



2023

Jeda ESG Report



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Tom Buke, CEO & Fonder

Every journey starts somewhere

Our journey to becoming a more responsible global citizen began years ago, when Jeda CEO Tom Buke brought the leadership team together and gave a simple directive:

“We’re going to become a more sustainable company. Now.”

Our Sustainability Challenges

Reducing our footprint is a complicated and necessary endeavor. In 2020, we conducted a full-scale emissions audit, which gave us the opportunity to step back and look at our baseline impact.

From there, we committed to meaningful changes. We've made great progress in some areas and found new and better ways of doing things. In other areas, we've made little headway. But this has not diminished our commitment.

Today at Jeda, impact is part of every conversation. The same leadership team that was present at the beginning continues to meet bi-weekly to discuss obstacles, victories, and plans for our better future.

It will not be easy to meet our goals, but we're serious about the actions we're taking. Every area of our business is influenced by our commitment to sustainability.

This is where we've started. We have a long way to go, but we're moving. Fast. We have a plan and we are moving.

I'm a whiteboard guy. When I've got a problem to solve, I get the smartest people into a room, we discuss the problem, write down the potential courses of action, decide what to do, and we move.

A blank whiteboard in a room with the right people has worked wonders here, and I think it has the potential to change the world.

Years ago, when I came to better understand the environmental crisis our planet and people are facing, I knew changing our business practices would begin on a whiteboard.

The problem we face today is at once personal and universal. We occupy a planet plagued by damaging business and manufacturing practices, our lives depend far too heavily on non-renewable energy sources, and we have failed to understand the true and catastrophic impact of our lifestyles. The consequences will affect us all.

// **We have a climate action plan & we are moving very fast.** //

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In 2021, Jeda created and published a first-of-its-kind sustainability report, which detailed the findings of an emissions audit we'd conducted and the steps we were taking to reduce our impact and become a more responsible global citizen.[1] As you might imagine, the report came out of a whiteboard exercise like the one shown on the previous page.

We shared the good, bad, and ugly of our greenhouse gas emissions and their sources. This transparency sparked a whole lot of conversation — in the bike industry and beyond. That, in itself, was a valuable outcome. But even more valuable is what we learned and how we've used this knowledge to continue to improve.

For all the progress we've made recently, I'm most proud to share that Jeda has signed onto an ambitious science-based corporate climate action plan with Science Based Target Initiatives (SBTi). Our commitment to reducing greenhouse gas emissions, which is detailed in the pages that follow, is currently being vetted and approved by the foremost experts in the field.[2]

This commitment is a journey, and what will come from its validation is an annual reduction target that will allow us to track our progress through accurate, science-based methods.

We're after real change and aligning SBTi's practices is a meaningful step to meaningful improvement. We recognize that sustainability includes many necessary pursuits, but our goals today are consciously focused on carbon reduction. This is the starting point of our journey because it's the most urgent element of sustainability that we, as a bike company, can control by understanding our impact, setting aggressive targets, tracking our progress through validated science-based methods, and taking real actions to meet them.

What we choose to focus on today — and what we choose not to focus on — means everything. There's much work to be done. This report shows both our findings and our evolving roadmap for the future.

We're sharing it with you here with the hopes that it inspires and educates more industries, companies, and people like you to take action. If you need a place to start, I suggest a whiteboard.

Tom Buke

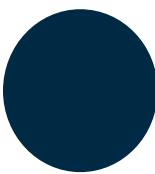
CEO & Founder, Jeda Bicycle

Understanding our scopes

In 2022, we again partnered with WAP Sustainability Consulting to measure Jeda’s impact in the previous year. This time around, we were able to gain a more in-depth look at our impact.

We examined a wider range of emissions categories, conducted life-cycle assessments, and looked at end-of-life impacts and use-phase impacts. This gave us a more accurate picture of our total emissions and a clear starting point for our reduction goals.





Scope 1
2.1%

Direct emissions from owned or controlled sources

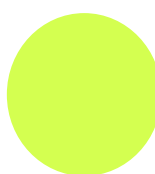
- On-site fossil fuel emissions
- Company-owned vehicles
- Manufacturing emissions
- Waste disposal
- Cooling systems



Scope 2
1.7%

Indirect emissions from the generation of purchased energy

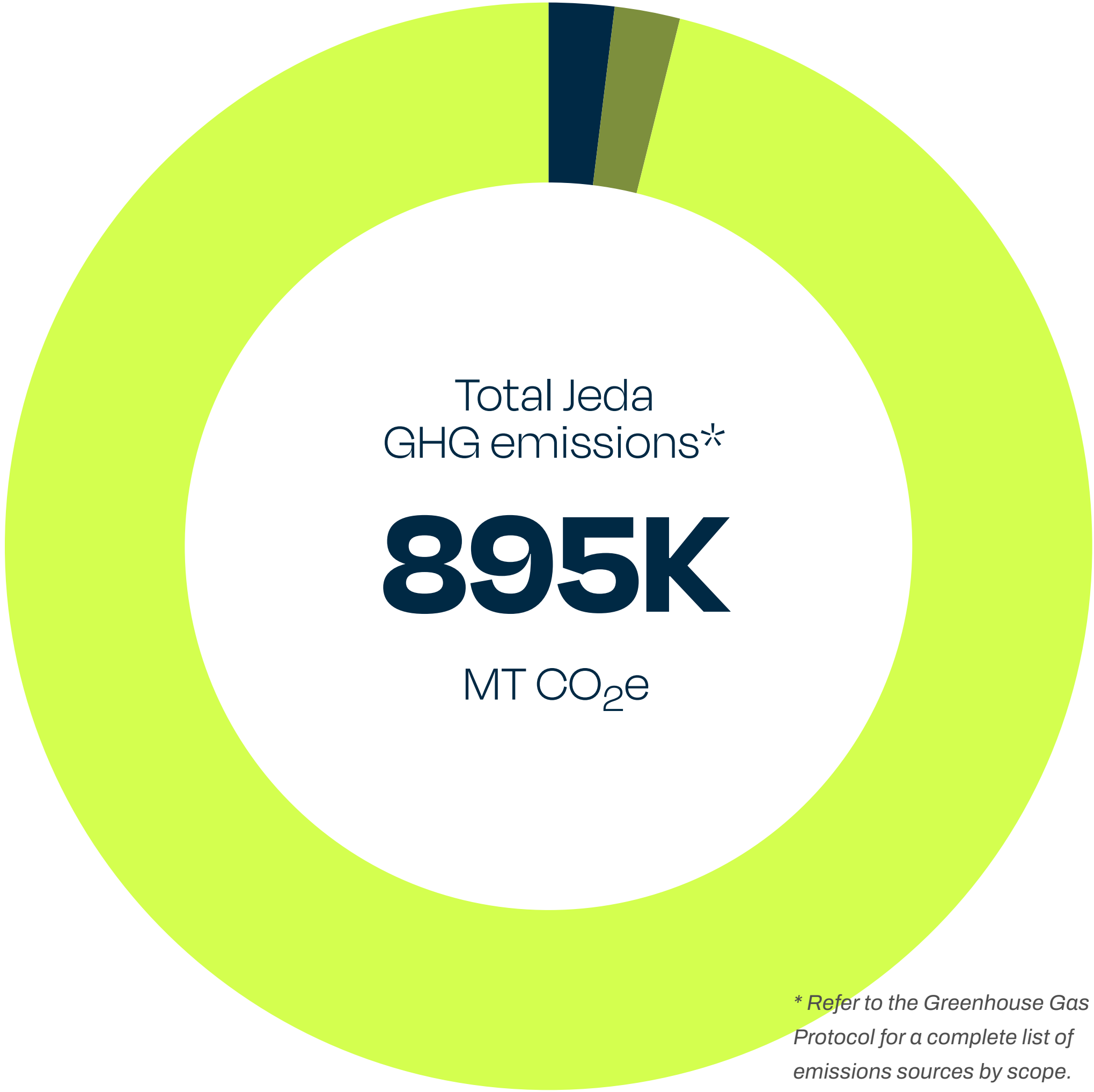
- Purchased electricity
- On-site generation of electricity from renewable sources
- Emissions from purchased heat or steam
- Emissions from transmission and losses in electric grid



Scope 3
96.2%

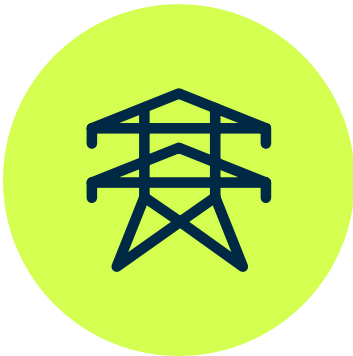
Indirect emissions that occur in Jeda's value chain including emissions upstream and downstream

- Purchased goods including raw materials, and components
- Transportation and distribution
- Generated waste
- Business travel
- Upstream emissions including extraction, refinement, & transportation
- Employee commuting
- Leased assets including buildings, equipment, or vehicles
- Disposal, recycling, and treatment of products at end of lifecycle
- Emissions from investee organizations and retirement plan investments



Our carbon reduction commitments

Our commitment is company-wide and in line with Science Based Target Initiatives (SBTi).



Source all electricity from renewable sources by **2030**



Reduce scope 1 and 2 GHG emissions **68% by 2032***



Reduce absolute scope 3 GHG emissions **30% by 2032***



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Why is our goal not zero emissions?

While we would love to announce we will go net-zero, that is a huge claim. We are still gathering information and doing analysis to see if it's possible for our company. The materials we must use to reach net-zero aren't ready.

Jeda believes in the bicycle as a tool for good, so we want to make sure that we can fulfill the promises we make while maintaining our ability to deliver sustainable bicycles long into the future.

The problem with offsets

While investing in carbon reduction projects is important in the overall effort, purchasing offsets as a way of reducing a company's carbon footprint can impair the crucial work of knowing and improving business practices.

When a company purchases offsets, it loses control of how that investment is used and whether it has a tangible benefit. At Jeda, we believe in reducing our impact through action.

We can't manufacture our way out of this

The emissions we create through our supply chain are our biggest opportunity for change — and not just by a little. Over 96% of our emissions are created in our supply chain by what we ask of our vendors, suppliers, and partners.

Jeda is, after all, a company that manufactures products and goods. And though these emissions are not directly created by Jeda, they are our responsibility.

Jeda has a complex global supply chain, and we need to work where we manufacture to meet our goals.

Through our recent emissions audit, we discovered **65%** of our impact comes from purchased goods.

This was a huge lightbulb moment. We realized we needed an ambitious supplier sustainability effort to cut down the top-line impact of what we make.

To address emissions and meet reduction goals, we're running a two-part strategy:



1. Build with less impact

We're using more sustainable materials, exploring manufacturing methods that can minimize our footprint, and advocating for our suppliers' efforts to transition to renewable energy sources.



2. Create products that are used longer

We're launching a new program to extend the lifecycle of what we make — even though it potentially means making and selling less.

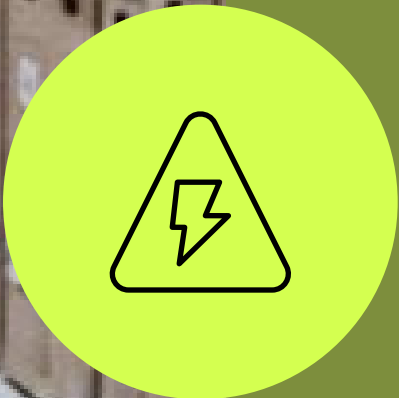


Scopes 1 & 2



Scope 1

Makes up the direct emissions from owned or controlled sources, like the emissions from Jeda-owned vehicles and the fuel we use in our warehouses and buildings.



Scope 2

Relates to the direct emissions from the generation of purchased energy, like the electricity we use at our factories.

What's so hard about being a sustainable retailer?

Direct ownership of our facilities gives us complete control over our operations footprint — but Jeda operates in many retail locations around the world that we rent. This model presents some real challenges when it comes to sustainable business practices.

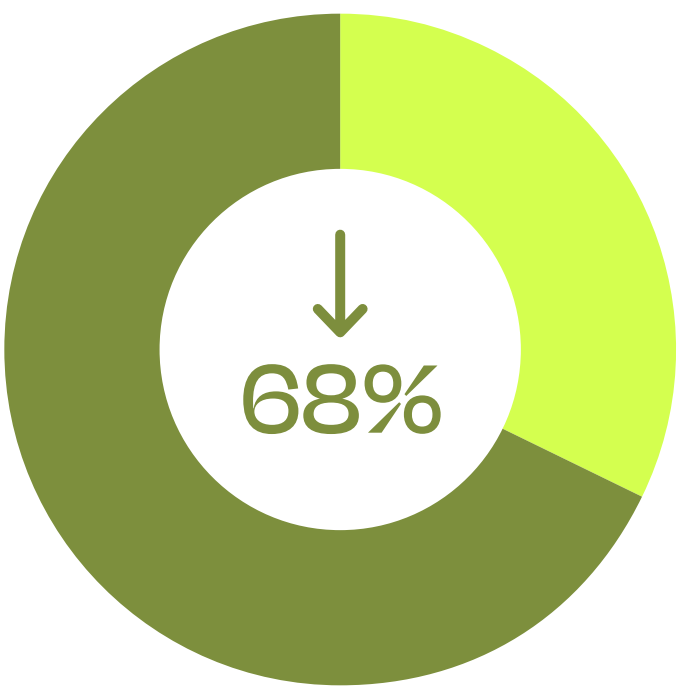
In 2021, we published a set of Retail Sustainability Objectives to help Jeda-owned retail stores and independent bike retailers on a journey to sustainability.[4]

These retailer guidelines outline meaningful, concrete changes retailers could make to their day-to-day operations to lower their impact. But operating with sustainable practices at any retail location — particularly one where the space is rented — comes with significant headwinds.

Here's what we're facing and how we're planning to address it.

Our goal:

23,127kg CO₂e
total GHG reduction



Reduce absolute scope 1 and 2 GHG emissions 68% by 2032



Source all electricity from renewable sources by 2030

The top challenges of operating a sustainable retail business



Responsible waste management

Each municipality has different processes for recycling, along with different levels of waste management infrastructure. In some places where Jeda retail operates, recycling programs, for example, are extremely limited. Solving this begins with local legislature, so we're encouraging advocacy.



Documentation of renewable energy purchasing

Currently, not all local utility companies offer the option to purchase energy from renewable sources — and even some that do offer this option are not equipped to provide proof of retired renewable energy credits. We're purchasing RECs where available and evaluating our utility partners to ensure we're choosing the most responsible energy.



Range and infrastructure for electric vehicles

We're excited about our pilot program for the use of electric vehicles. But in some areas where Jeda operates, a lack of available charging stations and drivable range limit the speed at which we can expand this program. We're continuing to invest in electric vehicles, particularly in regions where their use is supported by EV infrastructure.



Outdated building systems

It can be prohibitively costly and difficult to purchase, install, and maintain updated and planet-friendlier building systems like hot water and HVAC — particularly in rented spaces. Where possible (like in the Jeda Asheville store on the following pages), we're rebuilding spaces with far more advanced systems. We're also continuing to explore options in this realm, because it's one of the most significant contributors to a retail store's emissions.



Green buildings & infrastructure improvements

Improving the buildings in our operational footprint is critical for meeting our scope 1 goals. In 2022, our teams worked hard to open two sustainable buildings: Jeda Asheville and The Jeda Lodge.

The Jeda Lodge was our first building built from the ground up to meet LEED building certification. To meet this standard, projects must adhere to various sustainability criteria, including energy efficiency, water conservation, use of environmentally friendly materials, indoor air quality, and consideration for site selection and community impact.

Mechanicals & design



High efficiency RTU HVAC system installed

HVAC is the single largest source of energy use throughout our retail footprint, and an RTU will use significantly less energy than other unit designs



All LED lighting

With occupancy sensors throughout the building, a lighting schedule, daylight harvesting, and skylights to reduce the need for lights during the day



High efficiency, on-demand water heater

Water heaters represent the third largest energy use throughout our retail footprint



Oil interceptor

Installed for bike wash to prevent oil from entering the local ecosystem



Energy Effiecient Plumbing

All low-flow plumbing fixtures to reduce water usage

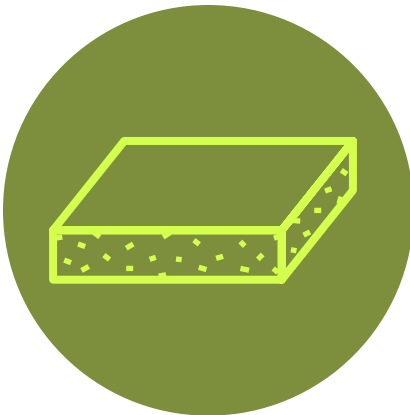


Reclaimed wood

Used for all walls and displays

Materials

Materials were critically analyzed to determine possible improvements based on the material life cycle, the source, its longevity and usefulness, as well as look and feel



Concrete floor

Repaired and improved rather than demolishing or dressing with LVT



All FSC certified wood

Used for floor fixtures



All finishes are no-VOC

Use of non-toxic (zero- or low-VOC materials)

Implementation



Waste

All construction & store opening waste to be recycled with a goal of 80% waste being diverted from landfills



Wood materials

To be FSC certified, reclaimed, or locally sourced responsibly



Construction Work

Done with the latest guidance, including adequate ventilation and documentation of materials used and waste disposed

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Shifting into an Electric future

Jeda owns and operates many vehicles around the world, which are crucial for events, transportation, and deliveries. Since our last report, we've taken the first steps in moving from gas-powered vehicles to electric.

Currently, we're running a pilot program with three electric vans, and we have an additional five electric vans on order. Through this pilot program, we're learning how to best put EVs to use in Jeda's operations. We see this as an important start on our journey to upgrade the entire Jeda fleet to electric vehicles.

Our path to 100% renewable energy

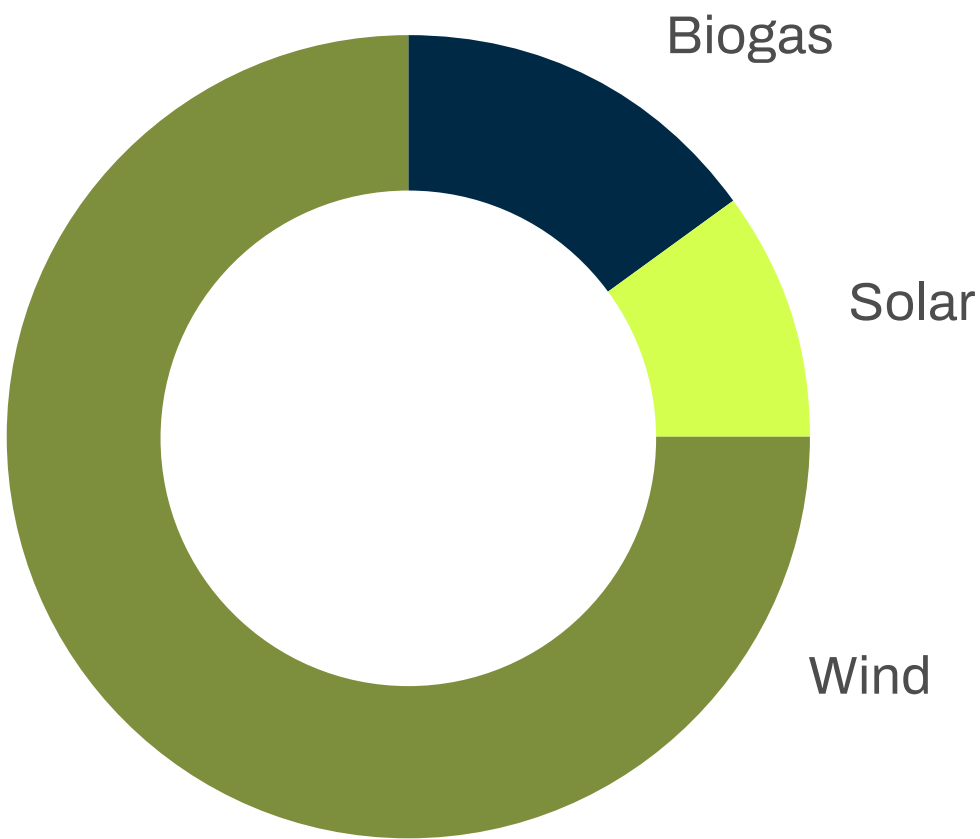
Sourcing renewable energy is a key component of our sustainability commitment, and we’re happy to say we are not starting from ground zero to meet our goal of powering all Jeda-owned facilities by 100% renewable energy by 2030.

Today, Jeda’s global headquarters and manufacturing facility in Waterloo, Wisconsin, is powered by a mix of biogas, solar, and wind energy credits we purchase from our local power supplier, Waterloo Utilities, which is part of a collective of 51 locally owned utility companies that make up WPPI Energy.

2022’s WPPI

54,424 MWh

Sourced clean energy



Jeda has been purchasing Renewable Energy Credits (RECs) from WPPI Energy since 2005.

Each megawatt-hour equals one Renewable Energy Credit (REC) that, once purchased, is retired through the Midwest Renewable Energy Tracking System (M-RETS) as a result of program participation.

Last year, Jeda purchased and retired 5,454 MWh (or RECs) — or 10.02% of the energy from WPPI’s Choose Renewable program — to power our Waterloo headquarters and manufacturing facility in full by renewable sources.

Though our headquarters and domestic manufacturing is powered entirely by renewable energy, Jeda also has a substantial footprint in rented buildings and other Jeda-owned facilities around the world. By 2030, we’ll be purchasing and retiring RECs for each of Jeda’s owned facilities following the same play we run in Waterloo, and we’re also currently exploring opportunities for sourcing renewable energy to power non-Jeda-owned facilities.



Scope 3

Scope 3 refers to all other indirect emissions associated with the bikes, gear, and other goods we produce up and down the value chain. These are the emissions produced on Jeda’s behalf by partners and vendors who play a crucial role in getting our products to bike shops around the world.



Reduce absolute scope 3 GHG emissions 30% by 2032 for a total of: 258,297kg CO₂e

WAP Sustainability Consulting

Product Life Cycle Assessment

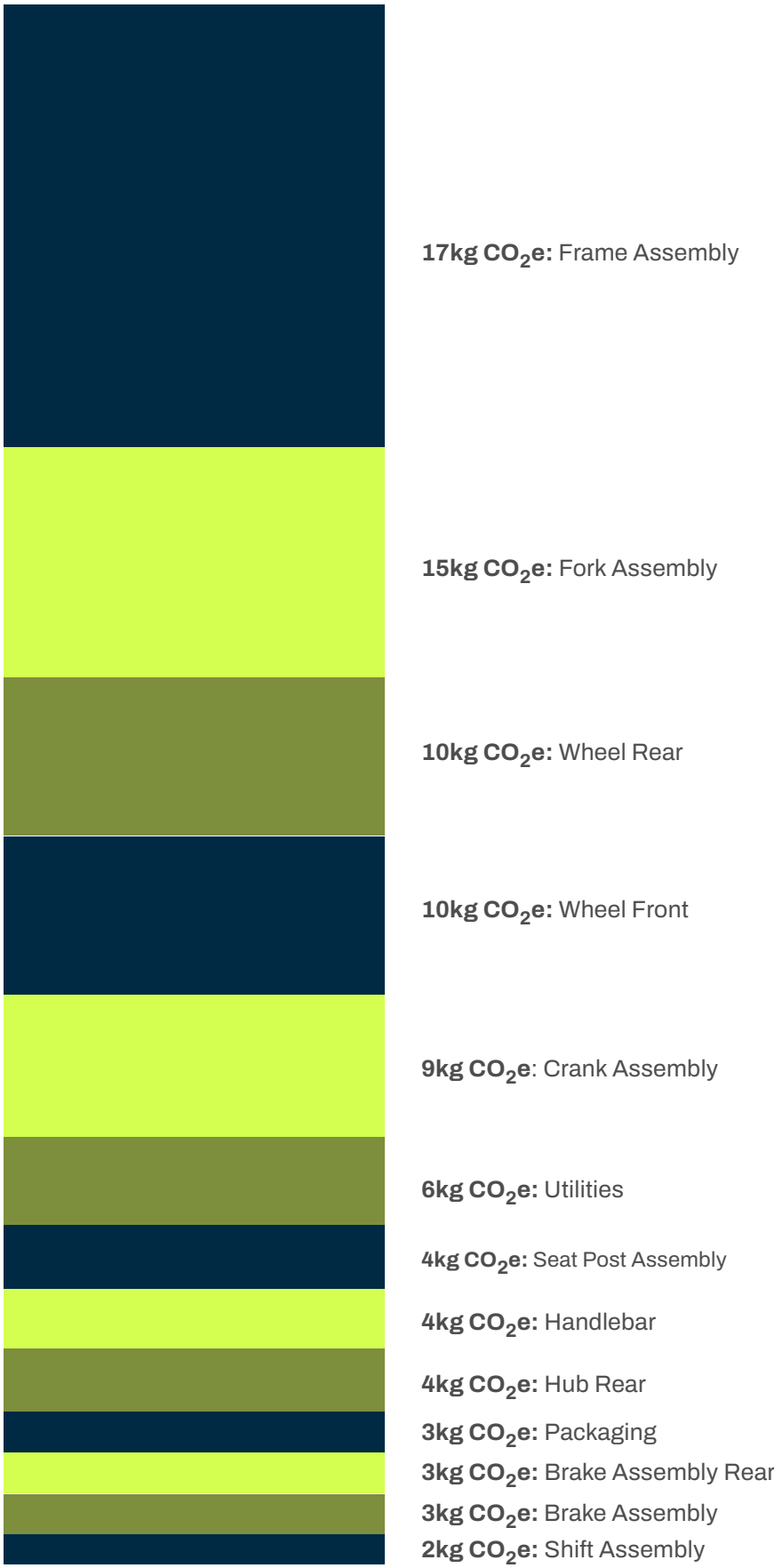
Every bike comes at a cost in carbon emissions. Our recent emissions audit gave us a detailed picture of that cost — all the way down to the parts on a bike model. Manufacturing a Marlin, which is our most popular model, comes at a cost of 116kg CO₂e.

Understanding this number, along with the specifics of the carbon-costliest parts of the bike, gives us a baseline for a reduction target and a clear view of where we can target improvements to our manufacturing and supply chain processes on this particular model to make the biggest strides.

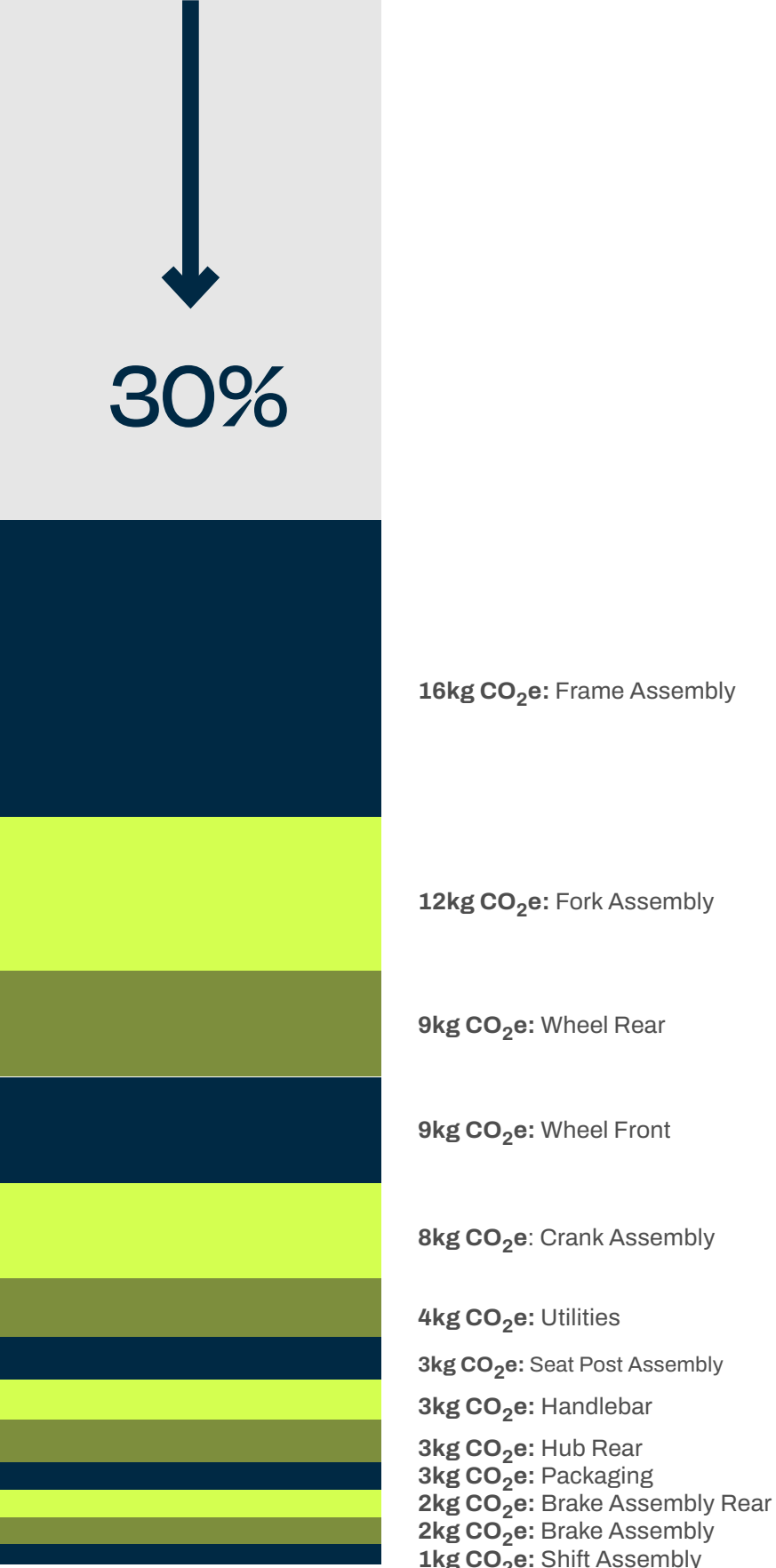
To meet our overall reduction goals, for example, we’ll need to reduce the emissions of Marlin to around 81kg CO₂e by 2033.

This 30% reduction will not happen proportionally, and the chart to the right is a representation not drawn to scale. We know impact of some parts will be reduced by more than 30%, and the impact of others will be reduced by less. To meet our goals, we’ll need a cumulative reduction, and this will take the continued investigation of all parts on Jeda bikes, their material makeup, and their manufacturing processes.

116kg CO₂e
2022



81kg CO₂e
2023



Not all bikes have the same carbon cost

Just as different bikes are built for different uses, there’s a great deal of variance in the carbon cost of different models. It’d be nice and simple to reduce the emissions of every Jeda model by a flat 30%, but the reality is a bit more complicated.

Higher-end electric and mountain bikes, for example, have parts like batteries and shocks that require more of an impact to manufacture.

Because of this, we don’t expect to reduce the emissions of every model by the same percentage — some will contribute more to our overall reduction goals than others, but the best practices we learn for lower-impact manufacturing will affect everything we make.

These LCA models are calculated based on finished products and illuminate GHG hotspots.

To improve our models we are now collecting data from directly from production. We continue to work closely with our facilities and suppliers to improve the models that guide our actions.

229kg CO₂e

Zero FX



197kg CO₂e

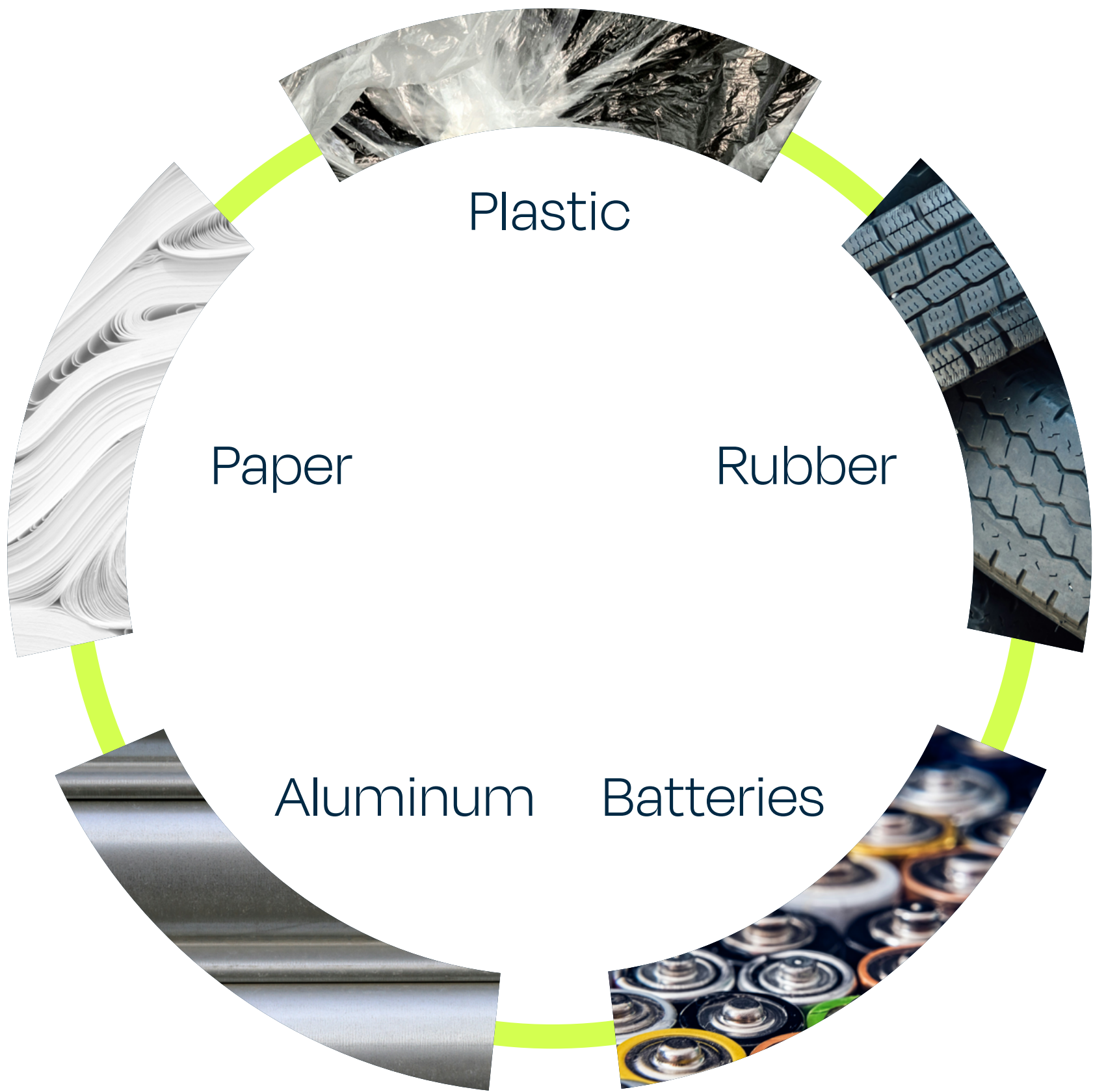
Kicker



158kg CO₂e

Killer





Materials Matter

Most of the environmental impact of products comes from the initial extraction and processing of raw materials needed to produce awesome gear.

To better understand the impact of our current processes, and to find opportunities for improvement, we’ve conducted lifecycle assessments (LCAs) of each of our main product categories.



Plastic:

Removing single-use

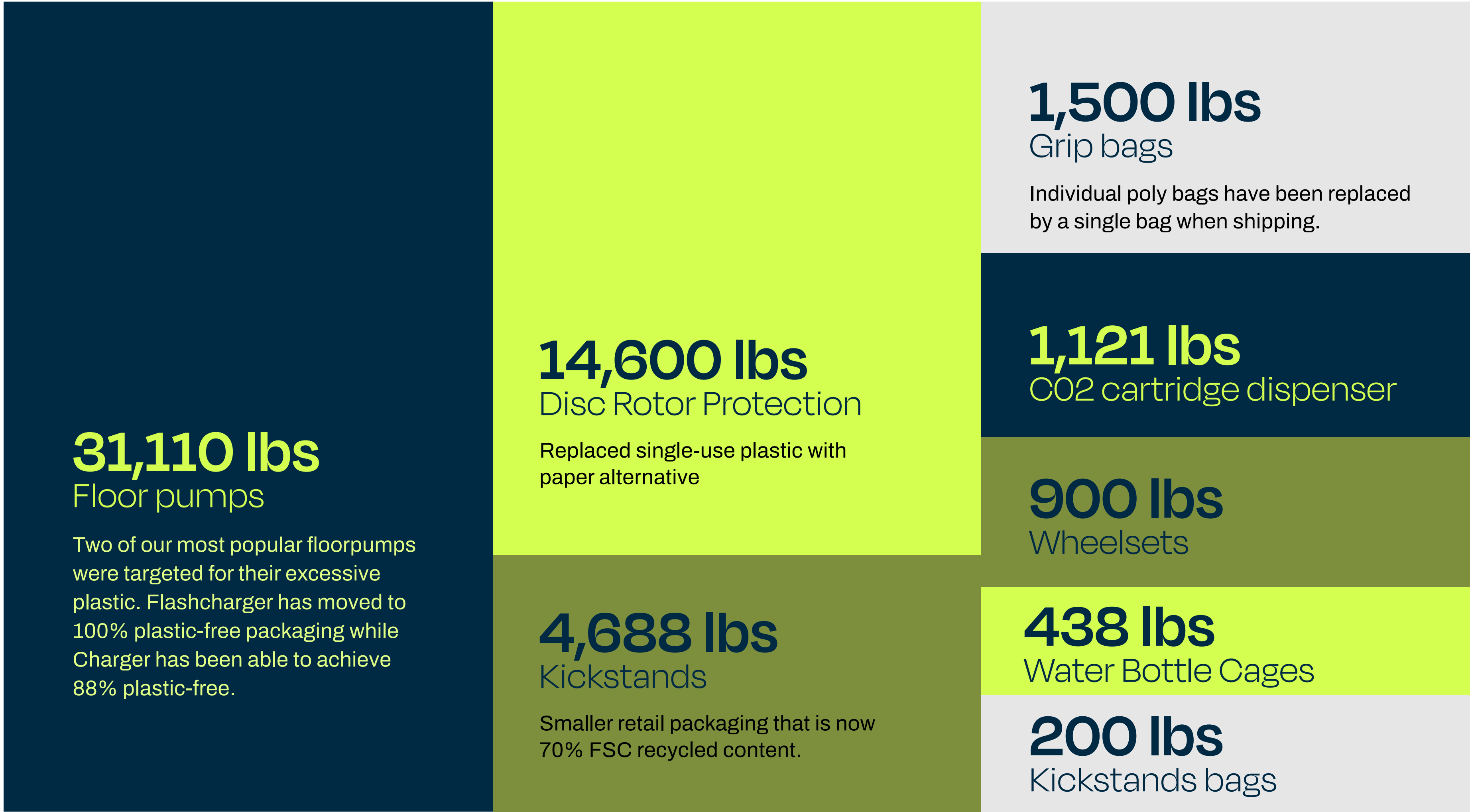
The amount of packaging waste in the cycling industry is a massive problem. In our first report, we highlighted the opportunity that exists for Jeda and outlined the initial steps our packaging team took to significantly reduce shipping material waste.

The multiplier effect of open source packaging

Since then, we've expanded our packaging waste efforts, extending these practices to accessories product packaging. But the reality is Jeda is just one company in the greater bike industry, with a value chain that includes both vertical (owned by Jeda) and contract (not owned by Jeda) manufacturing.

We openly share our sustainable packaging designs because we know there's no good in protecting secrets about sustainability that work. In some cases, our best practices have been adopted by partners outside of the Jeda organization. We're thrilled to see this, hope to see more of it, and will be happy to continue sharing.

Annual Avoided Plastic Landfill Waste:



537,422 lbs
/ year

Use of recycled plastics in Jeda and Bontrager products

2022 51,223 lbs.

2023 92,964 lbs.

2021

2022

2023

we had avoided
the use of
433,600 lbs.
of plastic

an additional annual
reduction of
103,822 lbs

an average of
537,422 lbs of
plastic packaging
per year.



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Paper:

A better bike box for a better planet

In 2020, we made drastic changes to the way we package and ship bikes, reimagining the bike box as we knew it as we worked toward a zero-plastic goal.

We started with our highest volume model pulling out the zip-ties, bubble wrap, and other miscellaneous landfill fodder we once used and replacing these items with natural materials. Even on this single model, the change led to a meaningful reduction of over 100,000 lbs. of plastic waste in a single year.

Packaging with FSC

Forest Stewardship Council (FSC) paper is sourced from certified sustainably-managed forests through documentation and a rigorous vetting process. While we would prefer to use it in everything we make, availability is variable by vendor. Some items have been able to utilize 100% recycled content. Jeda's bike box and its internal packaging average 87% recycled content.

Rubber:

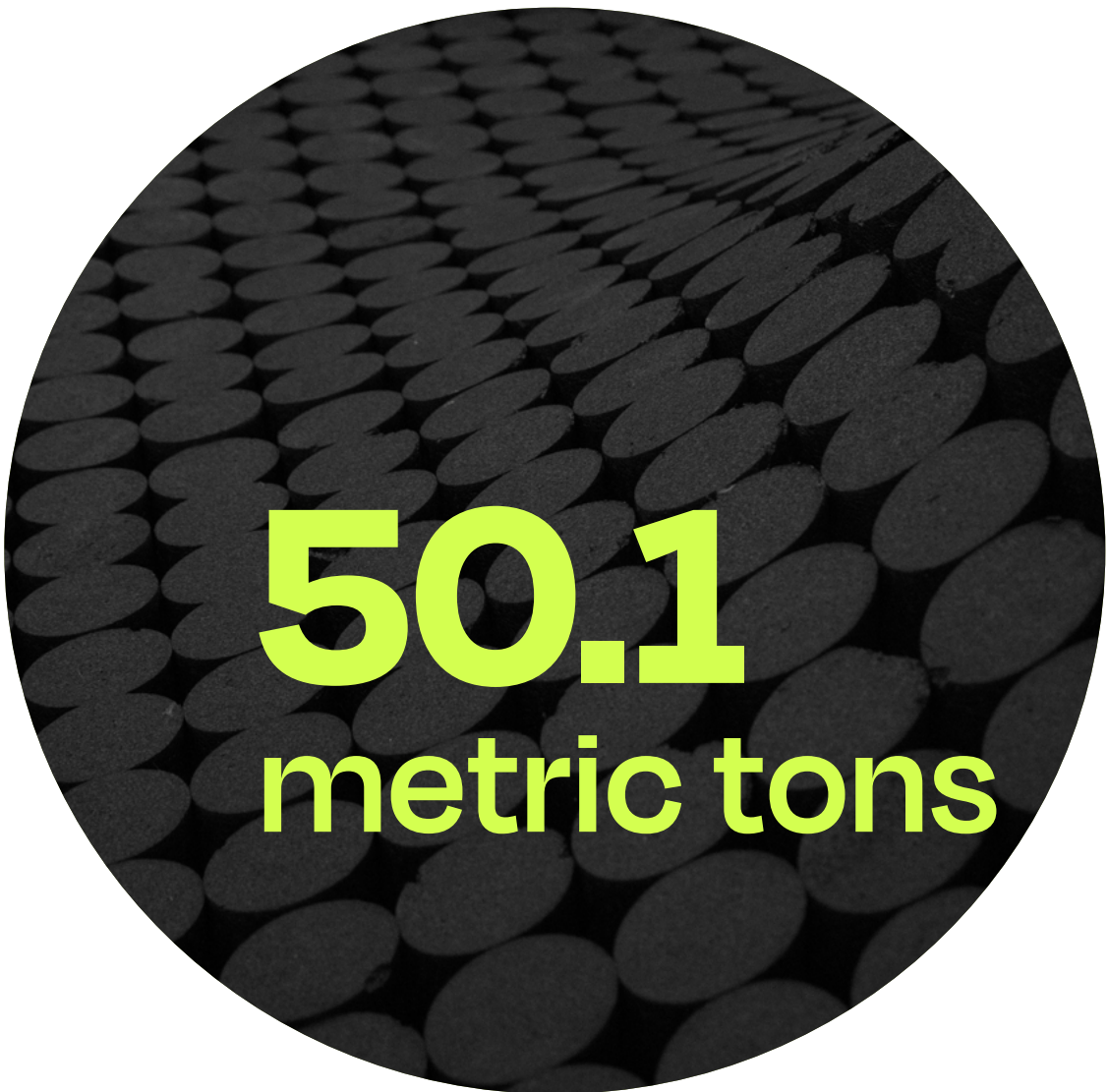
Using better materials

We’re making a serious effort to improve how we create our rubber products. In partnership with our suppliers, we’ve been conducting research to evaluate innovative materials to cut down on impact in this category. We’re also exploring recycling programs based at Jeda retail locations and working with the largest tire recyclers to divert our rubber products from landfills.

Rubber makes up a strong majority of the mass in bicycle tires, so we first turned our attention to sustainable rubber compounding.

Our team worked to explore compounding with materials like recycled carbon black made circularly from recycled tires, bio-oils to replace petroleum products, rice husk ash silica made from agricultural waste, and others.

We’re also exploring tire fabrics made from recycled materials. Recently, we’ve been building these materials into test tires to make sure they meet the standards of durability and performance our customers expect.



Expected savings of virgin black rubber in 2024

This year, we began including small amounts of recycled material in some of our most popular tires. We used these materials for just part of the year, but in 2023 we expect to save over 50.1 metric tons of virgin carbon black.

Aluminum:

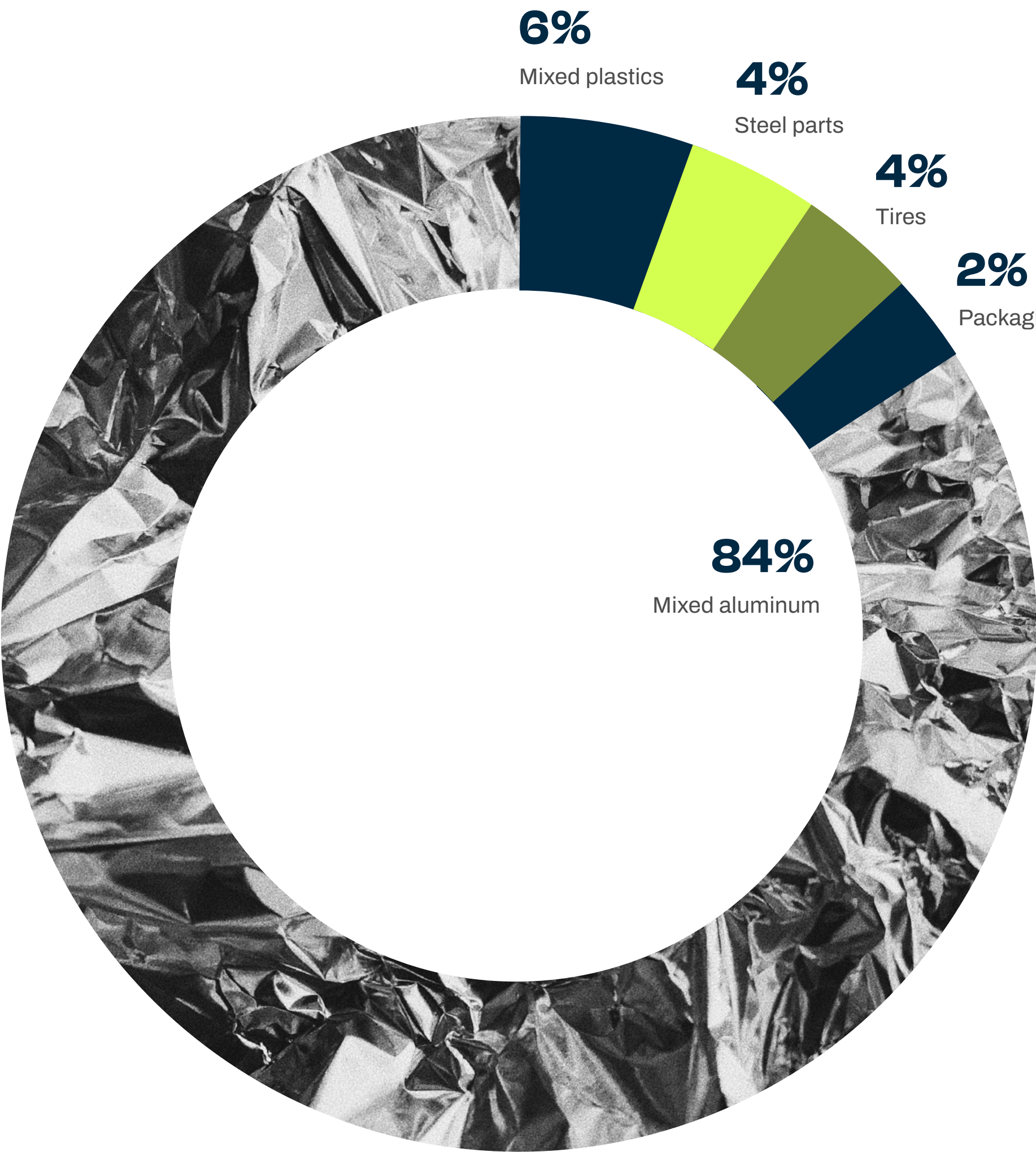
Remixing the mixture

Aluminum is one of the highest-volume materials in our supply chain, making up over 85% of the carbon impact when measured by material.

Though aluminum is highly recyclable, there’s unfortunately very little infrastructure in place for collecting and recycling the tightly specified alloys that Jeda uses to produce our bicycle components.

Our engineers, supply chain, and retail logistics teams are hard at work on this issue. We’re visiting recycling yards to learn sortation practices, working with our retailers to explore take-back programs, speaking to factories and industry experts to find better sources of material.

Aluminum represents the largest potential for Scope 3 emissions savings because there are impact savings to be found far beyond the material itself. We’re looking into options for sourcing aluminum from suppliers that are powered by renewable energy, as this will significantly lower Jeda’s overall global carbon emissions by at least 15%.



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The most environmentally friendly bike is the one you already own.

The second-friendliest is one that was owned by someone else.

Every bike deserves a second chance

Jeda builds bikes that last. In an effort to extend the lifecycle of our products and cut back on waste, we’re now offering an easy and reliable way to buy pre-loved bikes that are certified-awesome by Jeda.



1

Starting summer 2023, we’ll begin accepting the return of used bikes at Jeda-owned retail stores.



2

These bikes will be collected and brought to Waterloo, where our trained technicians will overhaul them, repairing and replacing what’s needed while recycling everything possible.



3

We’ll then offer the refreshed and refurbished bike to people looking to score a great bike with a more considerate carbon footprint.

The rule of 430

If you ride about 430 miles you would have otherwise driven, you’ve saved the carbon equivalent of what it took to manufacture your bike.

The amazing thing about being a bike company is that we make a product that can offset the carbon impact of its manufacturing through its actual use.

But this use has a caveat. While riding a bike for health and fitness is great, to achieve carbon-neutrality we need to use bikes to their potential. And that means choosing them over other more harmful modes of transportation.

When you replace your vehicle commute with a bike trip to the gym, grocery store, work, or wherever you need to go, you’re making a small contribution toward the carbon-neutrality of your lifestyle. And now with The Rule of 430, you have a tangible goal that comes along with your new bike.

Once you reach about 430 miles, you’ve offset the carbon cost of your purchase. If your bike had a voice, it’d be saying, “Hey, thanks for doing

The Rule of 430 is a guideline based on the estimated average of our most popular 2019 bike models. Keep in mind the specific mileage to offset each model varies, due to differing emissions costs of each bike family.

$$\frac{174 \text{ kg CO}_2}{1 \text{ bike}}$$

X

$$\frac{1 \text{ gallon of gas}}{8.887 \text{ kg CO}_2}$$

X

$$\frac{22 \text{ miles}}{1 \text{ gallon of gas}}$$

=

430 miles per bike

your part for the planet.”

The math of 430

According to our research with WAP Sustainability Consulting, the manufacturing of the average Jeda bike emits 174 kg of CO₂. A single gallon of gas emits 8.887 kg of CO₂. The average vehicle travels 22 miles per gallon.*

The future of 430

Our commitment to manufacturing processes that reduce carbon emissions will turn The Rule of 430 into an even more attainable endeavor. Future state, thanks to the efforts we’re making today, it’ll take far fewer car-replacement miles to replace the carbon cost of your bike.

How the bicycle can reach its full potential



Replace car trips with bike trips

The potential of the bicycle only exists when we choose bikes over cars. So, we’re invested in putting bikes where people need them.



Supporting safe bike infrastructure

People ride more when there are safer places to ride. This isn’t conjecture, it’s fact. And it’s no coincidence that cities like Amsterdam, which has bike-friendly infrastructure, have a 32% bicycle mode share compared to Los Angeles’ 1%.^[5]



Bringing trails & nature together

As we said in the outset of this report, sustainability is a big conversation — one with overlapping interests that share in a common goal. Having places to ride is important, and through developing great places to ride, we can share in an even broader good: protecting land.

The most impactful action you can take right now is to understand your personal impact

A small number of large companies are responsible for the vast majority of global emissions, and solving the climate crisis will require institutional changes beyond the scope of any individual.

In addition to electing leaders who will hold these companies accountable, you can be intentional about the companies you support with your purchases.

You can also make small-scale, personal changes. A great way to start is by understanding your impact. Explore this personal impact calculator, which will give you practical guidance on the changes you can make today.

2023

ESG Report