesses' CSR efforts – their social, ethical and societal responsibility. The affiliated businesses commit to pursuing ten principles within the areas of human rights, labour rights, the environment and anti-corruption. Each business must relate to the principles, pursue them and annually submit progress reports to the UN.

## Useful management tool

In joining the Global Compact and adopting its principles, Troldekt has a set of guidelines which are both binding and give our CSR efforts a sense of direction and progress.

Employees receive a printed version of the CSR report, and are continually kept up to date via our intranet. It has been a positive experience for Troldekt to review the report at office meetings with salaried employees and at canteen meetings with hourly-paid employees. As a result, it is now the company's objective to make the review a regular activity in connection with the CSR report. Selected business partners also receive a printed copy of the report.

Other interested parties can download our CSR reports at [troldekt.com](http://troldekt.com). A Danish version of the report is also available at [troldekt.dk](http://troldekt.dk), and a German version at [troldekt.de](http://troldekt.de).

The CSR report's seven focus categories have been taken from a report prepared by the Ashridge Centre for Business and Sustainability for the Danish Business Authority. The reporting period always runs from October to October.

Every year, Troldekt makes a voluntary financial contribution to the Foundation for the Global Compact; the money is used for raising awareness of corporate social responsibility worldwide.

## The 10 principles of the UN Global Compact

### HUMAN RIGHTS

1. Businesses should support and respect the protection of internationally proclaimed human rights
2. Businesses should make sure that they are not complicit in human rights abuses

### LABOUR

3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining
4. Businesses should support the elimination of all forms of forced and compulsory labour
5. Businesses should support the effective abolition of child labour
6. Businesses should eliminate discrimination in respect of employment and occupation

### ENVIRONMENT

7. Businesses should support a precautionary approach to environmental challenges
8. Businesses should undertake initiatives to promote greater environmental responsibility
9. Businesses should encourage the development and diffusion of environmentally friendly technologies

### ANTI-CORRUPTION

10. Businesses should work against corruption in all its forms, including extortion and bribery

# Troldtekt systematising sustainability

Troldtekt's continuous focus on the environment and sustainability is broad-based. We are investing massively in contributing to sustainable building practices, from the raw materials and suppliers we use to the production and disposal of our acoustic panels.

In 2013, we extended our partnership with Cradle to Cradle Denmark, which is guiding us in connection with the further development of our Cradle to Cradle road map. This is a schedule which describes the overall objectives towards our goal of being a no-waste and carbon positive business in 2022.

In drawing up the road map, Troldtekt has presented a publicly accessible and ambitious plan for the intended development of its business and its products. According to Annette Hastrup, Business Director at Cradle to Cradle Denmark, it is more of a road map than a list of all the correct answers:

"Often, a positive snowball effect occurs when businesses draw up a list of objectives. For example, Troldtekt has already achieved the renewable energy targets defined for several years hence."

The road map shows the direction within the five categories which form the basis of the Cradle to Cradle certification, and the areas where Troldtekt will work with Cradle to Cradle over the next ten years. The main categories are material health, material reutilisation,

water quality, renewable energy and carbon management, water stewardship and social fairness as well as general environmental measures. At Troldtekt, we have added general implementation as a sixth area.

## Guarantee of sustainability

A product is only regarded as being sustainable by the general public when reliable documentation is available to that effect. It is only perceived as being truly credible if the documentation is checked and approved by a recognised and independent organisation. The Cradle to Cradle certifications act as a guarantee for partners in the construction industry that Troldtekt really does produce sustainable products.

"The Cradle to Cradle certifications give contractors and consultants a guarantee. Using five categories, they document how Troldtekt's products create value for sustainable construction," says Annette Hastrup, Business Director at Cradle to Cradle Denmark.

## Multi-faceted efforts important







There is general consensus in Denmark and the rest of the world

that the environment, social responsibility and the economy are three essential aspects of sustainability. This was one of the results of the UN Brundtland Report in 1987. According to Annette Hastrup, Cradle to Cradle offers a new way of working with sustainability in practice.

"When working traditionally with sustainability, there is a tendency to want a surplus in the economic and social area, while only trying to minimise the environmental damage. Only reducing the negative impact on the environment in our quest for sustainability is not enough. Cradle to Cradle takes a holistic approach and focuses on eco-efficiency, where the environmental efforts are deeply integrated into a company's business strategy," says Annette Hastrup, explains:

"The most important point is that the materials and processes must create added value for the environment, for society and for the business, and in so doing human activity is having a positive impact on all aspects of life on earth.

ROAD MAP FOR THE DEVELOPMENT OF CRADLE TO CRADLE QUALITY IN TROLDTEKT

	2012	2014	2016	2018	2020	2022
<b>Material health</b> 	Definition of all materials commenced. Troldekt natural C2C silver-certified.	C2C-based product innovation. Troldekt recertified in 2013, and painted panels are now also included.	Min. two additional products C2C-certified.	Troldekt natural and painted C2C gold-certified.		All products C2C-certified.
<b>Material reutilisation</b> 	Complete reutilisation of product waste in the biological cycle.	Establishing a returns system for used products in Denmark.			90% reutilisation of used products in Denmark, 50% in other European markets.	90% reutilisation of used products in Denmark, 70% in other European markets.
<b>Renewable energy</b> 	DONG climate partnership, energy goals established. 100% renewable energy in electricity consumption from 1 July 2013 (wind power).	C2C gold level achieved in connection with recertification in 2013.				90% of renewable energy in total energy consumption (all energy sources).
<b>Water stewardship</b> 	Water consumption at C2C gold-certification level		Effluent from non-process-related activities reduced by 10%.		Effluent from non-process-related activities reduced by a further 10%.	Discharges of non-process-related waste water max. 10% of total water consumption.
<b>Social fairness</b> 	CSR reporting to UN Global Compact.		CSR report verified by third party.			CSR reporting certified.
<b>General implementation</b> 	C2C introduced in sales organisation.	C2C introduced throughout entire organisation.	Certification in environmental management ISO 14001.	C2C introduced throughout the entire value chain.		C2C business.

TROLDTEKT' CRADLE TO CRADLE CERTIFICATION

Theme \ Tier	Basic	Silver	Gold	Platinum
Material		✓		
Material Reutilization		✓		
Energy			✓	
Water			✓	
Social Responsibility		✓		

The table shows the status of Troldekt's recertification in 2013. Note the energy category, where we have progressed from silver to gold level.



# Marketplace activities

At Troldekt, we are committed to giving our customers peace of mind. This section describes how we measure, weigh and label our products and document our sustainability and environmental impact.

## OBJECTIVES AND STATUS FOR MARKETPLACE ACTIVITIES

### Objectives 2012-13

- > At Troldekt, we will endeavour to test and label our products according to voluntary schemes to give consumers extra peace of mind in relation to the product's durability, health-enhancing properties and environmental impact.
- > Environmental Product Declaration (EPD) with actual data.

### Status 2012-13

- > Documentation for how Troldekt contributes points to the three building certifications LEED, DGNB and BREEAM. Drawn up with the help of Ramboll.

### Objectives 2013-14

- > Same as in 2012-13.

## REGULAR ACTIVITIES

- > MK approval no. 6.31/0379. Class A material for Class 1 cladding
- > Ball impact resistance test of a range of constructions using Troldekt according to DIN 18032/EN 13964 (MPA Stuttgart)
- > Troldekt is certified to the best indoor climate categories by Danish Indoor Climate Labelling (Dansk Indeklima Mærkning (DIM))
- > M1-labelled (Finnish indoor climate labelling)
- > Finished documentation packs for valuers and auditors for the LEED, BREEAM and DGNB building certifications.
- > Environmental product declaration (EPD) according to the latest standard EN 15804 in close collaboration with the Danish Technological Institute.
- > [Read more at troldekt.com](http://troldekt.com)
- > [Read more in Troldekt's CSR report for 2011 \(pp. 6 and 27\) and at www.troldekt.com](#)

## FOCUS OF THE CSR REPORT 2013

- > About Troldekt's contributions to the LEED, DGNB and BREEAM building certifications / [page 9](#)
- > Environmental product declaration according to the latest EN 15804 standard / [page 10](#)
- > Troldekt's MK approval means less paperwork for its partners / [page 11](#)



# Responsible building practices can be measured and weighed

A list of good intentions is no longer enough when clients are after sustainable building practices. Third-party documentation ensures that good intentions regarding sustainability are realised in the finished buildings. This is why the voluntary building certifications LEED, BREEAM and DGNB are all becoming increasingly popular.

## Sustainable building practices with Troldekt

Troldekt contributes points to the three leading, voluntary building certification schemes within sustainable construction: The US LEED, the British BREEAM and the German DGNB certifications.

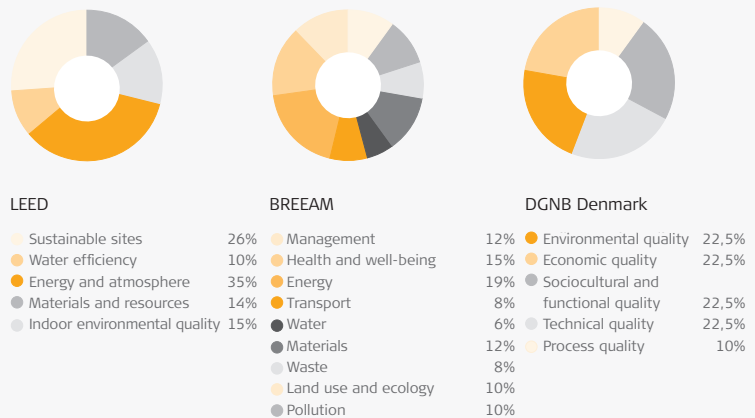
DGNB has been chosen as the Danish reference system, and Green Building Council Denmark is continuing its work on adapting the Danish version. The following building categories will be adapted for Danish conditions in the course of 2013-14: Residential properties with more than six units, neighbourhood certification, existing buildings, hospitals, schools and institutions, retail trade, warehousing and logistics as well as hotels.

## Each relevant in its own way

The American LEED and the UK BREEAM certifications are, however, still relevant for Danish developers and consultants.

"Multinational businesses are already often using LEED or BREEAM and want to stick to just one scheme. It makes sense for the foreign subsidiaries or departments of Danish companies to use the system which is preferred locally," says Hanne Tine Ring Hansen, Chief consultant at Ramboll.

### Weighting of criteria in the three building certifications:



Source: Benchmark Centre for the Danish Construction Sector

### Troldekt is contributing points in relation to the following:

- > Life cycle costs
- > Acoustic indoor climate
- > Degassings for atmospheric indoor climate and toxicity
- > Psychological indoor climate (art)
- > Materials, including:
  - Life cycle assessment
  - Regionality
  - Renewability and reuse
  - Recycled content
  - Procurement of materials and purchasing policy
  - Fire safety
  - Construction site waste management

# Environmental Product Declaration – EPD

It is now easier for customers and business partners to obtain clear information regarding the environmental impacts of Troldekt products. With our new environmental product declaration, Troldekt is able to document the sustainability of its acoustic panels from 'cradle to gate'.

The European Commission's new Construction Products Regulation (CPR) requires manufacturers to document the sustainability of their products. Troldekt is ready with a brand new environmental product declaration. This ensures transparency and makes it easier for our customers to compare our products with competing products, for example in connection with tenders.

### Focus on production flow

"The aim of the new European Environmental Product Declaration is to make it possible to compare information about the environmental impact of products across the EU states and thereby remove barriers to trade," says Peder Fynholm, Lead Auditor at the Danish Technological Institute.

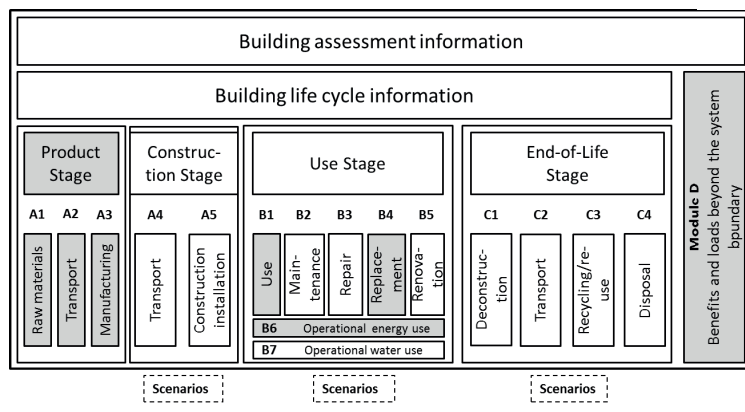
Troldekt has worked closely with the Danish Technological Institute for many years. In 1997, the Danish Technological Institute acted as consultants when we were nominated for Danish Indoor Climate Labelling (Dansk Indeklima Mærkning), and the partnership is continuing. Among other things, we are in dialogue about the challenges which the new EN 15804 standard presents compared to EN 14025.

Different standards and different units of measurement make it difficult to compare the environmental

### EPD facts:

An environmental product declaration (EPD) must contain verifiable, accurate and non-misleading environmental information about a product and its use. An EPD is a declaration and not a quality mark. However, it makes it easier for consultants and clients to compare the impact of different products on the environment. An EPD must contain information on the following seven environmental impacts:

1. Global warming (CO<sub>2</sub> equiv.)
2. Depletion of the ozone layer (CFC-11 equiv.)
3. Acidification (SO<sub>2</sub> equiv.)
4. Eutrophication (PO<sub>4</sub> equiv.)
5. Photochemical ozone formation (ethanol/ethylene equiv.)
6. Depletion of abiotic (inorganic) resources (Sb equiv.)
7. Depletion of abiotic (inorganic) fossil fuels (m)



In relation to EN 15804, an EPD must as a minimum contain the Product Stage module. Troldekt's EPD has several modules (marked grey), as the EPD is tailored to the requirements of DGNB.

impact of different materials. Clear guidelines on how to interpret the new EN standard will not be available until the new standard has been implemented in the various product standards, a process which can take another five years.

For example, there is considerable disagreement about whether products made in Denmark should declare nuclear waste, because Denmark sometimes purchases power produced in Germany, which uses nuclear energy.

# MK approvals mean less paperwork

An MK approval – materials and structures – gives clients and building authorities clear and up-to-date documentation that a product meets the performance requirements of the building regulations. Alternatively, the manufacturer must present documentation from case to case.

In Denmark we are following the joint European CE marking and fire classification rules. The Danish building regulations, BR10, contain additional requirements for class 1 cladding, depending on building use. In Denmark, one of the ways of documenting how products comply with current legislation is to use an 'MK approval', which corresponds to approval schemes in other countries.

"When you market a construction product with special properties, you must be able to document vis-à-vis both the client and the local authority responsible for approving the construction that it meets the functional requirements of the building regulations – for example in relation to fire properties. The MK approval – materials and structures – is one way of documenting these properties," explains Thomas Bruun, head of department at ETA Denmark, which issues the MK approvals.

## A sound basis

Another way of documenting the functionality requirements is to use test reports from a recognised test laboratory, but there are disadvantages of using this method on its own:

"For producers, it is a disadvantage that a new report is required every time they change the product – and at least every two years. For clients and the local authorities, it is also sometimes difficult to decode the relatively heavy reports, which can lead to construction delays," says Thomas Bruun.

"Even though obtaining MK approvals for your building products is voluntary, it is nevertheless a very good service for your customers as it gives them a clear and up-to-date document on which they can base their decisions," he adds.



**mk** Approval  
MK 6.31/0379

# Workforce activities

Prevention, retention and fairness are keywords at Troldekt. This section describes the activities which are designed to ensure job satisfaction and well-being.

## OBJECTIVES AND STATUS FOR WORKFORCE ACTIVITIES

### Objectives 2012-13

- › At Troldekt, we want to support and look after our employees to provide the best possible basis for high levels of job satisfaction and well-being.

### Status 2012-13

- › New sawing building and raw wood sawing machine reduce noise levels and improve the physical working environment during the weekly maintenance work
- › Driving silo reduces dust in the factory area.

### Objectives 2013-14

- › Same as in 2012-13.

- › We strive to keep annual absence due to illness cases below 2 per cent and the number of work-related injuries to less than five a year.

- › **Industrial injuries:** 6 (1/7 2012 – 31/6 2013)
- › **Absence due to illness:** 2.2 per cent (1/7 2012 to 30/6 2013)

- › Same as in 2012-13.
- › Set up emergency fire preparedness. 10-12 employees at the Troldhede factory are receiving fire-fighting and smoke diver training.
- › All employees have been offered a free first-aid course

## REGULAR ACTIVITIES

- › Flexible working hours for employees with special needs
- › Health insurance offered to all employees
- › Guidelines for reducing absence due to illness, industrial injuries etc.
- › Packing robots to relieve employees
- › Presentation of the Hammerich grant from the Troldekt A/S foundation for current and former employees with special needs
- › Defibrillators at the factory with annual refresher course for employees
- › Accident insurance for all employees

- › [Read more at troldekt.com](http://troldekt.com)

## FOCUS OF THE CSR REPORT 2013

- › Portrait of flexitimer Jens Erik Thomsen / [page 13](#)
- › Social events at Troldekt / [page 13](#)
- › Hammerich Foundation: Conclusion to the case of Rafaz's wife / [page 13](#)
- › Million-kroner investments in the working environment and job satisfaction in 2013 / [page 13](#)



"I look forward to going to work every day. My colleagues have made me feel very much at home and accept me as I am."

Jens Erik Thomsen, Troldekt.

## The happy flexitimer

Thirty-six year old Jens Erik Thomsen is a happy man, even though he had a slightly tough start to life. He feels he is in good hands at Troldekt and among his colleagues. It offers scope for personal development.

Jens Erik Thomsen is more outgoing and at ease with himself than he used to be. The flexitime job at Troldekt is making life easier for the 36-year-old from Skjern in western Jutland.

"I look forward to going to work every day. My colleagues have made me feel very much at home and accept me as I am," says Jens Erik Thomsen with a smile.

Before he started the flexitime scheme at Troldekt, he tried various small jobs and educational institutions. Some places are better than others, because not everybody takes sufficient account of the fact that Jens Erik Thomsen needs a calm and stable environment and a steady pace of work.

### Good to be busy

Attending a folk high school was an important turning point for Jens Erik Thomsen. He made a lot of friends and, most importantly, it gave him the confidence and the ability to live a more independent life. Today he works 30 hours a week in a flexitime job at Troldekt's factory in Troldehede.

"I greatly value being able to spend time with other people. Beforehand, all the days seemed the same as I was just stuck at home. Laziness took over, and it was much too easy to sit down in front of the television," says Jens Erik Thomsen, and adds:

"I would much rather work here at the factory in Troldehede. At the same time, I feel that I am developing as a person and contributing to society."

### Hard start

Due to complications at birth, Jens Erik Thomsen has, like so many others, difficulties with academic subjects. On the other hand, he is extremely good with his hands, so working in Troldekt's warehouse suits Jens Erik Thomsen down to the ground.

"I take things one step at a time and work my way through the day's tasks at my own pace and every so often there is time for a chat with my work mates," says Jens Erik Thomsen, and continues:

"In the past I was very introverted and shy. But now I am more open with my friends and colleagues. I feel that I am in good hands here at Troldekt."

# Social events good for team spirit



Company-paid events for employees strengthen the sense of togetherness at and between Troldekt's two departments.

It is also a way of acknowledging and expressing our gratitude to our employees for all their hard work.

This year, Troldekt's employees have been able to participate in three runs for recreational runners. Fitness levels were put to the test when the runners competed in the Forårsstafetten or Spring Relay at the end of May, in the Videbæk Run in June and again in the DHL Relay Race in August.

At Troldekt's annual family day, our employees and their families can learn about our company as well as having a nice day out. This year, an excursion to Ree Park was organised, where we had a guided tour, rode camels and barbecued in the company of bears, lions and antelopes.

## News in brief 2013

### > How the case ended

For several years, our employee Rafaz Mohammed fought to obtain a permanent residence permit for his wife. After several years of uncertainty, Rafaz and his family can now breathe a sigh of relief, as his wife has finally been granted a residence permit.

For several years, Rafaz's daily life was full of worries, and he had to shoulder numerous expenses, for example legal costs. Troldekt therefore supported Rafaz, his wife and two children financially as some of the fees for their lawyer were covered by Troldekt's Hammerich Foundation. The welcome decision marks the end of the case after several years of uncertainty.

### > Troldekt invests in the working environment

Troldekt is aware that noise has a big impact on human well-being, both at home and in the workplace. Troldekt's employees are absolutely key to our business, which is why a healthy working environment is very important for us.

In 2013, we invested massively in, among other things, reducing dust and noise pollution at our production facility in Troldekte for the benefit of our employees. The result was a new sawing building and a raw wood sawing machine, which has resulted in less dust and noise in the production area. The new raw wood sawing machine makes maintenance cleaner and easier for our employees.

We have also built a driving silo to reduce the risk of dust around the factory area and in the neighbourhood. The silo keeps the surplus wood from production dry so it has a higher calorific value. As a result, less is consumed when it is used to fuel our drying ovens and for general heating and at the end of the day, it also means lower carbon emissions.

# Supply chain activities

The supplier's production conditions are reflected in the end product. This section describes how we are working to promote good practice throughout the entire supply chain.

## OBJECTIVES AND STATUS FOR SUPPLY CHAIN ACTIVITIES

---

### Objectives 2012-13

- › Troldekt will work for its Code of Conduct to be effectively integrated by those product-related suppliers whose sales to us exceed DKK 100,000 a year.

Implementing the Code of Conduct:

- 90 per cent in 2013
- 75 per cent in 2012
- 50 per cent in 2011

### Status 2012-13

- › Our most important suppliers have now signed Troldekt's Code of Conduct. These suppliers account for 90 per cent of our materials' purchases.

### Objectives 2013-14

- › Same as in 2012-13.

## REGULAR ACTIVITIES

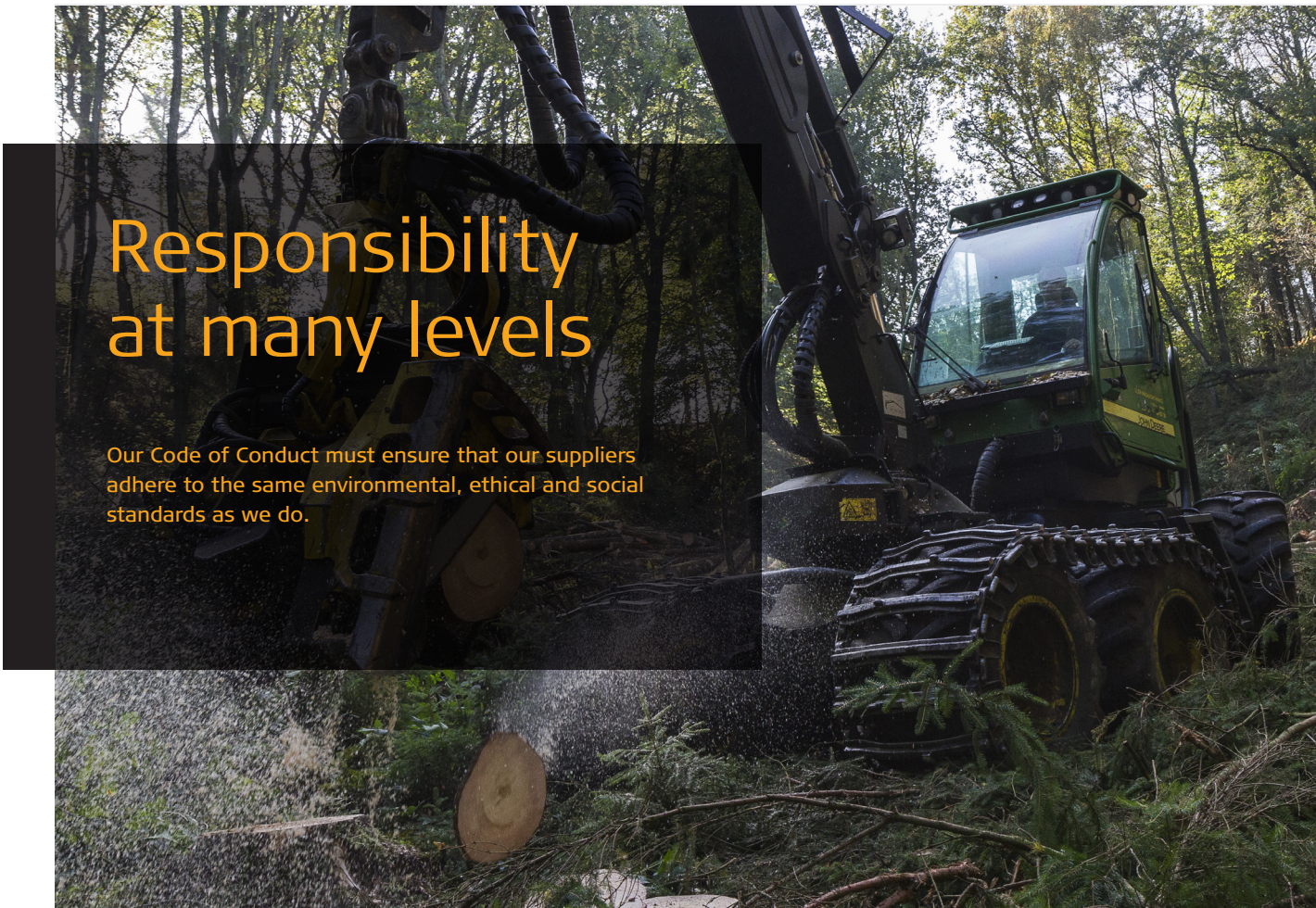
---

- › Implementing the Code of Conduct

## FOCUS OF THE CSR REPORT 2013

---

- › About Troldekt's Code of Conduct / [page 16](#)
- › Both PEFC and FSC®-certified wood possible in Troldekt's acoustic panels / [page 17](#)



# Responsibility at many levels

Our Code of Conduct must ensure that our suppliers adhere to the same environmental, ethical and social standards as we do.

The Trolldtekt Code of Conduct is a set of guidelines on which our collaboration with suppliers is based.

Today, our acoustic panels are already made of sustainable wood and cement which is produced according to strict environmental requirements. With our Code of Conduct, we systematically focus on all major suppliers with a view to ensuring a sustainable purchasing policy throughout the supply chain.

### Work in practice

The almost 100 largest suppliers are divided by type and categorised according to sales volume.

The most important suppliers have now signed Trolldtekt's Code of Conduct. These suppliers account for 90 per cent of our materials' purchases.

### Everything rests on dialogue

Trolldtekt is continually classifying its

suppliers. They are categorised into three risk groups according to their strategic significance and the risk of them breaching the guidelines.

We ask the suppliers in the low-risk group to sign our Code of Conduct. Suppliers in the medium-risk group also submit a self-evaluation form, while the high-risk group is also likely to receive a visit from Trolldtekt A/S.

In 2013, 95 per cent of our product-related suppliers were in the low-risk group, 5 per cent in the medium-risk group and none in the high-risk group.

If conditions change at existing suppliers, or if we start working with suppliers which fall into the high-risk group, we basically want to continue working with them. It is only through dialogue that we can encourage a supplier to raise its standards.

### Code of Conduct for Trolldtekt A/S

At Trolldtekt, we ask our suppliers to sign our Code of Conduct whereby they commit to meeting international standards in relation to:

- > Compulsory labour
- > Child labour
- > Non-discrimination
- > Freedom of association
- > Working environment
- > Terms of employment
- > Accidents and health
- > Company products
- > Environmental protection





## Guarantee for sustainable raw materials

Troldtekt supplies acoustic panels made of certified wood from which ever certification scheme our customers prefer. In cooperation with HedeDanmark, this creates value for the forests and is also good business.

At Troldtekt, our customers come first. We try to make choosing sustainable acoustic solutions a straightforward and flexible process. In 2013, we therefore supplemented the PEFC certificate with FSC® certification. This means that customers and partners can choose the certification scheme they want.

Both certification schemes document that the wood in Troldtekt's acoustic panels comes from responsibly managed forests.

### Two sides of the same tree

HedeDanmark is Troldtekt's biggest supplier of PEFC and FSC-certified wood, and also provides guidance to forest owners on how to have their forestry operations certified. "PEFC

and FSC are parallel certification systems, which in principle have the same function.

Both schemes makes it possible to trace the wood back to responsible forestry operations. PEFC is most widespread in Scandinavia, while FSC is recognised worldwide," says Martin Briand Petersen, Business Developer and Head of Forest Certification at HedeDanmark a/s. He adds:

"It will be easier for Troldtekt's customers to document the sustainability of a building when they can choose which certification scheme they want."

According to Martin Briand Petersen, working with the certifications is part of HedeDanmark's overall strategy, where expertise, value creation and innovation are fundamental values:

"HedeDanmark cooperates with companies like Troldtekt on several levels. We guarantee certification which creates value for both the forests and the business which uses the wood responsibly in its production. In addition, it makes sound financial sense."



### Obvious collaboration

HedeDanmark is an important business partner for Troldtekt A/S, because we share the same interests and values.

At Troldtekt A/S, we believe that sustainability should be an important part of all types of construction and renovation projects. In our view, it should also be possible to document every environmental effort so that everyone involved can guarantee and trace the sustainability of the project and back to the raw material. The certifications add credibility to our company and its products, which is completely in line with our philosophy.

# Stakeholder engagement

Knowledge-sharing, openness and dialogue are important tools for Trolldtekt in looking after the interests of its stakeholders. Here you can read how we do it.

## OBJECTIVES AND STATUS FOR STAKEHOLDER ENGAGEMENT

### Status 2012-13

- › Trolldtekt wants to show the greatest possible consideration for its stakeholders' wishes, needs and welfare.

### Status 2012-13

- › Built a driving silo, which reduces the amount of dust in the local area.
- › Neighbouring plot acquired and sown with grass.

### Objectives 2013-14

- › Same as in 2012-13.
- › Factory day for local residents.

- › Trolldtekt will continually develop and improve its website and web solutions to support greater dialogue.

- › Trolldtekt's new website is now ready in English and Danish versions and in a new responsive and mobile-friendly design.

- › Same as in 2012-13.
- › The finishing touches are being made to the German version.

- › Trolldtekt will help players in the construction sector to consider acoustics at an early stage of the planning process.
- › We expect to hold five large and 40 smaller acoustics seminars, but this year also for local authorities.
- › Increase the number of Trolldtekt acoustics professionals from 70 to 100.

- › More than 500 people have participated in our seminars. This year, architects employed by local authorities have also attended the seminars.
- › There are now almost 80 certified acoustics professionals in Denmark. From 2013, we have decided to focus on rolling out the scheme in Denmark rather than on the number of people being certified.

- › Same as in 2012-13.
- › Nationwide scheme with certified acoustics professionals

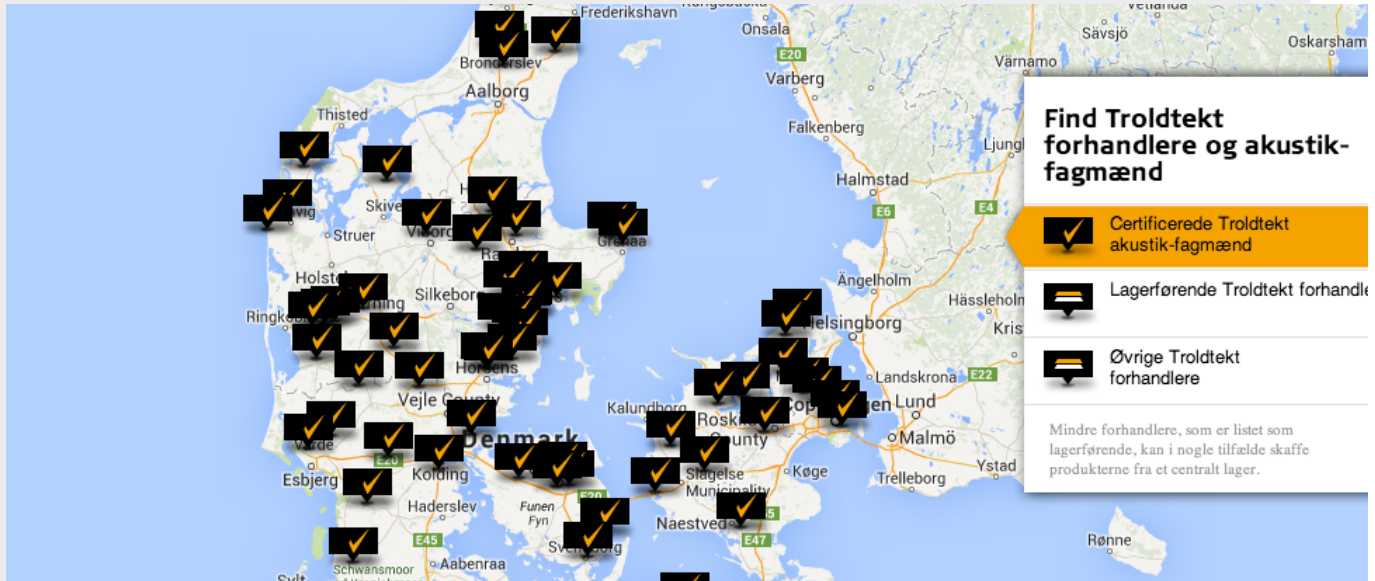
## REGULAR ACTIVITIES

- › Advise architects on acoustics requirements in public institutions
- › Offer web-based acoustics calculations for architects and other players in the construction business
- › Is behind [acousticsuniverse.com](http://acousticsuniverse.com), which offers a more visual approach to acoustics – for example for private customers and institutions
- › Is an active member of the trade organisation DI Byg, part of the Confederation of Danish Industry (DI)
- › Participates in DI's special building policy committee
- › Actively seeks to influence the trade association Danske Byggecentre (DB) to prioritise sustainable materials

› [Read more at trolldtekt.com](http://trolldtekt.com)

## FOCUS OF THE CSR REPORT 2013

- › Nationwide service with Trolldtekt acoustics professionals / [page 19](#)
- › Trolldtekt helps the construction industry with digital models / [page 20](#)



# Trolldtekt acoustics professionals everywhere

More and more homeowners want good acoustic solutions in their homes. Trolldtekt is ensuring full coverage across Denmark, so that everyone has a certified acoustics professional nearby.

Private homeowners constitute a growing market for Trolldtekt. Following 10-15 years of minimalist design in new buildings, homeowners are facing challenges when it comes to the acoustics in their homes. In 2012, we therefore launched the

'Trolldtekt acoustics professional's concept, which provides smaller firms of carpenters with the competence needed to advise customers about acoustics and sound comfort.

To become a Trolldtekt acoustics professional, carpenters must learn about terms such as reverberation time and absorption area as well as completing specific exercises on the installation of acoustic panels and on good acoustics.

This enables the tradesman to 'read' a room and correctly assess its acoustic challenges. Before starting

work, he can even produce calculations of a room's acoustics. The calculation model is available to everyone via our website, [trolldtekt.com](http://trolldtekt.com)

### Nationwide service

The focus this year for Trolldtekt has been to increase the number of acoustics professionals and ensure full coverage so that all private customers in Denmark have access to an acoustics professional in their local area. Trolldtekt has therefore certified ten new professionals.

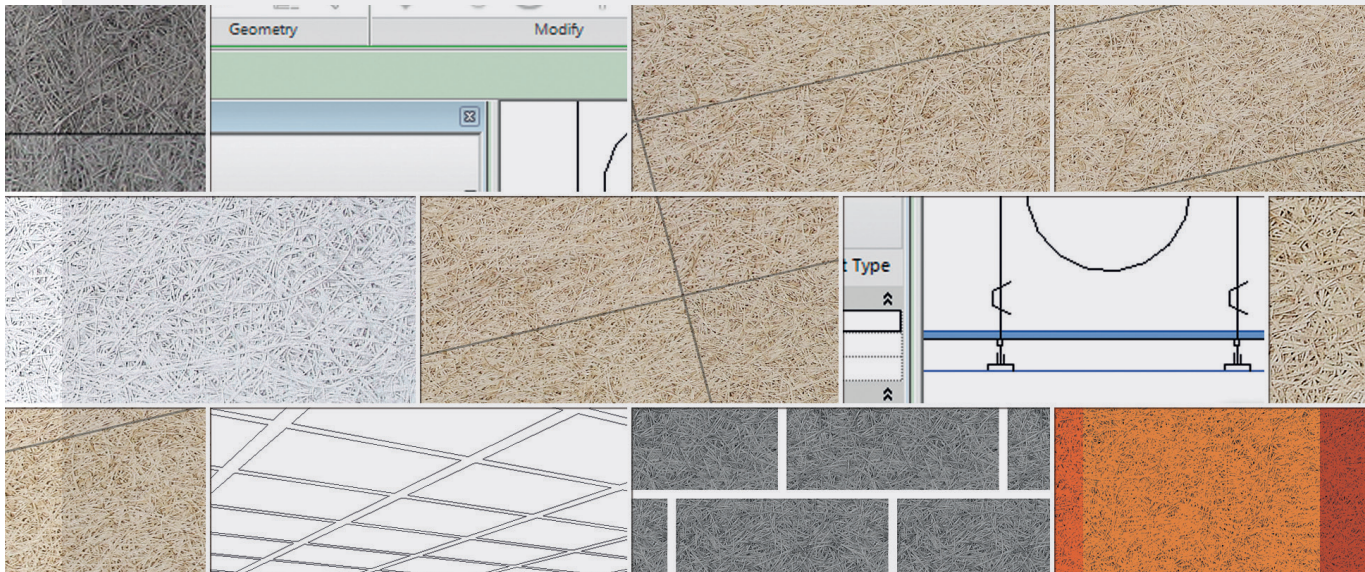
### Update



#### > Everyone wants good acoustics

Since 2012, more than 500 participants have learned about good acoustics in buildings. The seminar has given them valuable insights into the importance of building materials for sound, and provides specific tools for calculating acoustic properties while projects are still on the drawing board. The result is better advice to end-users.

This year we have chosen to extend the seminars' target group to also include local authorities and their technical services and environmental departments as well as Trolldtekt dealers.



## ICT rules take construction into the digital era

In future, digital building models will play a greater role in ensuring uniform high quality in public buildings and council housing. Troldekt helps architects and consultants to meet the requirements of the new ICT rules.

New ICT provisions require Danish municipalities and regions to use the same cost-saving tools which the state has done since 2007.

In future, when architects and consulting engineers submit bids for state, regional or municipal building projects, the projects usually have to be submitted in 3D information models. This digital tool is called Building Information Modelling or just BIM.

### Creates value across the building industry

Lone Sand is BIM Supervisor at Arkitema Architects in Aarhus and the driving force behind the network club BIM Aarhus. She sees BIM as a

useful tool that creates value for all the project partners. "BIM leads to better and more ingenious solutions, and optimises coordination between architects and engineers as it enables them to work from the same up-to-date information," says Lone Sand, and adds:

"This creates real added value for the client because we work more efficiently, prevent errors through collision tests and make more information available in our BIM models, including volumes."

### Troldekt makes it easier

In practice, BIM means that all parts of the building are planned as digital 3D building objects, with each one carrying data about dimensions, materials, fire and sound requirements as well as positioning. Michael Christensen from Troldekt, who holds an MSc in Architecture, has just finished converting the company's acoustic products into BIM objects.

"The intention with Troldekt's BIM objects is to make it easier for

architects and building technicians to meet the requirements of the new ICT rules and to choose sustainable materials. We want to be at the forefront of digital developments.. This is why we are continuously developing our object library and keeping an eye on developments within classification," he says.

### User-tested by Danish designers

Christoffer Nielsen is a designer at AART architects in Aarhus and has helped Troldekt to test the new BIM objects. He can already see several advantages in using them.

"It means, among other things, that I don't have to spend time looking for information on the Troldekt website. All the work has been done in advance so that I can just copy the objects directly into my models. This greatly facilitates my work, while I can also rest assured that I get all the right information first time round," says Christoffer Nielsen.

# Community activities

No company is an island. In this section, you can read about those business partners for whom acoustics is particularly important.

## OBJECTIVES AND STATUS FOR COMMUNITY ACTIVITIES

### Objectives 2012-13

- › Troldekt will maintain and develop its collaboration with societies and associations which can use our competences within acoustics and sound.

### Status 2012-13

- › Troldekt sponsors the Danish Association of the Hard of Hearing. This year, the charity received a donation of DKK 10,000 to purchase an audio induction loop.
- › In 2012, Troldekt became a member of Green Building Council Denmark. The organisation works to promote sustainable construction in Denmark.
- › Business membership of Astma-Allergi Danmark.

### Objectives 2013-14

- › Troldekt will maintain and develop its collaboration with societies and associations which can use our competences within acoustics, sound and the indoor climate.

- › Troldekt will strengthen its collaboration with relevant educational institutions to foster knowledge exchange and provide inspiration for the benefit of individual students, educational institutions and Troldekt.

- › Help commercial assistant student with exam project.
- › Internship for communication student

- › Same as 2013.

## REGULAR ACTIVITIES

- › Sponsor for the Danish Association of the Hard of Hearing
- › Sponsor for the Danish Acoustical Society (DAS)
- › Sponsor for the Danish Association of Young Timber and Building Merchants (FUT)
- › Develops targeted initiatives for the hearing-impaired
- › Participates in committee work within acoustics and the indoor climate
- › Troldekt holds an international competition for architectural students every other year. The next time is in 2014

› [Read more at troldekt.com](http://troldekt.com)

## FOCUS OF THE CSR REPORT 2013

- › Shared interests pave the way for cooperation with other organisations / [page 22](#)
- › Troldekt playing a role in young people's education / [page 23](#)
- › High standards in the last competition raise expectations for the Troldekt Award 2014 / [page 24](#)



# Help obvious business partners

At Troldekt, we recognise that our commitment and involvement in society at large can play a significant role. We are always keen to support a good cause when we can make a difference within Troldekt's line of business.



**Astma-Allergi Danmark**

### Astma-Allergi Danmark

Troldekt seeks to have a positive impact on the environment, and not only in its corporate capacity. Our core product also contributes to a healthy indoor climate. All products are indoor climate-labelled in the best categories according to the internationally acknowledged labelling scheme Danish Indoor Climate Labelling (Dansk Indeklima Mærkning).

Also, we now support Astma-Allergi Danmark through a business membership. Asthma and allergies now affect almost one in three Danes, and in our view the problem

needs to be tackled across a broad front. Troldekt therefore supports Astma-Allergi Danmark's work to put the diseases on the political agenda.



### Danish Association of the Hard of Hearing

This year, Troldekt is making a special donation of DKK 10,000 as a contribution to a new audio induction loop for the Danish Association of the Hard of Hearing in Aarhus. According to Sanne Lauridsen, local chair of the Danish Association of the Hard of Hearing in Aarhus, it will greatly help people attending the many social events which the association organises every year.

"For people with hearing disabilities, it is essential that they have a social life like everyone else," she says.

Troldekt and the Danish Association of the Hard of Hearing obviously have a shared interest in working for healthy sound environments

across Denmark. Our two organisations support one another in trying to improve communicative accessibility, as Sanne Lauridsen, local chair of the Danish Association of the Hard of Hearing in Aarhus, explains.

"The Danish Association of the Hard of Hearing and Troldekt are helping one another in the battle against noise. Having partners is incredibly important and means that we are not alone in tackling the immense task of trying to improve conditions for the hearing impaired.



**GREEN BUILDING COUNCIL DENMARK**

### Green Building Council Denmark

As a key part of our business strategy, sustainability has become a lodestar. We are therefore supporting this through membership of Green Building Council Denmark, which works to promote sustainable building in Denmark.



## Broad outlook

"Things are very busy at Troldekt, which means that I am part of the team on an equal footing with my colleagues. They allow me to work independently, and are keen to listen to my ideas. It's great, and I'm learning a lot."

Klaus Lindby Jensen.

At Troldekt, we believe that it pays to assume responsibility and look beyond our own organisation. We want to make a positive contribution to our surroundings. It might not be possible to see the effect of this commitment directly on the bottom line, but we still believe that it benefits everyone in the long run.

We celebrate diversity, and welcome all types of people to the company. It strengthens our competitiveness and testifies to the surplus energy that pervades the organisation, which is entirely in line with our philosophy.

Work trials, research projects, internships and helping students with assignments are just some of the things in which we involve ourselves.

### Communicating with Troldekt

Klaus Lindby Jensen started in August as an intern in Troldekt's marketing and communications department. After almost eight years in the optician's business, it was time to try a completely different field. The Danish School of Media and Journalism in Aarhus and a study programme in communication are the next steps. Before then, Klaus Lindby Jensen is help-

ing Troldekt with reporting and PR in connection with our CSR activities.

"Things are very busy at Troldekt, which means that I am part of the team on an equal footing with my colleagues. They allow me to work independently, and are keen to listen to my ideas. It's great, and I'm learning a lot."

Klaus is with us at Troldekt until February, when he will again be returning to the classroom.

### Tackling challenges together

At Troldekt, we are doing what we can to help citizens facing special challenges to move on in their working lives. During the past year, we have had two people on temporary traineeships through our collaboration with Arbejdsmarkedscenter Syd (Labour Market Centre South) in Aarhus.

"Physical, mental or social challenges make some citizens unsure about how to find a job. A traineeship is a chance to find out what it is like having a real job. It provides a very special kind of motivation and sense of responsibility," says Ida Balling Sørensen, deputy head at Arbejdsmarkedscenter Syd in Aarhus. She adds:

"Often, the result is greater clarity about future employment pros-

pects. For example a flexitime job or even normal employment."

At the moment, Troldekt has two people employed in flexitime jobs and another in a temporary traineeship.

### Troldekt, top marks and congratulations!

Troldekt is happy to help students with their school projects, if we can. An example of this is Jannie Margaard Krogsdal, who gained her diploma in commerce specialising in wood and building materials in June 2013. Her exam project was based around Troldekt's acoustic panels. Her work on the project brought Jannie Margaard Krogsdal more than just good marks:

"The exam project, the help which I've received from Troldekt and visiting the factory in Troldhede have given me a lot of in-depth background knowledge, and now I am in a much better position to tell customers about all the positive aspects of acoustic panels," says Jannie Margaard Krogsdal.

Troldekt congratulates Jannie Margaard Krogsdal on the top mark she received and is looking forward to working with her again when she starts her new job with the builders' merchant Roslev Trælasthandel A/S.



Following the Troldekt Award, the well-known German architects Ludloff & Ludloff chose Matthias Kisch's prize-winning design 'Synecdoche' as part of their interiors.

# Sky-high expectations for Troldekt Award 2014

Every other year, we invite architecture and design students worldwide to participate in the Troldekt Award competition. In 2014, the competition is being held again, and in addition to being able to include it on their CVs, participants also have the chance to win a cash prize.

Matthias Kisch, from the Royal Danish Academy of Fine Arts in Copenhagen, won the Troldekt Award 2012. A fun and simple idea did the trick: A flexible modular system made from Troldekt panels which can be used to create sculptures or, in Matthias Kisch's case, an acoustic cloud, which he calls 'Synecdoche'. The winning entry for the Troldekt

Award 2012 greatly appealed to the panel of judges. They were so enthusiastic about it that the German member of the panel, the architect Jens Ludloff, wanted to install a prototype in his own office, the well-known firm Ludloff & Ludloff in Berlin.

In 2012, the standard was so high that Troldekt had to supplement the main competition with a special prize. It will therefore be extremely exciting to see what good and creative ideas architecture and design students from around the world will present for our product for the Troldekt Award 2014.

Winning proposal from 2012. >





# Environmental activities

Troldtekt seeks to incorporate sustainability into the entire product life cycle. Learn about Troldtekt's environmental efforts in this section.

## OBJECTIVES AND STATUS FOR ENVIRONMENTAL ACTIVITIES

### Objectives 2012-13

- > Troldtekt wants to minimise the environmental impact of its activities and those of its suppliers – throughout the entire lifespan of each Troldtekt product.

### Status 2012-13

- > All Troldtekt's acoustic panels now carry Cradle to Cradle certification in the silver category.
- > DONG Climate partner. As of 1 July 2013, Troldtekt is only using electricity from renewable energy sources in its production.

### Objectives 2013-14

- > Same as in 2012-13.

- > In 2013, 70 % of our timber purchases must be PEFC-certified.

- > The level of supply of certified wood in Denmark makes it difficult for Troldtekt to obtain sufficient quantities of certified wood for its production. However, the share is above-target at 82%.
- > Revised the certification of wood in production so that FSC-certified wood can also be used.

- > Same as in 2012-13.
- > Certified-only wood in Troldtekt's production by 2020.

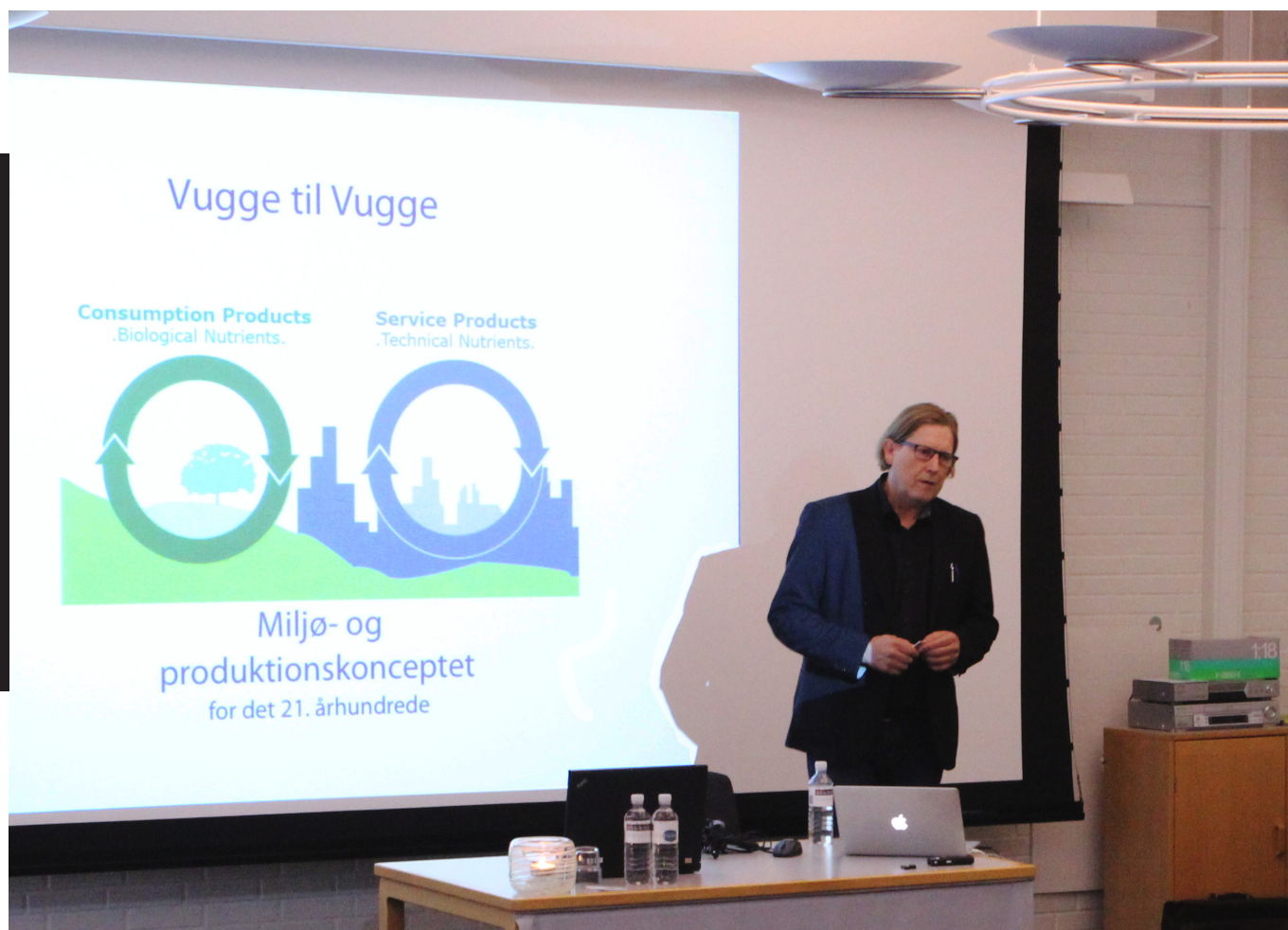
## REGULAR ACTIVITIES

- > Work based on a sustainable product life cycle – cradle to cradle
- > Use PEFC and FSC®-certified wood to an increasing extent
- > Only use cement from Aalborg Portland
- > 95% of energy consumption for heating the production premises comes from CO<sub>2</sub>-neutral wood waste
- > Raw materials sourced locally, thereby reducing the environmental impact of transport
- > Troldtekt panels release a minimum of gases during use (Danish Indoor Climate Labelling)
- > Troldtekt's production waste is sent for composting at HedeDanmark
- > Is a member of CO<sub>2</sub> Neutral Website
- > Has made all printed communication matter available on the website
- > Uses digital printing to reduce waste, energy consumption and chemical discharges
- > Collaborates with We Produce, which offers energy-friendly digital printing

> [Read more at troldtekt.com](http://troldtekt.com)

## FOCUS OF THE CSR REPORT 2013

- > Troldtekt incorporates Cradle to Cradle principles in its operations / [page 26](#)
- > Product life cycle in five phases / [page 27](#)
- > When waste becomes a valuable resource / [page 28-29](#)
- > Climate partnership between Troldtekt and DONG Energy / [page 30](#)



## Sustainable collaboration bears fruit

Troldtekt is continuing to integrate the Cradle to Cradle principles in its organisation. From this year, all our acoustic panels are now certified in the silver category. At the same time, we are extending our collaboration with Cradle to Cradle Denmark.

Cradle to Cradle certification documents the product's current sustainability profile. In 2013, all Troldtekt's panels now carry Cradle to Cradle silver certification.

"All our acoustic panels are now certified silver, but our efforts to further improve sustainability continue. We have entered into a long-term partnership with Cradle to Cradle Denmark and have recently produced a Cradle to Cradle road map," says Troldtekt CEO Peer Leth.

Cradle to Cradle Denmark is a leading advisor on the optimisation and certification of products accord-

ing to the Cradle to Cradle principles. With the completion of Troldtekt's Cradle to Cradle road map, the course is set for the next ten years. The road map describes the main long-term objectives on the way to becoming a fully integrated Cradle to Cradle business.

### Sustainable movement

Traditionally, sustainability has involved minimising harmful impacts by reducing energy consumption, minimising carbon emissions and living a simpler life. Cradle to Cradle takes a different approach, based on the re-

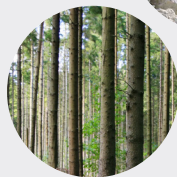
### Cradle to Cradle's three principles

- > Everything is a resource for something else
- > Production must be based on renewable energy
- > Diversity is valuable

alisation that it is not possible to reduce your way to sustainability. In addition, the global population is growing far too quickly. The Cradle to Cradle concept is a counter-reaction to the consumer throw-away culture and encourages the reuse or recycling of all materials.

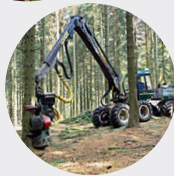
**1. Materials**

Danish raw materials – PEFC-certified wood from the forests of Jutland and cement from Aalborg Portland.



**2. Production process**

Top modern and environmentally conscious production in Trolldhede.

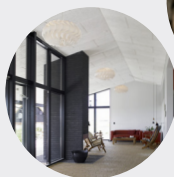


**3. Transport processes**

Sourcing raw materials locally minimises transport requirements.

**5. Disposal**

Compostable and reusable as fertiliser.



**4. Use**

Indoor climate-labelled in the best categories according to the Danish Indoor Climate Labelling scheme and the UK Emission Classification of Building Materials.



# Five-phase product life cycle

Throughout the product life cycle, Trolldtekt goes out of its way to minimise the environmental impact of its production and its products. This is a natural extension of the Cradle to Cradle principles and Trolldtekt's vision of a sustainable indoor climate as our lodestar.

**1: Materials chosen with care**

Trolldtekt is a completely natural product made of wood sourced from Danish forests and cement made from Danish limestone and sand. It is also PEFC and FSC®-certified, guaranteeing that the wood can be traced back to sustainable forestry. The wood comes from trees felled in Jutland, where they have grown for at least 40 years without the use of fertilisers, pesticides or other chemicals. The cement comes from Aalborg Portland, which is subject to strict environmental standards.

**2: Green production**

Trolldtekt is produced in Trolldhede in western Jutland in a closed process without any waste-water discharge. Ninety-five per cent of the energy for heating Trolldtekt's modern factory comes from CO<sub>2</sub>-neutral wood waste from the production process. Trolldtekt is a climate partner with DONG Energy and only buys wind power-based electricity for its production.

**3: Minimum transport**

Sourcing raw materials locally significantly reduces the environmental impact from transport. The wood comes from the forests of Jutland and the cement from Aalborg Portland.

**4: Indoor climate best in category**

As far back as 1997, Danish Indoor Climate Labelling awarded Trolldtekt the best category of indoor climate

labelling. Since then, Trolldtekt has also been awarded M1 classification by Danish Indoor Climate Labelling's UK counterpart, Emission Classification of Building Materials. In practice, this means that Trolldtekt emits a minimum of particles and gases during its use.

**5: Back to nature**

HedeDanmark processes the waste from Trolldtekt's production in Trolldhede to produce fertiliser. The production waste makes a particularly good compost thanks to the high proportion of lime in the cement, which boosts oxygen levels, as well as the high fibre content in the panels.

A new take-back system is being developed, so that we can handle used Trolldtekt panels in the form of building site and demolition waste.



## Project turns trash into cash

Businesses are becoming more sustainable, and at the same time their waste is suddenly becoming a valuable resource. This is the result of the project 'Rethink Business', which is being spearheaded by the Central Denmark Region.

The project is inspired by the American Cradle to Cradle concept and the vision of a so-called circular economy. With Cradle to Cradle Denmark as its advisor and a network of partners, Troldekt has already made great strides with the project. Massive investments are being made to contribute positively to society at large, which is part of Troldekt's business strategy.

"We are devoting considerable resources to making a positive contribution, both socially and environmentally, but we have to acknowledge that we cannot save the world on our own. We need partners, whom we meet through the Rethink Business project," says Peer Leth, CEO of Troldekt.

### Helping yourself

It is possible to completely avoid waste in the form of rubbish if busi-

nesses rethink their production. Correctly designed, waste from a business can become a valuable resource in another company's production. In this way, companies can create new business rather than more waste.

Because of Troldekt's unique products, where only natural raw materials are used, the potential is huge. Surplus material from our production is already being composted at HedeDanmark. At the same time, a take-back strategy for used Troldekt panels is being implemented.

Recycling in a biological cycle in the form of compost is already possible. Troldekt panels can also stay in the technical cycle, as the panels can be used to produce new cement. The logistics on the other hand poses challenges.

"Our collaboration partners will make the first necessary investments once we can supply the necessary volumes of cement-bonded wood wool. The way things are looking at the moment, however, this is not possible. Consequently, we need to initiate strategic cooperation with other players. Rethink Business gives us a network that will help us to ad-

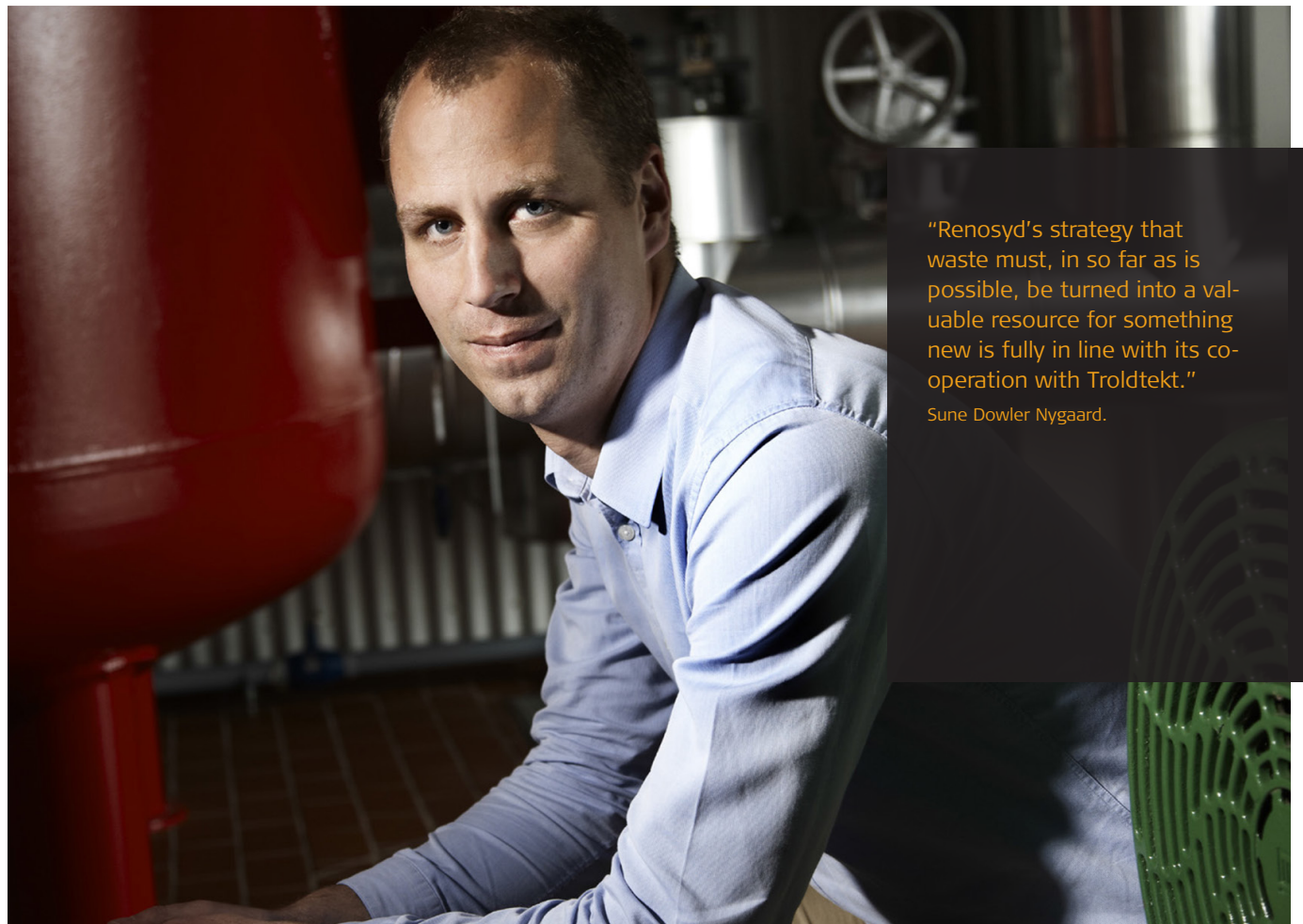
dress these challenges," says Peer Leth, CEO of Troldekt. He mentions the fact that Troldekt has started working with several different waste companies. Together we are developing a take-back scheme, which will give us the required volumes.

### Benefits all parties

According to Sune Dowler Nygaard, Business Customer Manager at Renosyd in Skanderborg, it may thus become financially attractive for the waste companies to start collaborating in this way.

"Renosyd's strategy that waste should, to the greatest extent possible, be seen as a valuable resource for something new is completely in line with the company's collaboration with Troldekt. We share knowledge with organisations, and initially this brings a number of environmental benefits. In the slightly longer term, there are also financial benefits. Cement-bonded wood wool is now contributing positively to the environment and becoming a smaller and smaller burden to the bottom line," says Sune Dowler Nygaard.

At the same time, the partner-



"Renosyd's strategy that waste must, in so far as is possible, be turned into a valuable resource for something new is fully in line with its cooperation with Troldekt."

Sune Dowler Nygaard.

Photo: Renosyd.

ship between Troldekt and Renosyd holds exciting potential because, according to Sune Dowler Nygaard, it goes beyond the immediate benefits for the two organisations.

"It demonstrates that private businesses can enjoy positive economic and competitive benefits by consciously designing their products so they can be reused. Moreover, Troldekt's take-back scheme also holds potential benefits for the environment," he says, before ending with:

"All in all it is a very obvious area for Renosyd to promote and contribute to."

In the Rethink Business project, Troldekt becomes part of a network of organisations. The Central Denmark Region will assist with advice from Cradle to Cradle Denmark as a way of rethinking the way in which companies perceive their business. As the name suggests, Cradle to Cradle Denmark provides guidance on incorporating the circular economy and Cradle to Cradle Design principles in organisations and products.

rethink.  
business

Join the circular economy revolution

- > The circular economy is a vision of a waste-free society. Businesses rethink their production processes so that all goods and surplus materials become part of a biological or technical cycle without any waste.
- > Cradle to Cradle certification guarantees that a product or business commits to continually working with and developing sustainability in accordance with the circular economy. Certification is not an end result, but a proof of the preliminary results.
- > Cradle to Cradle Denmark is a Danish consultancy business which has specialised in advising other companies on how to incorporate the Cradle to Cradle principles into their own businesses and products.
- > Renosyd is the first waste company in Denmark to refer to itself as a value company. Renosyd handles waste from private households and businesses in the municipalities of Skanderborg and Odder based on the view that waste is a valuable resource for something new.

The inauguration of the Anholt Offshore Wind Farm makes it possible for DONG Energy to supply more green wind energy to private businesses. 2013 thus saw Troldekt making the switch to only using electricity from renewable energy sources.

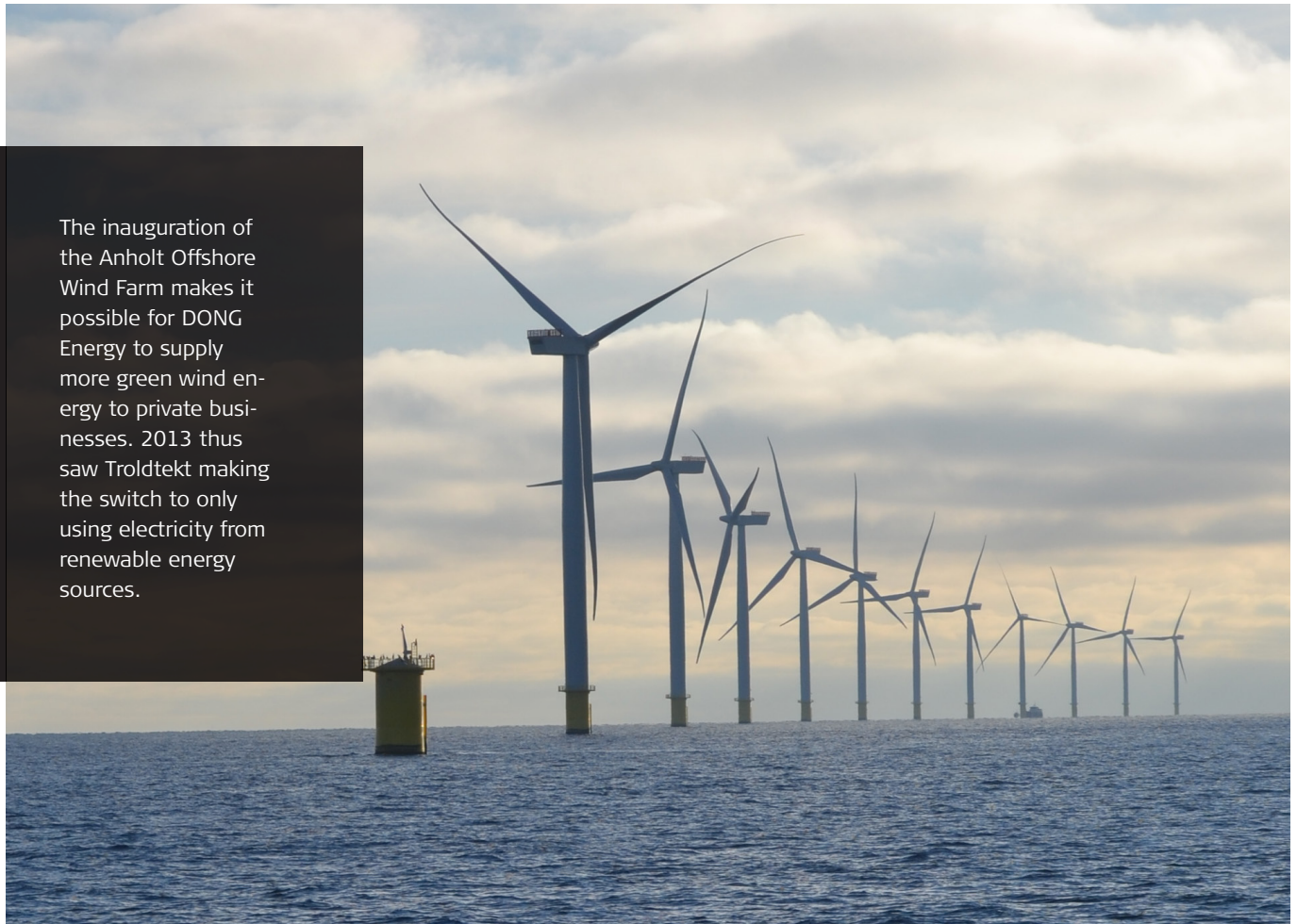


Photo: DONG Energy.

## Climate partner with air under its wings

Fortunate circumstances mean that we have already been able to achieve our objective in the renewable energy category. The objective was that half of Troldekt's electricity consumption in 2015 should come from renewable energy sources.

This has already been achieved and surpassed by far this year, as from 2013 we are only purchasing wind power-based electricity for Troldekt's production facilities.

### Seize the opportunity for eco-savings

The work with sustainability and the Cradle to Cradle principles is a key element in Troldekt's business strate-

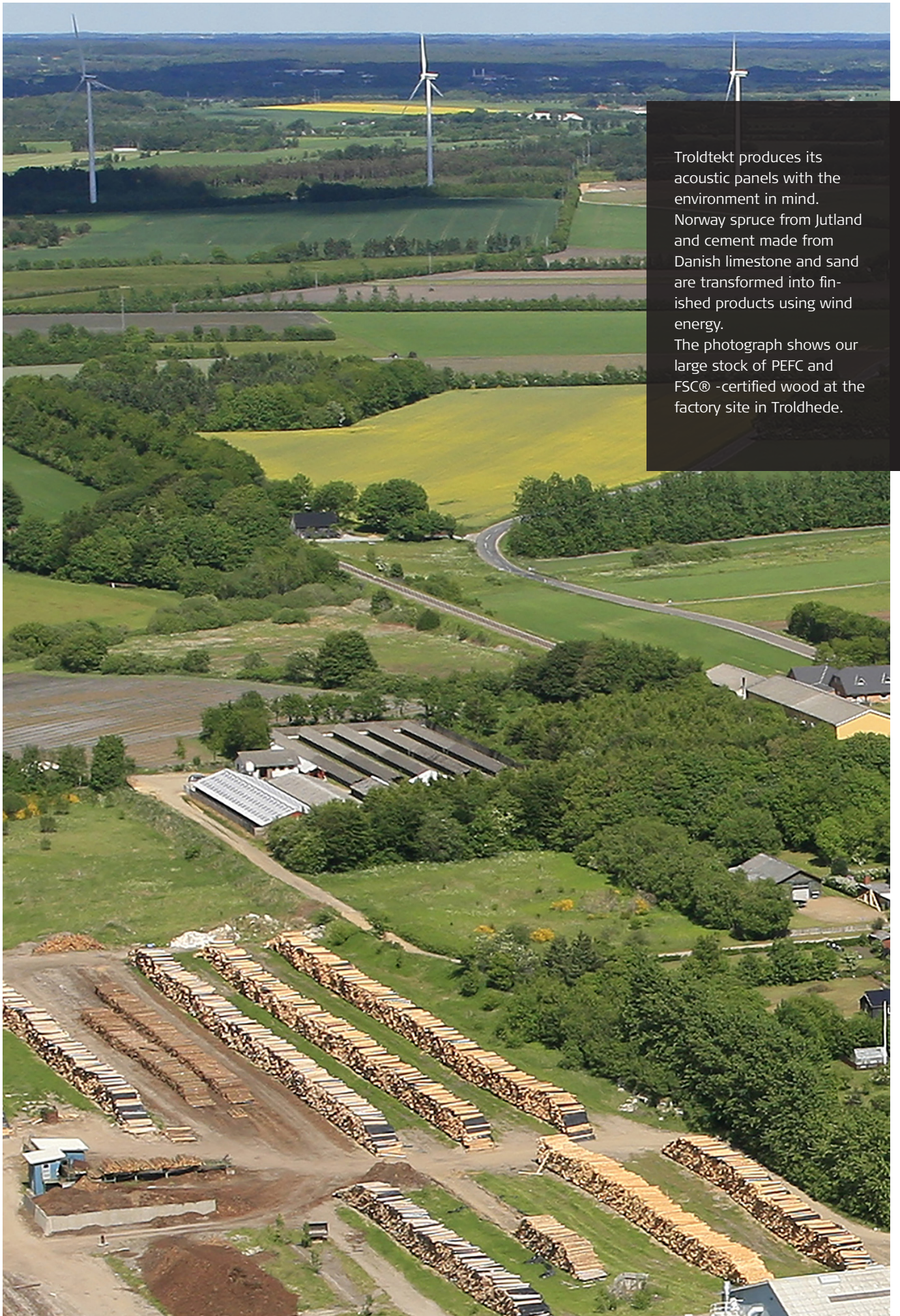
gy. As part of this strategy, last year we concluded a climate partnership agreement with DONG Energy. The commitments undertaken have since been included in our Cradle to Cradle road map. Fortunate circumstances mean that we have already been able to achieve our objective in the renewable energy category this year. Half of Troldekt's electricity consumption in 2015 should come from renewable energy sources. This objective has already been achieved and has been greatly surpassed.

The inauguration of the Anholt Offshore Wind Farm makes it possible for DONG Energy to supply more green wind energy to private businesses. 2013 thus saw Troldekt making the switch to only using electricity from renewable energy sources.

### Partnership agreement bears fruit

Under the climate partnership agreement, DONG Energy's specialists carry out annual energy screenings and advise Troldekt on how to streamline our operations and thus improve both carbon emissions and our bottom line. Initially, it means that the heating pipes in all the production halls have been insulated.

In addition, the energy screening showed that there is scope for optimising parts of the production facilities in Troldekte. These possibilities are now being examined and, where possible, the necessary improvements and measures will be made to reduce consumption for the benefit of the environment.



Troldekt produces its acoustic panels with the environment in mind. Norway spruce from Jutland and cement made from Danish limestone and sand are transformed into finished products using wind energy. The photograph shows our large stock of PEFC and FSC® -certified wood at the factory site in Trolldhede.

**Troldtekt A/S**

Address	Head office Sletvej 2A, DK-8310 Tranbjerg J Production and warehouse Østergade 37, Troldhede, DK-6920 Videbæk
No. of administrative employees	25
No. of production employees	43
Sector	Building industry
Contact	Tina Snedker Kristensen Head of Marketing and Communications tkr@troldtekt.dk +45 8747 8100

**About Troldtekt**

Troldtekt acoustic solutions for ceiling and wall cladding are among the leading products for ensuring good acoustics, efficient fireproofing and a healthy indoor climate. Troldtekt's main product is acoustic panels. They are made from wood and cement and are Cradle to Cradle-certified in the silver category. Troldtekt contributes green points and good acoustics in all sorts of buildings such as from offices and factories to schools, public facilities, 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 Troldhede in western Jutland.

Certifications and acknowledgements

