INDAVER

Working together on a

circular economy

SUSTAINABILITY REPORT 2023

PAUL DE BRUYCKER
INDAVER CEO

"In 2023, Indaver continued to be a shining example of stability and guaranteed its essential service provision in a safe, sustainable and unique way."

How we are accelerating the transition to a circular economy - here and now

Dear reader,

We are building a more sustainable future together. Furthermore, the contours are slowly but surely becoming clear. The sources we use for our energy, how we use raw materials more efficiently, what is needed to protect people and the planet... Everything is in a state of flux. And a lot of this relies on the growth of the circular economy - an evolution we fully embrace.

But we're not there yet. When it comes to circularity, there is plenty of talk and not enough action. In Europe, this is due to external factors such as geopolitical unrest and strong competition from Asia and other regions.
On the other hand, we could also do better ourselves. Therefore, in early 2024, I signed the 'Antwerp Declaration for a European Industrial Deal', a ten-point plan that supports a new legislative spirit, a smarter innovation framework and a stronger internal market among other things.

Indaver wants to be a beacon of stability, vision and decisiveness in this context. Because that's what we need to move towards a prosperous, self-sufficient and sustainable European society.

So, how do we achieve this? By profiling ourselves as more than just a waste treatment company. Indaver is also a supplier of circular raw materials and energy with a comprehensive service to our clients. Moreover, we ensure the safety of the circular economy by responsibly breaking down and securely storing hazardous components. Lastly, we pride ourselves on being a leader in raising awareness, driving innovation, and inspiring change.

This changing role - whilst maintaining our constant theme of creating optimum value from waste - is something we want to enhance and expand on in the next few years.

We are actively embracing our responsibility to expedite the shift towards a circular economy, both immediately and locally. This commitment is evidenced through numerous effective partnerships and cutting-edge methods, which we are constantly enhancing to better safeguard both people and our environment. However, the lion's share of the credit belongs to our dedicated staff, whose daily efforts bring sustainable waste management to life. Their collective drive to impact society positively is the real strength of Indaver.

In this sustainability report, you will discover exactly how that was achieved and ensured growth in 2023.

Happy reading,
Paul De Bruycker, CEO

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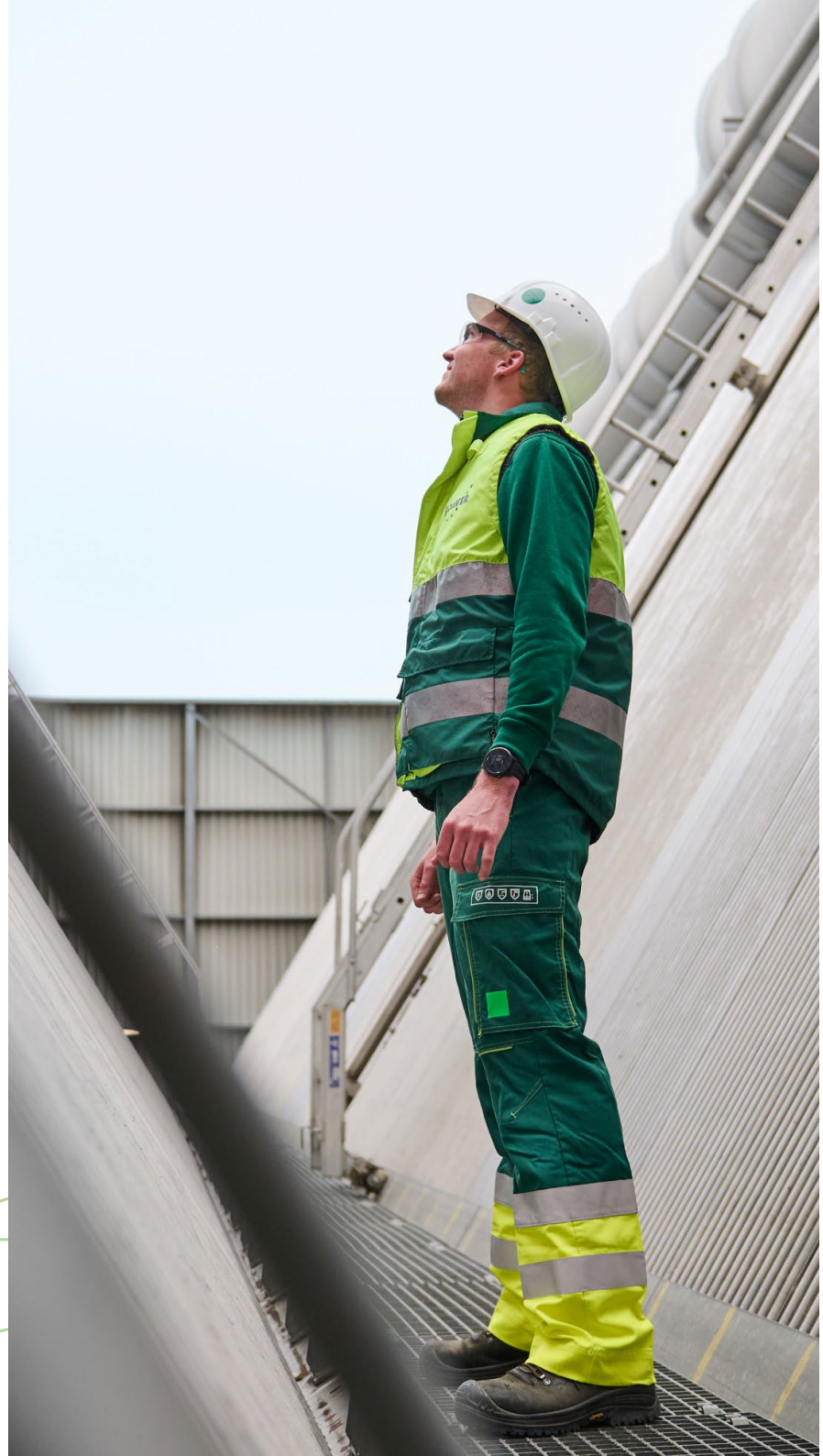


6 takeaways from 2023

1

#Cooperation

We are increasingly looking for opportunities to cooperate, even within our own sector

Alone you go faster, together you get further. To speed up the transition to a circular economy, we need even wider cooperation between companies, knowledge institutions, trade unions and governments. Indaver is a pioneer in this.

For instance, with our ECLUSE steam network (Belgium) we are focusing on supplying sustainable energy for the surrounding businesses and increasingly joining forces with players from other sectors. Such as our joint venture with Besix Group, in which we work with the FOSTER (Belgium) facility to recover energy from the sludge that remains following domestic wastewater treatment.

2

#Growth

Our determination and vigour are bearing fruit

Since Indaver was founded in 1985 - almost 40 years ago - our mission has remained virtually unchanged. Sustainable waste management is still the driving force behind our growth, and through continuous improvement we also get stronger at what we do every year.

A selection of the milestones we have reached in 2023: The construction of our waste-to-energy plant in Essex (UK) is well under way. We started a Energy-from-Waste plant in Aberdeen (UK). The first heat deliveries were supplied by the Antwerp North Heat Network and we brought the Indaver Solvents (UK) site in line with our quality, safety and other standards.

6 takeaways from 2023

3

#Responsibility

We are committed to our social role
We do this not only by minimising the impact on people and the environment in all our activities, but also by coming up with effective solutions for new or complex waste streams. The best example is our approach to the treatment of Substances of Very High Concern.

At the Antwerp (Belgium) site, for example, Indaver destroys PFAS-containing waste at high temperatures with a very high destruction efficiency. External risk assessments show that environmental safety is not compromised by our safe sink solutions.

4

#innovation

We spot opportunities where others see challenges
Industrial companies play an undeniable role in the transition to a circular economy by acting as drivers of innovation and upscaling. In 2023, Indaver positioned itself as a thinker and a doer, more than ever before.

For example, with our innovative Plastics2Chemicals project (in Belgium), we are opting for high-quality chemical recycling of end-of-life plastics. We are also exploring opportunities to recover precious metals and energy from new waste streams.
And at our waste-to-energy plant in Meath (Ireland), we will focus on hydrogen production to further enhance the sustainability of the energy system.

6 takeaways from 2023

5

#Agility

Unpredictability doesn't knock us off course

In our industry, it's not feasible to cling rigidly to one vision of the future. The speed of change in our society, often unpredictable, simply doesn't allow it. The crucial factor is our ability to respond swiftly, a skill we demonstrated effectively in 2023.

How do we tackle labour shortages, complex legislation, and other challenges? Through customer-focused business lines that support one another and, most importantly, with a versatile, curious, and inventive team that embodies our core values. The success of Indaver in meeting significant social objectives and achieving robust financial outcomes is all thanks to them.

6

#Care

People, climate and the environment are our priority

Concerning our core activities, we limit the impact of waste on people, the climate and the environment. Within those three domains, we want to provide both optimal protection and make a positive contribution. This is how it's done...

We recover high-quality raw materials which society needs.
We also supply energy to businesses and residential areas from our waste-to-energy plants. In doing so, we monitor air, soil and water quality and pay attention to biodiversity. Finally, transparency, open communication and knowledge-sharing are a priority.

INDAVER INSIDE OUT

INDAVER INSIDE OUT

Indaver has been a reliable partner in ecologically and economically responsible waste management for industry, local and national governments in Europe since 1985. As a partner, we can take on large parts of the waste management chain, from on-site service provision to final treatment. Important: during all our activities, we maximise material and energy recovery.

Indaver by numbers

OUR PEOPLE

Over **2,000 colleagues** supporting a circular economy.

A culture built on **5 core values.**

OUR OPERATIONS

Value creation in **9 countries.**

The management and treatment of **5.1 million tonnes of waste** by 2023.

OUR BUSINESS

Cooperation with **governments and large-scale industry** in Europe.

Strong finances with an **EBITDA** of **€184 million** (2023).

Indaver by numbers

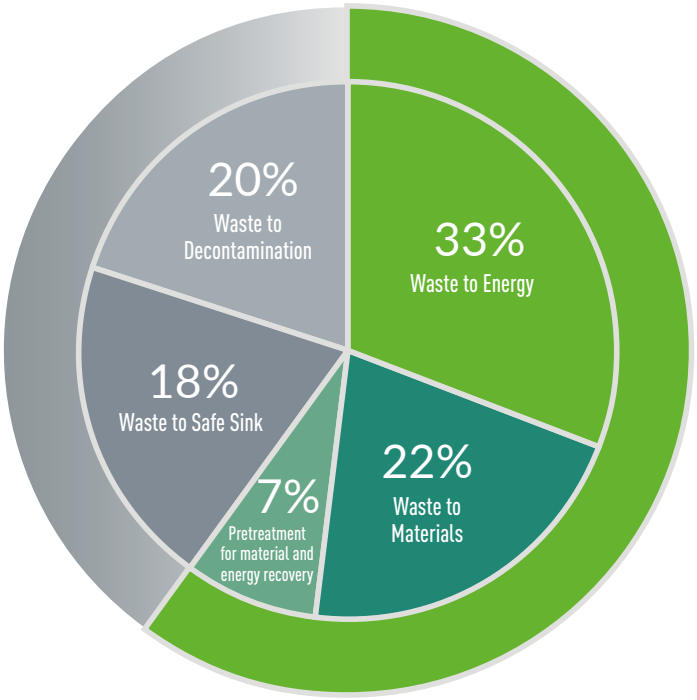
Volumes Managed

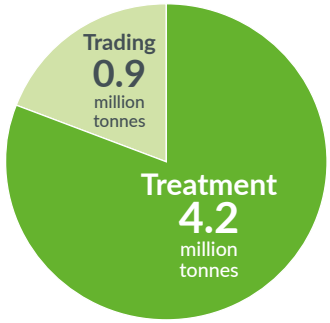
In 2023, Indaver managed 5.1 million tonnes of waste. We treated 4.1 million tonnes of this in our facilities and 1 million tonnes with third parties.

62% We treated 62% of the waste products with an emphasis on recycling **materials** and finding useful applications for the **energy**.

20% We treated 20% thermally, to break up the **hazardous components** at high temperatures or to neutralise them through physicochemical treatment.

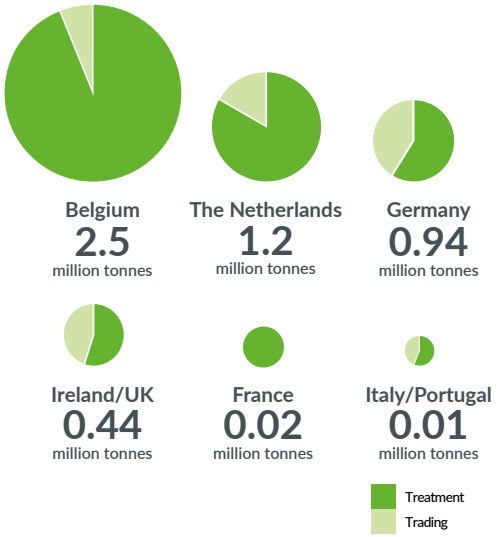
18 % We store 18% of the waste products **safely and sustainably** on our landfill sites.





TOTAL VOLUME OF WASTE MANAGED

5.1 MILLION TONNES



Why does Indaver exist?

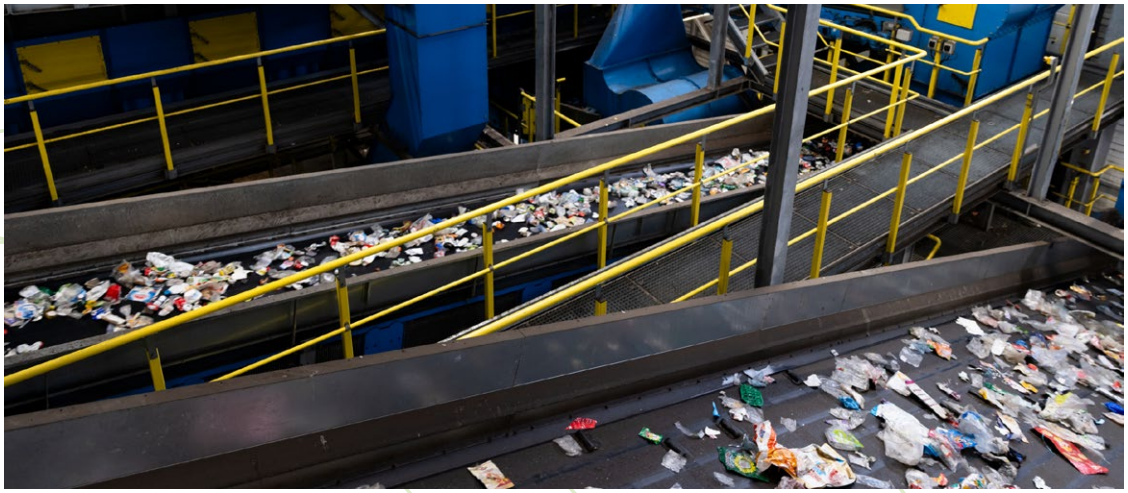
Because we are convinced that value creation from waste streams is essential to ensure well-being and prosperity in the Europe of tomorrow. Our approach therefore offers a vital response to resource scarcity, energy dependence, pollution and climate change.

Recovering and supplying raw materials

Humans use twice as many natural resources as the earth can regenerate each year. As a result, we're depleting these resources. In addition, Europe is too dependent on the rest of the world for the supply of materials required to meet our climate and sustainability goals.To get back within safe limits, the transition to a circular economy will be crucial.

Indaver is taking the lead with sustainable waste management. We invest in high-tech facilities and innovative processes to recover valuable and/or rare materials from a variety of waste streams, ready to be used in new applications. So quality is key, but so is volume. By way of illustration, thanks to our industrial scale, we were able to treat over 1 million tonnes of waste for recycling in 2023.

Read more about how we recover energy from waste.



Our recycling centre for PMD waste in Willebroek recovers valuable materials.

Turbines turn steam into electricity.

Generating and supplying energy

Europe's dependence on energy has become painfully clear in recent years. As a result, the energy transition has now really begun. That transition should provide our society with affordable, reliable and clean energy. Moreover, this revolution is also one of the cornerstones of the fight against climate change. We need to move away from fossil fuels, as was decided at COP28 in late 2023.

Indaver plays a meaningful role here too. Our facilities produce energy from the waste treatment process. We use that energy for our own processes in the form of steam and electricity. Moreover, we supply heat, steam and electricity to businesses and residential areas through dedicated networks. Consequently, in 2023, we produced the equivalent of the annual energy consumption of around 265,950 households.

Read more about how we recover energy from waste.

Why does Indaver exist?

Protecting people and the environment
To maintain the momentum of the circular economy, it's crucial to extract pollutants from the cycle. These include hazardous or otherwise unwanted fractions. For example, heavy metals (such as mercury), substances of Very High Concern (such as PFAS), asbestos and hazardous medical waste. To protect our material and food chains, Europe needs players who will take on this challenge with the necessary vigour, expertise and vision.

Indaver guarantees safe solutions. Depending on the type of waste, we either destroy these fractions at high temperatures or we neutralise the hazardous components. We store the unavoidable residual fractions in our special, purpose-built landfill sites. With these Safe Sink solutions, we keep the chains pure.

Read more about our Safe Sink solutions.

KARL VRANCKEN
CHIEF SUSTAINABILITY OFFICER

"By providing good quality raw materials and clean energy, we act as an enabler of the circular economy. Because we also remove polluting substances from chains, we are also a gatekeeper of the circular economy. We want to further expand that dual role. We support a sustainable future for and with our customers."

We safely store residual waste at our landfill sites.

Why does Indaver exist?

How Indaver creates value from waste streams

Indaver is both an enabler and a gatekeeper in the circular economy. An enabler because we lengthen and close chains, a gatekeeper because we keep chains safe. This is what that looks like in practice.

GATEKEEPER

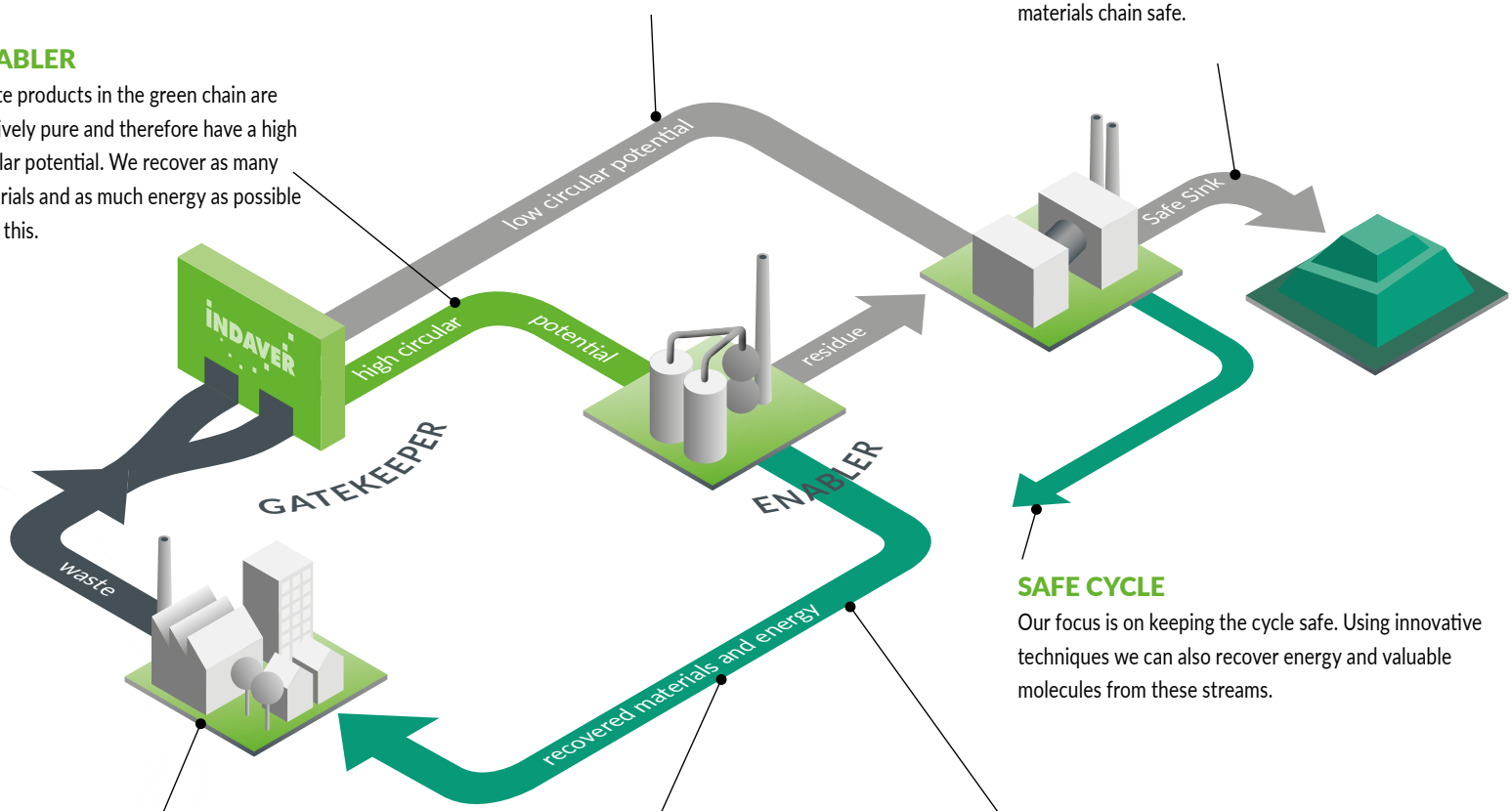
Waste products in the grey chain contain hazardous substances, also known as contaminants, and have a low circular potential.

SAFE SINK

With specialist facilities we guarantee a 'safe sink': we destroy and/or neutralise all hazardous substances or store them safely in a landfill, thus keeping the materials chain safe.

ENABLER

Waste products in the green chain are relatively pure and therefore have a high circular potential. We recover as many materials and as much energy as possible from this.



SAFE CYCLE

Our focus is on keeping the cycle safe. Using innovative techniques we can also recover energy and valuable molecules from these streams.

62%

55% processed for material and energy recovery.
7% pre-treatment for material and energy recovery.

WASTE

Businesses and households produce waste. Indaver provides a sustainable solution.

MATERIALS

Maximum recovery of high-grade materials.

ENERGY

Maximum recovery of energy in the form of steam, electricity and heat.

What are our ambitions?

Indaver wants to continue leading the way in sustainable waste management. This is how we implement sustainable waste management for different target groups:

For our customers
we want to offer industry and governments even more complete, more sustainable, safer and more cost-effective total solutions to provide optimum peace of mind.

For our staff
we want to be a value-driven employer that offers employees a safe, meaningful and pleasant work environment, with a view to sustainable employment.

For society
we want to fulfil our role optimally, as an enabler and a gatekeeper of the circular economy, for a diverse range of waste streams, by continuing to invest in innovative facilities and processes.

For our business partners
we want to be a reliable and valuable partner for players within and outside our sector by realising joint ambitions in the most efficient and effective way.

For investors and shareholders
we want to keep responding to changes in the market quickly and appropriately, so that we can continue our trend of growth and continuous improvement into the future.

PAUL DE BRUYCKER
INDAVER CEO

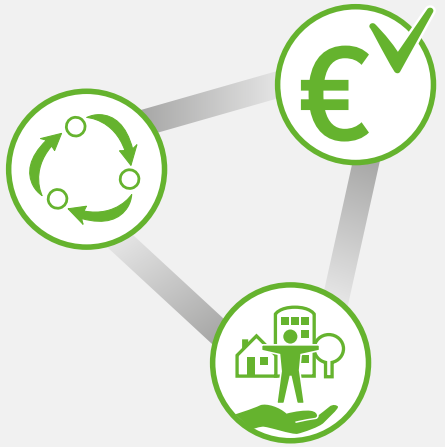
Indaver strives to close materials loops in the most CO_2-efficient and energy-efficient way. This is the only way we can maintain prosperity and well-being in this world.

The sustainable foundations of our value proposition

Our activities always need to fulfil three aspects of sustainability: social, ecological and economic. These aspects influence each other, complement each other and sometimes conflict with each other. Indaver reviews them constantly to ensure they remain in balance and that our business activities are still sustainable.

These complementary requirements are vital:

#1 Maximum recovery: we work with the Best Available Techniques.
#2 Right price: we work towards a cost-effective solution.
#3 No risks: we work on the basis of maximum quality and safety, without negative consequences for people, society and the environment.



How do we achieve our ambitions?

With Indaver, businesses, governments, industries and waste collectors can rely on almost 40 years of experience in sustainable waste management. Furthermore, we offer them a wide range of expertise and solutions. We translate that experience and expertise into sustainable total solutions, so that customers can focus on their core business.

How do we achieve our ambitions?

Proactively responding to new developments

The EU generates more than 2.5 billion tonnes of waste each year. Exactly what that huge mountain consists of depends greatly on social movements and trends. That means we need to be able to adapt quickly to optimally fulfil our role as enabler and gatekeeper of the circular economy.

To guarantee this agility, we approach our customers through complementary business lines and units. They all promote the same vision of value creation, but do so very specifically for certain target groups and/or in certain work areas.

Name	Target group	Work area
Industrial Waste Services (IWS)	Industry	International
Municipal Solid Waste (MSW)	Public and private sector	The Netherlands, Belgium
Municipal Solid Waste (MSW)	Public and private sector	UK, Ireland
Plastics2Chemicals	Industry	International
Indaver Separation Technologies (IST)	Industry	The Netherlands, Belgium, France
Landfill Reconversion (until 31/12/2023)	Public and private sector	International

From waste to raw material: this is how we close the plastics chain

Naturally, our demo plant in the port of Antwerp is the most visible aspect of Plastics2Chemicals (P2C). But with this project, we are going further than simply constructing and operating a facility to chemically recycle complex plastics into new, high-quality building blocks for industry. Willebroek will therefore soon have a facility for the preliminary treatment of plastics waste and we provide logistics services such as storage and transport. With our P2C facility, we also supply industrial customers with the base chemicals for other applications. In short, we take care of every step in the chain.

Want to know more about P2C? Read all about it here.

How do we achieve our ambitions?

Industrial Waste Services (IWS)

The European total partner for value creation from industrial waste

The IWS business line supports European large-scale industry with Total Waste Management. Here, the focus is mainly on the treatment and storage of hazardous or sensitive components. We remove these safely from the chain. IWS also focuses on maximum recovery of materials from industrial waste streams and on energy generation. We therefore devise tailor-made solutions for each industry. But the common thread that runs through them all is: expertise, safety, continuity, customer satisfaction and sustainability.

Total Waste Management for 4 sectors

Expertise

We supplement our decades of expertise in Industrial Waste Services with new insights from our business development and R&D teams, while collaborations with various knowledge institutions also contribute to our mission. We carry this broad view through to our operations. So, although we build and operate our own specialist treatment facilities, we also work with third parties who excel in specific sub-domains.

Recovering precious metals from liquid waste streams

Antwerp (Belgium) is home to Inda-MP, a facility that recovers metals such as palladium, platinum, rhodium and ruthenium from liquid waste streams. Find out why and how we recover precious metals

Safety

For complex and hazardous waste streams, safety is closely linked to our knowledge of the exact composition of the waste. In simple terms: the greater the insight, the safer our solution is. Our Waste Identity Card helps with this. This provides insight into the composition of the waste and the associated risks, so that we can always use the Best Available Techniques (BAT).

Continuity and satisfaction

Indaver works with industrial customers on a long-term basis. Contracts have a lead time of three to five years. During this period, we respond to the customer's needs as well as possible to guarantee customer satisfaction. We also regularly examine our collaboration more closely. In these face-to-face meetings, we evaluate the operational, strategic and tactical KPIs that we had previously put in place.

How do we achieve our ambitions?

Industrial Waste Services (IWS)

Circularity

By continuing to invest in both existing and new facilities and by making acquisitions, we are systematically expanding our service and processing portfolio in Europe. On the one hand, this helps us to continuously improve our recovery of valuable components from industrial waste, including precious metals and solvents. On the other, thanks to our investments, we are growing even stronger in the appropriate treatment of industrial, complex and/or hazardous waste and thus better protecting people and the planet. Through our hazardous waste treatment facilities, we also supply clean energy directly to industrial partners.

In short, Indaver contributes to a safe circular economy that strives for a non-toxic environment. We work with the customer to draw up a tailor-made plan so that we achieve the highest possible sustainability performance within the contract period.

For complex and/or hazardous waste streams from European large-scale industry, we guarantee the best possible solution in terms of safety, technology, cost and compliance with environmental regulations and other requirements. Furthermore, our solutions cover every step in the chain, including production, collection, transport, transshipment, treatment and recycling, administration and reporting. This makes Indaver a partner in almost the entire waste treatment process as well as a European supplier of raw materials and energy. This is how we are achieving a safe circular economy with and for our customers.

ALEXANDER MEY
SAFETY AND WASTE MANAGEMENT SPECIALIST
AT SCHILL+SEILACHER GMBH

"Thanks to Indaver, we now look at waste management differently"

"We used to dispose of our waste at a treatment facility without giving it further thought. This was mainly a convenient solution. Since our collaboration with Indaver, we have had to know the properties of the waste in detail, to identify the best possible treatment method. During that process, I've learnt a lot about our various waste streams, their qualities, prices and reporting. In short, thanks to Indaver, I now know our waste much better than I could ever have imagined. Their transparency and knowledge of complex industrial waste has fundamentally changed the way we look at waste management."

Want to know more about this collaboration?
Read all about it here.

How do we achieve our ambitions?

Supporting each other

The market can be fickle and unpredictable at times. We saw this clearly in 2023 when our MSW business line unexpectedly lost a large contract with which we had a long history. But our business lines instantly demonstrated their solidarity. IWS adjusted its portfolio in anticipation of the (temporary) deficit via MSW. This is not only an example of our agility, but also proves that separate business lines don't lead to internal competition. Indaver is still one brand with one story, now more than ever.

Supporting others

In early 2023, the Brussels-Energie and Uvélia waste-to-energy plants suffered technical failures following explosions caused by nitrous oxide cylinders. There was consequently a danger that a lot of waste would end up in landfills. As a fellow waste management company, Indaver showed solidarity and we processed around 5,000 tonnes of waste in our facilities. As a result, no waste ended up in landfills unnecessarily. This is proof that the Belgian Waste-to-Energy partnership works. All Belgian incineration facilities support each other in times of need.

How do we achieve our ambitions?

Municipal Solid Waste

A sustainable solution tailored to every customer

We invest in facilities and processes to transform recyclable waste (PMD, bottom ash, vegetable, fruit and garden waste, etc.) into high-quality raw materials. We also make maximum use of non-recyclable waste to generate green energy sources for industrial partners and residential areas. In this way, we are helping waste collectors and local authorities to meet their sustainable waste-management and materials-management targets. And we do this in Belgium, the Netherlands, the UK and Ireland.

PAMELA WALKER
REPRESENTANT OF THE LOCAL AUTHORITIES

"As a representant of the joint venture between Aberdeen City Council, the Aberdeenshire Council and the Moray Council, I can say that we're very pleased with the Ness Energy Facility in Aberdeen. Now that the facility is operational, we can move away from landfills and the export of waste. The new facility also means that we can treat our waste locally and extract value from it in the form of heat and energy."

Cooperation

Our experts use their knowledge and experience to actively connect clients and partners in relation to the circular economy. We offer them support to generate maximum returns from waste with minimum environmental impact. Together, we are working on innovative ways to manage materials more sustainably and to turn today's waste into tomorrow's valuable raw materials and energy.

Trust

Indaver is committed to providing services that are continuous, flexible, and cost-effective. Moreover, our approach is sustainable; at every stage of the waste treatment process, we prioritize the optimal recovery of energy and materials. It is this exceptional combination that inspires confidence among our various customers. They know that we continually invest in our people, processes and facilities to help shape the circular economy. An approach that enables us to respond quickly to new expectations and policy goals on the one hand, and lays the foundations for long-term relationships on the other.

Vision

We use targeted investments to underpin our vision to accelerate the circular economy using waste management and treatment.
For example, in 2023, we were working flat-out to build the state-of-the-art Integrated Waste Management Facility in Essex (UK), and we commissioned an energy-from-waste plant in Aberdeen (Scotland) in 2023. Both plants will supply electricity to the grid, thus reducing the need for fossil fuels. The plants are also equipped to connect a local heating network that can supply heat to nearby industry or homes. In the meantime, we continue to look for solutions to close the loop for new waste streams.

New energy facility in Aberdeen (UK) supplies electricity to the local grid.

How do we achieve our ambitions?

Municipal Solid Waste

Chain collaboration with a clear goal: cleaner compost and more of it!

Indaver works collaboratively to improve the quality of waste streams. One example of this is the Green Deal, which we achieved alongside companies in the tea and coffee sector, central government and the Waste Management Association. The gist of that deal: now that 97% of the coffee pods and tea bags in Dutch supermarkets are evidently made of compostable materials, they can simply go into the VFG waste. The result: an extra 88 million kilos of VFG waste converted into around 35 million kilos of compost every year.

ANNICK DE RIDDER
PORT ALDERMAN FOR THE CITY OF ANTWERP AND CHAIRPERSON OF THE BOARD OF DIRECTORS FOR THE PORT OF ANTWERP-BRUGES

A collaboration that benefits the entire region

"Port of Antwerp-Bruges is Flanders' economic engine. Alongside the city and the entire port community, we work extremely hard to keep that engine running as strongly but also as sustainably as possible. Making heating more sustainable is an essential part of this. The North Antwerp Heating Network saves 80,000 tonnes of CO_2 each year, equivalent to the emissions of 25,000 Antwerp households, and simultaneously supplies heat to provide heating for buildings and to create process heat for industry. In short, it's a cooperation that benefits both the city, port and the entire region."

Antwerp North Heat Network delivers process heat to closeby industry.

How do we achieve our ambitions?

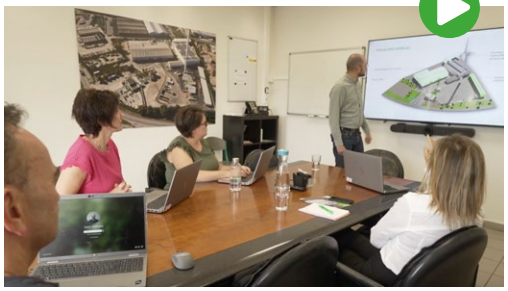
Municipal Solid Waste

Indanova brings the possibilities of waste management to life

2023 was also an innovative year for our Municipal Solid Waste business line. Consequently, in Belgium, we are now working with a **new business model** under the name Indanova. That model should enable us to assume our role in the circular economy even better.

What added value does Indanova offer for customers and our environment?

We can tell you in less than two minutes, in this video:



What activities come under Indanova?

- Waste management and treatment
- Materials recovery
- Energy recovery

As always, we are focused on waste providers, including public authorities and private operators, but also eco-organisations (such as Fost Plus and Recupel) and water treatment organisations. The change in this trend is that in addition to this, we are also increasingly positioning ourselves as an **energy and raw materials supplier** and an **innovative project partner**.

What can our customers count on?

Three promises characterise the way we work:

A passion for sharing knowledge

We inspire and assist organizations in finding conscious solutions that take people, safety and the natural environment into account. This way, our experienced employees serve as a knowledge hub for sustainable waste treatment and create long-term added value.

Close to our network

We get the right organizations around the table to achieve ambitious targets and make it our mission to be a solid and easily accessible point of contact for our partners. Starting from mutual trust, we come up with new ideas and solutions.

Always looking forward

We take the lead in finding solutions for future waste streams and are agile in the face of challenges. Continuous investments in new technology and infrastructure help us to create tailored and selective services.

A launch event full of symbolism

On 19 September 2023, the MSW team in Belgium invited customers and partners to a launch event at the iconic Museum of Fine Arts Antwerp.
The choice of this location was no coincidence.
The museum has finally reopened its doors to the public following several renovations, with the same unchanged quality of artworks, but with an entirely new look. An striking comparison with Indanova.

How do we achieve our ambitions?

Adjustments based on legislation

As an enabler and gatekeeper of the circular economy, we are on track to fulfil our ambitions, but we also need to make adjustments from time to time. This often happens because new legislation comes into force or existing legislation is amended. For example, consider the multitude of innovations that have arisen from the European Green Deal. We follow this closely so that we can capitalise on opportunities and mitigate risks.

Two legislative frameworks are already of major importance to our overall operation:

- **BREF Waste Treatment and Incineration:** this document describes a number of general Best Available Techniques (BAT) that apply to all waste incinerators, regardless of waste type. In addition, it also prescribes BATs for waste incinerators that treat specific types of waste, such as household, medical or hazardous waste.
- **Industrial Emissions Directive (IED):** this directive contains rules to prevent and, when that is not possible, to limit emissions into the air, water and soil. Specifically, the IED includes operational requirements, emission limit values and monitoring and compliance requirements for thermal waste treatment plants.

BREFs are essential for implementing the IED because they contain conclusions on the Best Available Techniques (BAT), which are the benchmarks for establishing permit conditions for industrial facilities. Every environmental assessment and permit application refers to BREF/BAT documents, and permits are checked regularly for compliance with BATs. Indaver only builds in accordance with these BREFs/BATs, which means that we have taken measures to prevent a negative impact on people and the environment.

How do we achieve our ambitions?

Adjustments based on legislation

Indaver actively contributes to realizing the Green Deal by focusing on various strategies.

How do we achieve our ambitions?

Adjustments based on legislation

#1 Climate and energy

The EU wants to decarbonise our society by focusing on renewable energy, avoiding fossil fuels and preventing greenhouse gas emissions. The legislation intended to encourage this affects both our own operations and our ambition to focus more strongly on energy generation from household and industrial waste streams.

- **Renewable Energy Directive 3:** this revision was adopted in October 2023. The binding target for the share of renewable energy by 2030 is now (at least) 42.5%. The definition of 'waste heat' has also been established. To fully capitalise on our energy potential, we will adapt to the new definition where necessary/possible.

- **Energy Efficiency Directive:** more ambitious targets for primary and secondary energy consumption play into our ambition to further raise our profile as an innovative energy supplier.

- **Emissions Trading System (ETS):** In this system, industrial companies must surrender one carbon allowance for every tonne of CO_2 emitted. They can buy and trade these carbon allowances. The outcome of the European decision-making process on ETS is still uncertain, but we expect it will have an impact. Today, only our E-Wood power plant comes under the ETS system because of the use of biomass.

- **Effort Sharing Regulation:** the ESR sets a national target for each member state to reduce the emissions from sectors that don't come under the Emission Trading System. The waste management sector comes under the ESR. For example, from 1 January 2024, the German federal government will levy a CO_2 tax of €45 per tonne in thermal waste treatment plants.

- **EU taxonomy:** to assess whether an activity is environmentally sustainable in the spirit of the EU Green Deal, a classification system was developed for sustainable activities. Among other things, it recognises Indaver's rotary kiln incinerators as contributing to the preservation of the environment, rather than as harmful to it. This is because they are seen as the final link in the circular economy chain, because they decontaminate the loop.

	RED (Renewable Energy Directive)	EED (Energy Efficiency Directive)	GHG (Greenhouse Gases)
	% energy from renewable sources:	% less energy consumption:	% fewer CO_2-emissions:
2030	**42.5** (binding) **+ 2.5** (on top)	**42.5** (primary energy consumption) **40** (final energy consumption)	Green deal 55
2050			Green deal climate-neutral

How do we achieve our ambitions?

Adjustments based on legislation

#2 Circular economy

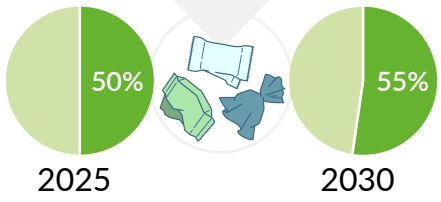
The circular economy is a crucial factor for making Europe climate neutral by 2025. And the constantly changing waste legislation (which we keep our customers informed about in a structural way) is never far away. Three examples:

- **Waste Shipment Regulation:** the revised legislation that will come into force within 2 years introduces a further tightening of the ban on exports outside the EU and of intra-EU trade with the destination 'Disposal' (removal vs useful application). The conditions under which such intra-EU shipments for disposal can still proceed have become more extensive and more complex, without this detracting from the self-sufficiency principle at a European level as laid down in the Waste Framework Directive.
- **Waste Framework Directive:** this framework directive establishes concepts and definitions within waste management, such as definitions for waste, recycling and recovery. In 2023, there was a review that mainly focused on textile collection.
- **Critical Raw Materials Act:** with this Europe is committing fully to self-sufficiency for critical and strategic raw materials. A critical raw material is of great strategic and economic importance. A material is also 'critical' if it is only produced in one country or in countries with an unstable regime. Whereas a strategic raw material is a material that allows Europe to become more independent for the production of strategic products, especially in terms of green energy, digital technology and defence. One of the Act's focal points is that by 2030, at least 15% of Europe's annual consumption must come from local recycling processes.
- **Packaging & Packaging Waste Directive:** the revision of this directive (which was still underway at the end of 2023) consists of two parts: the requirements that packaging must fulfil and guidelines to prevent packaging waste. Proposals include mandatory incorporation of recycled materials in packaging and forcing member states to demonstrably reduce their quantity of packaging waste per capita compared to 2018: by 5% by 2030, 10% by 2035 and 15% by 2040.

Towards a circular economy

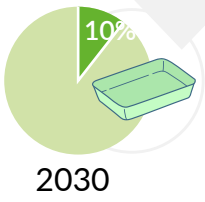
Need for extra recycling capacity

Targets for the recycling of plastic packaging waste in the EU.:



Need for high-quality recycling

Targets for recycled content (from post-consumer waste) in plastic packaging in the EU:



for contact-sensitive non-PET packaging

Important: Because we are selling more and more materials on the raw materials market, there is also an increased focus on quality specifications and product standards such as REACH to manage the risks associated with chemical substances.

How do we achieve our ambitions?

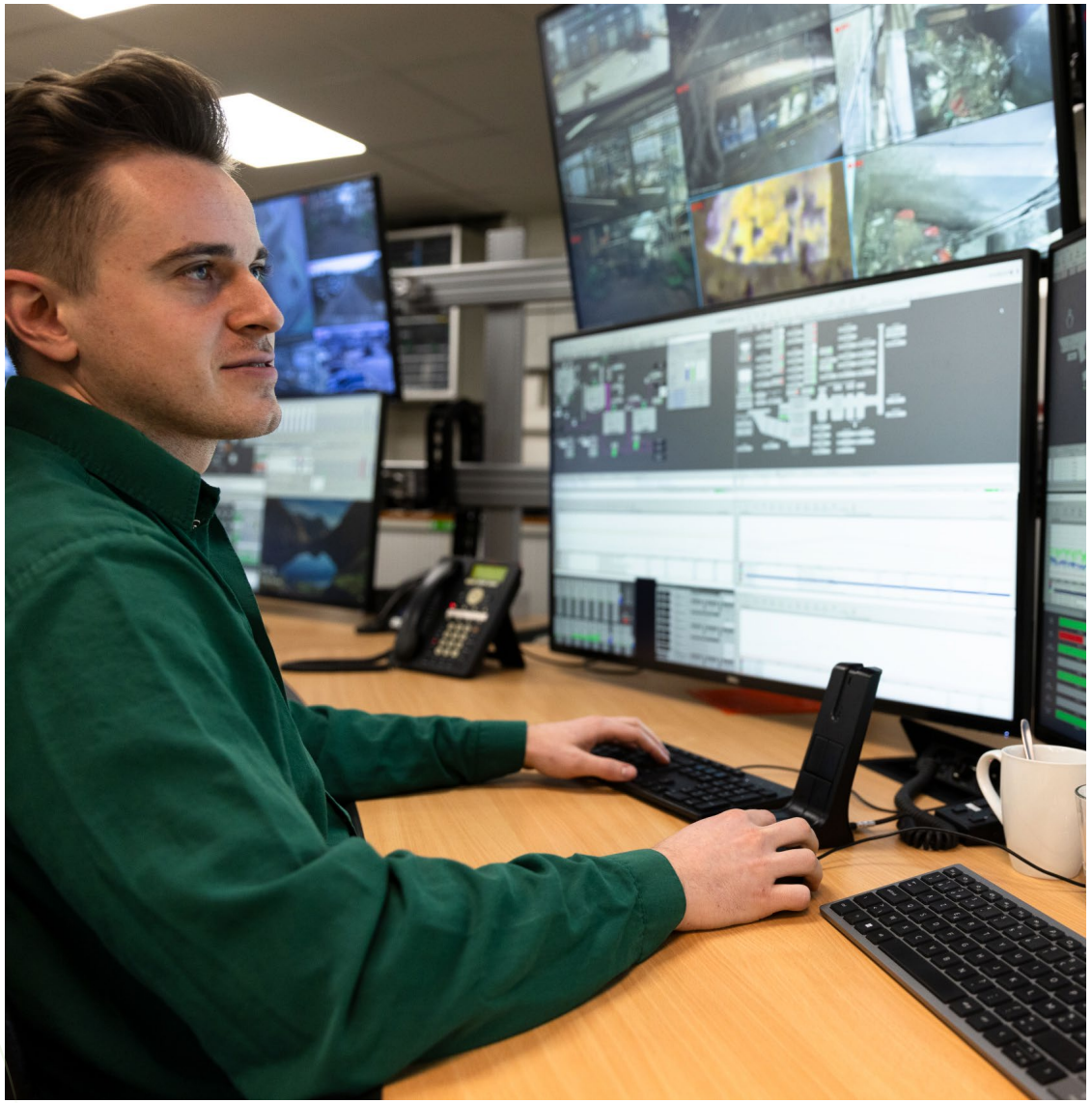
Adjustments based on legislation

#3 Zero pollution

As part of the Green Deal, the EU launched an action plan to protect human lives, animals and plants by reducing the contamination of air, water and soil to levels that are no longer harmful. This legislation contributes to that:

- **Industrial Emissions Directive:** this is the EU's main instrument for tackling industrial emissions. Needless to say, this has a major impact on our incinerators.

- **BREF for waste incineration:** in addition to regulations around Best Available Techniques for waste treatment, the latest BREF also focuses on nitrogen emissions. There has been a lower and upper limit for this since 2023. The next step would be the mandatory application of the lower limit. We are of course also keeping a close eye on this.



Indaver welcomes clear, strict legislation, as long as it remains feasible. If that is the case, our circular approach opens many doors.

Where does Indaver operate?

The short answer: in 9 European countries. Here, we manage and operate facilities that keep material chains closed and safe. With targeted investments and acquisitions, we are systematically expanding our radius of action and our capacity to recover energy and materials efficiently from a variety of waste streams.

Large-scale **waste-to-energy** installations for valorizing energy from non-recyclable waste streams.
Doel (BE) – Meath (IE) – Aberdeen (UK) – Rivenhall (in construction, UK)

Transfer stations for the safe intermediate storage and handling of waste.
All Indaver countries.

Specialised **high-temperature treatment** installations offering safe solutions for hazardous waste.
Hamburg (DE) – Biebesheim (DE) - Antwerp (BE)

High-tech **recycling installations** for recovery of valuable materials.
Inda-MP (BE) – Solvents (UK, BE) – P2C (BE) – Indachlor (FR) – Willebroek (BE)

Composting installations for processing green, vegetable, fruit and garden waste.
The Netherlands

What 5 core values are in our DNA

Sustainable waste management leadership is only achievable if the work environment supports it.
At Indaver, we are dedicated to creating the ideal conditions for innovation.
Central to this effort are our five core values, which truly encapsulate what is important to us.

DEMONSTRATING CONCERN FOR PEOPLE, SAFETY AND THE ENVIRONMENT

BUILDING RELATIONSHIPS BASED ON MUTUAL TRUST

CONCENTRATING ON ACHIEVING RESULTS

ENSURING TRANSPARENCY IN COMMUNICATIONS AND ACTIONS

CONTINUOUSLY IMPROVING

What do we report on and how?

We report on the 3 Ps of sustainability: People, Planet, Prosperity. This is also known as the triple bottom line. We are further sharpening our focus within these three segments. On the one hand, we report on the domains of People, Planet and Prosperity in terms of what Indaver itself experiences as highly relevant, and on the other in terms of what our stakeholders find important. In the meantime, we work hard behind the scenes to bring our approach in line with the requirements of the Corporate Sustainability Reporting Directive (CSRD).

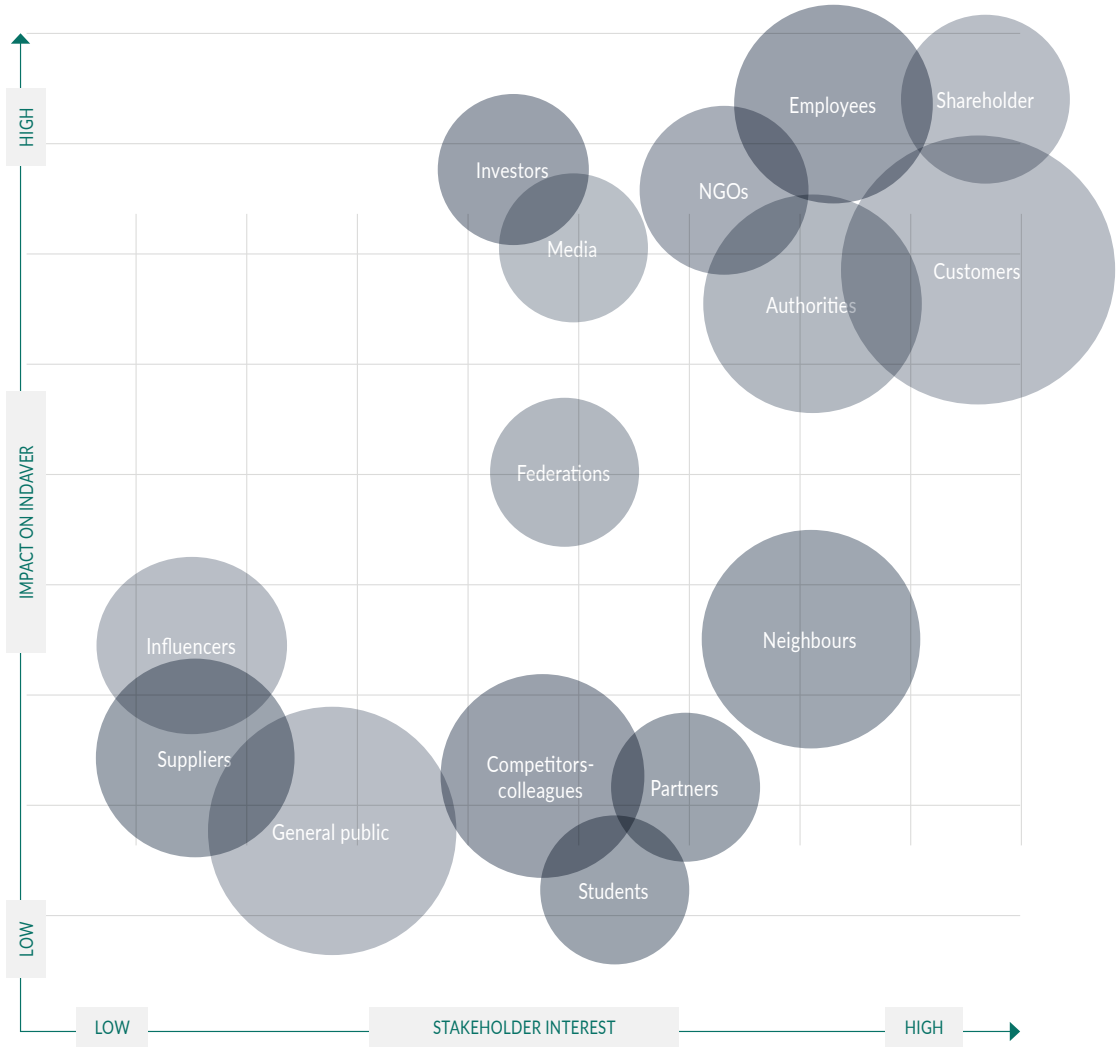
Two methods determine our sustainability focus:

#1 Stakeholder analysis: we engage in regular dialogue to ensure our reporting is more aligned with the expectations of our internal and external audiences. We supplement these insights with desk research, regular evaluations and customer feedback (e.g. our Balanced Score Card for IWS customers and the Closed Loop Feedback from Dutch MSW customers).

Certificates

Because we value transparency, we list both the audits and certificates that enable us to continuously improve in terms of safety, results, reliability and legal obligations.

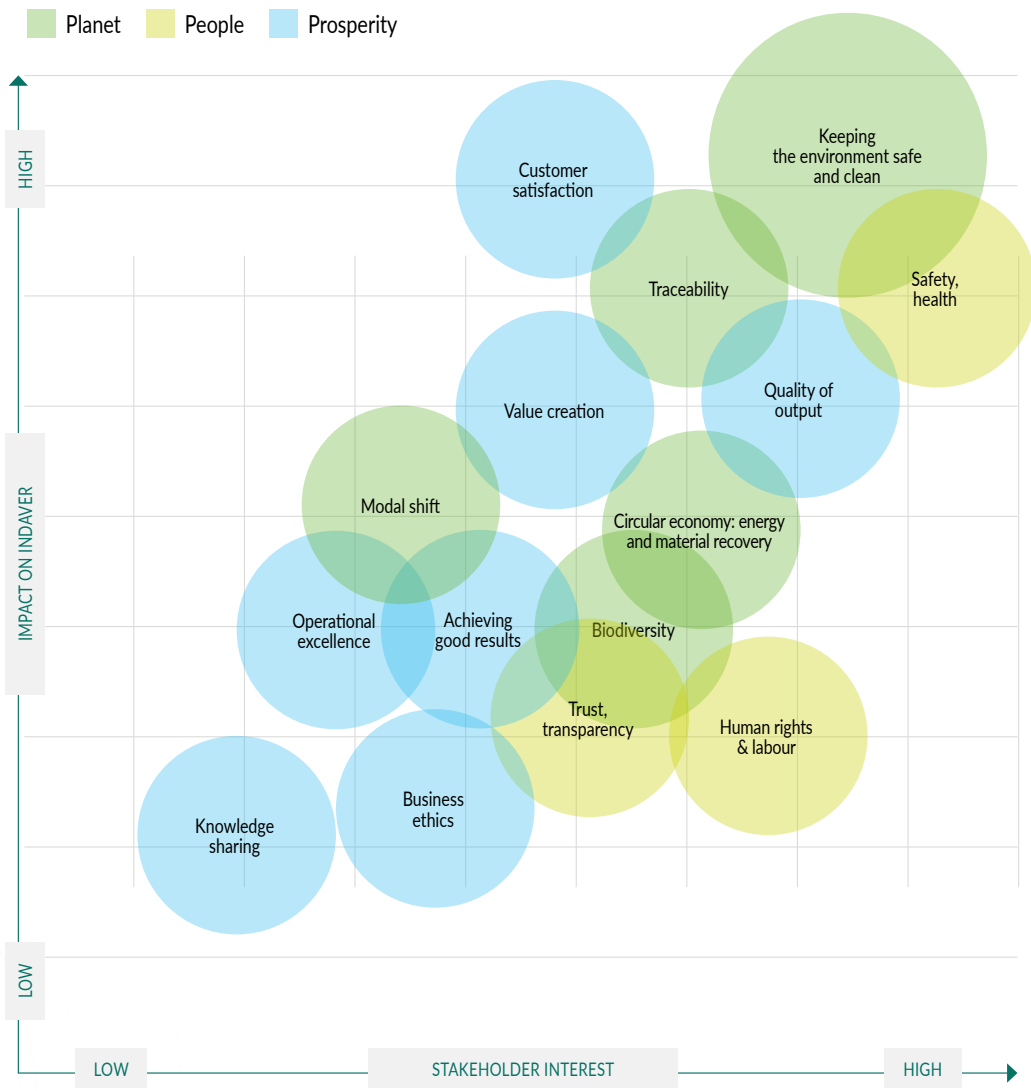
For an overview of our certificates, we refer to our website.



What do we report on and how?

#2 Materiality analysis: this type of analysis, as laid down by the Global Reporting Initiative (GRI) guidelines, includes the interests and views of internal and external stakeholders. The outcome is a matrix in which the most material (or relevant) domains are on the top right (= high customer interest + high impact on Indaver).

These 16 focus domains (sometimes under a different name) are all incorporated in this sustainability report. Furthermore, in each case we indicate which of the 17 Sustainable Development Goals for 2030 our focus domains contribute to. In fact, Indaver's sustainable waste management has a positive impact on no less than 14 of those SDGs.



KARL VRANCKEN
CHIEF SUSTAINABILITY OFFICER

"Through laws and regulations, such as the CSRD, Europe wants to increase transparency on the impact that companies have on people and the environment. We fully embrace this evolution and are therefore also working hard to ensure that we address strategy, frameworks, measurable goals and progress in more detail in our reports. This transition goes hand in hand with our changing role - from waste management to materials management."

What do we report on and how?

Overview of our material topics in this report

Material topic	Domain	In this report	SDG
Health & safety	People	Safe and healthy at work (p. 50-55)	
Human rights & working conditions	People	Sustainable Employability (p. 35-49)	
Trust & transparency/knowledge sharing	People	In consultation with local communities (p. 56-58)	
Keeping the environment safe and clean / modal shift	Planet	Climate (p. 62-78)	
Keeping the environment safe and clean / biodiversity	Planet	Care for the environment (p. 110-129)	
Circular economy / value creation	Planet	New, clean and safe materials from waste (p. 79-89)	
Circular economy / value creation	Planet	Waste treatment leads to (green) energy (p. 90-100)	
Trust & transparency/knowledge sharing	Prosperity	Openness and knowledge sharing (p. 132-135)	
Business ethics	Prosperity	Policy (p. 144-145)	
Good results / value creation	Prosperity	Controlled growth (p. 136-139)	
Customer satisfaction / Operational excellence	Prosperity	Customer focus (p. 139-143)	

PEOPLE

HOW WE OFFER OUR EMPLOYEES A SAFE AND ATTRACTIVE WORKPLACE, AS WELL AS TAKE CARE OF THE PEOPLE AROUND INDAVER.

PEOPLE

HOW WE OFFER OUR EMPLOYEES A SAFE AND ATTRACTIVE WORKPLACE, AS WELL AS TAKE CARE OF THE PEOPLE AROUND INDAVER.

Indaver's strength is its human capital. Our employees give their best every day to shape sustainable waste management. The numerous changes they face require knowledge, skill and creativity. That's why our employees are given all the room they need for personal development and to shape their sustainable career within Indaver. Alongside employability, well-being and safety are our top priorities. So, everyone can start and end the working day feeling healthy and energetic.

Sustainable employability

Finding, connecting, nurturing and developing talent

Social context

Constant change

The war for talent is a structural challenge in almost every country we operate in, but especially in Belgium and Germany. The baby boomer generation is reaching retirement age, fewer young people are entering the labour market and there is higher job mobility with employees changing jobs faster.

Within Indaver, many of our employees are approaching retirement. We're preparing for a significant turnover, ensuring timely and suitable replacements by attracting fresh talent. Additionally, retaining the highly specialised knowledge that is vital to our operations presents a substantial challenge.

We currently have four generations within the organisation: baby boomers, Generation X, Generation Y and Generation Z, each with their own characteristics, qualities, and expertise. Keeping our employees working energetically throughout their career therefore takes on a new dimension. Both from HR and within teams, we strive to keep all employees motivated and involved, with a focus on the sustainable employment of every talent in our workplace.

Lastly, the world around us is changing at a rapid pace. From technological developments, such as the rise of artificial intelligence, to ever-bigger social challenges, such as climate change and geopolitical tensions. Embracing that continuous 'change' is the only way forward for Indaver.

Sustainable employability

Finding, connecting, nurturing and developing talent

Our approach

Indaver Full Circle

At Indaver, leadership is value-driven. Modelling behaviour that inspires and motivates is an integral part of the Indaver Full Circle model. Our managers create an environment in which employees are encouraged to come up with their own solutions and where people are motivated to use their full potential. Confidence is at the heart of this. We have confidence in our staff's strength and knowledge.

With Indaver Full Circle, we have added a fourth pillar to our Care, Connect and Coach leadership model: Change.

These Four Cs show the direction we're taking. We are really putting ourselves on the map as a learning organisation. We are also consciously investing in optimum working conditions, a safe and motivating work environment, and our teams' skills, with the aim of ensuring the sustainable employment of all our staff.

Care (self-leadership)
We care about our employees and all their talents, and we are committed to developing them further. We therefore encourage our employees to invest in their personal leadership and self-awareness.

Connect (feeling welcome)
We work together and share knowledge as one Indaver, thus contributing to organisational goals together.

Coach (growing)
Together, we set the bar high. We challenge our employees and teams to give their best and take control. We give them the space to grow and the autonomy to do so.

Change (agility)
We help our employees cope with personal, professional and social changes. Because anyone who manages to improve themselves continuously, contributes to their own success and the organisation's.

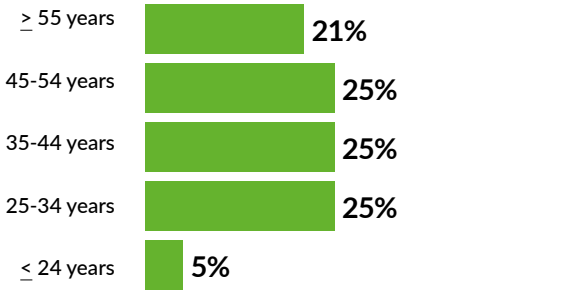
Sustainable employability

Finding, connecting, nurturing and developing talent

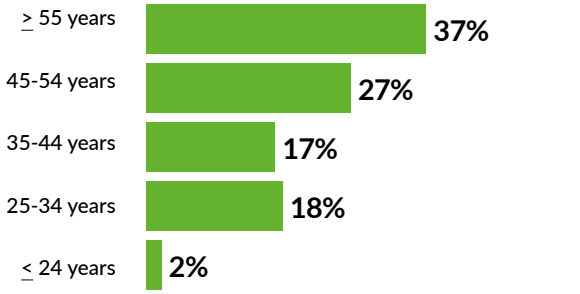
Age pyramid

Average employee age pyramids 2023

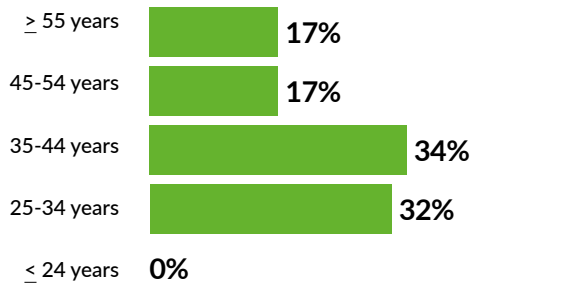
Belgium



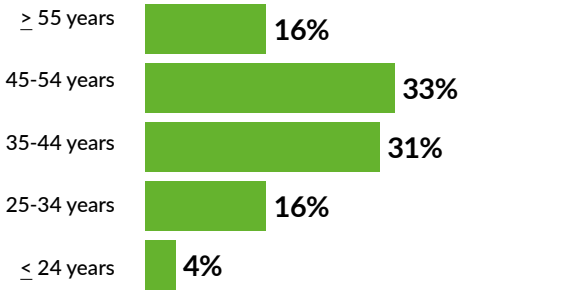
The Netherlands



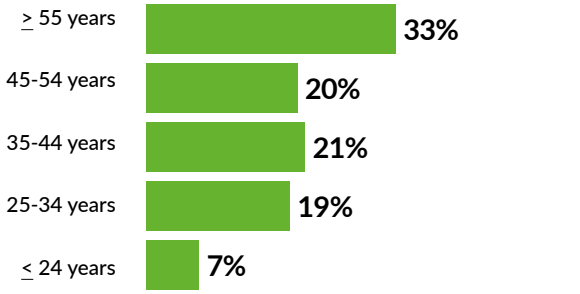
UK



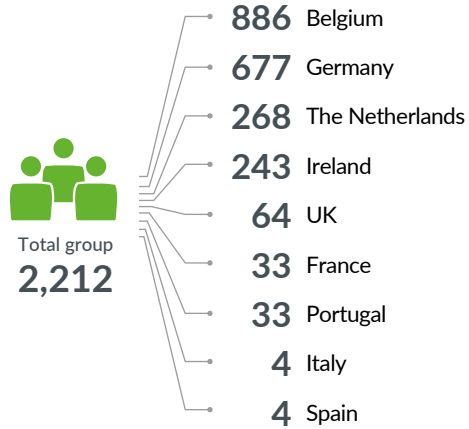
Ireland



Germany



Workforce



Sustainable employability

Finding talent

Last year, we pulled out all the stops to bring sufficient new employees on board within all of our business lines. To do so, we had to look further afield than usual. For example, we actively invested in the future of our labour market by attracting international talent and getting students excited about STEM courses.

Raising awareness of our employer brand online and offline

To bring in new talent, **brand awareness** is **vital** in the countries where we operate. And we cannot stress the relevance of our activities enough: we are a crucial link in the circular economy. How did we do it?

- **Job fairs**: we attended events such as the Noordelijke Banenbeurs in Groningen (Netherlands) and We Are Chemistry in Antwerp (Belgium). Furthermore, we participated in Voka's Open Company Day - a day in which we had no less than 2,000 visitors.

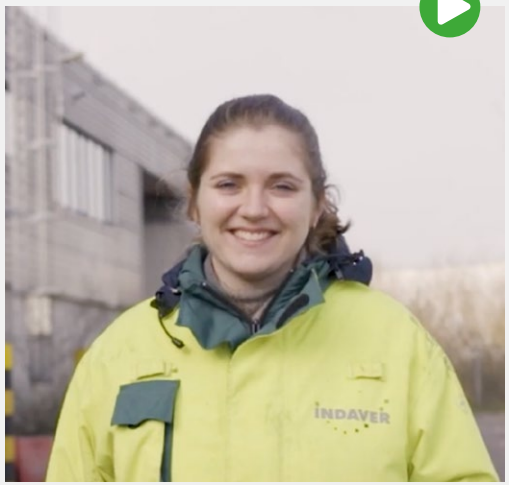
- **Special events**: we also participated once again in the election of **De Slimste handen van Nederland (The smartest hands in the Netherlands)**. Technical professionals play a crucial role in our society and deserve to be in the limelight. This is particularly true for employees in the waste sector. That's why we supported **Waste Heroes Week in the Netherlands**.

- **Partnerships**: we work with colleges and the VDAB (Flanders' public employment service) among others, to bring motivated employees on board. They have a range of critical skills and we teach them the other skills *on the job*.

Sustainable employability

Finding talent

- **Social media**: we made some **short videos of staff speaking** about their work and why they find it engaging, enjoyable or meaningful. In these videos, the same **four building blocks** always emerge: a job with impact, respect for personal growth, a collegial work environment and respect for a work-life balance. We shared the videos through the website and on our social media channels. The objective was to provide an accessible way to introduce interested parties to our people and our way of working.



Judith van Dieren on personal growth.

Ruud Sinke on the culture of trust.

Conor Jones on the balance between work and life.

Indaver among top 1% employers in Belgium, Germany and the UK

In 2023, Indaver received the Leading Employer Award in 3 countries after independent assessments of a series of relevant domains, including job satisfaction and working conditions. The award is only valid for 1 year, which encourages companies to keep on investing in creating a great place to work, instead of being complacent about it.

Sustainable employability

Finding talent

First steps in international recruitment

In 2023, Indaver worked with specialist partners to take its first steps in **international recruitment.** Our aim is to broaden our knowledge and experience. Furthermore, by doing so, we are continuing to build an organisational culture in which diversity, equality and inclusion are taken for granted (also see: DEI Policy).

In addition, in September 2023, we also established the **Indaver International Graduate Programme (IIGP)** for students who have just obtained a bachelor's or master's degree and are striving for an international career.

And these efforts have paid off, because we have since been able to strengthen our teams with engineering, technical and other talent from Portugal, Macedonia, Venezuela, Germany, the Philippines, Indonesia and other places. The international expansion of a team does require some adaptability from the current staff, but it is also an enriching experience for them.

KHADIJA SIDDIQUE
MASTER IN SUSTAINABLE AND INNOVATIVE NATURAL RESOURCES MANAGEMENT (SINREM)

"I want to actively contribute to the circular economy in my work. So, I work on compliance with CSRD requirements and research where our suppliers stand in terms of sustainability and the corresponding certifications. I feel welcome at Indaver and see a lot of opportunities to develop further within the IIGP."

IIGP in a nutshell

Why?
Giving graduates a good overview of the career opportunities at Indaver in a short time, and enabling them to begin developing the skills required for a suitable position immediately.

What?
Over a two-year period, IIGP participants have an opportunity to learn about the international aspects of Indaver and to immerse themselves in their chosen field. In four six-month blocks, they collaborate on projects related to their studies and interests. First of all, in their own country, then in another country with Indaver sites.

On the one hand, there is a management programme for economics bachelors and masters, and on the other, a technical-chemical direction for profiles in engineering and technology.

Who?
We chose 9 participants out of a total of 750 applicants for the programme. They all began working at the same time, in our business lines in Belgium, the Netherlands, Ireland, the UK and Germany. Consequently, they not only formed a community amongst themselves, but through these young potentials we are also creating a connection between our business lines.

Sustainable employability

Finding talent

Social media training for our ambassadors

We can use our social media channels to position ourselves as a leading international player in waste management and to demonstrate how we create value from numerous waste streams. Among other things, we want to use this to increase awareness of our employer brand and vacancies to potential staff. The role of our own staff is vital in raising this awareness. As ambassadors, they can communicate their **satisfaction and pride in Indaver**.

To give these ambassadors the support they needed, we organised our very first **Social Media Ambassadorship training.** We also regularly shared tips through our internal communication channels.

In 2023, we continued to promote ambassadorship with our **Refer-a-Friend programme**. The result: we welcomed 28 new collagues in Belgium and 34 in Ireland and the UK thanks to our current employees.

Promoting STEM and entrepreneurship among the employees of tomorrow

We are happy to help encourage young people to choose a STEM subject (Science, Technology, Engineering and Mathematics) while reducing the gap between education and the business world. Through **STEMfluencers**, our staff got young people excited about the wonderful world of engineering and science again.

Some of our staff also went to talk to young people as part of '**Entrepreneurs in front of the Class'**. With an important study-or-career choice ahead of them, a lot of these young people have important questions about the opportunities and challenges of entrepreneurship.

ROB KRUITWAGEN
COUNTRY MANAGER BELGIUM-NETHERLANDS, GAVE A GUEST LECTURE TO 5TH YEAR SCIENCE-MATHEMATICS STUDENTS (AGED 16-17) AT THE ASO SPIJKER (SPIJKER GENERAL SECONDARY SCHOOL) IN HOOGSTRATEN

"Discussing Indaver and tomorrow's circular society with young people is energising!"

Sustainable employability

Connecting talent

As our organisation continues to grow it isn't always easy to get to know colleagues outside your team. And hybrid working also presents other challenges in terms of leadership and involvement. That's why we are very consciously taking both big and small actions to connect all Indaver employees.

Getting to know colleagues from other sites

As part of **Voka's Open Company Day** on Sunday 1 October 2023, the general public had an opportunity to see our PMD sorting facility in action at the Willebroek site. However, the doors opened to employees and their families from as early as Saturday.

A great atmosphere and connection with staff associations

In Belgium, our MoodMakers community organises occasional activities to make **the workplace even more sociable**. Every Belgian site has a number of MoodMakers. These are ambassadors who organise fun events, such as a competition for the worst Christmas jumper, a game of darts or a pasta party.

We gladly showed our ugly Christmas sweaters.

The public receives information about the chemical recycling of plastics.

Colleagues take the time to get to know each other.

Also family members are happy to go home with new insights.

Sustainable employability

Connecting talent

For many years, our staff associations' mission has been to **connect** colleagues and families with each other even outside work hours. Although the way they operate differs from country to country, all of these clubs organise sports, cultural and leisure activities for staff and their families throughout the year.

The highlight of the year for the Belgian staff association was undoubtedly the **Family Day** in Singelberg. Employees and their families were treated to a Flemish fair and performances by De KetnetBand, among others. This family event was a real hit, with hundreds of attendees creating a great atmosphere.

Look daddy, a wader!

All smiles on our Family Day.

Drum roll, please. The Ketnet Band is coming.

Let's go bananas!

Sustainable employability

Nurturing talent

Keeping employees fit and motivated throughout their career is a big responsibility which we, as an employer, accept. We therefore strive to create a work environment and a work climate where everyone feels safe, and we support our employees as well as possible if problems arise.

50-50-50: good agreements within the teams

During the coronavirus lockdowns, space was necessary. Yet that unusual time did give us some new insights. For example, that it is possible to **travel less**, or that online meetings can sometimes be more efficient. We have embedded these lessons into our 50-50-50 approach with 50% less travel, 50% fewer physical meetings and 50% working from home for anyone who has that option.

50-50-50 is a keeper, however **hybrid working isn't everyone's cup of tea**. While some see a return to the workplace as a barrier, others would prefer to work in the office full-time. We therefore intentionally avoided imposing rules or procedures, and opted for good arrangements within the teams instead.

This means that **team members can find the best way** of working to achieve team goals, while respecting everyone's rhythm and preferences. Something to be aware of is how to maintain good feeling within the team on the one hand and within Indaver as an organisation on the other. We therefore make maximum use of work time in the office **to connect with colleagues** and to maintain strong links with the organisation.

To give employees maximum support with hybrid working, we also used the intranet to provide regular tips on collaborating, online meetings, giving remote feedback and using platforms to share documents or hold meetings.

Disconnection from work

Working from home has definitely earned a place in our work organisation, with our 50-50-50 approach. But despite the advantages, there are also disadvantages. For example, the line between work and private life becomes blurred. The disruption of that balance and increased digitisation can weigh heavily on our psychosocial well-being. This is why in a new collective labour agreement (Belgium), we are creating a framework for how to manage work and private time, including availability during and after work hours and on (social) media. Also in Ireland, there is a Right to Disconnect Code of Practice.

SASKIA BRESSINCK
MANAGEMENT ASSISTANT

"As a Management Assistant, my job is very varied: from organizing neighbourhood councils to updating the information screens at our site in Doel. Fortunately, I get to work from home one day a week. On that day, I finish everything I don't get around in the office."

Sustainable employability

Nurturing talent

Survey of physical and mental well-being at work

Indaver strives for a work environment where everyone feels comfortable and a work climate that's challenging and fulfilling. To **check we're on the right track**, from the end of May to mid-June, all employees in Belgium had the opportunity to participate in the anonymous Sonar well-being survey in cooperation with our external prevention department Mensura.

We asked questions about workload, opportunities for career progression, bonds with colleagues and managers and so on. **There was a high response**, with two in three employees (67%) completing the survey. Anyone who gave their e-mail address, instantly received a personal summary of the answers with a few concrete well-being tips.

VÉRONIQUE WILLEMS
PREVENTION ADVISOR PSYCHO-SOCIAL ASPECTS AT MENSURA

"Each year, we conduct a survey at Indaver Belgium to address work-related stress, career prospects, and the relationships between employees and their managers. Based on the answers we received in 2023, we included preventive measures in our action plan for 2024."

In the autumn, the **overall results** were **discussed with the management teams** and then also within each team. Meanwhile, the risks and points for improvement found their way into the 2024 Annual Action Plan and Global Prevention Plan (GPP) in the form of actions and preventive measures. Specifically, we are developing actions around connecting with colleagues within the 50-50-50 approach, stress management and mental load.

Support via the Employee Assistance Program and IndaFIT

At Indaver, we have various programmes to support employees with professional, personal or health issues at every stage of their career and life. For example, employees in Germany, the UK and Ireland can access support 24/7 through the **Employee Assistance Programme** (EAP).

Within the EAP, guidance is given by phone, online or face-to-face, depending on the employee's preference. Guidance sessions are strictly confidential with Indaver as an employer only providing the service, with no access to the nature of the discussion, to ensure our staff feel comfortable reaching out with the utmost privacy.

Anyone who wants to take steps to improve their mental or physical health, or to work towards a better work-life balance, can contact an independent coach within the **IndaFIT sustainability programme** in Belgium and the Netherlands.

Appropiate personal protection gear and ergonomic workplaces are top priorities.

Ergonomic workstations

On all our sites, we attach great importance to ergonomics. That means that we adapt the workstation, tools and tasks to our staff to improve their health, safety and productivity. For example, in Germany, 2023 saw all kinds of ergonomic and biomechanically correct equipment brought in, such as special work shoes, tools for picking up heavy objects, height-adjustable desks, screens to protect the eyes, etc.

Sustainable employability

Nurturing talent

MYRA LATUHERU-EVERSDIJK
CHIEF HUMAN RESOURCES OFFICER

"We want to keep out employees safe, competent and motivated at eveery stage of their life."

Cycling to work

TandjeBij's ambition is to make our mobility options greener on Belgian sites. With this mobility programme, we implemented a lot of measures over the course of 2023 to design a complete and diverse mobility package that doesn't revolve solely around the car.
Although the mobility survey of our Belgian employees, conducted by Slim naar Antwerpen (Smartly to Antwerp), showed that the car is still very popular for commuting to work, cycling is **clearly gaining ground**. The average distance that our employees commute is 28.4 km, so there is still a lot of potential. We are trying to take advantage of that by giving employees in Belgium the opportunity to buy a bicycle.

We are also **raising the profile of cycling** in other countries: we have a leasing programme in the Netherlands and there are also programmes to promote cycling in the UK and Ireland.

Building healthy teams

In 2023, our various locations launched several actions to assist employees in their health goals. A selection:

- Employees from our Belgian and Dutch sites were able to take part in the Indaver stop-smoking scheme. Our colleagues in Ireland also added e-cigarettes to the general smoking policy.
- Staff in Belgium, the Netherlands, Ireland and the UK had the option to sign up for free flu vaccinations.
- The extensive and personalised medical package in Germany includes voluntary blood tests, vaccinations, check-ups, etc.

Re-accreditation for the KeepWell Mark (Ireland)

In 2020, our Irish waste management plant was the first in the country to be awarded the prestigious KeepWell Mark by IBEC, Ireland's largest employers' association. It praised the efforts we had made to improve employees' health, safety and well-being. In 2023, we celebrated the re-accreditation for the KeepWell Mark.

Our assets include well-trained Mental Health First Aiders among our Irish colleagues. These staff received training from psychologists and can support colleagues facing mental health difficulties. Incidentally, we also have staff serving as Mental Health First Aiders in the UK.

Sustainable employability

Nurturing talent

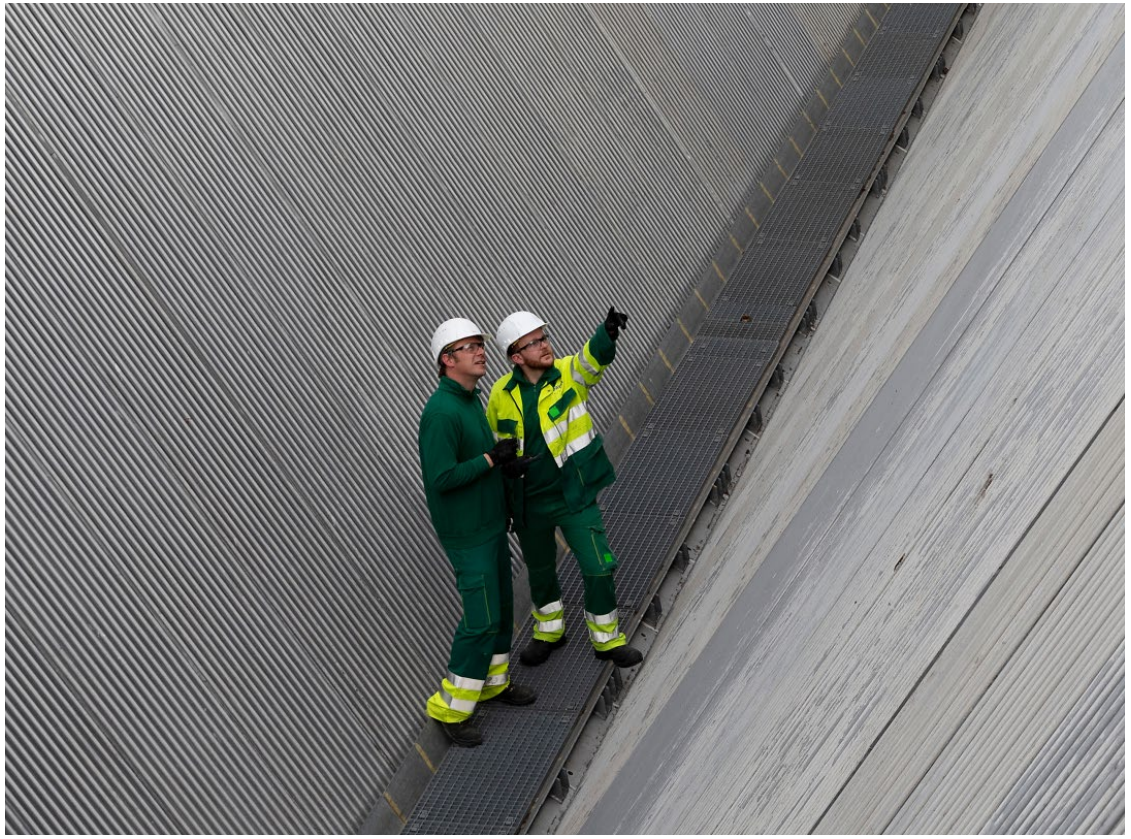
Financial well-being

Indaver operates in countries with an above-average minimum wage. No less than 7 of our 9 countries are among the top 8 European countries with the highest minimum wage: Ireland, the Netherlands, Belgium, France, Germany, the UK and Spain. Only Portugal is slightly further down (in 12th place). However, Italy, where we have 1 site, still has no minimum wage.

All employees at Indaver receive a living wage, in accordance with the national legislation and regulations of the countries and regions where we operate. Within Indaver, we use Korn Ferry for primary benchmarking based on the HAY job evaluation methodology. Korn Ferry follows the global trend for “living wages” closely.

Using this context as a basis, we do everything possible to offer employees much more than the legal minimum. In Ireland and the UK, for example, we conducted a benchmark of annual leave entitlement. The relevant changes were then made based on the results. For the UK and Irish teams, we also organised some online seminars on financial issues, in 2023. During these seminars, employees had the opportunity to ask questions about their personal situation.

Our family-oriented approach also deserves a mention. Paid paternity and maternity leave are actively encouraged, as are parental and family leave. We make it clear to everyone what financial benefits they retain during these periods, because we know that nothing is more important than family.



Sustainable employability

Developing talent

We can rely on a culture of continuous improvement. But, we want to put ourselves even more firmly on the map as a learning organisation, with an accessible learning platform and personal development paths. We are therefore putting the 'Change' part of Indaver Full Circle into practice with a diverse range of training courses, which we offer as modules with energetic names: "4YOU", "POWER-UP" and "BOOST".

Increasingly extensive education offer

In addition to the in-house training and the courses required to perform the job, more and more colleagues are taking training courses aimed at personal development. Among other things, Indaver works with Good Habitz, an online platform that offers hundreds of **practical online courses**, from using Excel, to learning a new language, to the use of social media in a professional context.

The range of training on offer keeps growing, so employees are advised to check the People platform's learning module regularly. They also receive **a monthly overview** of newly added courses via e-mail. Managers can also add training courses to the curriculum in consultation with their staff.

Total number of hours training 2023

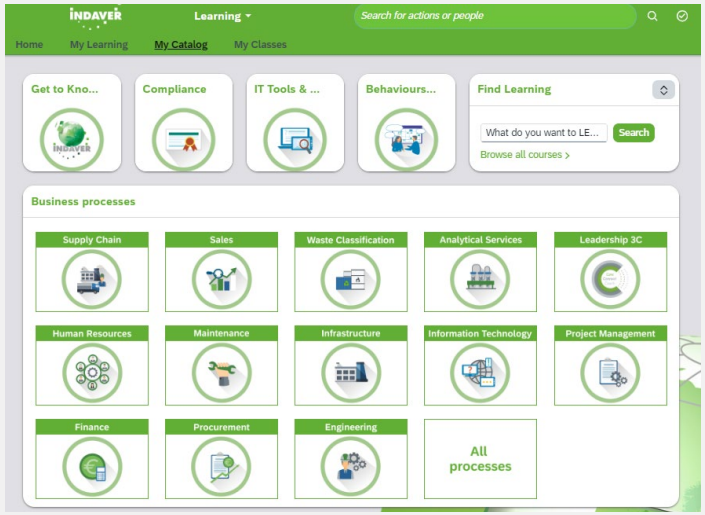
46,494 total training hours

Technical skills
14,872 hours

Compliance & safety
19,134 hours

Other skills
8,386 hours

Leadership/management
4,102 hours



Internal learning platform

We strengthened our People platform in 2023. Employees are now offered tailor-made training based on their job role and professional goals. These focus on both hard skills and soft skills. In consultation with their manager, everyone can therefore quickly map out a personal pathway.

Sustainable employability

Developing talent

Becoming a learning organisation

The environment is constantly changing. We continually invest in our people to turn these changes into opportunities. That's why we reviewed our 3C approach and developed an updated concept, the Indaver Full Circle. It is our company-wide framework, which underpins our new international approach to personal leadership. For instance, a **senior management** leadership course has been set up in collaboration with Vlerick Business School. Middle management will be covered over the course of 2024.

In addition, we have launched the '**Finance for non-financials'** training programme, which was particularly well-received.

Personal learning plan for every employee

With the **Individual Learning Journey** we are putting the Indaver Full Circle into practice with a particular focus on 'Change'. After all, it is only possible to be agile and resilient if you have the right skills. That's why we put a career-long focus on our employees' talents and skills.

We have outlined **personal learning plans** with respect to the employee's needs, talents and their specific role within Indaver. The pathway includes compulsory training and training courses that employees can choose for themselves through the People Platform's learning module.

4 of our most popular training courses in 2024

Leadership

- Finance for non-financials:
  with the participation of 65 members of senior management and 42 line managers (level 2), this course was the top hit in our 4C offering.
- Change Management:
  38 participants zoomed in on the particularities of change management.

General

- Waste treatment:
  this course with accompanying e-learning stayed very popular in 2023 and had 168 participants.
- Sharepoint:
  within our IT offering, the popularity if this course is striking. About 125 colleagues now master Sharepoint.

Safe and healthy at work

Working towards an open, proactive safety culture

Social context

As a **fast-growing company**, Indaver faces several challenges in terms of safety. In 2023, there were therefore several **large scale projects**, mostly in collaboration with partners and/or subcontractors. The main aim is to get everyone on the same page, because our primary concern is to make sure everyone goes home safe and healthy at the end of the working day. **We work safely, or we don't work at all.** A commitment we upheld in 2023, because we had no accidents on our large scale projects.

In addition to the intrinsic motivation to create a safe workplace, the **legislative framework** around health, safety and cybersecurity is also constantly changing. Furthermore, as an international player, we are confronted with a wide range of national regulations, coupled with increasingly stringent monitoring.

Finally, we also want to keep ourselves **safe online**. On our digitisation journey, we are becoming increasingly dependent on digital technologies. This offers a lot of opportunities and makes our services better, but also exposes us to cyber threats. We are therefore making even greater efforts to increase **cyber resilience** and fight potential cybercrime.

Our approach

At every Indaver site, we adhere strictly to all the applicable health and safety laws, regulations and standards. And where possible, we go further than what is prescribed.

However, compliance with industry regulations is the bottom line. We are only really where we want to be if everyone thinks and acts proactively. That is why we want to empower and encourage all workers to take measures to improve health and safety in the workplace. Our promise: when workers speak up, we will listen and take action, from training to new personal protective equipment. This is how we are moving towards **shared responsibility**.

The goal is a **proactive safety culture**. Among other things, this means that employees are able to point out unsafe situations and near misses to each other and report those cases. After all, having an overview of hazardous situations is vital to protect each other. We made another passionate appeal for this in the 'Trips and Falls' and 'Safety at Work' awareness campaigns, among others.

In addition to safety in the physical work environment, we also paid extensive attention to cybersecurity and resilience in our 2023 actions and campaigns. For example, we make our employees more resilient by using phishing simulations linked to e-learning. Because one thing is certain: the **human factor is crucial in security, both online and offline**.

Safe and healthy at work

Working towards an open, proactive safety culture

Safety management

We monitor security issues continuously. For that, we rely on proven guidelines, procedures and management systems. These are managed centrally by our new **Process & Technical Safety Experts** and others, and are implemented locally thanks to Health & Safety managers in our business lines. To ensure large sites are managed properly, we also work in collaboration with engineering to outline a planned safety approach for each project.

Education and training

When staff know the safety procedures well and use machinery correctly, we increase safety on the shop floor. Whereas office staff need to be on their guard for cybercrime. Over the past year, we have continued to invest in training and education on a variety of safety aspects.

On the one hand, there are mandatory training courses for our operational staff to keep their certification up to date. On the other, we offer a **comprehensive training programme** with operational and training courses to sharpen specific soft skills etc. In 2023, our senior management team received training to roll out the Four Cs within the organisation.

In 2023, we rolled out the organisation-wide **training matrix** and opted for automation. Using a training tool, staff and their managers can see at a glance which mandatory and optional training paths are linked to their job profile - i.e. a tailor-made selection from our extensive training catalogue.

In addition to toolbox meetings, we also explored the piste of **peer assessments** across business lines and borders in 2023. By so doing, we want to ensure that, moving forward, knowledge and skills are further secured throughout the whole organisation and blind spots are eliminated. We plan to start these peer assessments from 2024.

MARIET JASPERS
SAFETY & HEALTH MANAGER

"We all want to get to work safely and return home safely. It's therefore vitally important that we work together to ensure a safe working environment. We can achieve this by being alert, by reporting unsafe situations promptly and pointing them out to each other."

Finally, our sites approach **internal safety communication** in various different ways. At the Antwerp site, for example, they have a monthly safety newsletter. Indaver Separation Technologies (IST) launched a safety vlog to supplement its toolbox talks and provide guidance for new employees.

Safe and healthy at work

Working towards an open, proactive safety culture

Awareness-raising actions and campaigns

'Trips and falls' campaign (Belgium and Netherlands)

We have been analysing the causes of personal injury and its effects, since 2022. Based on that data, we set up targeted campaigns to raise safety awareness on certain aspects and to take proactive measures. For example, we ascertained that half of the Lost Time Incidents in 2022 were related to trips and falls. That had to improve in 2023.

In spring 2023, we made an appeal for people to increase the number of hazardous situation reports and thus to prevent trips and falls. The campaign ran on Indanet and on digital screens, there were video testimonials from colleagues, and safety posters were hung up around our sites. All of the information was shared on the intranet and we launched a new safety training course in the Netherlands and Belgium.

World Safety Day (Belgium)

In response to the World Day for Health and Safety at Work at the end of April, we further highlighted safe working at our site in Doel. All of our management and HSE colleagues were present on the tipping floor and spoke to the drivers who deliver waste materials to the site.

Above all, we wanted to increase attention to and create awareness of the risks of slips, trips and falls. Over the past year, there were in fact some incidents where drivers were injured after a fall. Drivers were able to make suggestions for improvement and after the talk they were given a souvenir to remind them of the importance of safety.

Safe and healthy at work

Working towards an open, proactive safety culture

ELIZA BOSSUYT
COORDINATOR PROCESSES AND SYSTEMS

"If you work with hazardous waste, personal hygiene and the correct use of personal protection gear is vital. Through campaigns, we continue to stress this point.."

'Occupational hygiene and PPE use' campaign (Belgium and Netherlands)

In autumn 2023, we paid particular attention to **personal hygiene** when working in an environment with chemical and biological agents. In the safety campaign, two colleagues talk about how they **use** their **PPE**, the overarching theme of the campaign. At the Antwerp site, we also recorded two demo videos showing how to **put on and take off a chemical suit safely**. In Ireland, the focus on the use of PPE has continued. For a few years, the staff there have been following a compulsory e-learning course, which includes a test on the correct use of Personal Protective Equipment.

Choosing industrial hygiene

In all our facilities, occupational or industrial hygiene is a priority. This is therefore also the case at Indaver Separation Technologies which organises regular measurements. In practical terms, this means that our operators are equipped with sampling equipment to sample the air that they breathe. Our laboratory then provides an analysis of the samples and reports them to the safety expert. It then makes an assessment of the results and takes action where necessary.

Cyber Security

In addition to ensuring our IT department's systems are secure, the human factor is crucial in cybersecurity. We therefore continually keep our staff **alert to phishing practices**. One way we did this was through an e-learning session for all employees, followed by a phishing simulation.

IT sent a **fake phishing email** to all of the Indaver group staff. Those who still fell into the trap were notified and asked to **complete** the **short e-learning course** again. After all, basic knowledge of cybercrime and security is the first, vital step to make our employees more resilient and to protect the organisation from cyberattacks.

These types of simulations are now sent on a regular basis and we can see a clear positive trend. Increasingly, fewer people are clicking on links and more and more people know how to find the Phish-Alert button in Outlook. It is important to use this, because it sends a message to the IT department, which can then delete the phishing email from everyone's inbox and take any further action required.

In addition to raising employees' awareness, we are also working hard on Business Continuity Plans. This means we can guarantee the continuity of our operations in the event of a potential cyber attack.

Safe and healthy at work

Working towards an open, proactive safety culture

Safety Champions (Ireland/UK)

By flagging potentially dangerous situations or areas that can be improved through our reporting platform, we can avoid potential work-related accidents. To reward colleagues who have raised a report for their commitment and to encourage an open safety culture, Indaver announce three Safety Champions every quarter in the UK and Ireland under the slogan 'Work Safe, Home Safe, Everyone, Everyday'.

When choosing our quarterly Safety Champions, all safety reports are submitted anonymously to management and the safety officer at the site. They then choose the best three examples. The safety reports are announced on our internal communications platform alongside feedback from management and the associated follow-up action.

ROBBY SCHATTEMAN
MANAGER SAFETY AND HEALTH IWS

"We are all responsible for our own safety and safe working creates added value. If it feels like an obligation, then we aren't where we should be yet."

Safe and healthy at work

Working towards an open, proactive safety culture

Frequency rate of work-related accidents below industry average

In 2023, the frequency rate (Fg)* of work-related accidents for the entire Indaver group (including contractors) was 8.7. This is well below the Belgian waste sector average of (24.89) and is close to the benchmark for the chemical sector.

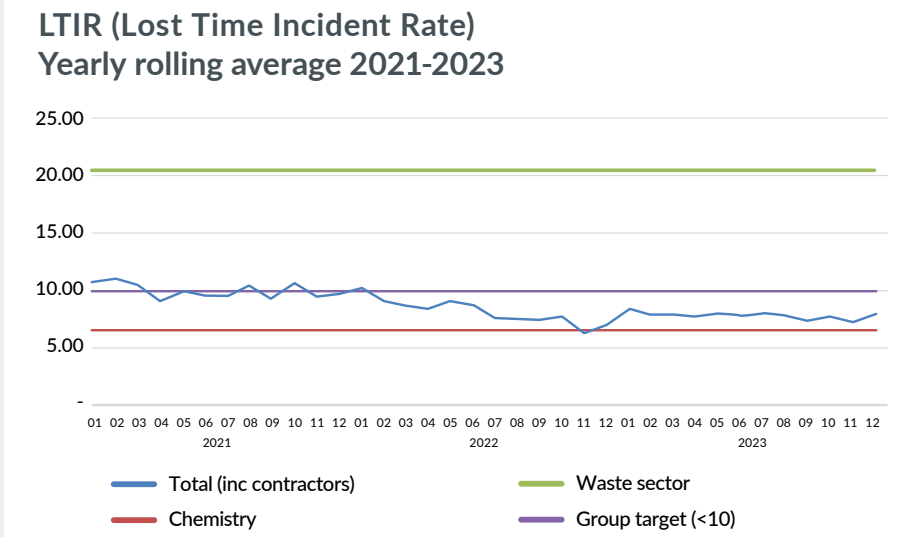
With this, our 2023 targets have been met and we are **doing everything possible to achieve our ambitious Health & Safety targets in the coming years.** With even more connection across national borders and our training matrix, we are continuing to build on a proactive safety culture and increasing our resilience in a rapidly changing market.

Naturally, we are also continuing to track our safety performance through our central Incident Registration & Management System and encouraging our employees to **report dangerous situations**. These are very relevant for taking preventive measures and for determining the approach for awareness campaigns.

(*) Fg = (number of work-related accidents x 1,000,000) / number of hours worked

Safety in figures

Indaver compares its safety figures with the available data from the Belgian waste sector. 2021 is the most recent year and shows a frequency rate of 20.4. In 2022, our rate of frequency was 7.0, which is far below the group target of <10 and very close to the chemical sector's target of 6.5.



In consultation with local communities

Towards a long-term trusting relationship

Social context

Local communities are essential for our success. This is where many of our employees live and where our customers and suppliers come from. It is only by being a good neighbour that we can get a ***licence to operate***.

We are committed to providing everyone in the vicinity of our facilities with accurate information on our social role and our care for the environment. This gives local residents and neighbouring businesses **a different perspective on our sites**.

Our approach

We want to be a responsible and respected member of the communities in which we operate. One way in which we do this is through initiatives that are aimed at protecting the natural environment and people (see page 101-129 for more info), initiatives in which we share expertise or future plans, and initiatives that allow local residents to get to know our sites.

For us, transparency and consultation are the keys to sustainable cooperation with everyone around us. We have an open dialogue, don't shy away from critical questions and actively share studies, emission values, research results and so forth. Raising awareness about the added value offered by our solutions is also a part of this.

Consultation committees and neighbourhood councils

Indaver has consultation committees and neighbourhood councils in several locations. Through these, we regularly present our plans and results, listen to suggestions from local residents, and try to build a trusting relationship. The benefit of this fruitful cooperation is widely recognised and some neighbourhood councils, such as those in Doel and Antwerp, have been doing good work for decades. This is how we create **mutual understanding.**

In addition to the regular meetings with these neighbourhood councils, there were also several additional consultation points in 2023 regarding our approach to PFAS. This is an important issue to every layer of society and we are committed to providing everyone with accurate information. We shared our insights with various parties (the environmental council, district council and city council) so that they could further share the information and insights with their stakeholders.

Visitor experience centre at Rivenhall site (UK)

We are building our waste-to-energy plant in Essex on a site that once served an operations base for the British Air Force in World War II. We want to set up an experience centre for visitors in one of the surrounding farms. This will become an **on-site museum, and it will be the starting point for a tour of our facility**. Furthermore, we plan to plant 30,000 trees and shrubs to create a habitat for animals. In 2023, we had archaeological and other studies carried out and by the end of the year, we were given the green light to proceed with our plans.

The new experience centre at our Energy-from-Waste facility in Essex will be the starting point of guided tours in the future.

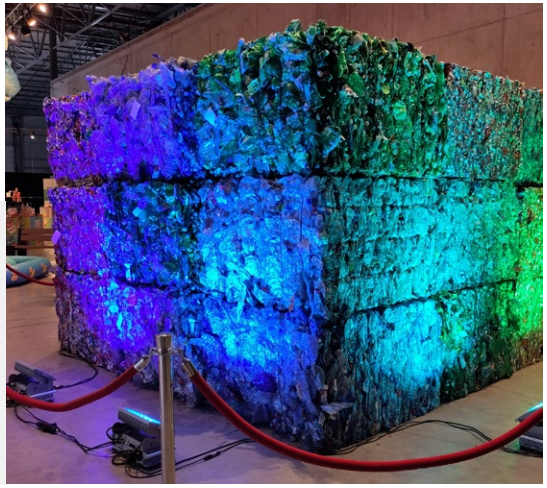
In consultation with local communities

Towards a long-term trusting relationship

Open Companies Day in Willebroek: sorting is an art

On Saturday 30 September, the doors of our Willebroek site opened to all employees and their families. A day later, on Open Companies Day, it was the general public's turn to take a look behind the scenes. We were able to welcome a total of **almost 2,000 visitors** in one weekend.

The central theme: **sorting is an art**. And we set up a real experience trail. Interactive installations, experiments and VR glasses immersed young and old alike in the world of sorting and recycling. One of the things visitors discovered during the tour of our facility is how the blue PMD bag is sorted into as many as 16 fractions, ready to be recycled for new applications. This enabled us to **make our role in the circular economy tangible** and to reveal the added value of our Plastics2Chemicals project.



Eye-catcher: a huge cube of PMD bales

Visitors began their journey of discovery in our brand-new hall, where the pre-treatment plant for the new Plastics2Chemicals plant will be built in 2024. There, they found a spectacular cube of sorted PMD bales.

In consultation with local communities

Towards a long-term trusting relationship

Respect for local residents

To guarantee a minimal environmental footprint, we schedule regular maintenance and repairs at all our facilities. This includes Bio Power in Alphen aan den Rijn (Netherlands), where we had to empty and clean one of the digesters for major maintenance works in 2023. Important: at Indaver, we see it as our responsibility to carry out these types of activity without significant disruption to the surrounding area. We inform all local residents well in advance, schedule the work outside holiday periods, and give everyone a chance to provide feedback afterwards.

How does Bio Power convert VFG waste into green gas and compost? Read all about it here.

Transparency on environmental performance

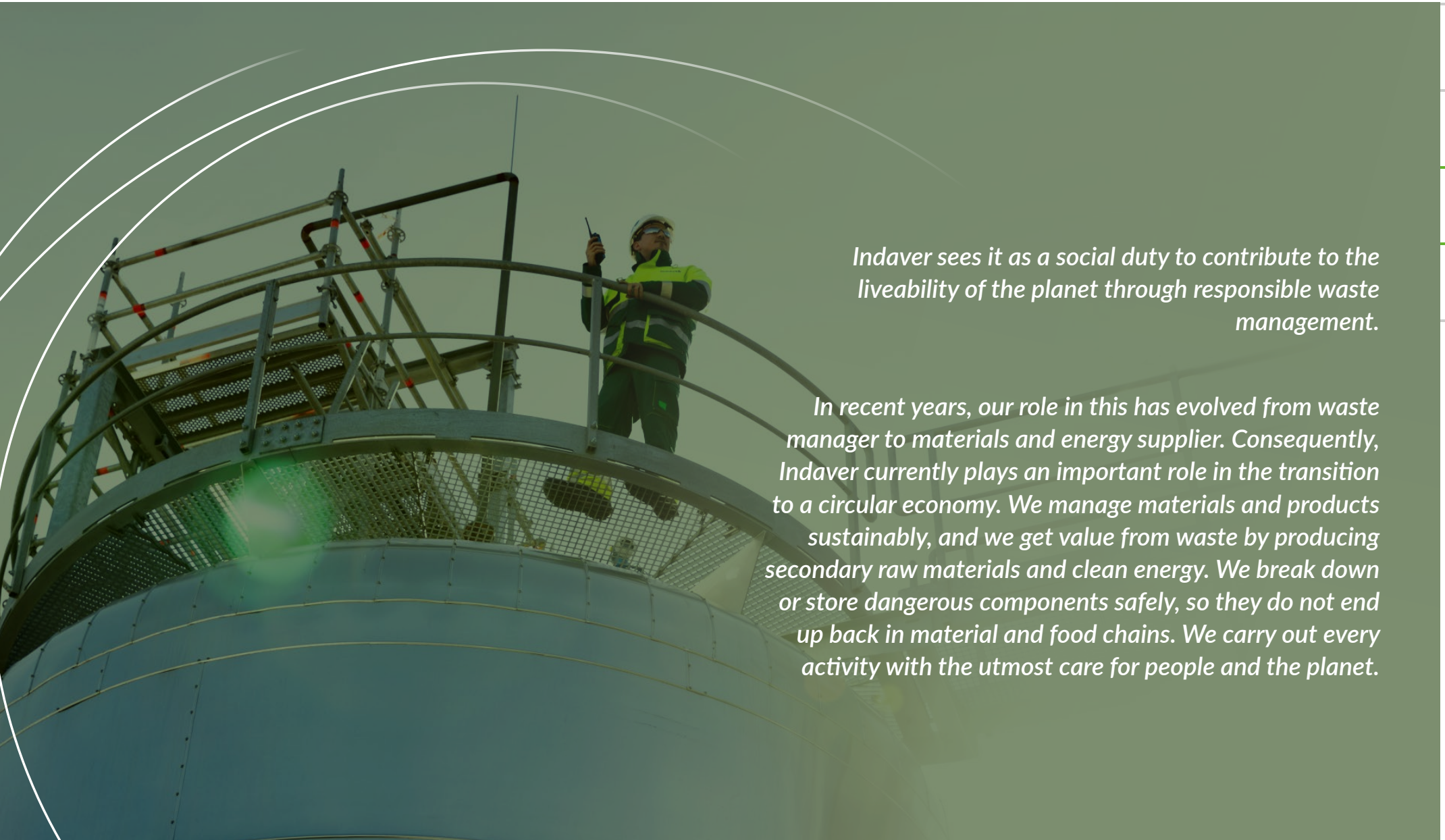
We minimise our impact on the environment by using the Best Available Techniques. We share what these efforts really mean for all our sites, in the sustainability report (see page 110) and on our website.

PLANET

HOW INDAVER TURNS THE EUROPEAN GREEN DEAL INTO REALITY

PLANET

HOW INDAVER TURNS THE EUROPEAN GREEN DEAL INTO REALITY



Indaver sees it as a social duty to contribute to the liveability of the planet through responsible waste management.

In recent years, our role in this has evolved from waste manager to materials and energy supplier. Consequently, Indaver currently plays an important role in the transition to a circular economy. We manage materials and products sustainably, and we get value from waste by producing secondary raw materials and clean energy. We break down or store dangerous components safely, so they do not end up back in material and food chains. We carry out every activity with the utmost care for people and the planet.

Care for the planet

the eu green deal shows the way

In 2019, the European Commission presented the Green Deal: a roadmap to make Europe a sustainable, climate-neutral continent by 2050. The plan includes initiatives for the climate, circularity and the environment which are closely intertwined:

- 0% net greenhouse gas emissions by 2050
- disconnecting economic growth from the use of raw materials, through a circular economy, among other things
- ensuring that no one is left behind (a Just Transition)

To achieve these 3 goals, Europe suggests 9 strategies. Indaver is dedicated to several of these strategies, such as climate and energy, the circular economy and the goal of zero pollution for a non-toxic environment. In concrete terms, this means that we are working on a clean and safe circular economy, with a focus on the optimal use and re-use of energy and materials and with minimal impact on the climate and the environment.

The Planet part of this sustainability report is constructed around the pillars of the Green Deal: climate, circularity and the protection of people and planet.

The Green Deal encourages us to evolve step by step from a waste treatment company into a materials and energy supplier.

Advanced cleansing of our emited gases and waste water makes for a clean and safe circular economy.

Steam networks supply green energy to industrial parties, which in turn avoids the use of fossil energy sources.

Climate

Social context

Significant reduction of CO_2 emissions

A major focus of the Green Deal is to reduce CO_2 emissions - the greenhouse gas that is released when burning fossil fuels. To slow down the rate of global warming, every sector, in every member state, must work towards **accelerating their emissions reduction**: a net 55% reduction in greenhouse gas emissions (expressed in CO_2-equivalent or CO_2-eq) by 2030 compared to 1990.

In addition to the EU, all EU member states have also drawn up an **Integrated National Energy and Climate Plan (INECP)** with measures to reduce greenhouse gas emissions. The plans establish the directives for the next ten years.

Green deal targets

2030 — **55 %** reduction in greenhouse gas emissions

2040 — **90 %** reduction in greenhouse gas emissions

2050 — climate neutral

Our approach

Carbon Management Plan

In line with the goals of the Green Deal, Indaver makes continual investments to reduce the CO_2 emissions from its activities and facilities. For the unavoidable CO_2 emissions, we look for innovative solutions and Best Available Techniques (BAT) alongside our partners. We are also committed to producing green energy.

At Indaver, **preventing CO_2 emissions** is our priority. Our biggest contribution lies in the fact that we **keep CO_2 in the chain in a valuable way.** We do this by recovering materials and energy from various waste streams. Thus, together with our customers, we avoid emissions associated with new raw material chains and we produce clean energy.

However, greenhouse gas emissions are unavoidable during thermal waste treatment. We already monitor and study these emissions closely and we want to **capture and store or re-use CO_2 from 2030 onwards**.

We also constantly track the energy consumption of our facilities, processes, buildings and logistics operations. We analyse the results and seek advice from external agencies so that we can also reduce our CO_2 emissions through **energy savings**.

In our sector, it is often difficult to avoid or reduce emissions. After all, we do not determine how much waste our society generates and that players like Indaver therefore have to treat. That's why we are calling for a specific greenhouse gas protocol for waste treatment companies.

In the **Indaver Carbon Management Plan**, we summarise how we intend to avoid CO_2 emissions in the short, medium and long term in order to contribute concretely to a climate-neutral Europe. The plan was formed with a wide group of stakeholders and experts and takes into account EU legislation (the Energy Efficiency Directive (EED), Waste Frame Directive (WFD) and Renewable Energy Directive (RED)) and the timeline set by the EU.

Climate

Carbon Management Plan: 6 goals

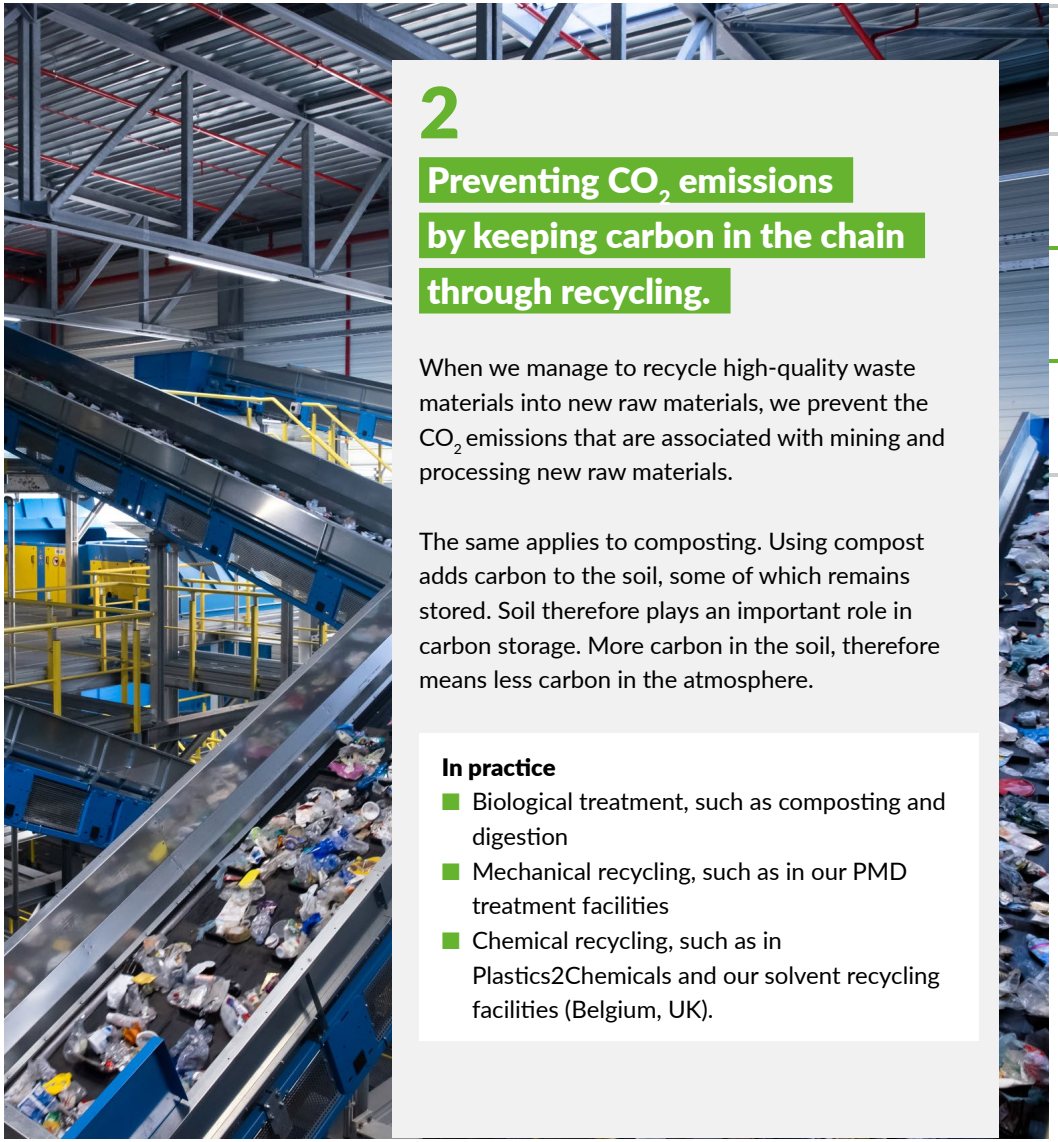
1

Destroying waste to reduce its impact.

By destroying greenhouse gases with a high greenhouse gas potential (also known as a: Global Warming Potential or GWP), we prevent them from further contributing to global warming.

In practice

- Rotary kiln incinerators in Antwerp (Belgium) and Hamburg and Biebesheim (Germany)
- IndaChlor in Dunkirk (France)



2

Preventing CO_2 emissions by keeping carbon in the chain through recycling.

When we manage to recycle high-quality waste materials into new raw materials, we prevent the CO_2 emissions that are associated with mining and processing new raw materials.

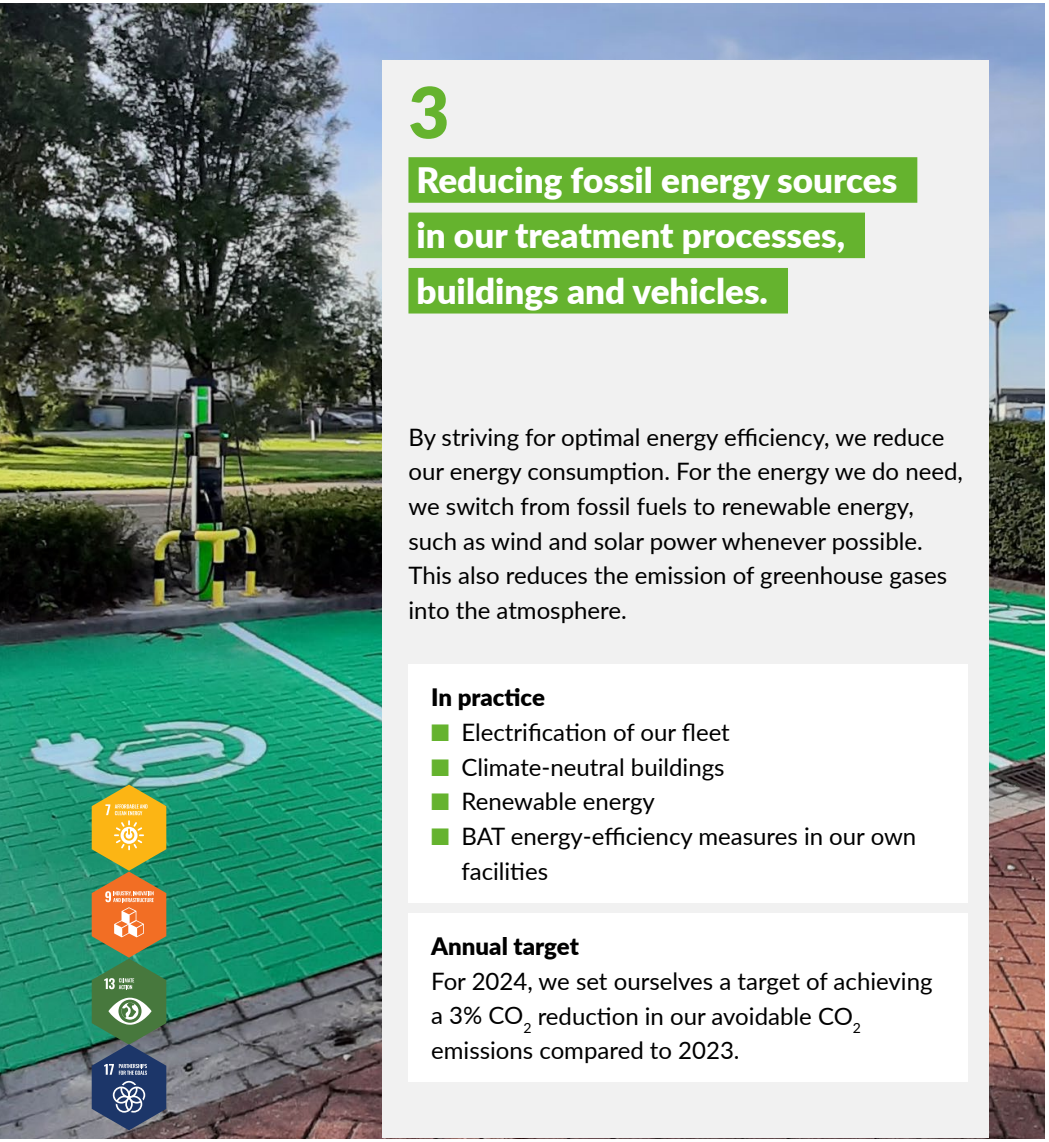
The same applies to composting. Using compost adds carbon to the soil, some of which remains stored. Soil therefore plays an important role in carbon storage. More carbon in the soil, therefore means less carbon in the atmosphere.

In practice

- Biological treatment, such as composting and digestion
- Mechanical recycling, such as in our PMD treatment facilities
- Chemical recycling, such as in Plastics2Chemicals and our solvent recycling facilities (Belgium, UK).

Climate

Carbon Management Plan: 6 goals



3

Reducing fossil energy sources in our treatment processes, buildings and vehicles.

By striving for optimal energy efficiency, we reduce our energy consumption. For the energy we do need, we switch from fossil fuels to renewable energy, such as wind and solar power whenever possible. This also reduces the emission of greenhouse gases into the atmosphere.

In practice

- Electrification of our fleet
- Climate-neutral buildings
- Renewable energy
- BAT energy-efficiency measures in our own facilities

Annual target

For 2024, we set ourselves a target of achieving a 3% CO_2 reduction in our avoidable CO_2 emissions compared to 2023.

4

Recovering high-quality materials from waste streams

This circular approach, whereby the recovered materials can be used immediately, is a key pillar in our carbon management plan. That way, we avoid the energy and ecological impact linked to primary raw materials.

In practice

- Precious metals from industrial liquid waste (Inda-MP)
- Fine chemicals from solvent waste (Indaver Solvents)
- Granulate and ferrous/non-ferrous metals from bottom ash (ash treatment in Doel, Belgium)

Climate

Carbon Management Plan: 6 goals

5 Recovering energy from waste streams

When materials recovery is not an option, we maximise energy recovery. We then use that energy for our own activities as well as supplying it to surrounding businesses and residential areas through steam and heating networks. The aim is to recover more and more (useful) energy from waste. This energy doesn't have to be generated by fossil fuels and, thus, results in a reduction of CO_2.

In practice

- Waste-to-energy plants, such as Meath (Ireland), Doel (Belgium) and Aberdeen (UK)
- Heating and steam networks, such as ECLUSE and WAN

6 Carbon capture and storage or re-use in useful applications

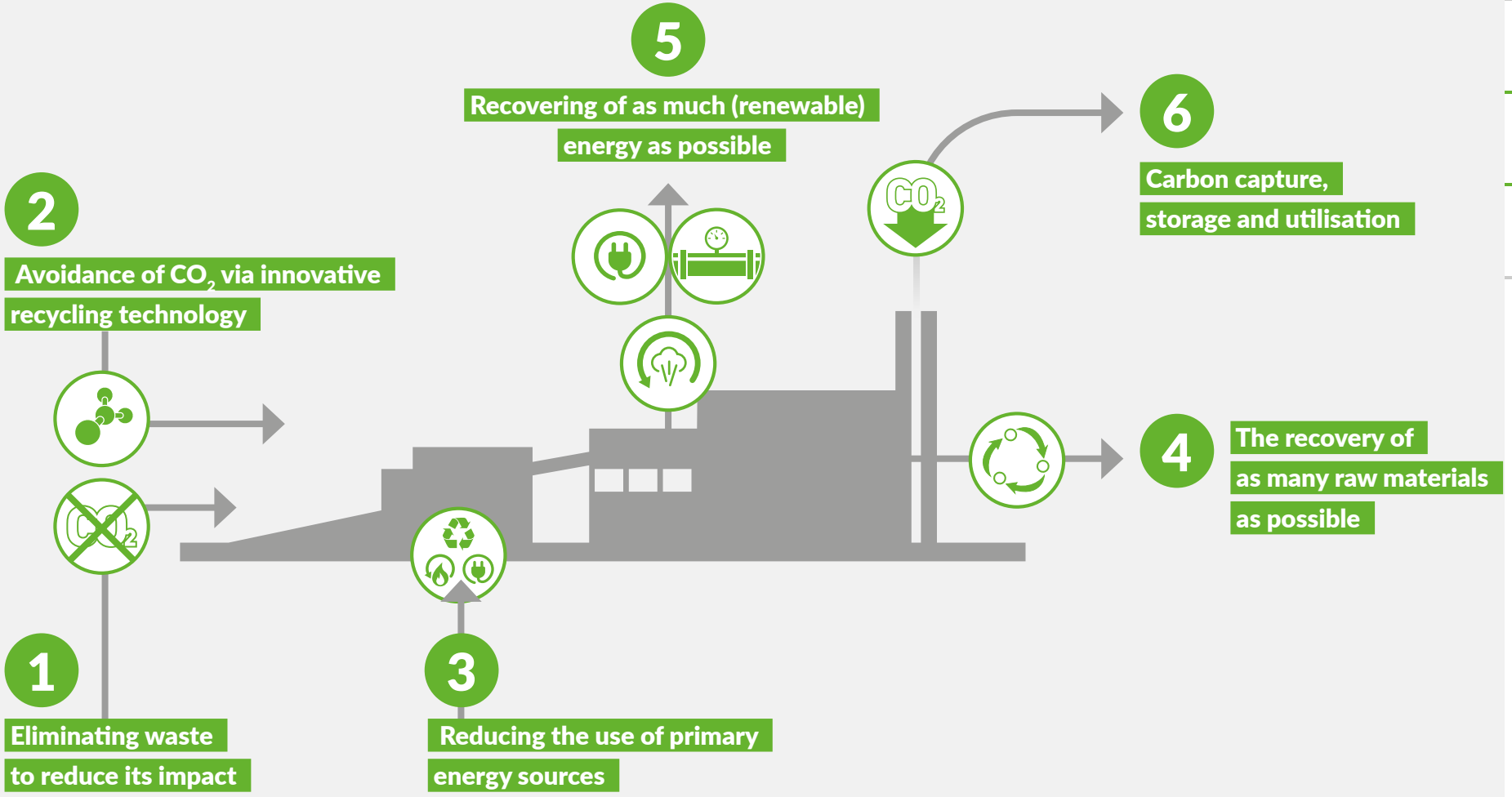
During Carbon Capture, the CO_2 emissions are captured before they enter the atmosphere as a greenhouse gas. The carbon is then stored or re-used. This is naturally better for the climate. This technology is evolving rapidly and although we are already conducting studies on several sites, we expect the first real applications from 2030 onwards.

In practice

- In Alphen aan den Rijn (the Netherlands), we recover CO_2 on a small scale for re-use in useful applications in horticulture.
- In Essex (UK), we are looking into the options to capture and re-use CO_2 in greenhouses. Additional CO_2 strongly stimulates plant and crop growth, which benefits food production.

Climate

The 6 complementary ambitions of our Carbon Management Plan



Climate

Carbon management plan 1: destroying CO_2

As a gatekeeper, one of Indaver's key tasks is to keep hazardous waste out of the loop. Our rotary kilns are vital for this. They destroy numerous hazardous, toxic substances, some of which have a high greenhouse gas potential. For example, IndaChlor destroys tetrachloromethane, a substance that is very harmful to the ozone layer, with a very high global warming potential.

It goes without saying that we always keep these facilities in top condition and improve them whenever possible. In 2023, for example, we invested in a new rotary drum in Antwerp (Belgium) (more info on page 141).

Indachlor destroys particularly harmful tetra chloro methane.

Climate

Carbon management 2: preventing CO_2 through recycling

With the Plastics2Chemicals (P2C) project, we are making great advances in the chemical recycling of complex plastics. To close the entire chain, we built a pre-treatment plant in Willebroek (Belgium) in 2023. This plant will convert the separated plastic waste streams into pellets, suitable for immediate treatment in the P2C plant.

Also in Willebroek, we built a sorting facility for our customers with which Indaver recovers up to 16 different raw materials from collected plastic packaging materials, metal packaging and drink cartons. This produces a very high level of purity. Since 2023, also coffee capsules are allowed in the PMD collection bags. To collect these from the waste stream, we've installed an additional eddy current separator for the smallest fraction.

In the new pretreatment installation in Willebroek, we prepare sorted PMD waste for recycling into new raw materials.

Climate

Carbon management 3: Switching to alternative energy sources

Green mobility: full speed ahead!

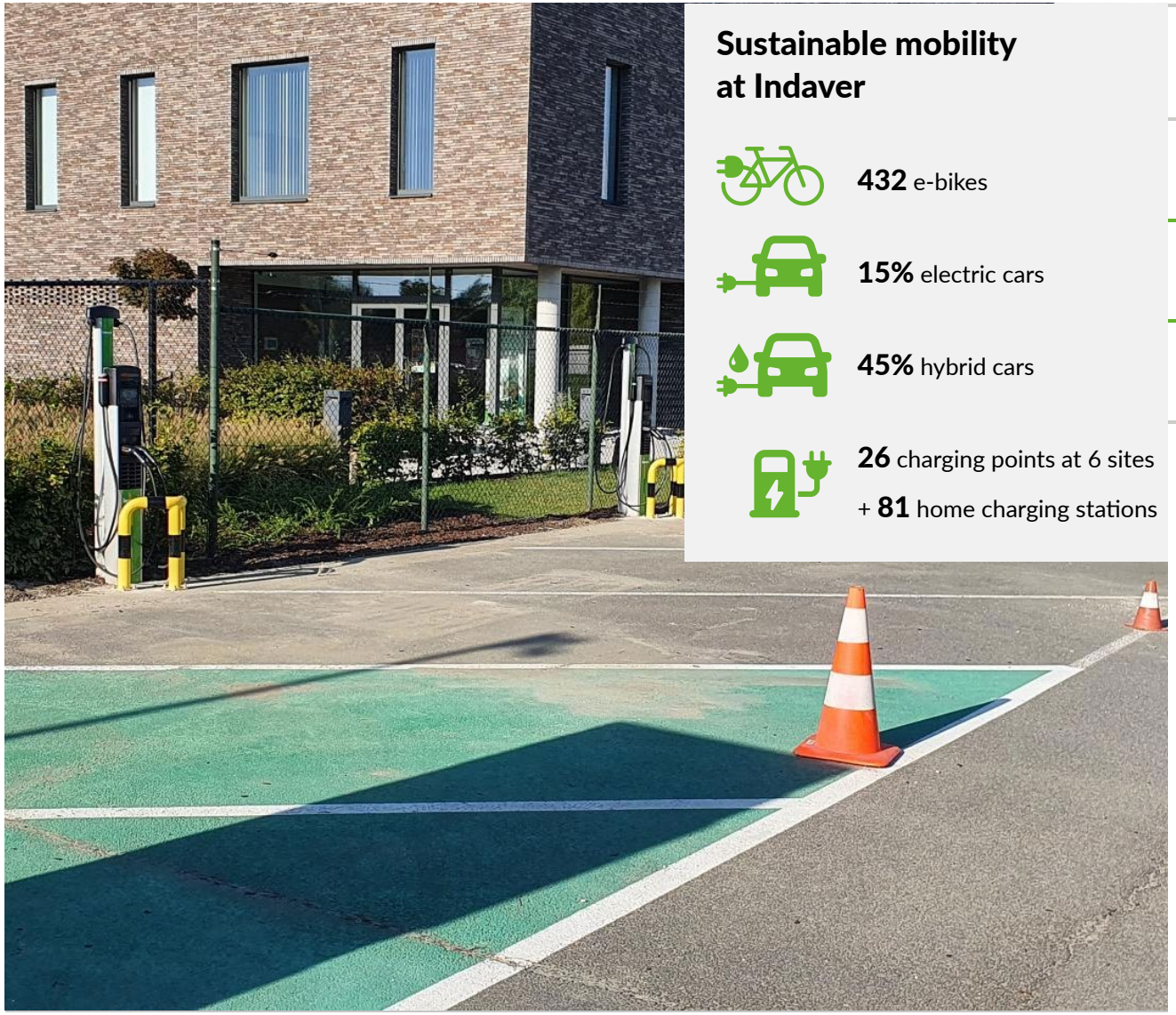
Indaver has been working towards a greener fleet and sustainable mobility options for its employees for several years. Bike leasing, electric cars and awareness campaigns should help us to reduce fossil fuel consumption. Furthermore, this increased sustainability also applies to our professional mobility: from electric forklift trucks on our sites to multimodal transport between sites. Lastly, we are also decisively opting for sustainable buildings.

Electric fleet

People who drive to work are encouraged to lease an electric car. **Electrification of the vehicle fleet** gained momentum in 2023, both in Belgium and the Netherlands.

After successful pilot projects in 2022, we prepared a large number of sites in 2023 for the arrival of **charging infrastructure**. Meanwhile, the charging points in Doel, Willebroek and Antwerp (Belgium) and in Nieuwdorp (the Netherlands) are in full use, while the first requests for a home charging point have also been processed.

Meanwhile, the sites in Hamburg and Biebesheim are preparing for the arrival of the first charging points in 2024. All other German sites will follow in 2025.



Sustainable mobility at Indaver

432 e-bikes

15% electric cars

45% hybrid cars

26 charging points at 6 sites

+ **81** home charging stations

Climate

Carbon management 3: Switching to alternative energy sources

Renewable energy for our own sites

Indaver aims to use as little fossil fuels as possible and is committed to renewable energy, such as solar and wind power. The site in Antwerp (Belgium), for example, is developing into an energy cluster.

Antwerp site: Hooge Maey landfill becomes an energy cluster

Since 2018, Indaver has been operating the 100-hectare Hooge Maey landfill site in Antwerp, which was once the largest landfill in Flanders, for non-hazardous waste.
At the Hooge Maey site, we combine **multiple land-use** with energy production. We treat solid non-hazardous waste on the landfill site, internal leachates and external wastewater in the water treatment plant, we convert landfill gas into electricity with gas engines, and we produce wind and solar energy.

Today, several projects are underway to make the site more sustainable and **to increase the portion of renewable energy.** The site currently houses 2 wind turbines, but that's just the beginning. A permit application for 2 additional wind turbines was prepared at the end of 2023, which we submitted in early 2024. We are also preparing for the construction of a solar park of about 20 hectares (good for 20 MW). We hope to have the necessary permits by the end of 2024, so we can build the park in 2025.

The envisaged additional renewable energy includes our **Plastics2Chemicals** project.
The plant is currently still under construction, but we want to make the right energy choices from the start. That way, we will be able to meet the energy demands of our technology for recycling complex plastics, immediately and sustainably.

Even more green energy for the site in Antwerp (Belgium)

Since 2023, Indaver's Antwerp site has been able to use energy from Hooge Maey's biogas engines as green energy. A permanent high-voltage link has been built so that 6,200 MWh of electricity from the four existing biogas engines goes directly to our Antwerp site.

Climate

Carbon management 3: Switching to alternative energy sources

The share of renewable energy continues to rise elsewhere

We also use renewable energy on the sites in Willebroek (Belgium) and Terneuzen (the Netherlands). At IWS Terneuzen, there are 670 **solar panels** on the company roofs. They supply 280 MWh of energy per year, around 10% of our own energy consumption.

In Willebroek, **solar panels and wind turbines** provide renewable energy for our own use. There are 4,000m² of solar panels on the roof of the PMD hall. Together with the wind turbines, they generate enough energy for our own operation (6,000 MWh per year). We supply the surplus to the grid and can buy energy when there is not enough wind or sun.

Batteries for energy storage in Meath (Ireland)

At the waste-to-energy plant in Meath, when there is an excess supply of solar and wind energy, the plant is temporarily disconnected from the grid. To avoid the energy going to waste, we are exploring the possibility of **buffering** the plant's renewable energy **in batteries**, so that we can use that energy when the wind drops or the sun isn't shining.

670 solar panels at IWS Terneuzen (NL).

Willebroek (BE) counts on the sun and the wind for its energy supply.

In Meath (IE), we investigate the option of storing energy in batteries.

Climate

Reduction of CO_2 footprint in the Netherlands

Quality improvements of the compost in our posttreatment installation consumes more energy than before.

The cleanest energy is the energy that we don't use.

Indaver is constantly looking for smart options to reduce energy consumption on its sites. In 2023, we made big advances in this, for example in the Netherlands. There, we closely monitor energy consumption at all sites. With new investments, we always look for the most energy-efficient solutions, without compromising quality or capacity, of course.

Energy-efficient investments

The post-treatment facility at our **Rotterdam-Europoort** VFG composting site has had separate kilowatt-hour meters for each plant component since 2022. This enables us to monitor our energy consumption even better.

In total, the facility does consume more energy than before, to increase the quality and quantity of compost. Thanks to new, energy-efficient LED lighting in the hall and new tunnel doors that keep the heat in better, we are still trying to limit energy consumption.

The **new office** that we opened in 2023 is also **extremely energy efficient**. The building is no longer connected to natural gas and is completely energy-neutral. A heat-pump boiler and solar panels generate renewable energy.

Four-year energy audit

At each Dutch site, Indaver keeps the energy balance sheet meticulously up to date. There is an energy audit every four years, in line with the European Energy Efficiency Directive (EED). This gives us a **detailed overview of all the energy flows** from our sites: including the buildings, industrial processes and facilities, transport and heating. We compile the audit reports into a quantified summary: the energy management action plan (EMA). Based on the results, we can define action points to further reduce energy consumption.

Climate

Reduction of CO_2 footprint in the Netherlands

Looking back over 2023:

ARP's natural gas consumption (a big consumer of natural gas within Indaver in the Netherlands) fell sharply, reducing Indaver in the Netherlands' Scope 1 emissions by 10%. This reduction is partly due to lower hydrochloric acid production. In addition, the pilot to save on gas consumption, which was conducted in 2023, was very effective. During the pilot period, it was proven that high-quality regenerated hydrochloric acid could be produced using more than 10% less natural gas. In 2024, a decision will be made together with the customer as to whether there will be a follow-up to this pilot.

With the start-up of the reverse osmosis plant, steam consumption at our IWS site in Terneuzen halved, which reduced CO_2 emissions by more than a third. In addition, 7% of the electricity consumed is generated by its own solar panels.

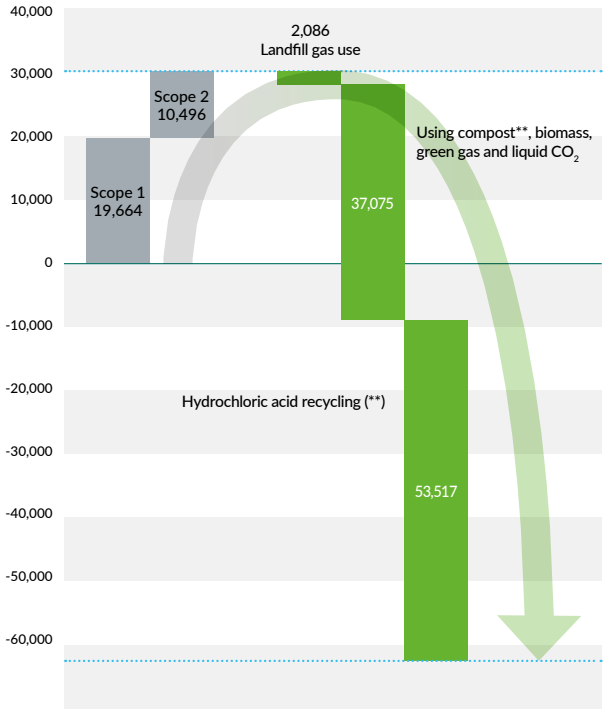
Outlook:

Pilot projects are planned for 2024 to see if it is possible to run the plant on electricity. More specifically, it involves conducting trials using the rotary sieve, converter and chamber filter press. The objective is to further reduce our diesel consumption.

Our energy-saving plans have been hindered by a long lead time on our application to upgrade our electrical connection at a number of sites. We hope to provide a positive report on this soon.

Reversed osmosis to further clean the waste water.

Reducing our carbon footprint (in tonnes CO_2) in the Netherlands 2023



Scope 1: direct CO_2 emissions - Scope 2: indirect CO_2 emissions

CO_2 emissions (total emissions: 34,275 tonnes)

Compensation (total: 90,447 tonnes)

(*) Compost utilisation: calculated according to established method

(**) Avoided emissions: calculation based on emission factors (from literature)

Climate

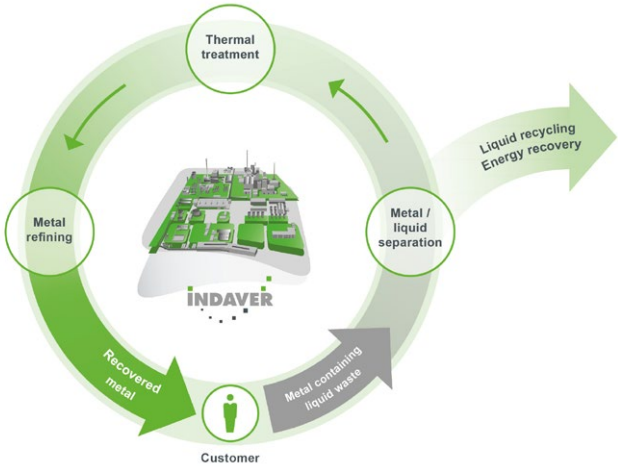
Carbon management 4: Recovering high-quality materials

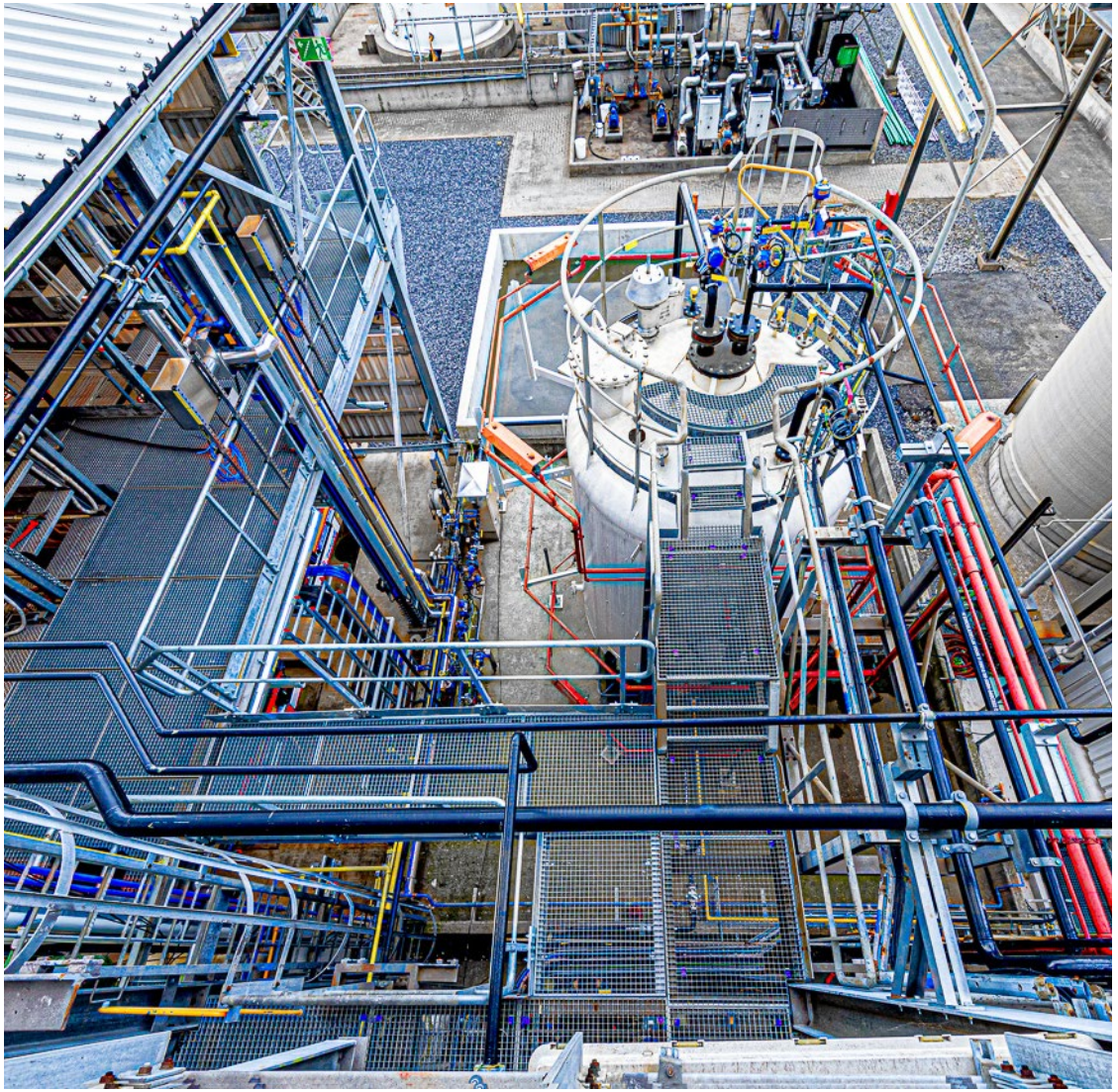
Recovered here, saved further along the chain

By recovering materials from waste using the Best Available Techniques, we save the energy and CO_2 emissions that would be needed to produce or extract those raw materials using fossil fuels further along the chain.

Inda-MP: new filtration unit reduces CO_2 footprint

In Antwerp, Belgium, Inda-MP recovers **precious metals** from liquids containing precious metals. Thanks to the new process line which we prepared in 2023, we will soon double our treatment capacity and be able to process more types of waste. Moreover, we are preventing the need to mine new precious metals, which is a very carbon-intensive process. By way of illustration: Every kilogram of Palladium is equivalent to about 25 tonnes of CO_2. We are thus also reducing CO_2 emissions in Antwerp.





At Inda-MP in Antwerp (BE), we recover precious metals like Palladium from waste streams.

Climate

Carbon management 5: Recovering energy

Extracting every joule of energy from waste and using it smartly

The energy that we gain from the treatment of various waste streams, is used in our own operations and we supply it to other users. These could be residential areas, businesses, hospitals, or other buyers. Together, we are preventing CO_2 from being emitted elsewhere for energy production using fossil fuels.

Investments in higher energy yields

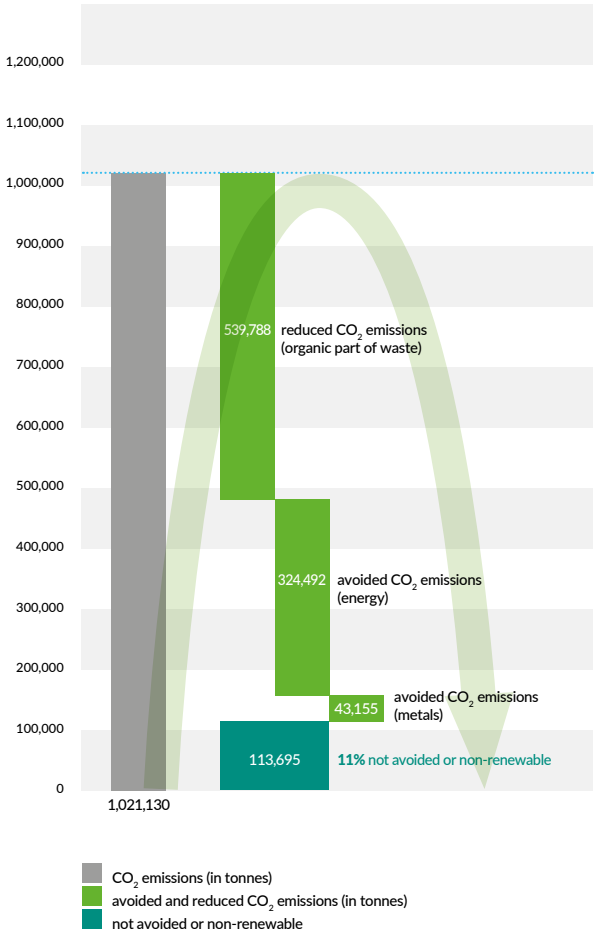
In September 2023, we installed a new turbine on the Antwerp site. This turbine converts the energy we recover from waste treatment into electricity. And this now provides a much better energy yield. In Hamburg (Germany), Indaver also invested in a new turbine to boost energy efficiency.

New turbine in Antwerp (BE) equals higher energy yields.

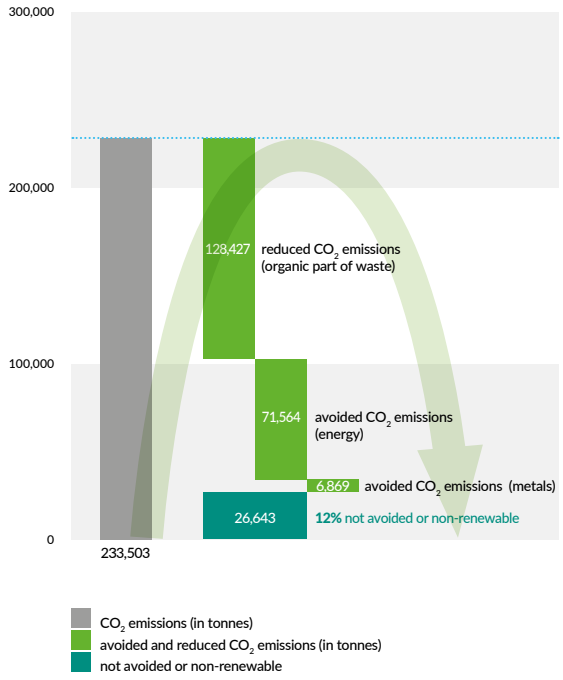
Climate-neutral facilities in Doel (Belgium) and Meath (Ireland)

The sites in Doel (Belgium) and Meath (Ireland) are striving to become climate neutral. They are doing this partly by recovering energy with their facilities.

Doel



Meath



CO_2-factors used for the calculations changed in 2020 and are based on NBN-EN 15316-4-5:2017

Climate

Carbon management 5: Recovering energy

Antwerp North Heat Network supplies carbon-free heat to Boortmalt

In 2023, we made sure everything was ready for the Antwerp mayor Bart De Wever to press the symbolic start button for the Antwerp North Heat Network (Warmtenetwerk Antwerpen Noord - WAN) in early 2024. Via this pipeline from the Port of Antwerp to Bruges, which we laid with the port authorities, we have linked our Antwerp site with the Boortmalt malting company. From now on, Boortmalt will switch from using natural gas and cogeneration to Indaver's residual heat for their malt production. Moreover, the North Antwerp North Heat Network (WAN) is the first 'open access' heating grid in Belgium, which creates opportunities for new suppliers and customers. Good to know: Indaver also installed the connection point for a residential network to a few social housing districts.

Read more about WAN (Antwerp North Heat Network)

YVAN SCHAEPMAN
CEO BOORTMALT

"It is great to see the power of teamwork when everyone's on the same page. The project in Antwerp is the largest CO_2-saving project for Boortmalt worldwide. It is impressive and we are well on the way to achieving our aim of being carbon neutral by 2035."

Climate

Carbon management 5: Recovering energy

Wim De Vadder, Manager Thermic Treatment at Indaver Antwerp, on the commissioning of WAN.

Discover how Stefan Opdenakker, Director of our Indaver site in Antwerp, adjusted the site to prepare it for the arrival of WAN.

Werner Linsen, Project Manager WAN, on the challenges that came with the construction of the heat network.

Gert Van Laer, Project and Asset Care Manager Europe at Boortmalt, on the way WAN contributes to achieving Boortmalt's sustainability goals.

In the works: supplying residual heat to a medical institution in Biebesheim (Germany)

After a series of successful preparations and tests, in 2023 Indaver signed a 'Letter of Intent' to supply waste heat to a medical institution near the Biebesheim site. That waste heat is generated from the treatment of hazardous waste. We hope to make this project a reality in 2024, so that the medical establishment to turn off the gas tap.

Climate

Carbon management 6: Carbon capture and re-use

Carbon capture and re-use for useful applications

In Alphen aan den Rijn (the Netherlands), we recover CO_2 on a small scale for re-use in useful applications in horticulture. But we are also investigating how we can capture and store or re-use carbon on other sites. The Integrated Waste Management Facility in Essex (UK) is a prime example. The Energy-from-Waste facility was under construction in 2023, but in the meantime we also developed plans to build a carbon-capture plant on the same site.

In Alphen aan den Rijn (NL), we capture CO_2 to be re-used in horticulture.

New, clean and safe materials from waste

Materials recovery

Social context

Moving towards a circular economy faster

The Green Deal highlights the need for Europe to work towards economic growth **without increasing the use of materials**. The circular economy must continue to play a major role in this. After all, fossil fuels are being phased out. Furthermore, geopolitical tensions or economic changes can suddenly make it much more expensive or even impossible to access mineral raw materials (such as metals), while demand continues to increase. In addition, very few raw materials are still being mined in Europe. So, for many important raw materials, we are completely dependent on imports.

Good quality, reliable and safe

Secondary raw materials recovered from waste streams can replace primary raw materials, if these materials are as good quality, as reliable and as safe as the primary materials. The increase in contaminated waste streams and the increasingly complex components they comprise, require greater efforts in the sustainable treatment of waste streams.

We have come to realise that due to economic and geopolitical shifts, our ability to purchase raw materials from other continents is no longer unlimited. Hence why it is so important to mine and manage our own materials as well as possible.

Our approach

Closing materials loops

You can create value from waste, that's what Indaver stands for. By making optimum use of waste streams, they become part of the circular economy. We invest in high-tech facilities and innovative processes to recover valuable and critical raw materials in an energy-efficient way. Thanks to our Indaver Molecule Management approach, we can also break down complex waste materials to the molecule, after which we supply the high-quality secondary raw materials to industry.

Worthy substitutes

The market puts high demands on its raw materials. The secondary raw materials that Indaver produces meet the same quality requirements as primary raw materials: they are **pure, reliable and safe**. This makes them a worthy substitute in the industry's and other sectors' production processes. By recovering raw materials from waste, we are closing materials loops and taking a big step in the transition to a circular economy.

What's important here, is that Indaver is increasingly looking at which raw materials society needs. For example, palladium and certain basic chemicals. We then consider which waste streams lend themselves to this and what processing techniques we should apply to them. In other words, we try to recover materials that we are sure will be useful to our customers. In 2023, this market-oriented mindset was further developed across all our sites.

Sorted PMD waste becomes a high-quality raw material for new products.

New, clean and safe materials from waste

Plastics2Chemicals: from complex to circular plastics

Proofpoint 2023

from complex to circular plastics

Using the European Green Deal and the increasingly stringent packaging targets as a guide, Indaver is taking the lead in the search for scalable and economically viable recycling solutions for complex plastics. The goal is to open Europe's largest depolymerisation facility in 2027, in Antwerp, (Belgium) with a capacity of 65,000 tonnes per year. Afterwards, we want to roll out the concept in other regions.

A significant challenge in meeting European recycling targets is the increasing use of multi-layered plastics, which are difficult to recycle mechanically. This category includes polystyrene (PS), extruded polystyrene (XPS) and polyolefins (PO): plastics that have numerous applications.

Long before ambitious targets highlighted the recycling challenges of complex plastics, Indaver had already been exploring circular solutions for this category of waste. That is why we launched Plastics2Chemicals in 2017. And stakeholders all along the chain are reaping the benefits of that today.

How a first in chemical recycling is closing the loop

Under the name Plastics2Chemicals (P2C), Indaver is closing the chain. It will soon be able to break down plastics on an industrial scale into high-quality basic chemicals that are suitable for use in new packaging, including for food.

Plastics2Chemicals: from circular experiment to world news

2017 — Investigation

Investigation into technologies for the chemical recycling of (extruded) Polystyrene (XPS and PS) and Polyolefins (PO) to include these plastic families in the circular economy.

2017 — Pilot project & validation

Start-up of the pilot installation to test the chemical recycling on real-life waste streams, in collaboration with the universities of Ghent and Antwerp.

Volume
2 kg/h

2024 — Demonstration

Start-up of the pretreatment facility in Willebroek and the demo plant in Antwerp to recycle (X)PS and PO.

Volume
65,000 tons/year

Estimated carbon reduction:
90,000 tonnes CO_2-eq

2027 — Industrial scale

Start-up of an extra line in Antwerp and focus on circular solutions for X(PS). As the largest depolymerisation facility in Europe, the site will be able to process about half of all European household (X)PS waste.

Volume
65,000 tons/year

Estimated carbon reduction:
227,500 tonnes CO_2-eq

Internationalisation & optimisation

Construction of installations for the chemical recycling of (X)PS and PO at strategic locations across Europe. With our partners, we continue to optimise technologies and processes.

New, clean and safe materials from waste

Plastics2Chemicals: from complex to circular plastics

How are we closing the chain upstream?
The selectively collected packaging waste is carefully sorted in our PMD sorting plant. The end products are bales of pure streams. But before P2C can chemically recycle them, those bales first must be separated, further purified and converted into small pellets. We will replace the link that is missing from the chain ourselves. To do so, we converted our old PMD hall in Willebroek into a pre-treatment site. Something we did extremely sustainably. By re-using materials among other things, we saved the equivalent CO_2 to 1,300 cars running for an entire year.

How are we closing the chain downstream?
Industrial customers want high-quality basic chemicals, which we supply thanks to innovative technology. The technology makes it possible to create raw materials that are of equal value to raw materials from fossil streams. We are thus also helping our customers to comply with the directives on recycled content in packaging.

Circular solutions are gaining momentum
In 2023, the most visible progress was the construction of the facilities in Antwerp and Willebroek. But even behind the scenes, the P2C concept really resonated with various stakeholders. They are also putting their weight behind this project.

TIM DEVLAMYNCK
BUSINESS DEVELOPER P2C

"Thanks to P2C, discarded packaging can be re-used for high-value applications. Simply put, from now on yoghurt pots will remain yoghurt pots - a European first!"

A project with impact

Capacity of 26,000 tonnes in phase 1 and 65,000 tonnes per year from 2027 onwards, or around 50% of Europe's household (X)PS packaging.

CO_2 reduction of 227,500 tonnes CO_2 eq., or approximately 50,000 fuel cars driving around for a year.

Talent with work for 100 additional full-time equivalents throughout Antwerp and Willebroek.

Green operations in sustainable facilities, powered by renewable energy.

Collaboration throughout the chain, from suppliers of end-of-life plastics to buyers of basic chemicals.

Expertise will be further developed and carried forward into other recycling projects

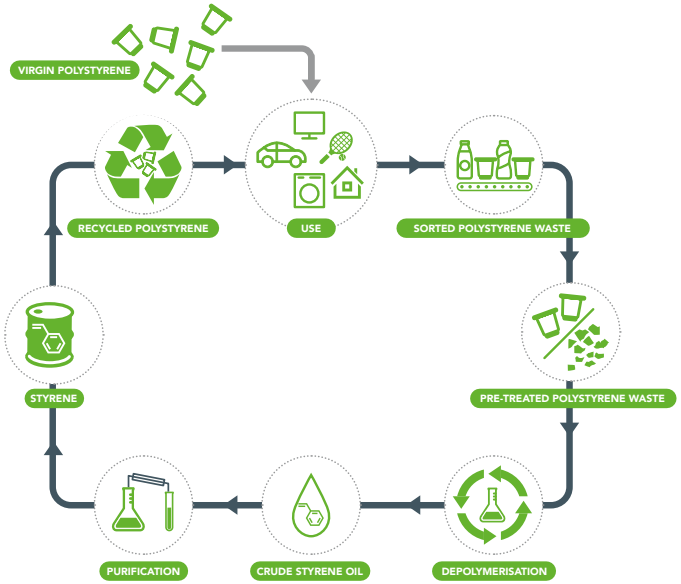
Are you following all our updates?
You can do so via our Plastics2Chemicals page.

New, clean and safe materials from waste

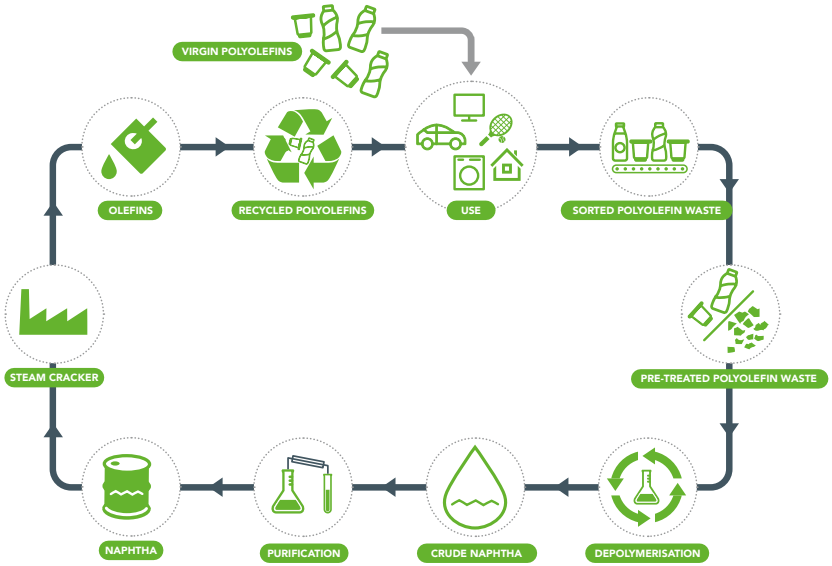
Plastics2Chemicals: from complex to circular plastics

Together with our partners, we close the loops for Polyolefins and Polystyrene.

Polystyrene loop



Polyolefins loop



WIM GEENS
MANAGING DIRECTOR AT FOST PLUS

Fost Plus awards recycling contract for (X)PS to Indaver

"PS is a relatively small portion of the contents of our blue bag, but from 2024 onwards, some 5,000 tonnes of PS from 5 PMD sorting centres will be chemically recycled in Antwerp. A Belgian circular story to be proud of."

VALÉRIE GOFF
SENIOR VICE PRESIDENT RENEWABLE FUELS & CHEMICALS AT TOTALENERGIES

TotalEnergies praises chain cooperation

"We are excited to support the development of more advanced plastics recycling. A collaboration of the entire value chain is necessary to achieve a more sustainable and circular economy. Furthermore, it brings us closer to our own ambition of producing 30% circular polymers by 2030."

New, clean and safe materials from waste

Indaver Solvents: from solvent waste to fine chemicals

Our network of solvent recycling facilities is growing steadily. In addition to the Antwerp (Belgium) site, we also treat solvents in Middlewich (UK), where we acquired BIP Chemical Holdings at the end of 2022. At the end of 2023, the company was given a new brand name: Indaver Solvents. With Indaver Solvents, we are investing heavily to take the efficiency, capacity, and sustainability of the recycling plants to an even higher level.

High-capacity solvent recycling unit
When it was acquired, the solvent recovery unit in Middlewich (UK) had a total processing capacity of around 20,000 tonnes. After replacing the new distillation columns, this increased by 7,000 tonnes. With the new cooling system and with the new boiler in operation in 2024, we expect capacity to increase further.

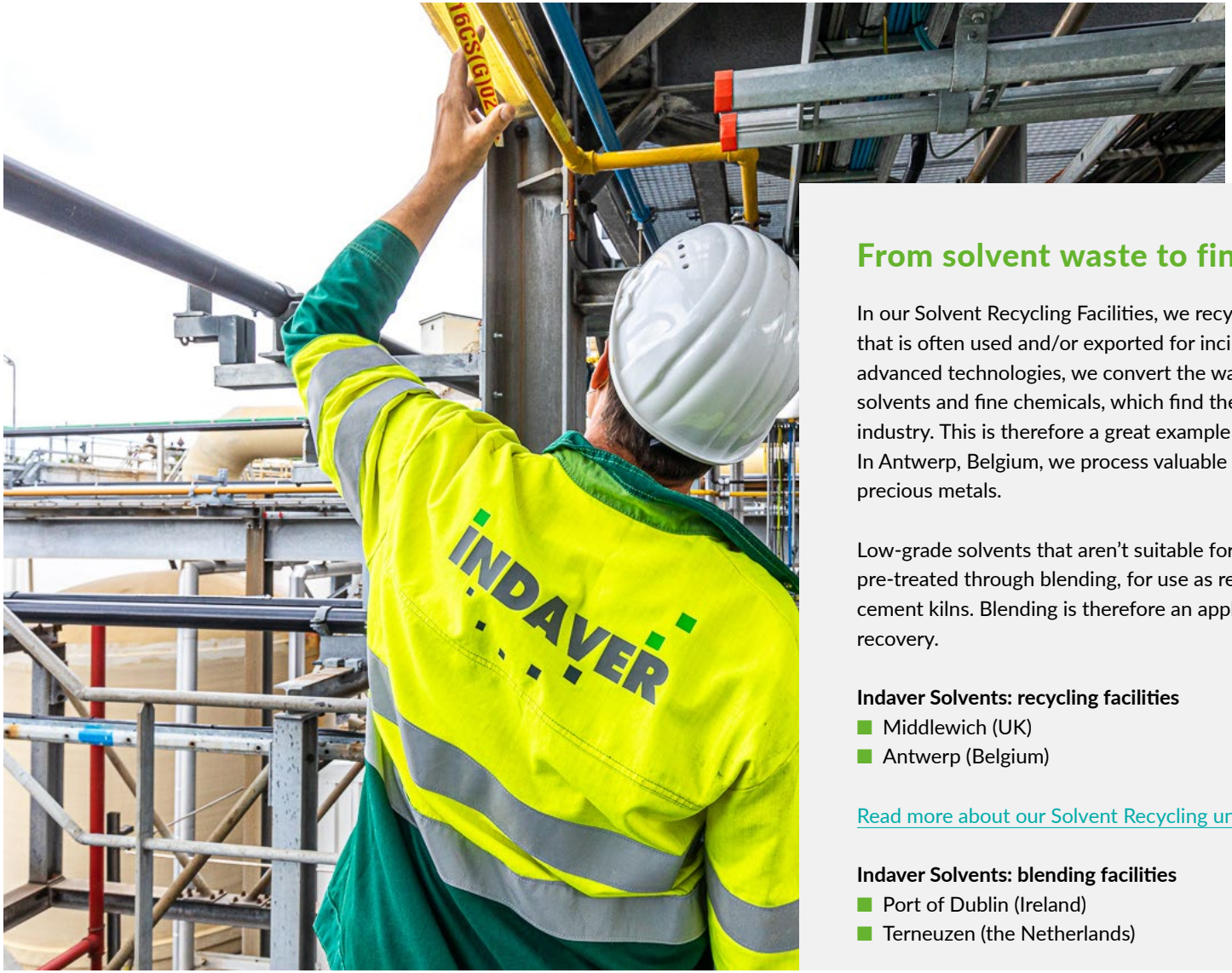
A selection of improvements so that we can treat a greater volume and more complex streams:

- 2 new distillation columns: better separation of **complex solvent mixtures** and **increased capacity** (+7,000 tonnes).
- New condensers for the cooling system: **increased capacity** and **fewer emissions from solvent vapours**
- A new system so that liquids are pumped into the distillation columns using nitrogen instead of air or oxygen: **increased safety**

In **2024**, we will continue to work on **expanding** the plant's **capacity**. We are currently preparing the necessary permits for this. In addition, the boiler will be replaced by a boiler that runs on waste solvents, **reducing the need for fossil fuels.** We are thereby not only increasing the recovery of materials, but we are also reducing CO_2 emissions.

New, clean and safe materials from waste

Indaver Solvents: from solvent waste to fine chemicals



From solvent waste to fine chemicals

In our Solvent Recycling Facilities, we recycle solvent waste that is often used and/or exported for incineration. Through advanced technologies, we convert the waste back into solvents and fine chemicals, which find their way back to industry. This is therefore a great example of material recovery. In Antwerp, Belgium, we process valuable solvents to recover precious metals.

Low-grade solvents that aren't suitable for recycling are pre-treated through blending, for use as replacement fuel in cement kilns. Blending is therefore an application of energy recovery.

Indaver Solvents: recycling facilities

- Middlewich (UK)
- Antwerp (Belgium)

Read more about our Solvent Recycling units.

Indaver Solvents: blending facilities

- Port of Dublin (Ireland)
- Terneuzen (the Netherlands)

New, clean and safe materials from waste

The Netherlands: from VFG and green waste to compost and energy

In the Netherlands, Indaver processes organic waste streams such as green and VFG waste (vegetable, fruit and garden waste) into high-quality compost. We make biomass from the residual wood streams. In the advanced VFG digestion plant in Alphen aan den Rijn (Netherlands), we also produce green gas and liquid CO_2. Indaver Nederland is substantially scaling-up its biowaste operations.

Rotterdam Europoort: re-processing residual streams

In 2023, we commissioned an upgraded **post-processing plant** at our VFG composting facility in Rotterdam. The facility is equipped with the Best Available Techniques to remove contamination from the material stream. In 2023, we also started re-processing the residual streams. That way, we can **produce more compost** from the VFG supplied. In addition, a larger portion of the screen overflow is used to make **biomass**, in order to generate electricity.

We use what we are learning from this facility to improve the post-treatment facilities at the other VFG sites.

Further strengthening our market position in organic residues

Since 2023, Indaver has been the 100% owner of the Oost-Groninger Afval Recyclinginstallatie (OGAR waste recycling facility) in Oude Pekela. With the full acquisition of the team and facilities, **we are strengthening our position** in the Netherlands' organic waste treatment market.

Improving compost quality: an ongoing exercise

All of Indaver's Dutch sites have been Keurcompost-certified for several years. Our companies are audited annually, and the quality of our products is continuously monitored.

Nonetheless, we make constant efforts to improve the quality of the compost. For example, in Nieuwdorp (the Netherlands), together with our client, the OLAZ (the Zeeland Public Waste Disposal Authority), we decided to regularly assess the quality of the VFG waste delivered, according to an established protocol. This means we can give municipalities feedback with targeted guidance on better waste separation.

As a result, the quality of Zeeland's VFG waste is now among the top in the Netherlands, with only 1.7% contamination on average. As a waste treatment company, we are happy with **cleaner** VFG waste while the Zeeland municipalities are rewarded with a **reduced treatment price**.

New, clean and safe materials from waste

Indaver Minerals: materials recovery at temporary storage sites

Indaver has a wide range of technologies for cleaning mineral waste streams to make them ready for re-use. Before the (purified) mineral raw material can be re-used, it undergoes a quality test in line with the latest legislation, which defines quality limits and potential uses. When cleaning is not an option, storage in Stainkoeln offers a sustainable solution.

5 locations in the north of the Netherlands

For lightly contaminated soil, industrial sludge, dredging spoil, rubble and other re-usable construction materials, our TOPs (temporary storage sites) in Groningen, Gaarkeuken, Delfzijl, Leeuwarden and Veendam mark the beginning of a new chapter.

Indaver Mineraal stores all cleaned mineral residual waste streams in one of its soil banks. Following approval and certification, the mineral raw materials are suitable for re-use as secondary construction materials.

Our temporary storage site in Groningen: last stop before reuse.

Recycling of bottom ash from waste-to-energy plants

In Groningen (the Netherlands), Indaver Mineraal is exploring opportunities to reprocess bottom ash, the residue from waste incineration, into 'clean products'. Until recently, bottom ash was used as a secondary raw material in construction materials, such as the foundations for roads and embankments. To prevent environmental impact, it was sufficient to isolate, control and monitor bottom ash (in line with the "IBC conditions" - Isolate, Manage and Control in English). From 2024, sales under IBC conditions are no longer permitted in the Netherlands. Bottom ash must be reprocessed into a construction material that can be used as a primary material, so that it can be used as **a construction material without restrictions**.

Together for a Circular Groningen

Indaver is one of the initiators of Circular Groningen, which aims to work towards a circular economy in the region using a widely supported regional approach. In this, we stress the important role of landfills in the circular economy, since there will always be residual materials left over that should not return to the loop. But: Stainkoeln is also the landfill site from which, following treatment, most waste leaves again for re-use, from cleaned soil to compost.

Discover Circular Groningen

New, clean and safe materials from waste

Inda-MP: creating added value for pharmaceutical and chemical customers

At its Inda-MP facility in Antwerp (Belgium) Indaver recovers precious metals from liquids. These precious secondary raw materials then find their way to pharmaceutical and chemical companies. With a new process line, we are doubling our capacity, while the new filter will reduce our CO_2 emissions.

Precious metals such as Palladium, Rhodium and Ruthenium are expensive and very scarce in Europe. Furthermore, mining them is carbon intensive (for example 25 tonnes of CO_2/kg Palladium). There are therefore lots of reasons for recovering **secondary precious metals**. Processing liquids into precious metals is a complex exercise, but Inda-MP has been providing a circular solution since 2019.

New process line: more capacity, less CO_2

From 2024, we will be able to significantly scale-up the **capacity** of the facility (+3,000 tonnes): there will be a second process line in addition to the process line for organic streams. Thanks to the new technology that we use there, we will also be able to process a **wider variety of liquids**, such as aqueous and organic streams containing (more) sediment, low pH, high chlorine content or thermally unstable substances. Processing is also more cost effective and more energy

The environmental benefits of Inda-MP

1,350 kg Palladium and **50 kg Ruthenium** recovered

33,000 tonnes of CO_2 prevented (no mining of new metals)

20,000 tonnes of solventen solvents recovered

From liquids to precious metals

Inda-MP offers a total solution for liquids containing precious metals: from the logistics of the liquid phases to the supply of the refined precious metals. Moreover, the valuable solvents are further purified in the Indaver Solvents plants, while hazardous components are safely destroyed and converted into energy.

BOTTOM ASH BECOMES A USEFUL END PRODUCT

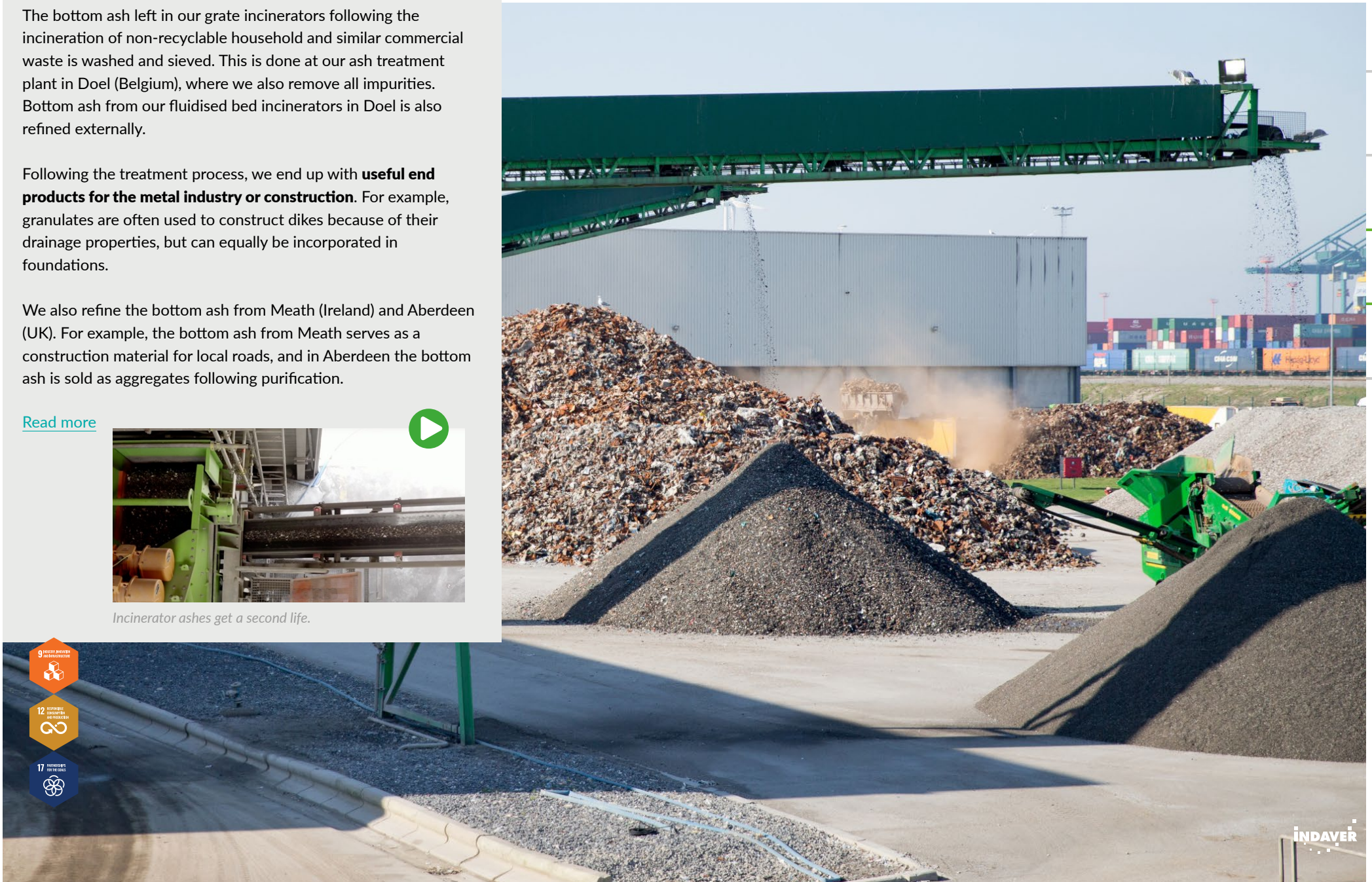
The bottom ash left in our grate incinerators following the incineration of non-recyclable household and similar commercial waste is washed and sieved. This is done at our ash treatment plant in Doel (Belgium), where we also remove all impurities. Bottom ash from our fluidised bed incinerators in Doel is also refined externally.

Following the treatment process, we end up with **useful end products for the metal industry or construction**. For example, granulates are often used to construct dikes because of their drainage properties, but can equally be incorporated in foundations.

We also refine the bottom ash from Meath (Ireland) and Aberdeen (UK). For example, the bottom ash from Meath serves as a construction material for local roads, and in Aberdeen the bottom ash is sold as aggregates following purification.

Read more

Incinerator ashes get a second life.



PMD BECOMES NEW (TRACEABLE) RAW MATERIAL

Our sorting plant in Willebroek (Belgium) treats some 65,000 tonnes of PMD waste collected from local authorities and companies every year. From that treatment, we extract as many as **16 different end products - ready for re-use.**

The new raw materials have a very high level of purity and meet all of the recycling industry's criteria. We are thus closing the materials loop and maintaining high quality. In addition, each bale is given an **identification label**. This contains all the data needed to keep this information traceable once the bale has left our sorting centre.

Read more

CHLORINATED WASTE BECOMES HYDROCHLORIC ACID

In northern France, near Dunkirk, is IndaChlor, Indaver's treatment and recycling plant that recycles chlorinated waste, primarily from the PVC industry. During the treatment of the chlorinated waste streams, around 40,000 tonnes a year, IndaChlor recovers chlorine in the form of hydrochloric acid. The energy generated in that process then also goes via a pipeline to a neighbouring company.

Good to know: IndaChlor destroys harmful greenhouse gases. For example, tetrachloromethane, which is many times more harmful to the climate than CO_2.

Read more

Waste treatment leads to (green) energy

Social context

scaling up the share of renewable energy

The global geopolitical situation has made it abundantly clear in recent years: if Europe does not want to be subject to major fluctuations in energy prices, we need to work on having our own resources. Meanwhile, there is increasing pressure on citizens, governments, businesses and industries to save energy and to switch to renewable energy sources as soon as possible, in order to reduce CO_2 emissions. The portion of renewable energy is therefore rising steadily, but it can't yet keep up with demand.

European and local energy targets

The EU is further increasing its energy targets, with the aim of making Europe's energy supply cleaner, more reliable and cheaper. By way of illustration, a revision of the **Renewable Energy Directive** was adopted in October 2023. This states that the share of renewable energy should reach (at least) **42.5%** by 2030.

In addition to the EU, EU member states and regions also have their own targets and legislation to achieve their climate ambitions. However, the common thread is always the same: more renewable energy.

Our approach

waste to energy

More ambitious renewable energy targets align perfectly with Indaver's goal to further establish itself as an innovative energy supplier. Indeed, in several facilities, Indaver is focusing on maximum energy generation. With our waste-to-energy strategy, we are reducing the use of fossil fuels and with that CO_2 emissions.

Steam network ECLUSE supplies green energy from the Waste-to-Energy installations in Doel (BE) to industrial parties.

42.5 %

The Renewable Energy Directive states that the share of renewable energy should reach at least 42.5% by 2030.

Waste treatment leads to (green) energy

Energy from Waste Streams

Our facilities produce energy from the waste treatment process. We use that energy primarily **for our own processes**. We supply energy to businesses and residential areas through **heating, steam and electricity networks**. We also recover the maximum amount of the landfill gas that is released from landfills, which contains a portion of organic material, in the form of **green gas or electricity**.

Active throughout Europe

Indaver operates thermal treatment plants in Belgium, Germany, France, Ireland, and the UK. In addition, there are more projects under construction, such as Rivenhall in East Anglia.

If we convert all the energy (electricity, steam and heat) generated by Indaver in 2023 to electricity, we provide the equivalent of 265,950 households (3.5 MWh/family per year - average consumption).

≈Energy for **265,950** households

DOEL
Fluidised bed incinerators
≈ **100,000** households

ANTWERP
Rotary kilns
≈ **10,800** households

DOEL
Grate incinerators
≈ **88,400** households

BIEBESHEIM
Rotary kilns
≈ **7,100** households

MEATH
Grate incinerator
≈ **42,600** households

INDACHLOR
≈ **4,400** households

HAMBURG
Rotary kilns
≈ **11,300** households

ALPHEN A/D RIJN
Bio Power (green gas)
≈ **1,350** households

Waste treatment leads to (green) energy

WAN: sustainable heat for industry and homes in Antwerp

WARMTENETWERK
ANTWERPEN NOORD

Working together with the Port of Antwerp-Bruges (Belgium) and others, Indaver created the Antwerp North Heat Network (WAN). After intensive preparations in 2023, the industrial heating network is ready: since the end of 2023, Boortmalt, the world's largest malting company, has been using the residual heat from its Indaver rotary kiln incinerators to make malt from barley. In a second phase, Fluvius will lay a residential network to supply energy to 3,200 families.

Phase 1: from residual heat to malt

A heating network that uses residual heat, consists of a network of well-insulated underground pipes that transports hot water from one place (industry) to another (industry and homes). With the North Antwerp Heat Network, this involves **residual heat from our rotary kiln incinerators**. This heat is transported at a temperature of around 105°C to Boortmalt, some 10 km away in the port. Boortmalt **uses the heat in the malting process**. The cooled water (65°C) flows back through a second pipeline to Indaver to be re-used.

> Thanks to the Antwerp North Heat Network (WAN), Boortmalt saves the equivalent of the natural gas consumption of 10,000 households.

Phase 2: from waste heat to energy for families

In a second phase, Fluvius will connect a residential network to this, which will also provide heating for schools, public buildings and 3,200 households in the Luchtbal and Rozemaai districts. Those households will consequently no longer use fossil fuels. Once the full capacity of the heating network is used, it will ensure 80,000 tonnes less CO_2 emissions. This makes the WAN a crucial part of the City of Antwerp's **municipal climate policy** (2030 Roadmap).

A pipeline gets the residual heat from our rotary kilns to Boortmalt.

Behind the screens of the construction of Antwerp North Heat Network

Waste treatment leads to (green) energy

WAN: duurzame energie voor industrie en woningen in Antwerpen

First open access network

What makes this network particularly special is that it will become an 'open access' network. **Any company located nearby in the port** that produces and/or wants to buy heat will then be able to supply residual heat to or buy it from the network.

A beautiful example of collaboration

WAN is an exceptional collaboration between several public and private players: Indaver, Port of Antwerp-Bruges, Boortmalt, Fluvius, City of Antwerp and Woonhaven social housing company. Furthermore, the Flemish government provides the subsidies necessary for the project to succeed.

On 29 February 2024, the pipeline was symbolically opened by a push on the button.

JACQUES VANDERMEIREN
CEO PORT OF ANTWERP-BRUGES

"Today, the North Antwerp Heating Network is leading to a real reduction in CO_2 emissions, and that is thanks to the collaboration between the port, industry and city. The long-term commitment and constant exchange of heat between industrial companies in the port of Antwerp, such as Indaver and Boortmalt, makes the development of a larger heat network possible. As a result, schools, large buildings and 3,200 homes in Antwerp will, in time, also be able to be supplied with heat in a climate-friendly manner."

WAN in figures (2023)

10 kilometres of pipes in the ground

60 MW: total capacity of the network

470,000 tonnes of malt is dried **per year** using the residual heat, the equivalent **of 16 billion beers**, among other things

Waste treatment leads to (green) energy

FOSTER: sludge as a valuable source of energy

On ArcelorMittal's site in the port of Ghent (Belgium), Indaver and BESIX, commissioned by the water purifier Aquafin, want to build FOSTER, a high-tech facility that thermally treats water purification sludge. The plant will produce green energy and, in the second phase, raw materials such as phosphorus.

Indaver is forming a consortium with the construction company BESIX, that will be responsible for the design, construction, financing, running and maintenance of the mono-sludge treatment plant in Ghent until 2046. The new plant will treat 2/3 of all sludge from Aquafin's sewage treatment plants. 1/3 already goes to SLECO's fluidised bed plant in Doel. **Energy and bottom ashes** are recovered from the sludge. All of the energy then goes to Arcelor Mittal in the form of high-pressure steam, in the same way as with our ECLUSE steam network.

In 2023, we focused on **applying for the permit**: we consulted all stakeholders, informed local residents and drafted the application. We hope to receive the permit in 2024, so that we can recover energy from 4 million Flemish people's domestic wastewater from 2026 onwards.

Significant CO_2 reduction

FOSTER's strategic location in the port of Ghent will greatly reduce transport needs for supply and removal. Furthermore, the plant will supply energy to Arcelor Mittal, which will consequently prevent CO_2 emissions in that respect too.

More about Foster

The installation for the treatment of water purification sludge will look like this.

From sludge to green energy and (in a next phase) raw materials, such as phosphorus.

Waste treatment leads to (green) energy

ECLUSE 2: ECLUSE steam network crosses the River Scheldt

ECLUSE
a channel for green energy

Since 2019, steam network ECLUSE has supplied process steam to five chemical companies on the left bank of the Scheldt in Antwerp (Belgium). This comes from thermal treatment plants in Doel. In 2023, ECLUSE received a permit to expand to the right bank of the Scheldt and works will start in early 2024. So, how will we get to the other side? Under the project name ECLUSE 2, the partnership will construct a tunnel under the Scheldt River for energy transport. A significant investment that proves we are more than just your average waste treatment company.

A reduction of up to 150,000 tonnes CO_2 emissions

Our Waste-to-Energy site in Doel can supply more steam than the companies at Waaslandhaven need. Currently, any excess steam is converted to electricity, which is less energy-efficient than direct steam usage. For this reason, ECLUSE actively searched for **additional buyers** for the generated steam. **Evonik** seemed to be an ideal match. The chemical giant uses a lot of steam, a need that is still currently filled by natural gas. By harnessing steam from waste processing, Evonik saves the equivalent of 38,000 households' annual consumption of natural gas.

Steam network ECLUSE supplies about 5% of all green energy in Flanders.

Sustainable industrial cluster

Once the tunnel is in place (target date at the end of 2026), **other companies** on the right bank will also be able to connect. Furthermore, the Scheldt tunnel will be able to accommodate **additional pipelines** to transport chemical products (hydrogen, chemicals, etc.). Further cascading of the heat may be explored in the future. ECLUSE thus facilitates opportunities for the growth of the Antwerp industrial cluster in all sorts of ways and supports Flanders in the transition to green energy.

Read more about ECLUSE

Waste treatment leads to (green) energy

ECLUSE 2: ECLUSE steam network crosses the River Scheldt

Together for a substantial reduction in CO_2-emissions

The ECLUSE steam network is a collaboration between Indaver, SLECO, Fineg, Port of Antwerp-Bruges, Water-Link and the Scheldt Left Bank Corporation (MLSO). It is one of the largest industrial steam networks of its kind. By way of illustration, ECLUSE has been supplying at least 5% of all green heat produced in Flanders since 2019.

ECLUSE 1
a channel for green energy

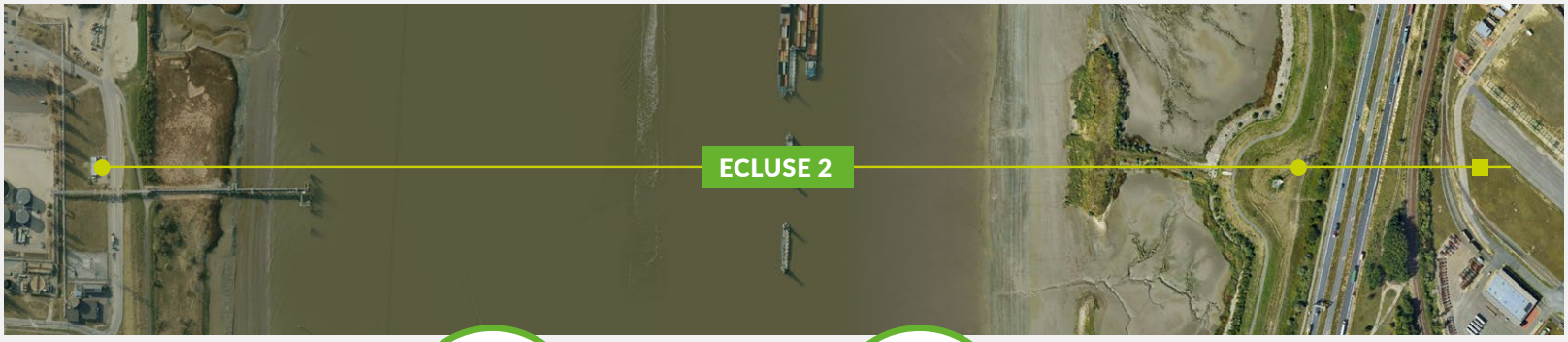
100,000 tonnes

CO_2 reduction of 100,000 tonnes per year (INEOS Phenol, Monument Chemicals, Ashland Specialties Belgium, ADPO, LANXESS

ECLUSE 2
a channel for green energy

100,000 to 150,000 tonnes

CO_2 reduction of 100,000 to 150,000 tonnes per year (Evonik + potentially other companies)



100,000 tonnes = **50x**

FUN FACT: A reduction of 100,000 tonnes of CO_2 is the same as the amount of CO_2 emissions saved by 50 standard 2.3 MWe wind turbines.

Waste treatment leads to (green) energy

Essex: waste-to-energy power plant goes underground

In the UK too, Indaver will soon be extracting energy from waste. At the Rivenhall site in Essex, once an RAF base, our largest waste treatment facility took shape in 2023. The Energy-from-Waste plant at the Integrated Waste Management Facility (IWMF) will treat 595,000 tonnes of non-recyclable household waste and similar commercial waste each year. Important: up to 49.9 MW of electricity can be generated during treatment.

Our largest treatment installation to date is rapidly gaining shape.

State-of-the-art

Thanks to the **efficient turbine**, we will be able to recover much more energy from the same amount of waste than was previously possible. Consequently, up to 100,000 households can be supplied with electricity. As the plant is in a rural area, we are also looking into energy supply for nearby **horticulturists**, for example.

Care for the environment

The construction of the site is just as progressive as the technology. To make the plant blend into the flat landscape as much as possible, we chose to build it **mainly underground**. An operation that involved the removal of 3 million tonnes of soil. In 2023, the plant itself took shape. By the end of the year, the site was 48% complete.

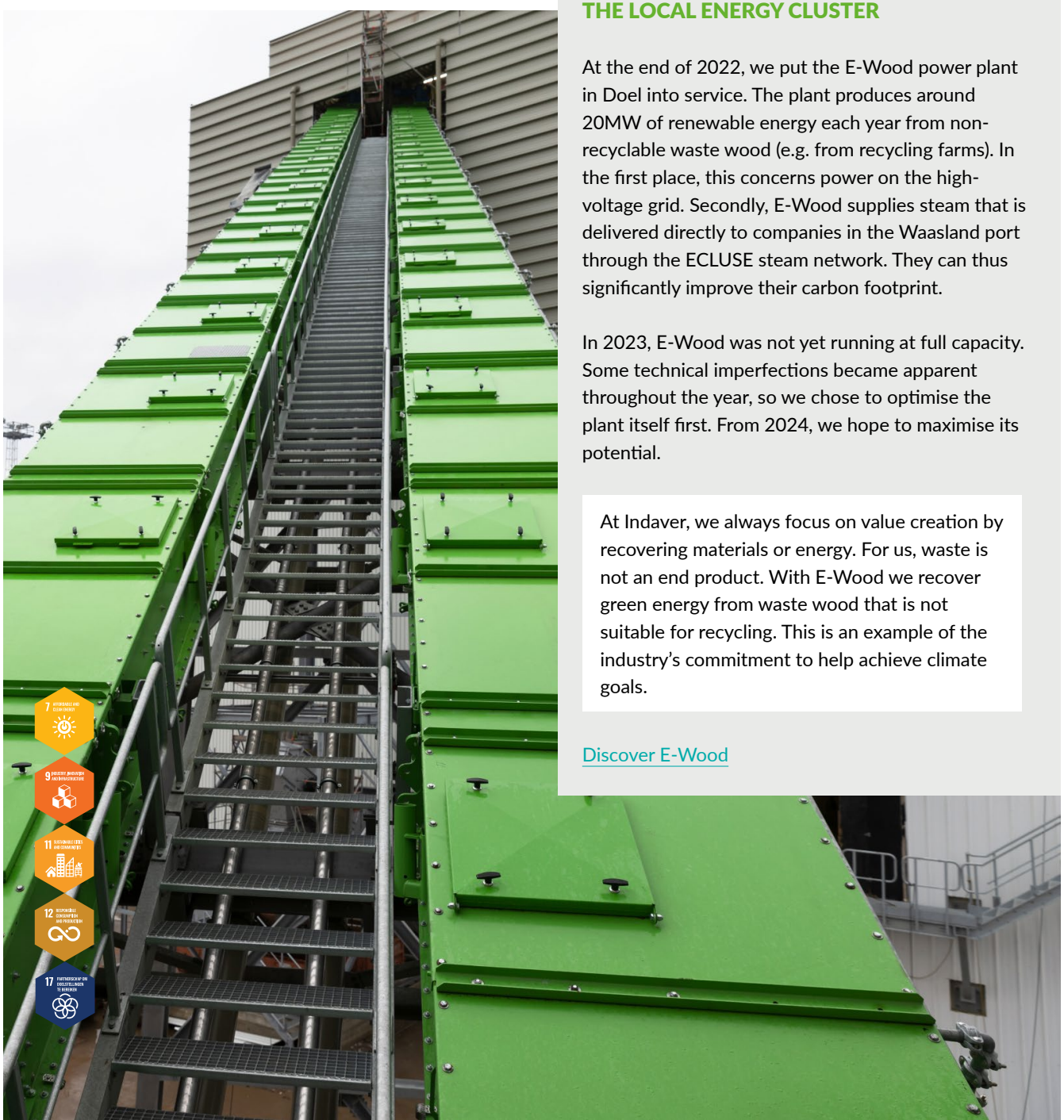
Moreover, we are involving residents in the project. A barn on the site will therefore be renovated into a visitors' experience centre, where workshops will be organised.

Future possibilities

The Energy-from-Waste facility in Essex should be operational by 2026. In line with our focus on continuous improvement, we are looking into opportunities to expand the facilities in the long term with a **pre-treatment unit for bulky household waste.**

Also on the agenda: research into carbon capture. This would then be re-used in greenhouses. Additional CO_2 can speed up the process of photosynthesis by up to 30%, greatly enhancing plant and crop growth.

Food imports are expensive in the UK, making food shortages a real issue. By supplying horticultural companies with green energy, we are helping this rural area to be self-sufficient.



E-WOOD POWER PLANT STRENGTHENS THE LOCAL ENERGY CLUSTER

At the end of 2022, we put the E-Wood power plant in Doel into service. The plant produces around 20MW of renewable energy each year from non-recyclable waste wood (e.g. from recycling farms). In the first place, this concerns power on the high-voltage grid. Secondly, E-Wood supplies steam that is delivered directly to companies in the Waasland port through the ECLUSE steam network. They can thus significantly improve their carbon footprint.

In 2023, E-Wood was not yet running at full capacity. Some technical imperfections became apparent throughout the year, so we chose to optimise the plant itself first. From 2024, we hope to maximise its potential.

At Indaver, we always focus on value creation by recovering materials or energy. For us, waste is not an end product. With E-Wood we recover green energy from waste wood that is not suitable for recycling. This is an example of the industry's commitment to help achieve climate goals.

Discover E-Wood

NESS ENERGY PROJECT IN SCOTLAND

In Aberdeen (UK), Indaver has been operating the NESS Energy-from-Waste Facility since October 2023. The plant processes some 150,000 tonnes of non-recyclable household waste from several council areas in north-east Scotland. The heat that is released during waste incineration will soon be **supplied to a nearby residential area**, where residents will therefore no longer need fossil fuels for heating and hot water.

Discover the NESS project (English)

PREPARATIONS FOR A HEATING NETWORK IN BIEBESHEIM

There are also **plans to build a heating network** in Biebesheim (Germany). 14 MW would be converted to energy. We have signed a letter of intent with a medical institution that is currently reviewing its heating system and wants to stop using gas. We also want to connect the facility to a small public grid that will supply energy to a school and a government building. In 2023, we made the necessary preparations, tested the turbines and started negotiations. In 2024, we will decide whether to roll out the network.

INDACHLOR: ENERGY FROM CHLORINATED WASTE

IndaChlor in Dunkirk (France) generates a lot of energy during the recovery of hydrochloric acid from chlorinated industrial waste streams. This energy is supplied directly to a neighbouring business as steam. We also use the steam to **generate electricity for our own consumption on the site**. This makes IndaChlor **self-sufficient** in its energy consumption.

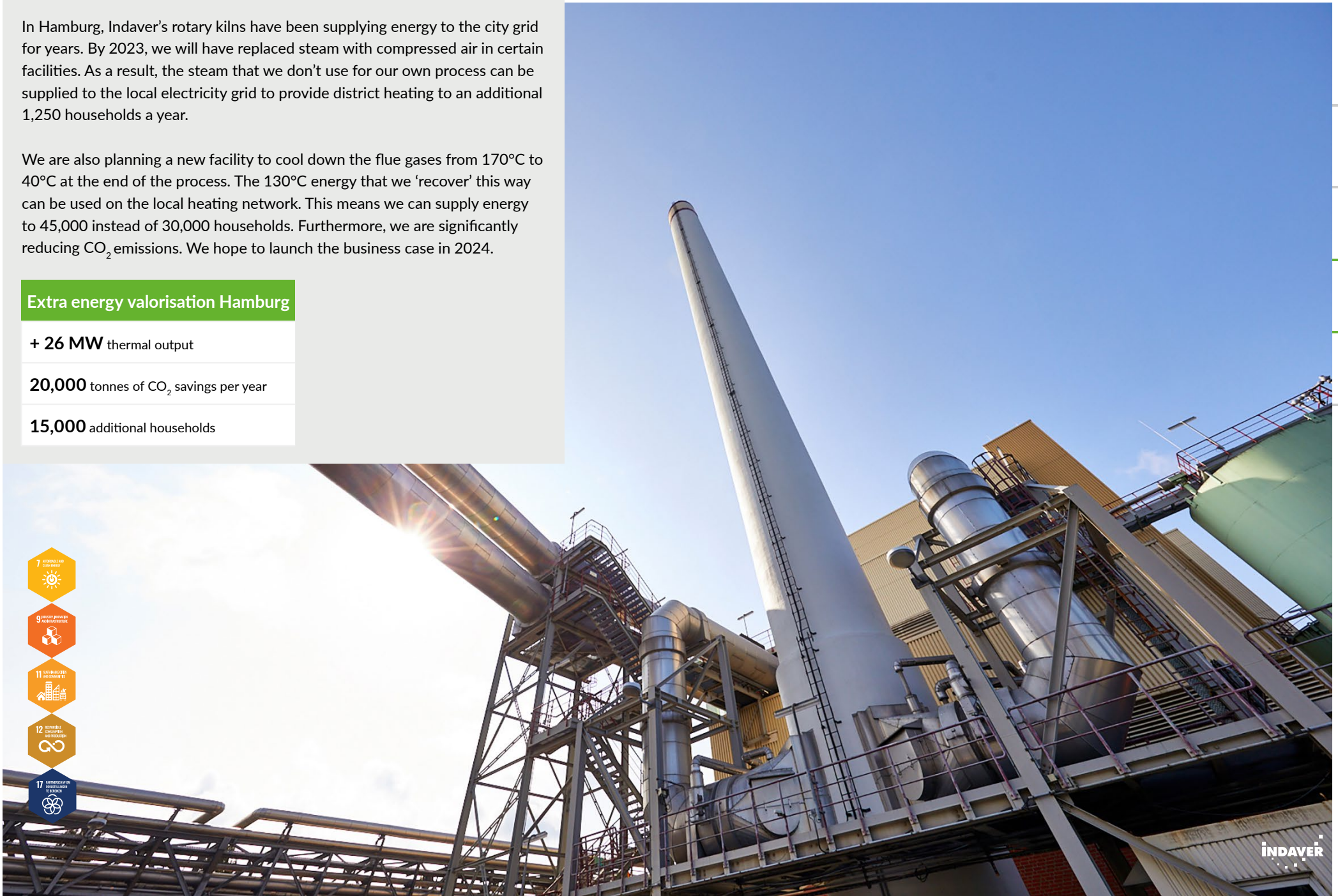
How IndaChlor works

BOOSTING ENERGY PRODUCTION IN HAMBURG

In Hamburg, Indaver's rotary kilns have been supplying energy to the city grid for years. By 2023, we will have replaced steam with compressed air in certain facilities. As a result, the steam that we don't use for our own process can be supplied to the local electricity grid to provide district heating to an additional 1,250 households a year.

We are also planning a new facility to cool down the flue gases from 170°C to 40°C at the end of the process. The 130°C energy that we 'recover' this way can be used on the local heating network. This means we can supply energy to 45,000 instead of 30,000 households. Furthermore, we are significantly reducing CO_2 emissions. We hope to launch the business case in 2024.

Extra energy valorisation Hamburg
+ 26 MW thermal output
20,000 tonnes of CO_2 savings per year
15,000 additional households



Keeping hazardous waste out of the loop

We keep the circular economy clean by safely storing pollutants at our landfill sites.

Zero ≠ none
The EU defines 'zero pollution' not as none but as 'a level that is harmless to humans and nature'. This is an important nuance, because even when using the Best Available Techniques, a small, harmless residual fraction will always remain.

Social context

Aiming for zero pollution

Polluted air, water, soil, materials and food have a major impact on people and the environment, according to the European Commission. Through the Green Deal, the EU aims to reduce pollution to levels that are safe for both people and the environment by 2050. EU member states are required to align with this goal.

Please note: intermediate targets, which EU member states must meet, have also been set in relation to air, water and soil quality, noise and waste.

Anchored in legislation

In line with the Green Deal, European policymakers aim to integrate pollution prevention into relevant EU legislation, focusing on addressing pollution at its source. Existing legislation is being tightened up in line with this principle. For example, the renewed EU waste legislation, regulations concerning industrial emissions, the extended lists of pollutants and the tighter framework for the transition to the circular economy are all relevant to our sector.

Read more about recent developments in legislation on waste management.

Pure Loops

The circular economy closes loops by re-using raw materials again and again, even when they are in waste streams. The legislation states that these secondary raw materials must have the same qualities as the primary raw materials they replace. Re-use of **secondary raw materials** is only possible if they are **pure and safe to use**. Unwanted and hazardous substances must never go back into the materials or food loop. Legislation and regulations provide frameworks for treating these residual fractions safely and for their final storage.

Keeping hazardous waste out of the loop

Our approach

The Safe Sink guarantee

Indaver has been offering sustainable solutions for waste management since the beginning. We treat harmful substances sustainably and safely, which includes destroying them at high temperatures or through safe storage. With our Safe Sink guarantee, we keep both the environment and the circular economy clean and safe, with advantages for industry, our economy, people and the environment.

Safe Sink: keeping high-risk components out of the loop

Even in a circular economy, residual fractions remain that are unsuitable for re-use, or recycling. For example, some waste streams contain substances that are very harmful to humans and the environment **(substances of very high concern** or SVHCs). We destroy those contaminants at high temperatures, or we neutralise them. We then store the residual materials safely. We call this our **Safe Sink guarantee**.

Our Safe Sink guarantee covers various **Safe Sink solutions**:

- We destroy the **organic hazardous waste that is suitable for incineration** in our rotary kilns. The extensive water purification and flue gas cleaning that is set up according to the strictest requirements and the principle of continuous improvement, ensures that the emissions meet all standards.
- We treat **inorganic hazardous waste** in our physicochemical facilities. The chemical treatment process neutralises and immobilises heavy metals and other potentially harmful components.
- We store any **residues that remain** after thermal or physicochemical treatment, safely and sustainably at our landfill sites for hazardous waste. Moreover, at these landfill sites we also store waste streams without prior treatment, such as asbestos and certain PFAS-containing waste. Our guarantee: we provide appropriate treatment for every waste stream, in line with the acceptance and treatment regulations for landfills.

STEFAN OPDENAKKER
DIRECTOR SITE ANTWERP

"Indaver is part of the solution. You cannot ignore the problem, nor export it. We have the knowledge and expertise to destroy the molecules of substances of very high concern."

Hazardous waste at one of our landfill sites.

Keeping hazardous waste out of the loop

Investing in the efficiency and sustainability of the treatment of PFAS-containing waste

PFAS is the collective name for more than 6,000 substances that, because of their chemical properties make them highly resistant to moisture, heat and stains, among other things. Thanks to these properties, we find PFAS in everyday products (paint, packaging, etc.), but also in the medical world (stents, circuit boards, etc.), energy transition (wind turbines, heat pumps, etc.) and other much-needed applications. The flip side of the coin: numerous PFAS are not or hardly biodegradable. As a result, they remain in the environment for a very long time and are nicknamed forever chemicals. Indaver offers a solution. In 2023, we removed 668,000 kg of PFAS from society there.

Water treatment plant Discharge water

An set-up of **8 activated carbon filters** ensures that emissions into the water meet the extremely strict standards set out in the discharge permit.

Groundwater treatment

After we pump the water, it is purified through **3 activated carbon filters**. Only then do we use the water as process water in the flue gas treatment plant.

Rotary kilns

In our **3 Antwerp rotary kilns**, we destroy PFAS molecules at high temperatures. 3 elements are crucial: high temperature, long residence time in the incinerator and turbulence.

Keeping hazardous waste out of the loop

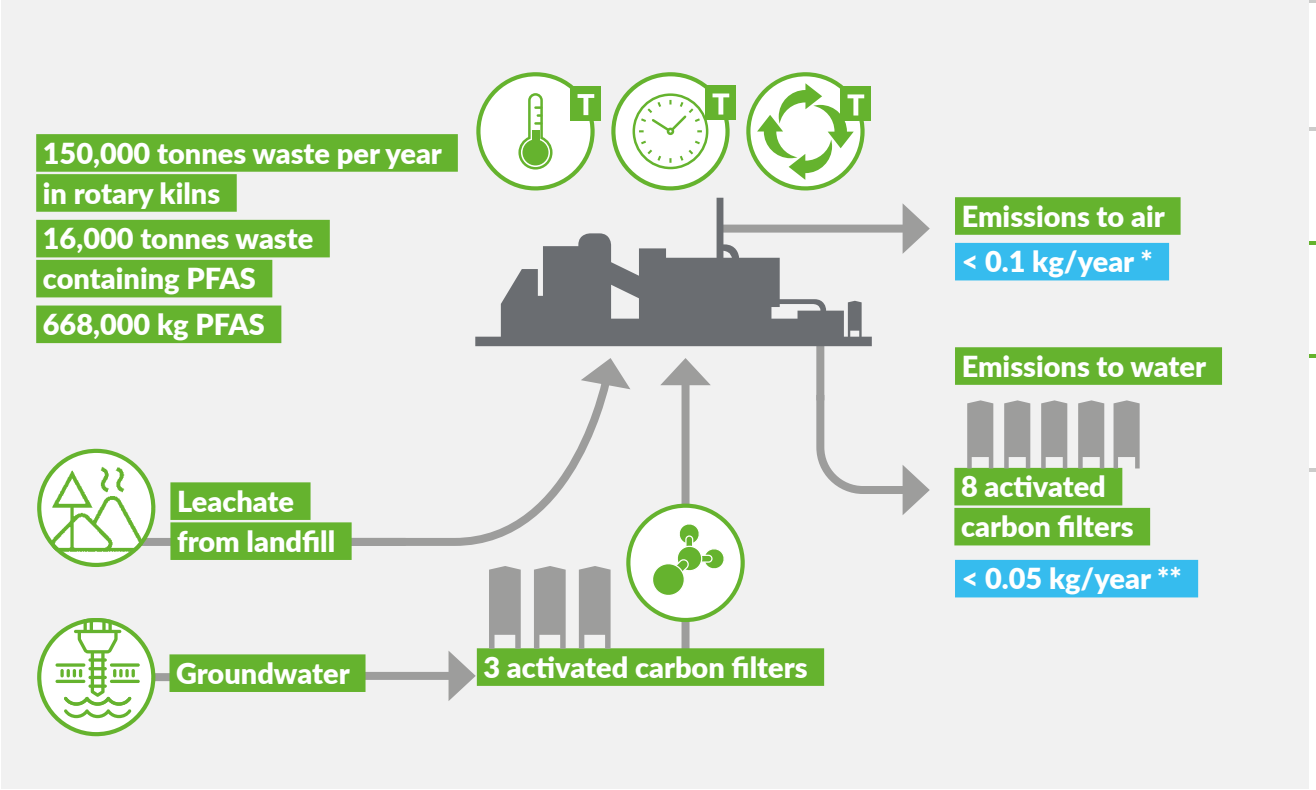
Investing in the efficiency and sustainability of the treatment of PFAS-containing waste

Large-scale, safe and effective solution to PFAS

With the widespread use of products containing PFAS, our society faces a challenge. For instance, the often high concentrations potentially pose a threat to the environment and ourselves. Although the PFAS issue has been studied and highlighted extensively in recent years, it remains too quiet on the solution side. The European Union is trying to change this with targeted legislation, such as the POPs Regulation. **Indaver is taking up its social role** by giving substance to this legislation.

In our **3 Antwerp rotary kilns** we destroy PFAS molecules at temperatures of more than 1,050°C. By exposing the harmful molecules to this temperature for a long time and under intense turbulence, they are effectively destroyed. This technique is therefore known as the **Best Available Technique** for this type of waste.

Moreover, it is also prescribed by legislation. Equally important, we do this **with the greatest care for the environment**, both in terms of air emissions and emissions to water.



* 14 emission measurements by LUC/VI/003 in 2023
** 34 measurements at the end of January-November 2023

Keeping hazardous waste out of the loop

Investing in the efficiency and sustainability of the treatment of PFAS-containing waste

Air emissions measurements show good operation

By the end of 2023, **no unambiguous standards framework was available** for the measurement of any residual PFAS molecules at the chimney level. Despite this lack of validated measurement methods, we do make our flue gases available to research organisations.

For instance, Indaver cooperated in scientific research in which we had biweekly measurements of PFAS residues in our air emissions carried out by independent labs. This already showed in 2022 that our emission levels were more than 10 times lower than the EFSA (European Food and Safety) standard for the four main PFAS components.

Following improvements in the treatment process, we were able to demonstrate a further reduction of PFAS in the flue gases in 2023. Today, emissions to the air from the 3 kilns combined are **less than 0.1 kg PFAS per year**. By comparison, that is less than what one leaking heat pump causes.

The measurement results were also modelled into immissions to calculate the amount of dust that could be present at about one and a half metres above the ground. Independent studies by Arche and VITO show that there is no risk to employees or residents.

Finally, Arche Consulting conducted a study on the deposition of flue gases. The subject of research are the dust particles that end up on the soil near our facilities. Again, no risks were found.

Read more about how we process PFAS-containing waste sustainably.

Comprehensive water treatment keeps the environment clean

The potential release of PFAS residues via wastewater is also carefully measured and controlled. The key players here are our **8 activated carbon filters.**

As part of a multi-stage water treatment process, they ensure that our plants meet the extremely stringent standards of the current discharge permit. For instance, the release of PFAS residues for the standardised PFAS molecules via wastewater is **less than 0.05 kg annually**.

After we pump the water and purify it through three activated carbon filters, we use it in our flue gas cleaning process as process water.

VITO measuring equipment on Indaver chimney.

Keeping hazardous waste out of the loop

Investing in the efficiency and sustainability of the treatment of PFAS-containing waste

Monitor evolutions closely and act accordingly

Scientific insights into PFAS, both in terms of characteristics (eco-toxicity) and the way they can be measured, are evolving very rapidly. Indaver closely follows this scientific evolution and also **actively contributes and participates to further refine existing measurement methods and analyses**.

In addition, we continuously invest in **making improvements to our treatment process** based on new insights or techniques. In the current debate concerning short or ultra-short chains, we are also actively involved in facilitating research.

In the future we will still have to deal with large quantities of PFAS-containing products. We do not want to export the problem but **take control ourselves**. We have a lot of expertise in-house and are constantly investing in new techniques. Our plant in Antwerp is **the safe sink Flanders needs** to cope with PFAS pollution.

Successful reverse osmosis trial in Terneuzen

Besides thermal processing at high temperatures, there are other techniques to combat PFAS. These are usually in the research phase and are not scalable, sustainable or financially feasible at the moment. Think of reverse osmosis. Nevertheless, we are also exploring the potential added value for our operations, such as in Terneuzen (The Netherlands).

To remove PFAS substances from industrial wastewater, IWS Terneuzen conducted a trial using reverse osmosis in 2022. The results were promising: most PFAS substances were completely removed from the water after treatment. Only a few smaller molecules required post-treatment. Indaver has since invested in a permanent water treatment plant for IWS Terneuzen.

Keeping hazardous waste out of the loop

Roche: Indaver and the pharma sector join forces for remediation project

Roche ceased its pharmaceutical operations in Clarecastle in 2020. What remained was a contaminated 36-hectare site. Indaver was appointed as the main contractor for the site remediation, working closely with Roche's team and a range of specialist subcontractors. Together, we will carry out the remediation promptly and safely, in two phases.

Thorough preparation is the key to success

After a thorough preliminary study, which included assessing the contamination, we moved into action in 2023. Since the excavation works must be done in a sheltered environment, our initial focus was on the dimensions of the covered area, ensuring there was a solid foundation for it and a suitable reinforcement.

Advanced shelter is crucial for remediation of pharmaceutical site.

We began building the covered area in the summer. We created a safe working environment with an airlock (negative pressure), air extraction with activated carbon filters, and monitoring of the indoor air. We were ready to begin the first excavation works in October and a month later this first excavation phase was complete. The solvent-contaminated soil from where the reactors stood, just in front of Roche's original production site, was gone – this amounted to over 18,000 tonnes of soil.

Safe treatment in a range of facilities

All excavated soil was transported safely to our Waste-to-Energy plant in Meath (Ireland), our facilities in Biebesheim and Hamburg (Germany), and other specialised waste treatment facilities in Europe. This wide network of sites enables us to complete the entire remediation process to the highest ecological standards.

Keeping hazardous waste out of the loop

Roche: Indaver and the pharma sector join forces for remediation project

Phase 2 on the starting blocks

At the end of 2023, we dismantled the covered areas from phase 1 and conducted an interim evaluation. Among other things, we evaluated whether everything was working according to plan and that people were well-protected. We will carry these insights into phase 2, which was fully prepared by autumn 2023.

In this new phase, Indaver will remediate two Areas of Environmental Concern: the former water treatment plant and a landfill site. That means that we will analyse, excavate, transport and sustainably process a further 150,000 tonnes of soil between 2024 and 2027.

After a rigorous selection process, Roche chose Indaver as its remediation partner. Our approach to quality, safety and environmental protection was the deciding factor, as was our intention to minimise the burden on the Clarecastle community.

More references for remediation works? We have bundled those together here.

Prestige project for Roche

To maintain its good reputation, Roche leaves nothing to chance. A selection of measures that illustrate the strict follow-up:

- lay a concrete slab in the airlock on which to place empty and full containers stably and safely
- carve out a dedicated and enclosed car park and buy additional, new, bespoke trucks and trailers
- apply strict emissions standards and use airtight containers to avoid odour pollution, for example
- design new, bespoke, excavation equipment

SECOND LIFE FOR SAFE SINK SITE: LANDFILL 'DERDE MERWEDEHAVEN' BECOMES RECREATION AREA

Since 1 January 2013, no more waste has been dumped at the 'Derde Merwedehaven' landfill site in Dordrecht, the Netherlands. The site was sealed and converted into a recreation area: Merwedeheuvel. The 55 hectares of green space fits in nicely with the existing recreation area, Hollandse Biesbosch.

We must wait before the site can open: Indaver hopes to reach an agreement with the province of South Holland about the transfer of the site in 2024. From then on, the Dordrecht municipality will manage the recreation area.

COMPLEX REMEDIATION PROJECTS

Clients regularly call on our international expertise in complex remediation projects. Our Safe Sink guarantee provides confidence in the safe treatment and storage of hazardous waste streams. Two examples:

#1 Total solution for dumped dishwasher tablets and powder

Indaver won a public tender to deal with some 44 tonnes of dishwasher tablets and powder that had been illegally exported from Germany to Poland and dumped on a company site there. We worked with a partner to repackage and transport the waste, then we carried out the treatment ourselves at our facility in Hamburg (Germany).

#2 Safe destruction of hazardous chemical waste

The Organisation for Security and Co-operation in Europe (OSCE) has appointed Indaver to treat some of the hazardous waste from Moldova at its facility in Hamburg (Germany). Here too, it will be transported by our partners - a journey of no less than 1,850 km.

Care for the environment

Results for air, water and soil quality

Social context

As part of the Green Deal, the European Commission is striving for clean water, air and soil by 2050. In so doing, it aims to improve the **quality of life of people, fauna and flora**. That goal is a high priority for Indaver too.

However, we would like to make an immediate side note on that, because the social trend is to promote zero emissions and pollution. However, that is simply not feasible with the current Best Available Techniques and this creates a point of tension between the policymakers' idealism and the **ambitious realism** of companies like Indaver. It means that we are doing everything that is technically feasible to revive ecosystems and avoid pollution.

And when we say we're doing everything, we mean everything. For many years, we have published a **transparent sustainability report** with all the relevant environmental achievements, figures that we also share on our website. So, everyone can judge for themselves.

Our approach

to measure, control and use the Best Available Techniques

At Indaver, transparency has long been the norm. We make every effort to limit our negative impact on the environment (people, animals and plants) as much as possible. We therefore adhere to the strictest environmental standards in all our activities, and we share our results.

We continuously **measure** our emissions and control the nature of our emissions and residues. The results of these measurements help us to continuously adjust our processes. We use energy and water sparingly and take measures to prevent contamination of the soil and groundwater. And where possible, we promote biodiversity in our environment.

Moreover, we always use proven, reliable and the Best Available Techniques. And we are continuously looking for ways to **optimise the way we work**. This is how we limit the impact of our activities on the air, water and soil as much as possible.

All our facilities comply with the BAT/BREF on Waste Treatment 2018 and BAT/BREF on Waste Incineration 2019.

Results for air, water and soil quality

Every year, we share which impact our installations have on the environment, namely air, water and soil. For example, we indicate how our installations perform with regards to emission limit values and how our water consumption evolves. This helps us to determine which investments and innovations are needed to raise the bar for ourselves and others.

Results for air: p. 111-125
Results for water: p. 126-128

Results from analyses prove that we comply with the strictest environmental norms.

Rotary kilns Antwerp

2023 - Emissions and impact

Mass balance

IN

Waste		
Waste (*)	150,490	tonnes
Waste used in place of raw materials (*)(**)	5,710	tonnes
Energy		
Heating oil	3,803	tonnes
Steam	196,366	GJ
Electricity	25,395	MWh
Flue gas cleaning additives		
Sodium hydroxide	1,151	tonnes
Absorbent for dioxins and heavy metals (sorbalit)	180	tonnes
Limestone	3,076	tonnes
DeNOx reagent	299	tonnes
Water purification additives		
TMT	29	tonnes
PE	3	tonnes
Quicklime	851	tonnes
$FeCl_3$	195	tonnes
Water		
Mains water (***)	392,519	m^3
Ground water (***)	78,256	m^3
Reused water (***)	130,766	m^3

OUT

Emissions to atmosphere		
Flue gases	1,037,564,127	Nm^3
Energy		
Energy recovery	1,131,646	GJ
Water discharged		
Waste water (***)	154,831	m^3
Residual products		
Bottom ash	25,737	tonnes
Fly ash + boiler ash	4,830	tonnes
Filtercakes (***)	9,121	tonnes

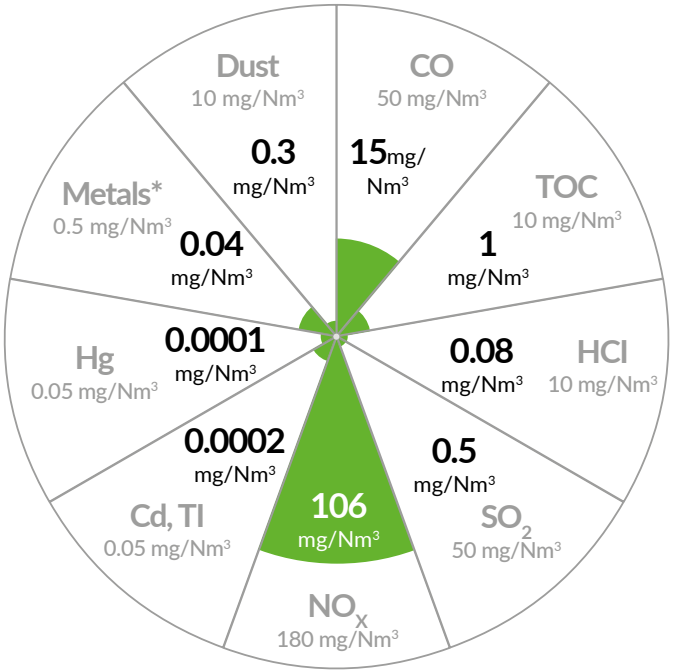
(*) Total volume waste processed in rotary kilns: 156,200 tonnes = 150,490 tonnes + 5,710 tonnes

(**) Waste used in place of raw materials: boiler ash, glass waste from bulb processing, waste oil, butanol

(***) Calculated value

Rotary kilns Antwerp
2023

Performance relative to emission limit



Daily average standard unless otherwise stipulated in Vlarem and/or environmental permit.

Performance 2023: the daily average values of the continuously measured parameters (Dust, CO, TOC, HCl, SO2 and NOx) were determined based on validated averages cf. Vlarem II art. 5.2.3 bis 1.27 §1.

* Sum of Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V, Sn

Volume of pollutants*

(in tonnes)

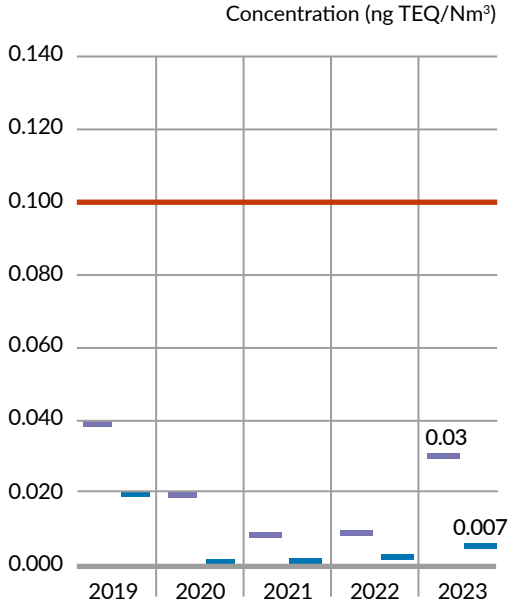
Dust	0.3
CO	15
TOC	1
HCl	0.08
SO_2	0.6
NOx	113
Cd, Tl	0.0003
Hg	0.0001
Metals**	0.04

Volumes of pollutants from contaminated components (in tonnes)

* The pollutant loads for the continuously measured parameters (Dust, CO, TOC, HCl, SO2 and NOx) were determined based on validated daily averages cf. Vlarem II art. 5.2.3 bis 1.27 §1.
The same system was applied for the discontinuously measured parameters.

** Sum of Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V, Sn

Dioxin measurements



Dioxin pollutant volume = 14.2 mg TEQ (in normal conditions)

Rotary kilns Hamburg
2023

Mass balance

IN

Waste	143,961	ton
Energy		
Heating oil	256	ton
Steam	465,970	GJ
Electricity	22,500	MWh
Flue gas cleaning additives		
Limestone	1,166	tonnes
Absorbent for dioxins and heavy metals	110	tonnes
DeNOx reagent	240	tonnes
Water		
Mains water	4,853	m^3
Water from channel	238,728	m^3
Rain water + process water	10,512	m^3
Demineralised water	23,833	m^3

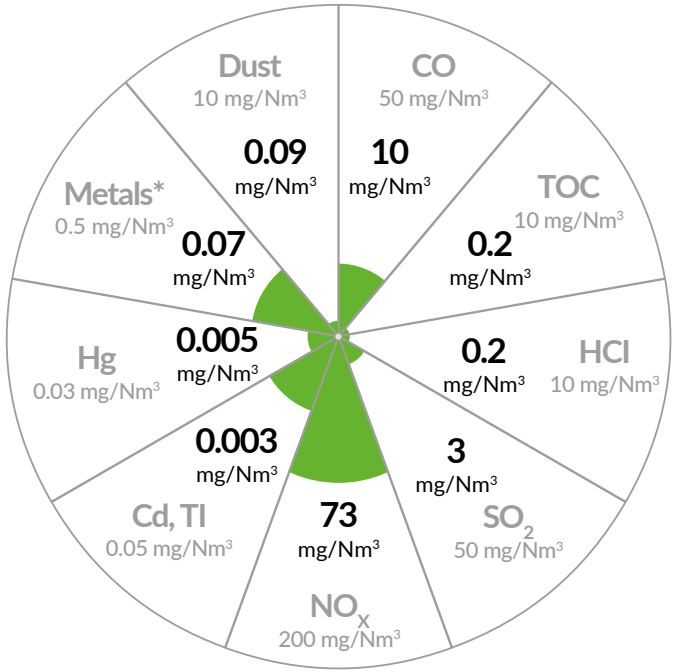
OUT

Emissions to atmosphere		
Flue gases	831,916,321	Nm^3
Energy		
Energy recovery	1,187,741	GJ
Water discharged		
Waste water	14,535	m^3
Residual products		
Bottom ash	29,179	tonnes
Scrap from bottom ash	2,928	tonnes
Fly ash + boiler ash	4,679	tonnes
Gypsum	1,683	tonnes

Rotary kilns Hamburg

2023

Performance relative to emission limit



Daily average standard unless otherwise stipulated in environmental permit.

Performance 2023

* Sum of Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V, Sn

Volume of pollutants*

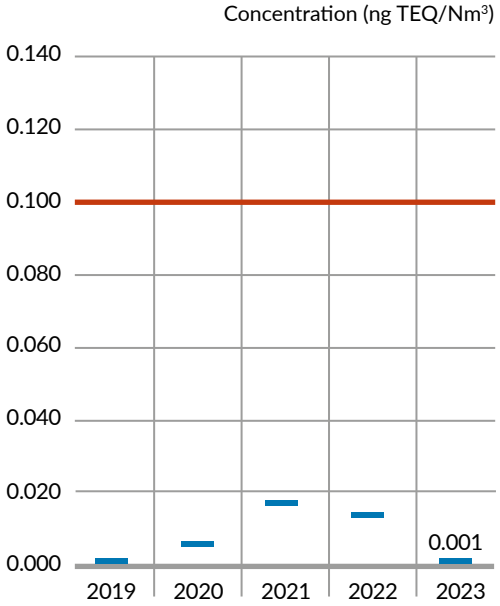
(in tonnes)

Dust	0.1
CO	11
TOC	0.2
HCl	0.2
SO_2	3.8
NOx	62
Cd, Tl	0.003
Hg	0.004
Metals*	0.06

Volumes of pollutants from contaminated components (in tonnes)

* Sum of Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V, Sn

Dioxin measurements



Rotary kilns discontinuous

Emission limit

Dioxin pollutant volume = 8 mg TEQ (in normal conditions)

Rotary kilns Biebesheim
2023

Mass balance

IN

Waste		
Waste (*)	115,103	tonnes
Waste used in place of raw materials (*)(**)	3,710	tonnes
Energy		
Heating oil	412	tonnes
Steam	121,163	GJ
Electricity	22,368	MWh
Flue gas cleaning additives		
Sodium hydroxide 50%	4,824	tonnes
Absorbent for dioxins and heavy metals	178	tonnes
Water		
Mains water	10,197	m^3
Ground water	150,654	m^3
Process water	11,664	m^3

OUT

Emissions to atmosphere		
Flue gases	678,309,598	Nm^3
Energy		
Energy recovery	748,813	GJ
Water discharged		
Waste water	38,862	m^3
Residual products		
Bottom ash	20,805	tonnes
Fly ash	6,697	tonnes

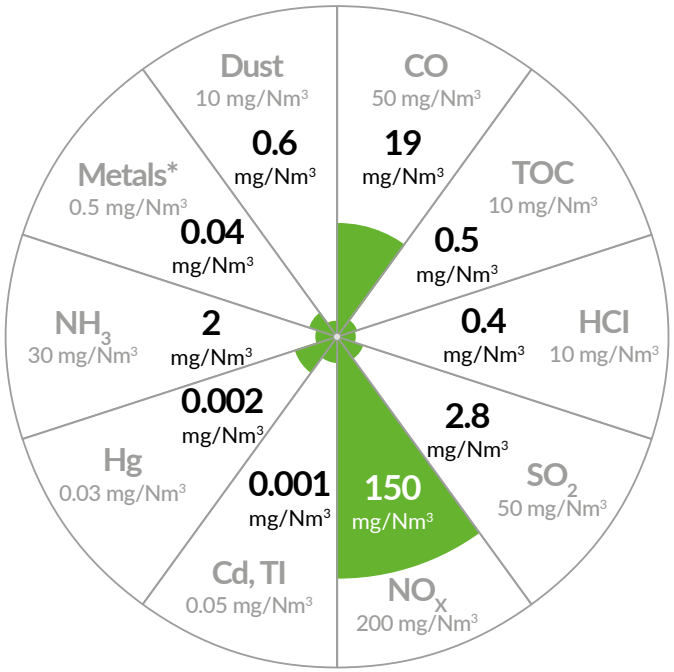
(*) Total volume waste processed in rotary kilns: 118,813 tonnes = 115,103 tonnes + 3,710 tonnes

(**) Waste used in place of raw materials: sand, ammonia water 25%, Na -sulfide/-polysulfide

Rotary kilns Biebesheim

2023

Performance relative to emission limit



Daily average standard unless otherwise stipulated in environmental permit.

Performance 2023.

* Sum of Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V, Sn

Volume of pollutants*

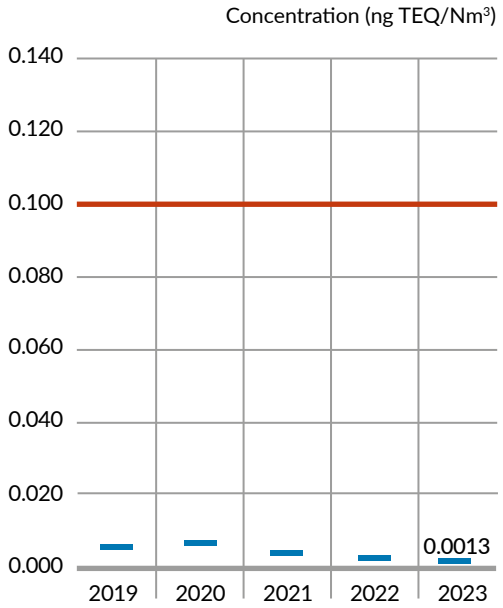
(in tonnes)

Dust	1
CO	14
TOC	0.5
HCl	0.3
SO_2	2.6
NOx	104
Cd, Tl	0.0009
Hg	0.002
NH_3	2
Metals*	0.03

Volumes of pollutants from contaminated components (in tonnes)

* Sum of Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V, Sn

Dioxin measurements



Rotary kilns discontinuous

Emission limit

Dioxin pollutant volume = 0.9 mg TEQ (in normal conditions)

Grate incinerators Doel
2023

Mass balance

IN

Waste		
Waste	435,697	tonnes
Energy		
Heating oil	826	tonnes
Steam	72,377	GJ
Electricity	47,441	MWh
Flue gas cleaning additives		
Quicklime	2,467	tonnes
Limestone	3,285	tonnes
Absorbent for dioxins and heavy metals	340	tonnes
DeNOx reagent	1,736	tonnes
Water		
Mains water	166,485	m^3
Reused water (*)	10,426	m^3

OUT

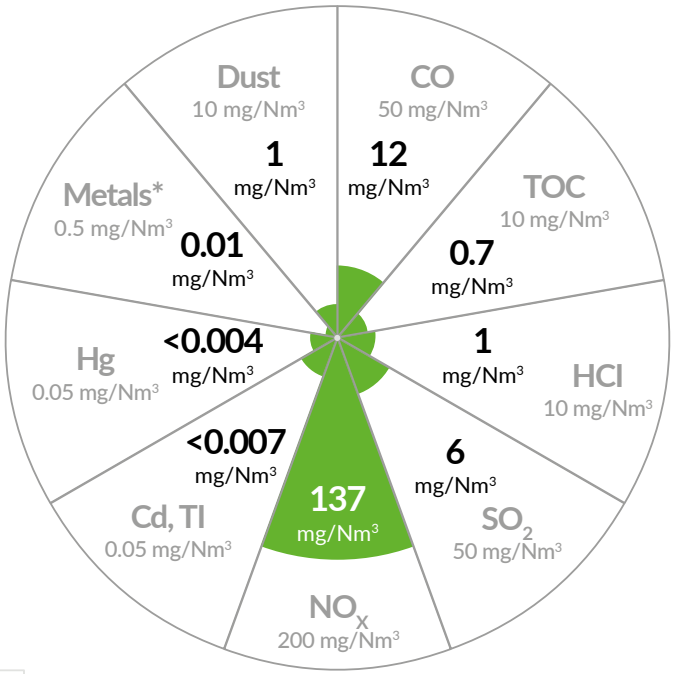
Emissions to atmosphere		
Flue gases	2,401,778,284	Nm^3
Energy		
Energy recovery	3,711,784	GJ
Water discharged		
Waste water	0	m^3
Residual products		
Bottom ash	95,855	tonnes
Boiler ash	5,594	tonnes
Flue gas cleaning residue	10,202	tonnes
Gypsum	2,832	tonnes

(*) Calculated value

Grate incinerators Doel

2023

Performance relative to emission limit



Daily average standard unless otherwise stipulated in Vlarem and/or environmental permit.

Performance 2023: the daily average values of the continuously measured parameters (Dust, CO, TOC, HCl, SO_2 and NOx) were determined based on validated averages cf. Vlarem II art. 5.2.3 bis 1.27 §1. The same system was applied for the discontinuously measured parameters.

* Sum of Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V, Sn

Volume of pollutants*

(in tonnes)

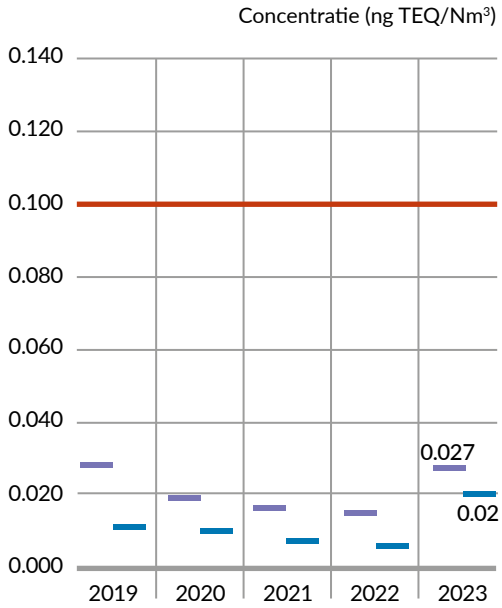
Dust	2
CO	29
TOC	1.7
HCl	2.5
SO_2	15
NOx	328
Cd, Tl	< 0.017
Hg	< 0.008
Metals **	0.023

Volumes of pollutants from contaminated components (in tonnes)

* The pollutant loads for the continuously measured parameters (Dust, CO, TOC, HCl, SO_2 and NOx) were determined based on validated daily averages cf. Vlarem II art. 5.2.3 bis 1.27 §1. The same system was applied for the discontinuously measured parameters.

** Sum of Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V, Sn

Dioxinemetingen



Dioxin pollutant volume = 57.6 mg TEQ (in normal conditions)

Grate incinerator Meath

2023

Mass balance

IN

Waste

Waste	234,660	tonnes

Energy

Heating oil	92	ton
Electricity	17,358	MWh

Flue gas cleaning additives

Quicklime	3,788	tonnes
Hydrated lime	1,561	tonnes
Absorbent for dioxins and heavy metals	77	tonnes
Expanded clay	254	tonnes
DeNOx reagent	209	tonnes

Water

Ground water	86,024	m^3

OUT

Emissions to atmosphere

Flue gases	1,344,010,286	Nm^3

Energy

Energy recovery	1,957,957	GJ

Water discharged

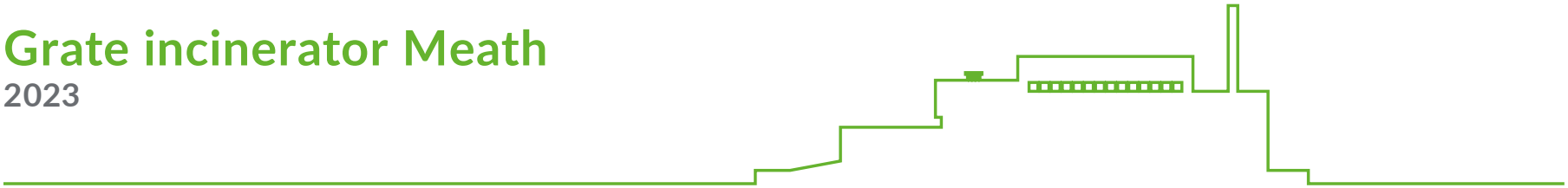
Waste water	0	m^3

Residual products

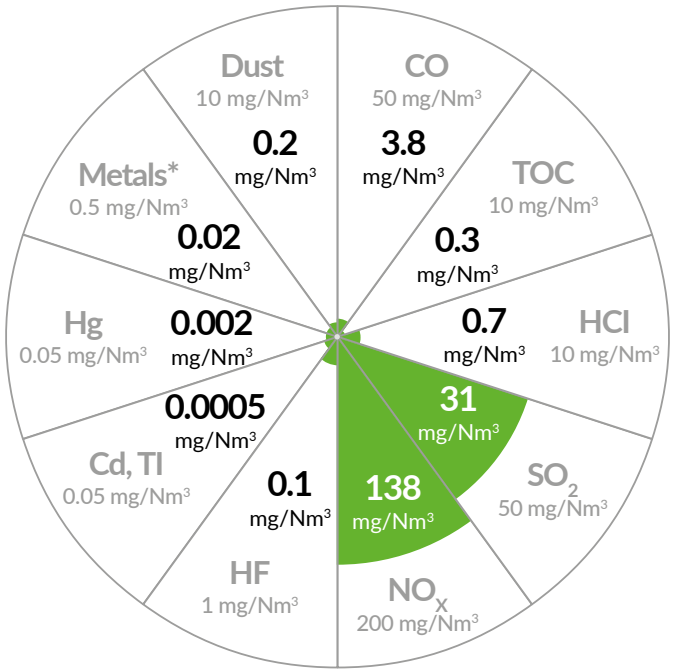
Bottom ash	40,554	tonnes
Ferro	2,677	tonnes
Non ferro	624	tonnes
Boiler ash	18	tonnes
Flue gas cleaning residue	4,047	tonnes
Fly ash	10,948	tonnes

Grate incinerator Meath

2023



Performance relative to emission limit



Daily average standard unless otherwise stipulated in environmental permit.

Performance 2023. Results are validated in accordance with the conditions of licence W0167-03.

* Sum of Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V, Sn

Volume of pollutants*

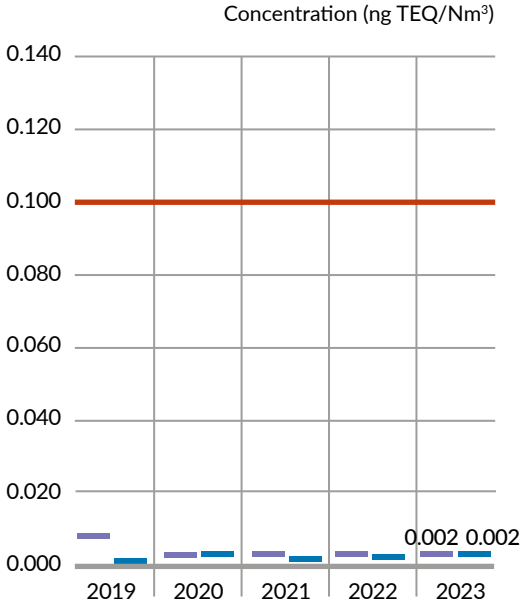
(in tonnes)

Dust	0.3
CO	5.6
TOC	0.6
HCl	1.6
SO_2	52
NOx	232
HF	0.2
Cd, Tl	0.0006
Hg	0.003
Metals*	0.02

Volumes of pollutants from contaminated components (in tonnes)

* Sum of Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V, Sn

Dioxin measurements



Grate incinerator continuous

Grate incinerator discontinuous

Emission limit

Dioxin pollutant volume = 2.2 mg TEQ (in normal conditions)

Fluidised bed incinerators Doel

2023

Mass balance

IN

Waste

Waste	630,916	tonnes

Energy

Heating oil	1,288	ton
Steam	180,866	GJ
Electricity	71,379	MWh

Flue gas cleaning additives

Quicklime	7,993	tonnes
NaOH	387	tonnes
Absorbent for dioxins and heavy metals	737	tonnes
DeNOx reagent	827	tonnes

Additives incinerators

Sand	2,257	tonnes

Water

Mains water	278,544	m^3
Reused water (rain water)	5,981	m^3

OUT

Emissions to atmosphere

Flue gases	2,349,022,995	Nm^3

Energy

Energy recovery	4,197,748	GJ

Water discharged

Waste water	0	m^3

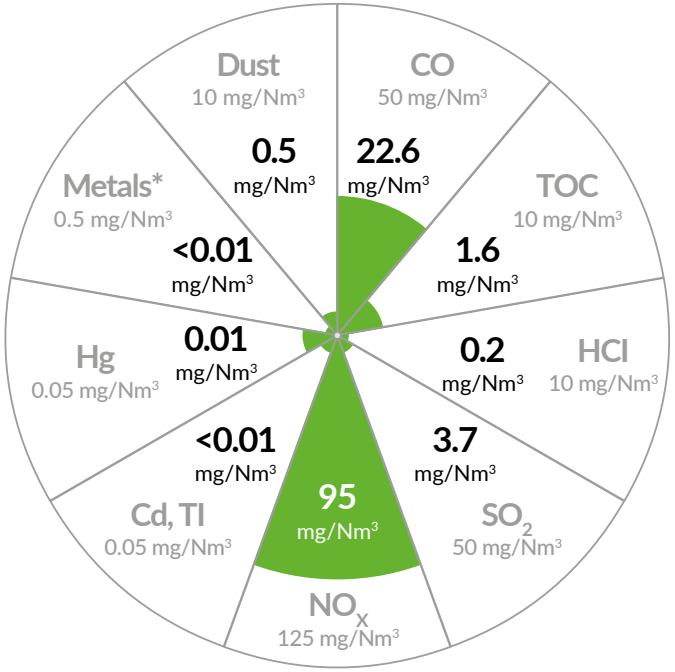
Residual products

Bottom ash	38,807	tonnes
Electrostatic filter and boiler as	95,012	tonnes
Flue gas cleaning residue	14,000	tonnes
Scrap	1,400	tonnes

Fluidised bed incinerators Doel

2023

Performance relative to emission limit



Daily average standard unless otherwise stipulated in Vlarem and/or environmental permit

Performance 2023: the daily average values of the continuously measured parameters (Dust, CO, TOC, HCl, SO_2 and NOx) were determined based on validated averages cf. Vlarem II art. 5.2.3 bis 1.27 §1. The same system was applied for the discontinuously measured parameters.

* Sum of Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V, Sn

Volume of pollutants*

(in tonnes)

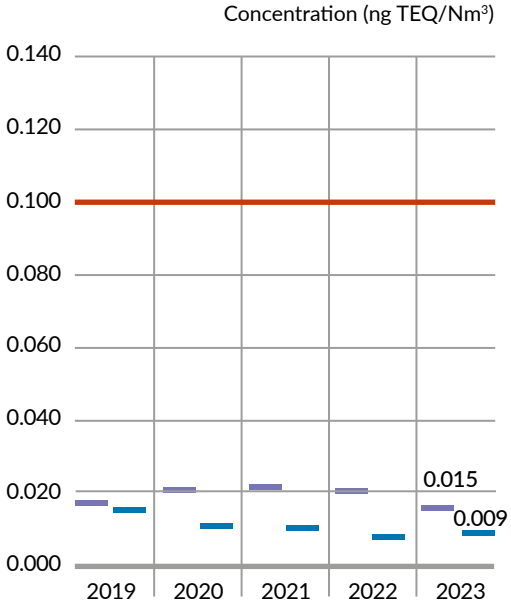
Dust	1
CO	54
TOC	4
HCl	0.5
SO_2	8
NOx	223
Cd, Tl	<0.02
Hg	0.02
Metals **	<0.02

Volumes of pollutants from contaminated components (in tonnes)

* The pollutant loads for the continuously measured parameters (Dust, CO, TOC, HCl, SO_2 and NOx) were determined based on validated daily averages cf. Vlarem II art. 5.2.3 bis 1.27 §1. The same system was applied for the discontinuously measured parameters.

** Sum of Sb, As, Pb, Cr, Co, Cu, Mn, Ni, V, Sn

Dioxin measurements



Fluidised bed incinerators continuous

Fluidised bed incinerators discontinuous

Emission limit

Dioxin pollutant volume = 28.5 mg TEQ (in normal conditions)

ARP IJmuiden
2023

Mass balance

IN

Waste

Waste acid	104,015	tonnes

Energy

Natural gas	7,428,666	m^3
Electricity	3,486	MWh

Additives

Fresh acid	2,604	tonnes
Compressed air	43,800	m^3

Water

Industrial water	131,400	m^3
Acid rinse water	137,137	m^3
Demineralised water	2,458	m^3

UIT

Regenerated acid	109,542	tonnes

Emissions to atmosphere

Flue gases	205,254,933	Nm^3

Water discharged

Waste water	331,333	m^3

Residual products

Iron oxide	24,064	tonnes

Site IndaChlor (Loon-Plage)
2023

Massabalans

IN

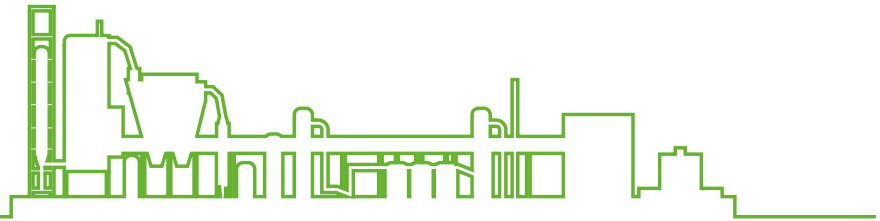
Waste		
Waste	21,016	tonnes
Energy		
Natural gas	345,517	m³
Steam	26,714	GJ
Electricity	2,026	MWh
Additives		
Sodium hydroxide	1,757	tonnes
Absorbent for dioxins and heavy metals	61	m³
Water		
Water from channel	109,130	m³
Mains water	21,322	m³

OUT

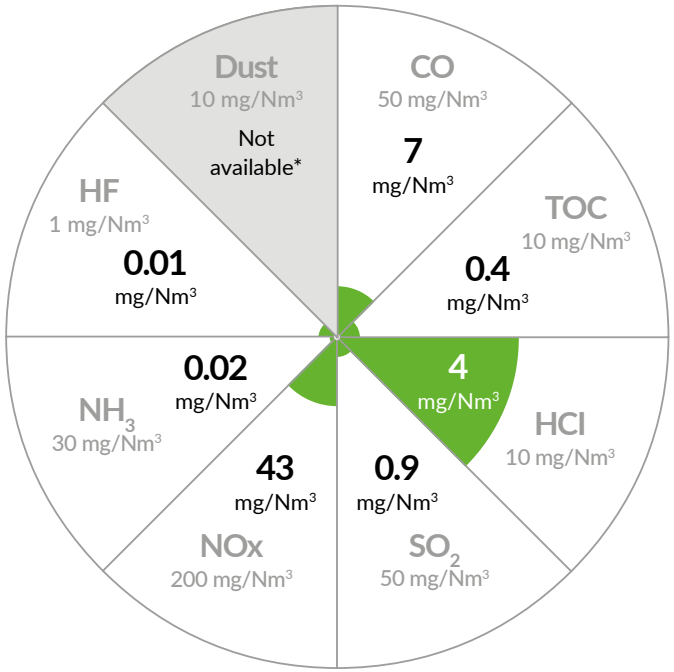
Recycled hydrochloric acid	49,636	tonnes
Energy		
Energy recovery	73 ,127	GJ
Emissions to atmosphere		
Flue gases	112,734,547	Nm³
Water discharged		
Waste water	64,540	m³
Residual products		
Fly ash	6	tonnes
Filtercakes	250	tonnes

Site IndaChlor (Loon-Plage)

2023



Performance relative to emission limit



Daily average standard unless otherwise stipulated in environmental permit.

Performance 2023: the daily average values of the continuously measured parameters (Dust, CO, TOC, HCl, SO2 and NOx) were determined on the basis of validated averages, as referred to in Article 18 of the "Arrêté du 20 septembre 2002". The same system was applied for the discontinuously measured parameters.

* Due to a measurement malfunction because of operational circumstances, we couldn't establish the correct values. This incident was reported to the relevant authority. Alternative measurements, however, indicate that we comply with the norm.

Volume of pollutants*

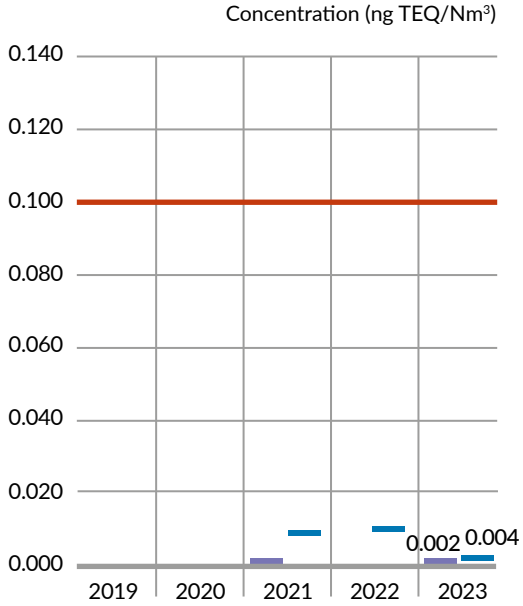
(in tonnes)

Dust	3
CO	0.8
TOC	0.05
HCl	0.5
SO_2	0.1
NOx	4.8
NH_3	0.002
HF	0.001

Volumes of pollutants from contaminated components (in tonnes)

* The volume of pollutants for the continuously measured parameters (dust, CO, TOC, HCl, SO_2 and NOx) were determined on the basis of validated averages, as referred to in Article 18 of the "Arrêté du 20 septembre 2002". The same system was applied for the discontinuously measured parameters.

Dioxin measurements



Dioxin pollutant volume = 0.3 mg TEQ (in normal conditions)

Care for the environment

Sustainable water management in every facility

Indaver (re)uses water as sparingly as possible, stores it safely and ensures that rainwater can infiltrate wherever possible. Where infiltration is not possible, we buffer the water. Thanks to extensive water treatment, we ensure that the quality of discharge water continues to meet current standards.

Capture

On several sites, we have **buffer basins** to collect clean rainwater from the roofs of our buildings. We use this water for the toilet facilities in the buildings, to control the dust on our landfill sites or as process water in our treatment facilities, which can consume a lot of water. By doing so, we save on our consumption of valuable mains water or other primary water sources such as groundwater and surface water.

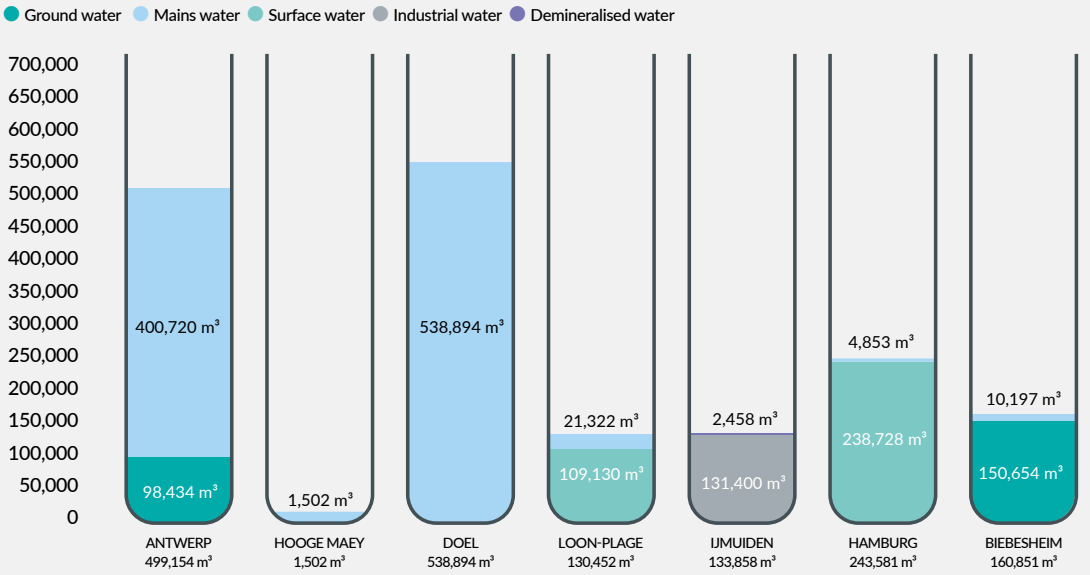
Infiltration

We strive to maximise rainwater infiltration on our sites. At the Indaver sites in Doel and Antwerp (BE), we have constructed wadis. In Willebroek (Belgium), infiltration crates have been installed under the car park. However, rainwater infiltration is not possible at all Indaver sites due to high groundwater levels or poor soil permeability, for example.

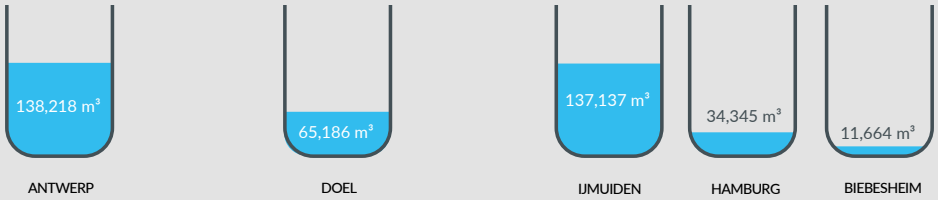
+80%

of our sites do not discharge any water. This thanks to the use of Best Available Techniques, such as dry flue gas washing, and on-site purification and re-use.

Primary water consumption in m³: 1,708,292 m³



Reuse of water (secondary) in m³: 386 550 m³



Care for the environment

Sustainable water management in every facility

Buffering

Where infiltration is not technically feasible, we buffer the rainwater and **drain it off slowly into the sewage system and/or the surface water** (river, canal). In this way we move our peak drainage to a later time and reduce the risk of overburdening the sewage system or floods.

Discharging Safely

We only drain the overflow into the sewer system and/or surface water, if all of our rainwater collection systems are filled during a downpour.

Biological water treatment removes nitrogen

At the Industrial Waste Services (IWS) site in Antwerp (Belgium), we are renovating the water treatment plant to further reduce nitrogen discharge into the water.

The central wastewater treatment plant will have a biological intermediate stage, extra sand filters and activated carbon filters to remove nitrogen as well as possible. The results of the test configuration in 2022 were positive: biological water treatment allows us to remove all the nitrogen present. In May 2023, we began construction of the permanent configuration.

Care for the environment

Sustainable water management in every facility

Indaver Separation Technologies: bespoke sludge dewatering

Sludge from production processes or a wastewater treatment plant can seriously disrupt a company's primary processes. This can result in high costs, potentially having to stop production, or an environmental incident. To prevent this, Indaver Separation Technologies (IST) offers bespoke solutions using mobile or permanent installations.

By separating water treatment sludge or production sludge into solids and water, the **clean water can be returned to the cycle**. In addition, the material value of the dewatered sludge can be recovered for re-use.

Care for the environment

Biodiversity as a basis for ecosystems

Diversity in flora and fauna, together with microorganisms, form the basis for all ecosystems. Biodiversity is part of the European Green Deal and is an essential part of every environmental permit, whether it concerns a new site, a modification or an extension.

In 2019, Indaver published a **policy document on biodiversity**, in line with the United Nations Convention on Biological Diversity.

Our policy on the conservation of biodiversity is reflected:

- in the selection of raw materials
- in the reduction of emissions
- by reducing or offsetting our facilities' impact on nature
- by producing compost, which decreases soil erosion and contributes to soil fertility and disease resistance
- by supporting local projects that improve biodiversity.

Beehives at the Stainkoeln site in Groningen (the Netherlands)

The Stainkoeln Indaver site, near Groningen (the Netherlands) provides a good biotope for the bees from the Stadsgoud apiary. The honey from our site is sold as a regional product under the Stadsgoud brand.

New trees, shrubs and a lagoon in Rivenhall, Essex (UK)

The energy-from-waste component at the Integrated Waste Management Facility near Essex (UK), took shape in 2023. To minimise disruption to the surrounding landscape, we are partially embedding it lower within the surroundings. We are also investing in the **restoration of this former quarry's immediate environment**. Part of the 70-hectare site is being made suitable for agriculture again, we are planting 30,000 trees and shrubs, and the lagoons we are maintaining also promote biodiversity in the area.

Praise for the biodiversity policy in Meath (Ireland)

In Ireland, the team at Indaver Meath also places great importance on biodiversity. In 2023, the site was visited several times by environmental experts, who prepared a detailed **biodiversity report** based on their visit. The report confirms that Indaver is promoting biodiversity on the site, by laying lawns, flower meadows, bushes and hedges, the reduction of pesticides and with the beehives. The small pond is invaluable for the newt population.

The experts recommend several actions to enhance biodiversity in the coming years: reduce mowing, plant hedges and fruit trees, and install insect hotels, bat boxes, hedgehog homes, and bird houses.

Derde Merwedehaven landfill site is now a recreation area

Over the last few years, the former landfill site 'Derde Merwedehaven' in Dordrecht, the Netherlands, has been sealed and converted into a recreation area: Merwedeheuvel. This will add 55 hectares of green space to the region, which fits in nicely with the existing recreational area Hollandse Biesbosch.

PROSPERITY

HOW WE CREATE VALUE FOR CUSTOMERS AND SOCIETY

PROSPERITY

HOW WE CREATE VALUE FOR CUSTOMERS AND SOCIETY

Companies are expected to embrace their social responsibility - and rightly so. At Indaver, corporate responsibility is ingrained in the business strategy. We are results-oriented, but for us, success isn't just about financial growth; it also comes from providing cost-efficient and high-quality services. We also want society to profit. Our solid financial base enables us to grow sustainably. So, at Indaver, good entrepreneurship and sustainability go hand in hand.

Openness and knowledge sharing

Through cooperation and dialogue, we demonstrate that we are a reliable partner

Social context

In early 2024, Indaver, along with 72 other industry leaders from around 20 sectors, signed the Antwerp Declaration for a European Industrial Deal. That ten-point plan, an initiative that grew out of the Belgian presidency of the European Council, aims to make Europe competitive, resilient and sustainable. Among other things, the declaration highlights the need for more innovation and a new spirit of legislation that both stimulates investment and creates a stable legal framework.

One thing is certain: openness and knowledge-sharing must become two basic ingredients of European industrial policy, along with clarity, predictability and trust. Indaver wants to lead by example in this regard. Despite economic and other challenges, first and foremost we remain a **reliable partner** for all our stakeholders: customers, employees, local residents, public authorities etc.

The Antwerp Declaration for a European Industrial Deal

Our approach

Our core values guide us in our strategy, decision-making and relationships. And they form the basis for our economic, social and environmental goals. How do we put our value of 'Ensuring transparency in communications and actions' into practice? By regularly opening our doors to local residents and interested parties and actively sharing our expertise at conferences.

We also step in **as experts in partnerships** to accelerate the roll-out of the circular economy. Our industry is highly influenced by external factors, so we need to be able to move quickly to deliver innovative solutions. Collaborating in partnerships is therefore something we take for granted, based on the principles of reciprocity, respect, openness, knowledge sharing and trust.

ELINE MEYVIS
PROJECT MANAGER

"Through our projects, we contribute to the circular economy. That makes you feel good. Furthermore, we use a range of technologies, which means you are constantly gaining knowledge."

Openness and knowledge sharing

Through cooperation and dialogue, we demonstrate that we are a reliable partner

Embracing local communities

Indaver does not operate as an island. On the contrary, we see the local communities in which we operate as an integral part of our network. We therefore consider it our responsibility to keep everyone correctly informed about our plans at all times, to invite people to get to know our facilities, and to share our expertise with stakeholders. We do all this through structural initiatives, such as consultation committees, and ad hoc initiatives, such as Open Companies Day.

Want to know more about how we connect with local communities? You can find out on page 56.

Putting our weight behind the BW2E memorandum

Belgian Waste-to-Energy, or BW2E for short, groups together all 14 Belgian facilities that treat household and similar residual waste with energy recovery. In total, they produce 1.5 million MWh of electricity each year, the equivalent of the energy needs of 430,000 households. In addition, BW2E members supply heat to residential or industrial heating networks.

Importantly, we launched a 2024 memorandum with BW2E. This has three key points:

- W2E is a necessary part of the circular economy
- We are committed to maintaining our independence and efficiency
- Under certain conditions, BW2E facilities can go from climate neutral to climate negative

Together, we can extract even more value from waste streams. And we are actively striving for that.

Circular Groningen Partnership

Indaver is one of the initiators of Circular Groningen, which is committed to a local circular economy. In addition to businesses, local authorities and social organisations, this young association also includes several academic institutions, including the University of Groningen and several colleges of further education. This is very interesting for Indaver, since we welcome students for internships or graduation projects.

In the summer, we welcomed over 50 partners of Circular Groningen to the Stainkoeln landfill. During that visit, we demonstrated how landfills play a vital role in the circular economy. After all, they are a safe solution for residual materials that must not return to the loop. That said, Stainkoeln is the landfill site from which most of the waste leaves again following treatment, for re-use as a secondary raw material, for example.

ALDO DE BOER
MANAGER STRATEGY & DEVELOPMENT
BL LANDFILL RECONVERSION

"In Groningen, Indaver BRP is getting better and better at circular waste management. More than 10 years ago, around 300,000 tonnes passed over the weighbridge at Stainkoeln. Last year, approximately 550,000 tonnes of waste streams came in, but only 55,000 tonnes ended up in landfills."

Openness and knowledge sharing

Through cooperation and dialogue, we demonstrate that we are a reliable partner

PAUL DE BRUYCKER
INDAVER CEO

"A dream with a plan, becomes goals. To achieve those goals, you need doers. This is what we have been doing with the partners of Flanders Circular for a while already: we have made a start. Even if everything isn't clear, even if there are loose ends... just start."

Flanders Circular, a Public-private partnership

Flanders Circular is the public-private partnership committed to the transition to a circular economy in Flanders. It includes representatives from public authorities, companies, knowledge centres, trade associations and financial institutions under the chairmanship of our CEO Paul De Bruycker. Together with the partners, he is committed to scaling up successful, inspiring case studies in six domains: bio-economy, chemistry, circular construction, manufacturing, the food chain, and water cycles.

Lecture on recycling polymers at Kekulé

The Royal Flemish Chemical Society and the University of Antwerp have been organising the Kekulé lecture series since 1983. During the Kekulé evening 'Rethinking the Plastics Cycle', Indaver explained what is involved in recycling polymers.

Participation in the Exhibition at Chemspec in Basel

In May, we attended the 36th International Exhibition for Fine & Specialty Chemicals in Basel, Switzerland. We showcased the added value of recycling solvents and precious metals. The trade fair was the perfect opportunity to talk to customers and prospects, to network and gauge the temperature of the market.

Nomination for the communication award at CEWEP Berlin

In June, we took part in CEWEP's 10th 'Waste to energy' conference in Berlin. Our CEO Paul De Bruycker has been the CEWEP chairperson since 2017. Speakers from the European Commission, academic institutions, and government, among others, examined the role of the waste sector in achieving Europe's climate goals. With Belgian Waste-to-Energy, we were also one of three nominees for the communication award.

Openness and knowledge sharing

Through cooperation and dialogue, we demonstrate that we are a reliable partner

Our STEMfluencers take youngsters on a tour in Indaver's world.

The entrepreneurial spirit is something we like to share in classrooms.

STEMfluencers inspire young people about science and technology

From the 20th March to the 12th May, some 100 young employees from 35 chemical and life sciences companies will give around 150 guest lectures to the first grade of secondary education in schools all over Flanders (Belgium). The aim: to get more girls and boys excited about an exciting future in STEM (Science, Technology, Engineering & Mathematics). Staff from Indaver also signed up for this.

Entrepreneurs in front of the Class

During 'Ondernemers voor de Klas' (Entrepreneurs in front of the Class), Indaver staff toured schools for a 2-hour guest lesson. By doing so, we aim to increase the connection with future employees and create a positive image of the business world, and more specifically the waste management sector, among young people.

University of Antwerp (Belgium) Summer School

Once again in 2023 we played an active role in the Summer School on the circular economy at the University of Antwerp. Staff from various business lines provided explanations and we welcomed the international student group to our site in Doel for the first time to learn about our sector up close.

Controlled growth

Investing in our role as enabler and gatekeeper in the circular economy

Social context

The European economy experienced moderate growth in 2023 and, in the second half of the year, only just managed to escape a technical recession. To turn the tide and strive for climate neutrality, the **twin transition** - the green and the digital transition - remain one of the EU's main focus points.

This focus leads to new regulations and legislation, amidst ongoing changes in the market. Meanwhile, technological developments are continuing at a rapid pace. When this is translated to our sector, the conclusion is clear: now more than ever, sustainable waste management is still a complex matter, in which **agility, scale, customer focus and expertise** are **the requirements for success**.

Our approach

From a sound financial position, Indaver offers **total solutions** for sustainable waste management. From various hazardous and non-hazardous waste streams, we recover raw materials which can then be re-used in new applications, while also recovering maximum energy during waste treatment. If there are contaminants, we make sure they are destroyed, or we store them safely.

We are convinced that our role as an **enabler and gatekeeper in the circular economy** is also the recipe for growth in the next few years. We therefore continue to invest in things that further strengthen our position, such as:

- high-tech facilities
- new waste streams, products, and work areas
- renewable energy
- the recruitment of experts in waste management
- the further digitalisation and automation of processes
- acquisitions of complementary organisations

This approach enables us to continue growing in a controlled manner, as growth is not an objective in itself. We only take steps when they contribute to our mission and fit within our strategy on sustainable, reliable and financially responsible waste management.

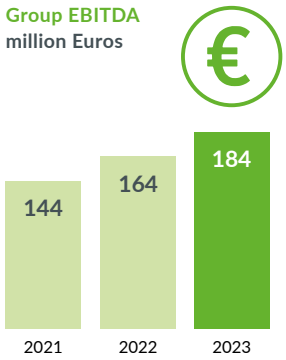
Controlled growth

Investing in our role as enabler and gatekeeper in the circular economy

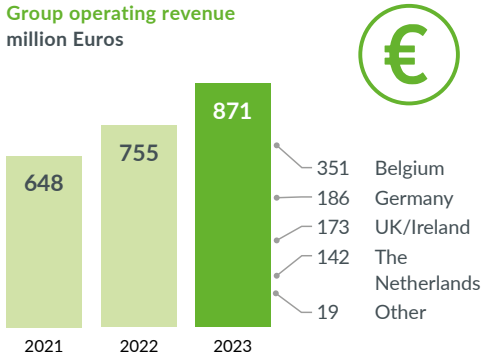
A stable financial basis

Despite challenging economic conditions, Indaver still managed to record growth in 2023. We achieved a turnover of €871 million and an EBTIDA of €184 million. From this stable financial basis, we invest in new projects and facilities.

Group EBITDA
million Euros



Group operating revenue
million Euros



Indaver has become a major European player in sustainable waste management. Through acquisitions, strategic partnerships and new activities, the scope of our operations has expanded considerably in recent years. Indaver is currently the second largest provider of hazardous waste treatment in Europe.

2023 was a landmark year for new projects. We completed our E-Wood power plant in Belgium, began the operation of an Energy-from-Waste plant in Aberdeen, Scotland, and the Antwerp North Heating Network in Belgium began supplying residual heat to Boortmalt for the first time.

The next few years also look promising. In Antwerp (Belgium), we are continuing work on our P2C facility, and the construction of our pre-treatment plant is progressing well in Willebroek (Belgium). Also, in Essex (UK), the Energy-from-Waste plant at the Integrated Waste Management Facility was half completed by the end of 2023. Meanwhile, Indaver and its partner Besix won the contract to build and operate a sludge treatment plant in the port of Ghent (Belgium).

Looking ahead, we have a robust pipeline of potential projects. These will lead to significant developments in the coming years, provided the licensing processes proceed as planned.

In short, Indaver is determined to keep growing and thus continue to lead the way in sustainable waste management.

Green loan for Antwerp North Heat Network

Through its investments, Indaver is helping to making society more sustainable. This therefore also applies to the Antwerp North Heat Network project (more info on page 92). Because of this project's added ecological value, Indaver secured a green loan for 15.3 million euros over 15 years, at an annual percentage rate of charge of 3.54%.

Controlled growth

Investing in our role as enabler and gatekeeper in the circular economy

Investing in the waste management of tomorrow

In 2023, we continued our trajectory. Recent acquisitions were integrated into the organisation and even more firmly embedded, such as Indaver Solvents, Indaver Minerals and the VFG composting in Oude Pekela.

Acquisition: Dranco, European specialist in digestion technology

Dranco has gained **international expertise** by operating 35 digestion plants across 14 countries, treating over 1 million tonnes of organic waste annually. Through this acquisition, Indaver is advancing significantly in **sustainable biomass treatment**. Together, we aim to meet European mandates for separating biomass waste streams and converting them into green energy and compost.

Important: Dranco continues to sail entirely under its own flag and there are no changes to its services.

Oude Pekela produces about 17 million kg of certified compost each year.

Cessation: Power-to-Methanol (Belgium)

Due to economic challenges and unforeseen high energy costs, the 'Power-to-Methanol Antwerp BV' consortium has decided to cease continuation. The 7 industrial and business partners, including Indaver, will not build the demo plant. The aim was to produce 8,000 tonnes of e-methanol, as a sustainable alternative to conventional methanol. Indavers' role in this project was mainly to research options for capturing CO_2. We will now continue to build on that expertise in other projects.

Integration: Oude Pekela (the Netherlands)

Indaver took full ownership of the Oost-Groninger Afval Recyclinginstallatie (OGAR waste recycling facility) at the end of 2022. OGAR produces some **17 million kilos of Keurcompost (certified compost)** each year from the VFG waste collected from 5 municipalities in East Groningen. The compost is used in the wider surrounding area to supply Groningen's fields and gardens with nutrients and to improve soil quality.

Indaver now operates ten VFG and green waste composting facilities in the Netherlands. Thanks to this acquisition and integration, Indaver can further strengthen its market position in the field of organic waste streams in the north of the Netherlands.

Controlled growth

Investing in our role as enabler and gatekeeper in the circular economy

Indaver Solvents fits in perfectly with our strategy to create value from waste: the recycled solvents are valuable raw materials for industry.

On-site solvent recycling: less transport, fewer costs and a minimum of waste.

Integration: Indaver Solvents (UK)

In 2022, Indaver strengthened its position in the UK, with the acquisition of BIP Chemical Holdings, a player in solvent recycling for customers in the chemical and pharmaceutical industries. After commissioning our solvent recycling plant in Antwerp, this was the next step in the **expansion of a network of solvent management facilities in Europe**. In 2023, our main focus was on upgrading the site in line with Indaver's environmental, quality, safety and other standards.

With this acquisition, **we are expanding our portfolio in the United Kingdom.** This will allow us to serve our customers even better. By 2022, we had already begun construction of a waste-to-energy plant at Rivenhall for the treatment of 595,000 tonnes of non-recyclable household and commercial waste. Furthermore, at the end of 2023, we commissioned a waste-to-energy plant in Aberdeen, Scotland, which will be in operation for the next 20 years. This will provide a solution for around 150,000 tonnes of household waste from a few surrounding council areas.

Want to know more about this acquisition?
Go to the press release.

Indaver Solvents is expanding its portfolio in the UK.

Customer focus

Expertise and experience provide guidance in uncertain times

Social context

Europe aims to pave the way for a sustainable society in the coming years. This vision includes retaining valuable materials in the supply chain, ensuring clean energy, and treating hazardous waste streams with minimal ecological impact.

In the wake of that ambition, **new legislation and regulations** are being introduced. Not only at European level, but, national, regional and even local governments are taking control. As a result, ever-stricter legislative frameworks are piling up, slowly but surely, from directives on nitrogen emissions and Substances of Very High Concern to mandatory reporting on sustainability performance. The result: many **companies must shift up a gear to keep up**. Additional experience and expertise is therefore welcome to meet all the challenges and seize every opportunity.

Our approach

In a rapidly evolving society, Indaver provides a **reliable service.** We monitor the tightening of European and other legislation closely and respond to it proactively. But we do much more than that.

Customers want partners that give them complete **peace of mind with the necessary expertise, experience, and scale**. Partners that not only help them to comply with the rules, but also devise circular solutions that fit their needs seamlessly. That's the kind of partner Indaver wants to be.

With bespoke total solutions, we try to offer our customers new opportunities. And in doing so, **we sometimes push our own limits**. Whether it's building a steam pipeline under a river, an innovative demo plant to keep complex plastics in the chain, or research into the capture and re-use of CO_2.

Construction of the innovative demo plant for the chemical recycling of complex plastics.

Customer focus

Expertise and experience provide guidance in uncertain times

Driven to continuously improve

Continuously improving is a long-term approach to ensure our services fit the needs of customers and other stakeholders better. We analyse our performance and do everything possible to raise this systematically, with the greatest care for people and the environment. In 2023, we also put our money where our mouth is, with a wide range of actions.

Investing in operational excellence

To ensure we can always provide the best services and products to our customers, we keep all our facilities in top condition. That means we regularly invest in new and/or improved parts.

In Antwerp, Belgium, we replaced a rotary drum in one of our kilns for the first time in 2023. This cylindrical tube, weighing 92 tonnes and measuring 4.5 metres in diameter, was replaced during a scheduled shutdown, with the highest safety standards strictly followed.

Again, in Antwerp, we invested in a new turbine for the North Antwerp Heating Network project. With a capacity of 7MW and a steam intake of 75 tonnes per hour, it now facilitates an **optimal steam network** from the site.

And at IndaChlor (France), we are investing heavily in a complete rebuild of the plant. This will enable us to process chlorinated waste even more efficiently into usable hydrochloric acid and recovered energy.

Looking for extra added value for customers

Indaver aims to provide sustainable solutions for all the waste streams our customers encounter. Therefore, we are continually exploring methods to treat additional waste streams. For example, since 2023, we have been able to **treat even more waste** at Inda-MP**:** low pH, high chlorine, thermally unstable, etc. Moreover, our operations there have a greater treatment capacity and a **lower carbon footprint.** As a result, we are creating additional value for key chemical and pharmaceutical customers, while increasing European independence from critical metals.

A rotary drum in one of our kilns is being replaced.

Innovation in action: Plastics2Chemicals demo plant

Using the European Green Deal and the increasingly stringent packaging targets as a guide, Indaver is taking the lead in the search for **scalable and economically viable recycling solutions for complex plastics**. This category includes polystyrene (PS), extruded polystyrene (XPS) and polyolefins (PO): plastics that have numerous applications from plastic-film covers to lids.

In 2023, we continued to build the pre-treatment plant in Willebroek and the demo plant in Antwerp. In the latter plant, the waste streams will be broken down into high-quality basic chemicals suitable for new packaging - including for food. Complex plastics thus become circular plastics, which means, for example, that yoghurt pots can simply remain yoghurt pots. Time and time again.
More information on page 80.

Customer focus

Expertise and experience provide guidance in uncertain times

The army in action on our landfill site

This army exercise at our North and Central Zeeland landfill site is evidence of the multi-purpose nature of our landfill sites. Our landfill's unique relief allowed the military to practice what is known as a double ridgeline landing . A double ridgeline landing is an advanced manoeuvre in which the helicopter lands on a narrow ridge or mountain ridge - something that's hard to find in the flat Netherlands.

Guaranteeing continuity

One of the cornerstones of a customer-focused policy is continuity. We try to guarantee it under all circumstances. By way of illustration: in 2023 we completed preparations to expand the capacity of our landfill in North and Central Zeeland (the Netherlands). We are doing this by **optimising the facility at our current landfill site**. A necessary step to ensure our service provision in the region and thus provide peace of mind to customers. After all, no more new landfills may be built. With the additional capacity, we expect to be able to meet demand until 2035. Meanwhile, we are also speaking to residents at information meetings.

In the north of the Netherlands, we also worked hard to safeguard our safe sink solutions . At Stainkoeln, our landfill site in Groningen, we set up a new landfill phase: Stainkoeln 3 (located on top of Stainkoeln 1). To make this possible, the soil bank was moved to the Temporary Storage Site (TOP) Groningen.

Discover all our landfills and their role in the circular economy.

Customer focus

Expertise and experience provide guidance in uncertain times

Digitalisation for better customer experience

Digitalisation allows us to put more emphasis on quality, safety, speed, and convenience for our customers. In 2023, we conducted all kinds of projects that support this ambition. A selection:

Flexible planning: industrial waste streams are often difficult to predict. To better balance supply and demand, we introduced integrated Sales & Operations Planning. One of the advantages is that we can now plan proactively rather than reactively. That way we always know when we need interim storage capacity and when we don't. In addition, our relationships with suppliers have improved, because we can share accurate schedules in advance.

Want to know more about our S&OP Planning? Annick Van Driessen, International Director Supply Chain Operations, explains.

Moving towards the optimum customer portal: soon all Indaver sites will be working with the same software system. This will allow us to report and publish all data in the same way on our customer portal, giving customers an improved user experience. We prepared for this in 2023.

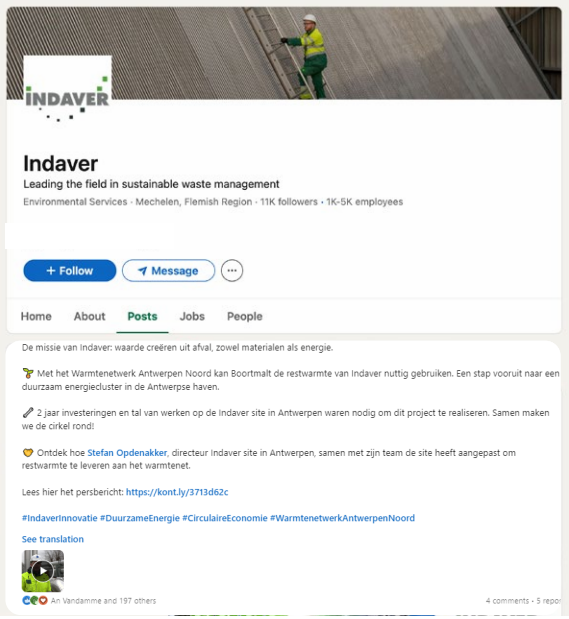
SAP S/4 HANA:
Indaver is making the transition from our existing ERP systems (MS Dynamics and SAP ECC) to a new system called SAP S/4 HANA. Switching to the SAP S/4 HANA ERP system will provide numerous benefits for our organisation, such as faster treatment times, an improved user experience, more efficient data management, and integrated reports and analytics. This gives users real-time access to data-driven dashboards, leading to better decision-making. Furthermore, the system enables us to embrace new digital technologies, such as machine learning and artificial intelligence, making us well prepared for the next phase in the digital age.

Improved complaints management: our portal for complaints from local residents, customers or suppliers was upgraded in 2023. On the one hand, it is easier for them to make a report, and on the other, we can now offer a solution faster and even more efficiently.

Increased awareness of cybersecurity: to keep customers' sensitive and personal data safe, we not only have an Information Security Policy, but in 2023 we also organised e-learning sessions and anti-phishing campaigns.

Revamped website: via www.indaver.com, it's now easier for customers to find out about what Indaver stands for, our various areas of expertise and how we operate sustainably.

LinkedIn page for the entire group: those who want to follow Indaver's news and activities no longer have to navigate between our group page and the different country pages. In line with our 'One brand, one story' strategy, since 2023 we have been sharing everything on one overarching LinkedIn page.



Our LinkedIn-page gets a makeover: one brand, one story.

Policy

A compass to fulfil our social role

Social context

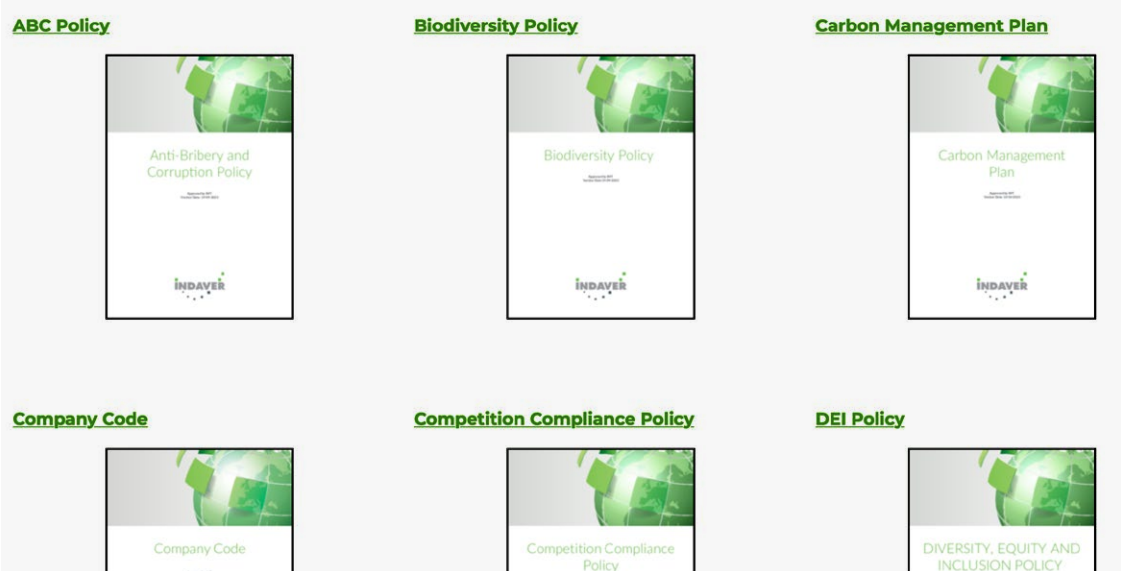
The call for corporate responsibility is greater than ever. This means paying close attention to issues such as anti-corruption, fair competition, socially responsible behaviour, relationships with other organisations, diversity, and inclusion, etc. Although many of these aspects are outlined in legislation, responsible business practice is about more than just complying with the rules (compliance). It's also about 'doing good' or **creating 'shared value' as part of the business strategy**.

Indaver wants to manage and treat waste streams while working responsibly. And we do that in several European countries, each with their own legislative, cultural, socio-economic, and business realities. Achieving that mission requires a steady compass.

Our approach

The principles for reinforcing our good reputation as a business partner and employer in all our geographical work areas are set out in **a series of policy documents that build on** our company code. This company code describes our mission, our key values, our responsibilities and our work culture. Furthermore, it outlines what we expect from stakeholders, but also what they expect. Through **e-learning sessions**, we make sure that everyone knows the building blocks of our policy and applies them. Moreover, we encourage responsible behaviour through an Employee Code of Conduct.

Extensive attention is also paid to the requirements Indaver imposes on its suppliers in terms of sustainable business practices, in particular in our Supplier Code of Conduct **and** the Charter for Sustainable Procurement. Among other things, suppliers must be able to demonstrate that they respect human rights, that they work in environmentally safe conditions, and that they pay their staff proper wages and provide appropriate working conditions.



Strong policy documents as a foundation for corporate responsibility.

Policy

A compass to fulfil our social role

Policy Documents

In this overview, we share some of Indaver's topical policy documents, such as fair trade practices, diversity and information security. For more information on these and other documents, please refer to our website.

Competition

Indaver is committed to competing openly, honestly, and vigorously, in accordance with free competition rules. With the Competition Compliance Policy document, we demonstrate to our employees what competition means, what the potential sticking points are, and how to deal with them. We also expect high ethical standards of behaviour from our suppliers and partners.

Competition Compliance Policy

Modern Slavery and Human Trafficking

We are implementing a zero-tolerance policy in this area, based on a specific policy document. Among other things, we ensure that all work permits and other documents for our employees are in line with our view on modern slavery and human trafficking, and we expect the same commitment from our suppliers.

In 2023, training was scheduled for our staff to learn to recognise modern slavery and human trafficking.

Modern Slavery and Human Trafficking Statement

Diversity and inclusion

With a DEI Policy, Indaver aims to clarify what diversity, equality and inclusion mean to the company. Furthermore, our ambitions are clearly presented, including the priorities and actions needed to realise these ambitions.

DEI Policy

Information security

How do we comply with the GDPR, what measures do we take to increase our cyber resilience, why do we use the NIST Cybersecurity Framework as a basis, and who at Indaver is responsible for information security? It's all in our Information Security Policy.

Information Security Policy

Whistleblowing

We want to create a culture in which employees can confidently report breaches of our Company Code and other policies to their manager. If an employee does not feel comfortable doing so, a report can also be made anonymously. With our Whistleblower Policy, we offer optimum protection for the reporter and we follow-up on the report.

Whisteblower Policy

Bribery and corruption

In our ABC Policy, we share the standards and expected behaviour to prevent bribery and corruption in our activities, business lines and operations. The document provides a framework for responsible, honest and fair business conduct, and applies to everyone who works for Indaver.

ABC Policy

Other policy documents

- Biodiversity Policy (more on biodiversity on page 129)
- Carbon Management Plan
- Group HR Policy
- QESH Policy
- QESH Technical Competence Policy
- Sustainable Waste Management Policy
- 10 Codes of Good Practice

View the documents via this link.

GRI reporting

At Indaver, sustainability is integral to our commitment to the circular economy.
In this Sustainability Report we refer to the GRI criteria that are relevant to our sector.
This report has been prepared in accordance with the "GRI Standards core option".
GRI is an international, independent organisation that helps businesses, governments and other organisations to understand and communicate the impact of business on critical sustainability issues, such as those described in the UN's SDGs.
While business and government leaders can agree with international principles, GRI's guidance helps to put these principles into practice.
GRI provides the world's most widely used standards on sustainability reporting and disclosure, enabling businesses, governments, civil society and citizens to make better decisions based on relevant information.
See the table for ease of reference.

GRI STANDARD	DISCLOSURE	PAGE NUMBER(S) AND/OR URL(S)
Universal Standards - All three need to be applied		
GRI 2: General Disclosures 2021	2-1 Organizational details	INDAVER p. 1; WHERE DOES INDAVER OPERATE? p. 28; https://indaver.com/about; https://indaver.com/company-data
	2-5 External assurance	WHAT DO WE REPORT ON AND HOW? p. 30-31
	2-6 Activities, value chain and other business relationships	WHY DOES INDAVER EXIST? p. 11-13; WHAT ARE OUR AMBITIONS? p. 15-16; https://indaver.com/about
	2-7 Employees	SUSTAINABLE EMPLOYABILITY p. 37
	2-9 Governance structure and composition	https://indaver.com/about
	2-11 Chair of the highest governance body	https://indaver.com/about
	2-12 Role of the highest governance body in overseeing the management of impacts	https://indaver.com/about
	2-22 Statement on sustainable development strategy	HOW WE ARE ACCELERATING THE TRANSITION TO A CIRCULAR ECONOMY p. 2; WHAT ARE OUR AMBITIONS? p. 14
	2-23 Policy commitments	POLICY a compass to fulfil our social role p. 144-145
	2-24 Embedding policy commitments	POLICY other policy documents p. 144-145
	2-25 Processes to remediate negative impacts	HOW DO WE ACHIEVE OUR AMBITIONS? p. 15-27; POLICY a compass to fulfil our social role p. 144-145
	2-26 Mechanisms for seeking advice and raising concerns	POLICY a compass to fulfil our social role p. 144-145
	2-27 Compliance with laws and regulations	POLICY a compass to fulfil our social role p. 144-145
	2-28 Membership associations	OPENNESS AND KNOWLEDGE SHARING p. 132-135
	2-29 Approach to stakeholder engagement	WHAT DO WE REPORT ON AND HOW? p. 30-31; IN CONSULTATION WITH LOCAL COMMUNITIES p. 56
GRI 3: Material Topics 2021	3-1 Process to determine material topics	WHAT DO WE REPORT ON AND HOW? p. 30-32
	3-2 List of material topics	WHAT DO WE REPORT ON AND HOW? p. 30-31
GRI 101: Biodiversity 2024	"101-1 Policies to halt and reverse biodiversity loss"	CARE FOR THE ENVIRONMENT p. 129; https://indaver.com/about/high-standards/policies-codes BIODIVERSITY POLICY
	304-2 Significant impacts of activities, products and services on biodiversity	CARE FOR THE ENVIRONMENT p. 129

GRI reporting

GRI STANDARD	DISCLOSURE	PAGE NUMBER(S) AND/OR URL(S)
Universal Standards - All three need to be applied		
	304-3 Habitats protected or restored	CARE FOR THE ENVIRONMENT p. 129
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	INDAVER BY NUMBERS p. 9; CONTROLLED GROWTH p. 137
GRI 205: Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	POLICY p. 145; https://indaver.com/about/high-standards/policies-codes ABC POLICY
	205-2 Communication and training about anti-corruption policies and procedures	POLICY p. 145; https://indaver.com/about/high-standards/policies-codes ABC POLICY
GRI 206: Anti-competitive Behavior 2016	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	POLICY p. 144-145; https://indaver.com/about/high-standards/policies-codes
GRI 301: Materials 2016	301-1 Materials used by weight or volume	INDAVER BY NUMBERS - Volumes in beheer p. 10
	301-2 Recycled input materials used	NEW, CLEAN AND SAFE MATERIALS FROM WASTE p. 79-89
	301-3 Reclaimed products and their packaging materials	n/a
GRI 302: Energy 2016	302-1 Energy consumption within the organization	2023 EMISSIONS AND IMPACT p. 111-125
	302-3 Energy intensity	2023 EMISSIONS AND IMPACT p. 111-125
	302-5 Reductions in energy requirements of products and services	n/a
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	CARE FOR THE ENVIRONMENT p. 110
	303-2 Management of water discharge-related impacts	CARE FOR THE ENVIRONMENT p. 110
	303-3 Water withdrawal	2023 EMISSIONS AND IMPACT p. 111-125
	303-4 Water discharge	2023 EMISSIONS AND IMPACT p. 111-125
	303-5 Water consumption	2023 EMISSIONS AND IMPACT p. 111-125
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	CLIMATE p. 73
	305-2 Energy indirect (Scope 2) GHG emissions	CLIMATE p. 73
	305-5 Reduction of GHG emissions	CLIMATE p. 73-75; PLANET p. 59-131
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	2023 EMISSIONS AND IMPACT p. 111-125
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	2023 EMISSIONS AND IMPACT p. 111-125
	306-2 Management of significant waste-related impacts	KEEPING HAZARDOUS WASTE OUT OF THE LOOP p. 103-109
	306-3 Waste generated	2023 EMISSIONS AND IMPACT p. 111-125
	306-4 Waste diverted from disposal	2023 EMISSIONS AND IMPACT p. 111-125
	306-5 Waste directed to disposal	2023 EMISSIONS AND IMPACT p. 111-125
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	SAFE AND HEALTHY AT WORK p. 50-55
	403-2 Hazard identification, risk assessment, and incident investigation	SAFE AND HEALTHY AT WORK p. 50-55
	403-4 Worker participation, consultation, and communication on occupational health and safety	SAFE AND HEALTHY AT WORK p. 50-55
	403-5 Worker training on occupational health and safety	SAFE AND HEALTHY AT WORK p. 50-55
	403-6 Promotion of worker health	SUSTAINABLE EMPLOYABILITY p. 44-45; SAFE AND HEALTHY AT WORK p. 50-55

GRI reporting

GRI STANDARD	DISCLOSURE	PAGE NUMBER(S) AND/OR URL(S)
Universal Standards - All three need to be applied		
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	SAFE AND HEALTHY AT WORK p. 50-55
	403-9 Work-related injuries	SAFE AND HEALTHY AT WORK p. 54-55
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	SUSTAINABLE EMPLOYABILITY p. 48
	404-2 Programs for upgrading employee skills and transition assistance programs	SUSTAINABLE EMPLOYABILITY p. 48-49
GRI 410: Security Practices 2016	410-1 Security personnel trained in human rights policies or procedures	POLICY - Policy Documents p. 143 - Modern Slavery and Human Trafficking
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	IN CONSULTATION WITH LOCAL COMMUNITIES p. 56-58
	413-2 Operations with significant actual and potential negative impacts on local communities	IN CONSULTATION WITH LOCAL COMMUNITIES p. 56-58
GRI 414: Supplier Social Assessment 2016	414-2 Negative social impacts in the supply chain and actions taken	POLICY - Policy Documents p. 145

Glossary

Anaerobic composting (digestion) A method to convert organic waste into compost via bacteria. This method does not require oxygen. **ARP** Acid Recovery Plant, a recycling facility for recovering hydrochloric acid from waste streams from the steel industry.

Biomass A feedstock for energy generation which replaces fossil fuel.

BREF or BREF document Provides background information and clarification for implementing the Best Available Techniques (BATs) a business can use. When approving an environmental permit, the permit provider must take the BAT conclusions into account.

Circular economy An economic system in which primary raw materials and waste and energy loss are minimised by slowing, closing and narrowing material and energy loops. This can be achieved through sustainable design, maintenance, repair, reuse, re-manufacturing, refurbishing and recycling.

Climate neutral Achieving net zero carbon emission by balancing a measured amount of carbon released with an equivalent amount sequestered or offset.

CSRD Corporate Sustainability Reporting Directive, which is the EU-Directive on the requirements for large companies to report on their impact on people and the environment.

EED The EU's Energy Efficiency Directive specifies that large companies must keep a detailed record of their energy management (EED-reporting). They must also implement all energy-saving measures that can be recouped within five years.

EFSA European Food Safety Authority.

Emission The release of a particular substance from a particular place (e.g. a chimney) expressed in volume/m^3.

Emission measurement The measurement of the volume/concentration of a particular substance released from a particular place.

Emission limit value Emissions standard, i.e. the maximum volume/concentration that may be emitted.

Enabler (facilitator) Indaver's role in the circular economy, in which we recover energy and high-quality materials from waste safely and efficiently.

Energy cluster Heat from Indaver's plants that is supplied to neighbouring companies and residential areas.

EPA Environmental Protection Agency, which is tasked in Ireland with protecting and improving the environment.

Frequency rate Legally determined safety indicator that charts the number of accidents involving more than 1 calendar day off work:
Fr = (A*1,000,000)/B where A = number of accidents involving time off work, and B = number of hours exposure per year (sum of all personnel).

Gatekeeper Indaver's role in the circular economy, in which we keep hazardous components out of the food and materials chains before, during and after waste treatment.

Green gas Gas reprocessed from biogas, which in turn is obtained from digested wet organic residue. This green gas is of a very high quality and can therefore replace fossil natural gas.

Green heat Heat derived from sources of renewable energy. In Indaver's case, the source of renewable energy is biowaste.

Grate incinerator Incinerator with energy recovery for thermal treatment of non-recyclable fractions of non-hazardous household waste and commercial waste.

GRI Global Reporting Initiative, an international organisation that sets guidelines for sustainability reporting.

IED Industrial Emissions Directive 2010/75/EU, which is the main EU instrument for regulating the release of polluting substances by industrial facilities.

IndaChlor Recycling facility for chlorinated waste residues.

Indaver Molecule Management Recovering molecules from pharmaceutical and chemical waste for reuse in industrial processes.

Glossary

INECP Integral National Energy and Climate Plan.

IWS Industrial Waste Services.

Leachate Liquid that comes out of landfilled solid waste, such as VFG waste or other solid substances, or has come into contact with it.

Mass balance The mass balance is a visual representation of each thermal process. The 'in' side shows the quantities of additives, water and energy needed to treat the waste efficiently. The 'out' side shows the quantity of solid residual materials remaining after the process, the quantity of flue gases emitted and the quantities of wastewater and energy released during treatment.

Materials loop System in which raw materials are being constantly recovered, reused and recycled in a safe manner.

MSW Municipal Solid Waste.

Physicochemical treatment Immobilisation, fixation, solidification and stabilisation – the techniques or methods used for the treatment of hazardous waste so that the waste can be deposited safely in a class 1 landfill site.

PFAS Collective name for per- and polyfluoroalkyl substances. These chemical substances are made by people and do not occur in nature. Well-known examples include GenX, PFOA and PFOS.

PMD Plastic bottles, Metal packaging and Drinks cartons (selectively collected).

QESH Quality, Environment, Safety and Health – usually referring to an Indaver policy or department.

Residue Waste materials that cannot be further recycled or treated after sorting, purification or treatment.

Rotary kiln incinerator An incinerator with energy recovery for the thermal treatment of hazardous waste.

Sustainable employment HR policy to enact sustainable measures for long-term, healthy, enjoyable and productive participation in the labour process.

Safe Sink Guarantee Destruction of unrecoverable elements in waste and the capture of the remaining, potentially hazardous components in Indaver's high-tech, final-treatment facilities, thus removing them from the materials chain.

SDG Sustainable Development Goals, defined by the United Nations.

Total Waste Management Service model that provides industrial clients with a worry-free customised solution.

VGF Vegetable, garden and fruit waste.

Vlarem Flemish Regulation on the Environmental Permit (Vlaams Reglement betreffende de Milieuvergunning), the implementation Decision for the Flemish decree on environmental permits.

Waste-to-energy Recovery of energy from the thermal treatment of waste, which is then converted into steam or electricity and supplied to neighbouring companies, commercial users (district heating) or the electricity grid.

Salt Cell Conditions The best conditions for creating a physical barrier between the waste products and the leachate in the landfill site.

Declaration of validation Bureau Veritas

Bureau Veritas Certification

DECLARATION OF VALIDATION

Awarded to

Indaver nv

Bureau Veritas Certification Belgium NV/SA hereby declares that the dataset used as input for Sustainability Reporting 2023 was verified and validated on 23/04/2024, with Bureau Veritas reference BE013984.

This data verification was carried out in accordance with the following principles:

1. The verification was carried out at Indaver's offices (Kallo, Belgium);
2. The verification does not include any specific standard verifications or interviews with operational staff;
3. The purpose of this validation is not to confirm an 'official status', as in the case of a DMA (Decretale Milieu Audit);
4. This validation site does not fall under any accreditation related requirement;
5. However, the method used is in line with the method used for a DMA, and the truthfulness of the figures is shown based on sampling.

Validation declaration no.: **BE013984**

Issue date: **07/05/2024**

Hilde Sansen – Certification Manager Benelux
For Bureau Veritas Certification Belgium N.V./S.A.

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