

Caring for the Environment

Modulex Billund Environmental Responsibility Report

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Kim Pedersen
Managing Director, Modulex Billund

Environmental best practice is a top priority in our factory and our goal is to become the green alternative among sign manufacturers. We are at the forefront of legislation by working with governments, regulatory authorities and international organisations so that we can continually raise our environmental standards.

Modulex Billund has always put a lot of focus in conducting its business with a minimal impact on the environment. From efficient manufacturing and production technologies that minimise our use of energy, to our constant effort to educate our employees through LEAN production, we strive to transition to a greener way of doing business.

In the past decade, I have personally put many efforts into searching for greener materials that are suitable for the signage and graphics industry. We, therefore, started a collaboration to develop a new paper-based material that could fulfill our needs and replace other more harmful materials, such as acrylics and aluminium composites.

As a result of this project, we have launched Etronit and GreenBond™ in 2020 as the green material alternatives for signage and view these materials as game-changers within our sector.

We have put together this report to show, in a transparent way, where we are right now, how we care for the environment and where we would like to be in 2025.

About Modulex Billund



Our Vision

Modulex Billund believes that it is crucial that companies, governments and individuals focus on developing in a sustainable and just way, and work towards minimising their impact on the environment and reducing social disparities.

Our Mission

To provide high quality signage and graphic solutions with environmental consciousness at its core, and to promote equality and education as fundamental values to help our customers move towards a sustainable and just design industry, which we see as the roadmap of the future.



Our Values

We want to have a positive impact on the world. We see efficiency, quality and transparency as the main drivers of our business and motivation. Our Code of Conduct is based on the principle of treating others as we would like to be treated.



Who We Are

We are part of the Modulex Group, originally founded in 1963 by the LEGO Group.

We retain and take pride in our Danish origins and long-standing commitment to design, quality and the environment. With over 55 years of existence and expertise, Modulex Billund is a strong referent within the signage industry.

LEGO Origins

Founded by the LEGO Group, Modulex Billund is an industry leader in signage product design, modular sign systems and environmental graphics.

We originally started with architectural planning systems, developed from the LEGO bricks, which evolved into signaling systems and eventually gave place to our current assortment of standard modular signage systems.

We very proudly retain the modularity in our products, fundamentally a LEGO concept, which adds value to our products by making them flexible, recyclable, upgradable and upcyclable. Modularity is a topic that will be mentioned further in this report as a strong environmental trait of our products and company.

Danish Heritage

Our Danish heritage has provided us with the framework and the consciousness to work towards a more sustainable future. Environmental concern and sustainable development are part of our DNA. Our factory in Billund is working together with other companies of Danish industry to develop alternative services that can substitute traditional "use and throw" products. As part of this natural concern for the environment, we make sure that our manufacturing processes, products and activities are conducted in the most sustainable way possible, and we work hard to improve.

About This Report

The aim of this report is to provide a thorough insight of our environmental and social corporate responsibility, efforts and performance, and to offer an account of how we strive to continually improve in these areas. To succeed in this endeavour, it is necessary to outline what we believe is a sustainable way – both socially and environmentally – to manufacture signage and graphics solutions. And it is thus imperative to start by defining what sustainable signage means.

Furthermore, our support of the UN's 2030 Sustainable Development Goals (SDGs) – which we see as the framework and basis for our business development and daily work – will be explained through direct and indirect references throughout this report.

Finally, we aim to highlight the green options we offer within our product assortment to explain how we incorporate sustainable practices into our manufacturing and product design, and to sponsor the values we preach and act upon – and are very proud of – as Danish manufacturers.

The data and statistics that appear in this report cover the period 2011-2018 and have all been measured internally by Modulex Billund. To refer to specific measures, please see annex.

Launched in 2020, GreenBond™ is a new material we have developed as the green alternative to aluminium composite materials (ACMs) and has a carbon footprint 41 % lower.



What is sustainable signage?



Transparency

It is not enough to assert that signage is eco-friendly. Those working with architectural signage want to know what signs are made of, how signs are made and what a sign manufacturer's values are.

It is crucial to clearly and easily understand a sign's environmental impact.

Sign purchasers are starting to turn to material certifications and rating systems. This means that manufacturers must list and verify what their products are made of, often via a 3rd party, to gain the consumers' trust.

Developing a consistent corporate 'green DNA' is key in achieving transparency and being accountable of company policies, efforts, accomplishments and mistakes.

At Modulex Billund, we work to be transparent manufacturers when informing our customers about the composition and impact of our products, as well as our efforts within environmental responsibility.

Our 'green DNA' – including our Green Network Diploma, product documentation and carbon footprints, data sheets and this report – aims to document our production processes, our products' impact and our values as a sign manufacturer.



Recycled and Renewable Materials

Although plastics, particularly acrylic, are very cost-effective, they harm our planet and health.

Additionally, very few recycling plants offer to recycle acrylic despite being technically recyclable under stream 7 plastics. Although recycled and recyclable plastics are becoming a primary eco-friendly option, some plastics such as acrylics still have some limitations at the disposal stage.

Recently, signs made of Forest Stewardship Council (FSC®) wood are becoming increasingly popular as a renewable alternative to other more harmful materials. These signs are eco-friendly and can contribute to LEED qualification and overall sustainable design through the Materials and Resources category.

Including a higher percentage of recycled and renewable substrates is a top priority for us, and an area where we actively work to replace non-recyclable materials in our assortment. Our two greenest products, Etronit and GreenBond™, are manufactured from PEFC™ and FSC®-mix certified paper and recycled wood fibres (RCF), sourced from forests in Finland and supported by Chain-of-Custody documentation, which verifies and tracks FSC® certified material from shop shelf to forest.

We have now included PVC-free vinyl as our eco-friendly graphical option. Vinyl graphics are becoming increasingly popular as they combine practicality and innovation. However, from manufacturing to disposal PVC emits toxic compounds that can be harmful to the environment and human health. PVC cannot be recycled and is usually landfilled, where it leaches toxic additives or incinerated, again emitting dioxin and heavy metals. By offering PVC-free vinyl, we include an environmentally friendly product that is safer for human health and the environment. Our aluminium products always include an average of 10 % recycled material. However, recycled aluminium is not easy to purchase due to the availability of recycled aluminium being extremely low.



Longevity and Modularity

What happens to a sign when a building is renovated or torn down?

Before, signs would be sent to landfills and would remain there for hundreds of years having a negative impact on the environment. Today, combining the right materials with consistent quality results in highly durable products that can be recycled separately.

Furthermore, modular signage enables to upcycle and update old signs by simply changing components like puzzle pieces, thus contributing to a circular economy. This process is cost and time-efficient and reduces overall wastage whilst increasing the longevity of the products.

At Modulex Billund, we have over three decades of expertise in modular products, which are 100 % upcyclable and upgradable. We design our products so that customers can renew their signage by easily replacing old parts to renovate the design, making sure components can be recycled separately. Longevity and modular design are efficient ways to minimise waste, optimize the use of raw materials and increase the life cycle of products.



Pacific series is one of the most popular modular signage systems we offer in our Global Sign Family (GSF).

Every panel and component can be separated, replaced and updated. This increases the longevity of our products and makes it easy to recycle and upcycle them.

IV

Fewer VOCs

Sign inks, protective coatings, adhesives and even some materials like acrylic contain volatile organic compounds (VOCs). These contribute to the greenhouse effect and severely diminish air quality and health. VOC emissions from building materials and furnishings are a major source of indoor air pollution. Green builders strongly prefer office signs with inventoried chemical ingredients and minimal use of harmful substances. Sign manufacturers are responding to human health by reducing VOCs drastically. GreenGuard certification has been widely adopted as a trusted standard for low-emitting and healthy products.

At Modulex Billund, all our UV-inkjet and eco-solvent printers are running on GreenGuard Gold certified inks. This ensures that the inks used in our graphical solutions and our printed signs are safe and acceptable for use in sensitive environments such as schools and healthcare facilities where vulnerable people spend extended periods of time.

V

LEAN Efficiency

The manufacturing process behind Modulex Billund's signs is equally important. Efficient manufacturing, eco-friendly UV printing, safe and healthy inks, water treatment and recycling of manufacturing waste are processes that help minimise the environmental impact and carbon footprint of each sign that we produce.

To make our manufacturing more efficient we have engaged with LEAN methodology. LEAN is a production method that helps us maximize the use of resources and energy during the production of our signage, as well as the space used, we have reduced 2,670m² (33 %) in the past year whilst increasing productivity by 27 %.

VI

Local Production and Supply

Local production and supply are the best options when making sustainable signage. Manufacturing domestically and purchasing raw materials locally diminishes the volume of fossil fuels used in shipping. Additionally, those savings translate in products of a higher quality and better design, and therefore last longer than those manufactured overseas at a lower cost.

At Modulex Billund, we put special emphasis on purchasing our materials from Danish or European suppliers, with which we contribute to the local economy and help reduce our carbon footprint. Local manufacturing processes and waste can be monitored and improved much more effectively; equally, when buying locally we work closely together with our suppliers making sure they hold similar environmental and social values and making it easier to trace the source of the raw materials.

VII

Biophilic Design

This refers to the movement within the built environment to use more natural materials indoors. It is more and more common for sign makers to use 100 % wood and paper signage to re-connect consumers with nature and improve human health whilst using recyclable and sustainable materials. We are trying to transition to a more biophilic and sustainable product assortment through the launch of Etronit and GreenBond™, our FSC® paper-based signage solutions.

Etronit is an FSC® paper-based signage material, launched as an eco-friendly and biophilic material in February 2020. It has a carbon footprint 53 % lower than acrylics, and 41 % lower than ACM.



How to measure sustainability?



Carbon Footprint

Carbon footprint and life cycle assessments (LCA) of products quantify and measure the environmental impact of a sign. This is increasingly important to achieve maximum transparency when talking about the impact of each product and material. Life cycle assessments which measure products' carbon emissions from cradle to cradle are a precise and adequate measure to identify areas of improvement and legitimize environmental claims over products.

Recycling and Reuse Indexes

It is important to select materials that are suitable for recycling, or methods other than landfilling to avoid environmental and waste problems. Furthermore, designing products so that the maximum number of components can be reused or upcycled is vital to increase the longevity of products and contribute to a circular economy.

Recycling and reuse levels are also crucial at a consumer level. To ensure that our customers understand how to reuse, upcycle or recycle our products, we continually inform our sales units, partners and customers about the possibilities to dispose and reuse our products, by down-streaming the relevant information and encouraging them to do this.

Renewable Energy Sources (RES)

To reduce carbon emissions and support the UN's Sustainable Development Goals (SDGs), it is vital to increase the overall share of renewable energy sources within each company and to offset carbon emissions. This in turn lowers the carbon footprint of each manufactured product.

Code of Conduct

Transparency and tolerance-zero when it comes to respect and ethical values are vital for sustainable development within companies. Our Code of Conduct is a set of ethical and moral values based on the 10 principles of the UN Global Compact, which provides a shared framework for all our subsidiaries, suppliers and partners all over the world. These guidelines are based on multiplicity, equal treatment and opportunities for everyone, and follow the principle of asking all people and parties to treat each other as they wish to be treated themselves.

How do we ensure minimum environmental impact?

2019 Highlights

Explicit Factors

100 %

of the energy we use is offset through wind energy.



93 %

of **all** our manufacturing waste gets recycled or sent to WtE.



100 %

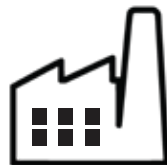
of our wastewater gets treated to remove harmful chemicals before entering the public sewage.



LEAN

33 %

space reduction in our production facilities.



27 %

increase of productivity and manufacture efficiency on every product.



97 %

of our raw materials are locally purchased in the EU.



Chemical Use & Waste

43 %

reduction of our chemical waste since 2011.



28 %

reduction in our total water usage since 2011.



100 %

of our eco-solvent and UV-printers are using low-VOC emitting inks, Greenguard Gold certified.



Explicit Factors

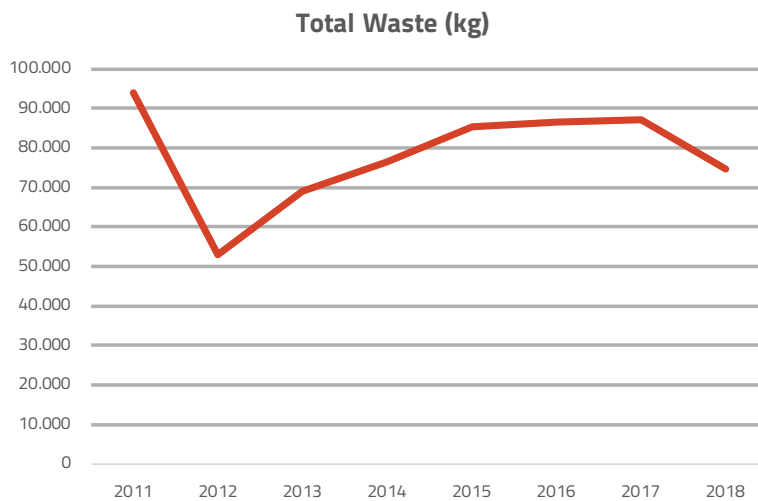
Renewable Energy Sources (RES)

We are 100% CO2 neutral

Our factory building is owned by KIRKBI who is responsible for our energy supply. We offset 100% of the energy used in our production facilities and offices through two offshore windfarms that produce more renewable energy than the total we use.

Manufacturing Waste

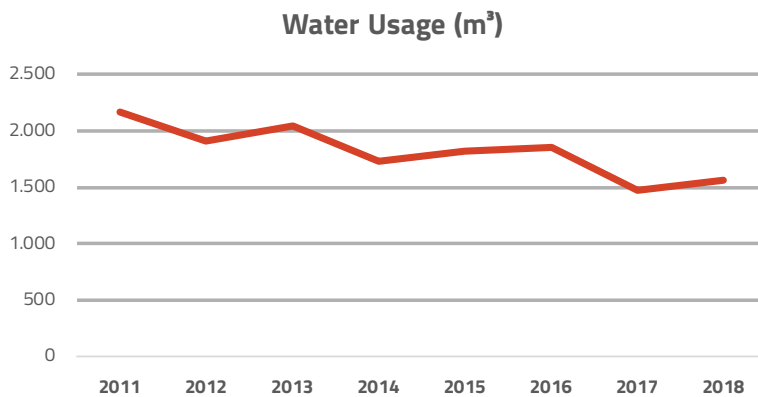
Out of all our manufacturing waste, **66%** gets recycled in local recycling plants and **27%** disposed of via Waste-to-Energy (WtE) plants, which involves incineration with energy recovery. This makes up 93% of all our manufacturing waste. WtE turns non-reusable, non-recyclable waste into energy, thereby reducing the need for landfilling which is the least desirable option due to high environmental impacts. Additionally, we have reduced our overall waste by **20%** since 2011.



Water Stewardship and Usage

We have reduced the total water usage by 28% during the past 9 years and 87.9% since 1995

Our wastewater gets treated to remove harmful chemical components before entering public sewage. We are audited four times annually to ensure that our water enters the public sewage at drinking quality. However, water treatment results fluctuate and this is something we work hard to control and improve.



Implicit Factors

Material Selection

By choosing durable materials and applying anti-corrosive protection to our products we increase their life cycle and reduce overall wastage. From a manufacturer's perspective, material choice is key in achieving signage and graphics that can be long-lasting, not only increasing the quality of our products but also cutting expenses and waste in the long term.

Local Supply

We procure 80 % of our raw materials in Denmark and 97 % within the EU

We prioritise local purchase when choosing suppliers for our raw materials, mostly choosing suppliers in Denmark (80 %), otherwise we look for suppliers within the EU (17 %). This helps reduce our carbon footprint and make sure that our suppliers have similar values and environmental standards as we do. Partnering with local suppliers also makes it easier to trace the source of the raw materials we use, as well as the methods used to obtain or produce them. Thus, we uphold the belief that buying locally and responsibly increases the quality and the added value of our products.

Consistent Quality (ISO 9001)

Quality is yet another factor that contributes to a longer life cycle and better material choice. We are audited by representatives of the International Standards Organization, who evaluate our customer focus, production methodology and roadmaps for continuous improvement.

LEAN

Space Reduction and Productivity

We have reduced 33 % (2670 m²) of the space in our production facilities and have increased productivity by 27 %

During the past year, we have incorporated LEAN production methodology to operate more efficiently and to optimise our resources. As part of LEAN culture, the 5S system of visual management has improved our organization and efficiency. This system consists of five pillars—Sort, Set in Order, Shine, Standardize, Sustain—that turns the maintenance of the workplace into a visual process.

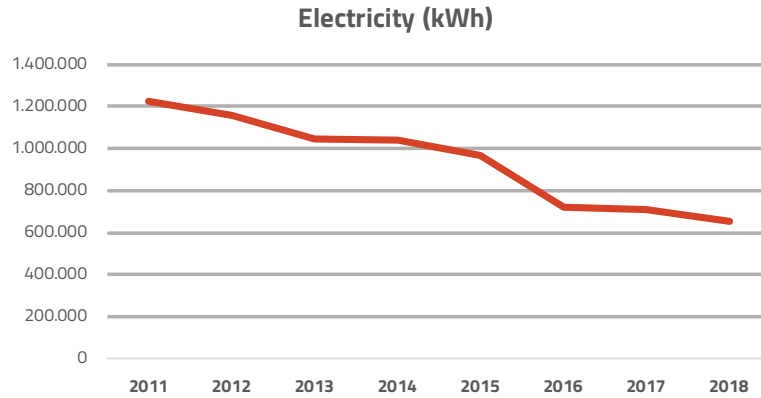
We have engaged with LEAN through weekly education and training for all our staff and see this as an investment to continue to improve in how we manage our resources, reduce production and delivery times, and make our factory more efficient and effective.

Energy Use

We have reduced our overall energy consumption by 46.6 % since 2011

To minimise our energy use we only have day-shift operations in the factory, except two people working on evening teams 4 days a week. We have reduced the number of m² to 2/3, but are producing the same, thus saving heat and electricity. Internally, we are transitioning to LED lighting and we use energy-efficient technologies such as UV-printing. We have changed the white ink in our UV-printers to avoid baking each panel at 60°C for 20 minutes and have sold the two electrical ovens used for this.

Modulex Billund is currently working together with an environmental counselor to analyse our energy use and find further ways to save energy and water. As part of this project, we are working to develop new automated paint and dry system to substitute our current paint booth and ovens which will allow us to gain efficiency and increase our graphical possibilities.



Chemicals

Low VOCs Inks

Our UV-printers and eco-solvent ink-jet printers are using GreenGuard Gold Certified inks

VOC emissions from building materials and furnishings are a major source of indoor air pollution. GreenGuard certification has been widely adopted as a trusted standard for low-emitting and healthy products. All our environmental graphics – wall, window, floor and panel decorations – are printed using GreenGuard Certified Inks. This includes our printed panels, but excludes braille and tactile technologies and white UV-print. GreenGuard inks ensure that our graphic solutions and our printed signs are safe and acceptable for use in environments such as schools and healthcare facilities.

GreenGuard Gold is the highest tier of GreenGuard certifications available. It has been designed to define products suitable for environments where people, particularly children and sensitive adults, spend extended periods of time.

Chrome-free pretreatment

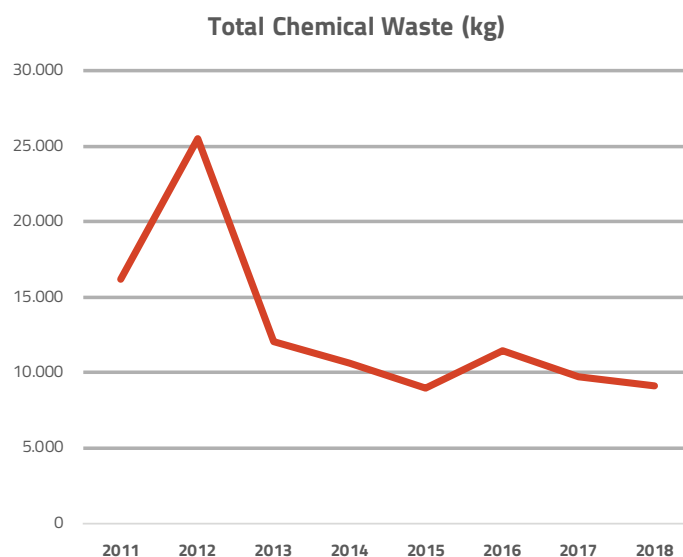
Our aluminium coating is chrome-free

Aluminium is usually pretreated with chrome before it is painted. Despite giving an excellent finish, chrome waste is hazardous. Following years of research, we have developed a chrome-free pretreatment which ensures the same high-quality finish but is much safer for the environment.

Our chrome-free pretreatment ensures a high-quality finish and a highly resistant coating for all our aluminium products.

Chemical Waste

We have reduced our overall chemical waste by 43 % since 2011



Product Design

Optimised wayfinding

Environmentally good practices begin not just at the product design stage, but in how it is applied. By ensuring that we understand our customers' rates of churn and change, we can advise on the most flexible product to suit their needs. This means we reduce the amounts of panels installed and changed by providing efficient and optimised wayfinding solutions.

Modularity, Upcycling and LED-Upgrading

Modularity is part of our foundations and DNA

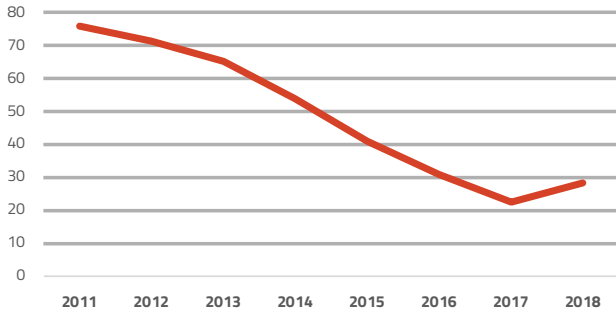
It has been around for over 50 years as part of our LEGO® legacy, and we are widely known for it. Some of our modular products have been sold without change for over two decades. Modular signage can be easily assembled and disassembled, and components can be recycled separately or updated, and signs can be upcycled and upgraded. Modular products have increased longevity and contribute to a circular economy.

As opposed to 'downcycling' or recycling, **upcycling** is based on the reuse of by-products by transforming them into new products of better quality and added environmental value. Modulex Billund sign families, both interior and exterior, are manufactured so that one can upcycle a sign to a brand-new design by just changing the panels and keeping the structure of the sign, whilst reducing expenses by 26 % compared to a total renovation. That way, panels can be recycled and by-product waste is reused. This means less cost and less waste, for us and our customers.

Through modularity, one can also **upgrade** signs by adding LED-illuminated panels. New illuminated panels have been manufactured to replace old panels as modular upgrades, allowing them to upgrade signs in a sustainable way. This enables customers to easily transform or customize their signs by simply changing panels. With minimal waste and expenses, the user is no longer stuck with an outdated sign and large replacement costs.

Emissions 2011 - 2018

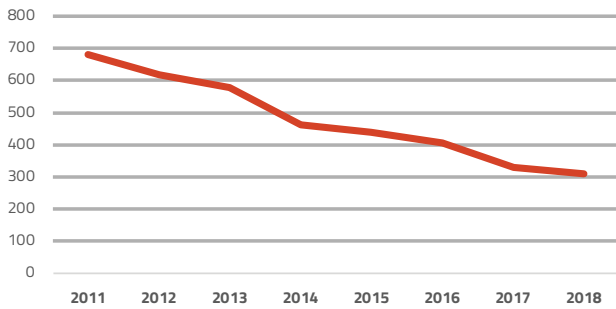
SO2 Emissions (kg)



SO2 Emissions

We have reduced our SO2 emissions by **63.1 %** during the past 9 years.

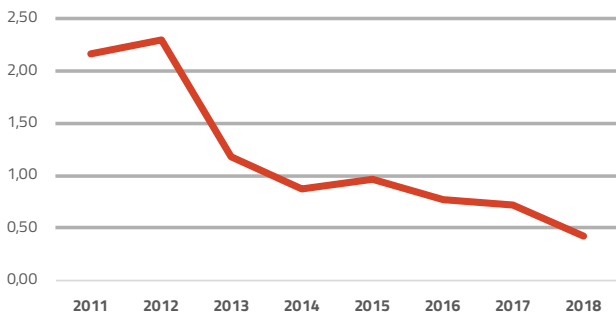
NOX Emissions (kg)



NOX Emissions

We have reduced our NOX emissions by **54.8 %** during the past 9 years.

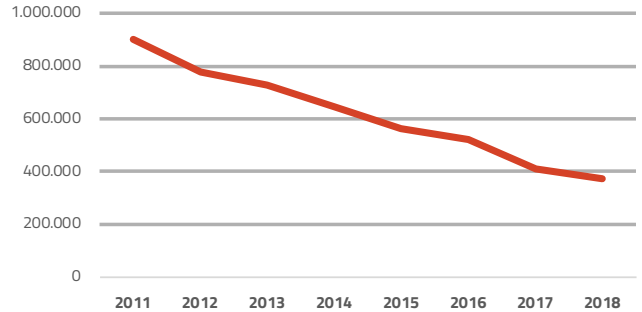
Thinner emissions (kg/hour)



Thinner Usage

The amount of thinner (kg) used per hour in our factory fell by **80.5 %**; from 0,41 kg/h to 2,16 kg/h from 2011 to 2018.

CO2 (kg)

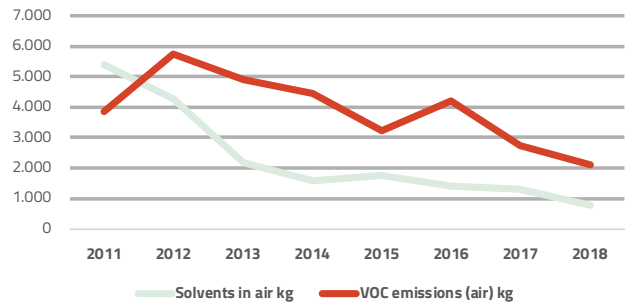


CO2 Emissions

We have reduced our CO2 emissions by **58.76 %** during the past 9 years.

We are 100 % carbon neutral; our total energy usage is offset through renewable energy generated by offshore windmills.

Solvents and VOC emissions (kg)



Solvents and VOC

The amount of solvents emitted to the air has fallen by **85.7 % since 2011**; an average of 12.2 % per year.

Our VOC emission by air has fallen **45.5 % since 2011**. At Modulex Billund, we comply with the EU requirements for the reduction of VOC emissions.

Green Assortment

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Aluminium

Aluminium is 100 % recyclable and one of the prime materials we use in our product assortment.

We currently use an average of 10 % recycled aluminium in all our aluminium products. Despite efforts to increase this, the global share of recycled aluminium is low. The challenge is not only about how much recycled aluminium we want to have in our products, the challenge is that there is simply not enough recycled aluminium in the world to fulfill the market's needs. And as the market for aluminium products is growing quickly, the quantities from 10-20 years ago which are now ready for recycle are much smaller.

Acrylic

We currently use acrylic for logos and letters. Despite having a low recycling index, acrylic PMMA can be recycled and regenerated. In 2020, we have worked with one of our suppliers to incorporate 100 % recycled acrylic into our assortment.

For signage purposes, recycled acrylic is difficult to use as it offers less UV-resistance than virgin acrylics. However, post-consumer and industrial acrylic recycling chains are now developing faster than ever. Therefore, we have incorporated 100 % recycled acrylic, with a carbon footprint 57 % lower than virgin acrylics, for our protective shields (COVID-19) for counters and receptions and our basic paperflex solutions. Our aim is to slowly but steadily increase the range of uses for recycled acrylic in our assortment to promote a circular flow of acrylic waste in Europe.

Aluminium sheets in our factory at Modulex Billund.

Etronit and GreenBond™

The paper coils used to make Etronit and GreenBond™ are sourced from Kotka, Finland, and are manufactured from **sawdust pulp** and **recycled fibres**. The recycled fibres make up a minimum of 20% of the paper composition. The sawdust – which is **FSC®-mixed** and **PEFC™ certified** – is supplied from the manufacturers' sawmill and other sawmills in the region. The recycled fibres are collected in a recycling plant in Kotka where old paper and wood products are recycled and fibres are carefully selected to make the kraft paper.

Etronit and GreenBond™ are generated as a by-product in other forest industry processes by re-using the sawdust that would otherwise be by-product waste. These materials give value to fibres and wood dust that would otherwise be disposed and thus contribute to a circular economy. This, in turn, means that no tree harvesting is carried out specifically for the paper used to make Etronit and GreenBond™.

The paper supplier in Finland supports sustainable forest management and use **Chain-of-Custody certification** - this applies to manufacturers of FSC® certified forest products to verify and track FSC® certified material and products along the production chain, all the way from the shop shelf to the forest. Despite there being a huge amount of certified forests in Finland, FSC® certified sawdust and fibre availability is low. Therefore FSC®-mixed certified sawdust is used to manufacture the paper.

Etronit and GreenBond™ both have a carbon footprint 41% lower than aluminium composites and 53% lower than acrylics. These two new products cover a huge gap in the signage markets by offering greener alternatives to other more popular materials whilst offering high-end and versatile graphical possibilities.

GreenBond™ 3mm sample with UV-printed background using GreenGuard Gold Certified inks, and 3D-print (tactile) with braille.



PVC-free Vinyl

Vinyl is becoming a popular option for visual communication and environmental graphics, but most of it is made from PVC. From manufacture to disposal PVC emits toxic compounds which can be harmful to the environment and human health. PVC cannot be recycled and is usually landfilled, where it leaches toxic additives or incinerated, again emitting dioxin and heavy metals.

At Modulex Billund, we have over 40 years of expertise with vinyl and environmental graphics and have been offering PVC-free vinyl as the eco-friendly option for more than four years. By offering PVC-free vinyl, we include an environmentally friendly product which is safer for human health and the environment.

Upcycling Interiors with Vinyl

We now offer a customer-directed upcycling service by using vinyl to refurbish any type of furniture or interior space. In other words, we 'give life back' to degraded items such as tables, doors or even whole rooms as an alternative to disposing of them. With a range of 120 different vinyl designs – including anything from marble to wood to glitter to natural stone – users can renovate interiors as an alternative to total renovation them, and refresh the look of spaces whilst adding an environmental value.

Through this process, we offer a practical solution by allowing users to upcycle interiors, reduce waste and save money in a sustainable way.

PVC-free vinyl; removing protection foil to apply on surface.



Packaging

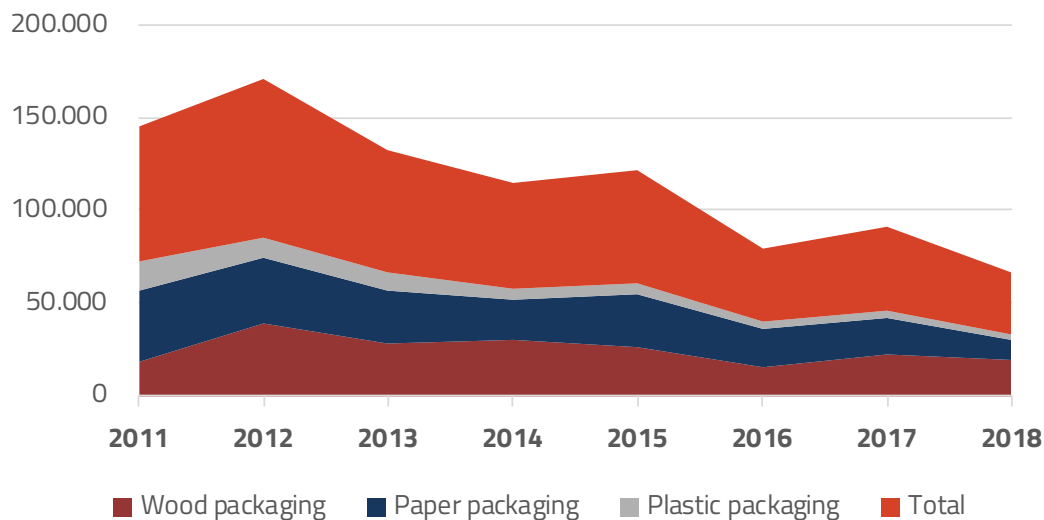
As manufacturers, packing is a crucial and abundant part of our business. Despite being necessary, packing materials are usually single-used and end up as waste. Therefore, at Modulex Billund we work hard to both reduce the amount of packaging we use and include materials that can replace plastic packaging when possible. By focusing on these two points we aim to minimise waste from our packaging and increase the recycling index of that waste through the use of paper, wood and recyclable plastics.

From 2011 to 2018 we have reduced our packaging (kg) by **54.3 %** to 33,242 kg in 2018, out of which plastics make up 10.2 %, paper is 31 % and wood is 58.7 %.

The plastic we use is mostly due to the fact that many of our customers store our products for indefinite periods of time where they need to be protected from humidity, temperature changes and other air components. This protection is a challenge with paper, which is why we still use plastic for some parts.

Our objective is to reduce our use of plastic packaging by 50 % by 2025 - we are planning on replacing shipment protection packaging such as bubble wraps and fillers with paper packaging elements, and have already started looking for labels and tape among others.

Packaging Use (kg)



Sustainable Development Goals (SDGs)

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SDGs

At Modulex Billund, we work to continue to improve within Sustainability, Social Responsibility and Environment and have been focusing on these for the last decades. Our **Green Network Diploma**¹, which recognises companies with 'outstanding efforts to improve their corporate responsibility within Environment', is a proof of this.

We see the Sustainable Development Goals (SDGs) as the blueprint to achieve a better and more sustainable future for all. They address the global challenges we face, including those related to poverty, inequality, climate change, environmental degradation, peace and justice.

The SDGs focus on Corporate Sustainability and will, therefore, have a significant influence on supply chain management globally and on corporate strategy. As part of our environmental strategy, we focus on the small details in our production chain and product assortment to reduce our impact on the environment. Our environmental strategy and objectives are shaped and driven by the SDGs, which provide an excellent framework to measure our performance and set our overall goals for continuous improvement.

To address each goal, we will mention the main targets and challenges within each goal that we want to address and will then specify how we contribute to it and how it shapes our goals and progress.

¹Green Network Diploma attached in annex.





Gender Equality

Targets

- 5.1. End all forms of discrimination against all women and girls.
- 5.2. Eliminate all forms of violence and exploitation against women and girls in the public and private spheres.
- 5.5. Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making.

Challenges and Indicators

At EU level, the gender pay gap is 17.5 % on average in the 27 EU member states, according to Eurostat. In 2018, the gender pay gap difference in Denmark was 14.5 %.

The cost of gender-based violence in the European Union is estimated to be EUR 226 billion per annum.

According to recent data from some 90 countries, women devote on average roughly three times more hours per day to unpaid care and domestic work than men, limiting the time available for paid work, education and leisure and further reinforcing gender-based socioeconomic disadvantages.

Response from Modulex

At Modulex Billund, we strive to act and work in accordance with the same values that we look up to. Gender equality and respect are top priorities in our company and the cornerstone of our Code of Conduct (CoC). We have a zero-tolerance policy towards all forms of violence in our workplace to prevent any form of abuse and sexual harassment, which is addressed in the first point of our CoC:

"Modulex support multiplicity and equality, i.e. equal treatment and equal opportunities for everyone regardless of ethnic or national origin, skin colour, gender, sexual orientation, religion, political opinion, nationality or social descent."

We have a confidential complaint procedure through our HR department, where any person feeling uncomfortable can confidentially contact our HR Manager, Helle Ulbrichsen.

At year-end 2019, Modulex Billund employed 50 people, out of which 42 % were men and 58 % women. Our management team is composed 66 % by women and 33 % men; this way we ensure sufficient representation – 30 % or greater – of both men and women in the decision-making and governance within our company.

All factory roles are classified into three categories in accordance to the level of skills required. Each category relates to a fixed hourly pay rate, meaning that salaries are not decided on a personal basis but according to the job category and skills required. There is no gender-based pay gap in our company; the pay gap is skill-based and is fixed to the type of job each employee performs.

At Modulex Billund, we reflect our values and moral guidelines and strive to promote them when selecting suppliers. To select suppliers, we individually evaluate and approve each company based on an approval scheme which measures their quality and control systems (based on ISO 9001), level of compliance with Modulex' Code of Conduct, whether they only trade with approved suppliers and other specifications based on production, personnel, product documentation and maintenance. To be approved, suppliers have to score over 70 % of a total of 60 points. Once approved each supplier's approval is re-evaluated every second year.



Affordable and Clean Energy

Targets

- 7.2** By 2030, increase global share of renewable energy in the global energy mix.
- 7.3** By 2030, double the global rate of improvement in energy efficiency.

Challenges and Indicators

Energy is central to nearly every major challenge and opportunity the world faces, from economic growth to food production to meeting the energy needs of the 1.3 billion people currently without access to electricity.

Energy is the dominant contributor to climate change, accounting for around 60 % of total greenhouse emissions. Transitioning the global economy towards clean and sustainable sources of energy is one of the greatest challenges in the coming decades.

The International Energy Agency predicts that the coal use is already declining, and that peak oil use will occur before 2030, with renewables and natural gas filling up the gap.

The share of renewables energy sources (RES) in final energy consumption has reached 17.5 % in 2015.

Response from Modulex

Modulex Billund is 100 % CO₂ neutral. Our building is owned by the KIRKBI Group who manage our energy supply, and have invested in two offshore wind farms that generate enough renewable energy to meet 100 % of our energy consumption. Therefore, our production line and the entire energy consumption in Modulex Billund is offset with Renewable Energy Sources (RES).

Since 2011, Modulex Billund has reduced its overall energy consumption by 46.6 %

We focus on power-saving behaviour and have replaced all the lighting in our factory with LED illumination. During 2019, we have reduced the company's production and administration areas by over 33 % to reduce operational electricity needs. At production levels, we prioritise energy-efficient technologies and graphic methods such as UV-printing and are investing to develop a new automated and highly-efficient paint and dry system to substitute our current paint booth and ovens. We have also changed the white ink in our UV-printers to avoid having to bake each panel at 60°C for 20 minutes and have sold the two electrical ovens used for this.

Modulex Billund has signed a contract with Scanenergi A/S under the EU Regional Fund project CLEAN Green Plan (CGP) to analyse our energy consumption and find further ways to save energy and water. The objective of the project is to conduct a deep analysis made by an external energy advisor to understand our consumption trends and find areas of improvement and roadmap for the years to come. As a part of this project, we are now looking into re-using the heat from our compressor unit and have changed to LED-lighting across the factory.



Responsible Consumption and Production

Targets

- 12.2** By 2030, achieve sustainable management and efficient use of natural resources.
- 12.4** By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle in accordance with agreed international frameworks and reduce their release to air, water and soil in order to minimize their impact on human health and the environment.
- 12.5** By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.

Challenges and Indicators

If consumption of natural resources were to increase at current rates and should the global population reach 9.6 billion by 2050, we would need three planet's worth natural resources to sustain current lifestyles by 2050.

93 % of the world's 250 largest companies are now reporting on sustainability.

Excessive use of water contributes to global water stress; water is free from nature but the infrastructure needed to deliver it is expensive - minimizing water use is imperative for a sustainable future.

If people worldwide switched to energy-efficient light bulbs, the world would save US\$120 billion annually.

Response from Modulex

Managing our resources efficiently is something we work hard to improve in. As mentioned previously in this report, we try to minimise our energy and water use and have engaged with an energy advisor to analyze potential improvement areas. We have reduced our water usage by 28 % since 2011 and our waste by 20 %.

Through our 'Servitize' project, connecting manufacturers to drive innovation within Danish industry, we are working to move from exclusively selling physical products to offering services related to our products, in order to help close the materials loop and contribute to a circular economy. We have based these services on modularity, where one can upcycle and recycle our signs by updating individual components. Such service offers is the possibility to renovate our products with minimal waste, material reuse and contributing to a circular economy.

This 'upcycling' service allows us to move from our traditional products to selling services that help close our products' circularity. This service opens up the possibility to upgrade our signage; when panels are updated in old products, new LED-illuminated panels can be added to signage that did not include that possibility previously.

Applying modular design enables a product's constituent parts to be easily separated and reused without further processing or easily recycling near the point of disposal. Modularity has been a strong foundation at Modulex Billund for many years and is becoming a remarkable opportunity to transform our products to become increasingly sustainable and hugely reduce waste. Many of our modular products have been sold for decades, and this makes upcycling a very interesting renewal option for most of our customers.

Our approach to sustainable production is that every small detail matters, from sustainable sourcing of raw materials to procurement practices to packaging and labelling. We are incorporating more sustainable materials into our assortment: PVC-free vinyl is now available as a greener option for environmental graphics; Etronit and GreenBond™ are manufactured from FSC® and PEFC™ paper mixed with recycled wood and paper fibres; we use 10 % recycled aluminium on average on all our aluminium products, however, this is hard to increase due to high demand and a low global availability of recycled aluminium.

Our objective is to replace 50 % of our plastic packaging with FSC® paper packaging by 2025. To do this, we plan to use all our cardboard and paper waste as packaging protection together with new paper-based packaging methods.



Climate Action

Targets

- 16.5** Substantially reduce corruption and bribery in all their forms.
- 16.6** Develop effective, accountable and transparent institutions at all levels.
- 16.7** Ensure responsive, inclusive, participatory and representative decision-making at all levels.
- 16.7** Promote and enforce non-discriminatory policies for sustainable and inclusive development.

Response from Modulex

At Modulex Billund, we follow our Code of Conduct (CoC) as the guidelines to manage our business in an inclusive, accountable and transparent way, with a strict anti-corruption stance. We are at the forefront of legislation by working with governmental bodies, regulatory authorities and international organizations to learn from best practice and comply with the law and regulations.

We believe in transparency and accessibility as the key drivers of the relationship with our customers, partners and suppliers. We have public and accessible information on all our activities and products and work hard to develop our green DNA as the channel to update on our environmental efforts and strategy.

Appendix

Modulex Billund Environmental Responsibility Report

Green Network Diploma



Green Network has presented this diploma to the company as a recognition of the company's work for corporate social responsibility either within environment or health and safety.

Within the areas in question the company has lived up to Green Network's expectations to document the measurement of impact according to the manuals developed by Green Network or the international standards ISO 14001, OHSAS 18001, ISO 45001 or EMAS.

Green Network is a business network and consultancy within CSR, environment and health and safety, that works to enhance companies capacity within societal responsibility.

Visit www.greennetwork.dk for more information.



DIPLOMA

Awarded to:

Modulex A/S

for demonstrating corporate social responsibility in:

ENVIRONMENT

Modulex A/S works actively with documenting the environmental impact on their surroundings.

Green Network can conclude that **Modulex A/S** meets the requirements of Green Network for documentation of their environmental impact.

That entails that **Modulex A/S**:

- Has produced a report according to Green Networks template
- Has identified the material issues within the area in question
- Has set targets for continuous improvement

Modulex A/S receives Green Network's diploma for the 9th time

The diploma covers the period from 2019 to (and including) 2021

Susanne Lydholm
Managing Director, Green Network



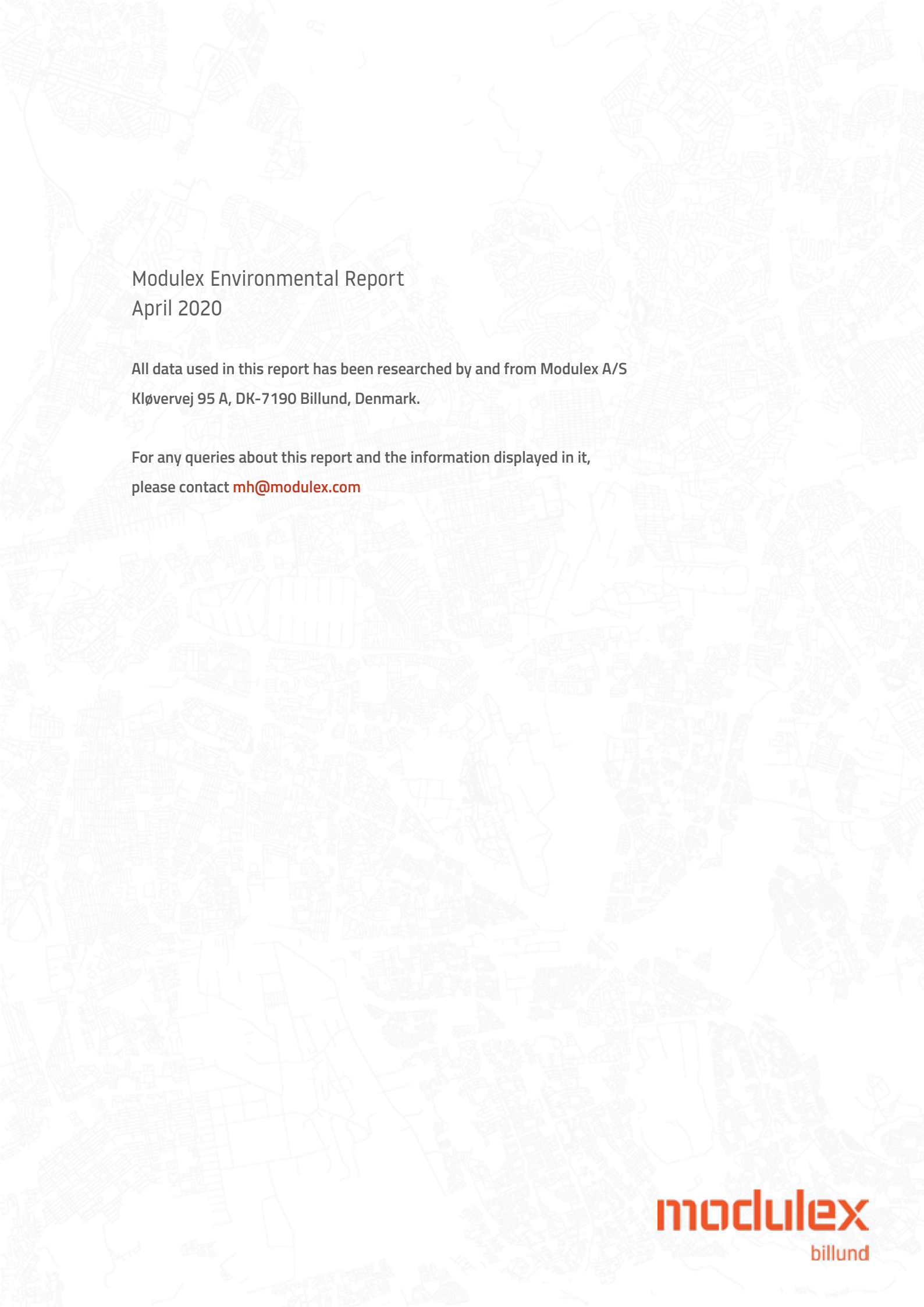
Data 2011-2018

Energy		2011	2012	2013	2014	2015	2016	2017	2018
Electricity	kWh	1.227.411	1.159.252	1.043.723	1.042.292	968.114	719.942	711.665	655.140
Natural Gas	m ³	200.654	195.111	182.900	150.634	167.078	171.691	124.575	113.625
Bottled Gas	kg	319	231	253	308	231	220	154	165
Water									
Water Usage	m ³	2.168	1.916	2.046	1.727	1.820	1.855	1.476	1.561
Hereof before									
Paint	m ³	905	909	1.061	748	665	880	714	722
Waste									
Total Chemical									
Waste	kg	16.170	25.503	12.091	10.650	8.955	11.451	9.756	9.147
Total Waste	kg	93.940	52.939	68.914	76.296	85.447	86.660	87.201	74.619
Total Packaging									
Usage	kg	72.763	85.512	66.305	57.502	60.902	39.760	45.757	33.242

Packaging Use		2011	2012	2013	2014	2015	2016	2017	2018
Wood packaging	kg	18.728	38.556	27.895	30.421	26.347	14.957	21.898	19.528
Paper packaging	kg	38.098	36.226	28.475	20.838	28.379	20.643	19.924	10.321
Plastic packaging	kg	15.937	10.730	9.935	6.243	6.176	4.160	3.935	3.393
Total	kg	72.763	85.512	66.305	57.502	60.902	39.760	45.757	33.242

Data 2011-2018

Emissions (air and water)		2011	2012	2013	2014	2015	2016	2017	2018
Solvents									
Solvents in air	kg	5.413	4.294	2.180	1.594	1.762	1.407	1.314	773
VOC emissions (air)	kg	3.850	5.749	4.908	4.460	3.242	4.220	2.732	2.098
Operating hours	hrs/year	2.508	1.872	1.842	1.824	1.824	1.824	1.824	1.824
Thinner emissions (solvents air)									
	kg/hour	2,16	2,29	1,18	0,87	0,97	0,77	0,72	0,42
Sewage									
Water waste	m ³	2.168	1.916	2.046	1.727	1.820	1.855	1.476	1.561
Electricity									
Total Use	Kwh	1.227.411	1.159.251	1.043.723	1.042.292	968.114	719.942	711.665	655.140
SO ₂	kg	74	69	63	52	39	29	21	27
NO _X	kg	344	289	260	208	155	115	120	117
CO ₂	kg	463.961	351.253	316.248	316.856	195.559	145.428	135.928	123.821
Natural Gas									
Total Use	m ³	200.654	195.111	182.900	150.634	167.078	171.691	124.575	113.625
Energi	GJ	8.069							
SO ₂	kg	2,4	2,3	2,3	1,8	2,0	2,0	1,5	1,4
NO _X	kg	337	327	316	253	281	288	209	190
CO ₂	kg	438.429	426.318	411.263	329.135	365.065	375.145	272.196	248.271
Bottled gas									
Total Use	kg	319	231	253	308	231	220	154	165
Energi	Mwh	4	3	3					
SO ₂	kg	0,03	0,00	0,00	0,04	0,01	0,02	0,01	0,02
NO _X	kg	1	1	1	2	1,7	1,6	1,1	1,2
CO ₂	kg	955	693	759	673	505	481	336	361
Total emssions									
SO ₂	kg	76	71	65	54	41	31	23	28
NO _X	kg	682	617	577	463	438	405	330	308
CO ₂	kg	903.346	778.264	728.270	646.664	561.129	521.054	408.460	372.453

The background of the page is a light gray, stylized map of Billund, Denmark, showing a dense network of streets and building footprints.

Modulex Environmental Report April 2020

All data used in this report has been researched by and from Modulex A/S
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