



Working together towards a
circular economy

2022 IN FACTS AND FIGURES

INDAVER



PAUL DE BRUYCKER, CEO

We seamlessly blend competitive entrepreneurship with a commitment to sustainability, all the while maintaining a strong focus on delivering quality.

Working together towards a circular economy

Indaver has accumulated decades of expertise and hands-on experience in developing sustainable solutions for the management and treatment of various waste streams. We advocate for the shift from a linear economic model to a circular one, where extracting value from waste plays a crucial role.

However, it's important to acknowledge that certain residual waste materials can possess hazardous properties that absolutely cannot be reintroduced into the cycle. To ensure the safety of these cycles, we take stringent measures to neutralize or eliminate these harmful components within our facilities. Our commitment extends to a continual investment in cutting-edge technology, aimed at minimizing the presence of even the tiniest residual fraction.

We work continuously to **unlock value from waste and leverage** our extensive knowledge and experience to repurpose waste streams for maximum utility. Indaver plays a pivotal role in providing secondary raw materials and renewable energy to support the circular economy, therefore contributing to the closure of material loops. This proactive approach substantially reduces

CO₂ emissions at various points along the chain.

We give our staff the space to develop their expertise further and to expand their talents sustainably. As a sustainable employer, Indaver is always looking for innovative solutions and new perspectives on complex waste issues.

We seamlessly blend competitive entrepreneurship with a commitment to sustainability, all the while maintaining a strong focus on delivering quality. Indaver serves as a prime example that ecology, corporate social responsibility, and economic prosperity can coexist.

From waste to raw materials and energy

Every year, Indaver manages around 5 million tonnes of hazardous and non-hazardous waste streams. We recover as many materials and energy as possible from these waste streams, whilst keeping hazardous substances out of the loop. In so doing, Indaver is an enabler (facilitator) and gatekeeper of the circular economy.

ENABLER

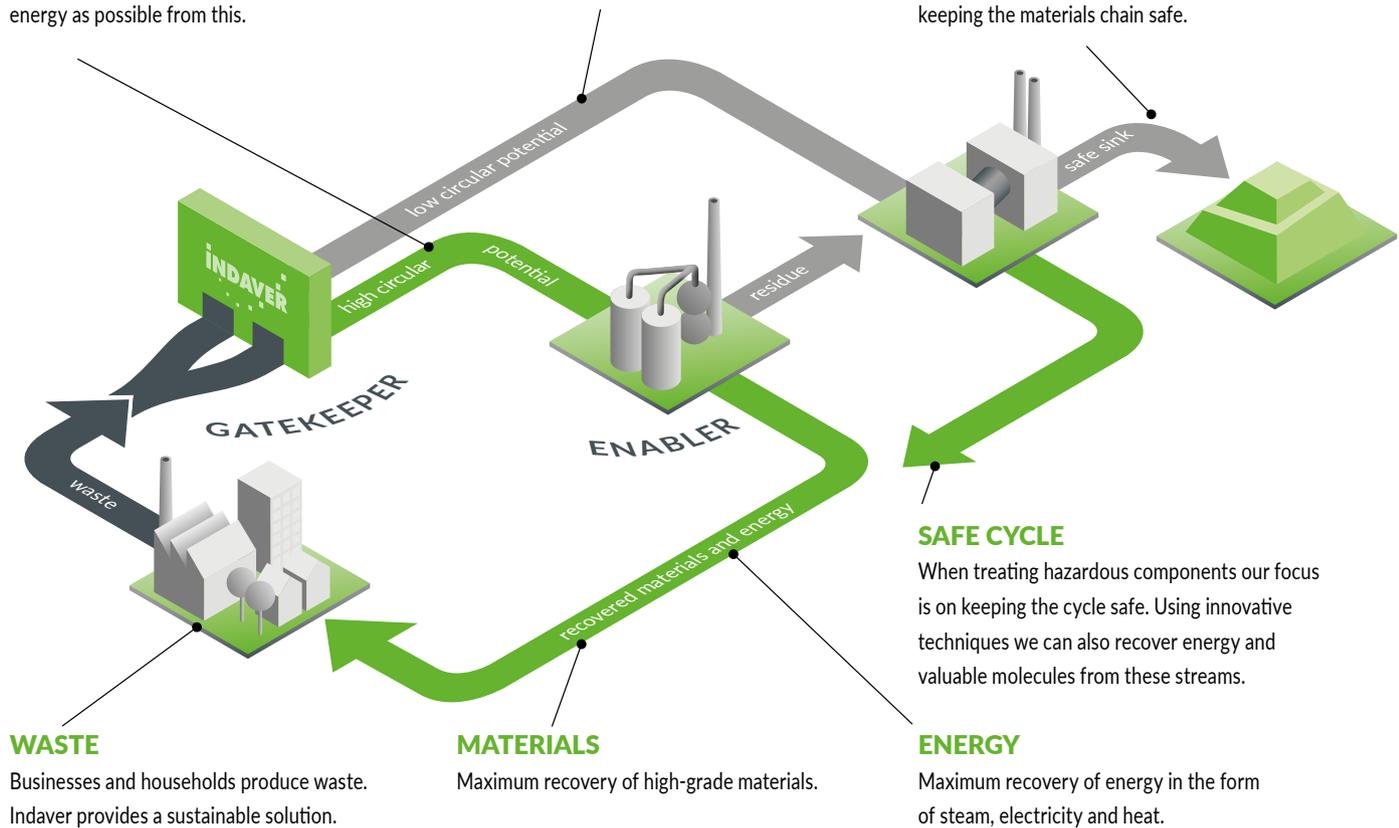
Waste products in the green chain are relatively pure and therefore have a high circular potential. We recover as many materials and as much energy as possible from this.

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.



Closing materials loops

Efficient, innovative and safe

Indaver's mission is to lead the field in sustainable waste management. We create value from waste, both for our industrial and our public customers, while simultaneously closing material loops. We treat collected waste streams in our high-tech facilities in a way that ensures we recover as many valuable materials as possible.

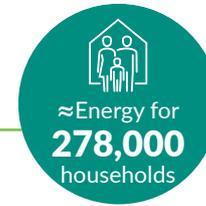
Thanks to our Molecule Management approach, we are able to break waste down to a molecular level and recover secondary raw materials. We then supply these secondary, high-quality raw materials to industries to replace the primary raw materials. Using this method, we are closing material loops. In addition to this, Indaver invests in innovative technologies such as chemical recycling to ensure we can treat the increasingly complex composition of waste. We destroy waste that contains hazardous components or we store it safely in our landfill sites. Therefore preventing harm to people, the environment and society.

Generating sustainable energy

Indaver treats waste that is not suitable for recycling in its thermal treatment facilities. This includes household and similar commercial waste as well as hazardous industrial waste. During this treatment process, we generate energy. We use this energy in our treatment processes. We then supply a large amount of surplus energy to businesses, public networks and corporate energy networks, in the form of steam, electricity or heat.

We produce green gas from the VFG waste treated by our composting facility in Alphen aan den Rijn (NL), which we supply to the network.

If Indaver converted all of this energy into electricity, it could supply power to 278,000 families each year, based on an annual consumption of 3.5 MWh or 1,500 m³ of natural gas per family.



DOEL
Fluidised bed incinerators ≈ **107,700**
households



DOEL
Grate incinerators ≈ **91,900**
households



MEATH
Grate incinerator ≈ **41,500**
households



HAMBURG
Rotary kilns ≈ **11,400**
households



ANTWERP
Rotary kilns ≈ **11,100**
households



BIEBESHEIM
Rotary kilns ≈ **7,200**
households



INDACHLOR
≈ **5,800**
households



ALPHEN A/D RIJN
Bio Power (green gas) ≈ **1,400**
households

Innovative solutions

Expansion of solvent recycling

In 2022, Indaver took over BIP Chemical Holdings (Middlewich, UK). BIP processes 30,000 tonnes of packaged waste per year and recycles **around 30,000 tonnes of liquid solvent waste from the chemical and pharmaceutical industries**. After distillation and treatment, Indaver supplies fine chemicals back to these industries. This acquisition, with Inda-MP (in Antwerp, BE) where we recover precious metals from liquid waste streams, is the starting point for our European network of solvent management facilities.

Soil purification and recovery of minerals

With the takeover of Mineralz Noord (NL), in 2022, Indaver is capitalising on the **growth opportunities in soil remediation and minerals resources recovery**. Under the name Indaver Mineral, we offer our customers a complete package for physical and biological soil remediation and cleaning drilling fluids. Indaver Mineral then recovers secondary raw materials from the (lightly) contaminated soil and dredging sludge.

Indaver operates waste-to-energy plant in the UK

In the autumn of 2022, 'cold commissioning' of the new waste-to-energy plant was performed in Aberdeen (United Kingdom). Indaver will operate the plant for the next 20 years. Once fully operational, in 2023, this plant will convert some **150,000 tonnes of non-recyclable household waste each year into affordable, clean electricity**. The waste at this facility comes from the municipalities in the immediate area.

P2C makes basic chemicals from end-of-life plastics

At its Antwerp (BE) site, Indaver is building the Plastics2Chemicals (P2C) demonstration facility. From 2024 onwards, this facility will process 30,000 tonnes of end-of-life plastics annually. Using an innovative thermal-chemical recycling process, we convert polystyrene and mixed polyolefins packaging waste into **new, safe and high-quality basic chemicals** for the industry. In Willebroek (BE), we are currently building the new pre-treatment plant for these waste streams.

Heating network construction has begun in Antwerp north

In late 2022, the first pipe of the North Antwerp Heating Network (BE) was laid. From 2024 onwards, **Indaver Antwerp's rotary kilns will supply their residual heat to Boortmalt malthouse via a pipeline**. Boortmalt requires a great amount of energy in its production process. The cooled water flows back through a second pipeline for re-use. In a later phase, residual heat will also be provided to two residential areas in Antwerp North.

Energy from non-recyclable wood waste

In late 2022, in Doel (BE), E-Wood, the waste-to-energy plant for non-recyclable wood waste operated by Indaver and partner Veolia, became operational. Wood waste is a renewable energy resource. The treatment of this material in the fluidised bed facility produces green energy. **E-Wood supplies this stable green energy source to the public grid in the form of electricity, or as steam for the Ecluse network**. E-Wood can convert 180,000 tonnes of wood waste into green energy per year.

Sustainable solutions for 5.1 Million tonnes of waste

In 2022, Indaver managed 5.1 million tonnes of waste. We treated 4.1 million tonnes of that at our facilities with the remaining 1 million tonnes being treated by third parties.

59 %

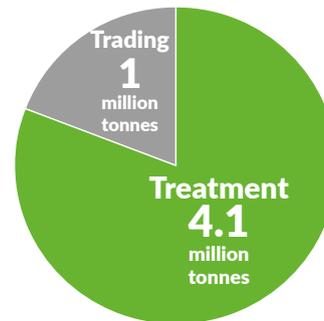
of the waste products with an emphasis on recycling **materials** and finding useful applications for the **energy**.

21 %

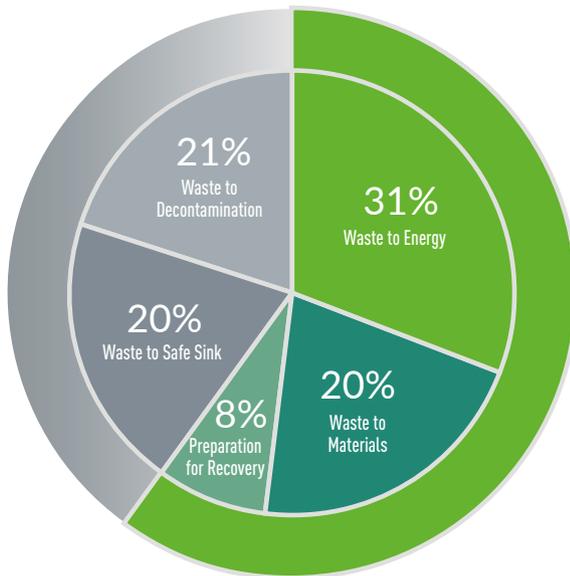
of the waste materials have been thermally treated to break up the **hazardous components** at high temperatures or to neutralise them through physicochemical treatment.

20 %

of the waste products **safely and sustainably** on our landfill sites.



Total volume of waste managed **5.1 million tonnes**



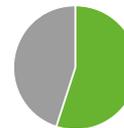
Belgium **2.5** million tonnes



Netherlands **1.3** million tonnes



Germany **0.9** million tonnes



Ireland/UK **0.4** million tonnes



France **0.02** million tonnes



Italy/ Portugal **0.02** million tonnes

Treatment
 Trading

Corporate social responsibility

Key figures 2022

As a sustainable waste management company for industrial and municipal waste, Indaver is results-oriented (economic goals). Indaver works openly and forms relationships based on mutual trust (social goals) and is focused on minimising its climate impact (environmental goals). These core values are essential to our operations and support us in our efforts to create value from waste.



Investing in people

Thanks to our staff, we find clever solutions and innovative services for waste management, which are useful both to our customers and to society. Indaver invests in the safety, well-being and personal development of its employees ensuring that they can carry out their work to their full potential.



802 Belgium	647 Germany	268 The Netherlands
218 Ireland	45 UK	35 France
28 Portugal	4 Italy	4 Spain

Safety first, always

Safety is an integral part of our work. We ensure all of our facilities and sites are a safe place to work. Indaver provides appropriate safety training and educates its staff how to recognise the dangers and risks on site. We work continuously on our proactive safety culture in which all employees look out for one another's safety.



Sustainable Development Goals

The circular economy is the only sustainable and ecological way to provide prosperity and well-being for every world citizen. To make the world a better place, the United Nations set seventeen Sustainable Development Goals for the period from 2015-2030. The waste sector, just like all other sectors and social organisations, has a vital role to play in making these ambitious goals a reality. Indaver is committed to multiple development goals to contribute to a more sustainable world.



Indaver Group in Europe

Locations

Indaver has sites and specialist facilities in several European countries. It manages waste with a focus on the sustainable recovery of energy and materials and does so efficiently thanks to innovative systems.

Belgium - Antwerp, Doel, Grimbergen, Kallo, Mechelen, Nijvel, Waregem, Willebroek

The Netherlands - Alphen aan den Rijn, Delfzijl, Dordrecht, 's-Gravenpolder, Groningen, IJmuiden, Leeuwarden, Moerdijk, Nieuwdorp, Oldekerk, Oude-Pekela, Rijkswetering, Rotterdam-Europoort, Terneuzen, Veendam, Vlissingen-Oost, Voorschoten, Well

Germany - Biebesheim, Billigheim, Frankfurt, Hamburg, Kassel, Mainz, Stuttgart, Wetzlar

Ireland - Cork, Dublin, Dún Laoghaire, Meath

United Kingdom - Aberdeen, Belfast, Essex, Middlewich, Teesside

France - Loon-Plage (Duinkerke)

Portugal - Abrantes, Lissabon

Spain - Tarragona

Italy - Origgio



[READ THE 2022 SUSTAINABILITY REPORT HERE](#)
WWW.INDAVER.COM/SUSTAINABILITYREPORT

