

A high-resolution satellite image of the Earth from space, showing the African continent and surrounding oceans. The image is centered in the background of the page.

IMPACT REPORT 2022

INTRODUCTION

At Planet A, our objective is to empower founders who are building an economy within our planetary boundaries. We built Planet A to become the leading science-driven venture fund that supports European startups tackling the world's biggest environmental problems. In 2022, we raised our first fund, closing in Q1/23 with 60% oversubscription at €160MM. We started to deploy this capital by investing in 18 startups as of April 2023 and plan to round out our initial investments in a total of 30+ pioneering greentech companies.

Expert insights have highlighted climate technology as a recession-resilient industry where new startups, new funds, and new investment rounds are driving forward despite market volatility. The influx of talent towards climate and nature tech has been promising and will likely accelerate rapidly in the wake of recent tech layoffs.

In the last decade, Europe has led the way in green technology innovation. Now it is time to industrialize and scale these developments. In 2023, political attention to greentech will continue to rise on both sides of the Atlantic. The EU Green Deal Industrial Plan and the US Inflation Reduction Act are both strong indicators of increased support by major governments. Translating the ambitious global political targets of the UNFCCC Paris Agreement as well as the UN Convention on Biological Diversity COP 15 into policy and corporate action will be key.

Sources: [CTVC](#), [HolonIQ](#), [McKinsey](#)

We are happy to announce our first Impact Report. In order to channel capital into solutions that pull the biggest levers to reverse the worsening ecosystem and climate crisis, we must collectively get better at understanding and quantifying our impact on the environment.

This report shares the fund's and our portfolio companies' impacts and contributions to solving the most pressing sustainability challenges. Here, we aim to highlight innovative solutions, shed light on the black box of impact assessments, and share our scientific approach to inspire others as they join us on our mission.

This is only the beginning. Let's build the economy our planet needs.

Sincerely,
Your Planet A Team



OUTLINE

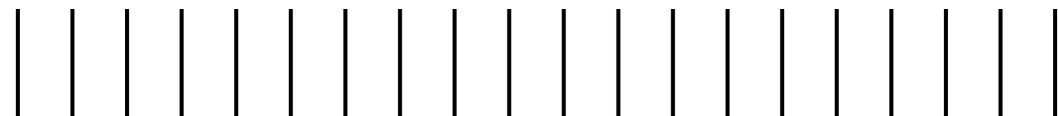
1 ABOUT PLANET A

2 RESHAPING THE ECONOMY

3 IMPACT BASED ON SCIENCE

4 OUR PORTFOLIO COMPANIES

5 POLICY IN PRACTICE



1. This Is Us:

ABOUT PLANET **A**

PORTFOLIO COMPANIES



Fund size:

€160M

Geographies:

EUROPE & ISRAEL

Ticket size:

€500K TO €4M

Target phases:

PRE-SEED, SEED, SERIES A

Portfolio as of Apr 2023



goodcarbon



UPRIGHT PROJECT

THE LANDBANKING GROUP

traceless

dovetail

Carbon^{Re}

HIVED

paleo



GA Drilling

WILDPLASTIC
RECOVERED FROM NATURE



44.01



Makersite



Dance

one•five



OPTIML



sunhero

Partners

LEADERS FOR CLIMATE ACTION



Sustainable Finance

EXIST
Existenzgründungen aus der Wissenschaft

IMPACT VC



Finance for Biodiversity Pledge

Cleantech for Europe

Signatory of:



Principles for Responsible Investment

TECH FOR NET ZERO ALLIANZ



IMPACT HIGHLIGHTS 2022

ENVIRONMENT



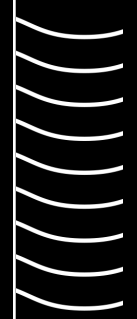
GHG saved

3319 T



Waste reduced

198 T

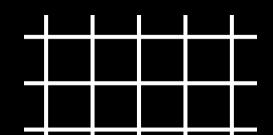


Energy saved

11,140,318 MJ

UN SDGs supported

8



IMPACT HIGHLIGHTS 2022

INVESTMENT



New investments

8



Follow-on investments

2

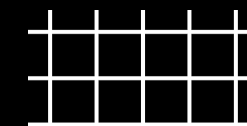
Carried interest aligned with impact targets

50%



Of our investments are EU taxonomy aligned

100%



IMPACT HIGHLIGHTS 2022

SOCIAL



Female coworkers at Planet A

43%



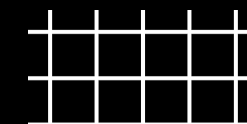
Female founders

23%



New jobs created at portfolio companies

209



WORKING TOGETHER FOR AN ECONOMY WITHIN OUR PLANETARY BOUNDARIES



Fridtjof Detzner
Founder & Partner



Tobias Seikel
Founder & Partner



Nick de la Forge
Founder & Partner



Jan Christoph Gras
Founder & Partner



Lena Thiede
Founder & Partner



Christian Schad
Founder & Partner



Laura Alberty
Communications
Manager



Kim Dang
Talent Advisor



Dr. Benedikt Buchspieß
Senior Scientist



Kritesh Shridhar
Scientist



Ulrike Schütze
Personal Assistant



Siyana Marinova
Finance Assistant



Florian Schabus
Investor



Jessica Burley
Investor



Dr. Christian Gonzales
Investor



Michael Münnix
Venture Partner



David Wortmann
Policy Advisor

2. The Challenge:

**RESHAPING
OUR ECONOMY**

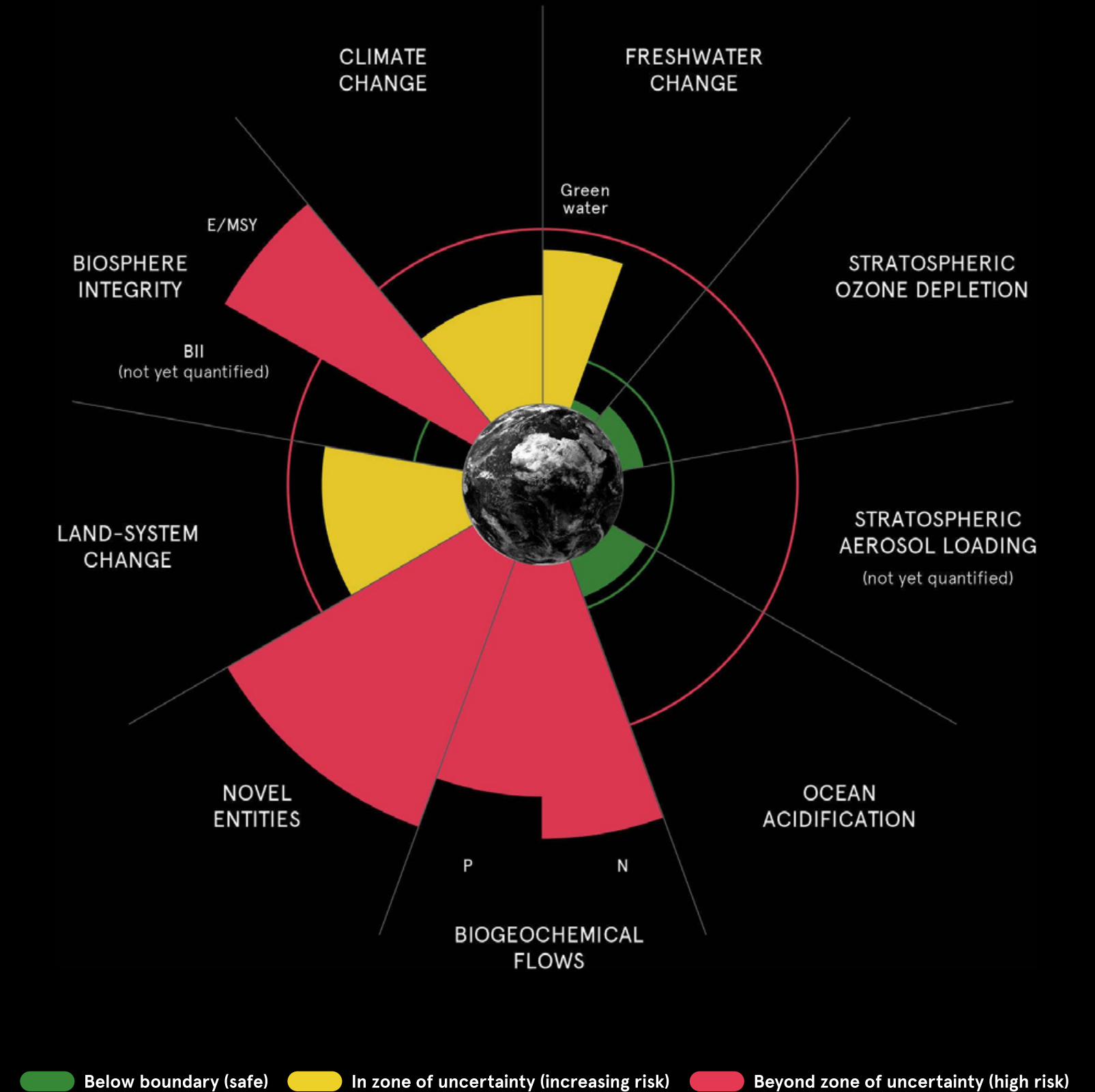


WE HAVE SURPASSED EARTH'S LIMITS TO SUSTAIN LIFE

The Planetary Boundaries is a science-backed concept outlining the safe operating space within which human life on this planet can thrive for future generations. The latest research indicates: **Humanity has already transgressed six of the nine quantitative planetary boundaries.**

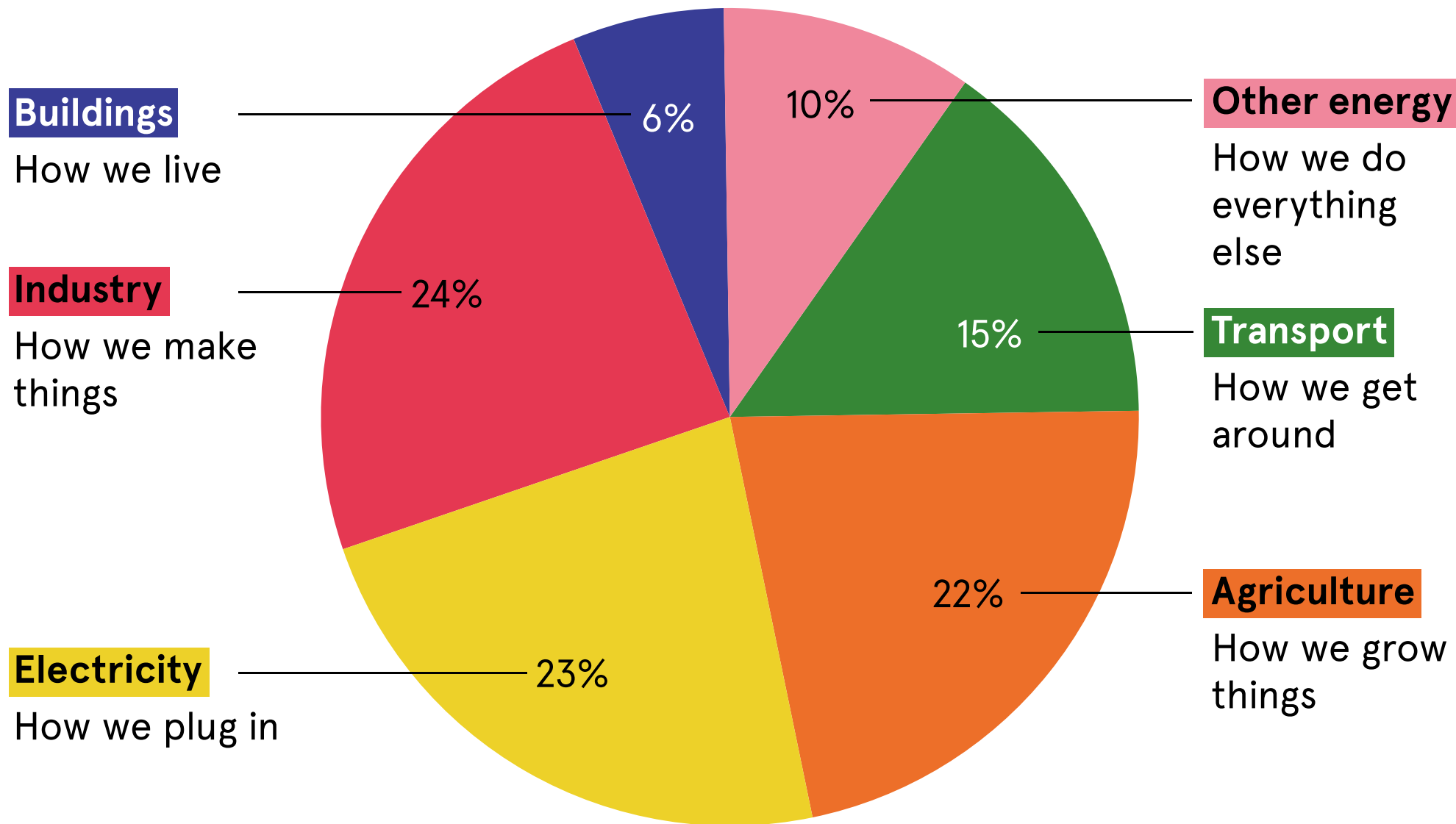
These six include: climate change, biodiversity (biosphere integrity), freshwater consumption, chemical and plastic pollution (novel entities), nutrient pollution (biogeochemical flows), and forest cover (land-system change).

The science is clear that crossing these boundaries increases the risk of large-scale abrupt or irreversible environmental changes.



WE NEED TO CHANGE ALMOST EVERYTHING

Direct contribution to global GHG emissions



The latest IPCC report “Mitigation of Climate Change” is unequivocal in its message: it is now or never for global climate action. The IPCC warned that global emissions must peak by 2025 in order to maintain a pathway to limit warming to 1.5°C.

At Planet A, we invest in pioneering technologies for hard to abate industries like cement or steel, sustainable fuels for the aviation and shipping industry, biobased materials and other innovative solutions that tackle the biggest levers of climate change.

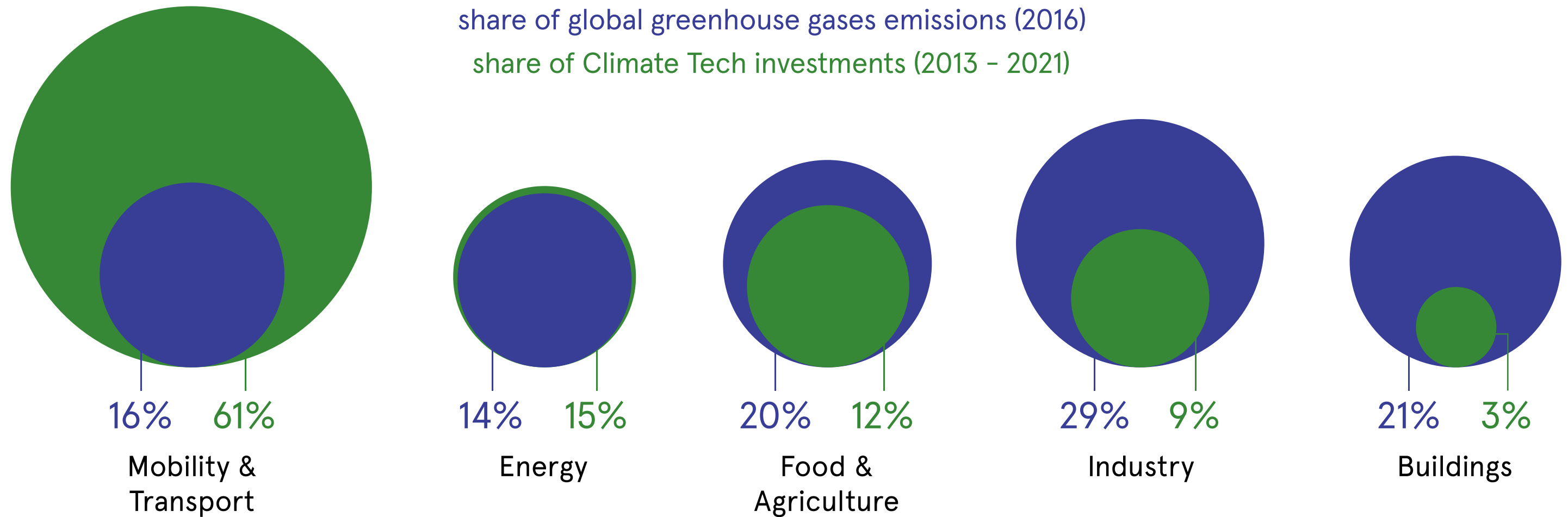


OVERCOMING INEFFICIENCIES IN THE MARKET

Currently, the technologies with the greatest mitigation potential are not necessarily those that receive the most funding. Most investments fail to represent sector relevance. **Unlocking investment opportunities in green technology requires a more science-based approach.**

84% of emissions receive 39% of the funding.

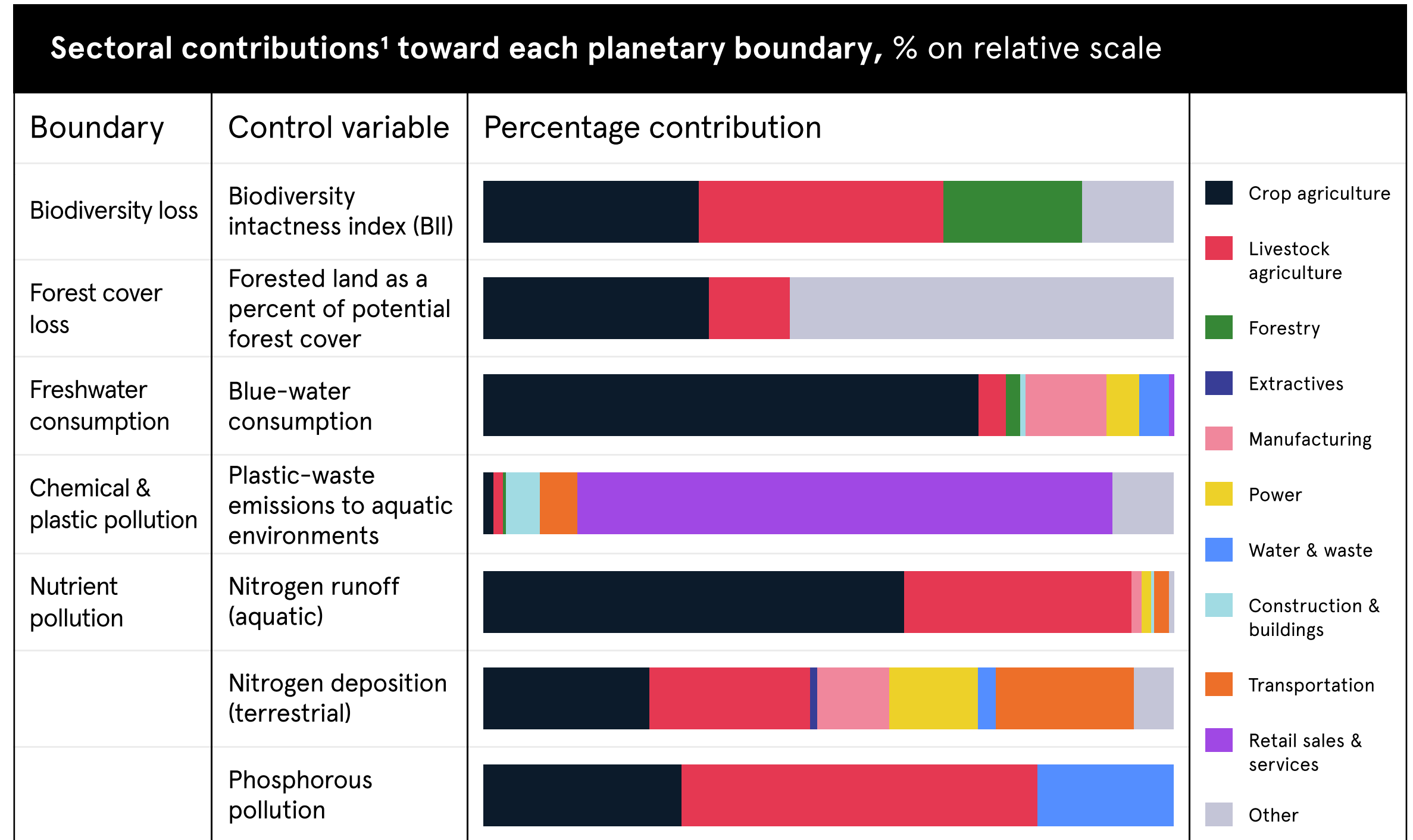
share of global greenhouse gases emissions (2016)
share of Climate Tech investments (2013 - 2021)



LOOKING AT THE WIDER ECOSYSTEM CRISIS

Addressing pollution, the ongoing mass extinction, and the loss of ecosystems requires us to avoid carbon tunnel vision and take nature into account. In the end, we rely on healthy ecosystems to treat and dissipate waste, maintain fertile soil and ensure water and air quality. In turn, restoring nature and conserving biodiversity are a vital part of the solution to climate change.

What moves the needle? Two sectors have the biggest lever here: Food systems (crop and livestock agriculture), followed by retail sales and services.



Source: [McKinsey Report 2022](#)

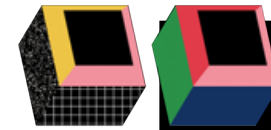


TOMORROW'S ECONOMY IS BASED ON TODAY'S INVESTMENT DECISIONS

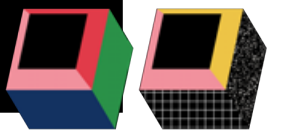
We believe venture capital has a great deal of power to shape the future of entire industries. **The climate crisis is an all-hands-on-deck situation**, requiring sustained cooperation between financial markets, politics, and industries to reverse the direction we're headed in.

Most of us are already aware we are running out of time. Investors need to ask themselves how big the potential impact of their investment really is. Using a science-based approach can help us understand which technologies have the potential to scale and succeed by **creating the most viable impact in the shortest amount of time** on our planet.

To do this, **visionary entrepreneurs and investors are leveraging the potential of dual returns**. The brightest and fastest founders are already capitalizing on the opportunity to enable this transformation by generating both impact and financial profits. For entrepreneurs and investors alike, there is enormous opportunity for innovation and financial return in this space.



There will be eight Teslas, ten Teslas. And only one of them is well known today... There will be Microsoft, Google, Amazon-type companies that come out of this space.



Bill Gates

Founder of Breakthrough Energy



OUR THEORY OF CHANGE

INPUT

What resources do we invest in founders?

- ▣ Time and energy
- ▣ **Diverse expertise:** entrepreneurial experience, LCA/ science, storytelling, VC, strategy, brand building, PR, and talent
- ▣ Partners and a strong network
- ▣ Like-minded investors
- ▣ GP commitment

OUTPUT

How do we help founders achieve their goals?

- We support startups that have a significant **positive impact on planet Earth** by providing:
- ▣ Long-term funding in seed- and series-A-investments.
 - ▣ Tailored mentoring with our Planet A Network.
 - ▣ Science-based impact measurement and forecasting.
- We integrate **impact measurement** into our entire management and investment process.
We actively seek collaboration and exchange across sectors and organizations.

EFFECT

What is the effect of our work?

- Supported startups **maximise their impact** potential faster and more reliably:
- ▣ We foster quantifiable impact in four main areas: **climate change, resource exploitation, waste, and biodiversity.**
 - ▣ We demonstrate that positive impact for the planet can go hand-in-hand with financial returns, making us a role model for **sustainable entrepreneurship** and investments.

IMPACT

What is the long-term change we want to contribute to?

- We want to shape an economy within the planetary boundaries.
- We want to make impact investment the new normal.

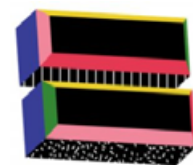
3. Our Philosophy

**IMPACT BASED
ON *S* SCIENCE**



SCIENCE-BASED INVESTING. NO GREENWASHING

IMPACT



IMPROVEMENT



SCALE

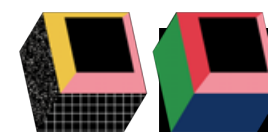
Impact perspective

Business perspective

At Planet A we believe in closely collaborating with entrepreneurs, investors, and scientists to create an economy within our planetary boundaries. We were the first European VC with a science team empowered to veto investment decisions. Our team of in-house researchers assess each potential VC transaction to ensure scalable and measurable impact is at the core of everything we do.

We publish our scientific methodology and calculated lifecycle assessments to encourage others to integrate quantitative, science-based assessments into their investment process.

[See our LCAs here →](#)



By putting science first, venture capital has the power to help build a regenerative economy and accelerate the transformation to a sustainable future.



Lena Thiede


Partner at Planet A Ventures



LOOKING BEYOND EMISSIONS

We only invest in startups that can demonstrate a positive, **quantifiable impact** in at least one of the following categories informed by the Sustainable Development Goals:

CLIMATE MITIGATION



7 AFFORDABLE AND CLEAN ENERGY	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	13 CLIMATE ACTION

RESOURCE SAVINGS




6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	12 RESPONSIBLE CONSUMPTION AND PRODUCTION

WASTE REDUCTION



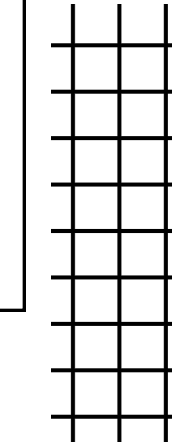
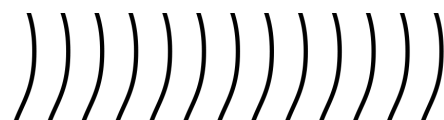
11 SUSTAINABLE CITIES AND COMMUNITIES	14 LIFE BELOW WATER	15 LIFE ON LAND

BIODIVERSITY PROTECTION

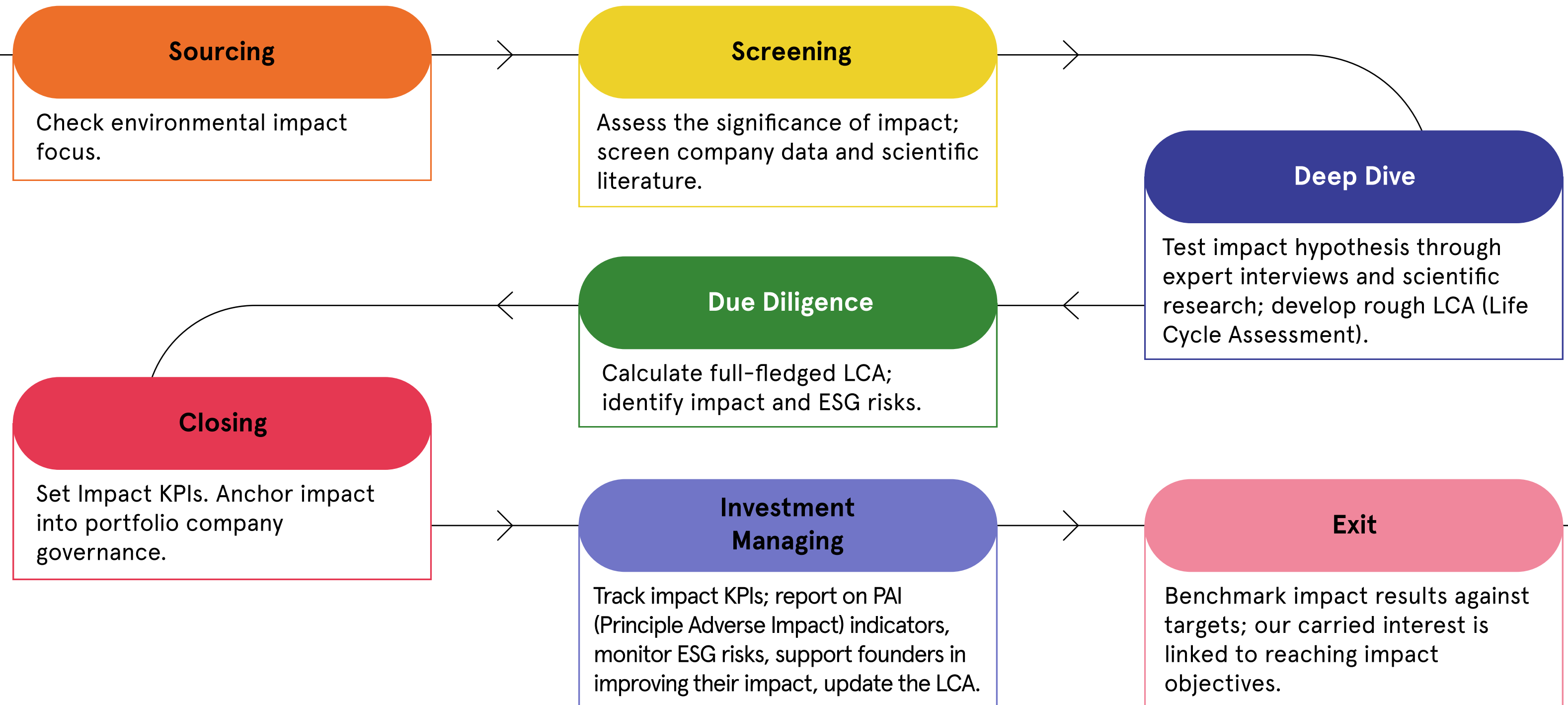


12 RESPONSIBLE CONSUMPTION AND PRODUCTION	14 LIFE BELOW WATER	15 LIFE ON LAND

We don't target companies that do something "a little better" in these areas. We are looking for truly innovative industry disruptors and system changers in the market.



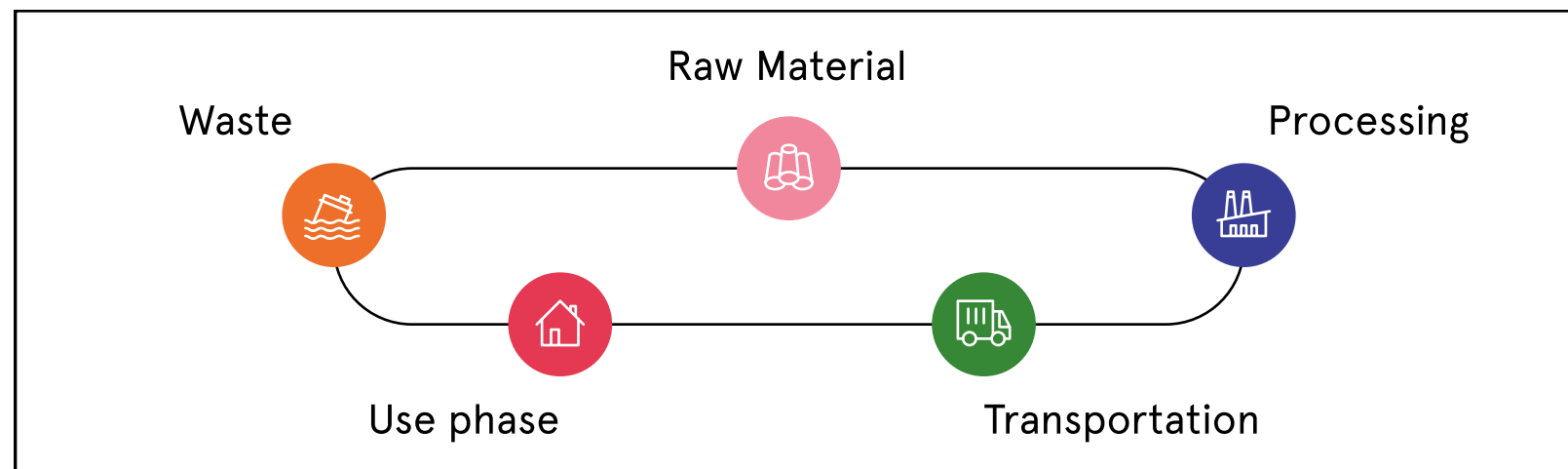
ANCHORING IMPACT IN EVERY STEP OF OUR INVESTMENT PROCESS



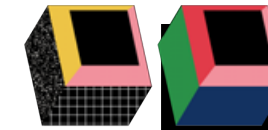
UNDERSTANDING LIFE CYCLE ASSESSMENTS

Our in-house science team calculates the environmental footprint associated with all lifecycle phases of a product or service. This starts with the extraction of raw materials and carries on through the processing, manufacturing, distribution, and use phase to the very end-of-life (in accordance with ISO 14040, 14044).

Our process allows us to evaluate not only greenhouse gas emissions but the entire ecological footprint, including water, land use, and energy demand. In the case of enabling technologies, we perform a rigorous scientific analysis using third-party data to determine the systemic impact of a product or service.



See our [LCA White Paper](#).



LCAs are a method widely applied in the scientific community. Using them allows for more data-driven, informed investment decisions, helping us identify companies that will establish an economy within the planetary boundaries.



Dr. Benedikt Buchspies
Senior Scientist at Planet A Ventures



WHY LCAS? A POWERFUL TOOL FOR INVESTORS



We identify winners.

LCAs help us discover champions of change, i.e., startups that apply the biggest levers.



We take informed investment decisions.

Impact has a seat at our investment committee. We will only invest if the LCA results are positive.



We know how to measure success.

Our impact KPIs are directly influenced by LCAs.



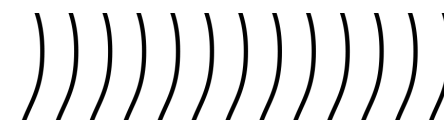
We support founders.

Quantitative evidence for portfolio impact gives our founders an edge over their competition.



We create transparency.

All of our scientific insights are publicly available, turning the black box of impact measurement into a glass box.



ALIGNING INCENTIVES FOR IMPACT

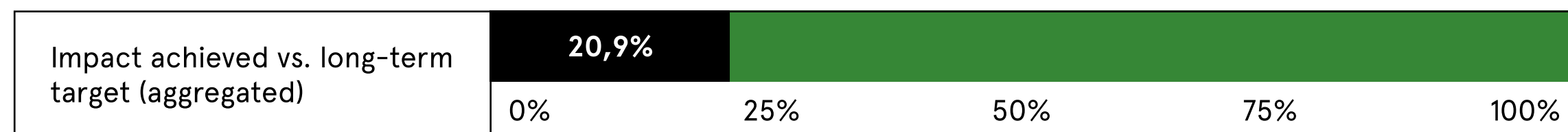
Once we have successfully established the LCA, we set realistic impact objectives. This allows both the company's management and us to monitor, evaluate, and improve impact performance.

Impact goals are based on the following categories in consultation with the start-up prior to investment.

Impact objectives and target values are subject to approval by main investors and are reported annually. We also tie 50% of our carried interest to achieving these objectives.

KPIs assigned to companies (abstract example):










	Climate	Resources		Waste	Biodiversity	Other
	t GHG reduced or removed	MJ fossil energy resources reduced	m3 water saved	t waste avoided	ha restored or improved ecosystems	
Traceless	✘	✘		✘		
Wildplastic	✘			✘		
GA Drilling	✘	✘				
GoodCarbon	✘				✘	
Dance	✘	✘				
C1	✘	✘				
Interatec	✘					
CarbonRe	✘					
One.Five	✘			✘		
44.01	✘					
Upright						✘
Landbanking	✘		✘		✘	
Makersite						✘
Dovetail						✘











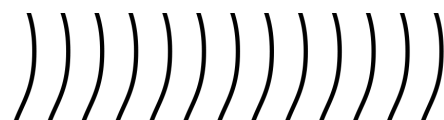
4. Driving Impact

OUR PORTFOLIO COMPANIES

PORTFOLIO OVERVIEW AS OF APR 2023

	Novel biobased and biodegradable plastic alternatives
	Enabling the mass-production of green methanol at a competitive price
	SaaS tool to power sustainable product and supply chain decisions
	Alternative fuels for hard to abate industries and modular Power-to-X energy storage
	Creating nature markets for planetary-scale restoration and preservation
	Mineralising CO2 in peridotite, eliminating it from the atmosphere forever
	SaaS solution provider for hard-to-abate industries such as cement and glass
	Precision fermentation for 100% bio-identical meat and fish proteins
	Recovers plastic from nature and produces recycled trash and parcel bags

	Investment and trading platform for high-quality nature-based climate solution projects
	E-Bike subscription service for more livable cities
	Proprietary drilling technology to unlock ultra-deep geothermal power
	Innovative alternatives to single-use plastics for packaging based on paper and novel bioplastics
	Open-access impact data platform for net-impact scoring of companies
	Tooling the financial sector needs to measure and realise transition opportunities
	Parcel delivery with smarter, greener transportation logistics
	SaaS enabling smart investment recommendations for significant carbon reduction
	Deploys technology and infrastructure to accelerate the global transition to green energy



PLASTICS AND PACKAGING DEEP DIVE

99%

of plastics are manufactured from petroleum and natural gas

3.8%

share of GHG emissions from plastics

<10%

of the seven billion tons of plastic ever produced have been recycled

Humans are addicted to plastic. We are now producing twice as much plastic as we did two decades ago. While 11 million tons of plastic waste enter our oceans every year, close to 0% of it is biodegradable. Plastic production and waste have become a threat to biodiversity, affecting millions of people's livelihoods and reducing our ecosystem's ability to adapt to climate change.

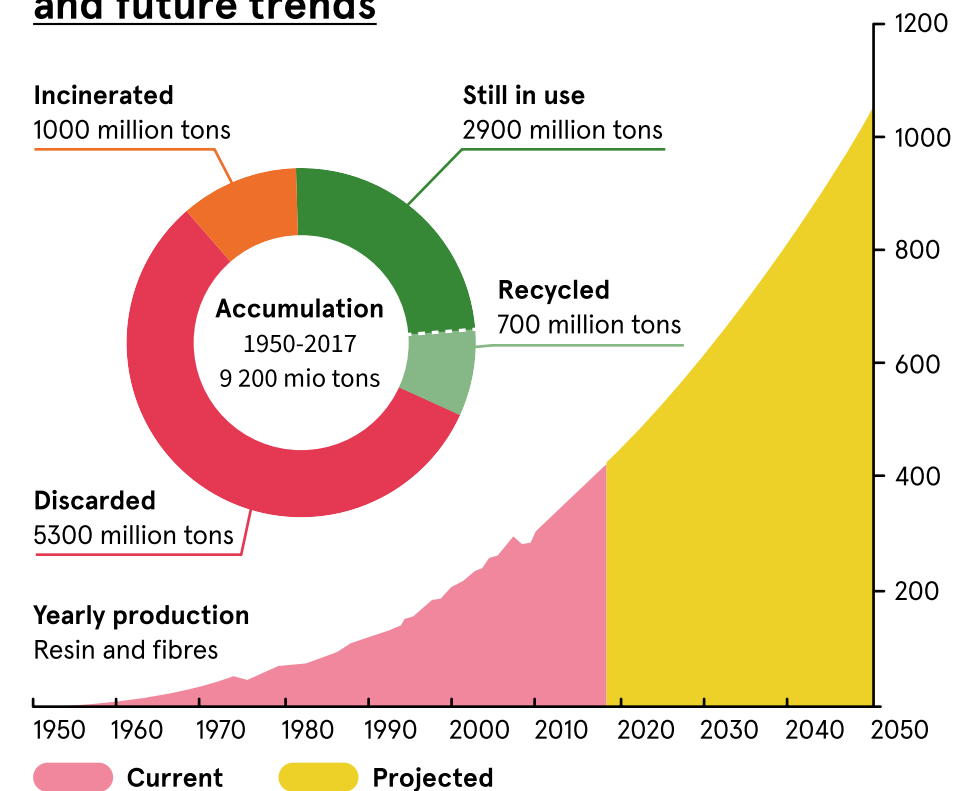
Challenges for manufacturers are growing, mainly due to increasingly tougher legislation. For example, new extended producer responsibility laws are holding brands and manufacturers responsible for their products' afterlife. The EU is taxing virgin plastic at €800 per ton since 2021 and has indicated an expansion of the Single-Use Plastics Directive to additional plastic categories.

This new demand for sustainable plastics and packaging alternatives creates a major opportunity for mission-driven founders. We are seeing tremendous innovation in sustainable materials such as biobased plastic substitutes, technology-enhanced business models that foster responsible consumption, and efficiency improvements in the recycling, clean-up, and treatment of waste plastics to move towards a circular economy.

WHAT EXCITES US

- Products for a truly circular economy
- Business models that push into market segments which are impacted by changing regulatory requirements and customer demands

Global plastic production and accumulation and future trends



THE PROBLEM

- Over 79% of the 8.3 billion tons of plastics produced to date has been dumped at landfills or in nature.
- Close to 0% of plastics currently produced is biodegradable.

THE PRODUCT

- 100% biobased substitute disposable plastics from agricultural residue.
- Products are fully compostable in under a few weeks, leaving no trace in nature.

THE MARKET

- The global plastics market is expected to increase from \$593 billion to \$810 billion from 2021 to 2030.
- Increased regulation such as a plastic tax, and shifting consumer demand will require the industry to adapt.

THE FOUNDERS



Dr. Anne Lamp
PhD in Process Engineering with multiple patents
expert in life cycle assessments



Johanna Baare
Experienced in entrepreneurship, scaling operations, and strategy consulting

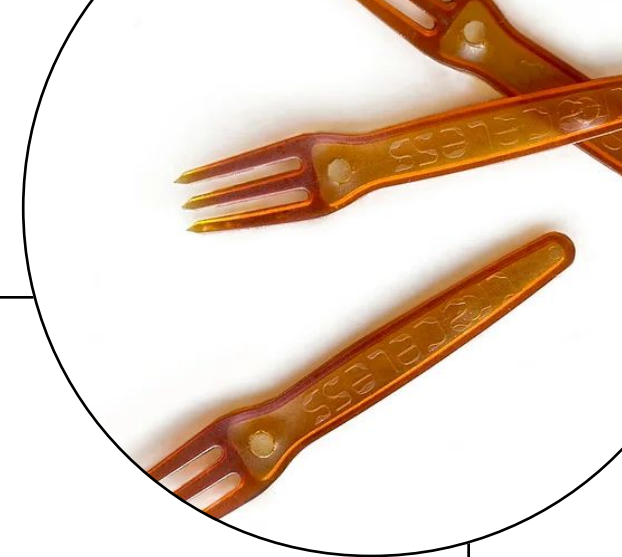
THE IMPACT

[See LCA here](#) →

- The production and disposal of traceless emits up to 95% less GHG emissions than the production and disposal of virgin plastic.
- Reducing demand for land, non-renewable energy, and mineral resources.



THE CO-INVESTORS



THE PROBLEM

- Today, 36% of produced plastics are used in packaging, 85% of which end up at landfills or as unregulated waste. Scaling sustainable product development for packaging alternatives is difficult and often expensive because technologies are not yet mature enough to be deployed at an industrial scale.

THE PRODUCT

- Redefining single-use plastics for packaging by discovering, developing, and commercialising innovative solutions based on paper and novel bioplastics.

THE MARKET

- The global plastic packaging market was valued at >\$260 billion in 2021.
- Global plastic waste is set to almost triple by 2060.

THE FOUNDERS



Claire Hae-Min Gusko
Career in law, investment management, and business strategy, Former Head of Growth Lab and Business Strategy at Infarm



Martin Weber
Background in consulting, project management, and investments, Ex-CFO and Head of Global Corporate Development at Infarm

THE IMPACT

[See LCA here](#) →

- Addressing multiple plastic packaging challenges at once.
- Reduction in GHG emissions of <75% per functional unit.



THE CO-INVESTORS



WILDPLASTIC

THE PROBLEM

- Around 91% of the 8.3 billion tons of plastics ever produced are not being recycled.
- Currently, global plastic production adds 850 million tons of CO2 annually.

THE PRODUCT

- WILDPLASTIC recovers plastic from nature and produces recycled products like trash and parcel bags.

THE MARKET

- The global plastics market is expected to increase from \$593 billion in 2021 to \$810 billion by 2030.

THE FOUNDERS



Christian Siegmund
Ex-Google and Youtube,
EF Alumnus



Tim Lampe
Ex-Partner Consultancy
MS in Environmental
Engineering



Katrin Oeding
CEO and Founder of
Oeding Design Studio, and
ex-Head of Design for
Kolle Rebbe



THE IMPACT

[See LCA here](#) →

- Every product reduces marine litter and microplastics.
- The WILDBAG **saves 51% CO2e** on average.



THE CO-INVESTORS PURPOSE®



NATURAL CAPITAL DEEP DIVE

2X

increase in produced capital per person between 1992-2014

40%

decline in stock of natural capital per person between 1992 and 2014

1.7

Earths required to maintain the world's current living standard

We tend to forget: We are part of nature. Half of the world's GDP is dependent on nature. Companies and societies at large, after all, rely on countless genes, species, and ecosystem services such as water provision or air quality as critical inputs. These dependencies translate into risks to businesses and asset managers. These risks can include ecological, operational, regulatory, reputational and financial risks.

Economic incentives have historically not been aligned with preserving biodiversity. This is changing: Financial regulators are starting to develop approaches to nature-related risk, legislation is tightening and awareness of biodiversity risks and the need for more resilient supply chains is increasing. The global biodiversity framework agreed at the CBD COP15 will further help channel steady flows of private funding into conservation and restoration as well as scaling the nascent credit market.

At the same time, the economic opportunities of ecosystem restoration are compelling. Between now and 2030, the restoration of 350 million hectares of degraded terrestrial and aquatic ecosystems could generate \$9 trillion in ecosystem services and remove up to 26 gigatons of GHG from the atmosphere.

WHAT EXCITES US

- Nature technologies that can accelerate the implementation of nature-based solutions (NBS) at scale. Drones, bioacoustics, environmental DNA, satellite monitoring, LiDAR, open source solutions hold great potential for improving the resolution and reducing the cost of MRV, driving greater accountability in assessing natural capital

MAIN DRIVERS FOR BIODIVERSITY LOSS

-  Habitat loss and degradation
-  Pollution
-  Over-exploitation
-  Climate Change
-  Invasive species

THE PROBLEM

- ❑ Natural Climate Solutions (NCS) are key to tackling climate change yet receive <3% of global climate funding.
- ❑ Current voluntary carbon markets are non-transparent with low-quality projects, non-value generating middlemen and high up-front costs.

THE PRODUCT

- ❑ A financing marketplace enabling high-quality credits and transparent investment in nature-based carbon projects.

THE MARKET

- ❑ In 2021, the voluntary carbon market reached \$2 billion, 4x its value in 2020.
- ❑ By 2030, the market is expected to reach \$10 billion to \$40 billion.

THE FOUNDERS



David Diallo
Serial entrepreneur, myphotobook,
GoodJobs



Jerome Cochet
Ex-McKinsey, ex-MD at Zalando MBA
from INSEAD

THE IMPACT

- ❑ The trading platform will accelerate the investment into NCS, which can contribute 30% of the required CO2 reductions in the atmosphere by 2030, i.e., close to 7 gigatons CO2.
- ❑ Investing in NCS can positively impact biodiversity, ecosystem functioning and soil, as well as air and water quality.



THE CO-INVESTORS

468 Capital

GREEN
FIELD
ONE



THE PROBLEM

- Nature has been historically underinvested in and the value of ecosystem services not considered, leading to its rapid depletion and biodiversity loss.

THE PRODUCT

- Building the technological, legal, and trust infrastructure for investments into nature futures, rewarding the conservation and regeneration of natural resources.

THE MARKET

- Half of global GDP, or \$44 trillion, is moderately or highly dependent on nature.
- Global biodiversity finance is valued between \$78 billion and \$91 billion per year.

THE FOUNDERS



Dr. Sonja Stuchtey
Serial entrepreneur, board member,
published author



Prof. Dr. Martin Stuchtey
Founder of SystemIQ, professor, ex-
McKinsey, board member, published
author

THE IMPACT

- The abatement potential of natural climate solutions is about 11.3 gigatons CO₂/a at scale ([Griscom et al., 2017](#)).
- By providing the infrastructure for the nascent nature market, Landbanking's services will support uplifts in biodiversity, and savings in water and other resources.



THE CO-INVESTORS Cape Capital



FUTURE OF MOBILITY AND TRANSPORTATION DEEP DIVE

5%

share of aviation's contribution to global warming

3%

of total emissions from global shipping

74.5%

of total transport emissions stem from road vehicles

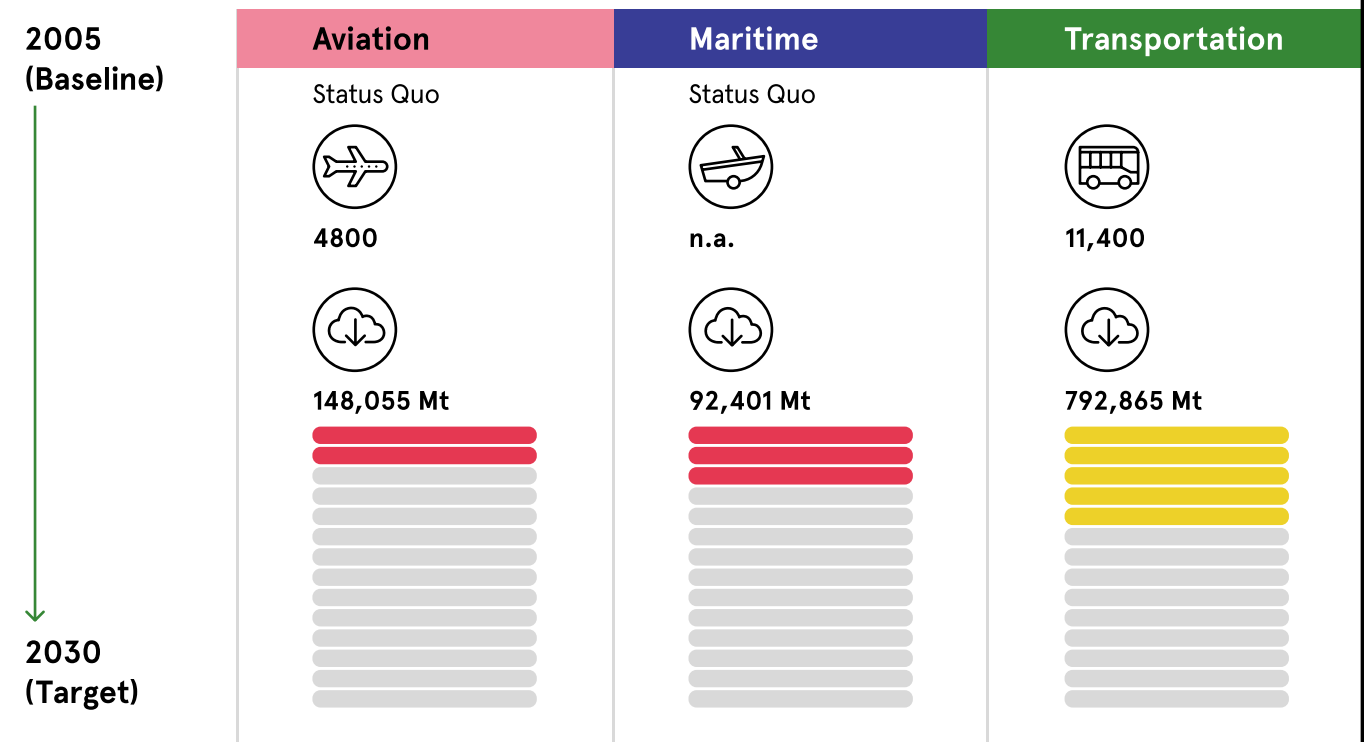
Today's major technology trends in the transport sector lie in mobility as-a-service, electrification, automation, connectivity. Micro-mobility can encourage modal shifts away from private motorised vehicles. New mobility players aim to cut both tailpipe emissions (representing 67%) and emissions from production (representing the remaining 33%).

However, progress has been slow to defossilize the mobility sector, especially in maritime and aviation transport. Hydrogen and electrification will only ever be feasible for short-hauls with small aircrafts. Legislative pressure is tightening as the EU includes the maritime and the aviation industry in the reform of the EU Emissions Trading Scheme. Sustainable fuels is the main way to decarbonise these industries. Synthetic fuels made from CO2 and green hydrogen using electricity are gaining traction as airlines are looking to reduce their carbon emissions. In the shipping industry, innovative alternative fuels like green methanol have the potential to save multiple gigatons of CO2.

WHAT EXCITES US

- Technologies for hard-to-decarbonise transport modes: aviation, shipping, long-distance trucking
- Green fuels
- Advanced battery tech that's cheaper / more energy dense / requires fewer minerals

Decarbonization Trajectory Transport Sector



THE PROBLEM

- There are numerous areas of the transport sector in which use of electricity is unlikely to be feasible, for example, aviation and long-distance shipping.

THE PRODUCT

- Alternative fuels, such as sustainable kerosene (SAF), synthetic gasoline or diesel.
- Modular chemical plants equipped with innovative chemical reactor technology for Gas-to-Liquid, Power-to-Liquid, and Power-to-Gas applications.

THE MARKET

- Global synthetic fuel demand is expected to be 20k TWh in 2050.
- Increased regulation for decarbonisation in the aviation and heavy industries.

THE FOUNDERS



Philipp Engelkamp
Experienced consultant
MSc in Industrial
Engineering



Dr.-Ing. Tim Böltken
PhD in Chemical
Engineering



Dr.-Ing. Paolo Piermartini
PhD in Chemical
Engineering



THE IMPACT

[See LCA here →](#)

- Saving 63% CO₂e on average compared to a fossil reference product.
- Long-term energy storage eases fluctuating energy supply from renewable sources.



THE CO-INVESTORS



C1 CIRCULAR CARBON CHEMISTRY

THE PROBLEM

- Without cost-competitive green alternatives, the chemical industry and hard to abate transport sectors, such as maritime, currently rely on carbon-intensive inputs and fossil-based fuels.

THE PRODUCT

- C1 developed a disruptive (homogeneous) catalyst to produce (green) methanol that brings down the green premium, making green methanol a viable solution for chemical and transportation industries.

THE MARKET

- The global methanol market was valued at \$37 billion in 2021, it's expected to reach \$62 billion by 2030.
- The EU is due to extend its Emissions Trading System to cover maritime transportation from 2024, effectively charging shipping companies for their emissions.

THE FOUNDERS



Christian Vollmann
Serial entrepreneur,
listing on the NYSE,
renowned angel investor



Dr. Christoph Zehe
Experienced Consultant
and Research Engineer,
Materials Chemical PhD,
Oxford



Dr. Marek Chęcinski
Founder of
CreativeQuantum
PhD in Catalysis at LIKAT



Dr.-Ing. Ralph Krähnert
Habilitated engineer
developing novel catalyst
technologies

THE IMPACT

[See LCA here →](#)

- Green methanol leads to a 76% reduction in GHG emissions when replacing crude oil in the shipping sector and up to 82% when replacing black methanol.



THE CO-INVESTORS



THE PROBLEM

- Around 33% of total urban GHG emissions in major cities are generated by transport.
- Shared e-bikes have high-cost barriers and can be unreliable for regular commuting.

THE PRODUCT

- A high-quality and tech-forward electric bike, packaged as a hassle-free subscription.
- A solution for those hesitant to purchase an expensive bike or hunt down a rentable e-bike or electric scooter.

THE MARKET

- E-Bike demand has increased significantly in recent years with sales in Europe projected to reach \$32 billion in the next five years.

THE FOUNDERS



Eric Quidenus-Wahlforss
Co-Founder of Soundcloud,
MA Industrial Economics
and Computer Science



Christian Springub
Serial entrepreneur
Co-Founder of Jimdo and
NorthClick



Alexander Ljung
Serial entrepreneur, Co-
Founder of Soundcloud,
MSc in Media Technology



THE IMPACT

[See LCA here →](#)

- Getting 5% of cars off the world's roads by 2030 would cut 3 gigatons CO2 emissions from reduced direct GHG emissions and resource demand.



THE CO-INVESTORS

BlueYard

LA FAMIGLIA

HV
CAPITAL

HIVED

THE PROBLEM

- Growing e-commerce has led to congested cities, toxic pollution and poor customer service experiences.
- Decarbonization by parcel carriers have been slow to nonexistent, with little concern for where deliveries or packaging end up.

THE PRODUCT

- HIVED provides emission-free, mass-market parcel delivery which is more efficient, cheaper, and better quality.
- This is enabled by their proprietary AI-powered last-mile routing software that incorporates electric and lighter mobility.

THE MARKET

- 24% of retail purchases are expected to take place online by 2026.
- The UK alone sees over 4.2 billion parcels delivered per year.

THE FOUNDERS



Mathias Krieger

Serial founder with strong data-driven focus and strategy background.



Murvah Iqbal

Serial founder with expertise in brand-building and sales.



THE IMPACT

- The main impact of HIVED comes from displacing conventional parcel delivery vehicles. HIVED results in an immediate reduction in GHG emissions as well as tailpipe emissions of other pollutants (e.g. particulate matter, NOx, etc.)



THE CO-INVESTORS



MAERSK



Pale blue dot



HARD-TO-ABATE INDUSTRIES DEEP DIVE

34%

global GHG emissions from hard to abate industries including steel, aluminium and cement

4 BILLION

tons of ordinary Portland cement are being produced every year

8%

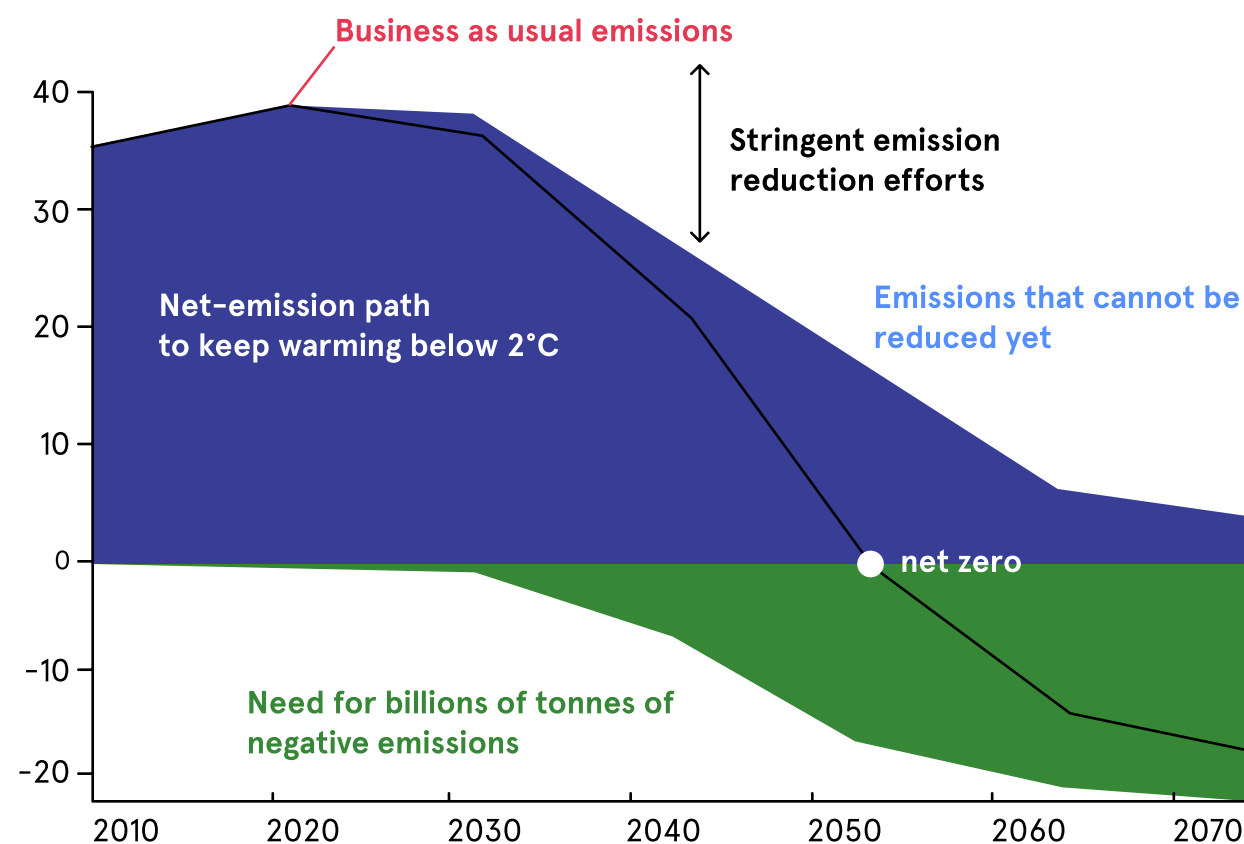
of anthropogenic CO2 emissions originate from cement production

After water, concrete is the most widely used substance on the planet. For the next 40 years, global development is expected to expand at the rate of adding a New York City-sized construction footprint every month. The magnitude of the problem inspires founders around the world, developing solutions for energy-efficiency measures like advanced analytics, alternative fuels and clinker substitution as well as alternative building materials and other new technologies like carbon-capture-and-utilisation.

Carbon removal will play a significant role in decarbonising hard to abate industries. The world may need to remove as much as 100-1000 gigatons of CO2 from the atmosphere over the century, to prevent the planet from reaching 2°C.

WHAT EXCITES US

- AI/ML Software that helps to increase efficiencies, while reducing energy and material waste
- Hardware decarbonization technology such as renewable energy sources (green fuels) and point-source carbon capture



THE PROBLEM

- Energy-intensive industries such as cement, steel, and chemicals account for more than 20% of global GHG emissions.

THE PRODUCT

- SaaS solutions for hard-to-abate industries to reduce energy consumption and carbon emissions.
- The AI-based software Delta Zero tackles emissions in the cement industry.

THE MARKET

- The global cement market was valued at US\$328.73 billion in 2021.
- The global cement market is determined to grow at a CAGR of 5.10% between 2022-2027.

THE FOUNDERS



Sherif Elsayed-Ali
Ex-Director Climate at Element AI, Co-founder Amnesty Tech



Buffy Price
AI for Climate Partnerships at Element AI; Senior Management Advisor



Daniel Summerbell
MEng in Aerospace and Aerothermal Engineering, University of Cambridge



Aidan O'Sullivan
Associate Professor of Energy and AI at University College London, Turing Fellow

THE IMPACT

[See LCA here](#) →

- Creating a near-live positive impact by empowering operators to save on fuel-derived emissions.



THE CO-INVESTORS



THE PROBLEM

- The IPCC estimates a reduction of 1,000 gigatons of CO2 from the atmosphere is necessary by the end of the century; this CO2 needs to be captured and ideally eliminated forever.

THE PRODUCT

- Leveraging the process of carbon mineralisation by eliminating CO2 from the atmosphere and turning it into rock.

THE MARKET

- The global carbon capture, utilisation, and storage market was valued at \$1.9 billion in 2020 and is projected to reach \$7.0 billion by 2030, growing at a CAGR of 13.8% from 2021 to 2030.

THE FOUNDERS



Talal Hasan
Serial entrepreneur, investor, member of multiple boards



Ehab Tafai
Experienced engineer, and plant and project manager



Karan Khimji
Ex-EY consultant
Harvard Business School alumnus



THE IMPACT

[See LCA here](#) →

- 44.01s mineralisation in suitable rock formations is the most permanent approach to CO2 elimination, reaching a high overall carbon removal efficiency between 88-91%.



THE CO-INVESTORS



SIEMENS

Air Liquide

ENERGY DEEP DIVE

81%

of the global primary energy supply in 2019 came from oil, coal and gas

3X

amount Geothermal will need to increase by 2030 to hit net zero by 2050 (IEA)

80%

price reduction in solar energy since 2010

Ramping up renewable energies worldwide will be key to reducing emissions. What excites us in this field is increasing renewable base-load energy production and the innovation revolving around tackling the intermittency of renewable energy. Batteries and long-duration energy storage are vital to transitioning the transport and energy sector, which are already seeing massive innovation via alternative ways of energy storage, battery management and analytics, second life, as well as small modular nuclear reactors or molten salt reactors that offer superior safety and efficiency.

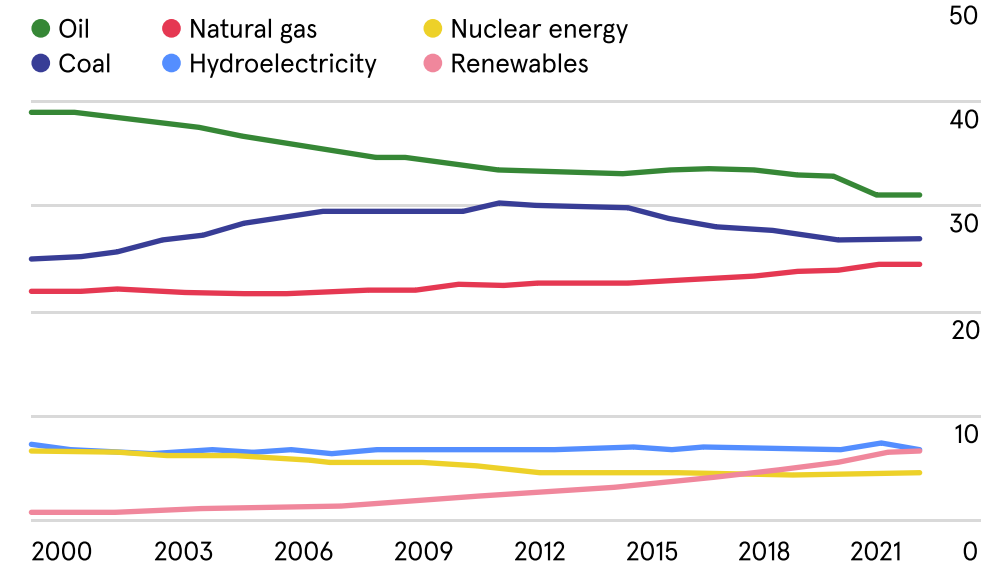
In a long-term clean energy mix, hydrogen will play an important role for on-premise storage, feedstock for e-fuels or fuel for heavy duty vehicles, and to decarbonise the production of steel. The European Hydrogen Strategy, which aims at developing a solid pipeline in Europe, is mobilising capital into the entire value chain and creating new opportunities for players to enter the market with innovative solutions.

Geothermal is also sparking global interest. Ultra-deep supercritical geothermal is a large-scale baseload solution to replace fossil fuels that is available anywhere, anytime, while making use of the technology, know-how, and highly skilled workforce of the oil industry.

WHAT EXCITES US

- Technologies that increase renewable base-load energy production and address intermittency of renewable energy
- Alternative ways of energy storage, battery management and analytics or second life
- Innovation in geothermal energy
- Hardware innovations along the value chain of hydrogen, ammonia and methanol

Shares of global primary energy Percentage



THE PROBLEM

- ❑ Wind and solar power are transient and will not be sufficient to replace the heat, light, and mobility we have come to expect from fossil fuels.
- ❑ We are in need of renewable and cheap energy sources with a constant baseload.

THE PRODUCT

- ❑ Proprietary Ultra-Deep Geothermal (UDG) drilling technology to unlock and expand geothermal power anywhere in the world.

THE MARKET

- ❑ District heating, as a first geothermal application, is expected to grow to a \$295.35 billion market size by 2030 with other use cases to follow.

THE FOUNDERS



Igor Kocis

20+ years of engineering and business leadership experience, ex-CEO of Arcado



Dusan Kocis

20+ years in R&D and business development



Tomas Kristofic

20+ years in R&D management specialising in process automation, electronics, and embedded system communications

THE IMPACT

[See LCA here →](#)

- ❑ Displacing existing power generation from fossil energy with net reduction exceeding 1kg CO₂e/kWh if geothermal replaces fossil based electricity production.
- ❑ Reducing GHG emissions by 99% compared to the conventional electricity supply it displaces.



THE CO-INVESTORS



THE PROBLEM

- Europe is praised as a leader in global renewable energy usage, however, it still derives 76% of its energy mix from fossil fuels.
- Household energy consumption is a major contributor at 27% of total energy consumption, the majority of which is derived from fossil fuels.

THE PRODUCT

- Photovoltaic installations, making autonomous, renewable energy accessible to millions of households, starting with Spain.
- Sunhero plans to expand its product portfolio to include electric vehicle chargers and other electrification solutions, providing a comprehensive suite of sustainable options for households.

THE MARKET

- The European residential solar PV panels market size is expected to reach USD 62.33 billion by 2030.

THE FOUNDERS



Christopher Cederskrog
Serial founder with track record of scaling major companies, such as Airbnb, internationally.



Stefan Braun
Serial founder with management expertise and international expansion background.



THE IMPACT

- Sunhero will accelerate the energy transition. We predict cumulative net savings of 5 to 11 megatons CO₂eq by the end of 2032.



THE CO-INVESTORS



FOOD DEEP DIVE

57%

of food production emissions derive from livestock agriculture

\$1.7T

size of the global meat market in 2022

11-22%

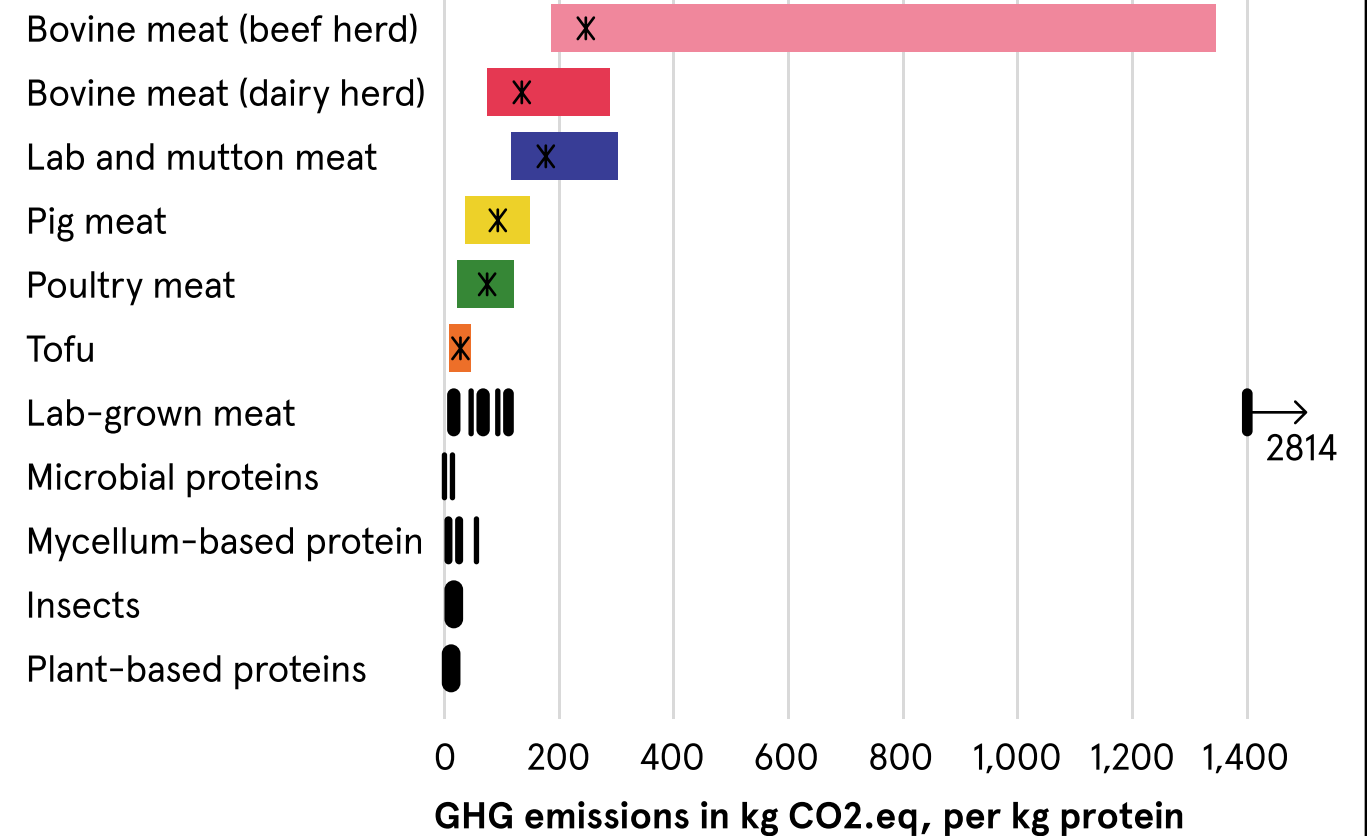
of all global animal products eaten predicted to be alternative by 2035

The world's population has rapidly increased in recent years, surpassing 8 billion people in 2022 and projected to rise to 9.7 billion by 2050. This will lead to an increased demand in food. While the global meat market is approximately \$1.7 trillion, livestock agriculture accounts for 57% of total food production emissions and is a major driver of biodiversity loss. This leads to an increased interest in meat substitutes and alternative proteins. Investments in plant-based alternatives to meat generate higher CO2e savings per dollar invested than any other sector.

What excites us are plant-based proteins that have seen a growing market with sales rising 17% in 2018. The use of alternative proteins as a food ingredient in consumer products is predicted to continue growing: A recent BCG analysis predicts that by 2035, after alternative proteins reach full parity in taste, texture, and price with conventional animal proteins, 11% of the globally consumed meat, seafood, eggs, and dairy will likely be alternative-based. With a push from regulators and step changes in technology, that number could reach 22% by 2035.

WHAT EXCITES US

- Technologies that help accelerate the adoption of non-animal based proteins
- This includes solutions that will improve not only taste, texture, and nutrition (e.g., precision fermentation, mycelium) but also methods to reduce costs and scale faster





THE PROBLEM

- Meat consumption accounts for ~15% of global GHG emissions and is the biggest single contributor to biodiversity loss.
- Plant-based alternatives have largely been unable to replicate the taste and look of real meat, limiting their potential market reach.

THE PRODUCT

- Paleo develops meat and fish proteins which are 100% bio-identical to animal proteins and 100% GMO-free.
- When used in alternative meat products, these proteins enhance the taste, look, and nutrition of market offerings.

THE MARKET

- Currently, the market for alternative protein is \$2.2 billion compared to a global meat market of \$1.7 trillion.

THE FOUNDERS



Hermes Sanctorum
Former Member of Flemish Parliament
PhD in Analytical and Environmental
Chemistry



Andy de Jong
Former practicing medical doctor
Vlerick Business School MBA

THE IMPACT

[See LCA here →](#)

- Overcoming key barriers in the transition from meat-based to plant-based diets.
- Changing from conventional meat protein to an alternative results in net GHG savings between 21-296 kg CO₂e per kg of protein.



THE CO-INVESTORS



TRANSITION ICT DEEP DIVE

92%

growth in AUM for funds marketed as “sustainable” in 2020 to c.\$1.7 trillion

1/3

of global market capital has made an SBTi pledge

\$4.1T

financing gap by 2050 to meet climate change, biodiversity, and land degradation targets

Transitioning into a low-carbon economy presents risks and opportunities. We need to be able to see both. Whether it is in the decline of fossil fuels or the boom of electric vehicles: trillions of dollars are on the move. Including physical and transitional risks in decision-making will improve financial stability, avoid misallocation of capital, promote allocation to solutions that are more likely to succeed, and provide guidance on designing transitions at the lowest risk to society and the economy.

Companies extract resources and produce emissions all along their supply chain. They have little to no insight into the environmental impacts of their increasingly complex supply chains. At the same time, companies are under pressure from governments, consumers, civil society, and other stakeholders to divulge more information about their supply chains; and the reputational cost of failing to meet these demands can be high.

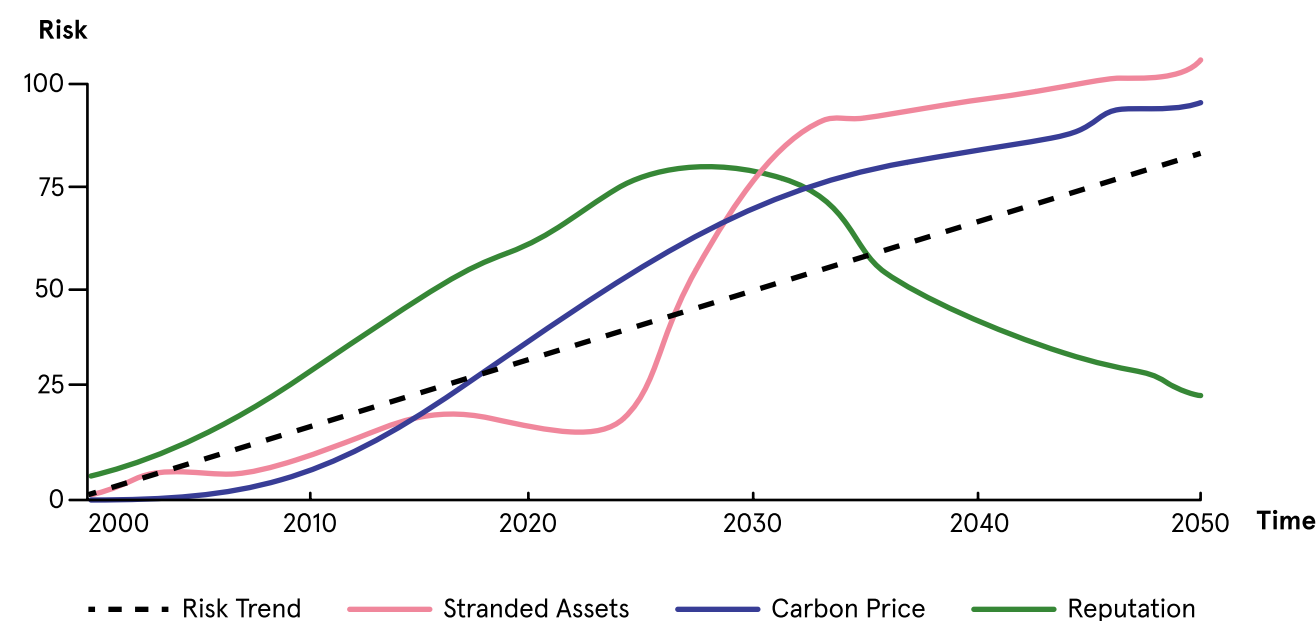
We see exciting innovation in AI-based software's ability to translate complexity into clear signals, aligning capital allocation with climate science. Investors need impact data to align profits with impact targets and reporting requirements. Meanwhile, companies need impact data to improve and communicate impact to address growing demands from clients, investors, employees, and regulators.

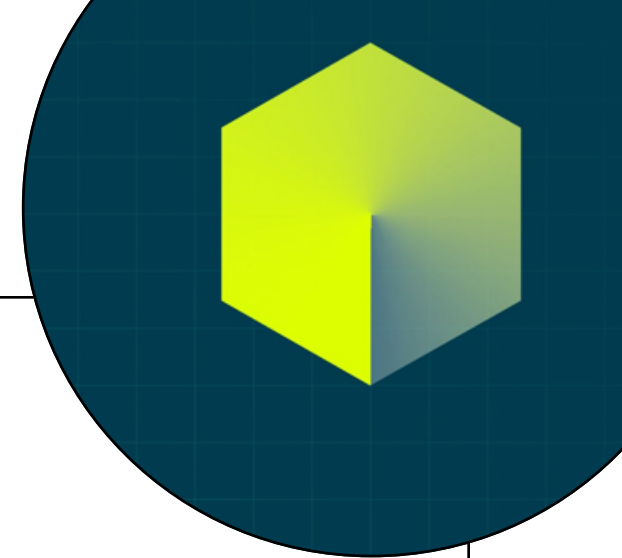
Sources: IEA, UNCTAD, Science Based Targets

WHAT EXCITES US

- Transition risk software supporting divestment from climate-stranded assets
- Software enabling green improvement in financial and physical assets
- Net-zero roadmap planning software for various stakeholders
- MRV for quantifying biodiversity

Example Transition Risk Categories (TCFD)





THE PROBLEM

- Complex, time-consuming, and expensive supply chain mapping processes.
- Challenges in assessing companies ecological footprints (scope 3 emissions) and emission savings potential.

THE PRODUCT

- Supply chain mapping tool calculating Life Cycle Assessments on the basis of a BOM (Bill of Material).
- Enables real-time simulations such as impact of changes in sourcing on overall costs and emissions.

THE MARKET

- Key enablement technology addressing a €30 billion TAM (including a wide range of industrial players).
- Rising relevance due to tighter regulations and taxations.

THE FOUNDERS



Neil Dsouza

Serial entrepreneur and software engineer
MSc in Environmental Physics

THE IMPACT

- Enabling LCA-based assessments of environmental implications of material and design choices on the fly.
- Manufacturers conducting an LCA reduced the carbon footprint of their products by 4-11% on average.



THE CO-INVESTORS

HITACHI
Inspire the Next

Translink
CAPITAL

 **KOMPAS**

THE PROBLEM

- ❑ The finance industry lacks tools to synchronise timelines and incorporate the true, future costs of our actions into the present day.

THE PRODUCT

- ❑ A novel platform that synchronises timelines by making future costs measurable today; this allows asset managers to consider various transition risks, such as future carbon price, reputational risks, and stranded assets.

THE MARKET

- ❑ Asset managers globally are expected to increase their ESG-related assets under management (AuM) to \$33.9 trillion by 2026, up from \$18.4 trillion in 2021.
- ❑ ESG information services TAM is projected to grow to \$5.1 billion by 2025.

THE FOUNDERS



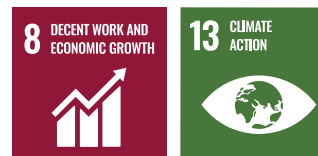
Amos Wittenberg
Financial journalist turned technologist and climate entrepreneur, ex-Palantir



Phillip Marks
Engineer and scientist specialising in computational modelling of sustainable energy systems, ex-Palantir

THE IMPACT

- ❑ Stable, climate-adjusted financial decisions will be critical in the resource allocation toward a more sustainable economy.



THE CO-INVESTORS **FOUNDERS FACTORY.**



UPRIGHT PROJECT

WE QUANTIFY
THE NET
IMPACT OF
COMPANIES

THE PROBLEM

- Currently, 42% of companies exaggerate their sustainability claims, and common methods to assess the impact of asset management portfolios fail to capture all relevant information.

THE PRODUCT

- Open-access platform for impact data which enables smarter decision-making for investors and companies.

THE MARKET

- Global ESG assets are on track to exceed \$53 trillion by 2025, representing more than a third of the \$140.5 trillion in projected total assets under management.

THE FOUNDERS



Annu Nieminen
MIT “Innovator under 35 Europe”
Ex-McKinsey



Juho Ojala
Expert in data-intensive software
MSc in Information Networks

THE IMPACT

- Mission: incentivise companies to optimise their net impact.
- Over 70% of the world’s GHG emissions since 1988 can be traced to only 100 companies.



THE CO-INVESTORS



THE PROBLEM

- ❏ The real estate industry is one of the most challenging markets to decarbonize, with buildings making up 40% of EU energy consumption and 36% of energy-related greenhouse gas emissions.

THE PRODUCT

- ❏ OPTIML's software analyzes any number of portfolio assets across the most relevant ESG and regulatory data points – in minutes.
- ❏ This provides relevant recommendations to improve efficiency and a rating that real estate developers and asset managers can understand.

THE MARKET

- ❏ Regulators are increasing pressure on the industry, with a 2021 EU directive requiring all new buildings to be zero-emission by 2030, and instating rigorous Energy Performance Certificate (EPC) labeling requirements.

THE FOUNDERS



Evan Petkov

Background in Energy Engineering. PhD with emphasis on building sector decarbonization from ETH Zurich.



Jordi Campos

Research background in Energy Optimization. Masters in Physics from ETH Zurich.

THE IMPACT

- ❏ Using Optiml can save 10-70% in CO2e emissions, depending on the asset (30% on average), leading to a potential cumulative GHG emissions savings of ~50 Mt by 2030.



THE CO-INVESTORS



innovation
endeavors

5. Setting the standard

POLICY IN PRACTICE

OUR COMMITMENT TO ESG OBJECTIVES

ESG Policy

At Planet A we acknowledge that everything we do affects our society and the environment. We see this as an opportunity and duty to integrate environmental, social, and governance (ESG) factors into our investment decisions and operational processes.

We have a dedicated ESG policy, which forms an essential element of support for all of our portfolio companies.

ESG Reporting and Transparency Portfolio Responses





100% No: aware of any current or pending ESG compliance or risk concerns

100% Yes: committed to providing timely information on ESG-related matters and fostering transparency regarding the company's activities

69% Yes: company's management committed to regular ESG-related training

Sustainability Clauses

We embed sustainability best practices into our term sheets and shareholder agreements. Our approach draws from standards set by Leaders for Climate Action. As part of our commitment, we ask our portfolio companies to implement the following measures:

-  Adopting a climate policy within 12 months (measure carbon footprint; set targets to become climate neutral).
-  Establishing ESG best practises.
-  Adopting a Diversity and Inclusion Policy within 12 months.
-  Including impact reporting obligations.





DIVERSITY AND INCLUSION IN VENTURE CAPITAL

The VC industry is home to one of the most homogenous workforces in the world, creating structural bias in investment decisions. Over 93% of VC dollars globally are controlled by white male partners. This denies perspectives, talent, and ideas that are needed to tackle society's most pressing issues.

At Planet A we recognize that access to the resources and opportunities to start a company are not equitably distributed in our society. We acknowledge our role and responsibility in addressing these issues. As an early-stage fund, we contribute to a more diverse and inclusive society and economy through our investments as well as our company culture.

As a VC fund, we aim to understand today what tomorrow will look like. Bringing in diverse and intersectional perspectives is one of the most potent ways to do this. This is why we launched Planet A's Diversity and Inclusion Policy in early 2022. For us, this is just the start.

[Diversity & Inclusion Policy](#) →

THE FIRST GERMAN SFDR ARTICLE 9 FUND

The European Union's new Sustainable Finance Disclosure Regulation (SFDR) requires all actors in the financial services market to disclose how they have integrated ESG considerations in their processes and how they assess sustainability risks. Planet A is classified as an Article 9 fund, meaning we pursue a **sustainable investment objective** that is aligned with the EU taxonomy. Any Article 9 fund must prove how it contributes to the environmental objective and must assess its investments against the principle of “doing no significant harm.”

Building on the SFDR framework, Planet A considers Principal Adverse Impacts of its investment decisions on sustainability factors such as: (1) a company's valuation and revenue; (2) its impacts related to GHG emissions, energy, biodiversity, water, and waste; as well as (3) social and employee dimensions including gender-based representation and pay.

[Read more](#) →

EU Sustainable Finance Disclosure Regulation

Article

6

Non-ESG
Funds



Article

8

Funds integrating
ESG characteristics



Article

9

Funds targeting
sustainable investments



STANDARD-SETTING ORGANIZATIONS WE COLLABORATE WITH



LEADERS
FOR
CLIMATE
ACTION.

Non-profit
empowering business
leaders to take action
on climate change



Network of Greentech
startups, investors,
and corporates



Advisory Board to the
German government
on sustainable
investments



German government
initiative to support
university/ scientific
spin-offs



IMPACT
VC

VC Community sharing
knowledge, tools and
resources



Commitment by financial
institutions with €18.8 trillion
AuM to prioritize biodiversity



Cleantech
for Europe

Bridging the gap between
the cleantech community
and EU policy-makers



TECH FOR
NET ZERO
ALLIANZ

Collaboration between tech
companies and the German
government to advance net-
zero technologies



Signatory of:
PRI Principles for
Responsible
Investment

UN-supported initiative to
advance responsible
investments

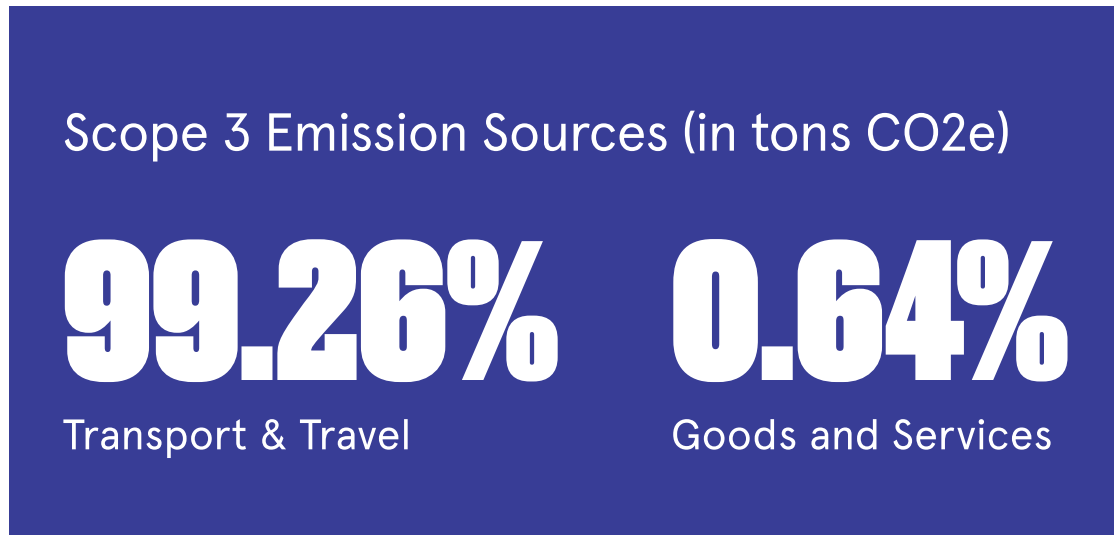
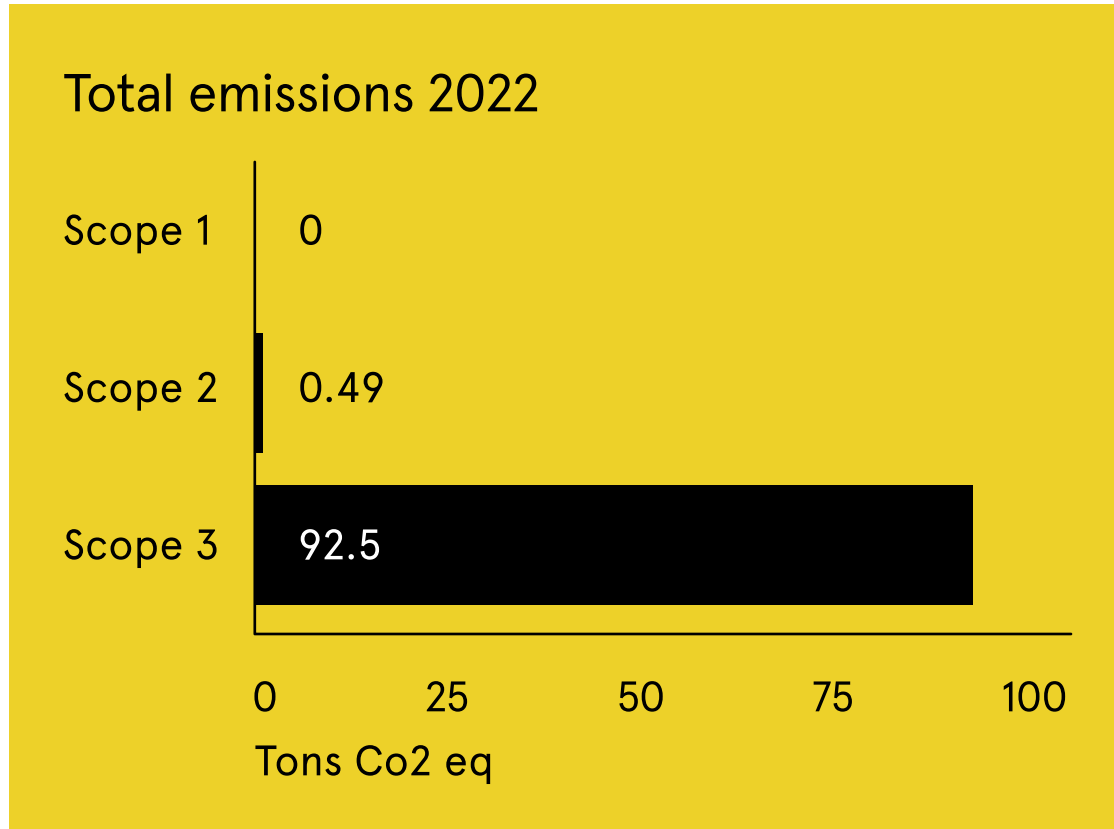
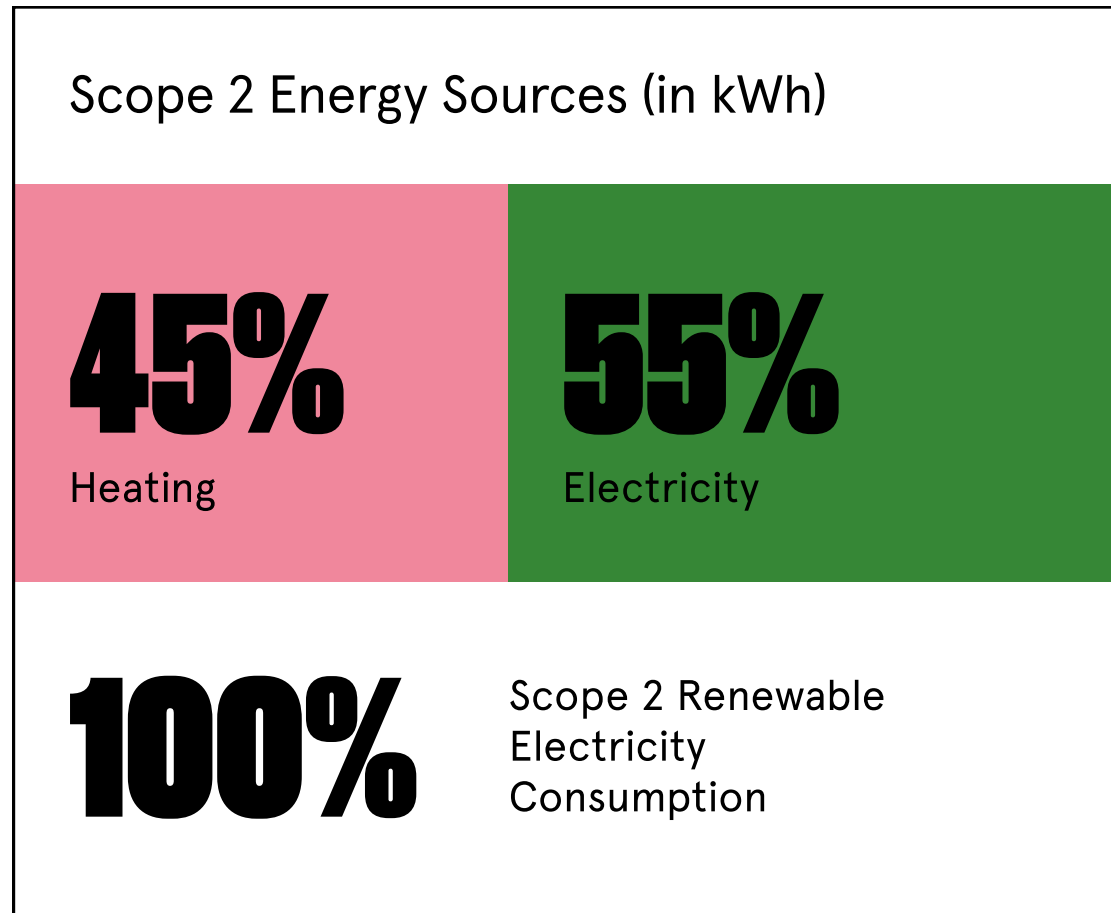
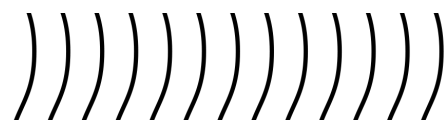




OPERATIONAL FOOTPRINT

At Planet A we optimize our operational footprint, for example by minimizing travel, our biggest source of GHG emissions.

While we have entirely offset our emissions in 2021, we decided to be more ambitious in 2022 and invested in **carbon removal** only. What's the difference? Traditional offsets result in emitted carbon staying in the system. Carbon removals actually take carbon out of the system. Based on criteria like permanence, additionality, transparency, and verifiability, we opted for a mix of technological and biological removal options.





**BUILDING
THE ECONOMY
OUR PLANET NEEDS**