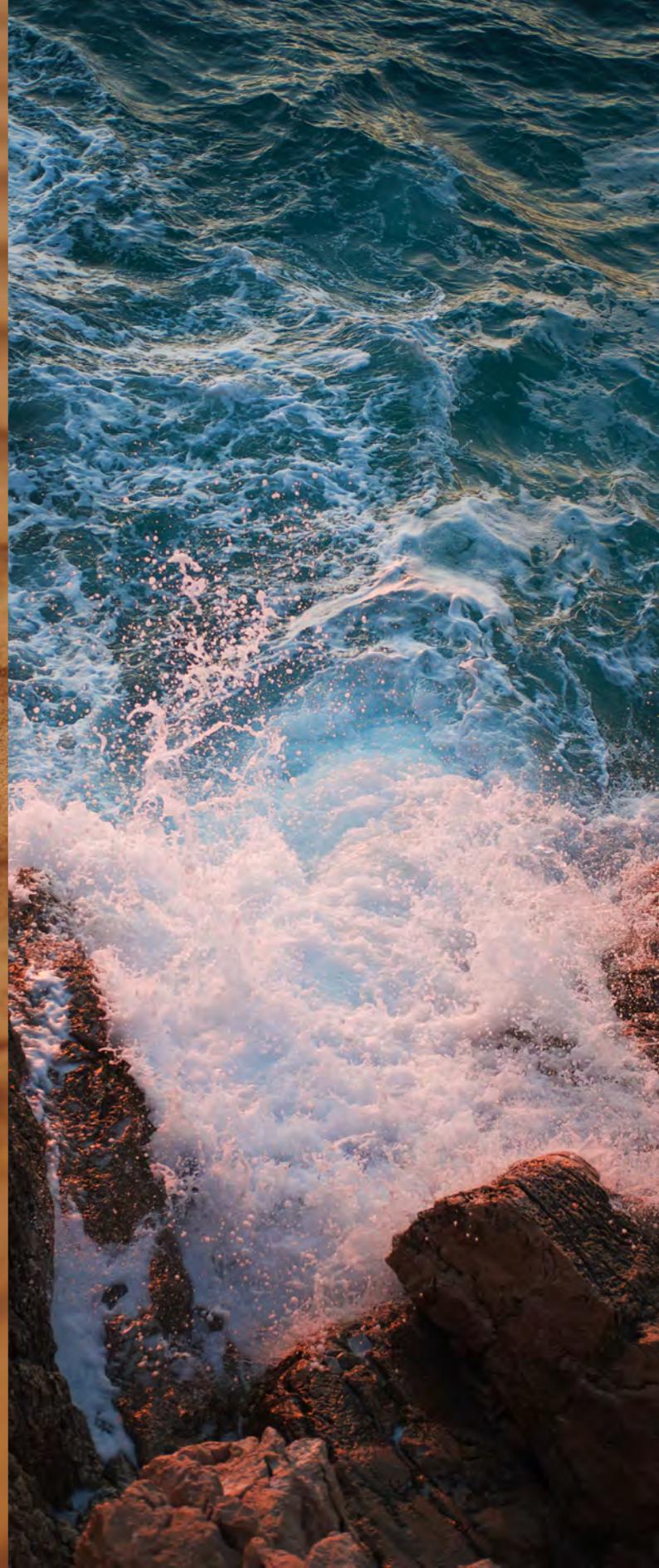
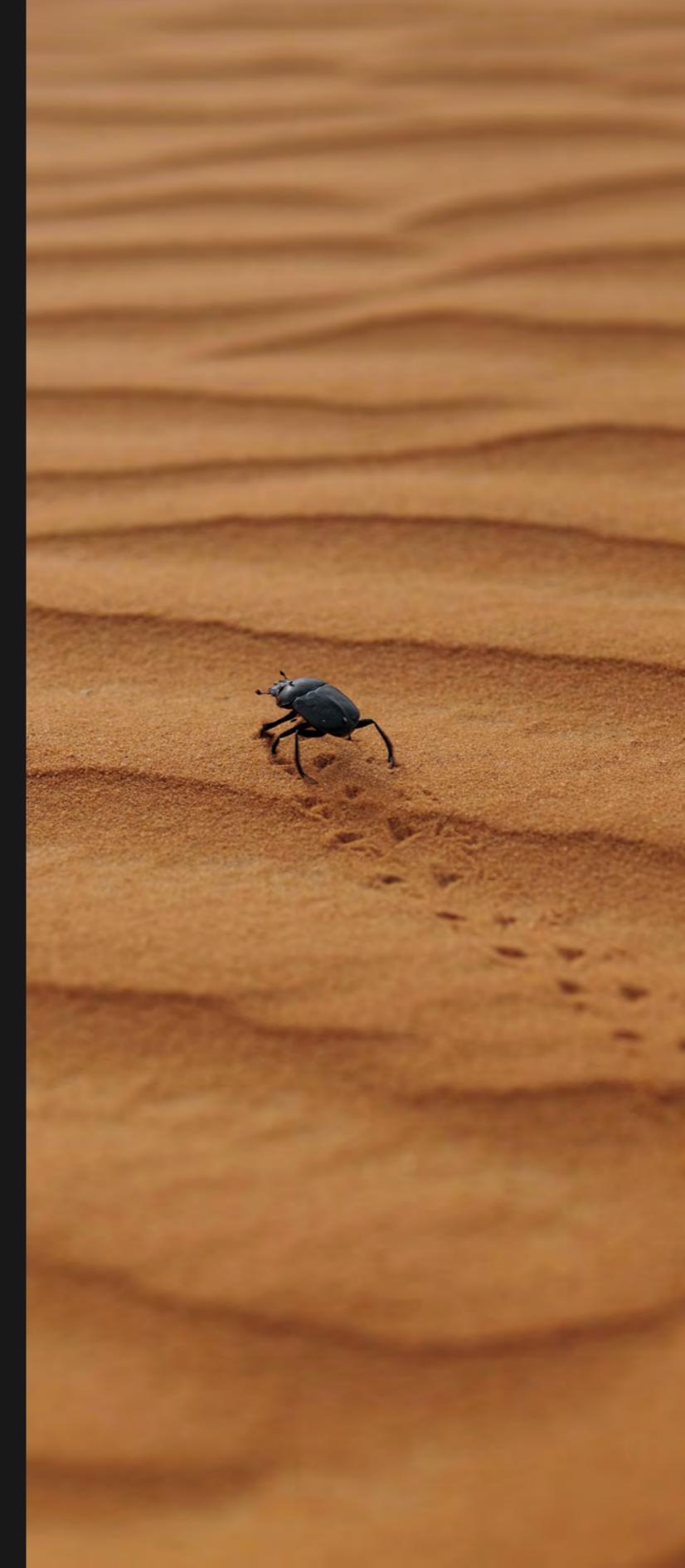


ecolytiq

ecolytiq Impact report 2022



Foreword

As a climate fintech, you've got to practice what you preach. We've made it our mission to accelerate the banking industry along on its sustainability transformation, recognizing that financial institutions play a central role in solving the climate crisis. Transforming an entire industry is a big task. We've scaled a lot in the last year to meet the demand of banks looking to take serious climate action. From hiring talented changemakers to engaging with new, influential stakeholders in banking & finance, we've seen the resonance and energy around our mission grow. And with it our impact – along with the challenges and opportunities it presents.

Every purchasing choice we make is a choice we make for the climate. We've seen the massive potential there is in increasing consumers' carbon numeracy and climate literacy through our products. However, a big problem in the market is a severe lack of transparency when it comes to utilizing sustainability data. Delivering credible and effective climate engagement requires earnestly working with robust data, and a lack of transparency slows the progress and potential of all of us working towards the same goals. We know this to be the next frontier for our market. To do that, there needs to be a wholesale adoption of "radical transparency" - a term we use to illustrate a deep commitment to honesty and integrity around sustainability and impact data. To produce the change we need, we embody the values of that change. Leading in this way, in the pursuit of innovation, is what we aim to do with this report.

We wanted to give an honest account of where we are and what we've accomplished while acknowledging where the obstacles remain. It's our pledge to be transparent with you, our community, to serve as a source of inspiration in the face of important challenges and opportunities for transformational change. In fact, we want to challenge our community to join us in embracing radical transparency. By being open with regards to your sustainability and impact data, you invite collaboration and progress. Solving the climate crisis doesn't need perfection, it needs action. It needs you.



Anisha Mohil,
Impact & Sustainability
at ecolytiq

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The background of the slide is a photograph of a dense forest. The trees are tall and closely packed, with their dark green needles creating a textured, layered pattern across the frame. The lighting suggests a bright day, with sunlight filtering through the canopy.

Our mission is to engage and educate consumers about their individual impact on the environment and empower them to contribute to a better world.

A close-up photograph of a white mesh shopping bag. Inside the bag are two lemons and one cactus fruit. The bag is draped over a light-colored surface, and its texture and the items it contains are clearly visible.

Why?

2/3

of direct and indirect global emissions can
be traced back to household purchasing
decisions and consumer behaviors¹.

¹ Understanding Households as Drivers of Carbon Emissions (Druckman & Jackson, 2016)

The consumer challenge

Emissions and other ecological impacts from consumer behavior and decisions occur throughout a consumption lifecycle – from which products they buy and how they buy them, to how they use and dispose of them. Every purchasing decision made dictates the degree of impact a consumer will have on the environment throughout the product's life cycle.

And consumers seem to recognize this problem. In fact, individuals largely want to engage in more sustainable consumption but often face various emotional, behavioral, or capacity-related barriers to consuming sustainably. This phenomenon is referred to as the intention-action gap².

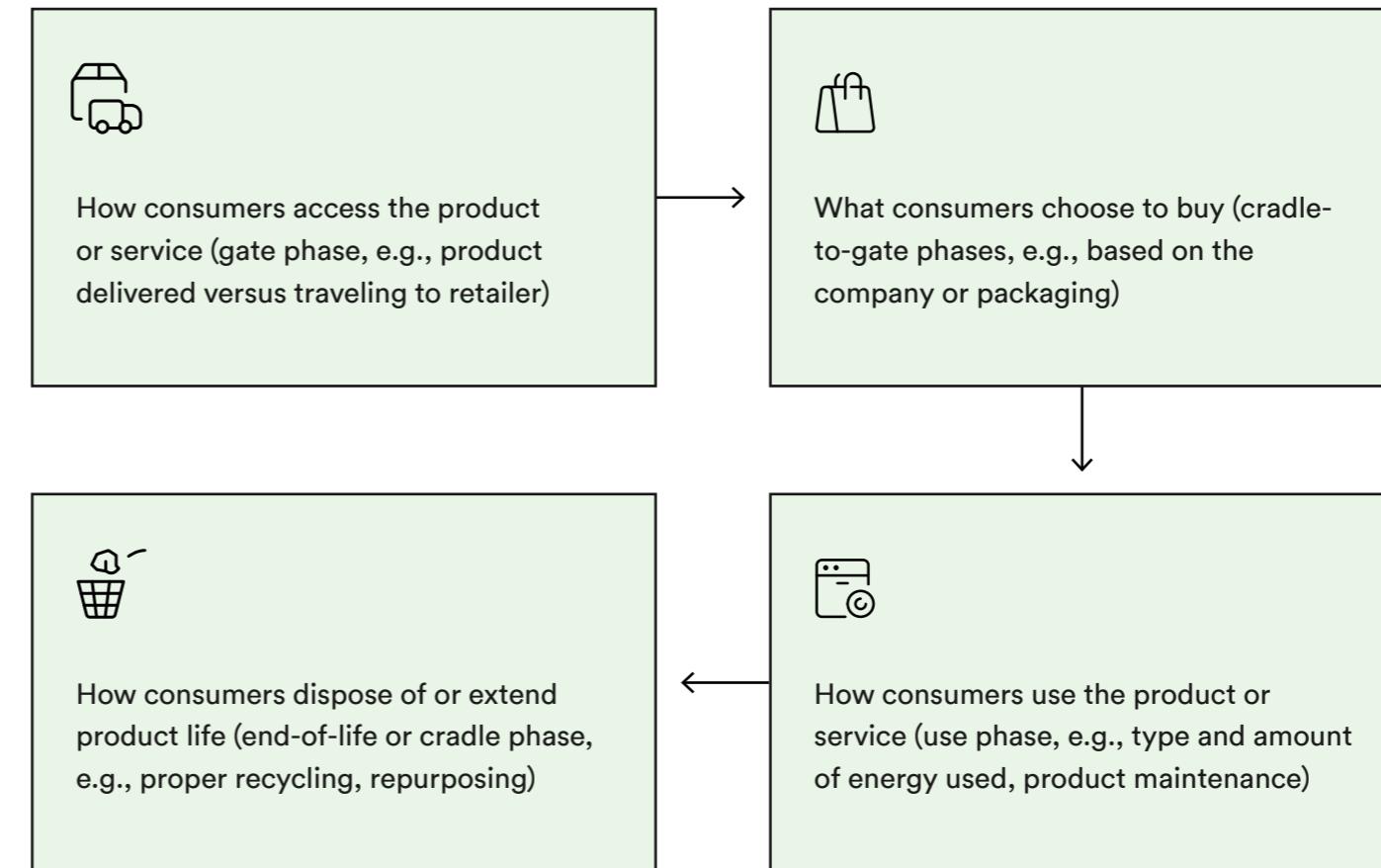


Figure 1: Consumer decisions and behaviors have an ecological impact at various stages of the consumption journey

² The Elusive Green Consumer (White, Hardisty & Habib, 2019)

The systemic challenge

We understand that educating and engaging consumers and making sustainable behavior accessible will help us bridge the intention-action gap; however, various solutions trying to address this challenge aren't yet up to the task. The conscious consumerism ecosystem faces some challenges and limitations. For instance, there is currently no globally adopted standard for transaction-based ecological calculations nor established best practices of how to effectively elicit conscious consumerism at scale. In the former case, a lack of standardization and transparency in how consumers are informed creates a risk of losing consumer trust in otherwise powerful technologies and behavior change tools. In the latter example, we need greater cooperation

and knowledge sharing between actors so that we can collectively be more impactful.

The issue of scale

Consumers sometimes struggle with how their individual impact matters in the face of a large and complex problem like climate change. It's no secret that a select few large companies have played the biggest role in damaging the environment while an individual in Germany, for instance, emits an average of 10 tons of CO₂e per year³. However, the evidence suggests we shouldn't underestimate the power of consumers as a collective. Scale is a necessary part of reducing consumption-related emissions both directly and indirectly through market forces. If we keep in mind that

consumer behaviors can be linked to 2/3 of global emissions, the importance of scale is made even clearer.

And the potential exists! Studies have shown that individual consumers can and do reduce their emissions when they are empowered with educational interventions⁴ and that even achieving reasonable levels of adopted green consumer actions can have a massive impact⁵. We simply need to reach enough consumers with the right tools.



³ World Bank, Climate Watch

⁴ The role of climate change education on lifetime carbon emissions (Cordero, Centeno & Todd, 2020)

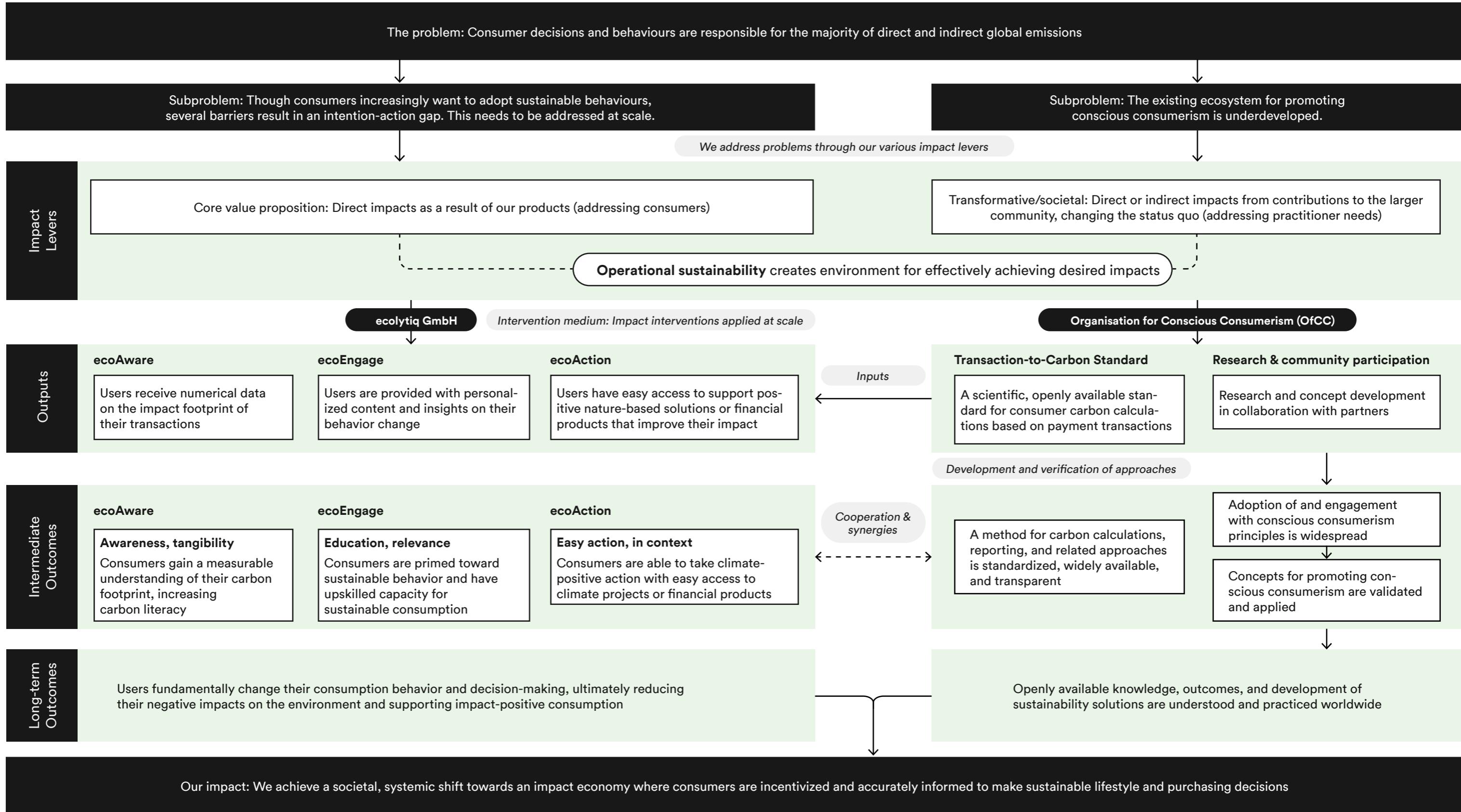
⁵ Quantifying the potential for consumer-oriented policy to reduce European and foreign carbon emissions (Moran, Wood, et al., 2018)

Deep dive: Our model & philosophy for impact

By understanding the core problem, we identified the need for systemic change. How do we accomplish that? Consumers need to be effectively incentivized and informed to make sustainable lifestyle decisions at scale. Accordingly, solutions need to be two-pronged, addressing both the needs of consumers and practitioners. Firstly, we must address the consumers' need for education and climate tools to be accessible, relevant, and trustworthy to elicit long-term behavioral change for impact-positive consumption. Secondly, sustainability data needs to become accessible and standardized globally to allow stakeholders to reliably employ it for climate good.

Though the problem is a complex one, we're tackling it from multiple perspectives both through our products and the work of our non-

profit entity, the Organisation for Conscious Consumerism (OfCC), each of which represents one of our impact levers. The ecolytiq product suite is specialized in eliciting sustainable consumer behavior while the OfCC focuses on addressing systemic barriers to consumer climate action. Together, they have a synergy, propelling our impact further as the outcomes created by ecolytiq and the OfCC are mutually beneficial (i.e., consumer insights and feedback validate and inform the OfCC's work, while the OfCC's work bolsters the product-related outcomes of ecolytiq). The combined reach resulting from these activities then accelerates the potential for impact at scale. This model for impact, depicted in a Theory of Change framework, is summarized in Figure 2.



Products rooted in behavioral science

ecolytiq's products are designed to address unsustainable consumption by directly targeting consumer behaviors and purchasing decisions. We make it easy and accessible for consumers to understand their impact, learn about how they can improve their impact, and act by supporting climate-positive projects and investments to bridge the intention-action gap. Our products utilize various widely accepted behavioral change principles such that, individually, our product suite meets consumers where they are while, collectively, moving them along their sustainable consumption journeys. Products can be categorized by the types of scientific approaches they employ, and the level of consideration required by the consumer to engage with the product, as depicted in Figure 3.

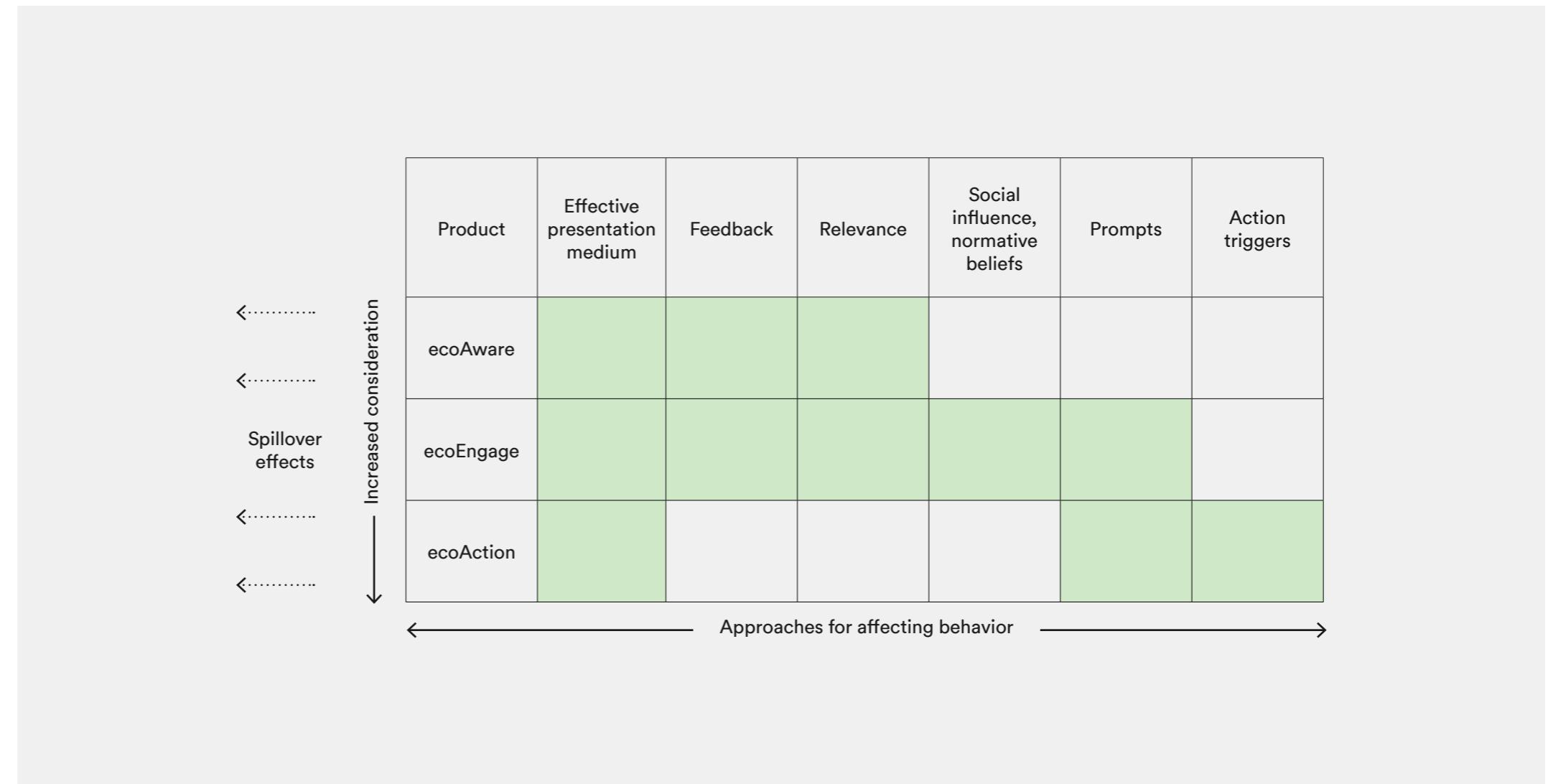
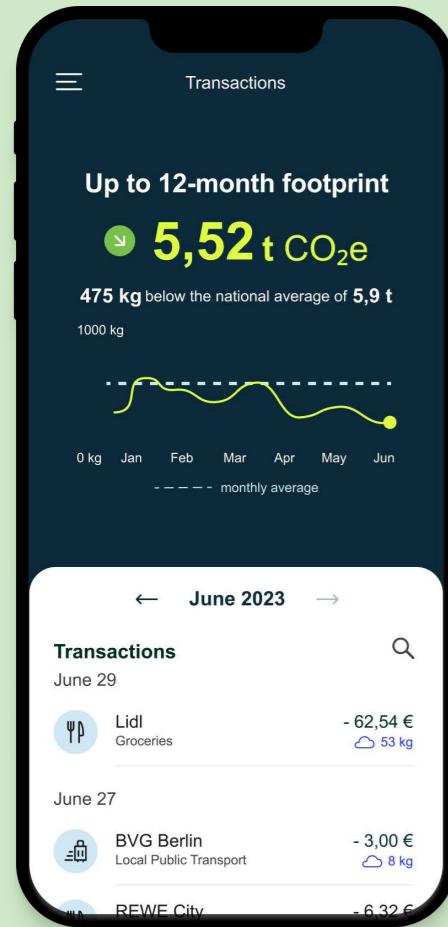


Figure 3: Applications of behavior change principles across products



Effective presentation medium

Our products consider the end-user's ability to access, engage, and comprehend the information we communicate. Compared to, for example, existing carbon accounting tools for households, we deliver our products through familiar digital tools consumers already use for their banking needs. This increases touchpoint frequency and the user's likely competency for engagement, making our method for generating impact accessible to consumers. Our method of delivering awareness and education to consumers through their banking applications unleashes our potential for scale. That's important, because most consumers want their financial institution to be more sustainable, with the most sought-after green finance products being green debit and credit cards⁶.

Feedback

Feedback is a common intervention for behavioral change, helping individuals make associations between the behavior and its consequences. This then allows recipients of feedback to reflect on these associations to inform future intentions, attitudes, and decisions to ultimately cement them into the consciousness of their behaviors.

Feedback as an intervention is implemented by both ecoAware and ecoEngage, albeit differing in some respects – frequency and type. ecoAware provides users with information regarding the carbon footprint of their transactions. This numerical feedback is provided in real-time, which is found to improve the cognitive linking between a behavior and

its consequences. Graphical data and written content offered by ecoEngage, which provides deeper insights on the user's performance, is more effective at selective frequencies. This is because complex information demands greater active involvement by a user. Overall, this blend of simple and frequent feedback with deeper contextual feedback works to create stronger linkages between the information provided and users' actions, based on their available capacity for engagement.

Relevance

Feedback is enhanced when combined with education and framed in a relevant context to ensure users know how it should be interpreted. In particular, ecoAware uses several framing

⁶ Is the grass greener on the sustainable side? (Mambu)

devices to contextualize the numerical feedback while ecoEngage provides personalized insights for reducing emissions. This includes the use of both historic (against individual past performance) and normative (against other individuals) comparisons that allow users to better assess, evaluate, and compete based on feedback indicators, as well as educational content relevant to the user's own behaviors (e.g., different content for red meat consumers versus vegetarians).

Social influence and normative beliefs

Normative beliefs refer to how people understand social norms, their understanding of acceptable behavior. Other behavioral change

interventions have found that appealing to social influence can be extremely effective. Normative comparisons and social content leverage social influence by normalizing sustainable behavior and establishing such actions as desirable.

Prompts & action triggers

While comprehending their environmental footprint, users are also engaged through prompts that either inform, motivate, or elicit desired actions. ecoEngage provides immediately available information intended to foster greater intention and capacity for taking action. ecoAction instead uses action-focused prompts, as they work best when received while the user is motivated to engage in the behavior and are received where a desirable

action can take place. So, when users learn about the impact of their purchases and how they compare in context, they can immediately leverage that elicited motivation to contribute to planet-friendly projects and investments with ease.

Increased consideration & spillover effects

Each of the interventions described requires varying levels of consideration and effort for users to engage with them, allowing our suite of products to meet them where they are. This means that whether the user has lower capacity or is highly motivated, there is a way for them to engage with educational material. This can be considered as a form of dynamic engagement

towards sustainable consumption. Another quality of this dynamic approach is the ability to move consumers forward on the spectrum of consideration. This increases the product's impact by triggering direct climate action and fostering deeper cognitive associations between the interventions and their future behaviors.

As these cognitive linkages are created and strengthened, users are more likely to develop good habits and make sustainable lifestyle changes in the future – known as positive spillover.

Reducing rebound effect risks

A risk to nudging and behavioral change interventions of this type is the reduction of expected gains from sustainable habits due to increased consumption, known as rebound effects. This can be either due to cost savings or a perceived “buffer” for consumers with superior relative performance (e.g., being lower compared to the national average or their own performance the previous month leads to consuming more because users feel they can afford to). To mitigate this backsliding, users receive additional content to reduce the risk of rebounding while deepening consumer engagement. It’s also been found that accurate data is an important factor in determining rebound effects, as vague feedback disassociates the consumer from

the consequences of their choices. We will continue to assess and design for rebound effect mitigation as we explore new approaches to make sustainable behavior as long-lasting and engaging as possible.

ecolytiq’s product-related approaches address the ecological problems caused by consumerism by engaging, educating, and empowering consumers directly. However, there are systemic challenges that contribute to the problem or otherwise limit the efficacy of solutions. We are shifting the systemic status quo to ensure the research, technologies, and overall efforts to reduce the negative impacts of material consumption (and increase the potential for positive impacts through these means) shape our future. In the next section, we describe this other side to our impact.

“As a non-profit organization, we enable the development of an impact economy driven by conscious consumerism. Our mission is to accelerate the adoption of conscious consumerism through behavioral change incentives and sustainability data transparency, leading to positive social, economic, and environmental outcomes for people and planet.”

Transforming the conscious consumerism ecosystem

It's clear that the way we consume needs to change, but how do we effectively help consumers make sustainable choices? Various technologies and approaches are being tested, but a lack of consistency and transparency limits their impact.

This calls for development in the conscious consumerism ecosystem from two angles:

- 1) standardization in technology and approaches;
- 2) further research and evaluation of applied concepts.



Over the course of 2022, we restructured the Organisation for Conscious Consumerism to tackle these issues. The organisation acts as an independent non-profit entity that leverages its expertise and network to drive systemic reform.

It all begins with the Transaction-to-Carbon (TtC) – framework for consumer carbon calculations based on payment transactions. This is the exact framework ecolytiq uses for its own calculations and is openly available for anyone to use. We believe sharing our approach with the world will propel the movement forward and improve the quality of the standard over time as the community contributes to its further development – it's a win-win that operates with transparency, fosters trust, ensures data integrity, and accelerates progress.

Beyond the TtC standard, what remains to be understood is how these technologies and data can be best applied in the real world. The OfCC brings forward data- and technology-driven concepts from individual consumption to systemic change. This also involves collaborating with stakeholders in the ecosystem to test these concepts and promote their widespread adoption.

Together, these technology- and research-based approaches accelerate systemic transformation by making certain the ecosystem's capacity for promoting sustainable consumption.

Generating
impact through
our product suite

Product highlights & milestones

There were some big and exciting product developments in 2022 that will help us take our impact to the next level, so we asked our Product Owners to share some of their team's highlights.

ecoAware

ecoAware ensures the information users receive about their environmental footprints is as relevant and accurate as possible. 2022 was an exciting year for the team as we expanded our offering to 6 new countries and added more ways for users to engage with their results!

Here are some highlights:

- We applied our Transaction-to-Carbon methodology to create new models for consumers in Sweden, Norway, Finland, Iceland, Denmark, and Canada for the first time. Applying geographically-specific calculations is an important part in ensuring the accuracy of the feedback given to users.

- We made it possible for users to refine their results by providing details on their dietary preferences, train travel and use of local transport, use of renewable energy, air travel, and purchase of second-hand clothing. This means users get more accurate results and see how behavior changes in these areas affect their ecological impact.

- Transparency is a core value of our company and is integral to how users experience our products. Accordingly, we now provide more detailed explanations on how calculations are made so that users can understand the sources of information.

- We revised our methodologies, containing over 21 consumption categories, making our calculations better than ever.

In 2023, we'll continue to maintain our calculation methodology at the highest standard for all new markets we enter, making sure consumers have a clear understanding of their ecological footprint from a trustworthy source.

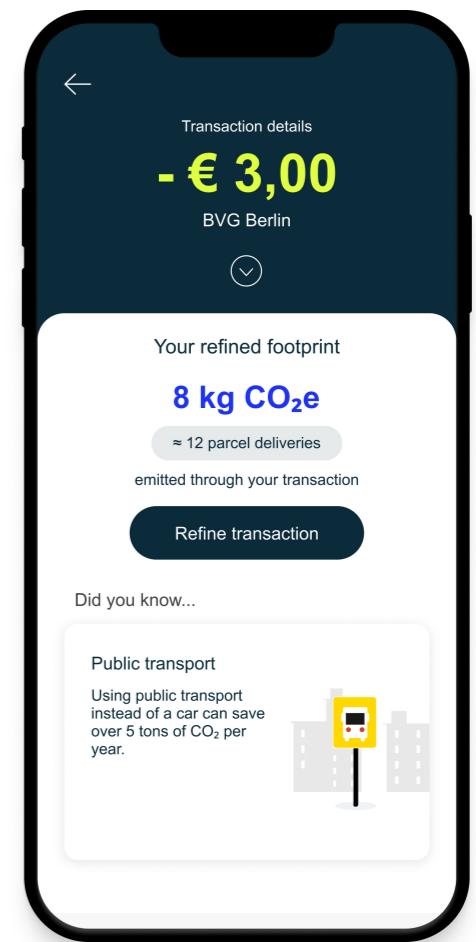
ecoEngage

Our goal with ecoEngage is to deliver engaging and relevant content, comparisons, and technical explanations that nudge users forward on their sustainable consumption journey.

- In 2022, we improved our contextual content to provide more personalized insights based on our user profiles. For example, users who use regular energy will receive content about how switching to a green energy provider could reduce their emissions, or users already using green energy would get a positive affirmation showing them their emissions savings as opposed to regular energy sources.

- We also improved existing features. We reconfigured our "explanations" based on the latest user feedback and science, and shared sources more transparently within the product. We even shifted focus to emphasize content about high impact areas for individuals such as transport or diet.
- Underpinning the content we deliver to users is a focus on quality. In 2022, we expanded our content library, using a strict process for identifying the latest scientific findings and incorporating user feedback and research to fit their needs.

In 2023, we're looking forward to making climate education even more engaging so that users are inclined to continue learning.



ecoAction

We experienced that consumers are overwhelmed with the terminology and are weary of greenwashing, so we aim to fill this knowledge gap so that users feel they can responsibly engage with these concepts.

To this end:

- One of our biggest accomplishments in 2022 was the launch of both our carbon credits and climate contributions platforms.
- We entered a partnership with carbon credit specialist Cloverly at the end of 2022. Cloverly enables us to extend our project portfolio with regards to location and carbon credit project types.

- We expanded our work with myClimate, ClimatePartner, and KlimaKollekte, which in total provide a portfolio of 20 climate contribution projects.
- We decided to only work with partners who offer certified projects by the Gold Standard, Plan Vivo or the Verified Carbon Standard (VCS). Our project portfolio was curated in line with SDG objectives.
- In the future, we aim to further measure project impacts by establishing additional criteria and formalizing project indicators. We are also moving forward with the operationalization of our sustainability and impact investing capabilities.





“For consumers, caring about the environment is one thing but acting on it is another thing entirely – the (in)famous “intention-action gap”. Reasons for this are deeply rooted in how our brain functions - and behavioral sciences are exploring the best ways to nudge us translate passion into action. ecolytiq not only acknowledges this, but actively seeks to integrate findings in products and even contribute to research in the field! I am happy to work for a company that embraces a scientific approach on so many levels - especially when it comes to learnings from behavioral sciences - because this is how we will drive impact!”

Henriette, Product Owner (ecoEngage)

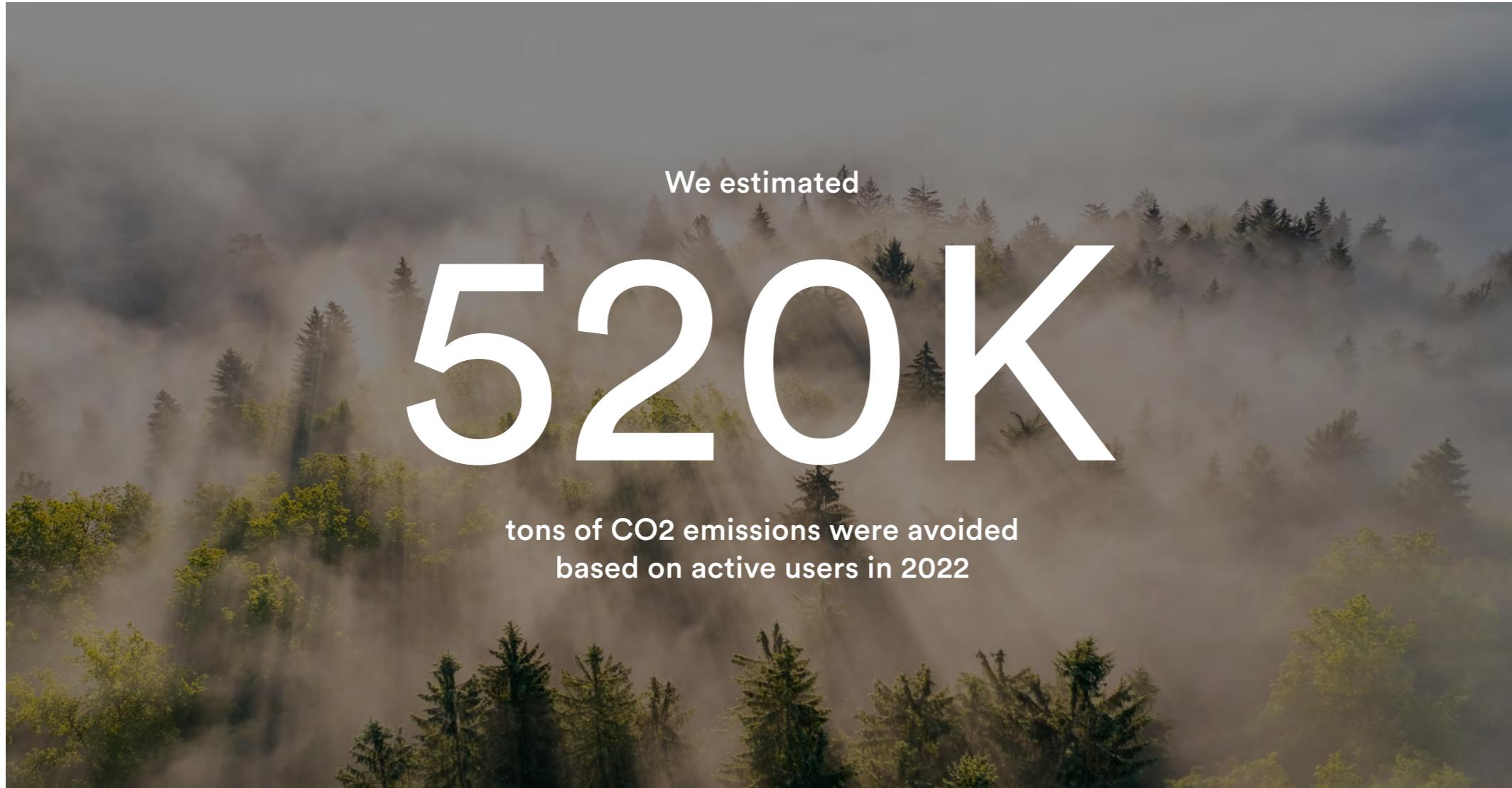
Milestones with our White Label

In 2022, we were very excited to launch White Label products into the market and find our two first clients - Volksbank Mittelfranken and Vancity!

Powered by ecolytiq

VISA **tink**  **Vancity** **WORLDLINE** 

cloverly **T|SYS**  **Tomorrow** 



We estimated
520K

tons of CO2 emissions were avoided
based on active users in 2022

The power of scale

Though our impact focuses on empowering individual consumers, the potential for scale makes our truly additionally powerful – as incremental changes to behaviors at the individual level have massive implications when compounded (even more so because of the massive impact of collective household consumption on climate change, as previously mentioned). Consumer decisions also affect the ecological footprint of companies. For example, Unilever estimated that almost 70% of its greenhouse gas footprint depended on which products customers chose and whether they used and disposed of them in a sustainable manner.⁷ Consumers help create demand and pressure that encourage more sustainable behavior from companies in the long run.

⁷ The Elusive Green Consumer (White, Hardisty & Habib, 2019)

First, to make our impact claims as clear as possible, we distinguish between active users and potential users. Our estimated avoided emissions and our impact data in the next section are based on active users, meaning we only count users with an active profile in our system(s). We also mention potential users to capture how many users we could potentially engage through the various banks and financial institutions that already offer our products. This is also an important figure to understand the reachable audience we could have an impact with over time. It's important to note that the number of users we reach is affected by how our products are implemented and promoted (e.g., whether a bank offers these features on an opt-in or opt-out basis).

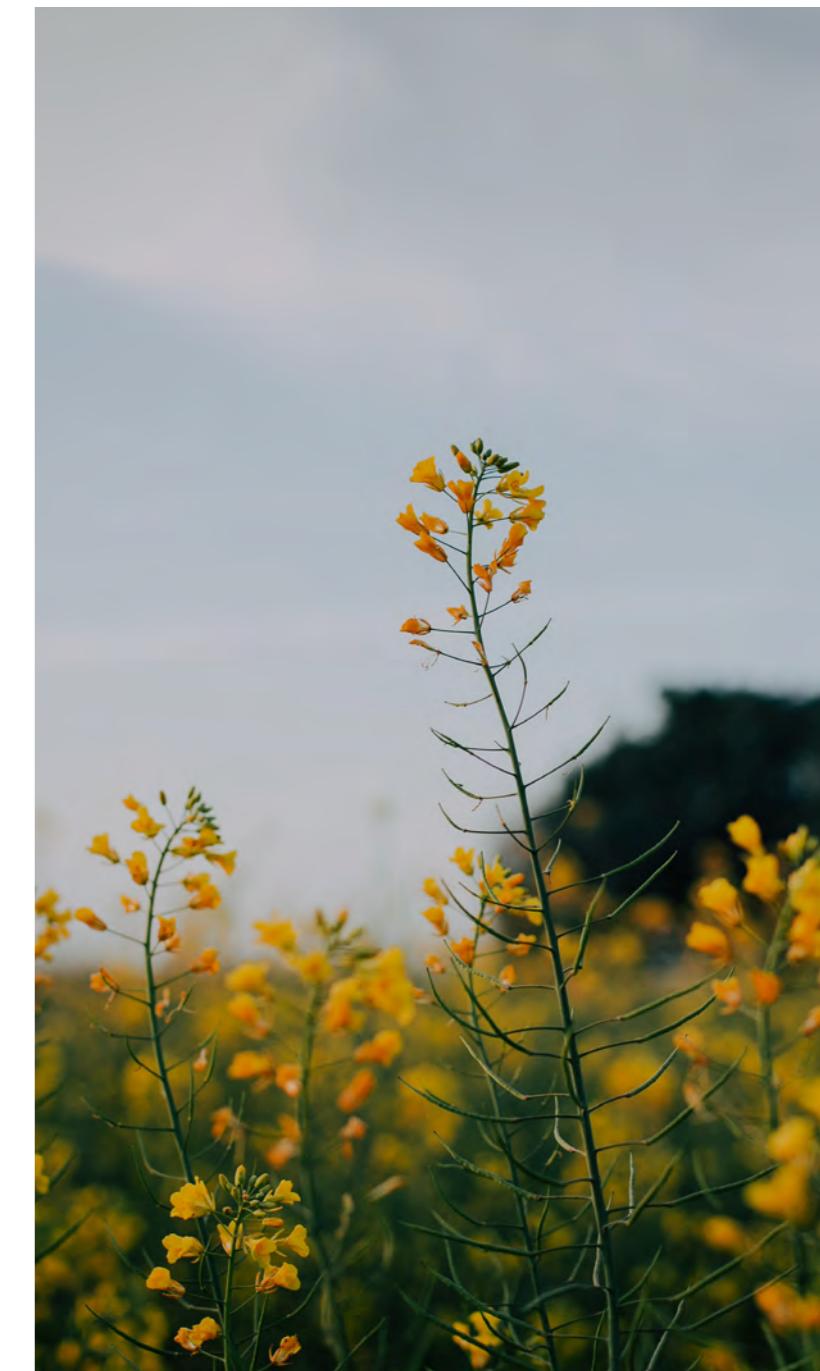
We increased the number of active users that engaged with our products by more than 10x between 2021 and 2022. Based on our data and

further estimates, which combine academic study results on the impact of consumer behavior change interventions on emissions reductions and initial results from our products, we estimate 520,000 tons CO₂e of emissions were avoided by consumers who directly used ecolytiq products. That's like taking 260,000 roundtrip flights⁸ between Berlin and New York or is equivalent to the annual emissions of over 50,000 German citizens!

These active users represent a portion of our potential user reach. Because we offer the products of choice for some of the world's leading banks and financial companies, this potential consumer reach is currently 50 million and growing. We aim to reach more of these consumers and work with more banks and financial institutions to scale up to 100 million active users by 2025 to have widespread environmental impact and awareness.

Our growth and potential for scale indicate how far our impact can go to achieve widespread emissions reductions and gain considerable consumer insights that inform new concepts and approaches. It is an indicator for the breadth of our impact; however, this only matters if we can foster sustainable consumption at the individual level. This influence on consumers' purchasing decisions and behaviors refers to the depth of impact that can be achieved. Using myclimate's flight emissions calculator

⁸ Using myclimate's flight emissions calculator



The ongoing journey to comprehensive impact data

The ecolytiq name makes one thing clear – our ecological impact is inherently tied to analytics, data, and scientific approaches. Implementing a sophisticated impact assessment methodology with the same scientific rigor as, for instance, the transaction-to-carbon methodology is developed in steps over time.

The first important step for us was to use scientific concepts and principles to develop our product suite, and the next was to get these products promptly into the hands of consumers. We recognized that during these initial stages, our access to data and feedback to the depth that we want and deem necessary would have to take the backseat in favor of having an impact quickly and promoting agility while ensuring user data protection. This also ensured we learned and gained insights as soon as possible.

We recognize how critical it is for our mission to dig deeper into our impact data to further understand the power of our behavior change interventions on sustainable consumption and how to accelerate and scale them. Further, we must work to validate the various hypotheses posited in our Theory of Change. Measuring these changes in consumer behavior is

notoriously complex, as these changes often develop over longer periods of time, are influenced by a myriad of external factors, and occur across various aspects of consumers' lives. In this scientific spirit, we're choosing to share the next steps we're taking, with insight into how impact data needs to be analyzed moving forward both at ecolytiq and in the community in general. Overall, our hope is to encourage a more rigorous and honest approach to assessing and quantifying impact.

So, rather than just sharing some "nice looking" numbers in this report, we will discuss data areas that we're working to develop further, alongside insights garnered from the initial data we had access to in 2022. It's important to note that the data used for this analysis depicts a snapshot of the overall active user base whose data we were able to safely access at this time, and may not be fully representative.

Data opportunity 1: Responsibly increasing and categorizing user data

Limited access to user data is currently the crux of our challenge for evaluating our product impacts. Due to certain platform integrations and data sharing policies, there are some users for which we currently don't have access to data. This approach ensured that the initial set up and scaling we achieved since 2021 prioritized the security of users. We did, however, have access to aggregate-level data for tens of thousands of users reached in 2022, which represents just a portion of the total active user base.

Another important consideration is how our products are presented to users. When customers change how our tools are presented to end users, making them more or less

prominent on their banking interfaces for instance, our ability to influence user behavior is also affected. Being able to compare outcomes based on these integration types would offer additional valuable insights. We are now able to work on a solution that ensures the protection of users' privacy is held to high standards while gleaning sufficient insight into the impact of our product suite. For the banks and financial institutions that offer our products to their users, this also means greater insight into their own impact. Ultimately, increasing data access and better-categorizing data will improve our ability to validate trends and control for various external factors. For example, we use CO₂ emissions per Euro spent as an important metric for observing changes in spending behavior rather than observing emissions alone. This figure gives us more information about how users are

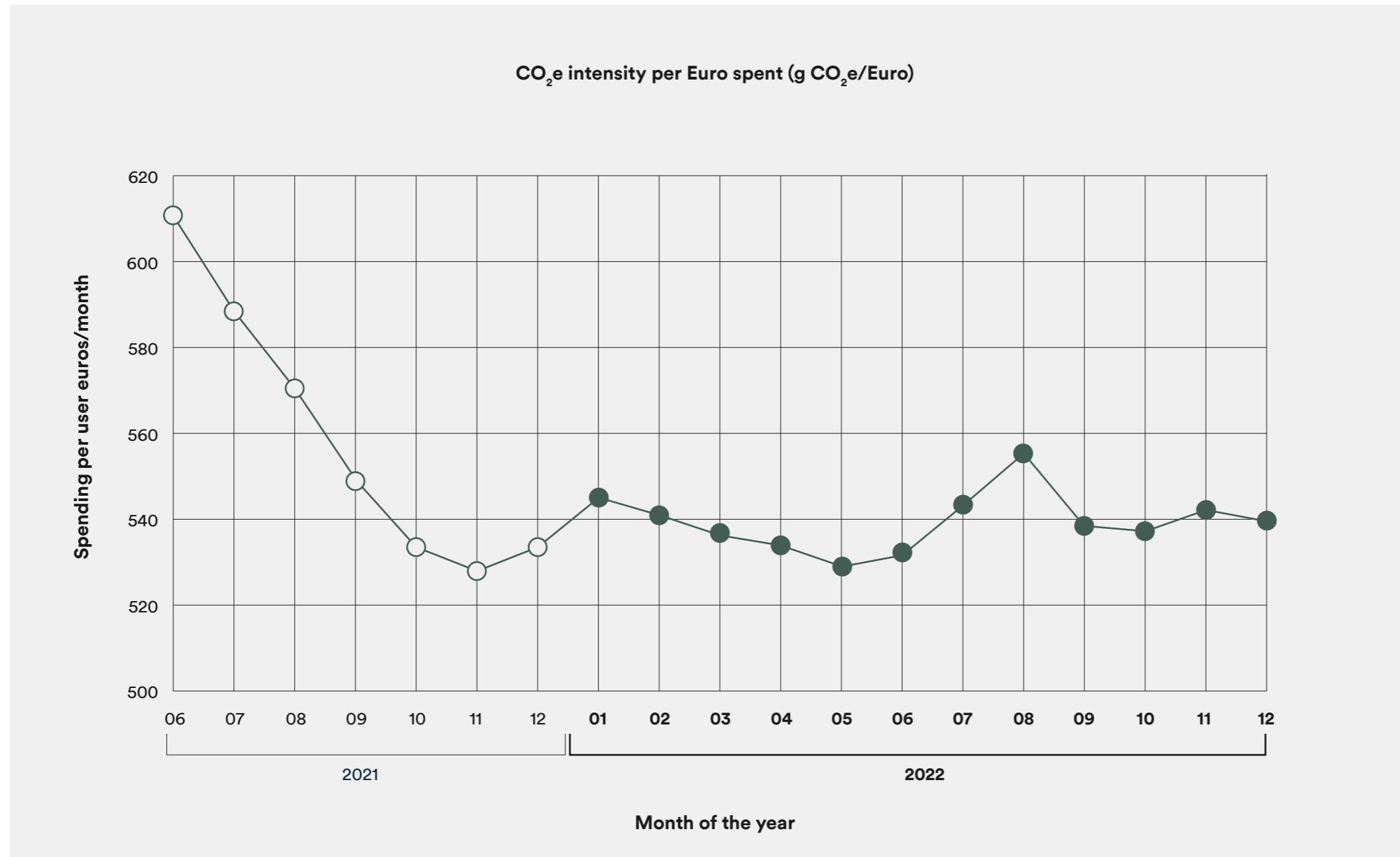
allocating their spending compared to limiting our analysis to emissions per user. The latter correlates directly to how much users spend, which doesn't give us the full picture.

We found that:

- a) after going live, there was a decrease in the carbon intensity per Euro spent until roughly the beginning of 2022, as seen in Figure 4;
- b) we then see the gCO₂e/Euro value leveling out at a sustained, lower level thereafter. This was despite a simultaneous increase in spending.

Overall, we observed a decrease of over 11% in the carbon intensity per Euro (gCO₂e/Euro spent) while simultaneously observing a

greater increase in spending since going live in June 2021. However, it's difficult to compare earlier with more recent results due to several uncontrolled factors (e.g., inflation, pandemic, etc., as discussed in the next section) and the fact that the data pool represents a narrower subset of users with varied and changing product experiences. For these reasons, we need standardized, secure access to the anonymized data for all end users. We could then categorize this data based on how users' respective banks implemented our product(s) to gain richer insights.

Figure 4: gCO₂e per Euro spent since going live**Warning, view this graph with caution!**

These numbers look pretty good and could imply that users made sustainable changes to their spending but, in addition to being from a snapshot of our active user base with unique user experiences, we acknowledge the myriad of other factors that could be affecting these results. For example, when we remove zero-emissions spending, we don't observe quite the same trend. Additionally, as will be discussed in the next section, there are external factors that need to be accounted for, such as the impacts of inflation in 2022 on spending.



Data opportunity 2: Controlling for external factors to validate attributable impacts

Looking at emissions per Euro alone isn't enough, it's also important to look at how often users engage in low-impact and high-impact behaviors based on the number of transactions. Conducting both analyses in parallel helps partially control for price-related factors, such as temporary price fluctuations, and locate sources of emissions intensity reductions. However, there are numerous external factors that affect what people spend money on. Consider Germany's introduction of the 9-Euro monthly ticket for public transportation that was made available in the summer of 2022.

Figure 5 depicts how this may have affected spending on local public transport and train travel at the user level.

Other examples are seen in Figures 6 and 7, which show the number of transactions per user at service stations and for air travel. Users appear to execute fewer transactions in these high-impact categories, which seems promising from a sustainable consumption perspective and could speak to the impact of our products. However, we must also acknowledge the potential influences of fuel prices, flight prices, inflation, and other external factors before surmising whether/how much of these changes are attributable to ecolytiq's impact. All things considered, the use of control groups, advanced user feedback, and implementing more robust research parameters will help isolate the impacts of our products in the future and allow us to garner insights into what is effective in eliciting sustainable behavior.

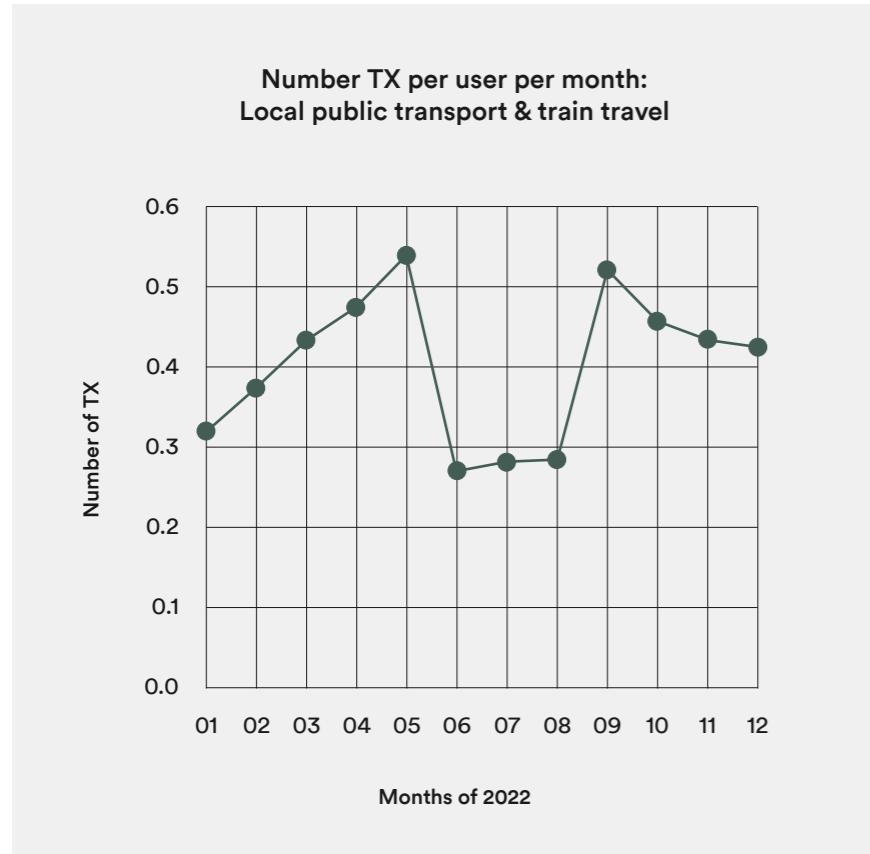


Figure 5: Apparent anomalies in public transport and train travel in June, July, and August

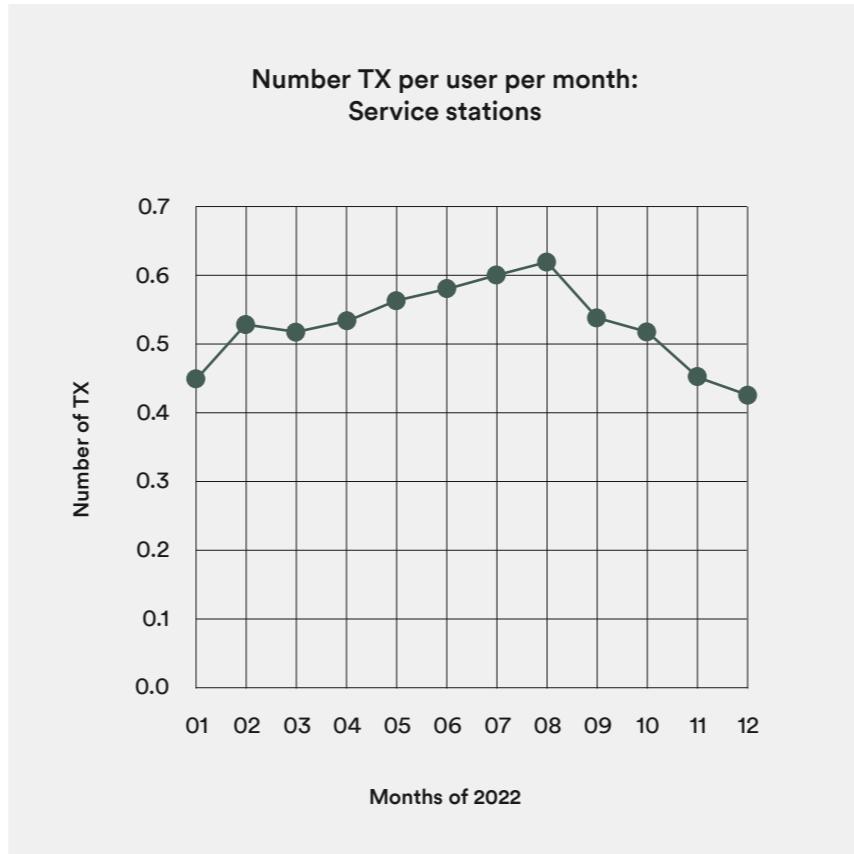


Figure 6: Number of service station transactions

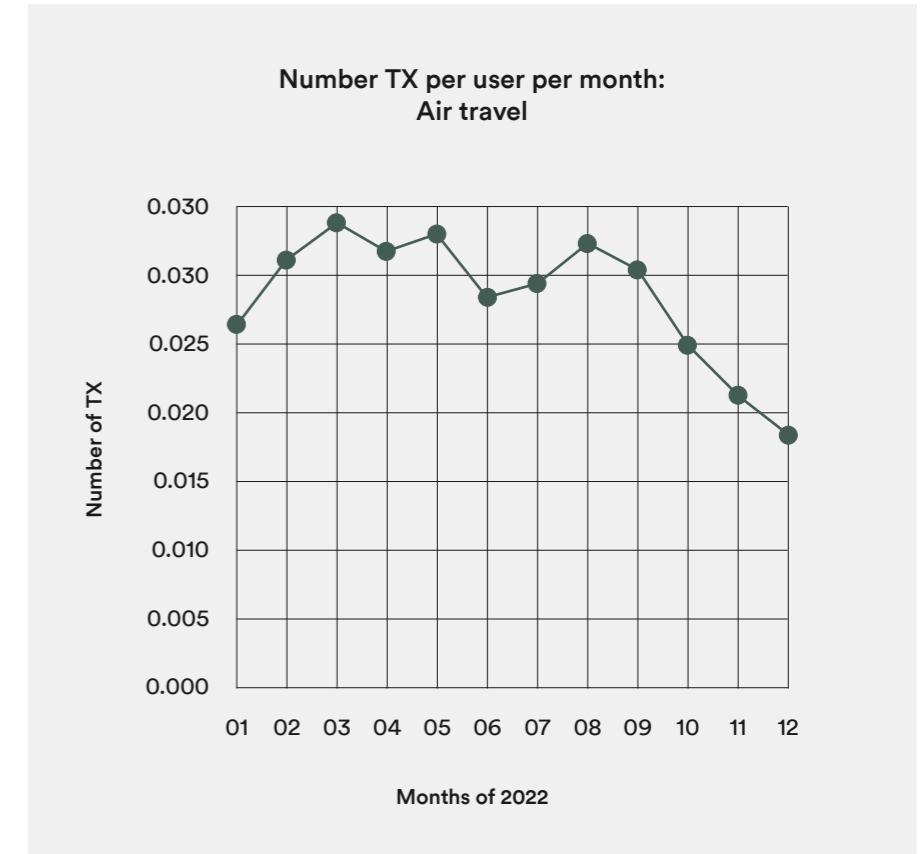


Figure 7: Number of air travel transactions

Data opportunity 3: Further individualizing data to observe changes over time

Sustained behavioral change needs to be observed in the long-term, as habit-forming interventions take time to continually increase consumers' capacity and motivation. Currently, we're mostly dealing with aggregate data rather than individualized data – the implications being that we are affected in our ability to follow along an individual's user journey over time to observe whether they specifically made changes. This, as mentioned, has been a result of our decision to preserve the data security and privacy of users until we could work on an impact measurement and assessment solution that guarantees these same protections.

One challenge with using aggregate data is that we're forced to include new users alongside those who have been engaging with our products for longer periods of time. However, each type of user delivers different signals for positive engagement with our products. For example, new users are more likely to increase their spending quickly to get a better picture of their environmental impact without the knowledge and insights of longer-term users. Though this would increase their total emissions (since we're measuring emissions for more of their spending), this observation would depict positive engagement and initial interest at the early stages of their sustainable consumption journey. In contrast, established users may have more stable amounts of spending once they start using our products as part of their preferred account.

This allows them to establish clearer personal benchmarks for comparing their ecological performance over time. As they engage with our products and increase their climate literacy, they would shift their spending from high-impact to low-impact categories (e.g., fewer flights in favor of train travel) to decrease their individual emissions. Therefore, we see that though both cases demonstrate favorable engagement, they result in opposing impacts on user emissions. Being able to discern individual changes is far more useful, and our analyses should pertain to both how much a consumer engages with our products as well as what they choose to spend on. From there, we could further personalize content to encourage favorable engagement behavior.

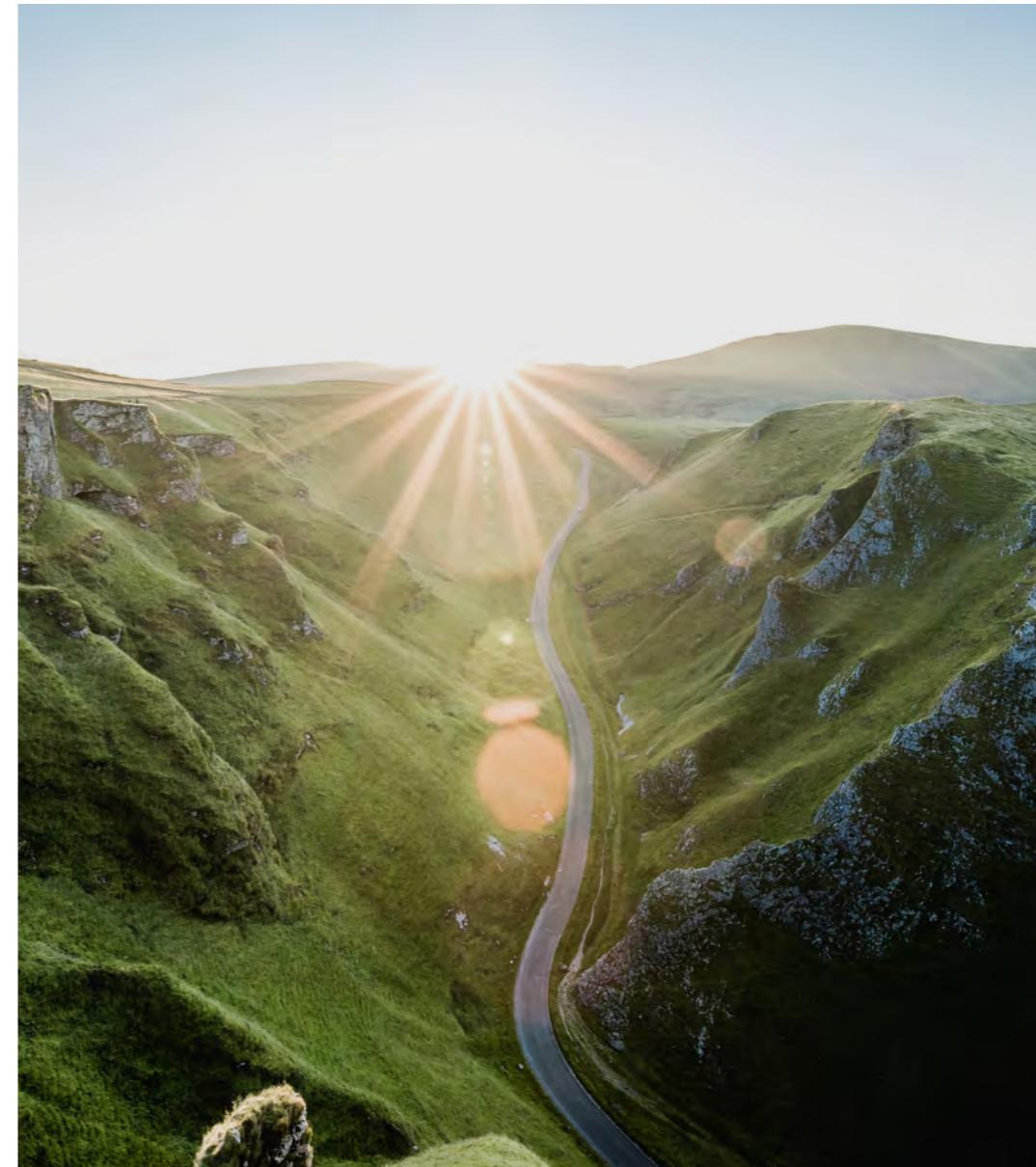
Developing solutions to data shortcoming

In general, the market for similar behavioral change interventions and payment transaction-based calculators needs better knowledge sharing and transparency to accelerate the development of these tools as a whole. We outlined these data-related opportunities and limitations to initiate the conversation in the hopes that, collectively and at ecolytiq, we achieve bigger impact, faster and sustainably.

To build on our impact evaluation capabilities, we are involving trusted partners to assure banks and financial institutions, as well as

consumers, that user data is handled with exceptional levels of care and solely for the purposes of contributing to the scientific community.

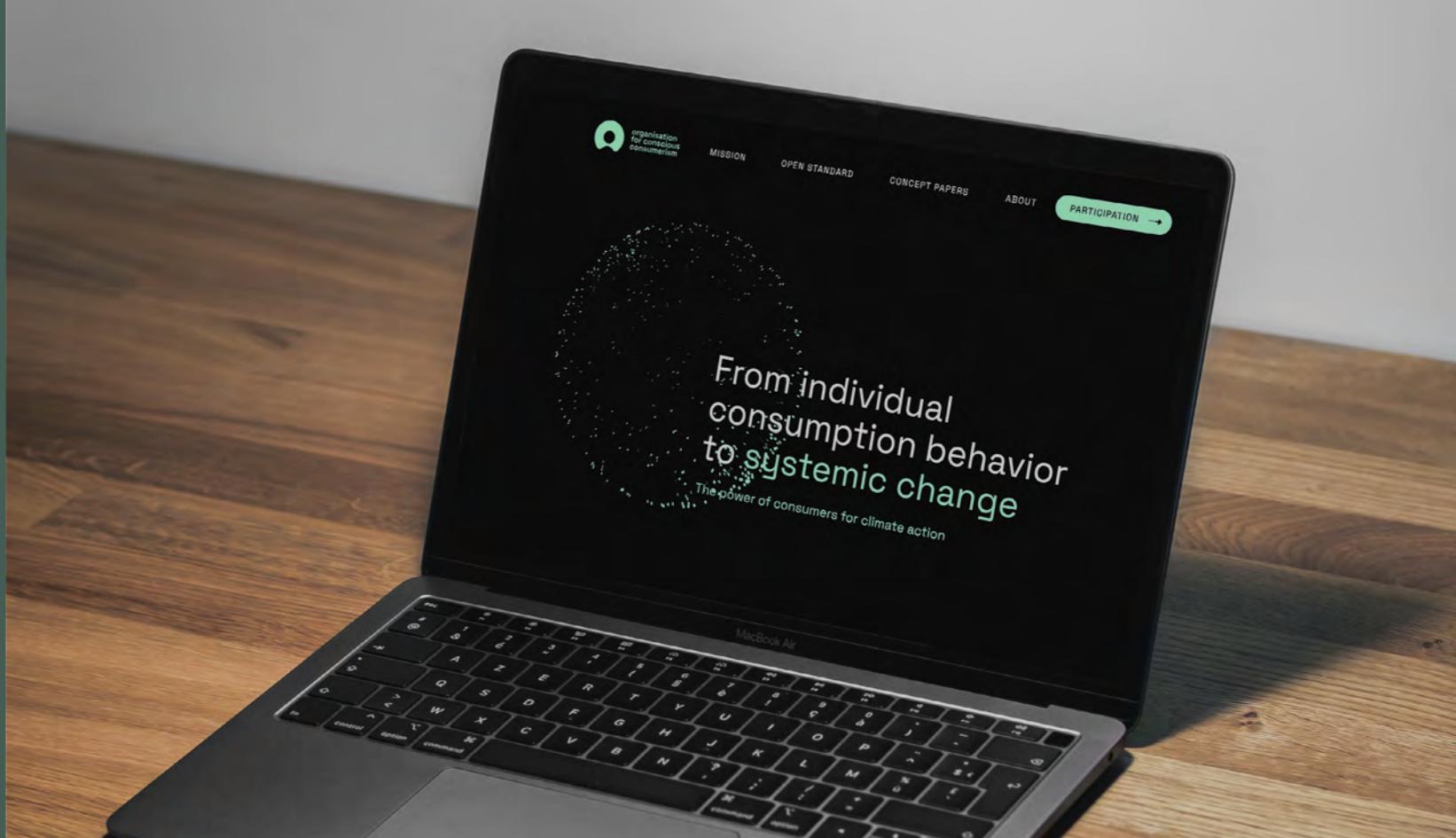
We've teamed up with OnePointFive and are in discussions with several top-tier academic institutions and industry experts to conduct formal and transparent studies on these behavioral change concepts. We encourage the community to take similar steps and connect with us. More exciting work and results to come in 2023!



Moving the needle forward

An exciting milestone for us was the recent re-launch of our non-profit subsidiary, the Organisation for Conscious Consumerism (OfCC), and its website, where stakeholders can easily access our knowledge base and contribute to the societal movement toward sustainable consumption and, ultimately, enable the development of an impact economy.

[Check out our website](#)



Research contributions

Transaction data provides a powerful insight into consumer carbon footprints; however, applications of transaction-based carbon calculations vary in approach and quality. As a result, the methodologies and technologies associated with transaction-based calculations could lose credibility in the eyes of consumers before they have a chance to achieve their intended impact.

For these reasons, the OfCC has developed and continues to improve upon its Transaction-to-Carbon Standard framework for all to use (and which has been used by ecolytiq since

2020). Furthermore, there is much to be learned and implemented that could foster greater transparency, knowledge, and communication within the conscious consumerism ecosystem.

Through the Organisation for Conscious Consumerism, we've begun putting together various concept papers to both facilitate the adoption of the TtC Standard framework and contribute knowledge to the community. To date, we have published two such papers and a call to action.





Transaction to carbon footprint: An Open Standard framework for consumer carbon calculations based on payment transaction

For organizations wanting to use transaction information to formulate spend-based carbon calculations, the Open Standard fully outlines the process for doing so using verified scientific approaches. This paper provides requirements and guidance for companies and organizations that want to estimate carbon footprint based on transaction data.

Transaction to carbon: ecolytiq 1.4 for carbon intensity estimation

Based on the first version of the Open Standard (now TtC), here we present the ecolytiq 1.4 approach, which should be applied when country-specific data is unavailable in the EXIOBASE 3 or the COICOP databases. This makes our standards accessible to those in markets without access to the data needed.

Call to Action: The Internet of Sustainability

Companies not only need to measure their impact on the environment, but also need to ensure that everyone has access to that information. We're working towards a global network that connects different data sources and technologies and sets standards as well as methodologies – called the 'Internet of Sustainability'. The aim is to make sustainability data transparent and open to all stakeholders.

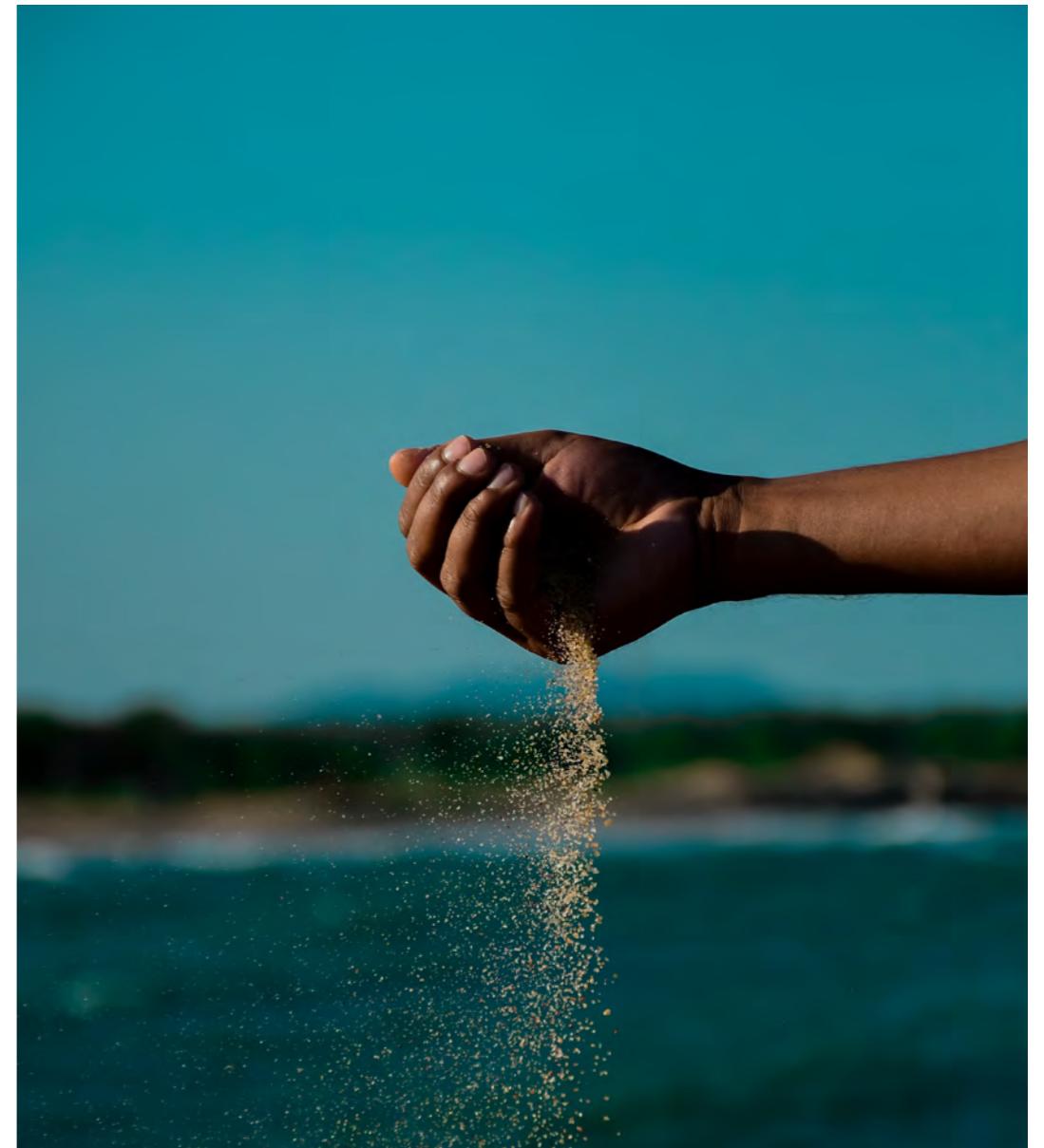
We call for all stakeholders dealing with carbon emission data, impact data with focus on the SDGs or any other factors such as social impact, water, biodiversity, etc., to join us and contribute their expertise and knowledge towards this project.

Community engagement

Looking into 2023, we have some big plans for the OfCC! A major focus for the organization this year is to engage and mobilize the conscious consumerism community to join the movement to build shared knowledge and commitments.

1. We believe in the need for a Community of Practice (CoP) to develop and disseminate best practices, guidelines, and strategies for members' use and to the public through the OfCC.
2. We believe in the need for standardization and transparency in how sustainability information is

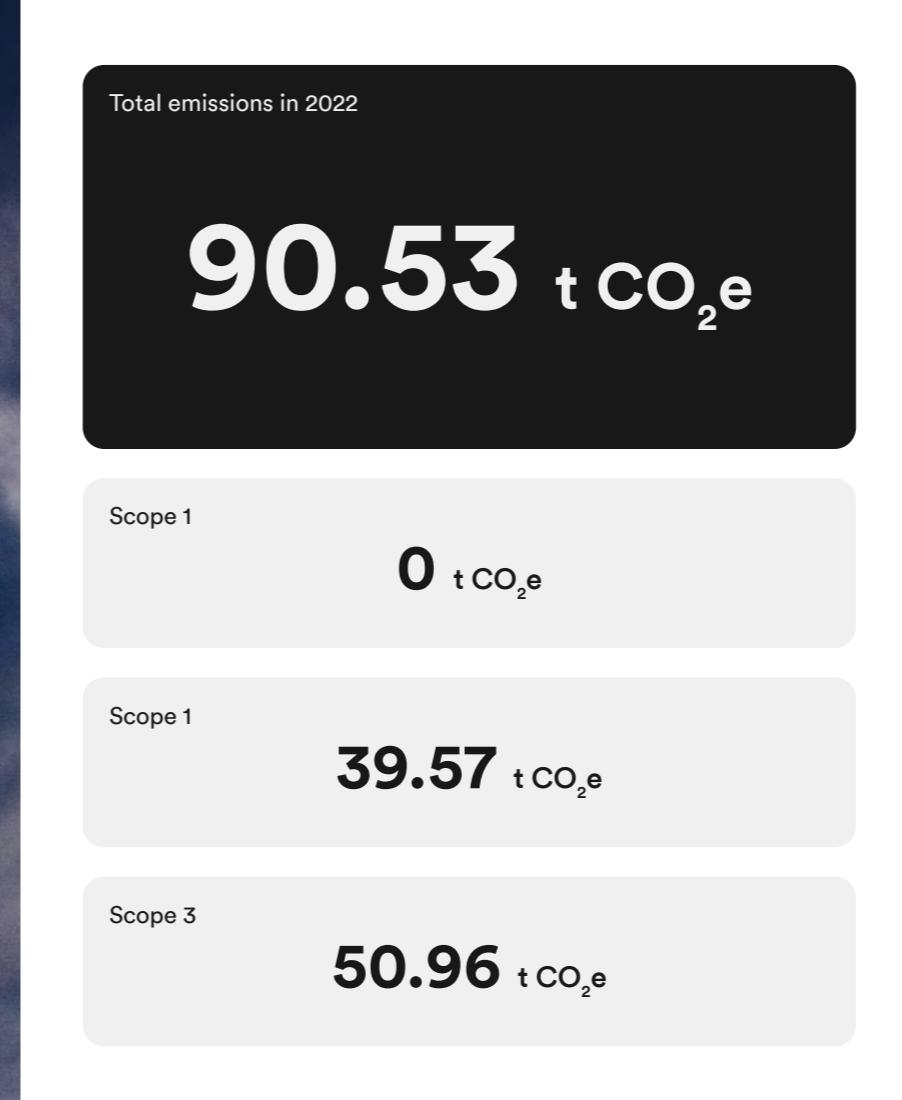
made available to the public with the belief that consumers have the right to know about the impacts of the products they buy. To this end, we aim to mobilize stakeholders to make formal commitments to sharing their sustainability information by signing our upcoming manifesto.



Our 2022 carbon footprint

Our 2022 emissions

In the spirit of transparency, we aim to communicate our carbon footprint as openly as possible. Rather than just sharing numerical results of our carbon emissions calculations, we also share the quality of our approaches to collect data and break down some key impact areas further. As a data company, we know that context is paramount in understanding data implications. Our calculations were performed using Plan A carbon accounting software.

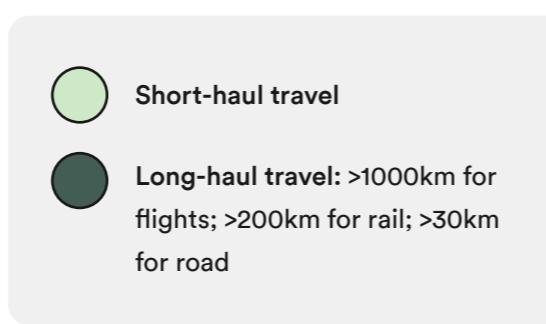


What was included in this carbon calculation?

What was accounted for in our emissions calculations, and how we collected that data, indicates the quality of the calculation made. Though some areas were not relevant for us, such as emissions from a vehicle fleet, we also did not account for other types of emissions categories such as events and marketing. For areas where we could not collect data, we made estimates or used national averages. We aim to introduce more accurate data collection practices in 2023.

- This category is not applicable
- Use of national averages
- Estimated figures
- Measured/actual figures

Scope	Category	Emissions	Data collection quality
Scope 1	Fugitive Emissions	-	
	Vehicle Fleet	-	
Scope 2	Heating	18.46	Yellow
	Electricity	21.1	Yellow
	Hosted servers	-	
Scope 3	Working from home	21.55	Dark Green
	Waste	0.05	Yellow
	Cloud servers	1.18	Dark Green
	Business Travel	22.48	Dark Green
	Facility supply	4.82	Light Green
	Employee commute	0.88	Light Green



Sustainable practices and policies

As we explored new markets for expansion in 2022, it's no surprise that business travel accounted for nearly a quarter of our emissions. Most emissions came from the 39 flights taken over the year, which included 13 long-haul flights of over 1000km. To minimize emissions from travel, we have a policy in place that encourages travel by rail. For example, in-country air travel is discouraged unless travel by rail is not possible or significantly cost or time prohibitive. Car rentals or taxis are also only permitted if public transportation is not possible or would be overly cumbersome (e.g., transporting goods, time sensitive). Going forward, we will introduce clearer criteria for determining whether in-person travel is necessary rather than conducting activities remotely to help reduce this large portion of our footprint.

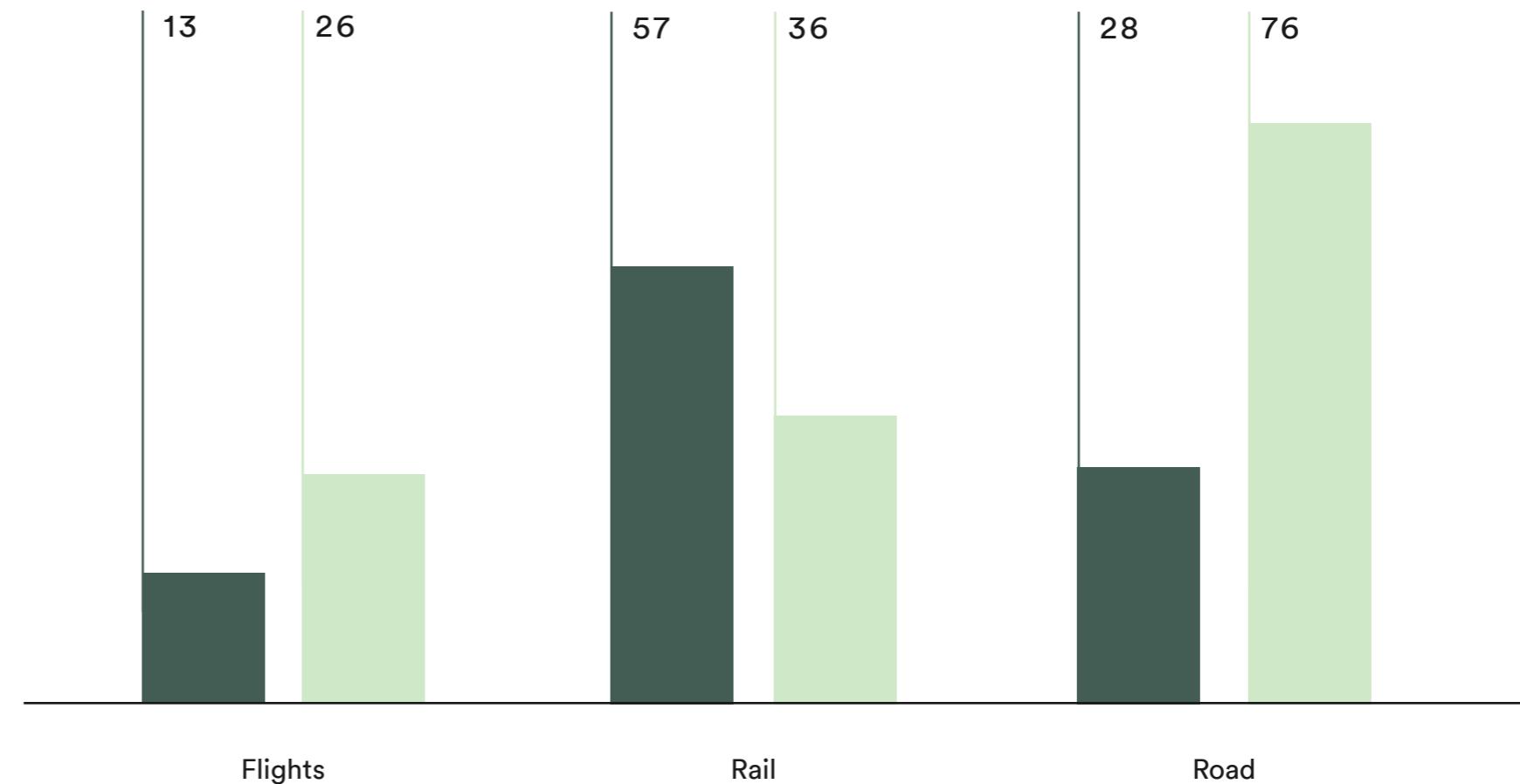


Figure 8: Number of business trips, categorized by type

Sustainability is also at the heart of our team. Though not part of our emissions calculations, we also engage in planet-friendly activities like planting trees and purchasing pre-owned hardware (e.g., some of our computers and other devices). We planted 292 trees in 2022, which corresponds to over 6 tons of CO₂ per year⁹. We also purchased 22 pre-owned monitors in 2022 from circulee.

According to circulee's calculations, each monitor could mean savings of over 400kg CO₂ if we keep these monitors for at least four years – giving us a total of over 9 tons in CO₂ savings over the next four years, or over 2 tons that can be attributed to the first year alone.

Though there are some limitations to us procuring 100% of our supplies sustainably, such as cost, we aim to create clearer policies for our hardware procurement as we continue to grow. Other sustainable initiatives include vegetarian and vegan catering at company events and trying our best to source employee gifts and office supplies sustainably.



⁹ This figure is based on the lifetime sequestration potential per tree averaged out per year, according to our partner Grow My Tree

How did we compare to last year?

ecolytiq's total emissions increased by nearly 58% from 2021 to 2022. Some reasons for this increase may include:

- The inclusion of additional emissions categories. In 2021, we did not include emissions from cloud servers or waste;
- We started using a new office! In 2022, we started renting office space in Berlin so that our employees could meet more easily in person;
- Our company also grew from an average of 26.7 full-time equivalent employees in 2021 to an average of 44.5 FTE employees in 2022 (an increase of 67%).
- Interestingly, despite including more comprehensive emissions categories into our carbon accounting in 2022, the average emissions per employee decreased from 2.15 tons CO₂e in 2021 to 2.03t CO₂e in 2022. An important next step is for us to set science-based targets to reach net-zero or net-positive emissions in alignment with global climate agreements.

Total emissions in 2022

57.31 t CO₂e

Scope 1

0 t CO₂e

Scope 1

21.66 t CO₂e

Scope 3

35.65 t CO₂e

Supporting carbon removals

ecolytiq purchased 90.53 metric tons of durable carbon removals. To hold ourselves to the highest standards, we used the Oxford Principles for Net Zero Aligned Carbon Offsetting to ensure we support the most effective projects.

- We retired 100% of carbon credits purchased. This means we avoid the risk of double-counting or double-claiming the emissions reduction resulting from forward-selling.
- We focused on removal projects to consider additionality – meaning they are more likely to have removed carbon emissions that would have, with more certainty, occurred otherwise.

• We pursued durable projects that had sufficient claims of permanence. Permanence refers to how long the removed greenhouse gases will stay out of the atmosphere. Over 80 percent of the purchased carbon removals are categorized as Type V in the taxonomy with removal and long-lived storage. The remaining 15 tons are categorized as Type IV, with an expected durability of 30 years of ecosystem restoration.



Bio-based construction
Austria

56.53 tons

The NORITEC Holzindustrie GmbH produces CLT products. CLT is an innovation in the timber industry first developed in Austria. Its structural properties allow it to be used in mid-rise and low-rise buildings, often replacing concrete elements. Each cubic meter of CLT board stores 585kg of CO₂. This approach to bio-based construction guarantees a minimum 50-year duration of CO₂ removal and storage.



‘Luckaitztal’ Forest Adaptation
Brandenburg

15 tons

The Luckaitztal climate project area is currently dominated by pines, with homogeneous tree heights, which are highly vulnerable to climate calamities such as storms, heat stress, and insect infestations.

Forest adaptation creates a climate resilient forest in Brandenburg by implementing the following measures: conducting natural regeneration, planting of diverse, climate-resistant tree species and wildlife management to avoid damages. As a result, the Luckaitztal climate project reduces carbon emissions by lowering the climate risk of the forest and sequesters additional carbon emissions from the atmosphere by increasing the structural diversity of the forest.



Lucrat Biochar Project
Germany

9.5 tons

Burning organic waste in the absence of air produces biochar. This helps improve water and nutrient retention in soil, making for a great sustainable fertilizer. It is an organic, carbon-rich material that is stable for up to 10,000 years, which makes it an effective carbon sink. Apart from storing carbon for a really long period, Lucrat Biochar replaces emission-heavy materials, prevents the release of more potent greenhouse gases like methane, and acts as storage for nutrients.



NovoCarbo (C-Sink)
Germany

9.5 tons

NovoCarbo creates biochar at production facilities throughout Germany. Their biochar is of the highest quality and complies with the European Biochar Consortium standard, and locks away carbon for up to 10,000 years. By increasing the number of industrial partners, and building up carbon removal parks throughout Europe, the project aims to scale biochar production and sequester megatons of CO₂ every year.

A people & culture company at heart

2022 was an intense and exciting year for ecolytiq! We never stop learning and developing, especially when growing quickly. It is our job to make sure our culture and team grows sustainably and that the team is engaged and motivated. We aim to build a workplace with positive impact on our team members, our stakeholders and the environment.

We grew from 30 to

52

team members

Some highlights:

- We grew from 30 employees up to more than 52 team members
- We grew into a new office in the heart of Berlin's business district
- We established an employee-led committee to identify our five core values that guide our daily work and interactions.

Values

We founded a values committee to democratically establish our values.



Respect

We embody a community mindset by building understanding and support for each other.



Transparency

We promote a culture of open and clear communication and collaboration.



Empowerment

We embrace diversity and sustainable behavior to help employees and partners flourish.



Impact

We drive positive change for a better world throughout all facets of our work.



Trust

We rely on the expertise of our world-class teammates to achieve the best outcomes.



17

nationalities

42%

of employees identify
as women

Cultivating people-centric sustainability

- Point of pride: We went from 6 nationalities at the beginning of 2022 to 17 by the end of the year – which means that every third employee comes from a different country!
- Area for improvement: 42% of all employees and 9 out of 21 of our managers identify as women, meaning we have a ways to go in achieving gender parity, especially at the management level. This is a marginal improvement from our 2021 figures, when just 36.5% of employees identified as women.

Fair pay

We ensure pay equity for our employees, we have instituted salary brackets.

We do not believe in unpaid work:

- Our internships are always paid at a rate of 1,073€ per month
- Our working students receive a salary 40% above minimum wage

Diversity

We are an equal opportunity employer and view diversity as an integral part of our mission to fight the climate crisis.

Our recruiters are required to undergo bias training, promoting diverse, capable talent.

Culture of sustainability

We offer exclusively vegetarian and vegan options at our team events.

We are mindful of energy and water use in our office space and try to reduce waste where possible.

Company meetings feature a dedicated portion to discuss insights for employees to learn how to live more sustainably.

We integrated impact as one of our core values.

We encourage employees to attend climate marches, even during work hours.

We host Lunch & Learn sessions, covering topics like mental health and climate action.

292 trees planted in 2022 with Grow My Tree (powered by impact hero) in celebration of our team.

Implemented employee Net Promoter Score (eNPS) to measure employee satisfaction

Benefits

Customizable working models within Germany with a remote option and office space in Berlin.

28 days of paid vacation per year.

Flexible working hours.

Collaborative working culture with flat hierarchies.

Regular feedback sessions & professional development opportunities.

Permanent work contracts.

Onboarding package with state-of-the-art technology.

Regular team events.

Relocation & visa support.

Multicultural workplace, where respect & recognition are prioritized.

Thoughts on the year ahead

2022 was a year full of firsts to lay the foundation for our culture and develop an empowering workplace. The next year will be all about promoting healthy growth, building upon the milestones we achieved in 2022. One of our goals is to track our eNPS over time to promote open communication and to facilitate better processes for incorporating employee feedback. We ultimately want to continue living our values by continuously fostering a sustainable and impactful workplace by defining and measuring standards like equal pay, non-male managers, etc. more consistently. Another primary focus will be on professional development and training initiatives as well as working towards a fully inclusive and bias-free workplace.



Investing in people, planet & the future

Policy for equity and diversity

ecolytiq is dedicated to encouraging a supportive and inclusive culture, and it is in our best interests to promote diversity and eliminate discrimination in the workplace. Our aim is to ensure that all employees and job applicants are given equal opportunity and that our organization is representative of all sections of society. We are committed to ensuring that each employee is respected, valued, and, as a result, able to give their best.

Our policy reinforces our commitment to providing equality and fairness to all in our employment practices and prevent discrimination on the grounds of age, disability, gender reassignment, marriage and civil

partnership, pregnancy and maternity, race, ethnic origin, color, nationality, national origin, religion or belief, or sex and sexual orientation. We are opposed to all forms of unlawful and unfair discrimination. When ecolytiq selects candidates for employment, promotion, training, or any other benefit, it will be on the basis of their aptitude and ability. All employees will be given help and encouragement to develop their full potential and utilize their unique talents.

Our commitments to equity and diversity are as follows:

- To create an environment in which individual differences and the contributions of all team members are recognized and valued.
- To create a working environment that promotes dignity and respect for every employee.
- To not tolerate any form of intimidation, bullying, or harassment, and to discipline those that breach this policy.
- To make training, development, and progression opportunities available to all staff.
- To promote equality in the workplace, which ecolytiq believes is good management practice and makes sound business sense.
- To encourage anyone who feels they have been subject to discrimination to raise their concerns so we can apply corrective measures.
- To encourage employees to treat everyone with dignity and respect.
- To regularly review all our employment practices and procedures so that fairness is always upheld.



Policy for Corporate Social Responsibility

At ecolytiq, we are striving to sustainably improve living conditions for as many people as possible, worldwide. Our Corporate Social Responsibility (CSR) policy refers to our responsibility toward our environment, recognizing that we're part of a bigger system of people, values, other organizations, and nature. The social responsibility of a business is to give back to the world just as it gives to us. Accordingly, we want to be a responsible business that meets the highest standards of ethics and professionalism. Our company's social responsibility falls under two categories: compliance and pro-activeness. Compliance refers to our company's commitment to legality and willingness to observe community values. Pro-activeness is every initiative to promote human rights, help communities, and protect our natural environment beyond compliance requirements.

We are committed to:

- Respecting the law
- Honoring internal policies
- Ensuring that all business operations are legitimate
- Keeping every partnership and collaboration open and transparent
- Respecting towards our clients and partners
- Ensuring that all business operations are legitimate
- Anti-bribery, anti-money-laundering and anti-corruption practices
- Safety and fair dealing
- Protecting the natural environment
- The health and safety of our employees
- Community engagement, which may be in the form of donations and aid
- Support of diversity and inclusion
- Protecting human rights as an equal opportunity employer abiding by all fair labor practices
- Continuous learning

Policy for Sustainability

Our mission is to do our part towards a better world, so we educate consumers about their individual impact on the environment and empower them to live sustainably. That said, we also believe in doing our part to act sustainably as a company.

ecolytiq aims to:

- Build and maintain a rigorous and science-based framework for continually improving our environmental performance
- Protect the environment by preventing pollution and promoting activities that help mitigate the effects of climate change
- Comply with, or exceed the requirements of all relevant environmental legislation and codes of practice and compliance obligations
- Make efficient use of natural resources, including gas, electricity and water to help reduce our carbon footprint
- Operationalize effective procedures for the reduction, reuse, recycling, for the safe storage and disposal of waste that cannot be avoided (hazardous waste such as batteries is to be disposed in a responsible manner)
- Work in partnership with our suppliers to promote effective environmental supply management, encourage sustainability and, wherever possible, purchase products and services that have the least impact on the environment
- Assess the environmental impact of any new equipment, process or product we intend to introduce in advance
- Ensure the effective implementation of environmental policies and procedures by providing appropriate information and training to our employees and encourage their participation in environmental improvement activities
- Establish environmental targets and objectives and report our performance against them
- Address complaints about any breach of our Environmental Policy promptly and to the satisfaction of all interested parties



New
horizons
for 2023

There's a lot to be excited about in 2023!

Our outlook for this year can be categorized into three areas:

Impact is people-centric

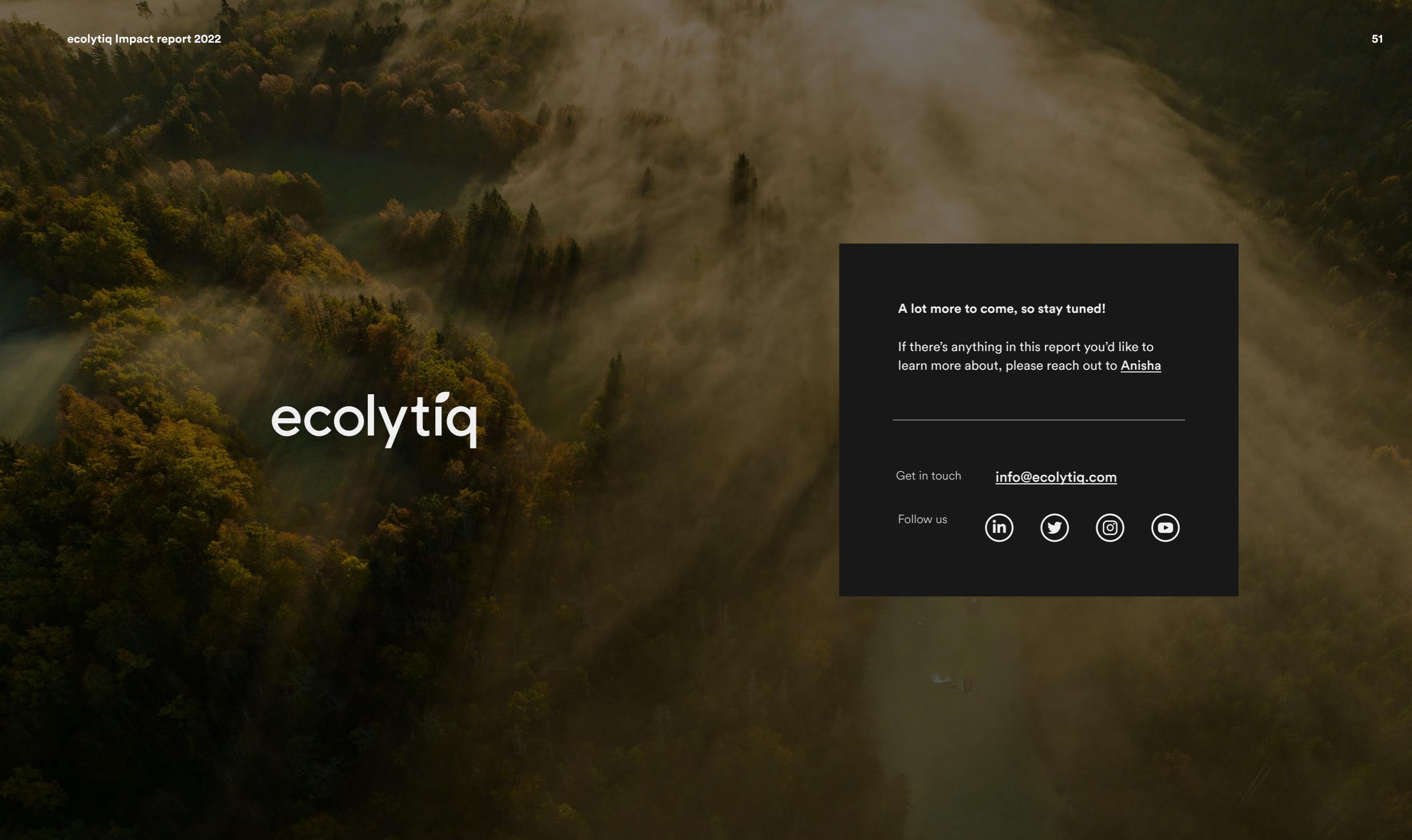
- Foster a culture of impact and sustainability in all our roles and decision-making
- Provide more resources, training, and motivation to increase employee knowledge on sustainability and impact topics, promote professional development, and to support employee wellness
- Cultivate diversity and inclusion
- Introduce new and better tools for employee feedback and open communication

Building a solid foundation

- Formalize our impact and sustainability reporting, structures, and management processes using best-in-class frameworks and standards. This will ensure our growth is sustainable and impact remains at the core of what we do
- Set science-based targets to reach net-zero or net-positive emissions
- Develop and implement new impact policies to streamline more climate- and people-friendly business

Expanding on our data & impact KPIs

- We believe there's room to grow in our impact and sustainability management, and we need to clearly outline more comprehensive impact and sustainability KPIs, goals, and strategies. The main areas of focus are:
 - Advanced data collection in compliance with data privacy regulations, goal setting, and action-plan development for our internal sustainability
 - Better defining and measuring People and Culture indicators such as pay equity, workplace diversity, employee satisfaction, etc.
 - Honing in on our impact measurement and management, with particular focus on improving data collection, bolstering indicator measurement, facilitating study design, and expanding and sharing learnings



ecolytiq

A lot more to come, so stay tuned!

If there's anything in this report you'd like to learn more about, please reach out to [Anisha](#)

Get in touch

info@ecolytiq.com

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