

Spirits of the *Future*

*How sustainable changemakers
are turning the liquor industry upside down*

Featuring

*Stories of 20+
innovators in the
spirits industry, about
every step along the
value chain.*



FRONTRUNNER REPORT • SPIRITS

 **Ecochain**

Welcome, the bar of the future is open.

Feel like a drink? No, not just yet?

In our first frontrunner report, we want to take you on a journey through the illustrious world of spirits. We've talked to innovative entrepreneurs in Vodka, Tequila, Mezcal, Rum, Whiskey, and Gin. The question that was nagging us: What is actually driving sustainability in the spirits industry? What are the big players doing? And how do upcoming brands design their business around sustainability?

We will take you along through the liquor value chain. You'll learn about the environmental challenges in each part of the way - and the innovative solutions the frontrunners are working on to fix them.

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Looking behind the curtain

The world of spirits

Liquors are nightlife. Liquors are emotions. Even though younger generations start to drink less alcohol - the spirits industry has brought forward some of the most iconic brands of our time.

But next to the Johnny Walkers and Jack Daniel's of the world, there is a dedicated scene of big and small brands alike - differentiating through quality, design and taste. And sustainability.

Much like the craft beer industry has brought forward many small local breweries that have made it to national and international fame, there are countless gin, whiskey, rum and vodka brands that are challenging the big players of today.

The race is on.

Diageo owns more than 25% of the global liquor market.

The liquor market is less diverse than you think

You'll encounter hundreds of different bottles and brands of spirits in your local bar, supermarket, or international hotel chain.

It really does leave you with one impression: The spirits market is big and diverse. But this is a misconception.

The big players own the majority of the worldwide liquor industry. Diageo, the mother company behind brands such as Captain Morgan's, Bailey's and Guinness, owns more than 25% of the worldwide liquor market.

It's estimated to be almost 50% larger than its closest competitors (Pernod Ricard and Bacardi - gigantic players themselves). So behind hundreds of shiny labels and colorful bottles, there might only be a handful of companies.



It's a brand game

While smaller brands are gaining the recognition of niche audiences, the big players dominate the market for a good reason: In the spirits industry, nothing is more important than brand.

Thanks to economies of scale, the production costs behind large-scale liquor enterprises are as low as it gets - but the perceived value allows for premium prices nonetheless.

As Brand Manager for a big spirits corporation, I was living a rockstar life: 5 star hotels and drinking in the world's best bars. But at the same time I've been vegan for over 20 years, have campaigned, and chained myself to petrol pumps. So that lifestyle wasn't true to my beliefs. When I left, I finally had the opportunity to change that.



Tim Etherington-Judge, CEO Avallen Spirits.

With advertising budgets of hundreds of millions of Euros, the market leaders can bank on awareness and brand loyalty in the mass market. And their own portfolios are diversified, too: It's easy for a big brand to sell their loyal customers to a premium product from their own range with an even higher margin.



Not on the radar

Consumers usually only buy small amounts of liquor themselves. That's not where brands make their money. The hospitality sector - bars, restaurants, hotels - is the actual playing field.

And for many reasons, sustainability rarely plays a role at the hotel bar: With just a little sip of Rum, how could it possibly have any impact? Liquors are deemed invisible when it comes to environmental impact. But is that actually appropriate?

Most consumers aren't given the chance to choose a sustainable spirit yet. The product must speak for itself first and foremost to get in front of the consumer. If it does get in front of them, then why would the consumer choose the less sustainable spirit.?

Russ Waheham, Two Drifters Distillery

Why is the liquor industry “upside down”?

From a sustainability perspective, the liquor industry is enormously interesting - because the glass bottle is often heavier than its contents. It's a question of priorities and careful innovation.

Margins are high, and the biggest impact maker might not be the content of the glass bottle.





Stories of change-makers

In this study, we will take you on a journey through the spirits supply chain. We'll take a closer look at the grains that the drinks are made from, how they get processed, and how they are packaged, distributed, and consumed. Through each step, we will present to you the story of different changemakers, and how they inspire others to reduce the environmental impact of their industry.

Most consumers don't care about sustainability yet. The product must speak for itself. If it does, sustainability can be a bonus.



Russ Wakeham,
Co-founder, Two Drifters Distillery.

The big players are so large, it's like trying to turn an oil tanker with a chopstick. It takes a long time. With smaller brands, we can decide something this afternoon and do it the next morning. If we believe it's a smart thing to do, we can just do it.

That's not necessarily how bigger organizations operate.

Tim Etherington-Judge,
CEO Avallen Spirits.



From Grain to Glass

*The journey of
raw materials*

It's easy to connect grapes to wine. But you don't immediately connect barley to whisky.



Annabel Thomas, CEO of Ne'Neen

What all spirits have in common is that they are made from some form of starch or sugars, processed through a distilling process. Barley, wheat, rye, potato, agave, you name it - there are countless variations of the traditional recipes.

What's so difficult about this is something else: transparency. Everyone knows that wine is made from grapes. That beer is made from hops. But it's harder to connect barley to Whisky.

You're not really aware of the impact of the ingredients of your cocktail, are you? Here's the thing: one 70cl bottle of Whisky requires roughly one kilogram of barley. That doesn't seem like a whole lot.

But even with little raw ingredient requirements, there is room for improvement. Two Drifters Distillers, an artisanal Rum distillery from Exeter, UK, are a carbon negative business. With extensive knowledge into carbon capture and Life Cycle Assessments, Russ Wakeham, co-founder of the distillery, really looked behind the impact of every aspect of his value chain.



We always need to balance things out. We can't get organic molasses for our rum from the UK. We could get it from Germany. Then it'd be organic, with differences in pesticides and chemicals, but it entails other impacts from the transportation, namely the carbon emissions. It might be 3 times the price, but not 3 times the emissions. The point is: It's an environmental balance act.

Russ Wakeham, Two Drifters Distillery

What makes our drink taste like our drink?

Arno Kunert started Daisy Gin, a small organic brand from Cologne, Germany, with impact in mind: He wanted to start “a green company”. He chose artisanal suppliers from the region, with generations of organic manufacturing practice, and sources ingredients only from the immediate surroundings, not farther away than 100 km.

One of Arno’s key goals: Create a gin that even surprises well-experienced gin-drinkers with new flavors. Daisy Gin shouldn’t be one of the gins that only tastes blended in longdrinks - he wanted to create a spirit that can be enjoyed purely. With these goals in mind, he tried and tasted a large variety of botanicals, the flavor-giving herbs and ingredients.

But at some point, his own recipe put a spoke in his wheel.

Consumers are not aware of the ingredients that go into their liquor

Orders of magnitude

For small distilleries, working with large suppliers isn’t always easy. They might be able to offer better prices, but the economic upsides often leave little potential for environmental improvement. Working with mission-driven suppliers is key for their success, says Russ.

Goji berries are one of our three most important ingredients. They are crucial for our flavor, and we can’t simply replace them. And even though our supplier only carefully sources from chosen organic producers, our Goji berries come from China. That’s obviously not as great as an ingredient from our backyard.

Arno Kunert, Daisy Gin



Liquid gold - content is margin

All these rewritten labels are band aid solutions. Recycled glass is great, but brands don't like to improve the actual liquid inside. Because that's incredibly profitable for them. It's hard to get those profits if you source from smaller scale farms.

Mark Byrne, Good Vodka

You've seen them: Bottles with all kinds of stickers and labels on them about recycling and responsibility. And they certainly show one thing: Consumers are more aware of environmental implications of their shopping behavior.

But they rarely talk about what's inside of the bottle. Changing the liquid inside isn't easy for most companies.

When we look further than carbon emissions, that one kilogram of barley can still cause significant impact.

A manufacturer could have a relatively BIG impact if they choose to source responsibly. It takes about 2sq meters of land to grow 1kg of barley organically, and the nature of organic farming in turn creates a better quality of soil - making plants hardier and more resilient to changes in weather, improves water quality and supports biodiversity. Every small choice we make as a consumer and manufacturer has a ripple effect.

Amy Stammers, Nc'Nean.

Your spirits need to be consistent, day in and day out. It's drilled into the big companies. If they change the barley, this will affect the taste. So what ends up happening is that they share barrels for blending, and it's difficult to change this entanglement.

Annabel Thomas, CEO of Nc'Nean



*It starts with the raw
ingredient: How Avallen Spirits
creates a carbon-positive
Calvados*



Interview with Tim Etherington-Judge, Co-Founder Avallen Spirits

Calvados is a traditional brandy from Normandy. Why did you decide that that's the liquor you want to create?

I do have a close connection to Normandy, but it actually started with the ingredients. We really started with a blank sheet of paper to understand where we can get started. Most liquors are made from grains. Calvados is made from apples. And apples are an incredibly sustainable raw material. Orchards don't damage the soil. They're not an annual crop. Apple orchards are an incredible source of biodiversity. Pesticides, water usage - whatever we looked at, apples came out on top. It's actually illegal to irrigate the orchard for Calvados.

But when it comes to processing the apples, it's the same as any other liquor, right?

Not really, it actually gets better with every step on the way. When you produce Whisky, you start with a dry, starchy material, that you need to malt, ground, etc. There are a lot of processes involved where you need to add water and energy. All we do is take the apple, wash it, juice it, and then let it ferment naturally. It couldn't get easier. We don't even need to control the temperature.

How did you make the distillation process more carbon positive, as you call it?

We use a traditional hybrid still. The gas we use to heat it comes directly from the apples. All the pulp is collected and given to local farmers, and the rest is used for our biodigester. That is what fuels 100% of the distillation.

One issue in spirits is that the bottle is often more heavy than the content. How did you tackle that?

We source the lightest bottle available in France - it's the standard Calvados bottle, but it only weighs 540g. It's perfect on any level: It's bartender-friendly due to its light, tall neck, and it's also the cheapest one. It used about 60% colored glass.

Why did you decide to measure your impact? It looks like you're already doing everything you can.

We work according to the ethos of measure, plan, improve, repeat. And we can only improve if we measure where we're at. Our goal is to be carbon positive and put a number for CO₂ and water on every bottle. We really want to be a leader in the industry. We want to purchase better products ourselves, and maybe we can bring others along with us!

Culture plays a big role for us to achieve that: Our labels are made from apples and recycled fibers. We use only natural inks. People tend to forget that the most sustainable thing is removing a process, not improving it. So we always ask what the most sustainable option can be.

Ecochain has worked with Avallen Spirits to calculate their environment footprint.



Good Vodka from waste fruit



For Mark Byrne and Tristan Willey, partners in Good Vodka, the solution also started with the problem. Making coffee is a process that incorporates many small steps. One of those steps is washing the fruit pulp from the coffee beans. In this process, the water absorbs a lot of sugar. But just using rescue fruit wasn't enough for the Good Vodka team. They wanted to take the extra step and actually measure their footprint.

Ecochain calculated and compared the footprint of Good Vodka. How did you actually use the results?

Mark Byrne: Initially we used it for getting investors. We needed proof for what we promised, and our investors asked for that. And when we saw the numbers, they were actually far more positive than what I thought.

Did you make any decisions based on that impact?

Yes, absolutely. Knowing the scale of our carbon impact made us much more serious about what we were doing, and made us even more insistent that this product be widely available, at an accessible price point..

It is important for me that the consumer pays the same price as for normal vodka, and doesn't need to pay extra for sustainability. This has to be paid for by the company.

How do you want to move forward?

We want to communicate it of course. We have some projects under way that will allow consumers to make a clear connection between the vodka and its emission data. But we also want to show transparency about how vodka is made. And show that, we as a brand, don't need to hide anything.

Your business model seems to be harder to scale. How do you want to tackle that?

Of course we'll have to sacrifice some profit. That's the way to do it. But with the smaller margin, we'll do much more targeted marketing.. Our brand is not an alcohol brand, it's a sustainably packaged good that happens to be made with alcohol.

*Sugar is
gold. That's
really all you
need to make
alcohol.*

Mark Byrne, Good Vodka

**Problem: Sustainable
products are hard to
scale.**

**Solution: Smaller
players can sacrifice
margins through
targeted marketing.**





Mezcal and the indigenous people of the Mexican mountains

When you hike in the mountains of Oaxaca, in South Mexico, you might encounter donkeys carrying baskets of wild agave plants over paths scattered with rocks. The agaves are needed to produce Mezcal, a close relative of Tequila. But while Tequila is only distilled from the blue agave, Mezcal is made from up to 22 different types of agave.

Mezcal is the living of the indigenous people of the Mexican mountains.

They harvest agaves with many years of maturity. The problem: Because the wild agave is not grown commercially, the commercial demand for Mezcal led to overharvesting - with all its implications for the biodiversity and social structure of the region.

For Santiago Suarez Cordova, CEO of Mezcal Amores, this was a big problem.

*When I learned that Mezcal is made from 22 species of agave and Tequila from only one, I was like ,What the f***? We have the most complex liquor and nobody speaks of it?*

That's when I wanted to start a brand around the love for Mexico and its culture.

Santiago Suarez Cordova, Mezcal Amores




“The harvesting of wild agave has been growing rapidly through the success of Mezcal. When the farmers are overharvesting, they lose their natural resources and thus lose money, their livelihoods. And harvesting early harms the reproduction of the agave. For this reason Amores does not harvest wild agaves unless we have a plantation program for that exact species. A big part of what we do is educating the farmers and preventing that from happening.”

Santiago Suarez Cordova - Mezcal Amores

Mezcal Amores is founded on regenerating resources, not degrading them. This starts with taking care of water, biodiversity and carbon footprint, and ends with being an active member of small producers of Mezcal. Maintaining the artisanal way of producing Mezcal.

Mezcal Amores’ “Plant our future” is their new pilot project for 2021 that aims to take farmers out of the line of poverty, while replenishing the resources of the wild agave that is so vital to the Mezcal production. Through selective nursing of different species of wild agave, Santiago is building an infrastructure that benefits both nature and farmers.



A black and white photograph of a man with a beard and a headlamp, holding a large agave leaf and a small animal. The man is looking directly at the camera, and the headlamp is on his forehead. He is holding a large, triangular agave leaf in his right hand and a small, dark-colored animal, possibly a cat or a small dog, in his left hand. The background is dark and out of focus.

How Mexico's Batman is fighting the loss of biodiversity in the agave industry

The agave is the foundation for Mexico's most well-known spirit varieties - Mezcal and Tequila. But there's a story behind the flowering plant that also gained popularity in recent years as honey-replacing syrup. Distilleries rely on the juice of the agave for their spirits. The agave of choice for Tequila is the blue agave, the *Agave tequilana*. The problem: Once the plant flowers, it loses a lot of juice. That's why the industry needs to harvest it before the flowering starts. At the same time, the flowering process is that agave's only way of sexual reproduction.

It's a dilemma with one alternative, albeit with its own problems: Clones. In order for the agave to be used for liquor, agave farmers rely on cloned plants. That means that all the commercially used blue agave comes from one source - they all share the exact same genetic code. This imposes a huge problem for biodiversity, as experts fear that the plant might lose its natural ability to be resistant to diseases, pests, climate change by evolving and adapting.



Rodrigo Medellín is one of the world's leading experts on bat, and in his home country Mexico, he is commonly referred to as Batman. For him, bats can be the missing ingredient to biodiverse agave farming. Bats are natural pollinators, and Rodrigo is working on pilot projects that use the bats' symbiotic relationship to the agave plant in order to pollinate it and increase diversity. He is a professor for Ecology at the National Autonomous University of Mexico and is working with the Tequila Interchange Project to raise awareness in the agave distillates industry and change modes of production.

Why are you so fascinated by bats?

Rodrigo: Bats always had an unfair bad image. Especially now during the pandemic. But they are incredibly important to our ecosystems: As pest controls, but also as pollinators. That's why I have already devoted more than half of my professional life to bats. I am fighting these myths!



Photo:
Joaquín Meza

What are you working on right now?

I'm finally back in the field, and now, I'm working on a project close to Mexico City. I'm documenting how bats provide ecosystem services by controlling insect pests in the rice fields.

How did you get involved with the agave and Tequila industry?

Bats and agaves have lived in symbiosis for millions of years. The agave plant evolved to produce exactly the right concentration of sugar, around 17%, for the bats. So in 1994, I approached the Tequila industry to tell them about these partners that they have, but don't recognize.

Why is that?

Agaves accumulate sugar until sexual maturity. Then they grow these immense flowering stalks and open the flowers, offering their nectar to pollinators. Humans however discovered that you can yield more sugar and more alcohol from it if you harvest the plants before they flower. For about 150 years, the Tequila producers didn't allow a single agave plant to flower. They considered that a wasted plant.

What does that mean for the industry?

More than 200 million plants of the blue agave completely lost their genetic diversity. It only needs one disease to hit the plants, and everything is lost. All plants will be sick. The industry needs to invest into their biggest partner, the bats, to recover some of the diversity! I've been frustrated with them since the 90's.

Why was that so important to you? Does that endanger the bats, too?

Bats feed off many different sources of nectar, so it wasn't a problem for them.

Bats were endangered since the 80's, due to vandalism in the caves, a lack of education, and modern agriculture. But in 2017, I could finally delist bats from the endangered species list.

We need to show people the benefits of biodiversity. The industry is heading for a disaster, and I wanted to make them aware of that high risk. Now, more and more companies are interested in the "bat friendly" label.

How do you see the responsibility of the producers?

Every producer needs to clean up their act. The pandemic is child's play compared to climate change, and we need to avoid that disaster to happen. But we as consumers are also responsible. We have the power to steer the direction of the world. Do you go to the supermarket? Or to the local farmer's market? What are the things we eat produced from? You need to ask yourself these questions.

Most of what you eat or drink comes from monocultures. We need to reframe the marketing of these things.

Rodrigo Medellin

This is easy to consider if you're already aware of the problem. Most consumers, however, are not aware of what's happening behind the scenes. How do we get the message across?

Great question. We are preaching to the choir. I was featured in National Geographic, but I always avoided the big, glossy media outlets. Then I was featured in a glossy TV magazine that reached almost 1 million people, and suddenly the lady that sells lemons at the market comes to me and says: "You are the bat guy! And I know now that bats are not bad!" I almost kissed that woman! This is the effect we should aim for. Let's reach the ones that are not aware.

"For about 150 years, the Tequila producers didn't allow a single agave plant to flower. They considered that a wasted plant."

Rodrigo Medellin



The impact of raw ingredients

What the Environmental Specialist says

“The raw materials in the production of liquor can have quite a lot of impact. Grains can be organically grown, meaning a lower environmental impact on water and toxicity. But land use might be higher. These impacts are part of the total impact of your beverage. But you can also reuse waste materials as feedstock. Growing virgin grains has a high impact, but if you use a sugar containing waste stream, your impact would be much lower.”



Lex Roes, PhD, Environmental Specialist at Ecochain



Distilling a feeling

How small brands reimagine how we manufacture spirits

Distilling liquors boils down to two core factors: Water and energy. This also means that the upside is enormous. Recycling heat saves distillers money, so it's an established process. But what else can distilleries do to reduce the impact of their manufacturing process?

Problem:

Becoming a carbon-negative business is a complex and time-consuming undertaking.

Solution: Setting it up from scratch is more efficient than refurbishing old processes.

How Two Drifters created a 100% electric and 100% renewable distillation process

Most processes that are based on fossil energy sources can be turned electric today. When Two Drifters realized that Rum could be a viable business for them, they didn't only dive into the impact of their operations - they designed them to be carbon negative from the ground up.

Carbon capture and carbon negativity

Two Drifters is one of the most ambitious projects in the spirits industry. They set themselves an internal carbon price of 700 dollars per ton. The EU tax is about 30 dollars per ton. Through a thorough LCA, they calculated their environmental impact -

and decided to overcompensate it by paying Climeworks in Switzerland to capture and offset CO₂.

There's no business reason behind it, other than their own drive to make a positive dent in the world.

How does your impact influence your manufacturing decisions?

Russ: A lot. The one single thing we have the most influence over is our distillery. Everything is electric. All the stills and everything else. We burn no gas.





Did you need to redesign your process?

All the tech is here. We started with a bigger brewery and a distillery on the side. But when we realized that the Rum was more popular, we zoomed in. We converted our brewery equipment into a larger still.

It was fully electric, with a negative carbon footprint through carbon capture.

Converting old equipment to new processes is quite expensive. But if you set it up with that intention from the beginning, I don't see how it would cost much more. It's a complicated issue, because it's just not so visible. A piece of plastic in the ocean is easy to understand. But you can't show a piece of CO₂ in the atmosphere. It's just so easy to dismiss.

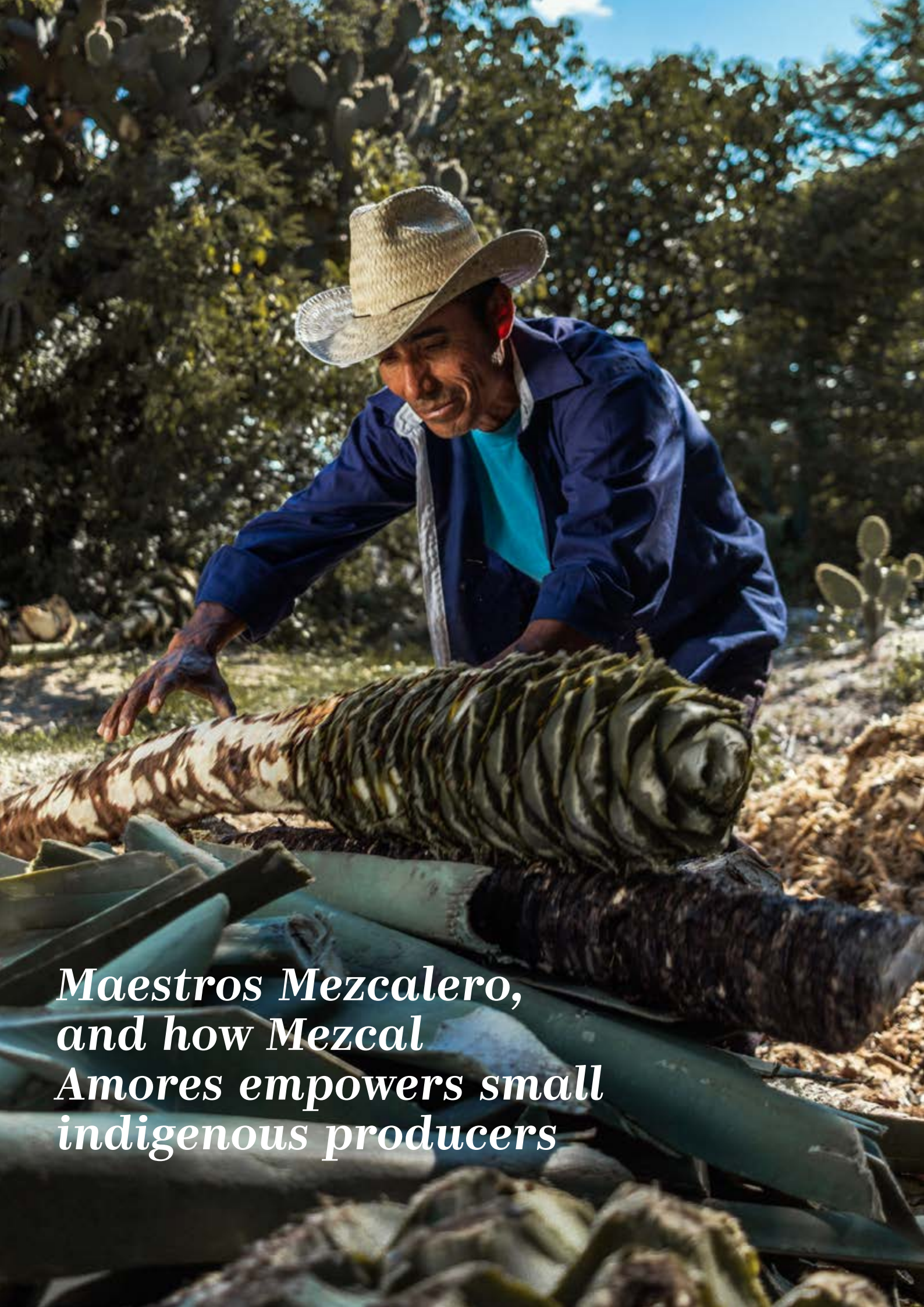
The one single thing we have the most influence over is our distillery.

How do you deal with the other scarce resource in the distillery process, water?

I have a background in chemistry, so I took control over the entire flow of water in our processes. We use a reverse osmosis system to purify the water.

The water in our region is very hard, so it needs purifying either way. But we also use the purified water to cool the stillers through

a water cooling system. All electric. The still chiller system is a closed circuit, so when it's hot, I can just use it and pump it into the next batch, saving the energy used. We also use heat exchange to generate our cleaning liquid as well, so the cleaning process is the dead end. That's about as much as I can do on my rented property.



*Maestros Mezcalero,
and how Mezcal
Amores empowers small
indigenous producers*

Mezcal is distilled in extremely rural areas, in ovens dug into the ground, using copper or ceramic pots. It is true indigenous craftsmanship, distilled in small volumes. Fermented in the dry heat of the Mexican South, anyone that has tasted Mezcal is fascinated by its richness.

The indigenous people of Mexico have lived in extreme poverty for generations. But the commercialization of the drink led to the interest of bigger brands, and suddenly, some producers got rich, often at the cost of the small producers.

Mezcal Amores tries to overcome this issue through extensive social programs. They source a majority of their production from small producers, and their relationship is based on trust and loyalty.

The indigenous culture values win-win situations, and we try to be a real partner to each other. We even provide microcredits and try to help the farmers and producers as much as we can.

Santiago Suarez Cordova, CEO of Mezcal Amores.

In their own distillery, Mezcal Amores is completely carbon neutral. They use less wood than traditional distillers, and the waste of the production becomes fertilizer for their agave plantations. 20% of their sales go directly to internal social responsibility programs ranging from planting agaves to buying Mezcal from extremely rural and small sized indigenous producers. While sustainability in Mezcal is still a new category, Mezcal Amores isn't shy about their ambitions.



We need to teach the world to scale a local production like this, but to remain sustainable. We want to build on micro producers in a natural way, and show the world that you can make this work.

Carbon neutrality is not our biggest goal. We have more important problems to solve. But consumers and bars like the carbon neutrality label. It is not that we disagree, but consumers have a hard time understanding more than carbon. It's about water, poverty, wood usage and local biodiversity.”



Santiago Suarez Cordova,
CEO of Mezcal Amores

Problem: Commercialization hurt the indigenous distillers.

Solution: Mezcal Amores invests a share of their revenue in community development.

The impact of distillation

What the Environmental Specialist says

“Overall, the production process in spirits doesn’t have a big impact. When fermentation is used, it’s even better - oftentimes, no electricity is needed at all. But distillation and boiling need energy. So from an LCA perspective, it’s important to look at the source of that energy. Is it grid energy? Does it come from green sources? If you use, for example, biomass or waste in a biodigester to generate biogas or energy, this will have an enormous positive impact on the overall footprint.”



Lex Roes, PhD, Environmental Specialist at Ecochain

The weight of a brand

*What can you do when your
bottle is heavier than the
content?*





People are mostly interested in editorial solutions, but I'm not convinced that they are after systemic change. I think they love things like the paper bottle, but they don't really care what's happening on the other end at the farms where feedstock for alcohol is grown. And consumers aren't asking for the proof yet, so companies don't act.

Mark Byrne, Good Vodka

Glass is big business

Glass bottles seem like a commodity, but the majority of the production is owned by few vendors. This power in the market, combined with the cost efficiencies of economies of scale, plays a big factor in reducing margins. It's harder to innovate with a size like that.

Yet, over the years, many companies have added labels to their bottles, or launched limited edition “Recycled” bottles. But this doesn't tell the story of how much recycled glass actually went into the product.

Most recycled bottles contain between 0% and 80% recycled glass. We are bottling our whisky in a 100% recycled clear glass bottle and combining this with a high tolerance for defects and as light a bottle as we can source. This lowers the carbon footprint of the bottle by 40%, because it takes much less energy to re-melt glass, than to break down sand, soda ash and limestone which is used to produce virgin glass.

Annabel Thomas, CEO, Nc'Nean

The packaging is the brand: That holds true in the liquor industry more than in any other. A beautiful bottle conveys a premium product. In recent years, many brands have tried to innovate in this field.

The impact of glass

And innovation is desperately needed: Because of the heavy, thick glass bottles, the transportation of the product at scale accounts for the biggest impact along the value chain.

The impact of glass spirit bottles was estimated to be 22 million tons of CO₂ in 2020 - that is equivalent to the yearly CO₂ budget of 11 million people.

*How a
glass cube
revolutionizes
the way we
ship alcohol*





The shape of a bottle tells a story: Some of the most iconic packaging designs in consumer goods history have, in fact, been liquor bottles. In a bar or a restaurant, the story might look a bit different. The bottle serves a more decorative purpose, with walls of glass behind the bartenders' back. But need these bottles be single-use bottles?

ecoSPIRITS, a project launched by Proof & Company, Asia Pacific's leading liquor distributor, is nothing less than a disruption.

Instead of distributing single use glass bottles, the company invented a closed-loop distribution system that completely eliminates packaging waste. Additionally, it drastically reduces the amount of glass being shipped back and forth.

At the core of the concept is a 4,51 liter square glass cube. The cube replaces the shipping of bottles - and can simply refill the bottles in any given bar. It accounts for a reduction of 550 grams of CO₂ per bottle of liquor - a remarkable change.

We talked to Paul Gabie, CEO of Proof & Company

How is the ecoSpirits glass cube received by other distillers? Brands depend a lot on their bottle, after all.

Paul: When we started with the first prototype in 2016, we knew we had to address this. The bottle is a safe container that retains the flavor, as well as a medium for storytelling. So we needed to solve both problems. That's why the glass vessel is key. It's the gold standard in flavor protection and hygiene.

In terms of branding, the cube itself is branded on the shelf. In fact, there is more space for branding than on a bottle. Plus you can see the liquid through the glass, all along an automated dispensing system. But you can still use the same bottles and simply refill them hygienically. It's quite absurd that our industry ships products in a packaging container that is heavier than its content. That's where we have the most potential, and that's where the ecoSpirits cube comes into play.

How should companies communicate their footprint?

ecoSpirits saves 30g of carbon per cocktail. That's quite a lot if you think about it. And it is something that's easy to communicate in a bar: With this cocktail, you're saving 30g of CO₂. It's that easy.

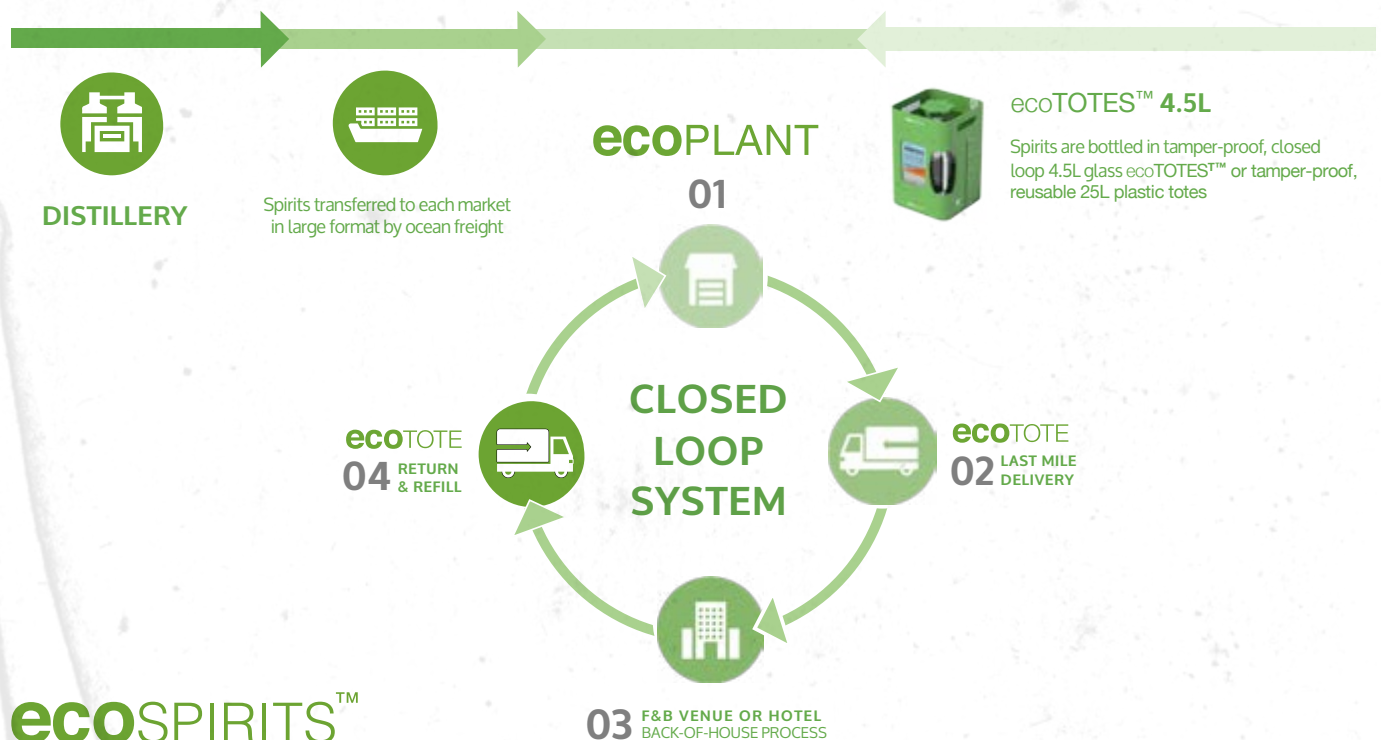
But we prefer to focus more on solving the problem instead of communicating it. The packaging is not a heavy industrial process, but shipping glass has a huge impact when being transported. We're fixing that.



How do you assess the environmental footprint of your product?

We've made an assessment from the gate of the production location until consumption. So we also focus on overall carbon footprint and waste reduction. We have made big steps towards reducing waste in the entire supply chain, but we're still trying to improve. We distribute through a satellite system, including a miniature processing facility that fits inside a 20ft shipping container. It can be deployed anywhere in the world, and it takes care of emptying, cleaning and filling the Ecotodes, all in perfect hygienic facilities.

In APAC, we've used this system to set up different closed loop systems that are operated through local spirit distributors. One of our clients, Raffles Hotel in Singapore, actually saves 10.000 bottles per year this way! And we're expanding into 2-3 new markets every quarter.



The impact of packaging

What the Environmental Specialist says

“Liquor is usually shipped in glass bottles, which is interesting because glass bottles can actually have a higher impact than plastic bottles. The impact of PET per mass is higher than of glass, but we’ve learned in several studies that the weight of the glass bottle can outweigh the benefits of glass, even with 60% recycled glass. Weight is a really important factor.”



Lex Roes, PhD, Environmental Specialist at Ecochain

37% Alc. Vol. CONT. NET. 750 ml

366/899



The Bar of the Future

Shaken, not stirred - the bartender is the one single person most associated with the premium feeling of a cold, fresh cocktail.

For brands, the bartenders are ambassadors, and their choice of drink will make or break the success of a product. Ara Carvallo, Portfolio Director at Distill Ventures, sees an interesting trend in the industry.

“There is a trend towards low carbon footprint cocktails, where bartenders have to make a cocktail with the lowest carbon footprint possible. But this is hard if brands don’t disclose their footprint. There are so many brands in each category - so if you have a footprint, you’d be an immediate frontrunner in the market.”

Ara Carvallo, Portfolio Director,
Distill Ventures, organizer Barra Mexico

Barra Mexico’s »Bar of the Future«



If there's one place in the world where the temperament of Latin American culture blends with tasty, quality drinks, it's Barra Mexico. It's Latin America's leading Trade Show for Premium Spirits, and the annual meeting point for more than 400 spirits brands and 6000 industry professionals. It's also a zero carbon show, completely free from single-use plastics - and their concept "Bar of the future" shows how sustainable bars could look like in the future.

Plastic waste is a predominant issue in bars. Plastic straws are only one side of the equation - cups, stirrers, bottles, cans, you name it. Barra Mexico is completely plastic-free. It's also carbon neutral, with plans to make the next edition carbon positive. It saved more than 230.000 liters of water and only served plant-based food.

Diversity: An industry in transition?

The spirits industry is changing. From biodiversity to sustainable brands - frontrunners are challenging the status quo everywhere. One thing that struck us while conducting our research: Many of the most interesting ventures were female-led. Ne'Neen and Hunky Dory are led by women, and Ara Carvalho is reinventing the Latin American spirits industry with Barra Mexico. So we asked Ara - how does the traditional male-dominated brand world of spirits influence diversity and sustainability alike?

"The spirits industry is a by-men-for-men industry. This is a big challenge, as there are few female founders. And the attitude of female founders and directors towards sustainability is very different compared to men. If there was more access for funding for female founders, that would mean a lot."

Ara Carvalho, Portfolio Director,
Distill Ventures, organizer Barra Mexico



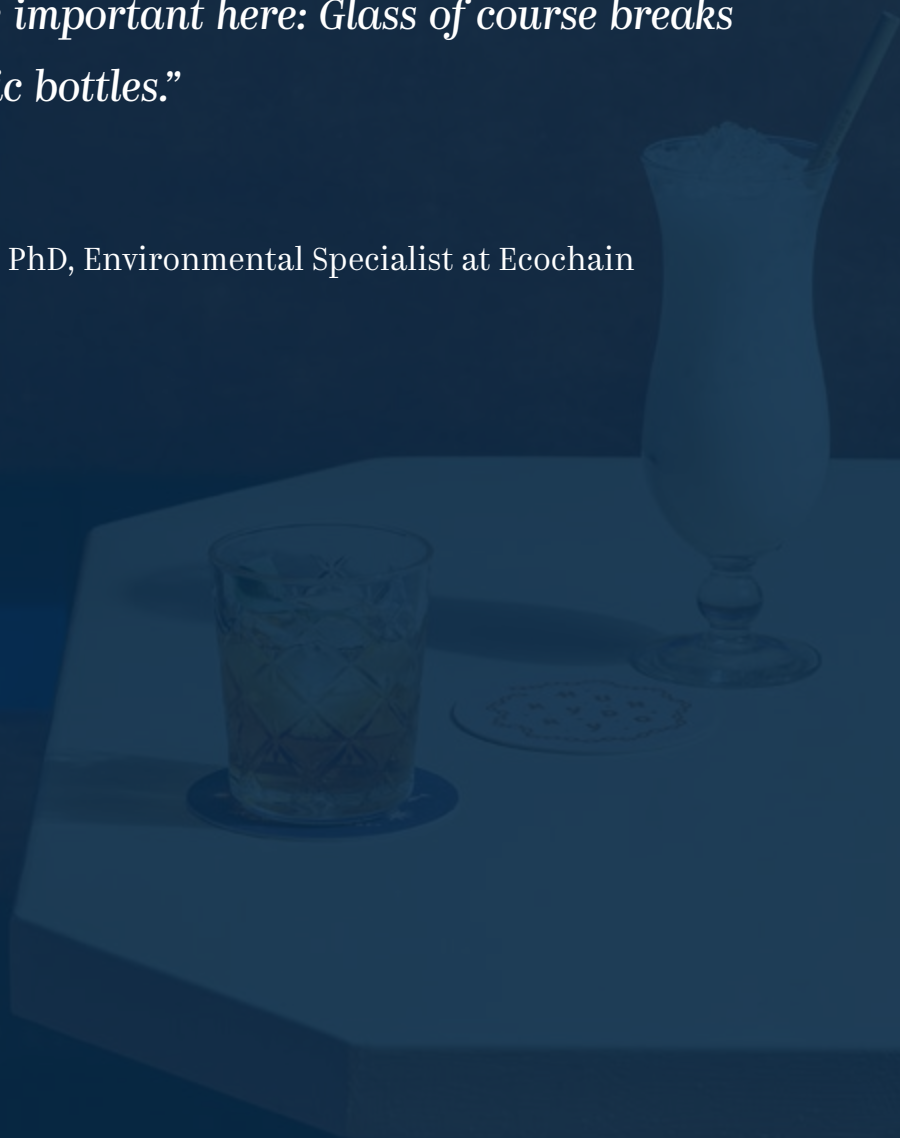
The impact of the bar

What the Environmental Specialist says

“Losses can always occur in the shipping process. Bottles crash. Products fail at the supermarket or at the bar. The packaging can be important here: Glass of course breaks easier than plastic bottles.”



Lex Roes, PhD, Environmental Specialist at Ecochain



The future is today

Thank you for reading our first frontrunner report. No industry has given us more authentic, inspiring brands.

But what inspired us the most: The frontrunners in this report have a shared mission - create a better planet. While each frontrunner has its own way of working towards this mission, this report highlights that there isn't a one dimensional solution for this multifaceted problem. It is a challenge that needs to be solved at each step of the value chain, from grain to glass, and the only way to do this is by cooperating and being transparent.

At Ecochain we help companies to achieve these challenges by measuring impact on each step of the way. Because there is only one way to move forward, and that is by inspiring others to follow suit.

Do you feel like you can help us or these companies in their mission towards a better planet?

Or do you have a story to share? Please don't hesitate to reach out at j@ecochain.com



Jeff Gomez



Tobias Liebsch



Thank you

*To everyone who we
interviewed for this report:*

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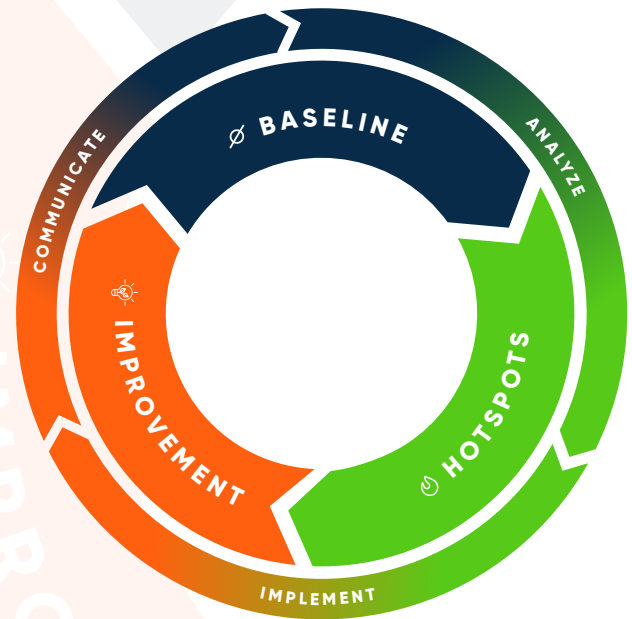
Do you want to be a sustainable frontrunner, too?

Here's how you can do it.

Becoming sustainable is a process. It requires constant iteration and continuous improvement.

And it all starts with measuring and understanding your environmental impact. That's also where the frontrunners from this report first started.

Our software solutions are designed to help companies like yours measure and improve their environmental impact. Do you just want to calculate the impact of one product? Or of your entire supply chain?



How Environmental Intelligence works

Our solutions are based on the ISO-certified Life Cycle Assessment methodology.

STEP 1

What do you want to analyze?

We define the scope of your analysis. Do you just want to analyze a single product? Or model your entire value chain?

STEP 2

How do you measure impact?

Different goals require different measurements. Maybe you focus on CO2. Maybe water usage or toxicity.

STEP 3

Data assessment and modeling

We collect your material, energy, and waste data and model the impact based on Life Cycle Inventory data.

STEP 4

Hotspot analysis and recommendations

We identify the biggest impact drivers in your product or value chain, and recommend effective measures to reduce impact.

Book a 15-minute call with our Environmental Specialists to find out how you can measure and improve your environmental footprint : ecochain.com/demo