



# Greencart



## Whitepaper

December 2024





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# Preface

Going to the supermarket to buy groceries is an almost automatic act that a lot of times people underestimate. Loading the basket with products people need and frequently with superfluous ones is a behavior dictated by consumerism and market dynamics.

However, embracing a sustainable approach to grocery shopping is essential to improving lifestyles and bringing significant benefits to the country's ecosystem. A conscious and sustainable grocery shopping involves choosing quality products, known for their authentic provenance and produced without harming people, animals, and the environment during the production and distribution cycle.

Nowadays, supporting sustainable purchasing and making smart choices when shopping is an increasingly pressing demand in society. What might have seemed a temporary trend in the past is now emerging as an authentic way of life, an opportunity to take care of our planet through everyday actions.

In the digital age, in particular, there is an evolution of the theme toward the

digitization of people's behaviors including sustainable online shopping, again with the goal of protecting the environment. Digitalization in the context of sustainable grocery shopping finds excellent implementation in the dApps that are emerging as crucial tools in promoting sustainability in different sectors. Their importance lies in their ability to integrate innovative technologies, such as blockchain.

In this regard, Greencart dApp emerged, which not only facilitates sustainable grocery shopping through awards for eco-friendly choices in supermarkets and local stores but also promotes ongoing awareness of the environmental impact of products purchased.

By using Greencart, users can not only shop with a greener perspective but also educate themselves on the best products for the environment by supporting brands with sustainable practices and eco-friendly packaging materials. This is resulting in a concrete opportunity to integrate sustainability into everyday life, typing in efforts for a greener and more responsible future.



# Executive summary



## The overall goals of this whitepaper are:

- 1) to curate a narrative based on the importance of the issues dealing with sustainability that prompted the birth of Greencart
- 2) to identify the 7 main KPIs that Greencart relies on for evaluating a sustainable purchase
- 3) to offer inputs for improving Greencart and the different contributions it could make on both the BSC and BSB sides.

Chapter 1 of this paper explores the critical issues that support this generation's climate challenge and what needs to be done to meet climate goals.

This chapter bridges how blockchain technologies can help the world achieve these goals and create a better future for generations to come.

Chapter 2 focuses on explaining the general idea that Greencart is based on and in detail how this dApp works.

Chapter 3 explores the KPIs on which Greencart is based in assessing sustainable spending. This chapter is divided into 7 sections:

**Fruits & Vegetables**



**Organic and vegan food**



**Eco-friendly packaging**



**Ethical certifications**



**Long-life products**



**Food waste prevention**



**Only electronic payments**



Chapter 4 provides Greencart's suggested next steps toward innovation and responsible sustainable action on both B2C and B2B sides.



# 1. Sustainable shopping?

## Yes, now I get it

*"The greatest threat for our planet is the belief that someone else will save it"*

Nowadays, environmental and sustainability issues have become among the most urgent and complex facing humanity. Climate change, with rising global temperatures and the resulting alteration of weather patterns, is already having a devastating impact on ecosystems, economies, and communities around the world.

Deforestation, driven by demand for wood, farmland, and urban development, is destroying crucial habitats and reducing biodiversity really fast. Pollution, both air and marine, threatens human and animal health, with plastic choking the oceans and greenhouse gas emissions degrading air quality. In addition, the unsustainable use of natural resources, such as water and fossil fuels, is rapidly depleting the planet's reserves, jeopardizing food

security and energy supplies for future generations.

In this critical context, the search for innovative and sustainable solutions has become imperative. Not only to mitigate the negative effects already underway but also to prevent further damage and ensure a livable future for all. Therefore, sustainability is no longer an optional choice, but an urgent necessity that requires the commitment and cooperation of governments, companies, communities, and individuals globally.

In this critical scenario, the need to find innovative and sustainable solutions is becoming increasingly imminent. One of the emerging technologies that is showing significant potential in this area is blockchain. Originally developed as the basis for cryptocurrencies such as Bitcoin, blockchain has evolved its applications far beyond the financial





sector. With its ability to ensure transparency, security, and immutability of information, blockchain is emerging as a valuable resource to address environmental challenges and promote sustainability.

In particular, decentralized applications, or dApps, based on blockchain offer innovative solutions

in different areas related to sustainability, representing a promising avenue to address current environmental challenges. By harnessing the potential of these technologies, we can move closer to a greener, more efficient, and transparent future, where sustainability becomes an integral part of our lifetime.



## 2. Greencart

In this sustainability perspective, VeChain launched an innovative sustainability platform called VeBetterDAO that uses a dual B3TR/VOT3 token model to incentivize and reward sustainable actions in the real world.

VeBetterDAO is designed to become the leading platform for Web3 sustainability X-2-Earn dApps, which through collaboration with strategic business partners and Web3 creators, aims to launch a wide range of dApps in order to engage, incentivize, and reward users by putting the power of change in the hands of people.

Among the revolutionary dApps, Greencart emerges. Greencart's mission is to reward users for grocery shopping sustainably at supermarkets or local stores, allowing them to earn B3TR tokens for every sustainable purchase they make.

Below, it is possible to see the webpage, X, and Instagram profile of Greencart:





# How does Greencart work?



**Accessing and Uploading the Receipt:** Users must access the dApp at: <https://www.Greencart.vet/> and select the option "Upload Your Receipt".



**Receipt Upload Mode:** Users can choose from the following options to upload their receipt:

- a) Open Camera: Take a picture directly from your cell phone.
- b) Take a Photo: Take a photo via the Greencart website.
- c) Digital Receipt: Upload a digital receipt directly from your smartphone.



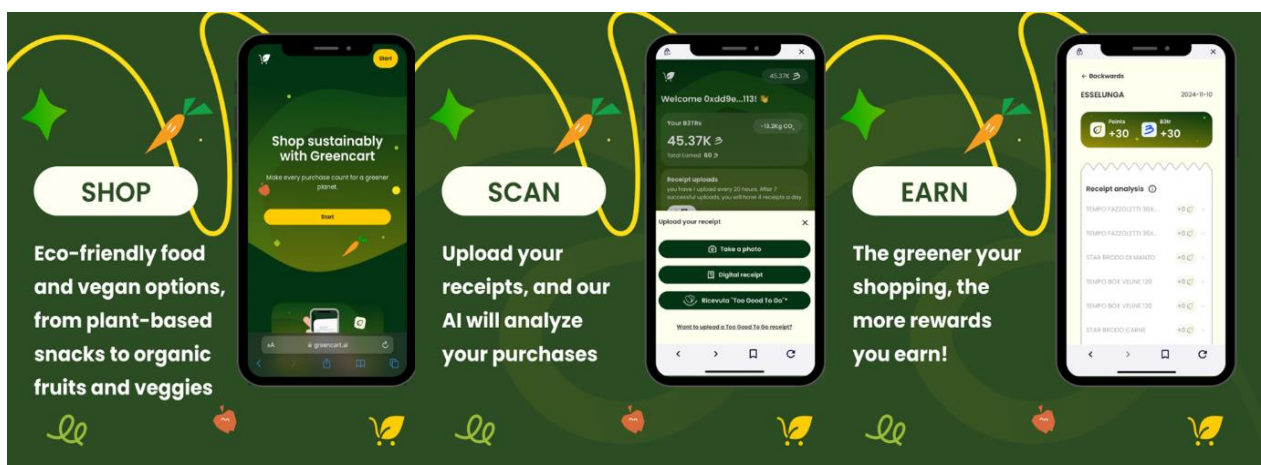
**Analysis with Artificial Intelligence:** Artificial intelligence will scan the receipt based on various KPIs to assess the sustainability of the expenditure made.



**Report Generation and Token Assignment:** A report that summarizes the sustainable elements of grocery shopping will be provided and B3TR tokens will be assigned for each sustainable purchase made.

For more detail, see Figure 1.

**Figure 1. How Greencart works**







### 3. Greencart's rewards

The growing importance of sustainability in today's world has paved the way for innovative solutions that empower individuals and organizations to make a positive environmental impact. At the forefront of this movement is [VeBetterDAO](#), a dynamic ecosystem leveraging blockchain technology to create a transparent, community-driven platform for sustainable action.

Greencart, a key component of the VeBetterDAO ecosystem, exemplifies this mission by rewarding users for completing impactful sustainable actions. VeBetterDAO operates as a comprehensive marketplace for sustainable assets and initiatives, enabling individuals, NGOs, and companies to tokenize their efforts in promoting environmental responsibility. What sets VeBetterDAO apart is its commitment to decentralization, with governance entirely entrusted to the community through a DAO model, ensuring collective ownership and decision-making power.

At its core, VeBetterDAO relies on blockchain technology to deliver unparalleled transparency, security, and accountability. Every transaction and action within the ecosystem is meticulously recorded on an immutable ledger, building trust and fostering transparency among users.

Each week, VeBetterDAO generates "Better" tokens, a unique cryptocurrency designed to reward and incentivize sustainable actions within the community. The distribution of these tokens is carefully structured to ensure a balance between rewarding users and supporting the ecosystem's operational needs. A significant portion—70% of the total tokens generated—is redistributed directly to users as rewards for their positive contributions, creating a tangible incentive for individuals to engage in sustainable practices. This approach not only encourages active participation but also helps to build a thriving, committed community dedicated to environmental impact.

The remaining 30% of the "Better" tokens are retained within VeBetterDAO's treasury, playing a crucial role in maintaining and expanding the ecosystem. These funds are strategically allocated to cover operational expenses, invest in new initiatives, and compensate the diverse network of collaborators who contribute their expertise and efforts to the platform. This balanced tokenomics model ensures that



Greencart can sustain its mission of promoting global sustainability while fostering a sense of fairness and mutual benefit among its users and stakeholders. Through this system, Greencart effectively aligns financial incentives with meaningful environmental impact, driving long-term engagement and trust within its community.

## 4. Greencart's KPIs

*"Integrating blockchain with sustainability initiatives can revolutionize how we manage resources, reduce waste, and promote ethical practices, ultimately driving a global shift towards a more sustainable and responsible economy"*

Maria Lopez, Environmental Scientist

In the current market environment, consumers' evaluation of products and services is no longer limited to traditional factors such as quality and efficiency but is increasingly moving toward sustainability. While marketers have until now focused primarily on managing prices to increase profits, the current challenge is to deliver perceived value aligned with growing environmental and social concerns. Although pricing has been considered a relatively simple step, the heart of the matter lies in defining what consumers really value, a psychologically complex task. Traditional efforts have focused on functional, and emotional aspects but the inclusion of sustainability is a key pillar in creating perceived value.

Sustainability has become a guiding light, with an active search for ways to reduce environmental impact and contribute to a more equitable future, reflected in increasing consumer choices for products with low environmental impact and added social value. Therefore, managers have to develop new concepts to anticipate what consumers today consider valuable. Although perceptions of value still remain subjective, new universal elements are emerging that offer opportunities for companies to improve performance in existing markets or penetrate new ones.



Thus, to create sustainable value is a breakthrough from traditional ESG models because it places innovation and digitization in the heart of sustainability. Indeed, this model emphasizes the importance of forces such as IoT, cloud computing, blockchain, artificial intelligence, and analytics in improving accessibility, reducing environmental impact, and promoting people's well-being. With an environmental focus, reducing waste and greenhouse gases, a long-term ethical approach in business by involving stakeholders, community projects at the social level are enhanced. Digital innovation, by optimizing processes and personalized experiences, becomes fundamental in this new way of operating, which requires reflection and a holistic approach, promoting efficient, customer-centered, and long-term sustainable operations, becoming indispensable in the current context.

In the research of sustainable value, some elements focus on basic consumer needs, such as reliability, certification and transparency. Other aspects emphasize social impact, aiming for universal accessibility and understandability for different consumer groups, integrating local labor, and supporting disadvantaged local realities and communities.

Hence, alongside an excellent product is a sustainability story that is recognized by customers through their purchase of the product. The core values of the pyramid, such as price, certifications, and proximity, meet the basic needs of customers.

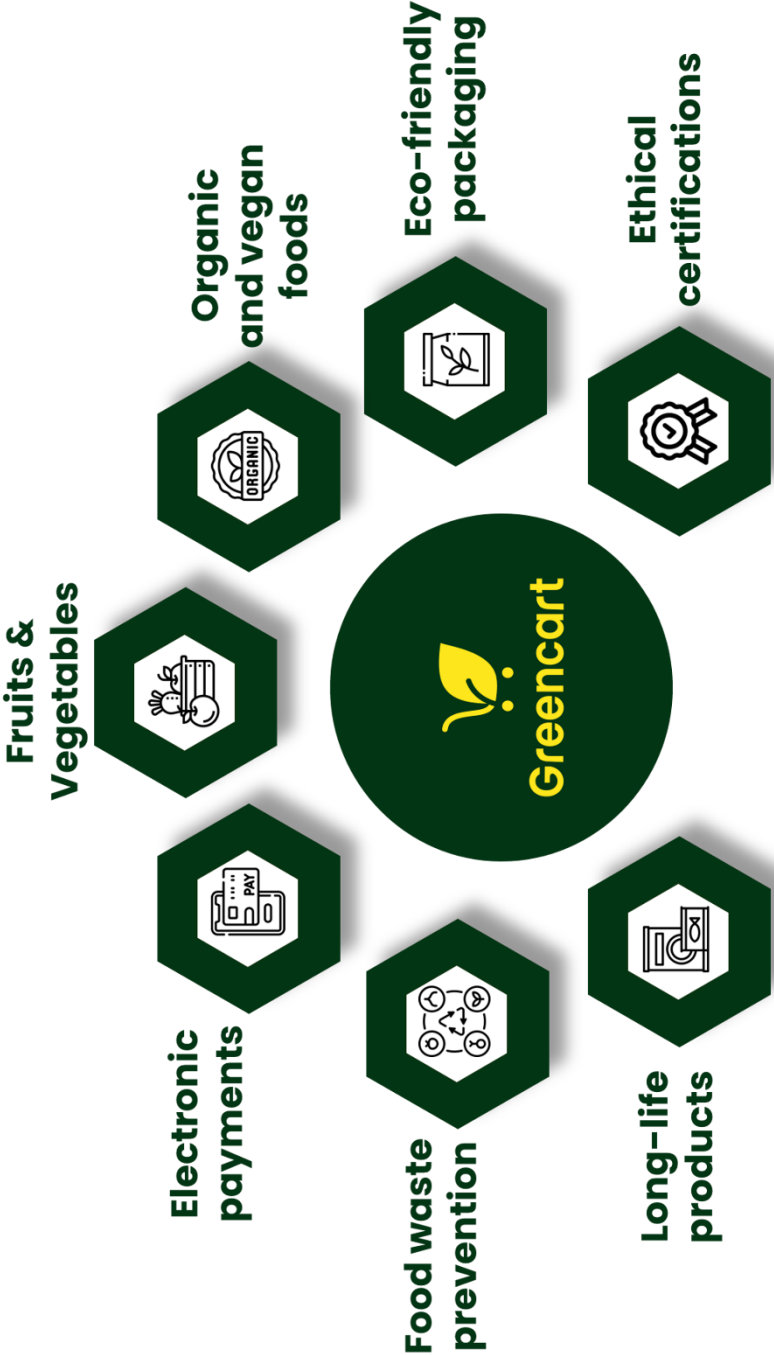
However, when seeking innovation, excitement, or prestige, environmental and social aspects influence expectations, driving toward conscious and sustainable purchases. Moving beyond mere sustainable or green production is the new challenge for companies to meet consumer needs with ethical and socially responsible practices, creating inclusive and inspiring products, contributing to a positive impact on health, society, and the environment.

Based on the following thoughts, the creators of Greencart decided to educate users on how to reduce their ecological footprint by promoting more conscious and responsible consumption.

With Greencart, making sustainable choices becomes simple and immediate, contributing to a greener future in order to incentivize sustainable purchases and measure the impact of consumer choices through clear and targeted KPIs.



# 7 Greencart's KPIs





## a. Fruits and vegetables

Little daily actions are what can really make a difference in reducing environmental impact, starting with purchases. Choosing to grocery shop consciously, preferring seasonal foods and local products is key to reducing emissions caused by long, often transoceanic, transportation.

According to data collected by Supermarket24, nearly a quarter (23%) of consumers state that they never buy products out of season, while 62% say they prefer foods that are in season. These data are encouraging and demonstrate a growing awareness among consumers in moving toward an increasingly sustainable and environmentally friendly lifestyle.

### **What are the sustainable foods we should buy and put on our sustainable grocery list?**

There are unsustainable products and foods that, on the other hand, promote sustainable eating. By paying attention to purchase products that are not the result of polluting and harmful refining and processing processes, people can contribute positively to the well-being of the Planet. Fruit and vegetables certainly stand out in this category. Buying these products at the supermarket is considered sustainable for several reasons.

First, many supermarkets are working to reduce their environmental impact by adopting responsible sourcing practices. This includes choosing local suppliers, which reduces the carbon emissions associated with transporting goods, and promoting seasonal products, which require fewer resources to grow. In addition, supermarkets are implementing policies to reduce food waste, such as selling “ugly” but perfectly edible fruits and vegetables that would otherwise be discarded.

The global fruit and vegetable market plays a crucial role in addressing global food security by providing diverse and nutritious products to a growing population. It is a major source of income for farmers and supports rural economies around the

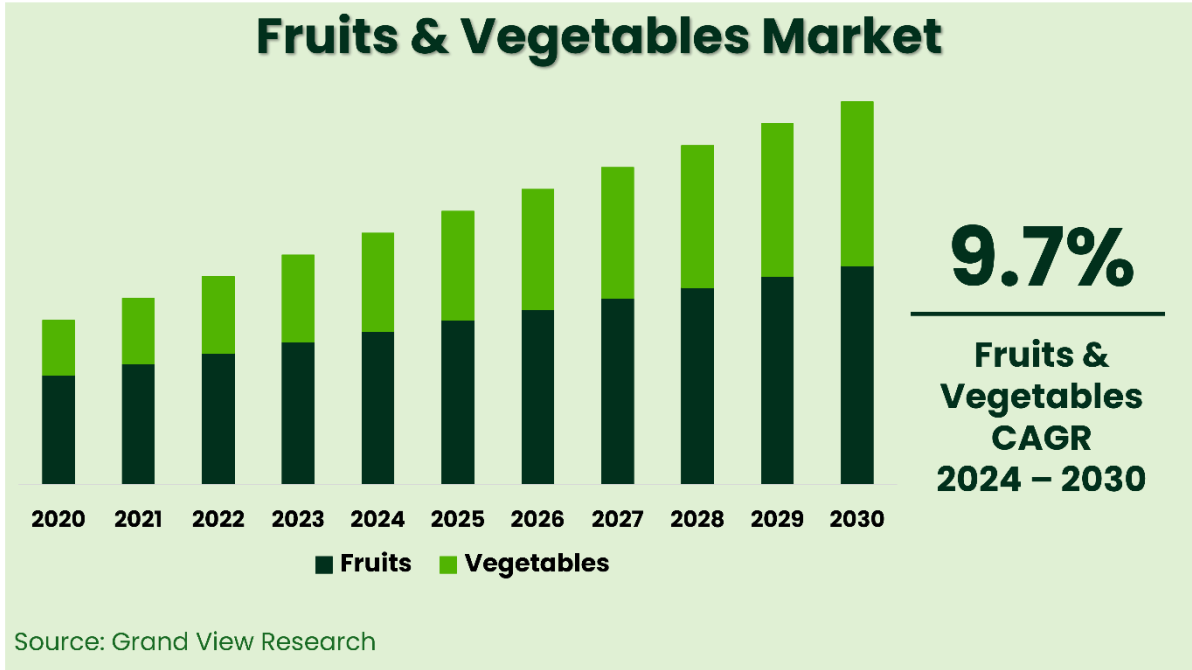




world. The market facilitates international trade, promoting economic cooperation and fostering agricultural innovation. As consumer preferences toward healthier and more sustainable food choices increase, the global fruit and vegetable market becomes instrumental in shaping dietary patterns and promoting environmental protection.

For instance, according to Data Bridge Market Research, the global fruit and vegetable market, which was valued at \$1,231.82 billion in 2023, is expected to reach \$2,985.19 billion by 2030, growing at a compound annual growth rate (CAGR) of 9.70% during the forecast period 2024-2030. In addition to providing information on market values, growth rate, segmentation, geographic coverage, and key market players, Data Bridge Market Research's reports also include in-depth analysis of experts, geographically represented production and business capabilities, network layouts of distributors and partners, detailed and up-to-date analysis of pricing trends, and analysis of supply chain and demand gaps.

**Figure 2. Fruits & Vegetables Market**





## b. Organic and vegan food

Organic and vegan food is often perceived by consumers as healthy, tasty, and environmentally friendly, but certification does not necessarily guarantee food safety. The term "organic" refers to a product that has been produced following certain standards during production, handling, processing, and marketing; it does not address the characteristics and properties of the final product. Similarly, vegan food, while excluding animal-derived ingredients, varies widely in its nutritional profile and environmental impact depending on its processing and sourcing.

In reality, organic certification indicates the adoption of standards that aim at various benefits: better incomes for small farmers, improved food safety, environmental benefits such as improved soil and water quality, preservation of biodiversity, and improved animal welfare. Vegan food production, particularly when combined with organic standards, aligns with many of these goals by avoiding the environmental impact of animal agriculture and prioritizing plant-based ingredients. Organic labels are based on rules that prohibit or limit the use of synthetic fertilizers and agrochemicals, an attractive feature for consumers.

However, even in organic farming, pesticides produced physiologically by plants are used, which at high dosages can have adverse effects on human health.

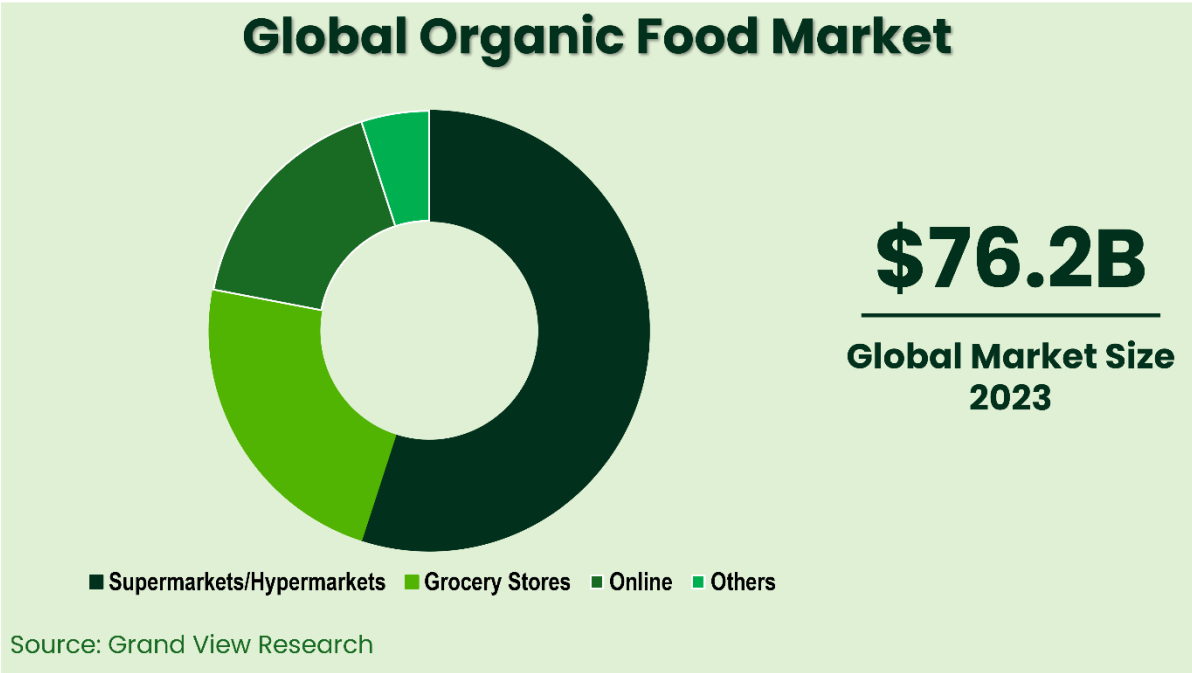
Including food safety measures in current organic certification programs and increasing awareness that organic or vegan farming practices are not synonymous with safe food are important steps to promote informed food choices. For instance, minimally processed vegan options such as organic lentils, chickpeas, and tofu provide nutrient-dense alternatives to conventional animal-based proteins while contributing to sustainability.

Organic fruit accounted for 57.0% of global sales in 2023. Growing consumer awareness of the health benefits associated with organic fruit and vegan-friendly produce has been a key factor in the growth of the market. Consumers are increasingly choosing organic and vegan food for its higher nutritional content and absence of synthetic pesticides and chemicals. The expansion of organic and plant-based product offerings in major supermarket chains, including items such as organic berries, stone fruits, and vegan salad kits, responds to growing consumer demand for convenient access to healthy options.



The organic fruit and vegetable segment is expected to grow at a compound annual rate (CAGR) of 9.6 percent from 2024 to 2030, with vegan-friendly innovations further propelling the market. With a growing number of consumers prioritizing healthy and plant-based food choices, sales of organic fruits, vegetables, and vegan meal kits through online channels are estimated to grow at the fastest CAGR of 11.3% from 2024 to 2030. Consumers are attracted by the convenience of buying organic and vegan foods online, benefiting from home delivery and flexibility in shopping hours. This convenience factor is driving the increase in online sales of vegan-friendly organic products, such as pre-cut organic fruits, salad kits, organic tofu, and vegan snack boxes.

**Figure 3. Global Organic Food Market**





## c. Eco-friendly packaging

Purchasing products with eco-friendly packaging is crucial to promoting a sustainable lifestyle. This choice not only reduces the environmental impact from producing non-biodegradable plastic waste, but also encourages companies to adopt more responsible practices. Green packaging uses recyclable, compostable or sustainably sourced materials, helping to conserve natural resources and mitigate the problem of plastic in the environment. In addition, increasingly conscious consumers are inclined to prefer products that reflect positive environmental values, prompting companies to innovate toward more sustainable solutions. This virtuous cycle can lead to a significant change in the global supply chain, making the market more environmentally friendly and for future generations.



In this regard, the European Union significantly tightened the current guidelines on packaging and packaging waste in 2018. All plastic packaging must be recyclable by 2030, with 55% of it successfully recycled. Only about 30% of all plastic packaging is actually collected.

Furthermore, according to a study conducted by Nielsen, more than 70% of global consumers say they are willing to pay more for products from brands committed to sustainable practices. This highlights a significant cultural shift toward conscious purchasing, where consumer choices can directly influence companies' strategies. Investing in environmentally friendly packaging not only improves brand reputation but can also reduce long-term costs associated with waste management and regulatory compliance. In addition, adopting recyclable or compostable packaging materials can help achieve corporate sustainability goals and maintain competitiveness in the global market by meeting the growing demand for responsible products.

Therefore, a growing demand for sustainable food packaging is expected among consumer-packaged goods companies, which will stimulate preference for consumer food products. Today, the global green packaging market has been valued at \$295.28 billion in 2023, and the growth of this sector is expected to be



\$311.99 billion in 2024 to \$462.71 billion by 2032, with a CAGR of 5.05% during the forecast period. Asia Pacific dominated the green packaging market with a market share of 38.9% in 2023.

As a result, the adoption of environmentally friendly packaging offers several advantages, such as reduced reliance on fossil fuels, reduced use of natural resources, increased use of recyclable products, more energy-efficient production methods, and the use of renewable resources. There have been recent trends in sustainable packaging, such as edible packaging of materials with a primary focus on reducing carbon footprint and reducing waste. They are also economically attractive to both producers and consumers.

## d. Ethical certifications

Purchasing products with ethical certifications is a key choice for consumers who wish to contribute to a more sustainable future. These certifications, such as Fair Trade, Rainforest Alliance and other recognized labels, ensure that products are made with respect for the rights of workers, local communities and the environment. By opting for such products, consumers promote agricultural and manufacturing practices that reduce environmental impacts, such as the sustainable use of natural resources and the reduction of carbon emissions.

They also support decent working conditions and fair pay for producers, countering exploitation and social inequality. Through conscious and informed purchasing choices, consumers

become agents of change, incentivizing companies to operate responsibly and sustainably, and helping to build a more equitable and planet-friendly global economy.







The main types of sustainability certifications are:

### **1. Environmental Certifications**

These certifications cover the environmental consequences of business activities, including aspects such as carbon and greenhouse gas emissions, pollution, production processes, raw material sourcing, cultivation methods, waste and natural resource management.

### **2. Economic and Ethical Labor Certifications**

These certifications ensure that business and labor practices are fair and unbiased. For example, they ensure that prices of raw materials are reasonable and that workers receive a fair wage. They also ensure that unethical practices, such as slavery and child labor, are not employed.

### **3. Animal Welfare and Cruelty-Free Certifications**

These certifications verify that products are cruelty-free and vegan, that is, manufactured without mistreatment of animals, such as animal testing or killing animals, and that they contain no animal-derived additives.



## e. Long-life products

Purchasing long-life products is an essential strategy for consumers who wish to adopt sustainable purchasing habits. Products with an extended shelf life, such as dried legumes, cereals, pasta and canned goods, significantly reduce food waste, a major environmental problem. In fact, about one-third of food produced globally is wasted, contributing to huge greenhouse gas emissions and the waste of valuable resources such as water and energy.

By choosing long-life products, consumers can better plan their meals, reduce the frequency of purchases and minimize food spoilage. This not only has environmental benefits but can also lead to financial savings as the need for frequent and urgent purchases decreases. In addition, long-life products often require fewer resources for their packaging and transportation, further contributing to the reduction of ecological impact.

Hence, buying long-life products allow consumers to actively participate in the fight against food waste and promote more efficient use of the planet's resources. This approach not only promotes sustainability but is supported by hard data that show its effectiveness. According to the Food and Agriculture Organization of the United Nations (FAO), food waste accounts for about 1.3 billion tons per year, contributing to about 3.3 billion tons of CO<sub>2</sub> equivalent emitted into the atmosphere. By reducing this waste by buying long-life products, consumers can help mitigate the effects of climate change.

In economic terms, a study conducted by the Waste and Resources Action Program (WRAP) in the United Kingdom estimated that an average household could save up to £700 per year by avoiding food waste. In addition, long-life products such as pasta and rice can be purchased in large quantities, thus reducing the use of packaging and the number of trips required for transportation, further decreasing the environmental impact.

Another significant finding relates to resource efficiency. According to the National Resources Defense Council (NRDC) in the United States, about 21% of the fresh water consumed in the country is used to produce food that ends up being wasted. Buying and storing long-life foods helps reduce this water waste, promoting more responsible use of natural resources.



In addition, long-life products tend to have a more stable supply chain, reducing the risk of disruptions related to climatic or economic factors. This not only contributes to food security, but also reduces the emissions associated with frequent transportation of perishables.

These data show that buying products with a long shelf life is a sustainable and beneficial choice for both the environment and the household economy, contributing tangibly to waste reduction and efficient use of resources.

## f. Food waste prevention

Prevention of waste, redistribution of surpluses, recycling and valorization of products that are still edible, reduction of plastic packaging and polluting emissions in supermarket outlets, and concrete actions to ensure access to healthy, sustainable and quality food for all: these are the pillars of the strategy implemented by several companies operating in the large-scale retail sector. Increasingly, these companies are relying on existing apps, associations, or other structures to help protect biodiversity, combat climate change, protect human health, and create more socially and economically equitable and inclusive production systems.

Reducing food waste, along with responsible choice of raw materials and control of the entire supply chain, is a goal shared by many large-scale retail operators. To achieve it, more and more supermarkets have come up with new sales formats, such as “fruit and vegetable boxes” and “anti-waste corners” in stores. These formats are designed to entice customers to buy, at a reduced price (by 30-70%), fresh or packaged foods that are edible and good but





aesthetically unappealing or close to expiration. In addition, stable partnerships have sprung up with apps for collecting surplus food and with charities that collect unsold food to give to those in financial need.

For instance, in 2022, the partnership with Too Good To Go App allowed Carrefour Italy to save more than 278,000 “Magic Boxes” worth more than 803,000 euros. Thanks to its well-established collaboration with Last Minute Market and the Banco Alimentare Foundation, Aspiag Service (dealer of the Despar, Eurospar and Interspar brands) managed to recover 1,441 tons of unsold food, donating it to more than 200 associations and facilities.

## g. Electronic payments

Making electronic payments is a sustainable choice for multiple reasons. First, it greatly reduces the use of paper and the resources required to produce physical money, thereby helping to reduce deforestation and pollution from the processes of printing and transporting currency. This approach not only conserves natural resources but also improves overall energy efficiency, as digital transactions require less energy than cash handling and management.

The security and traceability of transactions are further significant benefits of electronic payments, reducing the risk of fraud and improving tax compliance. This not only benefits the economy but also strengthens confidence in the global financial system. In addition, the adoption of digital payment systems promotes financial inclusion, enabling more people to access essential banking and financial services, thus contributing to more equitable and sustainable economic growth.

For instance, a study conducted by Visa in 2020 found that the production of physical money results in the cutting of about 3.4 million trees per year and produces more than 26,000 tons of solid waste. Transitioning to electronic payments can significantly reduce these environmental impacts, helping to conserve natural resources and reduce waste.



From an energy efficiency perspective, the Green Digital Finance Alliance has confirmed that digital transactions can reduce energy consumption by up to 70% compared to cash transactions. In addition, eliminating the need to carry physical money helps reduce CO2 emissions associated with transportation. Promoting the use of electronic payments not only improves access to financial

services for unbanked populations, but also supports a more inclusive and resilient economy.

In conclusion, the adoption of electronic payments represents a significant step toward a greener, more efficient, and equitable future, simultaneously addressing global environmental, economic, and social challenges.





## 5. Looking to the future

Looking to the sustainable future, it is clear that we are living in a crucial time for Planet. Environmental challenges require immediate and coordinated actions at all levels of society, from global policies to everyday individual decisions.

However, it is encouraging to see the evolution of initiatives such as Greencart, which not only incentivize responsible consumption but also promote a culture of environmental awareness and sustainability. These initiatives are not only a response to current climate and environmental emergencies, but also represent a prospect for growth and development that respects the limits of our planet and the needs of future generations.

In light of these considerations, it is critical that we continue to innovate and collaborate toward a future in which sustainability is not just a goal, but the very foundation of how we live and thrive on Earth.

### **B2C implications**

Greencart could play a decisive role in shaping the future of sustainable consumption. Through its ability to reward users for responsible purchases at supermarkets and local stores, Greencart not only motivates consumers to make greener choices, but also actively supports retailers' adoption of sustainable practices.

By leveraging data collected from receipts, Greencart could provide personalized suggestions to users to improve the sustainability of their purchases. By analyzing the products

purchased and identifying those with green packaging or from brands with sustainable practices, Greencart can suggest better and more sustainable alternatives for each product category. For example, it might recommend brands that use recyclable or compostable materials for packaging, or products with recognized environmental certifications. This approach not only helps users make more informed choices, but also educates them about the options available to reduce



the environmental impact of their daily grocery shopping.

Moreover, Greencart could use the data to identify trends and consumption patterns among users, providing recommendations based on aggregate behaviors. For example, it could suggest local or zero-mile alternatives to reduce the carbon footprint associated with transporting products. By analyzing users' purchasing preferences, Greencart could also promote products that are seasonal or have less packaging, encouraging more sustainable and resource-conscious consumption practices. This personalization of suggestions would not only make the platform more useful to users, but also contribute to a consumer culture that promotes long-term environmental sustainability.

In addition, Greencart could serve as an educational platform, providing

detailed information about the environmental impacts of products and the sustainable practices adopted by various brands. This would not only increase consumer awareness, but also make them active participants in the fight against climate change and conservation of natural resources. With the growing support of users and practitioners, Greencart could become a driver of innovation, stimulating the adoption of new eco-friendly technologies and materials in the production of consumer goods.

Therefore, in the long-term, Greencart's initiative could contribute significantly to creating a more sustainable global marketplace by promoting a vision in which environmental well-being is an integral part of daily life and purchasing decisions.



## B2B implications

Greencart could actively work with manufacturers and retailers to develop initiatives aimed at promoting transparency and sustainability in the procurement and production process of consumer goods. By leveraging detailed data from receipts, the platform could incentivize suppliers to improve their sustainable practices, rewarding those who adopt higher standards of environmental responsibility. This virtuous cycle would not only enrich the supply of sustainable products for end consumers, but also promote systemic change toward a greener and more ethically responsible supply chain.

Greencart, by acting as a catalyst for this transformation, could have a significant impact in making sustainability not just an option, but the preferred choice for conscious consumers.

Furthermore, Greencart could expand its impact beyond simply collecting data from receipts. It could establish partnerships with research institutions

to conduct in-depth studies on the environmental impact of different products and packaging. The results of these studies could be used to further inform users and improve the recommendations provided by the platform. In addition, Greencart could incentivize food waste reduction by educating users on food preservation practices and promoting purchases targeted to actual needs.

Another possibility is to partner with specialized recycling organizations to facilitate proper management of packaging waste by encouraging the adoption of recycling practices among users.

Finally, Greencart has the potential to become an essential resource for anyone wishing to make more sustainable choices in their daily consumption. In this way, the platform could positively influence not only individual behavior, but also corporate policies and global market dynamics, contributing to a greener and fairer future.



# Founders of Greencart



**Fabio Rigamonti** is Senior Software Engineer at VeChain, an innovative startup developing VeChainThor, a public blockchain designed for mass adoption by companies of all sizes, with a focus on supply chain and sustainability. He received a bachelor's degree in aerospace engineering from Politecnico di Milano in 2019 and a master's degree in Space Engineering from the University of Surrey in Guildford, UK, in 2020. He received a Master's degree in Business Sustainability from Talent Garden in 2023. Before joining VeChain, he worked at Accenture, specializing in both Cloud and blockchain, and acquired several certifications, including AWS Solution Architect Associate and AWS Developer Associate.



**Federico Luigi Alfeo** has a strong passion for blockchain and a commitment to sustainability. Holding a Master's degree in Computer Engineering, he has previously worked for NTT Data. Now at VeChain, Federico experiments with innovative advancements in blockchain technology. His diverse skill set includes full stack development in multiple programming languages. Driven by a desire to innovate and learn, Federico aims to contribute to projects that create meaningful, positive impacts on the world.



# References

FAO. 2023. FAO publications catalogue 2023.

Friedman, N., & Ormiston, J. (2022). Blockchain as a sustainability-oriented innovation?: Opportunities for and resistance to Blockchain technology as a driver of sustainability in global food supply chains. *Technological Forecasting and Social Change*, 175, 121403. 10.1016/j.techfore.2021.121403

Grand View Research (2020). Fruits & Vegetables Market Size, Share & Trends Analysis Report By Product (Fruits, Vegetables), By Type (Fresh, Dried), By Distribution Channel (Supermarkets/Hypermarkets, Grocery Stores), By Region, And Segment Forecasts, 2024 – 2030.

Grand View Research (2020). Organic Fruits And Vegetables Market Size, Share & Trends Analysis Report By Product (Fruits, Vegetables), By Distribution Channel (Supermarkets/Hypermarkets, Grocery Stores, Online), By Region, And Segment Forecasts, 2024 – 2030.

Lin, X., Chang, S. C., Chou, T. H., Chen, S. C., & Ruangkanjanases, A. (2021). Consumers' intention to adopt blockchain food traceability technology towards organic food products. *International Journal of Environmental Research and Public Health*, 18(3), 912. 10.3390/ijerph18030912

Kör, B., Krawczyk, A., & Wakkee, I. (2022). Addressing food loss and waste prevention. *British Food Journal*, 124(8), 2434–2460. 10.1108/BFJ-05-2021-0571

Kumar, M., Choubey, V. K., Raut, R. D., & Jagtap, S. (2023). Enablers to achieve zero hunger through IoT and blockchain technology and transform the green food supply chain systems. *Journal of Cleaner Production*, 405, 136894. 10.1016/j.jclepro.2023.136894

Shi, X., Yao, S., & Luo, S. (2023). Innovative platform operations with the use of technologies in the blockchain era. *International Journal of Production Research*, 61(11), 3651–3669. 10.1080/00207543.2021.1953182

Thanujan, T., Rajapaksha, C., & Wickramarachchi, D. N. (2022). Scalable and Socially Inspired Blockchain Architecture for the Organic Food Supply Chain. *Journal of Innovation Information Technology and Application (JINITA)*, 4(2), 163–177.

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