TURNING INVESTMENTS INTO IMPACT

IMPACT REPORT 2024



SHIFT

Version 1.2 (May 2025)

Photo from Petr Ganaj (Pexels.com)

PREFACE

Chaos is not the end—it is the beginning of something new, as transition thinker Jan Rotmans puts it. It is with this lens that we choose to look at the turbulent times we live in. It's a time where crises no longer arrive one at a time—they cascade, interlock, and amplify one another. From climate disruption and geopolitical instability to economic inequality and social unrest, we are navigating what has been aptly described as a "polycrisis."



Rotmans speaks of choosing hope not as a passive feeling, but as a deliberate choice in the face of uncertainty. He urges us to see transitions as profound opportunities—to engage in what he calls deep change: the systemic, structural, and cultural shifts needed to shape a just and sustainable future. In this light, turbulence is not something to avoid, but something to work through—with courage, clarity, and care.

As impact investors, we find hope in the tangible actions of the entrepreneurs we support. These individuals are not just adapting to change—they are driving it. They build regenerative business models, challenge entrenched systems, and reimagine what is possible. They remind us that transition is not only necessary—it is already underway.

We feel a deep sense of pride in walking alongside these bold changemakers. Their work inspires us daily. It grounds our belief that capital, when deployed with purpose, can catalyze long-term impact that goes beyond short-term returns.

This report is both a reflection and a celebration: of what has been achieved, of the values that guide us, and of the road ahead. It is a testament to the idea that even amidst uncertainty, we can choose to be hopeful—and that hope, when coupled with action, becomes a powerful force for transformation.

On behalf of the team at SHIFT Invest,

Guus Verhees & Janneke Bik

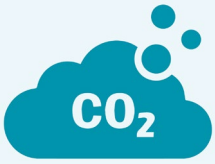
HIGHLIGHTS 2024 - SHIFT III

50% overall fund impact targets achieved[1]

+ 5 new investments

33 companies in SHIFT III portfolio

CO_2e emissions avoided



135 kt

▲ 140%

equivalent to 48 million liters of petrol[2]

22M EUR avoided costs to environment and society[3]

Water saved



1,080,000 m³

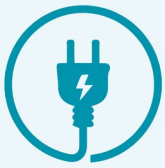
▲ 9%

equivalent to 2.3 million hours in the shower[4]

1.2M EUR avoided costs to environment and society[5]

Renewable energy produced

Energy saved



6 GWh ▲ 75%

123 GWh ▲ 76%

equivalent to the annual energy use of 52 thousand households[6]

Waste avoided



1.5 kt

▲ 286%

equivalent to the annual waste of 1,545 households[7]

450k EUR avoided costs to environment & society[8]

Chemicals avoided



22%

compared to conventional textiles*

Results shown here represent the cumulative positive impact of the companies that we supported from 2020 until and including 2024 (SHIFT III only, excludes some impact of SHIFT II companies). This is not corrected for investor attribution. 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 % change shown under each result is the % change compared to the cumulative results of 2020 - 2023. Note: this is a different presentation than previous year's report, where we only showed the impact achieved in 2023, of both SHIFT II and III companies.

*Not possible to make YoY comparison due to change in methodology.

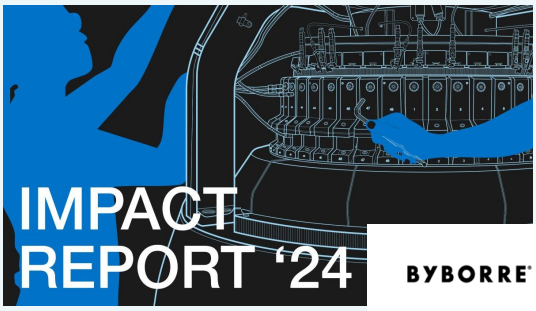
1. Average realisation of impact targets, weighted by % of total investment amount. Note: while the realisation of impact targets is expected to grow in the coming years, this can be volatile as it is affected by new investments including new impact targets, volatile performance and changing allocation.; 2. E10 blend, WTW (CE Delft, 2023); 3. Based on abatement cost to meet 2°C target (True Price, 2021); 4. Average Dutch shower (CBS, 2021); 5. Based on restoration cost via desalination (True Price, 2021); 6. Avg energy use of household in NL (CBS, 2021); 7. Avg amount of household waste per household in NL (CLO, 2022); 8. Based on average waste processing costs per household in NL (Rijkswaterstaat, 2022).

SHIFT

HIGHLIGHTS 2024

from our portfolio companies

BYBORRE published their first ever impact report, raising the bar on transparency in the textile value chain.



Whiffle completed a mega-project to model the energy output of the entire North Sea in 2050.



OneThird expanded their footprint to 10 countries, where their products are being used to fight food waste.



Canopus developed a new range of precision geothermal drilling tools, that enable the creation of boreholes with a diameter of just 6 inches / 15 cm.



ChainCraft found the location for their first full scale plant and completed a new LCA that demonstrated substantial emission reduction potential.



Vertoro joined forces with Raizen to scale up and roll out their lignin valorisation solution in Brazil.



WHY WE ONLY INVEST IN IMPACT

The physical Earth has been disrupted by human activities, and now the Earth 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. We invest multi-stage, ranging from proof-of-concept to growth, typically from €250K up to € 7.5M per company as (co)-lead investor.

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.

4.5 yrs

until our global carbon budget has been depleted[9]

▼ 21% worse 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 regenerate[11]. 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.

7.2 %

global circularity rate[10]

▼ 16% 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[12]

▼ 73% lower than 1970

We invest in solutions in the highest burden sectors:

ENERGY TRANSITION

SMART FOOD & AGRICULTURE

GREEN INDUSTRIES

SUSTAINABLE MOBILITY

9. The time it will take to reach the amount of CO_2 that can still be released into the atmosphere until the 1.5° C warming limit is reached (MCC, 2024); 10. To what extent the world uses secondary materials instead of virgin ones (Circle, 2023); 11. UNEP (2024), 2020 baseline; 12. 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.

HOW WE WORK

Mission & Vision
SHIFT Invest has a fund-level impact mission supported by impact strategies for each investment domain based on research by trusted institutions like the IPCC, IPBES, and UNEP to direct investment sourcing.

Policy & Practices
We are dedicated to the continuous improvement of our impact measurement and management strategy and SHIFT III is categorised as an **Article 9 Fund** under the SFDR. The fund has an impact policy and investee Code of Conduct that captures all processes surrounding sustainability objectives and ESG.



Sourcing
We perform regular industry scans and deep dives on topics we're excited about, and we believe have significant impact potential. In **2024**, we engaged with almost 1,000 start- and scale-ups and did 7 deep dives on topics like alternatives for short-haul aviation, soil health, and grid congestion.

Impact Potential
For companies that fit our investment criteria, we set up an impact case to assess their relevance to our sustainable investment objectives and environmental impact potential.

Responsible Exits
To ensure our investment and incentives schemes are aligned with our impact mission, part of our team's success fee is dependent on the funds environmental impact performance.

Impact Management
We actively support our portfolio companies in making sure impact remains a top priority. We help measure and communicate impact, formally integrate it in policy and decision making, and select follow-on investors that share the same commitment.

Monitoring and Reporting
We perform an annual in-depth impact and ESG monitoring process together with our portfolio companies and share impact results in our (non-public) Impact Report. The results are discussed with our Impact & Investment Committees to check-in on progress and flag potential opportunities for impact maximalisation.

Impact Case
To build a solid impact case and understanding, we assess a company's theory of change, identify measurable KPIs and targets, additionality and any potential impact or ESG risks and trade-offs.

Impact Committee
Before committing to an investment, we discuss the impact case with our Impact Committee. The Committee helps ensure our investments make a material contribution to the impact objectives of our fund.

WHO WE ARE

SHIFT'S TEAM

Our team consists of **#18** professionals that are united in their drive for impact. Led by our Impact & ESG officer, Heleen de Jonge and partner Florentine Fockema Andreae, we transform our impact goals into tangible daily actions. **42%** of our team & investment committee identify as women.



SHIFT'S IMPACT COMMITTEE

Our impact committee is our sparring partner, providing input and information for our investment decisions from an impact perspective. They also help develop our impact strategy, our way of working and how to cultivate the impact investing space in general. The diverse backgrounds of our members enable the Committee to share in-depth knowledge for our impact assessments. This leads to sharpening theory of change of investees, discussing trade offs, and identifying opportunities to deepen and/or accelerate impact.

> "For over 10 years, the Impact Committee has played a crucial role in ensuring that impact assessment is effectively applied in a venture capital context. We provide strategic guidance to SHIFT's portfolio companies from initial investment to scale-up phase by considering the broader value chain—suppliers, customers, markets, and technology partners—to enhance scalable and sustainable impact, aligning it with long-term business viability. This helps ensure that pioneering ventures grow in a way that maximizes their positive contribution to the planet. – Alain Cracau"



Alain Cracau (chair)
Founder at Goodberries



Remona van der Zon
Sustainable strategy at KLM



Esther Wolfs
Biodiversity consulting



Marc Jansen
Managing director BOM Investments



Björn Aarts
ESG & Sustainability Rabo Investments



Mieke Weegels
Innovation adoption & behaviour change WUR



Sandra Mulder
Business engagement WWF NL

NEW INVESTMENTS 2024

Teeptrak offers performance monitoring solutions and analytics for machines, to help optimize manufacturing operations. By improving the production efficiency of resource and energy intensive goods, Teeptrak helps reduce the climate and resource footprint of the manufacturing sector.

RideTandem offers demand-responsive transit services with shuttles and buses for regions poorly served by public transport. By replacing private vehicle use and underutilized traditional bus services RideTandem helps to reduce the CO2 emissions in the transport sector.

Friday Energy offers smart storage solutions and advanced energy control software to businesses facing grid constraints. As such, Friday Energy aims to accelerate the energy transition by allowing businesses to optimize their energy usage for the availability of renewable energy sources such as solar and wind, whilst easing the load on the grid.

Thermeleon provides thermal energy storage systems enabling greenhouses to reduce their energy usage. Thermeleon aims to lower energy consumption and thereby reduce CO2 emissions in the greenhouse sector with their storage solution.

Roboat is developing advanced autonomous navigation systems for ships on inland waterways. This solution stimulates sustainable waterborne transport by addressing key issues in the sector and enables more fuel-efficient sailing.

INVESTMENT THEMES

ENERGY TRANSITION

CI CONNECTIONS · whiffle · FridayEnergy · jungle · SOLH · volytica diagnostics · MAXEM · ZERO FRICTION · Canopus · Magneto

SMART FOOD & AGRICULTURE

Onethird · THERMELEON · FUL foods · CHAINCRAFT · NutriLeads Ingredients for health · SAIA AGROBOTICS · scope biosciences · foamplant · TIME- TRAVELLING MILKMAN SUSTAINABLE CREAMINESS

GREEN INDUSTRIES

FononTech · PELGEN · torwash · CEVAP TECHNOLOGY · omrt · Basilisk self healing concrete · nature's principles · ertoro · astrape networks · KRIYA MATERIALS · foamplant · teeptrak · BYBORRE · SusPhos · E-MAGY · CHAINCRAFT

SUSTAINABLE MOBILITY

volytica diagnostics · ROBOAT · MAXEM · E-MAGY · RideTandem · heex · ertoro · OTIV

This overview includes both SHIFT II and SHIFT III. Due to the synergies in mitigation across sectors, there are many companies that provide solutions to more than one investment theme and are thereby shown multiple times in this overview. However, their impact results are not double-counted.

ENERGY TRANSITION

Energy is the driver of our economies, and current trends indicate that we will require 11-21% more energy by 2050 to sustain socio-economic development[14]. Today's energy system is not capable of meeting this challenge without disastrous consequences for the planet and our future on it, but reaching a net-zero system is challenging. At SHIFT Invest, we support innovative companies that push the needle on a net zero energy system throughout the energy transition value chain: generation, distribution and consumption.

CHALLENGES ADDRESSED



Fossil fuels have historically been at the heart of economic development but are also the main driver of GHG emissions. We need a resilient, efficient net-zero energy system revolving mainly around wind and solar energy.



Oil, coal, and gas are the main resources for the world's energy supply but are all functionally finite resources. Additionally, we need to mitigate trade-offs of the net zero energy system like critical metal, land and water use.



The energy industry's actions affect nearly 20% of near-threatened species[14]. Decisions on the design of energy infrastructure will affect ecosystems for a long time. We believe it is necessary to work towards a nature-positive energy transition.

SOLUTIONS PROVIDED

Renewable energy use & generation

whiffle, eriora, Canopus, SOLH, MAXEM, FridayEnergy, CI CONNECTIONS

Energy & material efficiency

EMAGY, KRIYA MATERIALS, volytica diagnostics, Magneto, ZERO FRICTION

KEY IMPACTS GENERATED BY PORTFOLIO COMPANIES

75 kt
CO_2e emissions avoided

123 GWh
Energy saved

52 GWh
Renewable energy produced

OBSERVED RISKS

Securing sustainable feedstocks: feedstocks like biomass still have an environmental impact.

Participation risk: efficiency technologies can also be used by polluting industries to maintain their (cost) advantage over green ones.

Spatial footprint: renewable energies like wind and solar have a relatively large spatial footprint, and thereby risk disrupting local ecosystems.

14. McKinsey (2024); 14. WEF (2020)

FRIDAY ENERGY

Friday Energy offers smart storage solutions and advanced energy control software to businesses facing grid constraints.

Grid congestion and fluctuating energy prices are a crucial bottleneck to overcome for the energy transition. Storing and using locally produced green energy reduces the need for the activation of fossil energy sources and reduces congestion. Friday Energy helps to advance the transition by providing local energy storage and energy trading solutions to businesses.



FROM CHALLENGE TO SOLUTION

CHALLENGE

The transition to renewables is hindered by the disparity between demand and supply, and grid congestion is limiting businesses' ability to decarbonize operations.

SOLUTION

Friday's batteries and software optimize energy management at commercial and industrial sites, balancing supply and demand of (renewable) energy as well as ancillary services to further stabilize the grid.

IMPACT

BATTERIES AND ENERGY MANAGEMENT SYSTEMS

Friday's software uses two strategies to optimise energy use, both accelerating offtake from renewables, avoiding the emissions associated with fossil-based electricity.

1. **Local optimization**
   Uses the battery to load locally produced renewable energy to unload at later point in time.
2. **Market-based optimization**
   Uses the battery to load renewables are abundant and prices are low, and unload when prices are high.

Avoided emissions will depend on the grid's emissions intensity at the time of loading and unloading, which varies during the day and over time.

Friday's solution also helps unburden the grid and thereby accelerates electrification and the uptake of renewables.

0.08 - 0.13
kg CO_2e / kWh

GHG emissions avoided through Friday's optimization strategies
(based on energy mix in NL, 2024)

SMART FOOD & AGRICULTURE

Agriculture is a primary cause of crossing planetary boundaries for nitrogen, phosphorous, biosphere integrity, land-system change, and freshwater use[15]. There is increasing evidence that our land, soil, and water systems are already stretched to their productive limits whilst the demand for nutritious food is only increasing as the world's population continues to grow[16]. Changing the way we use our land, water and soil is going to be fundamental to ensure we maintain access to nutritious food without undermining the climate, biodiversity and other planetary systems.

CHALLENGES ADDRESSED

Our food system accounts for approx. 1/3rd of global GHG emissions, from various sources like the conversion forest carbon-sinks into carbon-emitting pastures, nitrous oxide from fertilizer application, and methane from rice and livestock[17].

Agriculture relies heavy on resources like 70% of freshwater[18]. On top of this, 1/3rd of our produced calories are wasted, underscoring the need for regenerative practices and value chain improvements to respect the biocapacity of our planet.

Deforestation, pesticides, fertilisers and other chemicals harm the long-term health of our ecosystems. Food-production related drivers like these are estimated to cause between 50-70% of freshwater and terrestrial biodiversity loss[19].

SOLUTIONS PROVIDED

Plant-based innovation

TIME- TRAVELLING MILKMAN SUSTAINABLE CREAMINESS

FUL foods

Precision agriculture

SAIA AGROROBOTICS

scope biosciences

THERMELEON

Waste prevention and valorisation

NutriLeads Ingredients for health

Onethird

foamplant

CHAINCRAFT

KEY IMPACTS GENERATED BY PORTFOLIO COMPANIES

CO_2 1.8 kt

CO_2e emissions avoided

332 t

Waste avoided

OBSERVED RISKS

Climate change: the effects of global warming will decrease the supply chain resilience of our food system, making it more difficult to source, store, and transport goods.

Lagged results: it can be time consuming to transform traditional agriculture systems as they depend partly on natural cycles and timelines, meaning that benefits may not be immediately apparent.

15. Campbell et al. (2017); 16. FAO (2021); 17. Xu et al. (2021); 18. UNESCO (2024); 19. WWF (2021)

THERMELEON

Thermeleon provides thermal energy storage systems to help decarbonize greenhouses.

Greenhouses are important for productive agriculture, but also consume a lot of energy. In the Netherlands, they account for almost 10% of natural gas use. Any solutions must carefully balance the needs of greenhouses– including energy, light, CO_2, and temperature. Thermeleon's efficient thermal battery offers a promising way to meet these needs while significantly reducing the environmental footprint.



FROM CHALLENGE TO SOLUTION

CHALLENGE

Greenhouse crop production requires large amounts of energy, and a significant amount of this energy is lost in the form of heat.

SOLUTION

Thermeleon's Heat Battery sustainably heats greenhouses at night, and cools during the day, recharging with 'free' surplus heat.

IMPACT

Heat Batteries for Greenhouses

Thermeleon's passive thermal energy storage system helps reduce heating and cooling demand and improve the management of the latter. Lower energy consumption results in decreased GHG emissions, the scale of which depends on the energy source used.

Creating more uniform temperatures in the greenhouse is also expected to improve crop health.

10-30 %

potential reduction in heating and cooling energy demand

GREEN INDUSTRIES

Impacts, notably emissions, have grown faster in industry than any other sector of the economy. The industrial sector is our largest energy user, is highly resource intensive and its pollution harms biodiversity. On top of this, industries produce novel materials that were previously not known to the earth system[20]. We support innovative companies that facilitate the transition to industries that are powered by renewable energy, more efficient, less polluting, and more biobased.

CHALLENGES ADDRESSED

The production of cement, steel and chemicals are some of the most carbon intensive-processes in industry, with the production of steel alone accounting for almost 8% of global GHG emissions.

Our global economy is depleting natural resources 1.7x faster than ecosystems can regenerate. Industrial sectors are still the most resource intensive domain of this economy and global demand for materials is expected to double by 2060[21].

Impacts on ecosystems are widespread: from the physical impact of resource extraction, to the production of ecotoxic chemicals and industrial pollution. For example, harmful marine plastic pollution has increased 10x since 1980[22].

SOLUTIONS PROVIDED

Biobased alternatives

CHAINCRAFT, PELAGEN, nature's principles, ecoloro, foamplant, torwash

Circular solutions

CEVAP TECHNOLOGY, Basilisk self healing concrete, BYBORRE, SusPhos

Energy & material efficiency

FononTech, astrape networks, omrt, EMAGY, teeptrak

KEY IMPACTS GENERATED BY PORTFOLIO COMPANIES

CO_2	Waste	Water	Energy
42 kt	331 t	90,387 m³	2.4 GWh
CO_2e emissions avoided	Waste avoided	Water saved	Energy saved

OBSERVED RISKS

Competition with other uses: biobased feedstocks can compete with other high-value applications for biomass, like food.

Execution: reforming manufacturing systems can be capital intensive as these assets have a long lifetime.

Rebound effect: resource efficiency saves costs, which can mean savings are allocated to additional production and consumption, reducing the initial environmental benefit.

20. Persson et al. (2022); 21. Compared to 2019 levels (IPCC, 2022); 22. UNEP (2023)

TEEPTRAK

Teeptrak offers performance monitoring solutions and analytics for machines, to help optimize manufacturing operations.

In highly industrialized countries, a substantial share of total energy consumption comes from the industrial sector (25% in the EU, and >30% in countries like the USA and China). Factories, therefore, represent a critical area where even modest efficiency gains can lead to significant reductions in overall energy use. Teeptrak's hard- and software solution helps to improve efficiency and thereby advance decarbonization and resource efficiency in industry.



FROM CHALLENGE TO SOLUTION

CHALLENGE

Manufacturing puts great pressure on natural resources and has a high carbon footprint. Most equipment is low-tech, meaning there is little visibility nor intelligence to improve efficiency.

SOLUTION

Teeptrak's widely applicable plug-and-play solution monitors and improves manufacturing performance and efficiency, enabling users to reduce resource consumption and waste.

IMPACT

Resource efficiency and effectiveness

TeepTrak helps industries to improve TEEP, a measure of the efficiency of manufacturing equipment. In many industries, fixed costs—and consequently fixed resource usage—are common. Improving machine capacity can significantly reduce the resource consumption or waste per unit produced, where even small relative improvements can lead to substantial absolute gains.

50%

efficiency increase achieved within in 6-7 weeks[23]

23. Reported by TK customers during interviews. This is an average figure; there are customers that report even larger improvements.

SUSTAINABLE MOBILITY

Global marco-economic developments create huge challenges for the mobility and logistics sector. Today's system needs urgent change to cope with the constraints of limited infrastructure and environmental limits. New solutions are needed to enable a modal shift towards more sustainable modes of transport, make more efficient use of transport assets and infrastructure, develop cleaner modes of transport and create more livable communities.

CHALLENGES ADDRESSED

GHG emissions are the most significant driver of the climate impact of transport. The sector accounts for 15% of global emissions, which even excludes the manufacturing-related impact of transport modes and infrastructure[23].

Transport infrastructure has a high material footprint and long lifetime. Additionally, electrification necessary to reduce GHG emissions could be hindered by the scarcity of some critical non-renewable materials[24].

Transport infrastructure causes habitat destruction and fragmentation[25]. Vehicle emissions and noise, light and sound pollution also disrupt species and ecosystems. On top of this, vehicles, especially ships, serve as conduits for invasive species.

SOLUTIONS PROVIDED

Modal shift

OTTV
MAXEM
ROBOAT
RideTandem

Reducing carbon and energy intensity of fuels and transport modes

ertoro
volytica diagnostics
heex
EMAGY

KEY IMPACT GENERATED BY PORTFOLIO COMPANIES

CO_2 12 kt
CO_2e emissions avoided

52 GWh
Energy saved

786 t
Material demand avoided

OBSERVED RISKS

Interdependencies: the success of the modal shift and other mitigation strategies depends on factors like reliability, traffic management systems and developments in the energy and construction sectors.

Legacy of current systems: impacts from existing transport infrastructure and assets can be significant due to their long lifetimes if they are not prematurely decommissioned.

23. IPCC (2022); 24. IRENA (2023); 25. IPBES (2020)

RIDETANDEM

RideTandem's demand responsive transit services helps establish a more efficient commuting mode for employees in areas underserved by public transport

Almost half of transport emissions come from passenger vehicles on the road. In areas with limited public transport services, people are forced to rely on individual cars or otherwise, cannot access employment. RideTandem provides demand-responsive transport (DRT) software that helps companies with high commuting demand, like factories with shift-workers, organize and decarbonize their operations.



FROM CHALLENGE TO SOLUTION

CHALLENGE

In the EU, passenger cars are responsible for 16% of total GHG emissions, and 50% of employees use the car to commute.

SOLUTION

RideTandem's DRT platform for organisations with employee transport challenges coordinates and optimises shared commutes via local minibus and coach operators.

IMPACT

Demand responsive transit to reduce emissions from employee commutes

By enabling demand-responsive transport services for employers, RideTandem lowers the CO_2e emissions associated with employee commutes. RideTandem's DRT service allows for commuting in large coaches with more people, instead of in their single-person car, an almost empty private vehicle, or low-occupation private bus service. This lowers the footprint of each passenger kilometer.

> 2,000 kt CO_2e

GHG emissions avoided in 2024 through modal shifts enabled by RideTandem

THEMATIC TECHNOLOGY TRANSFER FUND

At SHIFT Invest - alongside Seed to Series B financing - we provide pre-seed capital to promising start-ups through our dedicated proof-of-concept fund: The Thematic Technology Transfer Fund. We run this fund together with the technical universities of the Netherlands and the Dutch research organization TNO. The goal of this RVO-backed fund is to accelerate the transfer of new technologies arising from knowledge institutes to the market. In this way, we enable entrepreneurs to take disruptive ideas from Dutch knowledge institutes to the market and support them in building ventures with broad adoption and impact.

astrape

Improves the energy efficiency of data centers with photonics technology, allowing data to be transmitted between servers using a fully optical network.

FononTech

Enables small-scale electronic component manufacturing with impulse printing technology, minimizing pollution, reducing the required size of equipment, and improving efficiency.

FUL foods

Sets a new standard for sustainability and nutrition with carbon-negative microalgae-based food ingredients.

Magneto

Develops a more energy efficient and environmentally friendly alternative for cooling that does not require polluting refrigerants.

Enables the expansion of onshore wind through blade add-ons that reduce noise.

nature's principles

Develops an innovative biobased lactic acid production process based on mixed culture fermentation, using waste biomass.

PELGEN

Employs tissue engineering techniques to build sheep skin in-vitro, to create lab-grown leather.

SAIA AGROBOTICS

Revolutionises indoor agriculture with robotics and AI to help the transition to autonomous indoor farming.

THEMATIC TECHNOLOGY TRANSFER FUND - CONTINUED

scope biosciences

Detects pathogens with molecular diagnostics, avoiding crop loss and minimizing pesticide use.

SOLHO

Enables industries to decarbonise heating and cooling with off-grid solar energy systems.

SusPhos

Specialises in the recycling of phosphates from various waste streams, with a low carbon footprint.



TIME- TRAVELLING MILKMAN
SUSTAINABLE CREAMINESS

Develops sustainable fat ingredients that improve the texture, taste, and footprint of dairy alternatives.

torwash

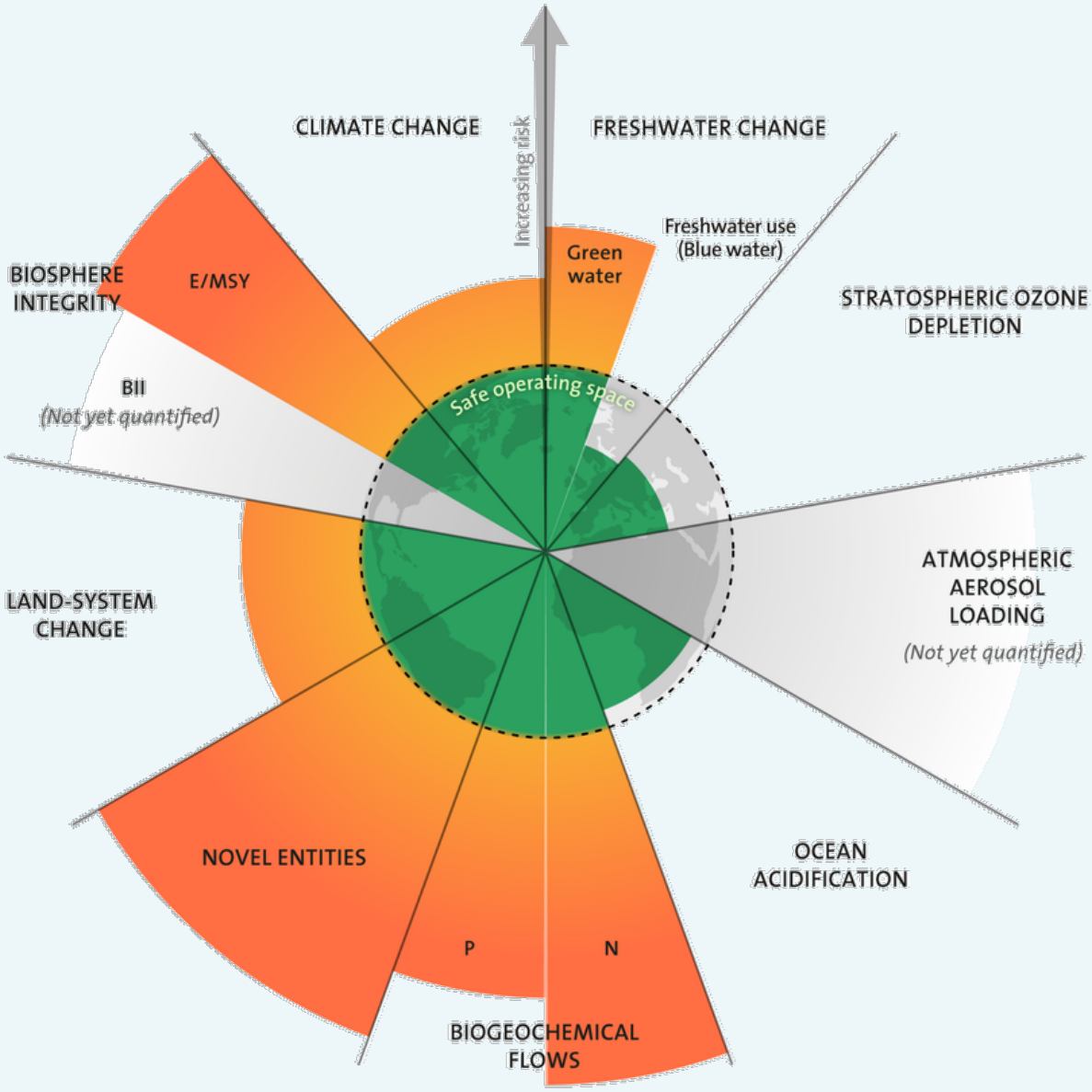
Converts organic waste like sewage sludge into durable biofuel pellets with a unique dewatering and grinding technology.

ROBOAT

Develops autonomous navigation systems for ships on inland waterways, which allows for more fuel-efficient sailing.

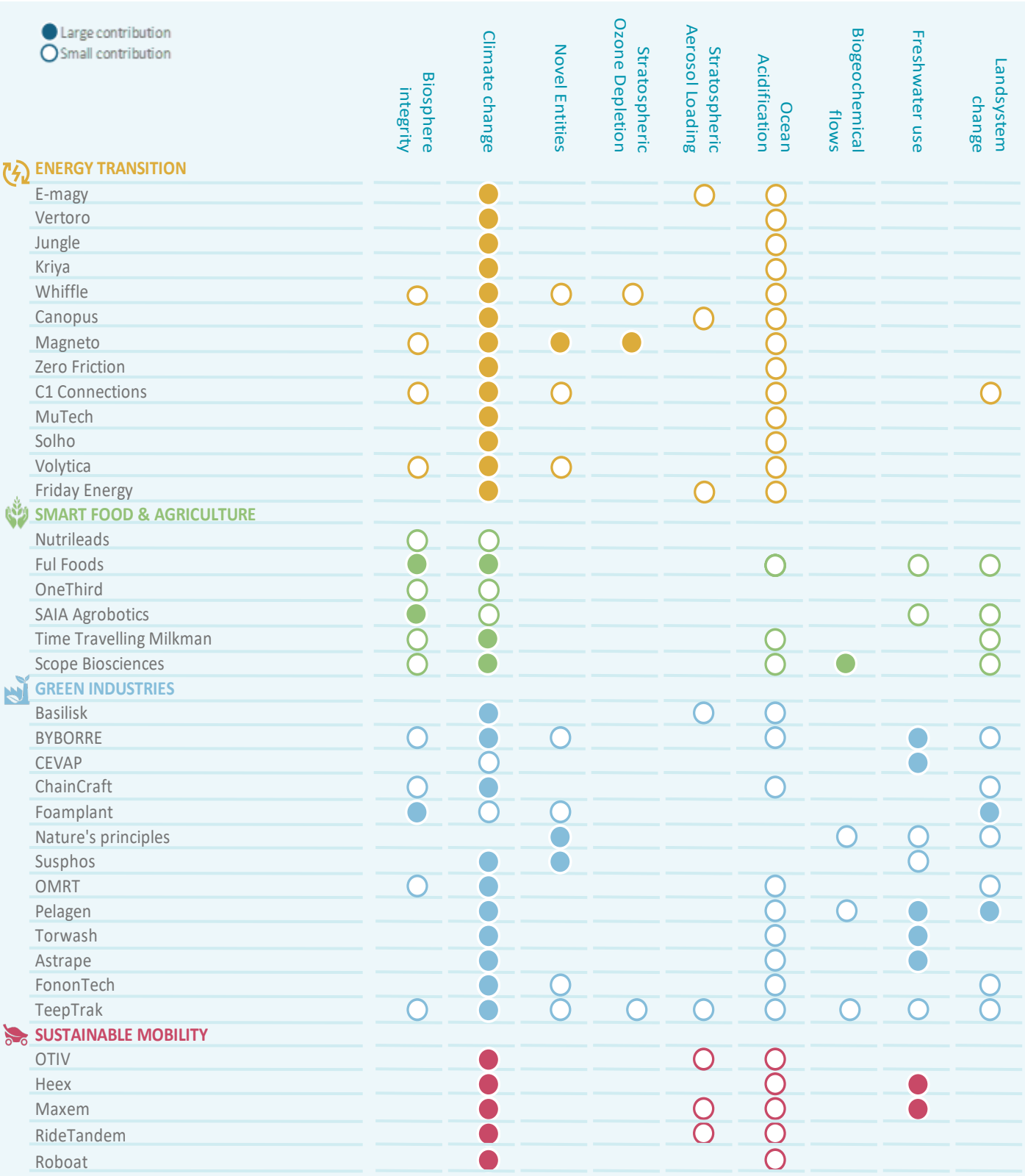
PLANETARY BOUNDARIES

Sustainability is not limited to climate change, as illustrated by Johan Rockström's Planetary Boundaries Framework. This is based on the concept that humanity needs to operate within nine essential ecological boundaries. Crossing these boundaries will trigger abrupt environmental changes with potentially catastrophic consequences. Recent studies suggest we have already crossed the threshold in multiple key areas. It is imperative that we move towards an economy that stays within these boundaries for a balanced existence with nature for future generations.



Credit: Designed by Azote for Stockholm Resilience Centre, based on analysis in Persson et al., 2022 and Steffen et al., 2015.

We believe the planetary boundaries are a powerful tool to use in the field of environmental sustainability and strive to integrate it further into our investment process by translating these boundaries into factors we can incorporate in our investment strategy. Our impact strategies per sector have been developed through the lens of this framework. The table below provides an indication of how our current portfolio contributes to the Planetary Boundaries.



RESPONSIBLE BUSINESS PRACTICES

Over the past 12 years we have specialized in measuring and managing the positive footprint companies have. Or: their impact and "why the world is better off them in it". Alongside this, we have increased our efforts to ensure that this positive impact is achieved in a responsible manner regarding other Environmental, Social and Governance topics. Although this is challenging for early-stage companies that are still in development, it also provides an opportunity to build stronger foundations for healthy, resilient, and responsible businesses of the future. We see that ESG integration leads to financial outperformance, is increasingly part of the 'license to operate' in the EU, can save costs and add value, and is something that society, especially employees and consumers, care about. This is what we support our portfolio companies with throughout our involvement.

ESG ACTION PLAN

We have developed an ESG action plan that details the phases that are needed to work towards full systematic implementation and integration of ESG in our fund, at portfolio companies internally, and in their value chain. Note that this process is not always linear and the field of ESG is very much in development, so this plan is evolving over time.

PHASE 1 – METHODOLOGY

Setup
Define ESG topics, craft strategy, fortify policies, determine data gathering methodology, and pilot with portfolio companies.

PHASE 2 – BASELINE

Data availability
Conduct ESG-assessment cycle to determine baseline for data availability. Then improve the quality and availability of data, raise awareness and traction surrounding ESG. Work towards improved transparency and reporting.

PHASE 3 – IMPROVEMENT

Integrate and improve
Work towards improving ESG performance in portfolio. Define responsibilities and integrate in culture, develop roadmaps / toolkits / best practices, and test the effectiveness of initiatives.

PHASE 4 – INTEGRATED VALUE

Transformation
Create integrated value, in our portfolio, fund and beyond. ESG is standard practice throughout company activities and within value chain.

ESG MATERIALITY HEATMAP

PORTFOLIO COMPANIES' MATERIAL RISKS ON ESG METRICS

ENVIRONMENTAL	SOCIAL	GOVERNANCE
CLIMATE	HUMAN RIGHTS	ETHICS, NORMS, PRACTICES
FOSSIL	LOCAL COMMUNITY	STRUCTURE & OVERSIGHT
ELECTRICITY	WORKING CONDITIONS	TRANSPARANCY & REPORTING
WASTE	PRODUCT SAFETY & QUALITY	
POLUTION	DATA SECURITY	
SCARCE MATERIALS	DE&I	
NATURAL RESOURCES		
BIODIVERSITY		



Instead of waiting for perfect data, we ask companies to rate how relevant each ESG risk is to their business. If many companies in the portfolio rate a risk as highly relevant, we treat it as a key issue at the portfolio level. We assess risks from two perspectives: how external ESG factors might affect the company's performance (financial materiality), and how the company's activities might impact people and the environment (impact materiality).

PORTFOLIO OUTCOME

The topics with the overall highest level of direct materiality across the portfolio are:

1. Diversity, equity, and inclusion
2. Product quality and safety
3. Electricity use
4. Working conditions
5. Natural resource use

VALUE CHAIN RELATED RISKS

In each ESG assessment we also explored value-chain related risks, as this is where the majority of the impact lies for early-stage companies. We believe these risks are still important to be aware and transparent about, but acknowledge companies have less power and ability to mitigate them than the more direct impacts.

MITIGATION

For some companies, mitigation will be highly sector specific and is therefore addressed on a case-by-case basis.

Other topics like DEI are a shared challenge. In 2024 we therefore organized a C-level event for all our portfolio companies where we invited a DEI expert to advise portfolio companies on this[27].

27. Session took place early 2025.

LOOKING FORWARD TO 2025

MORE IMPACT: LAUNCHING SHIFT IV

Our 4th successor impact fund will be launched mid 2025. With this new fund, targeted around EUR 150M, we will continue to grow our portfolio and support even more impactful ventures.

INNOVATIVE METRICS FOR BETTER INVESTMENT DECISIONS

We are exploring new methodologies to quantify impact potential, such as Prime Coalition's Emissions Reduction Potential framework. Better metrics will help us make better investment decisions.

DOUBLING DOWN ON IMPACT VALUE CREATION

Following the 2024 reporting cycle, we continue to work on helping companies accelerate their positive impact, while also helping to grow their maturity on ESG and its mitigation.



Colofon

SHIFT

Laan van Kronenburg 14

1183 AS Amstelveen

The Netherlands

T 020 3032071

E info@shiftinvest.com

SHIFT Invest is managed by New Balance Impact Investors (NBI). NBI manages early stage venture capital funds with a purpose. We work with a diverse and experienced team committed to accelerate innovation by supporting the creation of great companies.

