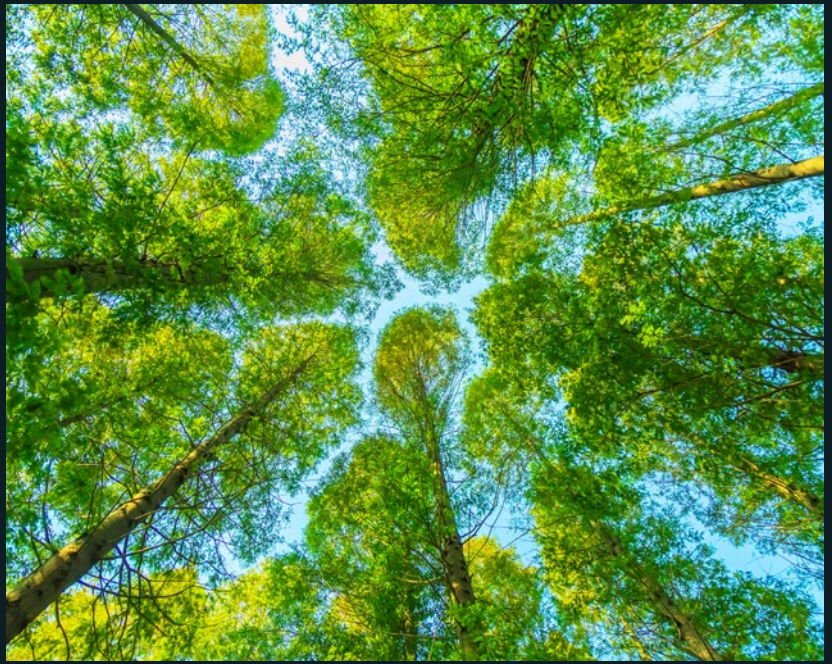




Impact Report 2023

Published 2024





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This report details Ooni’s impact on people and planet in 2023. It also sets out our new approach to measuring and managing our impact under our new Regenerative Business Strategy.

About Ooni

People around the world can now bake restaurant-quality pizza at home in as little as 60 seconds. That's possible because our award-winning portable ovens quickly reach very high heats. And *that's* possible because Ooni is excited about doing things differently and better.

Founded by the pizza-loving couple Kristian Tapaninaho and Darina Garland, we're a B Corp based in bonny Scotland, with around 300 team members in the UK, US and Europe.

Our ovens run on hardwood pellets, wood, charcoal, gas or electricity so there's an Ooni for everyone, along with brilliant accessories, ingredients and merchandise. You'll find us [online](#) or at some of the world's most trusted global retailers. Go ahead and enjoy great food and good times with friends or family – whether that's pizza, bread, meat or veg.

Our key products	Koda 16 Oven	This gas-powered outdoor oven can bake two 12" pizzas or three 10" pizzas at a time	
	Karu 16 Oven	Wood-powered, or powered by a separately available gas burner, this outdoor oven can handle pizzas up to 16"	
	Volt 12 Oven	This indoor or outdoor electric oven can bake pizzas up to 12"	
	Perforated Pizza Peel	This lightweight aluminium utensil helps you manoeuvre pizzas with ease, for the perfect base	
	Digital Infrared Thermometer	This laser-guided, precision tool can read extreme temperatures to help you get great results every time	
	Dough Balls	These time-saving frozen balls are made with '00' Caputo Pizzeria flour, at the perfect size for 12" pizzas	

Foreword



Ooni is all about the joy of bringing people together around food. Increasingly, we're helping people to do this in ways that take care of our planet.

This report highlights our social and environmental impact during 2023, building on the momentum and successes of previous years.

We started the year on a high, as we became a certified B Corp in January. This recognises our social and environmental commitments and achievements, and our reporting transparency.

I'm also particularly proud of our climate action, supply chain visibility and employee volunteering achievements in 2023. We measured our total greenhouse gas (GHG) emissions more precisely than ever, giving us an improved baseline to measure our future performance. We examined how we can better identify and manage any potential social and environmental issues in our supply chains. And our employees tripled their volunteering days, benefiting causes including urban biodiversity and refugee support.

On our tenth birthday in 2022, Ooni announced our ambition to become a regenerative business. Our focus throughout 2023 was defining how to achieve that ambition by 2050, and developing a long-term Regenerative Business Strategy to get us there. This report introduces that strategy, and the new thinking behind it.

Ooni is now entering its teenage years – a time of huge transition and growth. This will be a challenging period but also an energising and transformative one. While we have a mammoth task ahead, with the whole Ooni community behind this, I'm excited about what we'll achieve in 2024 and beyond.

Keep on cooking,

Darina Garland
Co-CEO and Co-Founder

“Ooni is now entering its teenage years – a time of huge transition and growth. This will be a challenging period but also an energising and transformative one.”

This report relates to all Ooni businesses/subsidiaries (Ooni Inc, Ooni GmbH, Ooni SAS, Ooni Canada Inc, Ooni Finland Oy, Ooni Srl, Ooni International Trading Shanghai Co Limited, Ooni Pty Limited, Ooni NZ Limited, Ooni AB and Ooni Norway AS).

Our 2023 progress

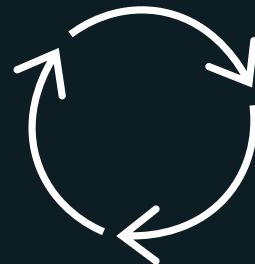
At Ooni we've grouped our social and environmental impact work under six pillars, reflecting the nature of our business:



CLIMATE ACTION



IMPACT FUND



ZERO WASTE



SOCIAL RESPONSIBILITY



COLLECTIVE ACTION



TRANSPARENCY

Climate action

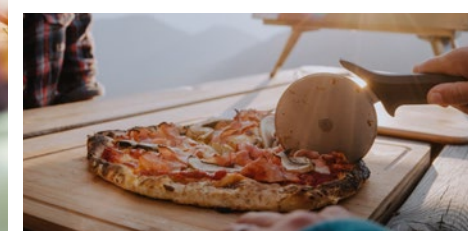
Reducing our greenhouse gas emissions

The latest climate science indicates that human-made greenhouse gas (GHG) emissions have already breached the level that nature can safely absorb, pushing global temperatures beyond safe limits and putting us on track for an uncertain future. Put simply, the world needs to take urgent action to reduce GHG emissions.

That's why we at Ooni are committed to achieving net zero operational and value chain (scope 1, 2 and 3) GHG emissions as soon as possible:

- **Scope 1** – direct emissions from sources owned or controlled by us
- **Scope 2** – indirect emissions from generating electricity, heat or steam that we purchase and use in our operations
- **Scope 3** – all other indirect emissions from our value chain as a result of sourcing, making, shipping, using and disposing of our products, and employee commuting and business travel

Understanding the source of our GHG emissions is the first step to eliminating them by doing things differently. We already knew that the vast majority of our GHG emissions are scope 3. In 2023, we collected data to calculate our first full organisational GHG footprint for 2022.



Climate action continued

In October, we also began to conduct life cycle analyses (LCAs) of key products to understand their whole-life GHG emissions and wider environmental impacts. These will conclude in early 2024.

Together, this knowledge will enable us to draw up targeted action plans to limit our impact on the climate.

Overall, **our 2022 total GHG emissions reduced by almost 27% compared to 2021** (see Table 1 and the Appendix). Our reduced scope 1 emissions are mainly due to using a more accurate way to assess the impact of refrigerant use in our offices. Improved methodologies also affected some of our scope 2 and 3 calculations.

A key driver of our increase in scope 2 emissions was a dramatic increase in our electricity consumption, largely because of a return to office working after the COVID-19 pandemic, and our US team moving to a bigger office in Austin.

While our scope 3 emissions decreased overall, not all of the changes in our emissions are fully explained. We'll continue to evolve our data collection and methodology for our 2023 carbon footprint.

Table 1: Our scope 1, 2 and 3 GHGs, 2022

Scope	Tonnes of carbon dioxide equivalent (tCO ₂ e)	% change since 2021
Total scope 1	23.48	-77.78%
Total scope 2	125.98	+515.14%
Total scope 3	219,339.43	-26.74%
Total emissions	219,489	-26.72%

See the Appendix for a full breakdown of the emissions and an overview of our methodology and assumptions.

Carbon removal/credits

Working with the carbon removal specialists [Cur8 Earth Limited](#), we have committed to removing 818 tonnes of CO₂e emissions (equivalent to our total emissions over 10 years) in a way that's expected to last for at least 500 years.

Spread across Europe, North America and Oceania, our diverse carbon removal portfolio includes biochar,¹ direct air capture, bio-based construction materials (cross-laminated timber), afforestation and reforestation, soil carbon and enhanced rock weathering.

These methods remove (retire) carbon at different rates. In March 2023, 328 of our biochar and bio-based construction materials credits were retired, which is equivalent to 328 tonnes of CO₂e. We know we have a long way to go but are proud of this start.

1 A stable form of charcoal made from biomass including crop and forestry residue by pyrolysis, preventing carbon emissions from rotting or combustion. Used as a soil amendment, it stores carbon, and improves soil health and water retention.

Reducing our energy use

Following an Energy Savings Opportunity Scheme audit, we adopted multiple measures in our UK offices in 2023 to reduce our energy consumption (see box).

2023 activities to reduce GHG emissions from our UK premises

- Replaced all high bay lights with LEDs and all fluorescent lights with dimmable LEDs
- Serviced boilers regularly and replaced worn/old parts
- Re-sealed doors to reduce draughts
- Serviced and cleaned down air conditioning units, and replaced broken fans in the compressor unit
- Changed more of our energy supply to renewable tariffs
- Encouraged power saving, e.g. switching off lights and appliances when not in use
- Shut down office completely during quiet periods
- Started switching to smart meters to track our consumption more closely
- Changed some heating to automatic programming

“Our ambition is to be a regenerative business by 2050.”

In 2024 we will:

- Finalise and start implementing our net zero plans
- Submit Science-Based Targets to reduce our scope 1, 2 and 3 GHG emissions for validation by the [Science Based Targets initiative](#) (SBTi)
- Complete our product LCAs to model our pathway to net zero
- Develop design principles to reduce the carbon impact of all aspects of our products

Next steps

Impact Fund

Through our membership of 1% for the Planet, in 2023 we continued to dedicate 1% of our Fyra oven revenues to support primarily environmental causes, along with additional donations to organisations supporting various valuable causes.

- In 2023, we spent a total of £519,476, including:**
- A £100,000 donation to the Red Cross to support emergency relief efforts following earthquakes in Syria/Turkey
 - Over £80,000 in donations to multiple organisations working to provide food security and hunger relief in Scotland, the US, Canada, Australia, Italy, Germany, France and Finland
 - £150,000 to sponsor Eden Reforestation's ecosystem restoration work as part of our ongoing partnership (see following pages)

We made our Impact Fund more global to reflect our increasing worldwide presence, donating funds to organisations that enhance food security and livelihoods (see map).

During 2023 our strategy development work included reviewing how to best deploy our Impact Fund. This meant that we deprioritised communication strategies until 2024/2025.



Organisations supported by Ooni



Organisations	International	UK
	Let's Food Red Cross Eden Reforestation Projects	Brave Trails Bumblebee Conservation Trust Fareshare River Kids Scran Academy The Space @ Broomhouse West Lothian Food Bank
Canada	Second Harvest	
Finland	Hope yhdistys	
Germany	Obstkäppchen	
Italy	Banco Alimentare	
Philippines	Communities Organised for Resource Allocation	
Thailand	Pariah Dogs	
Ukraine	Pizza for Ukraine	
		USA
		Ace Hardware Foundation Central Texas Food Bank Feeding Texas Outright International (global) SeedMoney Slice Out Hunger Venture Out Project

Example charity partnerships during 2023

Obstkäppchen

Obstkäppchen supports people aged over 65 to eat healthily by regularly providing bags of groceries while also reducing their loneliness by having a cuppa and a chat with them. In 2023 we donated €27,044 to help this organisation support vulnerable people in Germany.

Second Harvest

With a vision of 'No waste, no hunger', Second Harvest distributes surplus edible food from businesses to food-insecure Canadians. By offering a combination of cash and in-kind donations worth CA\$8,649, we helped Second Harvest continue to raise funds via their seasonal raffle event, and provide 260,330 nutritious meals – and the fight against climate change.

Outright International

Outright International advocates for global lesbian, gay, bisexual, trans, intersex or queer (LGBTIQ) inclusion and equality, through research and collective activism. Our £10,000 donation enabled the organisation's global research, critical advocacy to overcome discriminatory laws and practices around the world, and grant-making work.

Eden Reforestation Projects

In this fifth year of our partnership with Eden, our sponsorship supported the restoration of critical mangrove coastal ecosystems in Eastern Kenya that have been depleted by historic commercial overexploitation.

With our support, Eden has planted just over 1 million trees at this site in 2023. It has also employed an average of 18 people per month, strengthening local livelihoods, health and resilience. During the first three years of our partnership, we sponsored the planting of 3.3 million mangrove trees in Madagascar, which continue to protect areas from storm surges and support many people's livelihoods.

"There's more than enough food to feed everybody, it's just a matter of making that connection."

Lori Nikkel
Second Harvest CEO

"Ooni's partnership has played an integral role in Outright's growth and successes over the last three years."

Outright International



JOEL MUNIZ / UNSPLASH



EDEN

In 2024 we will:

- Refine our approach to donations in line with our long-term ambition to become regenerative
- Continue seeking to maximise the impact of our donations and our strategic charitable partnerships

Next steps

Zero waste



At Ooni, we aim to eliminate all unnecessary waste from our operations, products and packaging.

Our packaging

In our packaging, we strive to use materials with the lowest possible end-of-life impact. We also educate and empower the Ooni community to dispose of our packaging responsibly when they no longer need it.

In 2023, we sought to increase the amount of our packaging that uses materials which are widely recyclable in the UK, including recycled pulp, cardboard cartons and biodegradable plastic bags.

Our products

Product design is key to reducing waste. We design our products to be long-lasting by using high-quality manufacturing materials. Our product team is increasingly focusing on product circularity to reduce waste further.

Operational waste

In 2023, 79% of our UK operational solid waste was recycled and a further 21% was sent to Energy from Waste facilities to generate energy for the grid. This means that **we sent zero UK operational waste to landfill.**

As part of our forthcoming Regenerative Business Strategy, we're looking to significantly increase the scope of our ambitions and activities on other kinds of waste.

In 2024 we will:

- Strive to maintain our zero operational waste to landfill achievement
- Develop a plan to meet our waste targets in line with our new Regenerative Business Strategy (see page 24)

Next steps

"We strive to use materials with the lowest possible end-of-life impact."

Social responsibility

For us at Ooni, social responsibility means being a good, diverse and inclusive employer who helps everyone to feel free to be themselves and fulfil their potential at work. It also means ensuring that our direct and indirect suppliers treat their employers and workers well.

Diversity, equity and inclusion (DEI)

At Ooni we always strive to treat our employees fairly and equitably, and help them to thrive. We achieve this through our company culture and a suite of formal policies.

We protect everyone's right to respectful, equitable treatment and equal opportunity, irrespective of their age, gender, sexual orientation, ethnicity, country of origin, disability, socio-economic background, or any other characteristic, even in places where the law doesn't protect those characteristics.

In 2023 we **conducted a DEI survey to understand more about our team's demographics, get their honest feedback on our DEI performance** and initiate discussions around these vital areas.

Reflecting our workplace culture, we enjoyed a large team turnout at Pride events in Edinburgh and Austin, and friendly yet competitive office cook-offs during Pride month.



Supply chains

Like many businesses, we rely upon many suppliers across the world for our goods and services. **Strengthening transparency and accountability right along our supply chains** was a big focus area for us in 2023.

We're committed to upholding the human rights of everyone involved in our business. Our manufacturers must sign up to our Supplier Code of Conduct, which aligns with the [Ethical Trade Initiative base code](#).

In 2023, we started developing systems and processes to better map, measure and manage improvements throughout our supply chains.

We also joined the Sedex supply chain assessment platform and started using its approach to support human rights due diligence (HRDD) relating to suppliers of our hard goods (ovens and pizza-making accessories). This involved using their supplier self-assessments and [SMETA](#) audits to identify social and environmental risks.

We developed a Human Rights policy that aligns with the [UN Guiding Principles on Business and Human Rights](#). While some of our planned HRDD work was delayed by resource constraints, we conducted initial work on developing an HRDD framework to identify and act on any potential human rights issues in our supply chains in future. We also commissioned our own third-party audit for a possible natural stone supplier, and an external expert risk assessed the provider of outsourced customer service agents in the Philippines.

For more information on this area, please see our [2023 modern slavery statement](#).

Subsidiaries, business operations and suppliers



Subsidiaries		Operations		Direct suppliers	
USA	Ooni Inc	UK	2 offices (243 employees) 6 distribution centres	China	Majority of ovens and accessories, merchandise patches, apron, gloves, notebook
Germany	Ooni GmbH	Germany	Bonn office (14 employees)		
China	Ooni International Shanghai Trading Co Limited	USA	Austin office (70 employees) 7 distribution centres		
Canada	Ooni Canada Inc	Canada	1 distribution centre (3 employees)	UK	Dough trays, firestarters, wood logs, wood pellets, groceries products
Australia	Ooni Pty Limited	Netherlands	1 distribution centre	Italy	Groceries products
New Zealand	Ooni NZ Limited	Philippines	Outsourced customer service (3 employees)	Hungary	Groceries products
France	Ooni SAS	Thailand	Customer service (1 worker)	Lithuania	Wood logs
Italy	Ooni S.R.L.	China	Shanghai office (4 employees)	USA	Wood logs, wood pellets, groceries products
Finland	Ooni Finland Oy	Australia	Melbourne office (4 employees)	Greece	Groceries products
Sweden	Ooni AB	New Zealand	4 employees, 1 distribution centre	Spain	Groceries products
Norway	Ooni Norway AS	Sweden	2 employees	Czech Republic	Cookbook
		Spain	2 employees	Bangladesh	Sweatshirts and t-shirts (printed in UK)
		Italy	5 employees	India	Tote bags
		Finland	1 employee		
		France	3 employees		

All graphic information is accurate as of the end of Ooni's financial year, 31 December 2023
Ooni Modern Slavery Statement 2023, published May 2024

Social responsibility continued

Looking after our people

Our employees really matter to us – Ooni wouldn't be Ooni without them. We explicitly foster emotional and mental wellbeing at work and we pay our teams around the world a real living wage that reflects the actual cost of living.

In 2023 we were delighted to be named one of Built In's Best Midsize Companies to work for in Austin, Texas, recognising our workplace culture, compensation and benefits.

We launched several initiatives to support our employees' health and wellbeing during the year. This included providing access to therapeutic support and tools through the BetterHelp and LinkedIn Learning platforms, covering topics such as wellbeing in the workplace and managing anxiety.

Our new menopause policy outlines the adjustments we provide to anyone experiencing difficulty at work because of mid-life hormonal changes. And we introduced Summer Fridays, enabling employees to enjoy Friday afternoons off during July and August, to help them balance personal and work life, and enjoy some extra time off however they choose.

Alongside this, we expanded in-work training opportunities for our employees, to support their learning, development and careers. This included sessions on Building High Performing Teams, and Mastering Crucial Conversations & Feedback. In total, 369 learners benefited from 60 of these sessions. We launched an Essential Learning Programme through LinkedIn Learning, and promoted training opportunities through a Learning at Work week.

Our pensions

Pensions are a powerful way to help shape a better future. According to financial advocacy group Make My Money Matter, having a green pension is 21 times more powerful at cutting individual carbon emissions than the combined impact of giving up flying, becoming vegetarian and switching energy provider.

“Ooni, a huge thank you. Your kindness made our Christmas so special! We will be taking the oven with us on our sailing expeditions.”

SailFuture

In line with our membership of the Green Pensions Charter and as mentioned in our previous Impact Report, in January 2023 we **switched our default UK pension fund to be ethical** (the Aegon Ethical Managed Flexible Target ARC fund). At the same time, we increased our employer match contribution from 4% to 6%.

The Wow project

Through this project, we humanise our relationship with our customers and others by delighting them in small, unexpected ways. This included sending 200 handwritten cards, 490 merchandise gifts, and 300 custom Etsy items.

We donated an oven to non-profit child welfare organisation SailFuture, enabling teenagers in a Florida foster home to make themselves pizzas.

In 2024 we will:

- Continue to build internal systems to enhance our supply chain visibility
- Further develop our human rights due diligence framework
- Ensure that our strategy covers goals that ensure access to life's essentials for our people, and ensure that we give back to communities

Next steps

Collective action

Together, we're powerful. One way that Ooni strives to support social and environmental progress is by encouraging and enabling our team members around the world and the global Ooni community to work with us for positive change.

Through Career Ready, one employee mentored a student from Broxburn Academy, which included a four-week paid internship at Ooni. The student was close to dropping out of school, but has now decided to continue their education and progress to university.



"To pack 3,245 bags with a team of only four staff is simply not possible. Thankfully Ooni were able to provide nearly 400 hours of support. We are extremely grateful for the amazing support from Ooni, and its staff who always go above and beyond for us."

Stephen Newman
Manager, River Kids

Employee volunteering

We were delighted that so many of our employees took the opportunity to volunteer for their chosen cause during their salaried working hours during the year. We created a #volunteering channel to make it easier to find volunteering opportunities, which led to an increase in volunteering and several new charity partnerships.

In 2023, our employees more than tripled their volunteering days to 294.

These people used their time and skills to support issues including refugee support, tackling homelessness, urban biodiversity, food growing and painting community spaces.

In December, 48 of our employees collectively supported the Scottish charity River Kids over several days, packing hundreds of seasonal gift packages for children who would otherwise likely not receive Christmas gifts. This helped the charity to brighten up Christmas for 3,245 children.

Ooni Day

Ooni Day is our annual celebration to bring people together while raising money for our charity partners around the world. For every pizza registered on 20 May, we made a donation to our chosen charities.

In 2023, we raised a total of £78,041. This included our initial donation of £50,000 and an additional £28,041 – £1 for each pizza registered by a member of the Ooni community that day. We're delighted that our supporters registered over 25% more pizzas compared to 2022, increasing our Ooni Day fundraising total as a result.

This enabled us to support nine charities around the world who are tackling food insecurity in various ways, for example by distributing surplus food to families who need it, influencing progressive food and agriculture policies, and helping to support the livelihoods of remote fishers.

In 2024 we will:

- Continue to support our employees in contributing to causes that matter to them as part of making Ooni a great place to work

Next steps

Transparency

Becoming a certified B Corp in January 2023 was a significant milestone for us. While we were pretty close to the threshold with a score of 80.1, we were delighted to have made the grade. The rigorous assessment and verification process took 18 months and spanned our governance, and how we treat workers, customers, communities and the environment.

We've published annual modern slavery statements since 2021. Reflecting good practice, these documents clearly outline our structure, activities and supply chains, and the steps we take to prevent, monitor and address any human rights risks associated with our business.

During 2023, as part of evolving our internal governance in support of enhanced transparency and accountability, we established a Core Compliance Team. This team comprises senior cross-functional representation with the purpose of driving business-wide information and clear ownership of each law and regulation that applies to Ooni. This set up and accompanying processes also enhance our ability to assess trends in legislation – particularly those that are disclosure-related – and prepare accordingly.

"Strengthening transparency and accountability right along our supply chains was a big focus area for us in 2023."

In 2024 we will:

- Continue to evolve our disclosures on, and work to combat modern slavery and other human right abuses
- Report against our Regenerative Business Strategy for the first time

Next steps



Introducing our new approach

Our ambition to become a regenerative business

In 2022, Ooni announced our ambition to become a regenerative business. For us, this means becoming a business that helps to create conditions for all life to thrive. **We want to go beyond causing zero harm to people and planet – we want to have a net positive effect, with restorative and regenerative impacts.** This is a world away from the conventional approach of doing a little less harm each year, without the context of longer-term, planet-aligned objectives.

In 2023, we defined what becoming a regenerative business would mean for us, then commenced an in-depth process to define the long-term outcomes, and shorter-term business targets, we must deliver to achieve our ambition by 2050. This involved transforming our previous strategic approach and six impact pillars.

Our new Regenerative Business Strategy reflects our new approach, and our understanding of how all of our actions and impacts interact.



Developing our Regenerative Business Strategy

Our starting point was understanding what's happening to the world and defining what we need to do (or not do) in response.

We know the world is facing social and environmental system collapse triggered by human behaviour, including climate breakdown, biodiversity collapse, and ever-growing inequalities.

In assessing what we must do to help counteract this, we drew on world-class scientific and economic research. We based our approach on the knowledge that sound business, a healthy society and a thriving planet are interdependent, and that the legacy of colonisation continues to drive current social, economic and environmental injustices.

This included:

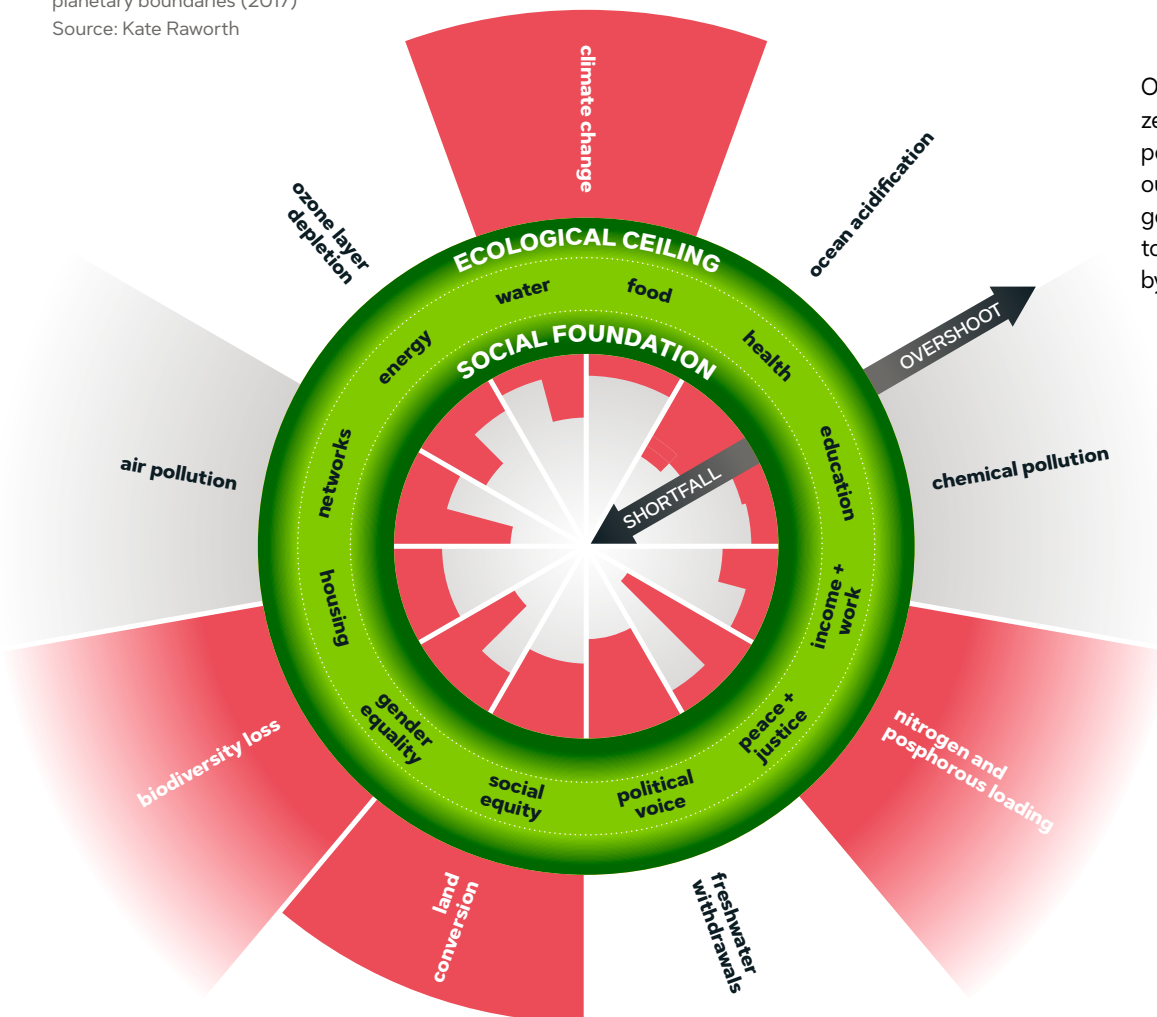
- **Planetary boundaries:** nine safe limits we need to remain within to keep Earth's vital systems stable and resilient
- **Doughnut Economics:** which defines a 'sweet spot' within ecological and social limits that ensures our global economy can meet 'the needs of all people within the means of the planet'
- **Emerging regenerative thinking**

As it aligns with both regenerative ambitions and business needs, we used the [Future Fit Business Benchmark](#) to provide the core architecture for our strategy:

- Its eight focus areas which outline how any business can affect the world around it influenced our nine Regenerative Business Goals
- Its 23 Break-Even Goals influenced our zero harm targets under each goal
- Its 24 [Positive Pursuits](#) influenced our net positive targets

Only by achieving both our zero harm targets and net positive targets will we meet our regenerative business goals, and our ambition to be a regenerative business by 2050.

The Doughnut of social and planetary boundaries (2017)
Source: Kate Raworth



Our strategy at a glance

A step change

From late 2024, this new strategy will inform all of our actions, and how we report and measure our success.

This involves a real step change – transforming our impact rather than making incremental improvements.

It means transforming and measuring our success in terms of our impact on people and planet. It means we're on a path to actively stop – and, in time, reverse – any social and environmental harm associated with our business and supply chains. And it means increasingly ensuring that we and others adopt regenerative practices.

We know that this is incredibly ambitious. If you or a business you work with are on a similar journey, or if you would like to find out more, please get in touch!

1 Climate



2 Water



3 Local Environment



4 Products



5 Waste and Pollution



6 People



7 Supply Chains



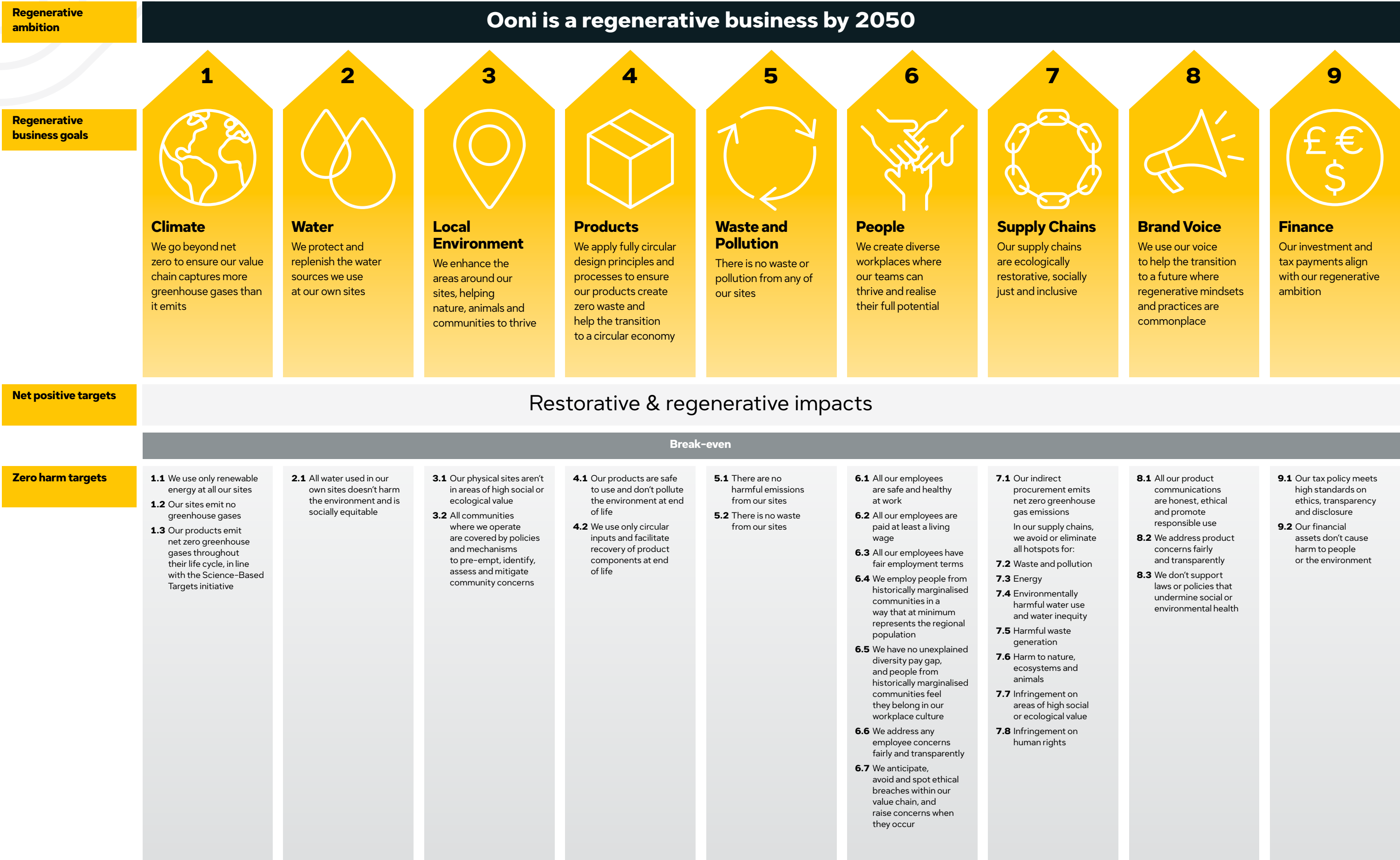
8 Brand voice



9 Finance



Ooni Regenerative Business Goals and Targets



Our plans for 2024

Our focus in 2024 will be knowledge-gathering to help us begin implementing our Regenerative Business Strategy from 2025.

We will:

- Commence a double materiality assessment in line with best practice to determine the highest priority actions based on what the world and our key stakeholders most need from us.
- Prepare to baseline our current performance in all target areas against relevant external frameworks and break-even points.
- Use this knowledge to start developing and prioritising specific action plans for each of our targets. Our impact on the climate will be a priority focus as we're ahead in this area and want to maintain momentum.
- Start putting key enabling factors in place, including key roles and responsibilities, decision-making and reporting systems, internal and external stakeholder engagement, and research and development.

Our status as a certified B Corp will also help us to keep us on track, supporting appropriate internal controls and governance in place.



Appendix Greenhouse gas footprint

We calculated our greenhouse gas (GHG) emissions in a carbon footprint for 1 January to 31 December 2022. This appendix provides information on our footprint, and key underlying methodologies and assumptions. We will report on our 2023 carbon footprint in 2024.

GHG footprint scopes and categories

Scope 1 direct: company facilities and vehicles

Scope 2 indirect: purchased electricity, steam heating and cooling for our use

Scope 3 indirect (upstream): purchased goods and services, capital goods, fuel- and energy-related activities, transportation and distribution (T&D), waste generated in operations, business travel, employee commuting and leased assets

Scope 3 indirect (downstream): processing of sold products, use of sold products, end-of-life treatment of sold products, leased assets, franchises and investments

Ooni’s carbon footprint

We believe the almost 27% reduction in our carbon footprint from 2021 to 2022 (see table) was largely due to better quality data and fewer assumptions in calculations.

Other notable factors affecting a change in our year-on-year emissions include:

- Scope 2: we dramatically increased our electricity consumption, from 94,000kWh to 318,000kWh. Including our Australian premises in our 2022 calculations accounts for 15% of this increase. Other key drivers were our employees returning to our offices after mostly working remotely during the COVID-19 pandemic, and our US team moving to a much bigger office in Austin.

- Scope 3 product-related categories: emissions related to sourcing and manufacturing of hard goods and inbound transport significantly decreased due to fewer products being manufactured in 2022. In contrast, grocery-related emissions (packaging and outbound transport) increased in line with sales. The reduction in emissions relating to use of sold of products is largely as a result of changing our method of calculation.

- Scope 3 other purchased goods and services: Emissions from our indirect procurement increased in 2022, reflecting a three-fold increase in spend from 2021.
- Scope 3 downstream transport and distribution: Our emissions from outbound transport increased overall due to higher volumes of orders and returns, and more accurate calculations.
- Scope 3 business travel and employee commuting: Emissions in these areas increased because of an increase in global headcount and a return to pre-COVID working methods, alongside our ‘Ooni is 10’ celebration event in Edinburgh to which we invited all our global employees

“Our product team is increasingly focusing on product circularity to reduce waste further.”



Table 2: Ooni GHG footprint, 2021–2022

Scope	Emissions category	tonnes of carbon dioxide equivalent (tCO ₂ e)	% of total	tCO ₂ e	% of total
	Total scope 1	105.7	0.04%	23.48	0.01%
1	Testing fuels	2.25	0.00%	2.95	0.00%
1	Refrigerants	91.28	0.03%	6.57	0.00%
1	Natural gas	12.17	0.00%	13.96	0.01%
	Total scope 2	20.48	0.01%	125.98	0.06%
2	Electricity (location-based)	30.38	0.01%	125.98	0.06%
2	Electricity (market-based)	20.48	0.01%	108.76	0.05%
	Total scope 3	299,386	99.96%	219,339.43	99.93%
3	Purchased goods & services (total)	122,360	40.85%	98,975.09	45.09%
	Raw materials (including Groceries, Fuels, & Merchandise)	97,683.29	32.61%	52,215.78	23.79%
	Manufacturing energy	5,636.48	1.88%	4,995.64	2.28%
	Ooni packaging	9,866.88	3.29%	4,321.80	1.97%
	Warehouse packaging	146.45	0.05%	463.58	0.21%
	Grocery packaging	314.64	0.11%	7,172.71	3.27%
	Other purchased goods & services (+ capital goods 2022)	8,712.39	2.91%	29,805.58	13.58%
3	Fuel & energy-related activities (FERA)	11.47	0.00%	24.87	0.01%
3	Upstream T&D	7,929	2.65%	4,570.23	2.08%
	Upstream T&D China movements	898.99	0.30%	135.55	0.06%
	Upstream T&D inbound freight forwarders	7,030.31	2.35%	4,264.64	1.94%
	Upstream T&D – inbound groceries	Not included	–	96.51	0.04%
	Upstream T&D – FedEx	Not included	–	73.53	0.03%
3	Waste	0.3	0.00%	0.51	0.00%
3	Business travel	34.42	0.01%	506.48	0.23%
3	Employee commuting	57.6	0.02%	63.68	0.03%
3	Downstream T&D	10,106.92	3.37%	43,416.25	19.78%
	Downstream T&D outbound	9,734.41	3.25%	23,252.78	10.59%
	Downstream T&D Amazon	113.08	0.04%	1,366.20	0.62%
	Downstream T&D returns	142.91	0.05%	1,187.86	0.54%
	Downstream T&D delivered at place (DAP) + delivered duty paid (DDP)	110.8	0.04%	17,386.82	7.92%
	Downstream T&D groceries	5.72	0.002%	222.59	0.10%
3	Use of sold products	152,963.09	51.07%	68,878.10	31.38%
3	End of life	5,922.99	1.98%	2,840.54	1.29%
	TOTAL	299,512		219,489	

GHG footprint methodology and assumptions

Consultancy firm Ape calculated the scope 1, 2 and 3 emissions associated with our business activities during 2022. All data was sourced and assessed in line with the latest reputable sources and reporting guidelines, notably UK Department for Environment, Food & Rural Affairs conversion factors, national calculations, Ecolnvent analyses of specific materials and processes, Government Environmental Reporting Guidelines and peer-reviewed academic literature.

Our calculations multiplied the weight or consumption of key fuels, materials and resources by their relevant emissions factor, taking into account any other relevant considerations. Where applicable, fuel, shipping and freight emissions include well to tank (WTT) emissions.

Where data was unavailable, we calculated emissions based on the latest available figures, the closest available material or resource, or average weight/ distance travelled within that region, adjusted for volume of purchases/use/sales. Where data was unavailable for some of our sites, we estimated emissions based on the values per square foot at our Broxburn Unit 5 site, adjusted for the square footage of the site in question. Where datasets were unfeasibly large, we based calculations on random data samples.

Unless specified otherwise, we assumed that all road freight was completed by an average rigid heavy goods vehicle fuelled by diesel (except FedEx deliveries and return of sold products, which we assumed were completed by a diesel-fuelled class 1 van with <1.5t capacity). We assumed that sea freight was completed by an average cargo ship (or roll-on-roll-off ferry where necessary), and that all road/sea freight carriers were loaded to an average level.



“Understanding the source of our GHG emissions is the first step to eliminating them by doing things differently.”



Key proxy calculations and assumptions are noted below.

Scope 1. Stationary combustion assumptions

- One litre of liquid oxygen weighs 1.1417kg
- Weld gas (20L) comprises argon (93%), CO₂ (5%) and O₂ (2%)
- Related products, e.g. various types of wood pellets or logs, have the same environmental impact

Scope 1. Fugitive emissions assumptions

- Various fridges and freezers used were classified as domestic refrigeration systems
- Air conditioning units were classified as small or medium stationary air conditioning systems, depending on their output

Scope 2. Emissions from purchased energy assumptions

- Utility-scale generation of solar electricity

Scope 3. Purchased goods and services

Finance and capital goods basis of calculations

- Goods and services with associated emissions in other categories, e.g. freight, business travel or raw materials, were assessed in those categories
- Each line of data was categorised into the supplier and their goods/services, and then Quantis spend-based emissions factors were applied

Raw materials: manufacturing assumptions

- Emissions factors for all unknown, blank and 'mixed' material types mirror the average of all named materials

Raw materials: fuels basis of calculations

- Emissions associated with the combustion of sold fuels are included in the use of sold products

Fuel assumptions

- Emissions factors of diesel, natural gas, LPG, biomass, solar and water are universal
- Biomass consumed by manufacturers have the same emissions factor as wood chips
- Ukraine's electricity carbon intensity mirrors that of the UK

Ooni packaging assumptions

- Plastic & paper and PVC & steel were each 50:50 by weight

Warehouse packaging basis of calculations

- Spend-based emissions intensity (kgCO₂e/£) for packaging at US warehouses was calculated based on applying data representative of UK warehouses to US warehouse packaging expenditure

- Cardboard packaging materials at EU warehouses were calculated in a similar way

Warehouse packaging assumptions

- Paper/low-density polyethylene (LDPE) was 50:50 by weight
- Self-adhesive paper and polypropylene (PP) backing was 50:50 by weight
- The tCO₂e/£ spent by US and EU warehouses on packaging mirrors that of UK warehouses

Groceries, merchandise and fuel packaging assumptions

- Wool was greasy wool

Other fuel- and energy-related activities assumptions

- Weld gas (20L) comprised argon (93%), CO₂ (5%) and O₂ (2%)

Scope 3. Upstream transport and distribution

China movements basis of calculation

- Data included shipment weight, type, loading address, shipping port, origin port and sometimes destination address
- We multiplied the distance (km) between the loading address and origin port by the shipment weight (t) to achieve a t.km value for each shipment
- For shipments in Wenzhou, we calculated both the distance and subsequent t.km relating to transport from the origin port to the destination port, and between the destination port and destination address where possible
- Some China-based suppliers' T&D data was based on 2021

China movements assumptions

- Each country's loading/destination address was a primary port in that country

Inbound freight forwarders basis of calculation

- Where freight forwarding had a pre-calculated environmental impact, we used those values. Otherwise, we plotted a route between the origin and destination addresses, and calculated distance across various modes of transport. We multiplied distances by the weight of the freight (t) to achieve a t.km value.

Inbound groceries (US) basis of calculation

- The distance between the loading and shipping addresses (km) was multiplied by the weight of each shipment (t) to calculate t.km associated with each shipment. We then multiplied the t.km of distribution associated with each shipment.

Inbound FedEx basis of calculation

- For 'customer' shipments, we plotted a freight route between shippers' and recipients' addresses and calculated the distance of this route (km), then multiplied these distances by the weight of shipment (t) to achieve a t.km value associated with each mode of transport along one route.
- 'Product' shipments didn't include the recipient address, only the loading address and gross weight. To calculate associated emissions, we applied the average road and air distance associated with the 'custom' shipments.

Inbound FedEx assumptions

- The distance associated with product shipments mirrored the average distance associated with custom shipments

Scope 3. Waste generated in operations

Basis of calculations

- The waste stream outputs of the Broxburn units were split into general waste, mixed recycling, food waste, scrap metal, and Energy from Waste (EfW) residual waste, including the landfill and diversion-from-landfill rates associated with each stream.
- We calculated the weight of each waste stream that was landfilled or diverted from landfill during each month of 2022.

Assumptions

- The landfilling of EfW residual waste is the same as that of commercial and industrial waste

Scope 3. Business travel

- We calculated the distance between origin and destination locations for all travel across various modes of transport, then multiplied that by the number of passengers to determine the passenger.km
- Calculations considered air travel classification, travel class and vehicle classification

Scope 3. Employee commuting

Basis of calculations

- The average tCO₂e/employee per month of commuting, based on data representative of 2021, multiplied by the number of Ooni employees at the end of each month in 2022
- We excluded any data that gave identical home and office postcodes, although it's likely that these employees walked or cycled to work

Assumptions

- 'Carshare' meant two employees in one car
- Car journeys were in an average car fuelled by petrol, 'train' means the UK National rail service, 'bus' means local (not London) bus and 'tram' means light rail/tram
- An unspecified mode of transport means that employees travelled to work alone in a car
- 'Tesla' means an average battery powered vehicle according to DEFRA conversion factors

Scope 3. Downstream transport and distribution

Outbound (UK, EU, CA) basis of calculation

- Random samples of 500 rows of outbounds were collected for each region
- The distance between the shipment origin and destination was calculated using Google Maps API
- Average distance was calculated for each random sample from each region
- The average weight was calculated based on the total number of outbounds within each region (not the random sample)
- Average weight (t) was multiplied by the average distance (km) in each region's random sample to achieve an estimated average t.km within each region
- The total number of outbounds within each region was then multiplied by the region's average t.km to achieve a total estimated t.km for downstream T&D within each region

As there were only seven downstream T&D outbound shipments within the UK datasheet that required air distribution, the emissions associated with these shipments were calculated through the same t.km methodology, not a random sample

Downstream T&D – Outbounds US East, US West & US Kentucky basis of calculation

- Random samples of 500 rows of outbounds were collected for both US East and US Kentucky, and a random sample of 1,000 rows for US West
- All other calculations were made in the same way as outbound (UK, EU, CA)

Downstream T&D Amazon fulfilled by Amazon (FBA) basis of calculation

- Data was received regarding the downstream T&D Amazon (FBA) outbounds in 2022, representing Amazon outbound fulfilment throughout the UK, EU, US and CA regions
- Distances and weights were calculated in the same way as outbound (UK, EU, CA)

Downstream T&D Amazon (FBA) assumptions

- All road transport was completed by a Class 3 (<3.5t capacity) van, fuelled by diesel

Downstream T&D Amazon (Fulfilled By Merchant (FBM)) basis of calculation

- This data was representative of both UK and US outbounds
- Distances and weights were calculated in the same way as outbound (UK, EU, CA)

Downstream T&D – Returns (UK & EU) basis of calculation

- Data was received regarding the returning of sold products representative of both the UK and EU regions
- T.km associated with each return in UK and EU regions was multiplied by the total number of returns in each region to achieve a value associated with UK or EU returns

Downstream T&D – Returns of sold products (US & CA) basis of calculation

- Based on a random sample of 500 rows we calculated the average distance between the ship-to and destination zip codes. We then multiplied this average by the weight of each return to achieve a t.km value associated with each return.
- Where weights of returns were negative values, we assumed this was an inputting error and that these values were positive.
- The representative rate of returns for all US outbounds was applied to the total number of CA outbounds.
- This estimated number of returns were multiplied by the average t.km/outbound based on the average distance (km) of outbounds within the random sample, and the average weight (t) based on all CA outbounds.

- The estimated t.km associated with each return was multiplied by the estimated number of returns.

Downstream T&D – Returns of sold products (US & CA) assumptions

- The CA rate of returns mirrored the US rate

Downstream T&D – US DAP & DDP basis of calculation

- Data was representative of the UK, EU, US and CA regions.
- UK: The distance between the shipment origin and destination was calculated using Google Maps API. Distance (km) was multiplied by the weight of each outbound (t) to achieve a t.km value associated with each outbound shipment.
- EU DAP & DDP: We used a random sample of 500 rows from the full EU outbound dataset, then calculated distance using Google Maps API. We multiplied this average distance (km) by the average weight (t) of all EU DAP + DDP outbounds, to estimate t.km per outbound, then multiplied that value by the total number of DAP + DDP EU outbounds to get a total t.km value.

Downstream T&D – US DAP & DDP assumptions

- Emissions intensity (kgCO₂e/\$ spent) in the 2021 US DAP emissions section reflects the 2022 emissions intensity of US and CA DAP and DDP

Downstream T&D – Groceries basis of calculation

- We collected random samples of 500 rows of outbounds for the UK region, and 1,000 rows for the US region.
- We calculated the distance between the shipment origin and destination using Google Maps API.
- Average weight per shipment per region was calculated based on the total respective datasets. Average distance (km) was multiplied by average weight (t) to achieve the average t.km associated with each outbound, which we multiplied by the total number of outbounds in each region.

Scope 3. Use of sold products

Basis of calculation

- Data regarding the current and history sale of Ooni ovens and burners reflected 2018–2022.
- We formatted this into the total number of each oven/burner type sold each year from 2018–2022.
- Ovens/burners 'in-use' during 2022 is based on a five-year, 20% depreciation model: 100% of the number of ovens/burners sold in 2022, 80% of those sold in 2021, 60% of those sold in 2020, 40% of those sold in 2019 and 20% of those sold in 2018.

- The 2022 'in-use' figure was multiplied by the fuel rate of each oven/burner (through combustion of gas, wood logs or wood pellets), multiplied by the estimated number of hours that an oven/burner is used annually.

Assumptions

- Each oven is used for an average of 46.08 hours per year, based on our data.

Scope 3. End-of-life of sold products

Basis of calculation

We had no specific data relating to the end-of-life of sold products.

- For Ooni packaging, groceries, merchandise and fuels packaging and warehouse packaging, we applied regional rates of recycling to the total weight of all Ooni packaging to estimate the total weight of each material disposed of via recycling and landfilling.
- We estimated US warehouse packaging based on the packaging material composition and spend of UK warehouses. The US expenditure (£) was 4.26 times greater than the UK, so we estimated US warehouse use as 4.26 times each category of packaging.
- We estimated EU warehouse packaging by applying UK tCO₂e/£ associated with end-of-life of packaging to EU expenditure.

Assumptions

- All materials relating to the raw materials and raw materials (merchandise) sections were landfilled
- We applied UK regional recycling rates to all materials across Ooni, groceries and warehouse packaging materials because of a lack of regional-specific recycling rates.

Out of scope

- Emissions factors that represent the combustion of sources of bioenergy in the testing fuels, manufacturing energy and use-of-sold-products categories have a CO₂ value set to net zero. This accounts for the CO₂ absorbed by the bioenergy sources during their growth. We have accounted for the release of GHG and WTT emissions associated with extraction, refining and transportation of bioenergy sources before combustion.

“We want to have a net positive effect, with restorative and regenerative impacts.”





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