

TURNING INVESTMENTS INTO IMPACT

IMPACT REPORT 2025



PREFACE

Dear reader,

We are publishing this impact report at a time when climate and nature are sinking down the global risk agenda. And while this pains us, not least because the root causes of many conflicts are deeply intertwined with our environmental crises, it's not difficult to see why. Tensions are rising in our already crowded crisis landscape. War, authoritarianism, and polarisation are escalating, and interdependencies have gone from being a force for peace and stability to a source of vulnerability. While climate and nature are being deprioritized, we are at the same time entering the "age of overshoot", beyond 1.5 degrees of warming. Going forward, we must navigate irreversible changes, while at the same time preventing the problem getting worse. This is precisely the moment to hold course.

In that spirit, we launched our 4th fund with high ambitions. Around us, we *do* also see moments of quiet but profound progress. Renewable energy now accounts for almost a third of global power generation, plant based products are cheaper than animal-based alternatives in European supermarkets, and it seems possible that greenhouse gas emissions will peak this decade. Youth movements and policy wins, like the Zero Carbon Acts, have helped set direction; technology and execution will determine whether it scales.

Ten years after the Paris Agreement, we feel both humble about how far we still have to go, and hopeful that we can get there. The defining challenge of this time is not just technical; it is also deeply personal. How do you respond to immediate crises without drifting from the long-term direction? When do you go for the pragmatic choice and when should you stick to your principles? Do you speak up, even when you're standing alone?

Navigating these tensions, resisting cynicism and short-termism, requires courage from all of us. Because the future we need sits beyond the comfort zone of 'business as usual'. That is why, for this year's impact report, we want to shine an extra light on the founders and leaders of the companies we invest in. To elevate these impact-makers, who choose the harder, braver path, over the easier and more shortsighted one.

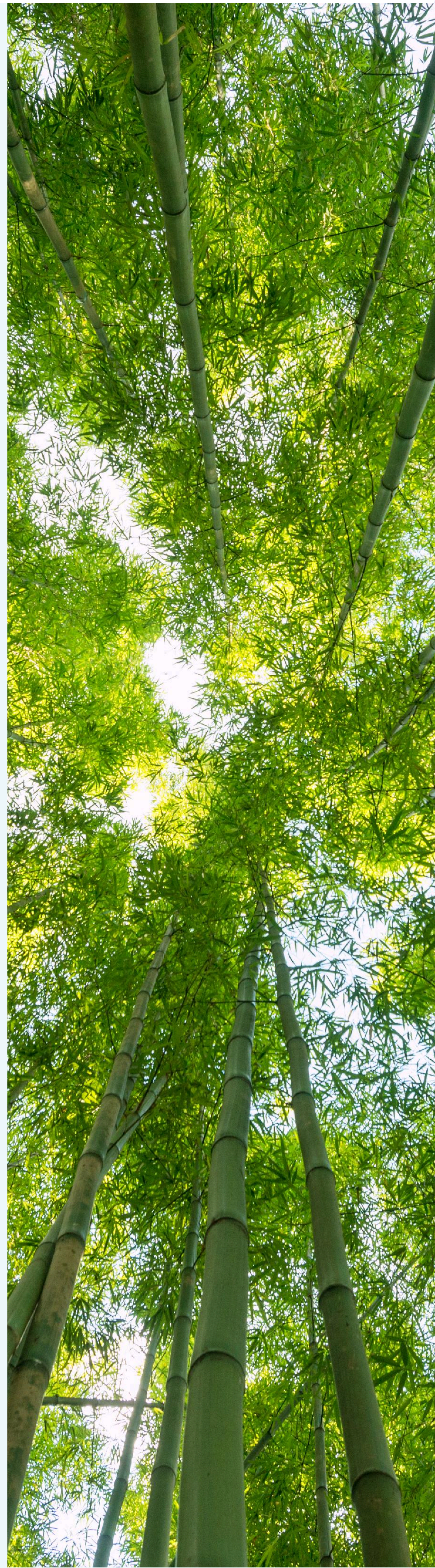
In the pages that follow, you will get a glimpse into the kind of future we are choosing to build, and an insight into the people that are laying the bricks. We will show the results realised this year, the lessons we have learnt, and the opportunities that lay ahead. We hope you find inspiration in these stories, and join us in our journey to shape a more sustainable future.

On behalf of the team at SHIFT Invest,

Guus Verhees and Janneke Bik

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WHY WE ONLY INVEST IN IMPACT

The planet has been disrupted by human activities, and now it is beginning to disrupt the human world. There is no doubt in scientific research and literature about the interconnectedness of various global crises, including climate change, biodiversity loss, and resource depletion. We believe innovation and entrepreneurship are one of the necessary elements to help restore the balance between nature and society. That is why invest in innovative enterprises with a significant positive planetary impact potential.



CLIMATE CHANGE

The integrity of life on earth is at risk: we have unequivocal evidence that climate change is a threat to our society and planetary health. There is a brief and rapidly closing window of opportunity to limit the sources and enhance the sinks of greenhouse gas emissions and adapt to the changes already underway, so the time to act is now.

3.5 yrs

until our global carbon budget has been depleted

▼ 24% LESS THAN LAST YEAR



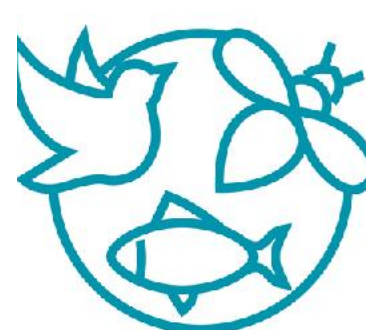
NATURAL RESOURCE DEPLETION

Global consumption at its current rate is unsustainable. If we don't change course, the amount of material we extract from the Earth could rise by 60% by 2060. That's impossible, considering we have already taken far more than the earth can regenerate¹¹. To live within the planet's limits, we need to shift to a circular economy- one that uses fewer resources, wastes less, and keeps materials in use for longer.

6.9 %

global circularity rate

▼ 4% WORSE THAN LAST YEAR



BIODIVERSITY LOSS

Biodiversity is disappearing at a rate not seen since the mass extinctions of the dinosaurs. This matters – not just because plants and animals have a right to exist, but also because biodiversity is an important part of the systems we rely on for food, water, medicine and even a stable climate. Protecting it is essential for nature and our own future.

0.27

Living Planet Index score in 2020

▼ 73% LOWER THAN 1970

OUR FUNDS

ASSETS UNDER MANAGEMENT:

115 M €

FUNDING PHASES:

SEED - SERIES B

GEOGRAPHY:

NL, BE, FR, DE, UK

SHIFT I & II

VINTAGE YEAR: AVERAGE INVESTMENT:

2009 1.4 M €
2014

FUND SIZE: # OF INVESTMENTS:

46 M € 20

SHIFT III

VINTAGE YEAR: AVERAGE INVESTMENT:

2020 2.5 M €

FUND SIZE: # OF INVESTMENTS:

110 M € 36

SHIFT IV

VINTAGE YEAR:

2025

FUND SIZE: # OF INVESTMENTS:

92 M € 5

... AND COUNTING!

THEMATISCHE
TECHNOLOGIE
TRANSFER



Together with the technical universities of the Netherlands and TNO, we run a dedicated proof-of-concept fund that bridges the gap between research and market. TTT provides pre-seed capital to the most promising early-stage ventures emerging from these institutions, helping founders turn scientific breakthroughs into businesses built for real-world impact.

SECTORS WE INVEST IN



ENERGY
TRANSITION



SMART FOOD &
AGRICULTURE



GREEN
INDUSTRIES



SUSTAINABLE
MOBILITY

MEMORABLE MOMENTS OF 2025



Celebrating our 15 year Lustrum on the Mediterranean in Marseille



Our annual football tournament, the SHIFT Cup



Portfolio Day event, with special guest David Van Reybrouck



Guus with Siete (Robin Radar) speaking at NVP

WHO WE ARE

OUR TEAM

Behind SHIFT is a team of **15** professionals who believe that capital can do better. Leading our work on Impact & ESG are partner Florentine Fockema Andreae and Heleen de Jonge, who steward the link between our values and practice: who we back, how we engage, and what we measure.

We also believe that who makes investment decisions matters: **46%** of our team and investment committee identify as women. This is also something we focus on at portfolio-level, as member of **Code-V**. The average proportion of female-identifying FTEs in the SHIFT III portfolio increased by **9%** since last year, to 27%.



OUR IMPACT COMMITTEE

Our impact committee is an independent group of experts who challenge our thinking and sharpen our decisions, helping us ask harder questions about the companies we back and where we could push for deeper impact.

“ Within the Impact Committee, we collaborate closely with SHIFT’s dedicated team; an exceptional group that turns ambition into action every day.

Together, we discuss cutting-edge impact assessments of ventures, helping them sharpen their theory of change, understanding trade-offs within planetary boundaries, and scale their positive footprint.

Esther Wolfs



ALAIN CRACAU
Goodberries



REMONA VAN DER ZON
KLM



ESTHER WOLFS
Biodiversity expert



JOLANDA VAN DE SANDE-DE ROOIJ
WWF NL



BJÖRN AARTS
Rabo Investments



MARC JANSEN
BOM Investments



MIEKE WEEGELS
WUR

OVERALL IMPACT RESULTS

73 %

overall fund impact targets achieved¹

18

companies reported their impact

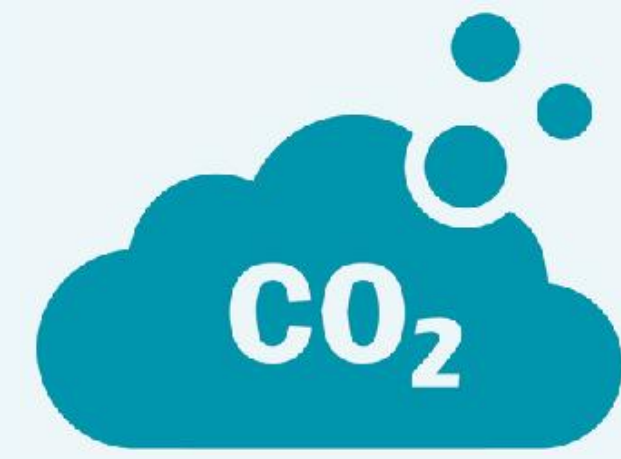
+ 1

new investment

+ 5

new companies with impact targets set

CO₂E EMISSIONS AVOIDED



228 kt

▲ 78%

equivalent to 5,000 cars taken off the road
36 M € *avoided costs to environment and society*

WATER SAVED



1,200,000 m³

▲ 11%

equivalent to 150 thousand hours in the shower
1.5 M € *avoided costs to environment and society*

RENEWABLE ENERGY PRODUCED



188 GWh 17 GWh

▲ 52%

▲ 188%

equivalent to the annual energy use of 80 thousand Dutch households

ENERGY SAVED

WASTE AVOIDED

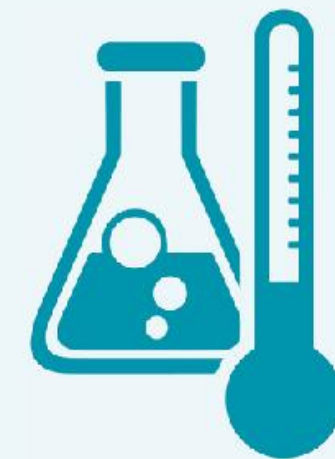


2.7 kt

▲ 181%

equivalent to the annual waste of 3,000 households
0.8 M € *avoided costs to environment & society*

CHEMICALS AVOIDED



36 %

▲ 64%

compared to conventional textiles

▲ The % change shown under each result is the % growth compared to the cumulative result of 2020 - 2024.

Results represent the cumulative positive impact of the companies that we supported from 2020 until and including 2025 (SHIFT III only, excludes some impact of SHIFT II companies). This is not corrected for investor attribution.

HIGHLIGHTS OF 2025

FROM OUR PORTFOLIO COMPANIES

C1 connection's solution went operational in the largest wind turbine in Europe.



C1 CONNECTIONS

OMRT developed a new tool for building designers and developers to design with microclimates and biodiversity in mind.



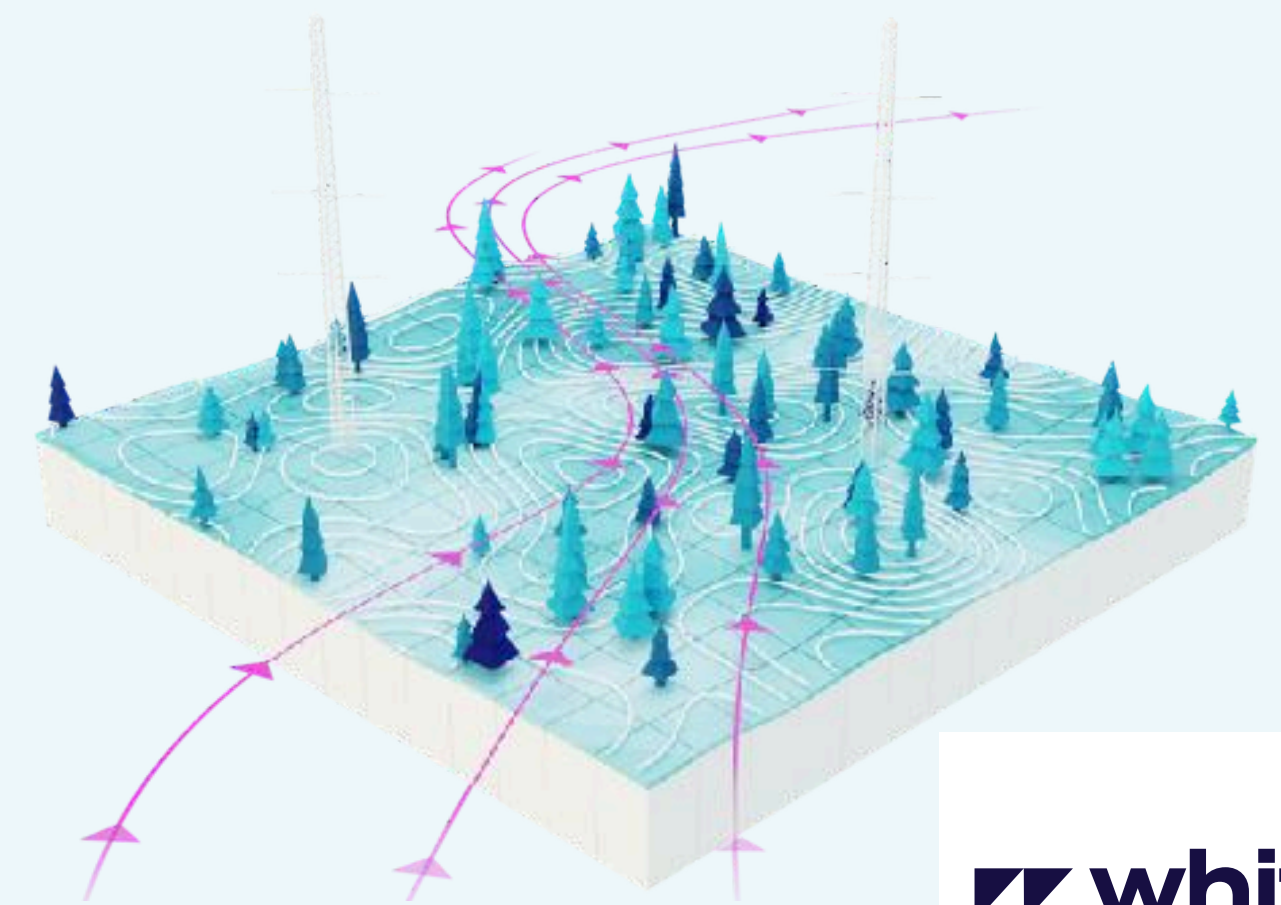
omrt

Ridetandem enabled the delivery of over 2 million passenger journeys across the UK and Germany.



RideTandem

Whiffle received validation that their solution cuts wind prediction uncertainty by 50% compared to prior state-of-the-art models.



whiffle

Friday Energy made critical batteries last longer in the field, protecting them from overuse, overheating and damage.



FridayEnergy

OTIV became a key technology supplier for Europe's largest freight automation project.



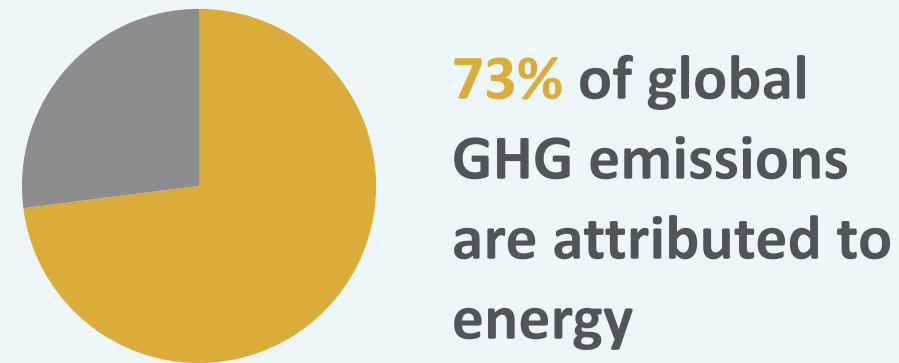
OTIV

ENERGY TRANSITION

Energy is foundational to modern life, but is also a major driver of climate change, with knock-on effects for ecosystems and natural resources.

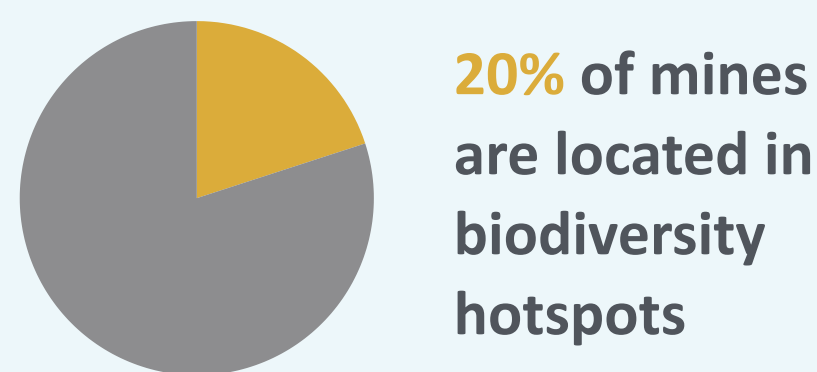
CLIMATE

Fossil fuels are still at the heart of the energy system, making energy the main driver of greenhouse gas emissions and climate change.



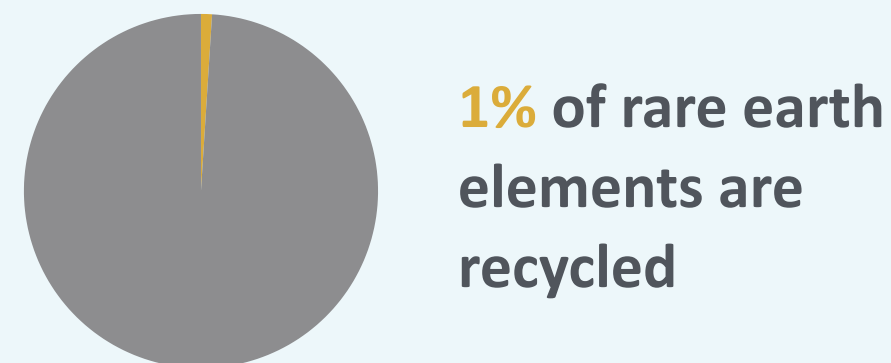
BIODIVERSITY

New power projects, along with the mining operations that support them, exert substantial pressure on nature by breaking up habitats and polluting ecosystems.



NATURAL RESOURCES

The energy transition can become resource-intensive: driving demand for scarce materials, creating more waste, and increasing pressure on water resources.



HIGHLIGHTS

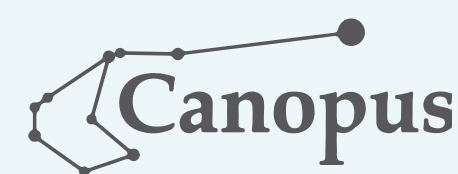
	2024	2025
GHG emissions avoided (t CO ₂ e)	26,339	32,843
Energy saved (GWh)	0	0
Renewable energy produced (GWh)	52,678	64,630

SOLUTIONS WE'RE BACKING

Getting to net zero requires not only more renewable generation, but also a smarter, more flexible system: built on electrification, efficiency, storage, grid innovation, and, where needed, alternative energy carriers. We also search for solutions embedding circular economy principles and protecting biodiversity.



High-resolution weather models for better forecasts, to better design and operate wind parks.



Directional drilling technology for geothermal wells, improving the viability of geothermal energy.



Energy management tools to enable consumers to manage their distributed energy resources more efficiently.



Predictive maintenance software for renewable energy producers to optimise the energy yield and maintenance planning of wind turbines.



Smart battery solutions to better manage renewable energy consumption and production.



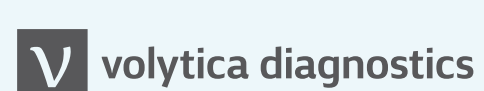
Combining solar power with innovative thermal energy storage system for greenhouses.



Smart billing and consumption tracking for easier to manage and more trustworthy sustainable heating networks.



Noise reduction solutions for wind turbines to increase energy production within noise constraints.



A diagnostics solution that analyses battery field data to extend battery lifetime.



Solar panel mounting solution to enable the adoption of renewable energy on weak roofs.



Magnetocaloric refrigerators with high energy efficiency and no harmful refrigerants.



High-capacity wind turbine connection enabling larger turbines and easier installation, increasing energy yield while lowering the levelized cost of wind energy.

OUR IMPACT MAKERS

A CONVERSATION WITH ERIK



Before Rable, Erik Valks ran multiple larger companies for private equity investors. In these roles, he drove value creation through strategies such as international expansion beyond the Benelux region. “When I became CEO at Rable, there was nothing more than a prototype of the product. It was an exciting new challenge to build a company from scratch around an important solution.”

What need is Rable's solution addressing? “Rable enables solar panels to be installed on roofs that previously lacked the structural or technical capacity to host them. About half of all roofs in the Netherlands lack this capacity, and thanks to the mounting system of Rable there is now a business case for it.”

Building an impact business from the ground up comes with its own challenges. What was so different about it? “The ability to make bold decisions without inheriting outdated infrastructure! For example, the early phase of the company allowed us to design for reusability and recyclability from the very beginning. We designed our products so they can be redeployed on different roofs and have a lifespan of 25 years. That took extra effort, but both the commercial and environmental case for it was clear.”

What makes you hopeful? “The rapid deployment of solar panels worldwide during the past 12 years is beautiful to see. Today solar energy is cheapest type of energy. We see bottlenecks ahead such as grid modernization, yet the economics for solving them

are strong even without political will for sustainability. It's also motivating to note that every solar panel installation enabled by our mounting system avoids the equivalent emissions of burning 170 kg of coal per year.”

What does the next green leap forward look like for Rable?

“Replacing the standard steel with green steel as the primary material in our mounting systems would enable us to significantly reduce our environmental footprint. This is possible, but it will make the product 40% more expensive and customers generally are not willing to pay this yet.”

And what external developments are you excited to see in the future?

“I'm keeping a keen eye on the development of new technologies such as solid-state batteries: like solar panels, batteries will be significantly cheaper in 10 years, contributing to bringing a fully decarbonised energy system within reach.”

Any advice for other impact business leaders?

“To be persistent and engage with technologies where you can solve a real problem and truly bring unique value to the market.”



Rable designs mounting systems that enable solar panels to be installed on weak or lightweight rooftops that would normally be unsuitable for PV without reinforcement. Their solution thereby unlocks new roof space for PV, accelerating the energy transition and reducing pressure on natural land.

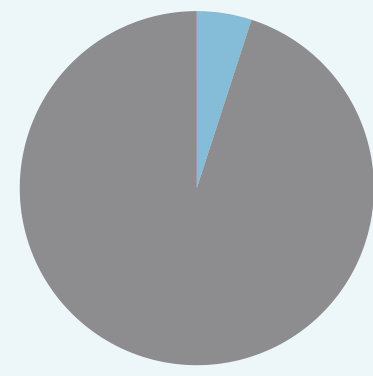


GREEN INDUSTRIES

The industrial sector is one of the most resource- and energy-intensive sectors. It also generates vast amounts of waste that contributes to water and soil pollution, in addition to producing harmful novel materials.

CLIMATE

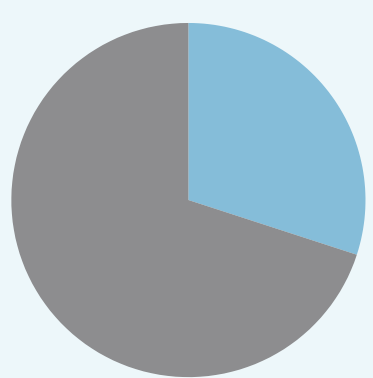
Heavy industry and manufacturing remain hard-to-abate, carbon-intensive sectors, making industries a major driver of global GHG emissions.



20% of global GHG emissions embedded in materials

BIODIVERSITY

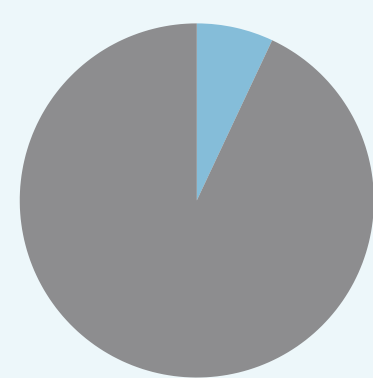
From the physical impact of mining, to toxic chemicals and environmental contamination from poor waste management, impacts of industries on nature are varied and numerous.



30% biodiversity loss caused by the built environment





NATURAL RESOURCES

By running on a linear 'take-make-waste' model, heavy industry and manufacturing turn finite natural resources into short-lived products and long-lived waste.



7% share of secondary materials in the global economy

HIGHLIGHTS

	2024	2025
 GHG emissions avoided (t CO ₂ e)	40,474	42,831
 Waste avoided (t)	2.7	3
 Energy saved (GWh)	2,434	328
 Water saved (m ³)	90,387	117,905

SOLUTIONS WE'RE BACKING

We look for innovative solutions to facilitate the transition to industries that are powered by renewable energy, more efficient and use secondary and bio-based resources.



Advanced fermentation process for bio-based fatty-acids that decarbonise and reduce the land footprint of chemicals.



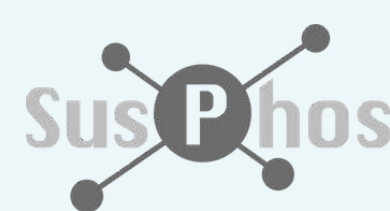
AI-powered acoustic testing systems that enable fast, non-destructive detection of defects in metal parts.



A digital platform that optimizes the design processes of buildings, making these more material and energy efficient.



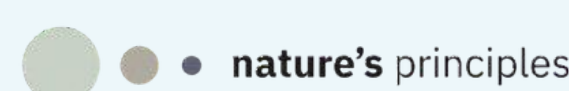
Animal-free, engineered high quality leather.



Upcycling phosphate from sewage sludge ash and other waste streams into circular fertilizers and flame retardants.



Plug-and-play tool to monitor the performance of industrial equipment in real-time, improving efficiency via the early detection of equipment and product defects.



Mixed-culture fermentation producing lactic acid and other bio-based chemicals from waste.



Redesigning the textile supply chain to produce more sustainable fabric with substantially lower production waste.



Photonics-based optical networking that improves the energy efficiency of data centers.



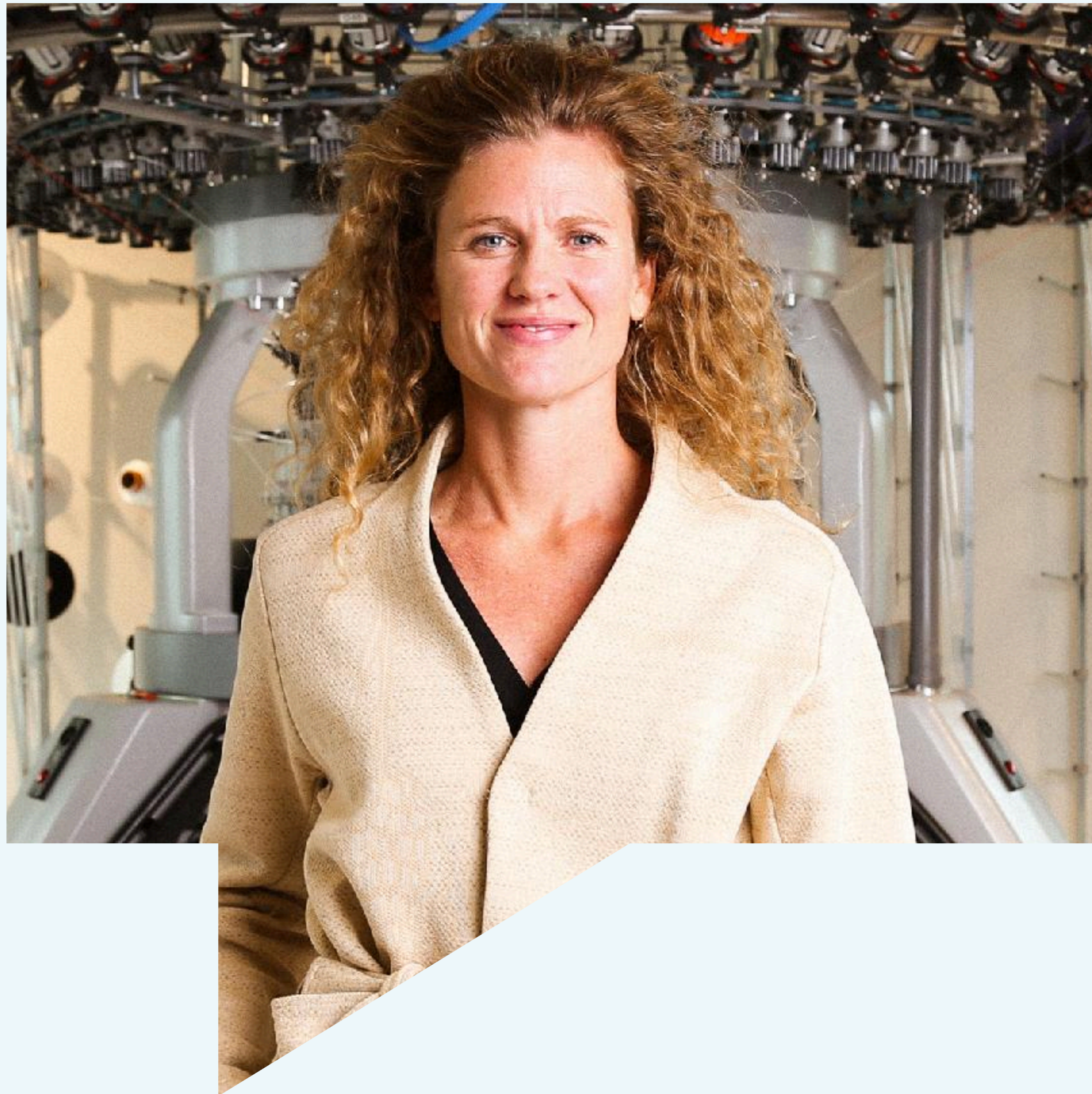
Additive micro-electronics manufacturing that reduces the ecological footprint of chip and display production.



Converting wet organic waste streams like sewage sludge, agro-residues, and mixed plastics, into biofuels, biogas, and fertilizers.

OUR IMPACT MAKERS

A CONVERSATION WITH MIJKE



We sat down with Mijke van Ballegooijen, CEO of BYBORRE, in the company's knit studio - a space draped in richly textured, colourful textiles that wouldn't look out of place in a gallery. During our round of introductions, Mijke recounts her time in the airline industry before starting at BYBORRE.

How did you end up as the CEO of an impact enterprise after 13 years in the airline industry? "It started as a temporary position, but then I fell in love with BYBORRE's product, the mission, the beast the textile industry is and I decided to stay. I really cannot imagine working for a non-impact company again after this."

That sounds like quite a transition. **What makes an impact enterprise so different from a more traditional company for you?** "There's a big difference in employee engagement between impact and non-impact companies. It's such a cohesive and really energizing environment. Being mission-aligned attracts very talented and motivated people."

And yet staying hopeful in this 'beast' of an industry can't always be easy. **How do you manage to stay encouraged as a leader?** "You need to be a very positive person and surround yourself with risk-takers as the pressures are numerous when you intentionally seek impact. My motivation comes from creating products that are not only sustainable, but also truly high-quality and beautiful. You need to have this 'carrot', of beautiful and durable textiles together with the 'stick', of asking customers to rethink the way they've always done things to become more sustainable."

That tension between impact and commercial reality also must arise within BYBORRE. **Can you take us through a case where impact came first, even when it wasn't the easy choice?** "We occasionally receive small orders that do not fit our on-demand model. Rather than producing textile upfront and risk the surplus going to waste, we decide not to accommodate these to avoid overproduction, in line with our mission."

Not every founder finds it easy to hold that line. **What would you advise founders facing these types of decisions?** "Stick to your principles and stay consistent—especially when it's hard. Be clear and open about why you're making certain choices. Decision-making becomes easier when you have strong principles in place. These act as a compass, helping you stay aligned with your mission."

With that mission in mind, what market developments are you most excited to see in the future? "We've made good progress towards creating more sustainable textiles, but the end-of-life is still a huge challenge. There is a clear need for technology that can recycle textiles produced from multiple yarn types."



BYBORRE is a textile innovation studio that enables brands to transition to custom-made responsible fabrics, which are produced on-demand with full transparency.

BYBORRE

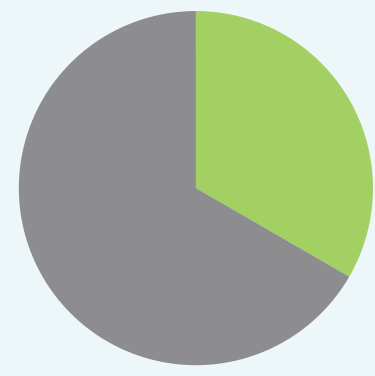


SMART FOOD & AGRICULTURE

Agriculture is already a leading cause of environmental degradation and climate change, even as growing global food demand further intensifies pressure on land, soil, and water systems.

CLIMATE

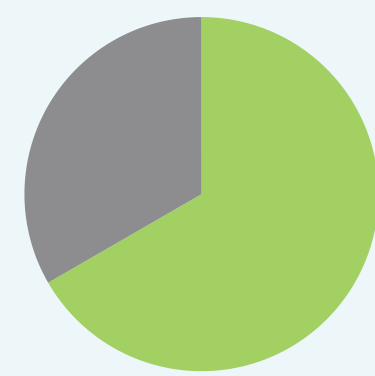
Modern food systems have become a powerful engine of climate change, relying on deforestation, intensive livestock production and heavy fertiliser use.



33% of global GHG emissions are from F&A

BIODIVERSITY

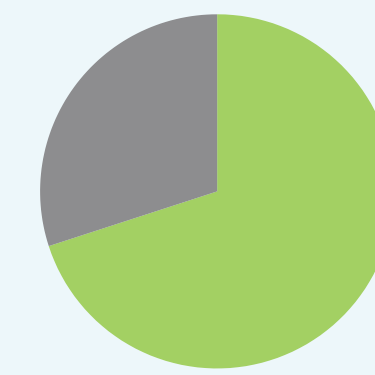
Agriculture erodes biodiversity twice over: through the genetic narrowing of crops and breeds, and through harm and habitat loss driven by monoculture and chemical-intensive farming.



9 plant species represent 66% of worldwide crops

NATURAL RESOURCES

Food systems overdraw nature's resource bank: irrigation strains freshwater supplies, intensive farming exhausts and erodes soils, and a large fraction of the harvest is ultimately lost or wasted rather than used for consumption.



70% of global freshwater withdrawal is for agriculture

HIGHLIGHTS

	2024	2025
GHG emissions avoided (t CO ₂ e)	0	0
Waste avoided (kg)	328,000	87,130

SOLUTIONS WE'RE BACKING

We invest in solutions at different points of the value chain, from promoting the transition to plant-based proteins, promoting crop health, repurposing agricultural side streams, and reducing food waste in retail.



Preventing food waste by predicting shelf-life with fresh produce scanners and through a platform providing quality insights.



TIME-TRAVELLING MILKMAN

Sunflower-based fats that match dairy creaminess, at a fraction of the emissions and land pressure of tropical oils.



Advanced fermentation process upcycling food waste and agricultural residues into bio-based chemicals.



NutriLeads
Ingredients for health

Upcycling carrot pulp into a clinically proven precision prebiotic that supports gut and immune health.



A portable diagnostic kit that detects crop disease on the spot, enabling farmers intervene early, use fewer pesticides, and protect yields.



Biodegradable plant-based foam to replace plastics in industries including furniture and horticulture.



Instead of sending robots into the greenhouse, SAIA brings plants to the robot, making it possible to grow more food with less water, energy, and no pesticides.



Passive thermal heat battery systems to decarbonise greenhouses and improve crop growth.



A blue ingredient derived from spirulina, grown without land, pesticides, or fertiliser, produced in a process that captures CO₂ rather than emitting it.

OUR IMPACT MAKERS

A CONVERSATION WITH NIEK



We had a call with Niek Savelkoul, founder and CEO of Scope Biosciences, on a frosty morning from our office in Amstelveen, to explore his journey from his studies at Wageningen to his beginnings as an entrepreneur.

Why did entrepreneurship feel like the right path for you?

“I love the process of crafting a vision, shaping the story that supports it and leading a team that turns a vision into reality. During my studies in Wageningen, I had the opportunity to help translate biotech innovations into real world applications, and that experience made it clear to me that entrepreneurship is the most direct way to create tangible impact.”

When did that potential for tangible impact first become reality in your own work?

“A Dutch seed company invited us to test our solution on the farm of a grower who had built his business from the ground up. We saw first-hand the impact that a disease could have on their crops and how our technology could very successfully help prevent further losses. The experience energized our team by showing the measurable impact we can deliver.”

Seeing that impact up close must also sharpen your sense of responsibility around how your technology is used. **Did you ever have to make a choice led purely by impact?** “We are intentional about where we choose not to operate, due to ethical concerns or limited potential impact.

For example, we declined the opportunity to deploy our solution to assist in disease detection of large-scale livestock, as we did not want to support the intensive livestock industry.”

Gaining support for such decisions must not always be easy. **How do you navigate these discussions with relevant stakeholders?** “I remind myself of the principles we built the company on and stay anchored in them, even when others push back. As the founder, you know your technology well, so you can trust your perspective on how and where it should be applied.”

What makes you excited about driving positive impact in the food and agriculture industry? “We can make a much quicker change in this market than we can do in any other market; this means that we can continue to deploy new variants of our testing solution based on our customer's needs.”



Scope Biosciences develops ultra-sensitive CRISPR-Cas diagnostic kits for rapid, on-site pathogen detection, enabling early intervention in crops and reducing food loss and pesticide use.

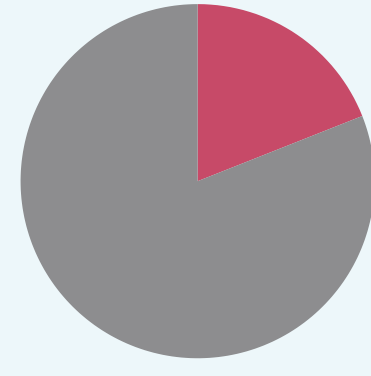
scope
biosciences

SUSTAINABLE MOBILITY

Transport shapes the modern world and strains it. From GHG emissions to air pollution, noise, and land use, the way we move people and goods leaves a mark on almost every dimension of our environment.

CLIMATE

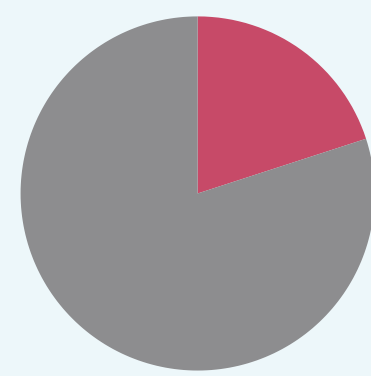
Transport is one of the fastest-growing sources of greenhouse gas emissions, and the largest emitters, freight trucks and long-haul flights, are also some of the most difficult to decarbonise.



19% of global GHG emissions are attributed to transport

BIODIVERSITY

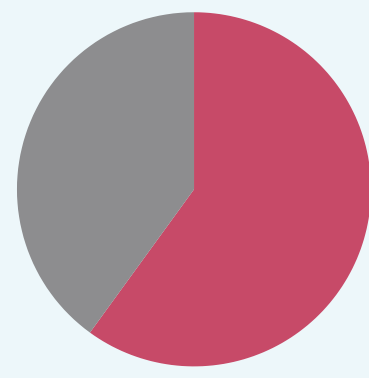
Roads and railways cut through habitats, isolating wildlife populations on either side. The result is a slow fragmentation of ecosystems, made worse by noise, light, and pollution that extend far beyond the tarmac.



20% of terrestrial ecosystems are directly affected by mobility infrastructure




NATURAL RESOURCES

Transport assets have a high material footprint and long lifetime. Electric vehicles replace fossil fuels with critical minerals, for which demand is growing fast and circularity is low.



60% of mined lithium is used to produce EV batteries


HIGHLIGHTS


	2024	2025
 GHG emissions avoided (t CO ₂ e)	5,159	24,444
 Waste avoided (t)	52	10,519
 Energy saved (GWh)	252	1,675


SOLUTIONS WE'RE BACKING

We support the transition to more sustainable transport systems, by prioritising the shift to low-emission transport modes, efficient asset use and cleaner innovations, supporting liveable communities.


 **volytica diagnostics** Real-time battery health monitoring solution.

 **MAGY** Advanced silicon materials that make EV batteries smaller, lighter and longer-lasting.


 **RideTandem** Energy-efficient shared worker transport in places where public transit is not available.

 **OTIV** Autonomous driving technology for trains and trams that makes rail transport safer, more efficient and more competitive with road transport.

 **MAXEM**® Smart charging and energy management for fleets and grid-constrained locations.

 **Verforo** Bio-based marine fuels, chemicals and materials from forestry and agricultural residues.

 **heex** Smart data infrastructure that accelerates autonomous mobility development while reducing its computational footprint.

 **ROBOAT** Autonomous electric boats that move freight, waste and people through city waterways and take traffic off the road.

OUR IMPACT MAKERS

A CONVERSATION WITH CLAUDIUS



We sat down with Claudius Jelhe, founder and CEO of volytica, for a conversation about the origins of his company, its mission and the values that have contributed to its growth.

What led you to start your business? During his PhD, Claudius developed advanced models to understand battery end-of-life behaviour. "That's when I saw an opportunity to take battery monitoring technology out of the lab and apply it to a real industry problem."

What problem did you set out to solve? "Our mission is that every battery must be used to its true potential. Batteries are very valuable resources for energy storage and for buses and other vehicles. They are being underutilized with unnecessarily short lifetimes and a lack of safety."

Can you share a moment when your solution resulted in a real-world impact? "A bus operator approached us when the batteries in their fleet of 100 vehicles were reaching the end of their warranty period. Our analysis revealed that 90% of these batteries could continue operating reliably for two more years after their warranty period. The operator decided not to replace the batteries as they would normally have done, avoiding unnecessary waste and saving millions of euros."

Is there anyone who has shaped the way you think and work?

"Yes, Richard Feynman is one of the most influential quantum physics professors of all times. His approach to explaining physics is unconventional and unique, which inspires me a lot. He wrote a brilliant and funny book called 'Surely You're Joking, Mr. Feynman'."

We'll put it on our reading list! Is being unconventional important to you?

"Thinking out of the box lies behind most groundbreaking innovations. And communicating in an unconventional way, with humour, is a powerful way to help people understand and remember science-heavy ideas. I spend an unreasonable amount of time looking for good scientific analogies. These days, I often find myself talking about bouncers at the club when explaining battery management electronics."

A good reminder that how you communicate about your solution matters just as much as the solution itself. A final bit of advice for founders?

"Have a salesperson in your founding team, alongside technical experts, to ensure that your solution makes sense to your customers. Don't underestimate this - your solution can only have a sustainable environmental impact if it is commercially viable."



Volytica delivers real-time battery intelligence that reveals how batteries really age, empowering operators to improve safety, reduce degradation, and extract full lifetime value from every pack.

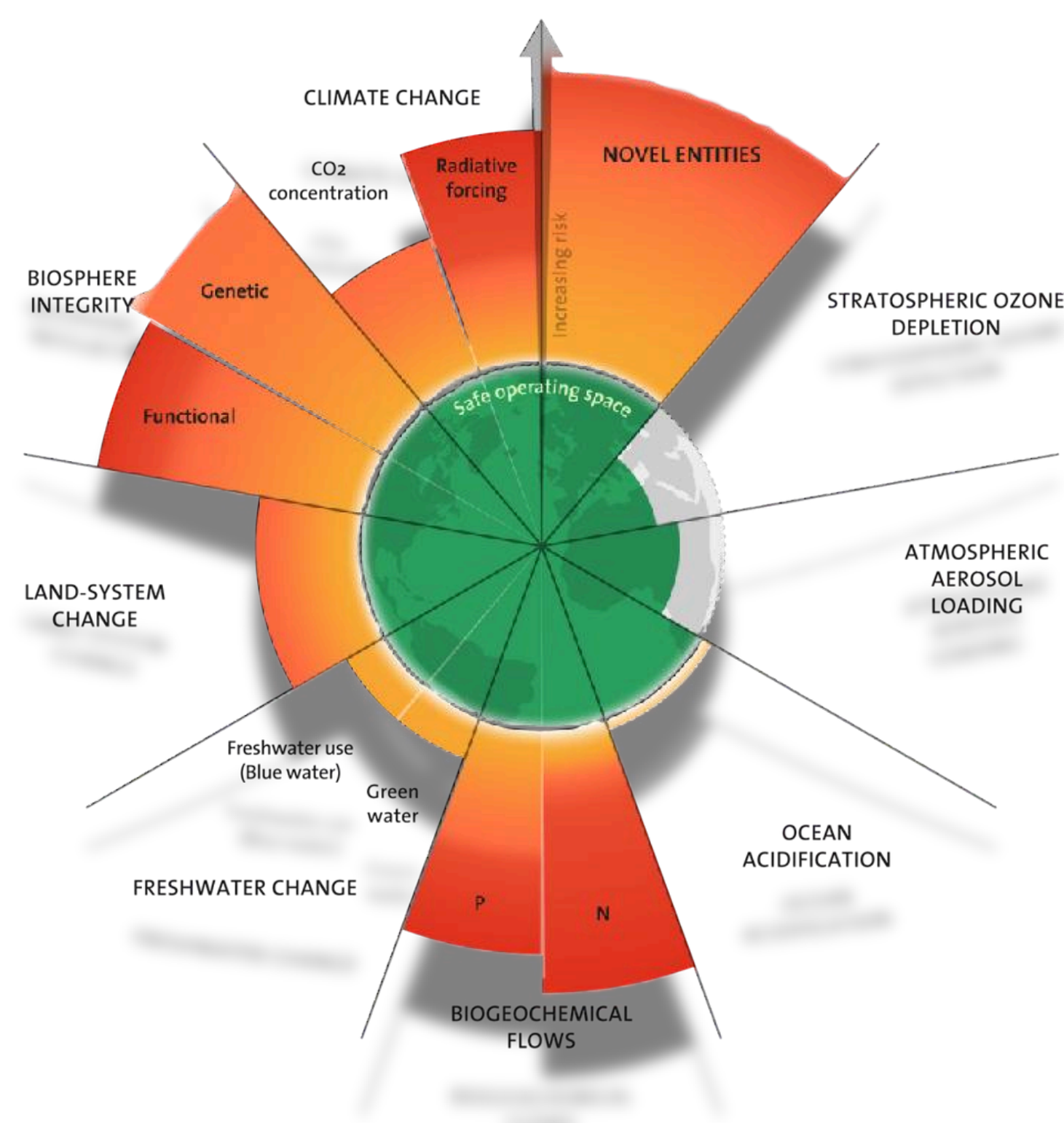


PLANETARY BOUNDARIES

DIVING DEEPER: IMPACT ANALYSES

The planetary boundaries help us keep the full picture in view: not just whether something is “impactful” but whether it supports a safe operating space within all the systems that keep our planet stable - a key consideration in our investment decisions.

The following case study shows this framework in practice. By evaluating the potential transitions enabled by the solution, we develop a clearer understanding of its likely net impact.



⚡ CASE STUDY: ENABLER OF ROOFTOP SOLAR PV

▼ positive intended impact

▼▲ positive/negative unintended impacts

▶ both positive and negative impacts possible



CLIMATE CHANGE



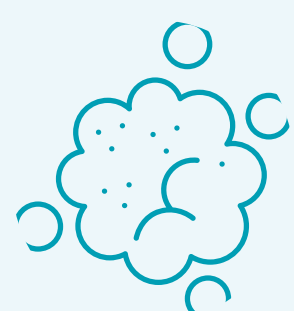
Across its full lifecycle, solar PV ranks among the lowest-footprint energy sources available, second only to wind.



LAND-SYSTEM CHANGE



Solar goes where buildings already are. Increasing electricity generation on existing rooftops lessens the competition between clean energy and the land systems we need to protect.



AEROSOL LOADING



Solar's operational air quality footprint is close to zero. Upstream mining introduces some particulate pollution, but the lifecycle impact remains significantly lower than fossil energy across almost every air quality metric.



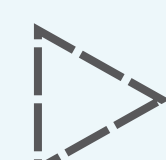
FRESHWATER USE



Solar is among the least water-intensive ways to generate electricity at scale, alongside wind.



NOVEL ENTITIES



Solar panels use semiconductor materials, but this is a one-time input and many are recoverable. Fossil extraction releases complex chemicals into soils and waterways on an ongoing basis, with no recovery pathway.



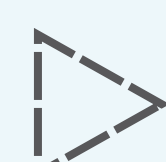
BIOGEOCHEMICAL FLOWS



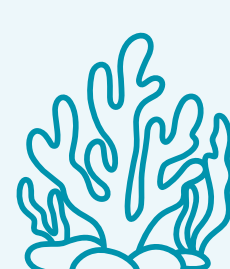
Solar energy avoids the release of nitrate derived from fossil fuel combustion and the fertiliser runoff that makes bioenergy one of the worst performers here. The caveat: silicon purification generates nitrogen and phosphorus compounds, which wind energy sidesteps due to its simpler materials profile.



OZONE DEPLETION



Compared to coal or gas, the ozone depletion potential of solar energy is 95–99% lower per MWh. But solar panel manufacturing still uses NF_3 and SF_6 in purification processes, a known industry challenge for which further process innovation is required.



OCEAN ACIDIFICATION

Impacts here are mainly through other boundaries. For example: reducing GHG emissions indirectly slows ocean acidification, which is primarily CO_2 -driven. And by displacing energy sources that degrade habitats and pollute waterways, solar eases some of the pressure on the ecosystems that biosphere integrity depends on.

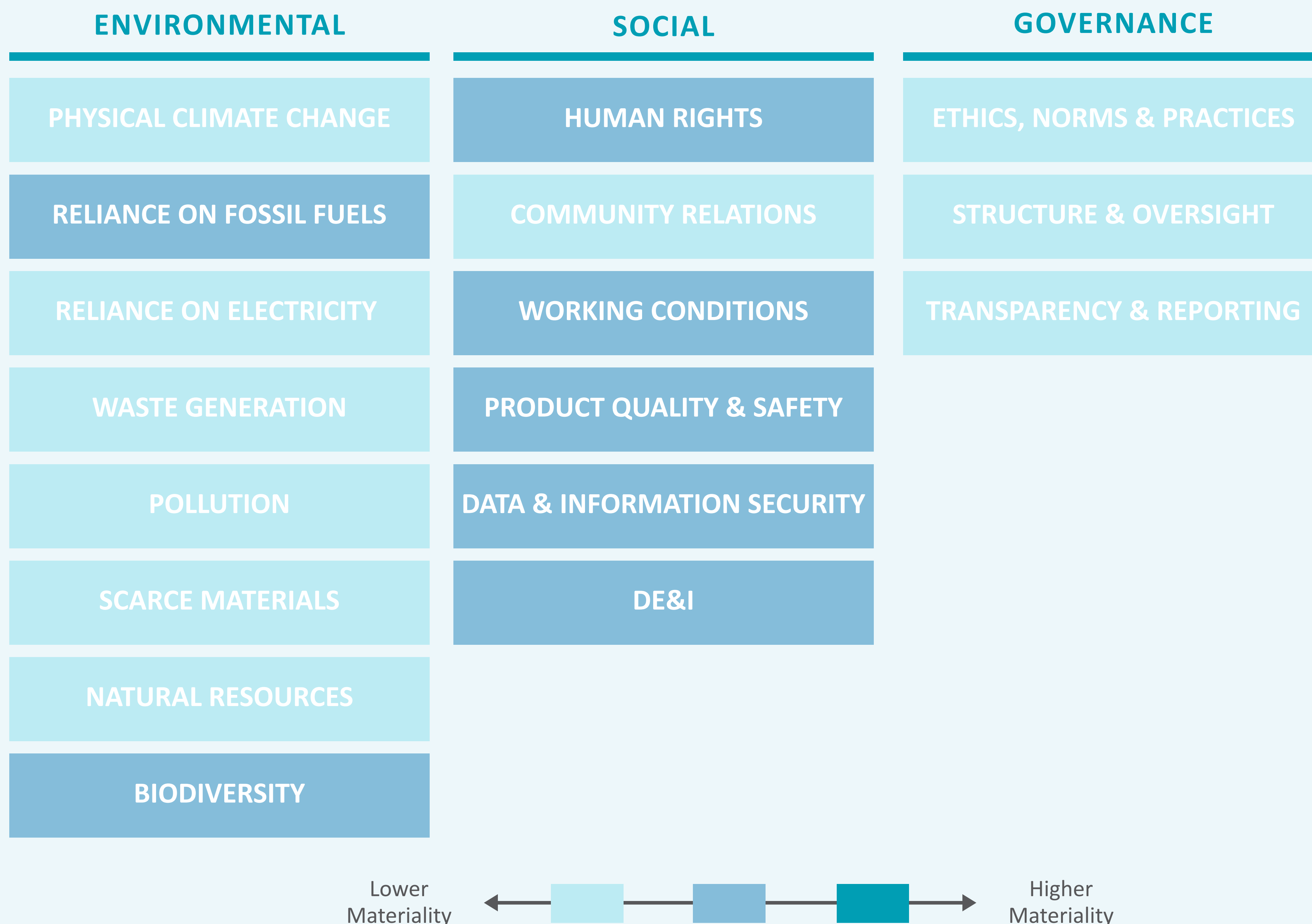


BIOSPHERE INTEGRITY

ESG MATERIALITY HEATMAP

DIVING DEEPER: RESPONSIBLE BUSINESS PRACTICES

ESG is how companies grow well, not just fast. It's key to prevent solving one problem at the cost of others, and it helps identify where practices should be strengthened to build resilience. We look at this from both directions: how external developments might affect a company, like a carbon tax on companies that still rely on steel, and how activities of the companies we support shape the world around them, such as whether the workers producing that steel are paid fairly and work safely. A significant risk with no associated mitigation plan calls for a direct conversation. When the same theme surfaces across multiple companies, it warrants a project: bringing in expertise, facilitating peer learning, and building shared resources.



TOP MITIGATION ACTIONS BY PORTFOLIO COMPANIES IN 2025

- Engaging with suppliers on transitioning to renewable energy sources, and with transport partners on the adoption of electric and alternative-fuel vehicles.
- Transitioning from fossil-derived biodegradable biopolymers to fully bio-based recipes.
- Building new features that enable clients to incorporate biodiversity considerations in real estate design.
- Establishing a Human Rights policy and a Supplier Code of Conduct for higher-risk suppliers.
- Switching to European suppliers who abide by stricter regulations and implementing a dual-sourcing strategy to reduce dependency risks on China.

PORTFOLIO-WIDE CHALLENGES FOR THE FUTURE

- **DE&I:** building more diverse leadership teams remains a priority across the portfolio. While progress is being made, there is meaningful ground still to cover, particularly in increasing gender diversity at management and supervisory board level.
- **Dual-use:** as (environmental) deep-tech innovation attracts growing interest from defence and security sectors, companies are increasingly navigating questions around dual-use applications.
- **Responsible supply chains in high-risk geographies:** several companies source from suppliers in 'unfree' countries like China, which presents both operational and ethical considerations. Strengthening guidance on how to engage responsibly with suppliers in high-risk geographies is an area the fund is actively working to address.
- **Responsible and sustainable software:** from AI ethics to digital sovereignty and the carbon and water footprint of datacenters, the responsible development and deployment of software is an emerging priority.

LOOKING FORWARD TO 2026

GROWING & DEPLOYING OUR NEW FUND: SHIFT IV

2026 marks an exciting chapter for SHIFT Invest. With three first investments already made in SHIFT IV - backing breakthrough technologies in food waste reduction, smart manufacturing, and chip energy efficiency - we are off to a strong start. This year, we look forward to reaching the final close of SHIFT IV, on track toward its €150 million target, and continuing to back the bold entrepreneurs building scalable solutions to the climate and nature crises. The best is yet to come.

SUSTAINABLE VALUE CREATION TOPIC: RESPONSIBLE AI

To drive meaningful progress on ESG, we're going deep rather than wide in 2026. That's why we've selected *one* theme to focus our collective energy on: Responsible AI. As AI becomes more embedded in how companies develop products, run operations, and interact with customers, it's difficult for governance and oversight practices to keep up. How do you ensure your AI isn't perpetuating harmful biases? Can you explain how our AI systems reach their conclusions, and who is accountable when they get it wrong? Who has access to the data your company puts into AI systems, and how might it be used?

This is still a genuinely new area for most companies to navigate - standards and regulation are still taking shape, and many teams are working without a clear playbook. That's why we believe our focus and support can add the most value here: working through these questions together now, so this solution can be used with confidence and integrity.



THE FINEPRINT

DEMISTIFYING IMPACT INVESTING: YOUR FAQs, ANSWERED

What does “impact” actually mean?

Our mission is to invest exclusively in companies solving environmental problems (climate change, biodiversity loss, and the depletion of natural resources). So when we talk about impact, we mean a real, measurable positive change in the environment: like tonnes of CO₂ avoided, less land degraded, or fewer toxic chemicals released.

How do we decide whether a company qualifies?

For each of our four investment themes, we actively map where we think our capital can make the biggest difference, and go looking for the best companies in those spaces. In total, we look at thousands of investment proposals each year, and only a small handful make it into the portfolio.

Before we invest, every company goes through a detailed impact assessment, alongside the commercial one. We're a venture capital fund, which means we're looking for companies where financial return and environmental impact go hand in hand, not one at the expense of the other. On the impact side, we look at what problem they're solving, how big that problem is, what their solution actually does about it, and how credibly we can measure the result. At this stage, it's also important to rule out if there are any significant environmental or social trade-offs.

Is there anything you refuse to invest in?

A broad range of activities: fossil fuels, weapons, mining, waste incineration, anything that violates human rights or labour standards, and more. We have an extensive exclusion list that companies are also held to during our shareholding period, via our Code of Conduct.

How do we put numbers on impact?

We choose specific metrics (impact KPIs) for each company, for example, kg of CO₂ avoided per product sold. We then calculate impact by comparing the company's solution to a realistic "what would have happened anyway" baseline, drawing on company data, customer data, and scientific research like the IPCC and IPBES. Where possible, we follow internationally recognised frameworks and life cycle analysis standards.

Are the numbers precise?

Measuring the impact of early-stage innovations is not an exact science. The innovations we invest in are often too new for there to be much independent research on their technology, early-stage companies don't always have access to data across their supply chain, and impact projections inevitably involve assumptions about the future. We're as rigorous as we can be, using established methodologies and validating figures wherever possible, but the numbers should be read as well-grounded estimates rather than precise measurements.

What happens after we invest?

We set impact targets for each company and check in every year. If things are going well, great. If a company is falling short or something unexpected comes up, we engage directly with the team to address it. Impact stays on the agenda throughout our entire time as a shareholder, alongside responsible business conduct (ESG) more broadly; this is key to build resilient companies.

Who oversees our impact work?

A few things working together. We have an independent Impact Committee of sustainability experts - separate from our investment team - that reviews every investment from an impact perspective and signs off on the KPIs and targets we set. They also review our annual impact results, acting as an external check on our progress and assumptions.

On top of that, we report in detail to our investors every year, showing impact results against the targets we set at the time of investment, on a company-by-company basis. That level of transparency keeps us accountable to the people who have entrusted us with their capital.

Do we have a financial incentive to actually deliver on impact?

Yes, deliberately so. Half of our performance fee is linked to whether our portfolio companies collectively hit their impact targets. If they don't, that portion gets donated to a non-profit aligned with our mission. We wanted our financial interests to be genuinely tied to environmental outcomes, not just returns.

What kind of fund are you according to EU Regulations for the finance sector?

The EU has rules that require investment funds to be transparent about how they approach sustainability, called the Sustainable Finance Disclosure Regulation (SFDR). Under these rules, funds are required to disclose their sustainability approach in a way that matches what they actually do. Because we are an impact fund with a specific environmental objective, we fall under the most stringent disclosure category - **Article 9**.

This means that, alongside our proprietary impact reports, we produce additional disclosures for our investors that show how we measure up against the EU's own definitions of sustainable investment and indicators they define to capture the (negative) footprint of our portfolio, the so-called Principal Adverse Impacts. This standardised reporting helps investors compare funds on a like-for-like basis.

THE FINEPRINT

FOOTNOTES AND REFERENCES

p.4 - why we only invest in impact

- Carbon budget: the time it will take to reach the amount of CO₂ that can still be released into the atmosphere until the 1.5° C warming limit is reached ([MCC, 2025](#));
- Global circularity rate: to what extent the world uses secondary materials instead of virgin ones ([Circle, 2025](#))
- Living Planet Index: the state of global biodiversity based on population trends of vertebrate species from terrestrial, freshwater and marine habitats. Reference year (LPI = 1) is 1970 ([WWF, 2020](#)). There is not yet a better (proxy) metric for global biodiversity that is updated YoY due to data availability, but many are under development following the Global Biodiversity Framework.

p.9 - overall impact results

- The % impact targets realised represents the average realisation of impact targets, weighted by % of total investment amount. This means that, while it is expected to grow overall, it can be volatile due to changing investment allocations.
- Avoided impact/savings refer to the impact of the portfolio company or its products, compared to the most likely (conventional) alternative product. This baseline differs per company.
- The total results shown here represent the cumulative positive impact of the companies that we supported from 2020 until and including 2025 (SHIFT III only, excludes some impact of SHIFT II companies). The % change shown under each result is the % change compared to the cumulative results of 2020 - 2024.
- These results are not corrected for investor attribution. This is because, as an early-stage investor, our role is catalytic, so we want to understand the full environmental potential of the solutions we're supporting. Adjusting for our ownership stake would imply we only "caused" a fraction of that impact, when in reality this capital is often essential for the company to exist or scale at all.
- References for equivalents:
 - cars taken off the road: carbon footprint of the lifetime of a car ([ICCT, 2025](#))
 - avoided costs CO₂e emissions: based on abatement cost to meet 2 dec. C target ([True Price, 2021](#))
 - hours in the shower: average shower duration in NL ([CBS, 2021](#))
 - avoided costs of water savings: based on latest valuation of NL drinking water ([Waternet, 2025](#))
 - energy use in households: based on avg energy use of households in NL ([CBS, 2024](#))
 - waste in households: based on avg amount of household waste per household in NL ([CBS, 2024](#))
 - avoided costs of waste savings: based on avg waste processing costs per household in NL ([Rijkswaterstaat, 2023](#))

p.9 - energy transition

- GHG emissions attributable to energy ([Our World In Data, 2020](#))
- Mining impact biodiversity ([MSCI, 2021](#))
- Recycling of rare earths ([Earth.org, 2026](#))

p. 11 - green industries

- GHG emissions embedded in materials ([McKinsey, 2025](#))
- Biodiversity loss built environment ([WALCC, 2024](#))
- Share of secondary materials built environment ([CGR, 2025](#))

p.13 - smart food & agriculture

- GHG emissions from F&A ([Crippa et al., 2021](#))
- Diversity of worldwide crops ([FAO, 2019](#))
- Freshwater withdrawals for agriculture ([UNESCO, 2024](#))

p.15 - sustainable mobility

- GHG emissions from transport ([Pal et al., 2023](#))
- Mobility infrastructure & terrestrial ecosystems ([IENE, 2023](#))
- Lithium in EV batteries ([Lancet, 2024](#))

pg. 17 - planetary boundaries

- latest diagram by Rockstrom et al. ([Stockholm Resilience Centre, 2025](#))