

01

PURE

Sustainability magazine



Better spaces.
Better life.

Better spaces.
Better life.

Your sustainable partner for over 50 years

Since our establishment in 1973 Unilin Insulation has placed maximum focus on sustainability. It all started with the processing of the residual waste streams of the flax industry. Today we have entered the next - but no less challenging - phase: finding a way to recycle PU in order to close the circle again. For instance, we extract raw materials from PU waste for the production of new, high-quality insulation boards. We aim to make our production sites CO₂ neutral by 2030 so that as a company we can be entirely climate neutral by 2050.

This is not some loose ambition but a firm commitment. All our goals have been scientifically determined and anchored in our One Home strategy. We evaluate, report and tweak our performance on a yearly basis so it is a work in progress.

In this magazine you will read who is involved in this process and how we go about it. As your sustainable partner, we are happy to offer you this behind-the-scenes glimpse.

Because it will take every single one of our 1,000+ employees, our suppliers and our customers to attain these goals. Through innovation and entrepreneurship, through enthusiasm and the will to make the climate and our products even better.



Jorrit Gillijns
Sustainability Manager



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Polyol reactor brings things full circle

Some three years ago a polyol reactor was installed at our Desselgem site (BE). A complex name for an essential process because without polyol there's no PIR. Moreover, thanks to this reactor, waste is recycled into new raw materials.



R&D Manager Brecht Beerens: "This reactor is a textbook example of our innovative nature. The reactor manufactures excellent raw materials and allows us to recycle waste."

R&D Manager Brecht Beerens explains how this works. "In a nutshell it comes down to this: manufacturing PIR insulation boards requires different raw materials that interact with each other, amongst others a hard element, MDI, and a soft element, polyol. Together, these two ensure that PIR is light, strong and wear-resistant and has a high insulation value."

"On the one hand, with the polyol reactor at our own site we can produce custom-made polyols. By developing them ourselves, we can improve the quality of our insulation boards in terms of compressive strength

and insulation value. We can also better control and guarantee this quality. On the other hand, this reactor lets Unilin Insulation turn waste streams into a new raw material, polyol, which effectively closes the circle."

And that is new because until recently recycled raw materials had to be purchased in order to work more sustainably. "As we want to implement an ambitious recycling policy, our R&D department went in search of a way to recycle our own waste into new raw materials. As a result, we now produce raw materials from recycled waste in-house and what's more, they are of perfect quality."

"This reactor allows us to recycle our factory waste and cutting residues perfectly into new, high-quality raw materials. That is unique."

Own recipe for recycled raw materials

R&D Engineer Arno Verlee adds: "This reactor is all about innovation. What was previously of little value – milling dust, subpar boards or cutting residue – now serves as the basis for recycled polyol. We figured out this process entirely on our own and we managed to develop a polyol recipe for new PIR products." The recipe is quite unique. "It is. In our reactor we produce recycled polyols that are used to manufacture PIR, a feat unmatched by any competitor today. In other words, we have every right to claim our process is unique."

This fits in with our ambitious goal. "At the moment, we can already make high-quality polyols from PIR waste. The next step consists of using them to manufacture high-quality insulation boards. By recycling these waste streams into new raw materials we are demonstrating that our insulation boards are sustainable in every respect. This brings us another step closer to realising our ambition of making all our products fully reusable."



With its in-house reactor Unilin Insulation has developed a unique polyol recipe.

CO₂ neutral production starts at a height of 180 metres

A whopping 180 metres, that is the height of the two wind turbines at our production site in the Walloon town of Feluy (BE). Together they generate a total 7.2MW, or 70% of the plant's electricity requirements and the equivalent of the annual consumption of approximately 5,500 homes. The green power makes the production process of our insulation more environment-friendly which, in turn, makes homes and buildings more energy-efficient. Win-win all around.

More renewable energy in the pipeline

With these wind turbines Unilin Insulation has taken a new step towards 100% renewable energy in order to make all plants CO₂ neutral by 2030. We are making a veritable energy transition from fossil (gas, grey power) to renewables (wind and green power). To make this happen, we generate as much renewable energy in-house as possible at our own sites. So don't be surprised if we add the odd wind turbine or a solar panel park here or there.





"We want to be trailblazers."

Unilin Insulation is always on the move. Growth, innovation, lifelong learning, sustainability, ... you name it. And the latter is a priority because the future will be sustainable or not at all. It is a conviction Lieven Malfait, Managing Director of Unilin Insulation, has held for years and he is happy to explain what this entails.

Lieven Malfait: “We are always very transparent in our ambitions, what we have done and where we are headed. It is our ambition to keep growing as we have done in the past ten years. For this we are counting on growth areas, such as Eastern Europe. But we will also continue to diversify our product offering. Today we are primarily known for our PIR insulation boards and roof elements but we are also thinking in terms of wool products for the expanding renovation market. And then there’s XPS insulation, a high-quality and complementary product because it is mostly used for basements and foundations and for inverted roofs.”

Will that growth be sustainable?

“Absolutely, our growth will be sustainable. Not only do our products save energy, resulting in lower CO₂ emissions, but we will also ramp up our own climate efforts. Without empty words but with scientifically based goals in line with the Paris climate agreement.

Is there an actual strategy behind that approach?

“Absolutely. We want to practise what we preach and so we cemented our sustainability vision in One Home, an active and ambitious way of taking our responsibility. Because there is only one planet, One Home. With this strategy we are committed to reducing our emissions to the extent that scientists deem necessary to limit global warming to a maximum of 1.5°C. And we are taking things one step further. Our production sites will be CO₂ neutral by 2030, and by 2050 our product will be climate neutral across the value chain, from A to Z. That means zero emissions, across the board.”

“At the moment 59% of our energy is already of the renewable variety.”

Doesn’t that sound easier than it actually is?

“That’s correct but today 59% of the energy used by the Unilin group is already of the renewable variety. It is generated by, amongst others, wind turbines, biomass plants and solar panels. We will continue to ramp up this internal production.”

How do you tackle the waste issue?

“With the same level of ambition. For instance, the ability to recycle old insulation boards is a hot item at Unilin. That is why on a European level we are taking part in the Circular Foam project together with other companies, suppliers and leading universities. The project will reduce ‘waste’ to its original building blocks through chemical recycling, allowing us to manufacture insulation boards of the same quality from recycled raw materials. Revolutionary!”

Innovation plays a key role in this whole process?

“Absolutely. We purchased a polyol reactor three years ago. It sounds complex but simply put: we can use the dust generated by the milling process at the plant to manufacture polyols – raw materials in other words – in our own reactor. So far we have already succeeded in making quality products with polyols containing 30% dust. If we can make further improvements, we will be close to making a circular product using raw materials sourced locally from waste, so no transport etc. is involved.”



This calls to mind your pioneering years, when flax waste was used to manufacture the first boards.

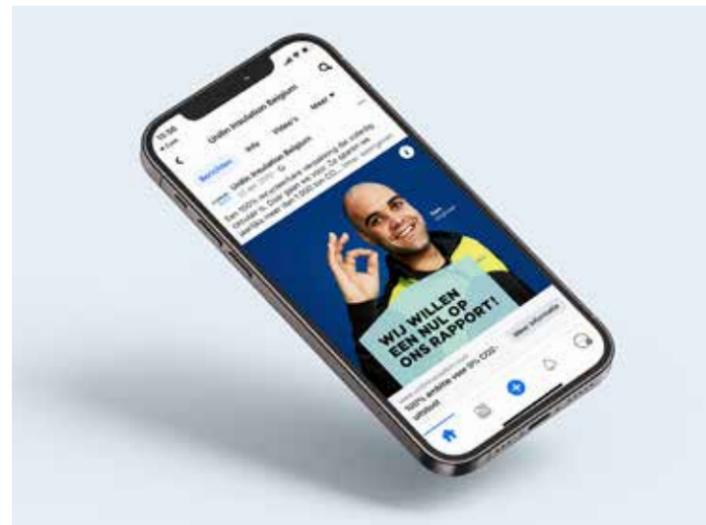
“In terms of sustainability we have been at the forefront from day one by manufacturing insulation boards from flax waste all those years ago. We are doing the same thing now but this time by processing cutting residue, factory waste and construction site waste – we collect the latter through take-back programmes at our customers – into high-quality, water-resistant boards. We are currently fitting the pieces of the puzzle together and we will succeed.”

So actually, not that much has changed in half a century.

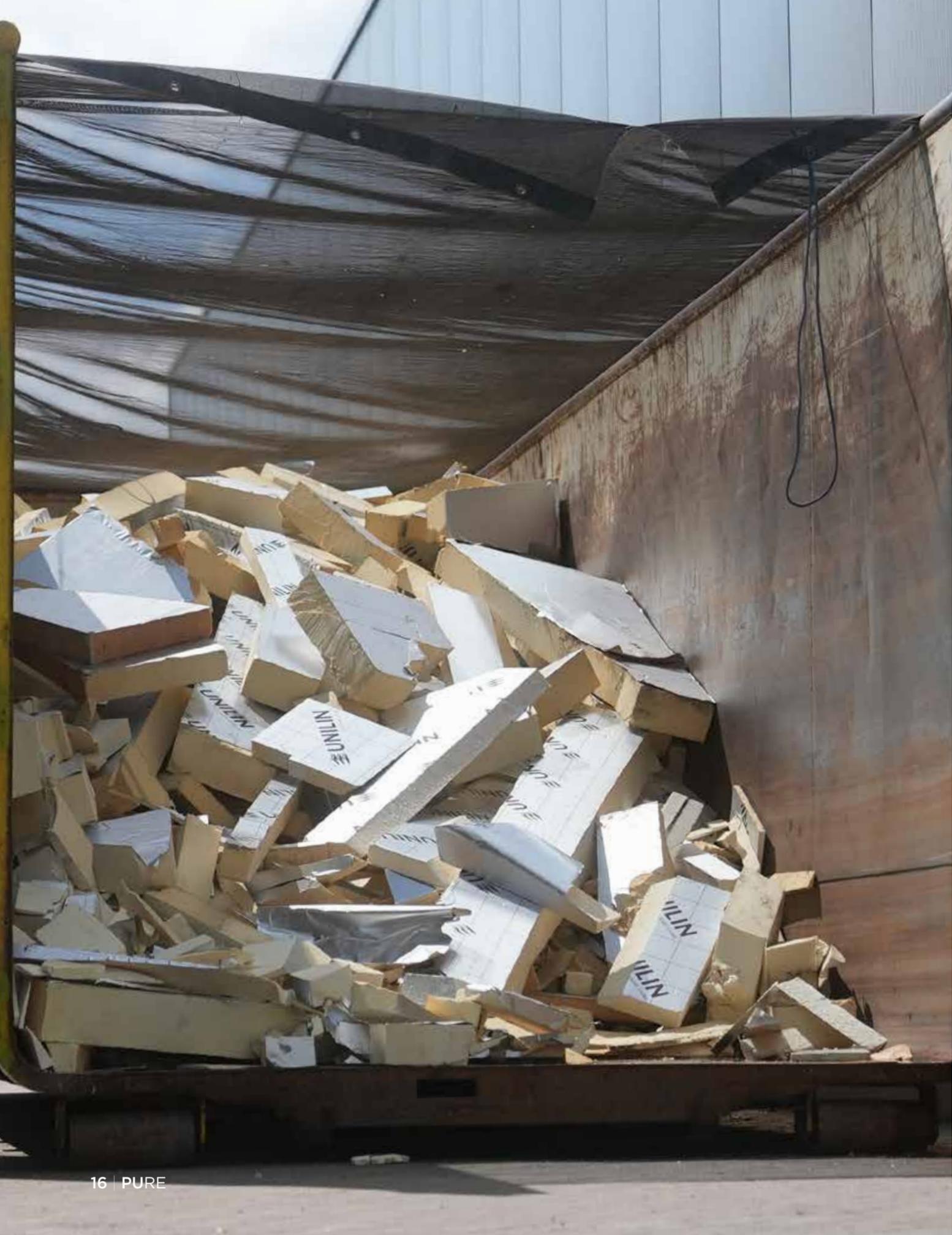
“Not if you look at it that way, no. (laughs) But of course, in reality nothing could be further from the truth. Personally I started here 33 years ago as a young engineer. Entrepreneurship, taking risks, innovating, always looking ahead. That’s how it was when I started out and it still holds true today. We want to be trailblazers. Today we are just that in a variety of areas, especially when it comes to our sustainability ambitions. Take my word for it: here, too, we are writing history together with our 1,000+ employees.”

We want a 0 on our report card!

Yes, we want a 0 on our report card! Odd? No, it's not. In fact, it is with 100% ambition that our 1,000+ workforce is striving for 0% CO₂ emissions and full climate neutrality by 2050.



“Zero production emissions, zero energy loss for our customers and zero industrial accidents. That is our common goal!”



Take-back programme RECOVER takes back construction site waste...

Recover
UNILIN TAKE BACK PROGRAM

Collecting construction waste at building sites or on the company premises to be reused and to prevent landfilling. The 'RECOVER' take-back programme ensures that insulation waste from our Belgian and Dutch customers is taken back.

...and ensures reuse

This way we recycle waste into a reusable product. **Haico Martens** of Martens Dakbedekkingen from the Dutch city of Gemert is happy to contribute to the take-back programme. "In our company we try to sort all waste so that it can be reused. This project ensures that cutting and sawing residue from insulation boards at our building sites is collected in big bags. We also recover the packaging film. All recovered materials end up in the Unilin container on our company premises. This is a practical way of sorting all PU waste and landfilling is now a thing of the past. So sustainable working methods are not necessarily complicated or expensive."

What do we do?

Unilin Insulation takes back all films and PU cutting residue from insulation boards or roof elements. Together with a number of partners we ensure the material is collected in the proper way. For this we place big bags or containers in all sizes at our customers. Full receptacles are replaced with new ones.

This approach prevents landfilling and we can use the waste to make new products. Through mechanical recycling, the collected waste is transformed into compression- and water-resistant insulation boards. A portion is optimally valorised through incineration in the cement industry, with both the calorific value and the mineral ashes being used to best advantage. However, our ultimate goal is to be able to reuse all waste for the full 100%. That is why we take part in such endeavours as the Circular Foam project, to look for a solution to make new raw materials through the chemical recycling of old PU (see p. 30).

recover@unilin.com



Choosing PU insulation products is choosing sustainable construction.

9 reasons why PU is sustainable

02

PU lasts a lifetime

An average building has a lifetime of some 60 years before it is demolished or thoroughly renovated. All that time PU retains both its shape and its insulating qualities.

01

PU has a good insulation value

Thanks to good insulation values, many projects rate much better than expected and even obtain an excellent BREEAM certificate.

03

PU insulates very effectively with only a thin insulation layer

PU is a light insulation material, making it easier to process and limiting transportation costs to a minimum. Moreover, it doesn't take a heavy construction to support the building. Less material = more sustainable building!

04

PU is sturdy

PU is indestructible. What's more, it is impervious to moisture, walkable and always compression-resistant, making it suitable for roofs, floors and walls.

07

PU doesn't produce waste

Together with our partners, such as contractors, we take back all films and cutting residue from insulation boards or roof elements. Through our take-back programmes we ensure the correct collection of the material and reuse it.

05

PU has official Environmental Product Declarations (EPDs)

Our quality is documented by official Environmental Product Declarations (e.g. ATG and CE marking). That means no self-declared sustainability labels but objective and accurate information.

08

PU is suitable for prefab

Unilin Insulation offers a range of prefab roof and wall elements. This reduces the number of transport movements to and from the site, cuts waste and saves more time.

06

The manufacturing process of PU is CO₂ neutral

We aim to make all our plants CO₂ neutral by 2030, amongst others by ramping up our in-house production of renewable energy.

09

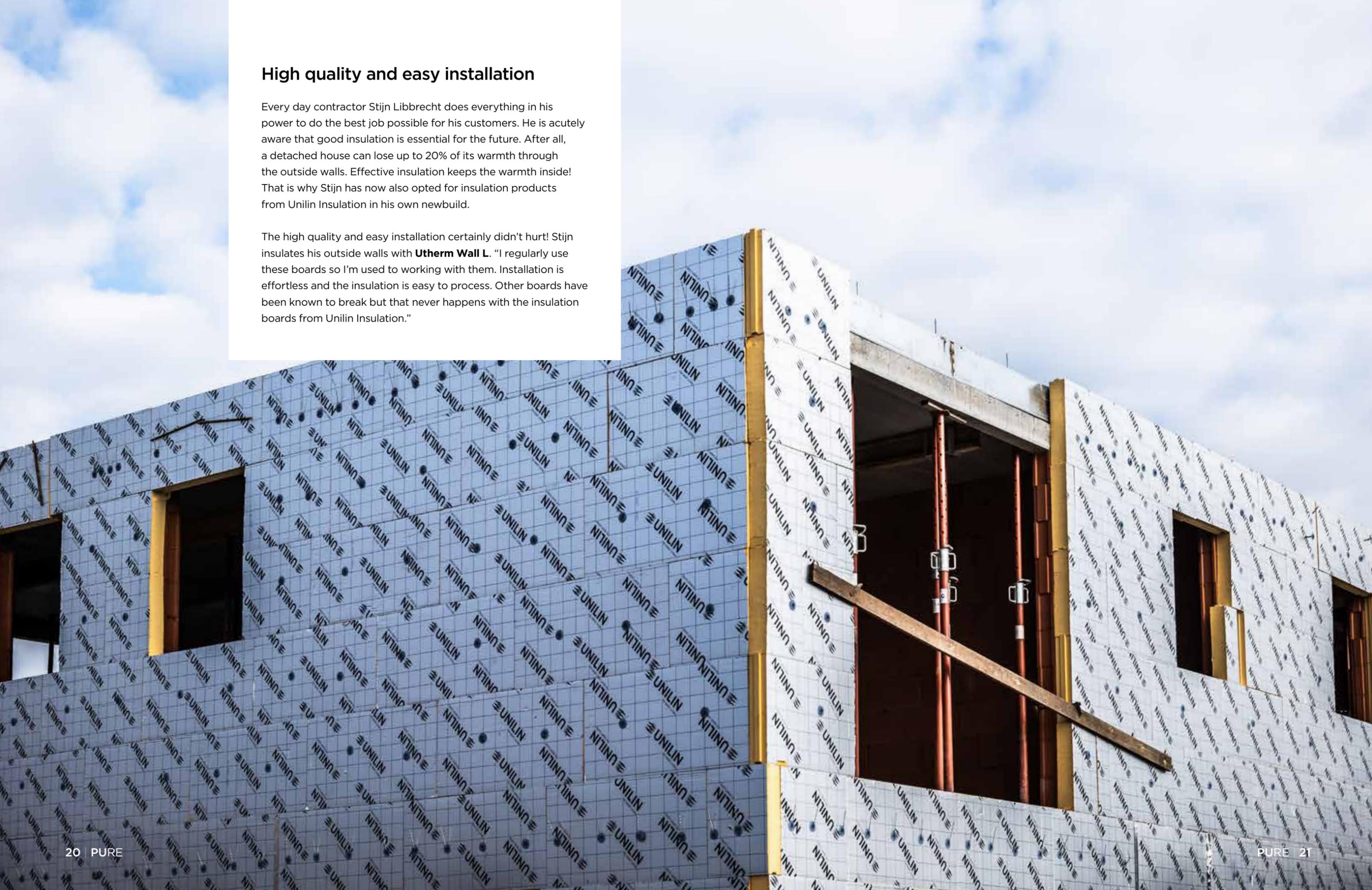
PU becomes recyclable

By 2030 we want to recycle more than 70% of our insulation boards and we can use recycled raw materials to make new high-quality products. Because in a circular economy nothing goes to waste.

High quality and easy installation

Every day contractor Stijn Libbrecht does everything in his power to do the best job possible for his customers. He is acutely aware that good insulation is essential for the future. After all, a detached house can lose up to 20% of its warmth through the outside walls. Effective insulation keeps the warmth inside! That is why Stijn has now also opted for insulation products from Unilin Insulation in his own newbuild.

The high quality and easy installation certainly didn't hurt! Stijn insulates his outside walls with **Utherm Wall L**. "I regularly use these boards so I'm used to working with them. Installation is effortless and the insulation is easy to process. Other boards have been known to break but that never happens with the insulation boards from Unilin Insulation."



Young graduates

Nowadays it's not just what you produce that matters, how you produce has become just as important. We asked three people in their mid-twenties who were hired by Unilin Insulation around one year ago how they contribute to this process.

Rosalie Lapointe

26 y.o., Process Engineer in the R&D division in Feluy (BE) since August 2022

How did you end up with Unilin?

"I am Canadian by birth and met my Belgian boyfriend there. After a long-distance relationship of 3.5 years I decided to move to Belgium and look for work here. I didn't know Unilin but looking it up online I realised it's a company that has everything I'm looking for. I was instantly enthusiastic when I saw what they do with insulation boards. It dovetails perfectly with my master's degree in chemistry and my knowledge of polymers. The attention they give to sustainability made me want to apply for a job right then and there. I didn't even bother to send out any other CVs!"



"The attention they give to sustainability made me want to apply for a job."

Did those topics also come up during your job interview?

"Of course. They told me about the One Home strategy that is implemented on a daily basis to reduce CO₂ emissions and improve the quality of the boards. And that's obvious from the projects as well. My manager showed me in detail what it takes to improve everything that has to do with sustainability, and more specifically how we can realise it."

How important is sustainability for companies?

"Sustainability is crucial. Sustainability can help a businesses grow by setting a good example for the rest of society, which must also become more sustainable. Environmental protection must be a priority, not a choice. And Unilin understands this only too well."

Do you also attach importance to more sustainability in your personal life?

"We do the best we can and that's how it should be. At the moment I still live in an apartment but I've already made up my mind that when I have my own place eventually, insulation will be my top priority, followed by the installation of solar panels. I also made a conscious choice to drive a hybrid car. And naturally we also try to make a modest contribution in our everyday lives: sorting waste, using water and electricity sparingly, etc. I hope everyone feels the same way."



“I am constantly challenged to work more sustainably.”

Mathijs Verweij

25 y.o., Supply Chain Planner
at Unilin Insulation Oisterwijk (NL)
since March 2022

What do you do day in day out?

“I am in charge of the production planning of production line PUD2. In addition to a daily planning I make sure we have sufficient raw materials to manufacture and deliver the various elements - think of chemicals and wood. The latter is always FSC or PEFC certified. I also contribute to a range of projects. For instance, I'll shortly be launching a project to work paperless, amongst others by digitalising the distribution of the planning.”

The manufacturing process is becoming more and more sustainable. What is your personal contribution?

“Management is increasingly focusing on this aspect. The One Home strategy sets goals for our site and our division. Every year they become more strict, which always poses a fresh challenge for myself in my role as supply chain planner. For example, we try to reuse waste streams as much as possible. If reuse is no longer an option we try to recycle those elements as much as possible.”

What do you do in your life to live sustainably?

“By taking my bicycle whenever possible, not just to and from work but also in my spare time. Naturally that's good for the environment but also to stay in shape. (laughs)”

“There's really no ignoring our sustainability strategy.”

Marthe Tack

24 y.o., Marketing Coordinator Export
in Desselgem (BE) since October 2022

Unilin Insulation manufactures products that make for more sustainable living. Did this influence your choice of job?

“It did, actually. My dad is a contractor so I was not unfamiliar with the concept of insulation and what it stands for. I was primarily looking for a company that makes products that appeal to me, that have added value and, if possible, were linked to the construction industry. And I found one.”

Did this come up during your job interview?

“Driving onto the company premises our sustainability strategy is plain for all to see. Anyone who arrives here wonders what that 'zero on our report card' on the office facade is all about. It was also discussed during my interview and I really liked that because not every company does this spontaneously or has such a clearly defined sustainability strategy.”



What is your personal contribution to this strategy?

“As a member of the marketing team it is my job to keep my eyes and ears open in here. Often we are working on wonderful projects around sustainability but we don't communicate this often enough. I am not directly involved in sustainability projects but it is my job to keep up to date on the progress we make and showcase it (externally).”

Is it something you also concern yourself with outside of your job?

“I think many people concern themselves with the subject these days. My generation in particular. We sort very actively at home, we have a compost barrel and chickens. I also take leftovers to work whenever I can, it's cheap and nothing goes to waste. Also when I'm shopping I try to avoid products with too much packaging.”

By 2025 all our packagings will be 100% circular



Good insulation saves money and benefits the environment. As a manufacturer of insulation boards we contribute towards this goal on a daily basis but we also look to the next step. We aim to make our production methods fully climate neutral and our new packaging is an important step in this regard.

By 2025 all our packagings will be 100% circular. For Utherm, our product with the greatest packaging stream, this is already the case. The transparent packaging film currently consists of at least 35% recycled material and, as a whole, it is fully recyclable, saving around 600 tonnes of CO₂ per year.

“A simple intervention now saves some 600 tonnes of CO₂ per year.”

The switch to this transparent film didn't happen overnight. In recent years we had already started to do more with less packaging material. For instance, we reduced the thickness of our stretch and shrink films by 30%, allowing us to make the switch to recycled material today. Thanks to these efforts, we have reduced the percentage of new raw materials by 60% and eventually this will be 100%.

Transparent packaging greatly benefits the environment

“Until recently, our Utherm insulation boards were packaged in a white film printed with the Unilin Insulation logo. The film in itself was recyclable but it was far from easy. By making the film transparent and using less ink it is now not only more environment-friendly but also much easier to recycle”, says Aster Onderbeke, Sustainability Engineer at Unilin Insulation. “So an intervention that seems simple at first sight can make a major positive impact.”

Well-considered choice for satisfied customers

Naturally this circular film had to be of the same quality as its predecessor so we sought thorough advice on its composition. We consulted extensively with our suppliers and also listened to the needs of our customers. We knew that this way we would not compromise on quality, to the contrary even.



Sustainability Engineer Aster Onderbeke: “Our circular packaging is a major step towards climate neutral production.”

CO₂ disappears like snow in the sun

In our transition from fossil fuels to 100% renewable energy the sun also plays a key role. Three of our eight production sites (Desselgem (BE), Chesterfield (UK) and Navan (IE)) have already installed solar panels on their roofs. Together they account for 14,657 panels with an output of 6.0 Mwp, the equivalent of the annual energy consumption of some 1,400 homes.

650 tonnes of CO₂ less

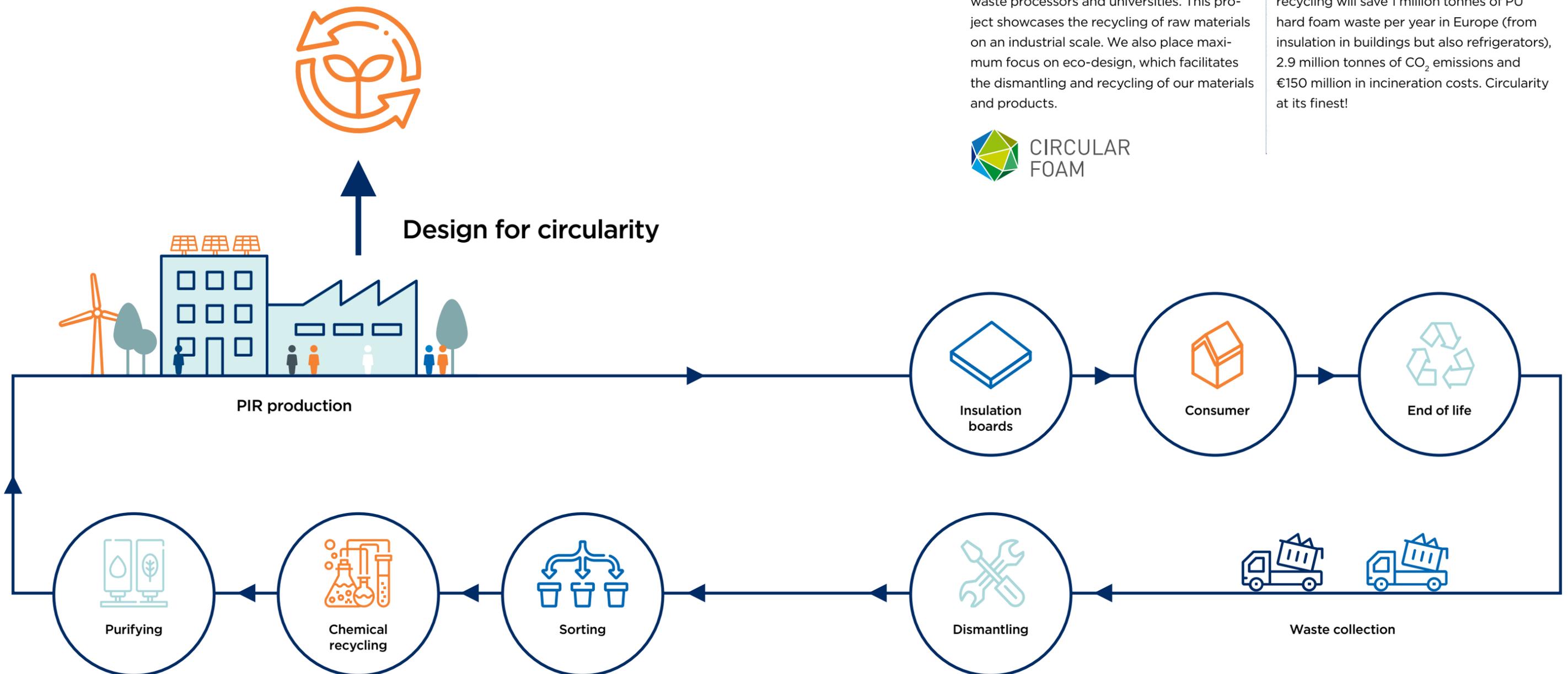
These panels have reduced our emissions by some 650 tonnes of CO₂. And there are even more projects for the in-house production of renewable energy in the pipeline. In the coming years they will further reduce our CO₂ emissions with a single goal: reducing our emissions to zero by 2030.

Circular Foam: European research project to make recycling possible

No loss of quality

Fully recycling our insulation products, that is our ultimate goal. Because in a circular economy nothing goes to waste. That is why we invested in a polyol reactor (see p. 4) that turns waste streams into new raw materials. And it is also the reason why we participate in European research projects such as **Circular Foam** together with industrial companies, waste processors and universities. This project showcases the recycling of raw materials on an industrial scale. We also place maximum focus on eco-design, which facilitates the dismantling and recycling of our materials and products.

This should help us recycle more than 70% of our insulation boards by 2030 as chemical recycling enables us to recover used raw materials. This will significantly lessen our need for new fossil fuels without compromising on quality. In turn, this will not only reduce waste streams but also signifies a major step towards climate neutrality. Because by 2040, recycling will save 1 million tonnes of PU hard foam waste per year in Europe (from insulation in buildings but also refrigerators), 2.9 million tonnes of CO₂ emissions and €150 million in incineration costs. Circularity at its finest!



A day in the life of...

Krzysztof Kotowski, team leader roof elements Desselgem (BE)

Some twenty years ago, love made Krzysztof Kotowski (45) leave his home country of Poland for Belgium. Together they settled on the 'horse city', Waregem, a decision motivated in part by their love of these noble animals. Last year Krzysztof joined Unilin Insulation in neighbouring Desselgem as team leader roof elements, a career switch he hasn't regretted for a single second.

Krzysztof alternately works the early and the late shift. For one week we tagged along in the late shift (from 1-9 p.m.), which doesn't mean he doesn't have to get up early.

The alarm goes off, get up, make breakfast, drop the children off at school.

7 a.m.



8.30 a.m.

The late shift means he has the morning off. Krzysztof puts the finishing touches on his spaghetti sauce so dinner is ready, he mows the lawn because it's much too long, checks his mails and enjoys a cup of coffee.

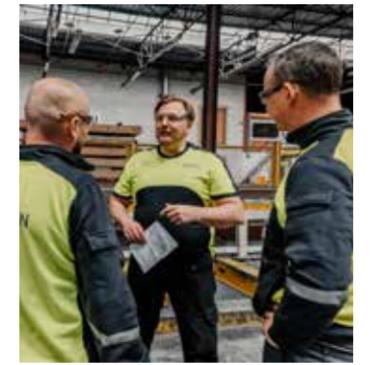


He loves horses but he mounts his iron steed to go to work, in this case an e-bike. Good for the environment and his health.

12.20 p.m.



12.45 p.m.

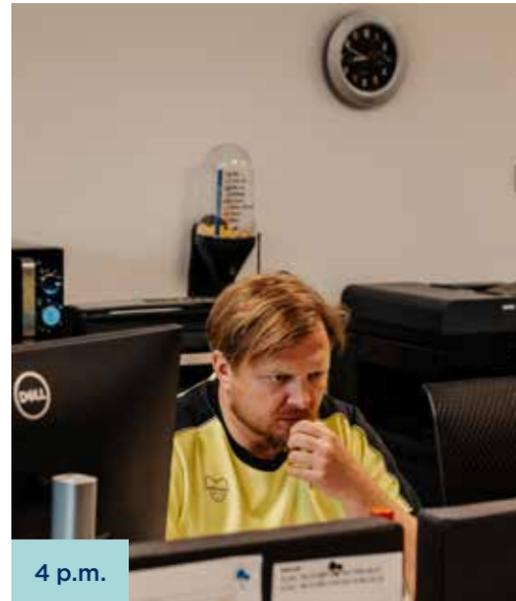


Krzysztof always comes in to work early so he has time to confer with the team leader of the early shift. Naturally he first puts on his work clothes and safety shoes: safety first!



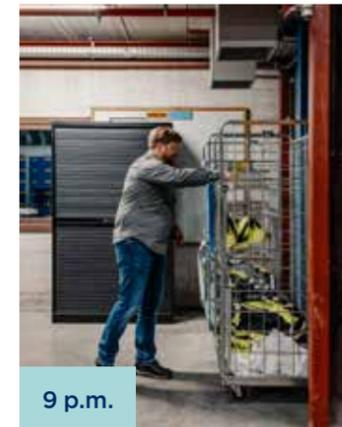
1 p.m.

Krzysztof starts his work day by visiting all workstations and talking to his colleagues. As team leader Krzysztof coaches some 15 employees. He checks if everything is going according to plan and monitors the production process.



4 p.m.

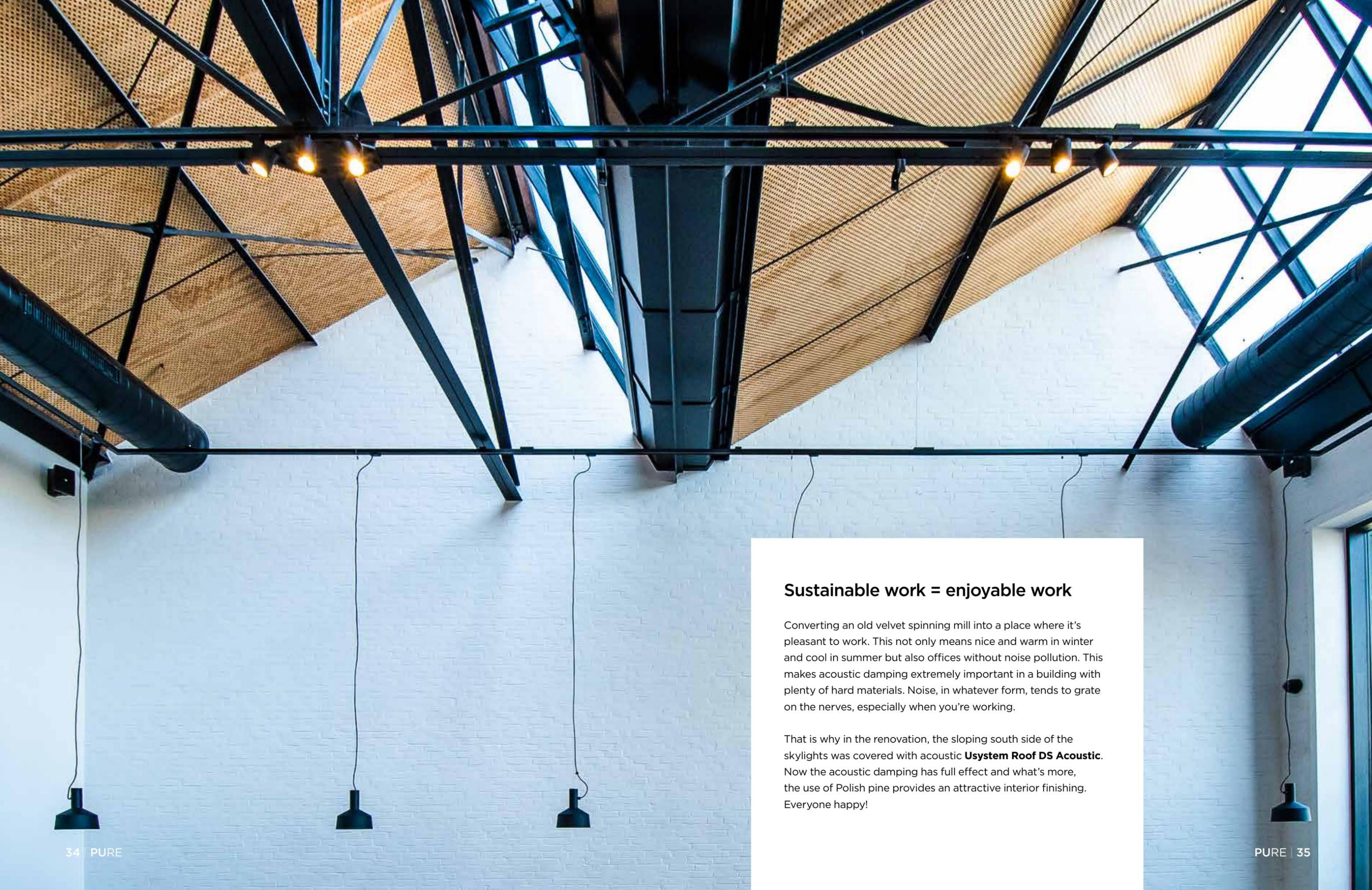
Being a team leader also means: putting together the staff planning, carrying out quality control, assisting in the rollout of internal procedures... Krzysztof is no stranger to spending a few hours in front of a computer. The odd cup of coffee keeps him sharp and alert.



9 p.m.



Krzysztof's shift has flown by. Change clothes, clock out, retrieve his fully charged e-bike from the bicycle shed and return home safe and sound. See you tomorrow!



Sustainable work = enjoyable work

Converting an old velvet spinning mill into a place where it's pleasant to work. This not only means nice and warm in winter and cool in summer but also offices without noise pollution. This makes acoustic damping extremely important in a building with plenty of hard materials. Noise, in whatever form, tends to grate on the nerves, especially when you're working.

That is why in the renovation, the sloping south side of the skylights was covered with acoustic **Ussystem Roof DS Acoustic**. Now the acoustic damping has full effect and what's more, the use of Polish pine provides an attractive interior finishing. Everyone happy!



Dive into our brand-new training centre

More than 1,000 employees at Unilin Insulation put their best foot forward every single day. To nurture existing talents and recruit new ones, we built a brand-new training centre in Wielsbeke (BE): The Dive. An investment of €2.5 million that symbolises our overall vision on personal development, training and education.

“With The Dive we nurture our talents while recruiting new ones.”

Lifelong learning, from school bench to workbench

For many years now, Unilin has attached great importance to learning on the work floor. After all, the idea of only recruiting those candidates who meet all the job requirements is completely outdated. Talent scouts Lies Langedock and Sarah Van Marcke know why: “When we feel there is a match between our company values and those of the candidate, we train them on the work floor. In addition, we also make sure they stay with us by continuously offering training courses. The Dive harnesses all the knowledge we’ve gained in recent years on the subject of learning and development. The training centre caters to all the questions our employees have regarding their career and training. One example is the in-house programme that trains operators to carry out basic technical tasks such as setting or replacing sensors. This way they can develop their technical skills and technicians have the opportunity to take on more complex tasks.”

Talent as a success factor

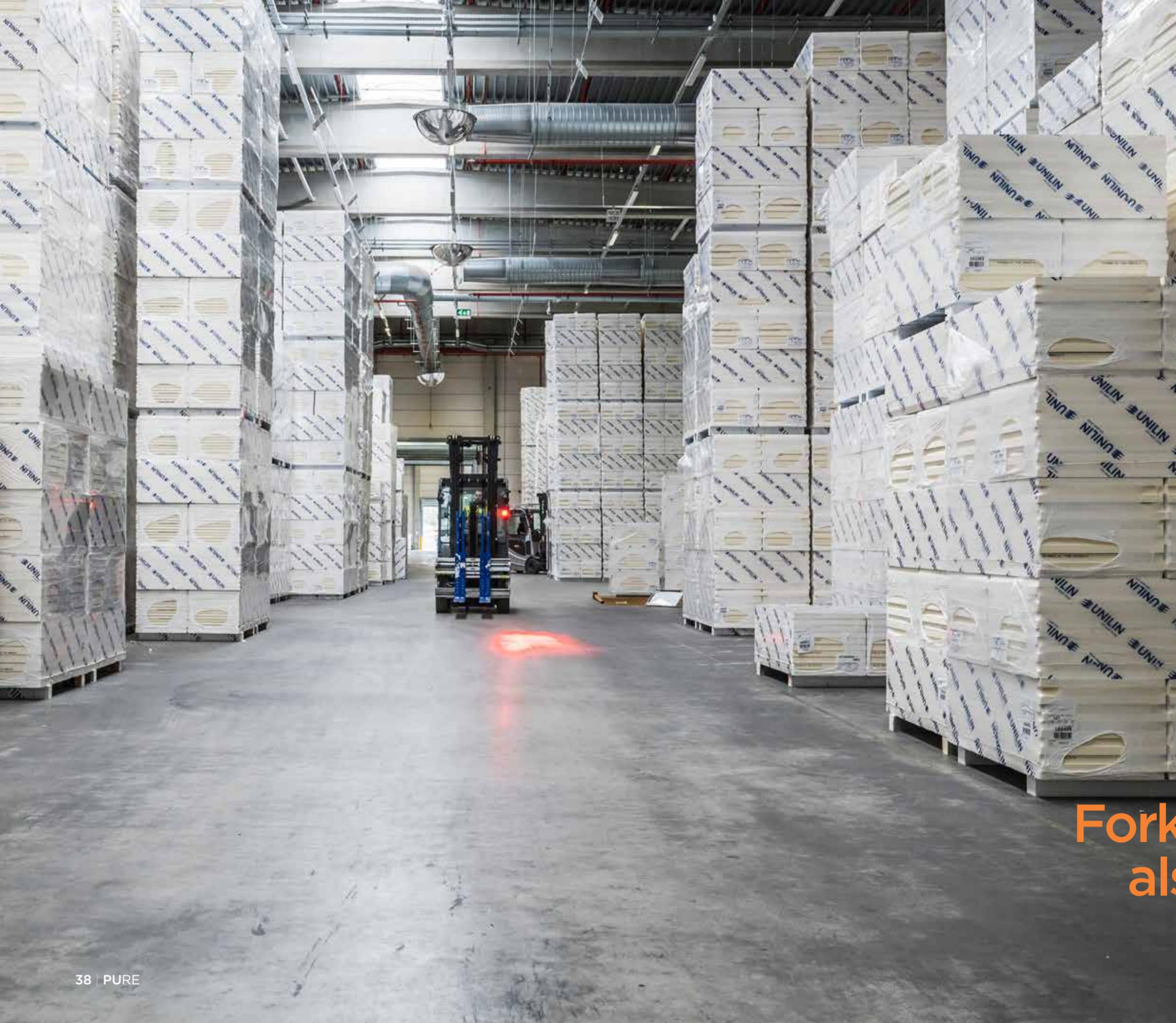
However, in our philosophy training doesn’t start when a new colleague joins our firm, it starts at school. Through intense collaboration with secondary schools and institutions for higher education we stimulate talent to opt for a career in the manufacturing industry.



“Education and training are no longer the sole responsibility of our educational system”, Talent Director Nick Leenaert explains. “The industry itself can also play a vital role. Technology evolves so fast. It isn’t possible for schools to always be up-to-date on the latest gadgets and machines. But in our company students can acquire hands-on experience with the latest technologies under the watchful eye of experienced employees. The Dive will also make a helpful contribution in this regard.”

Unilin Group’s CEO Bernard Thiers sees nothing but benefits: “Manufacturing in Europe is and will remain expensive so the only way to be competitive is to bank on our strong sense of innovation and absolute quality. And if we want to continue to lead the market, our people are a crucial asset. They drive our innovation and entrepreneurship. In other words, education and training make all the difference. With The Dive we are not only ready to keep our current employees learning throughout their career, it is also an asset for finding new colleagues that fit the mould.”

jobs.unilin.com



Meanwhile electric mobility is becoming commonplace at and around our production sites. Most forklift operators have traded in their LPG or diesel model for an electric version. By 2030 all fossil fuels must be eliminated.

Nothing but benefits

An electric forklift truck is obviously emission-free. Even the overall CO₂ footprint (production, power generation, ...) is much lower than that of a forklift truck on fossil fuel. In addition, these forklifts contribute to a healthier and safer work environment. It's goodbye and good riddance, not just to CO₂ but also to such emissions as carbon monoxide and sulphur. What's more, an electric forklift is quiet, improving interpersonal communication and reducing noise stress. And they are also much safer: when the driver takes his or her foot off the gas, the forklift stops quickly, which diminishes the risk of industrial accidents. It's clear: electric mobility brings nothing but benefits.

Forklift operators also go electric

Prefab is synonymous with efficient, easy and sustainable building

Prefab or off-site building is becoming increasingly popular. Not just because the construction process is significantly faster but it is also much more sustainable. The roof elements or wall systems are entirely assembled at the plant and delivered ready-made, resulting in zero construction site waste. Prefab also involves less transport to the worksite (and therefore less CO₂ emissions) and facilitates reuse at the end of the life cycle. It is the perfect method for fast, custom-made and climate-conscious building.

Plug & play!

Realising three one-family and two lifetime homes in the Dutch city of Beetgum, in an efficient manner. The prefab elements (wall and roof) of Unilin Insulation made this possible. Light SIP wall elements were used, fitted with high-quality PIR insulation, that are easy to install, even without a building crane. Moreover, the entire construction can be disassembled in keeping with the circular construction guidelines for 2050.

Used products:
Ussystem Wall DS



Processing of elements went smoothly and with zero waste

Building a home with a ready-made roof sturdy enough to install an additional thatched roof on top is quite a challenge but the installation with the Unilin Insulation roof elements in Moergestel (NL) went smoothly and the right insulation values were achieved. Additional benefit: the prefab roof elements are always delivered made-to-measure. This means no further finishing and therefore no construction site waste.

Used products:
Ussystem Roof DS Easy Airtight
Ussystem Roof PR RBD





Prefab is a sensible choice

In the Dutch town of Hilvarenbeek the roofs of an entire new-build quarter were realised with roof structures from Unilin Insulation. Complex homes that were built fast and efficiently thanks to the prefab elements. The roof elements are supplied as standard with a painted white visible side so that both insulation and finishing are ready in one go. The high insulation value and airtight construction significantly reduce energy consumption, saving the residents hundreds of money.

Used products:
Ussystem Roof PR FAS



Futureproof renovation

For a renovation project involving a 1950s home near Boxtel (NL), the roof was replaced in its entirety. The new roof was built using roof elements and a prefab dormer window from Unilin Insulation. As a result the property offers all the residential comfort of a newbuild thanks to the prefab elements, with good insulation value and integrated finishing. Bring on the future!



Used products:
Ussystem Roof SW Light Plus
Ussystem Roof PR RBD

Super insulating roof for supermarket

A roof with a surface area of 2,350m², extremely sustainable and highly insulating. That was the assignment for the flat roof of the new branch of a well-known supermarket chain in Oisterwijk (NL). The exceptional insulation value was supplied by the Unilin **Utherm Roof L insulation boards**, PIR insulation with a thickness of 142mm. The contractor was also very enthusiastic: "Utherm Roof L is very pleasant to work with. It is exceptionally manageable due to its low weight, it fits well, and it's easy to process. Moreover, per board you're installing almost three square metres so you can work quickly."



Combining PIR and other materials for even better insulation

Choosing the best insulation method possible is important for construction and renovation firms and for architects. PIR is known for its favourable insulation value but when combined with other materials, this value is even higher.

It will come as no surprise that the insulation of a building impacts the energy performance, comfort, noise levels and environmental protection. But the question is: what is the best insulation? The answer to that question consists of just three letters: PIR. And in combination with other materials PIR becomes even more effective.

What is PIR and how do we combine it?

PIR stands for polyisocyanurate, a solid type of foam with optimal insulation performance. The λ value is situated between 0.022 and 0.027 W/mK. This means a higher insulation value for the same thickness. In other words: PIR saves space without compromising on insulation performance. Combining PIR with other materials makes the insulation even better. For instance, a combination with mineral wool for better noise protection or acoustics depending on the product, or with wood fibre for better noise protection and higher comfort in summer. PIR can also be combined with glass fabric: an ideal soundproofing solution between apartment floors or dividing walls



The Ussystem Roof DS Acoustic is a combination of PIR and mineral wool, the perfect combo for noise protection and thermal comfort.

between individual dwellings. Why don't we ask customers and professionals who opted for one of these combinations to tell us all about it?

PIR and wood fibre for optimal sound absorption, perfect airtightness and energy savings

Older dwellings are usually not optimally insulated, in particular the roofs, through which a great deal of warmth is lost. The best solution in such cases is **Utherm Sarking L Comfort**. Just ask Alexandre Philippe, who used it in his home near Wavre (BE). The combination of PIR and wood fibre is also ideal to insulate roofs on the outside so no room is lost in the attic. On the contrary. And that is not the only benefit: wood fibre boards offer upwards of 10 dB in sound insulation but can also act as an underlay to make the roof water- and windproof and create an uninterrupted insulation shield. No more thermal bridges! An ideal solution from a sustainability standpoint that also saves energy, especially if you consider that Unilin Insulation is striving for CO₂ neutral production by 2030!

PIR and glass fabric for optimal warmth and sound insulation

And then there is the construction site in Strasbourg (FR) where the company Technochape opted for **Utherm Floor K Comfort dB** and a combination of PIR and glass fabric for the thermal and acoustic insulation of a detached home. This solution is also highly practical for the installers. "This product represents a wonderful, advanced technology allowing us to install two products (heat and sound insulation) at the same time", says Cédric Zisswiller of Technochape. "What convinced me is the fact that in addition to more comfort and time gains during installation, these boards also come with noise protection benefits. In this case up to 3 dB, which is quite impressive."

Utherm Sarking L Comfort boards have a wood fibre sarking board on one side with a thickness of 35 mm. This is how you create optimal acoustics.



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For our customers, our employees and our planet.

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