

Home Delivery Sustainability: The Environmentally Conscious Consumer Under Pressure

Descartes' 3rd Annual Home Delivery Sustainability Study



Introduction

Even amidst global economic uncertainty, ecommerce continues to thrive. Descartes' 2024 consumer sentiment study of ecommerce home delivery, [Online Buying Grows, But Too Many Consumers Still Experiencing Delivery Woes](#), revealed that consumers in every demographic are increasing the volume and frequency of their online purchases, with **39%** of respondents making more ecommerce purchases in the surveyed period in 2024 compared to 2023.

But what role does the environment play in those purchase and delivery decisions? How motivated are consumers to reduce their carbon footprint through sustainable products and eco-friendly home delivery options? What impact are inflation and other economic factors having on consumers' delivery preferences and behavior? With these questions in mind, Descartes and SAPIO Research conducted the third annual home delivery sustainability survey of 8,000 consumers across the U.S., Canada, and nine European countries to gain an understanding of the intersection of the environment, last mile delivery, and consumer buying behavior in 2024.

Top Level Findings

Below are high-level, at-a-glance takeaways from the research



57% of respondents are quite/very interested in sustainable home delivery services



99% are open to doing more to reduce their environmental impact



89% felt their willingness to pay more for sustainable delivery was impacted by the current economic situation



37% believe convenience and environmental impact are equally important



56% of 18-34-year-olds reduced online shopping this past year due to environmental concerns

Source: Descartes / SAPIO Research



Progress stalled but not stuck

The results of this year's home delivery sustainability study highlight the overarching dilemma that is slowing the advancement of sustainability initiatives across ecommerce home delivery: while today's consumers have an absolute willingness to do their part for the environment, the current economic climate—and the resulting financial implications for individual consumers—is dampening their motivation to prioritize sustainable options.

The good news is that **57%** of consumers are quite/very interested in sustainable home delivery services and are willing to buy more from brands with sustainable supply chains. In addition, consumer perception of retailers' efforts in home delivery sustainability continues its upward trend, albeit with less intensity, with **44%** of respondents (up **1%** from 2023 and **6%** from 2022) thinking all/many are doing a good job.

Given the continued interest in sustainable home delivery options, even in the midst of the current financial pressures and economic uncertainty, retailers cannot afford to miss this opportunity to educate consumers about how making the eco-friendly delivery choice can also be the cost-saving option—helping consumers save money in trying times, while simultaneously meeting their sustainability expectations and driving delivery costs down to protect the bottom line.

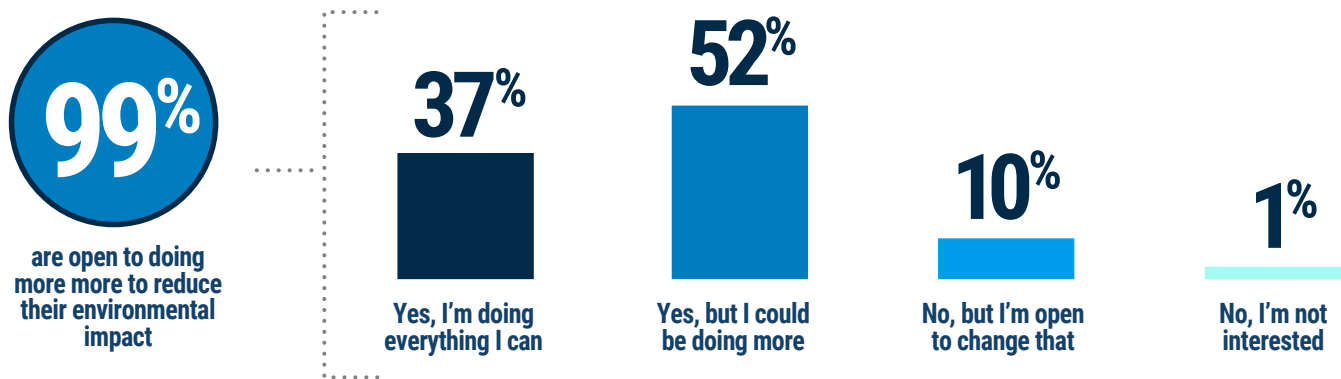


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The environmentally conscious consumer

While one in 10 online shoppers surveyed admitted to not doing their bit to reduce their environmental impact, a sizable **99%** are either doing or open to doing more (see Figure 1)—reflecting the ongoing shift in the collective consciousness that is propelling consumers to make more sustainable choices when shopping online. Notably, a significant number of respondents (**38%**) indicated that they regularly/always make purchasing decisions based upon product or company environmental impact, down slightly (**3%**) from 2023.

Figure 1 | Consumer perception of their environmental footprint



Consistent with last year's results, there is a notable difference in sentiment by country, with **43%** of respondents from the U.S. (tied with Germany this year) being the most committed to making environmentally friendly purchasing decisions, compared to only **28%** in the Nordic countries. Notably, male respondents (**40%**) were more focused on sustainable purchasing than female respondents (**35%**).

Despite the stalled progress of sustainability in last mile delivery, this year's survey revealed that consumers are keen to purchase goods from companies that measurably demonstrate that their supply chain is more sustainable than the competition, particularly for clothing and footwear (**42%**) and groceries (**40%**). In contrast, the number of respondents who said they weren't interested at all in the sustainability performance of companies remained a relatively small proportion, rising slightly from **9%** in 2023 to **12%** in 2024.

When evaluating products for their environmental impact, consumers continue to be most concerned about groceries (**36%** vs. **35%** in 2023) and clothing and footwear (up **5%** from 2023 to **35%**), with electronic equipment (**29%**), health and beauty (**28%**) and restaurant food (**27%**) rounding out the top areas of concern.

Although results were depressed slightly across the board in 2024, the top three consumer considerations when evaluating products for their environmental impact were consistent with 2023 results:



Specific environmentally friendly product characteristics at 47%, down 5% from 2023



Word of mouth from friends/family at 38%, down 1% from 2023



Company commitment to having a positive environmental impact at 35%, down 3% from 2023

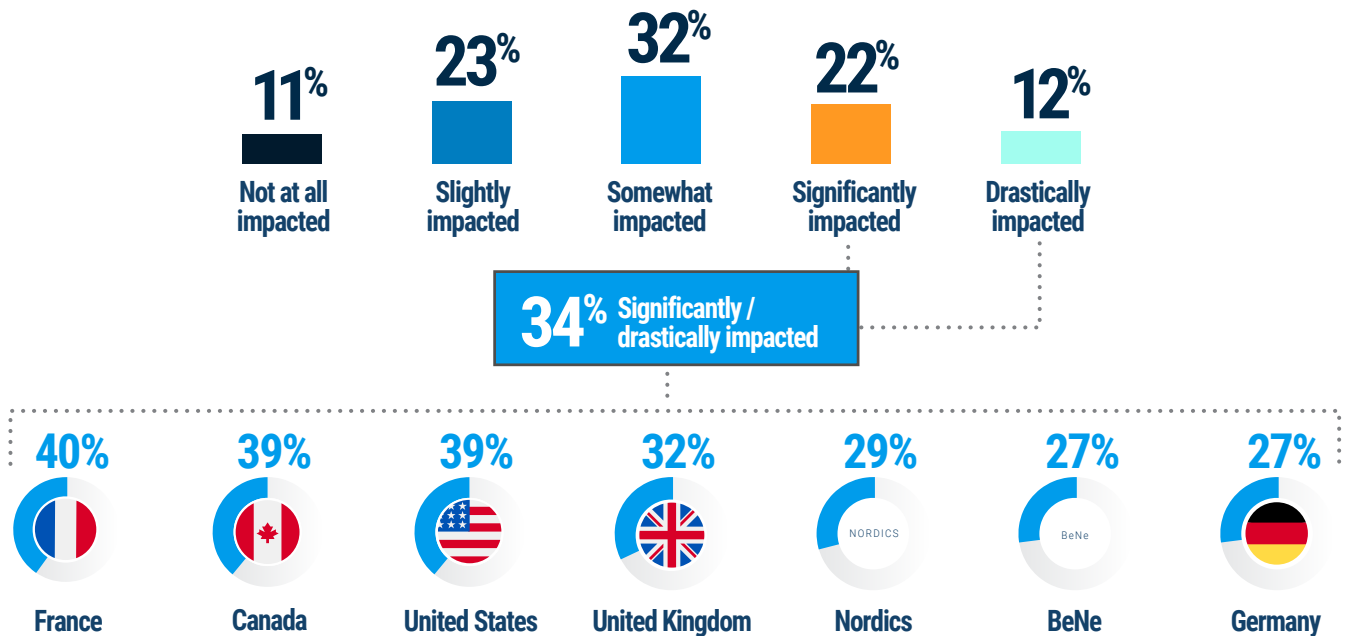
Feeling the economic squeeze

Despite interest in making sustainable choices, it's no surprise that consumers experiencing the pressures of inflation, escalating housing costs, and rising prices for groceries and other necessities are less willing to make environmentally friendly delivery choices if they are proving more expensive than the alternatives. In fact, **34%** of respondents said the current economic situation significantly or drastically impacted their willingness to pay more for sustainable delivery options, with a whopping **89%** impacted at least to some degree (see Figure 2).

Respondents across all countries surveyed were impacted at some level by financial pressures, with the highest proportion of respondents from France significantly or drastically impacted (**40%**); Germany and Belgium/Netherlands experienced the least impact (**27%**) on their willingness to pay more for sustainable products/delivery (see Figure 2).

With the financial situation taking its toll on consumers' sustainable choices, the percentage of consumers who feel that helping the environment in their daily life is quite or very important fell from **52%** in 2023 to **47%** in 2024—although encouragingly not falling below 2022 levels (**45%**) when Descartes first started surveying consumers.

Figure 2 | Impact of current economic situation on willingness to pay for more sustainable products/delivery



Source: Descartes / SAPIO Research



*A whopping **89%** indicated that economic constraints have impacted their willingness to pay more for sustainable products/delivery.*

Making sustainable choices: convenience vs. cost

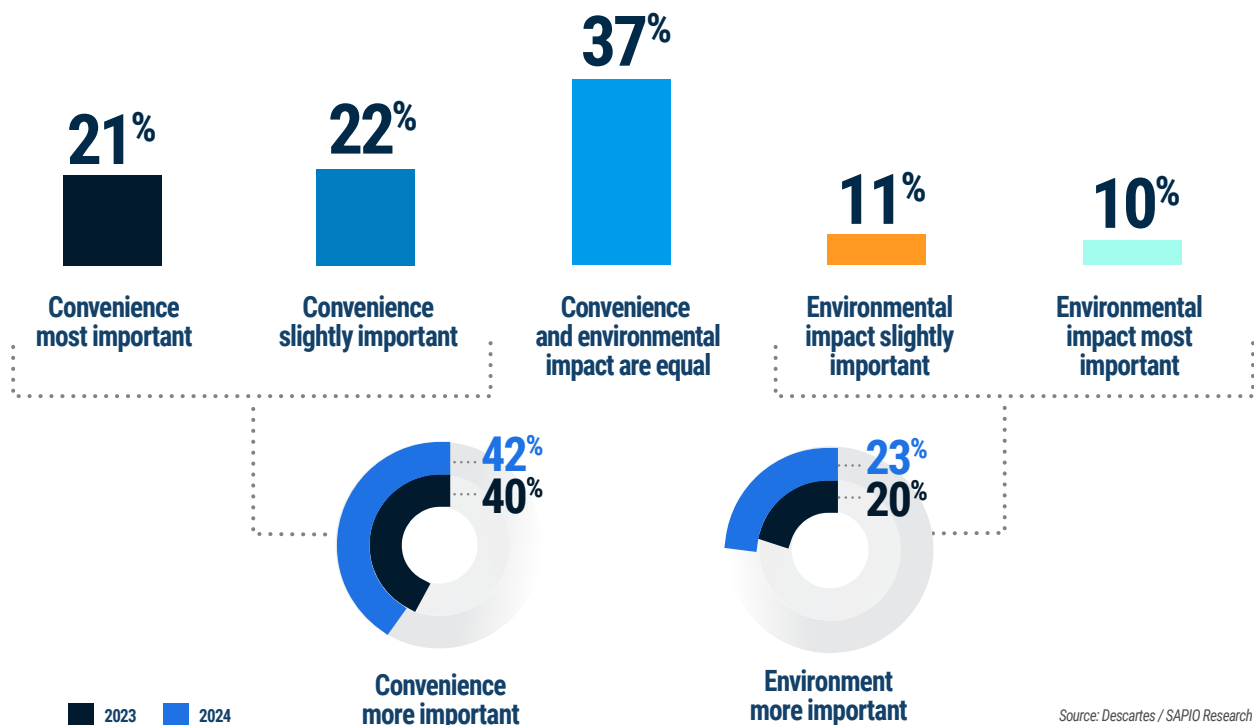
To get a sense of how strongly consumers are committed to reducing their carbon footprint in light of cost and convenience factors, respondents were asked if they would be willing to purchase and pick up goods locally at a slightly higher price, as opposed to paying less to buy products online and having them delivered *if they thought it would help the environment*.

Groceries continued to top the list, with **52%** (vs. **58%** in 2023) of respondents indicating they would regularly/always pay slightly more for groceries that they pick up instead of opting for delivery. Medicines (**45%**) and clothing and footwear (**45%**) rounded out the top three categories, although both categories were down slightly from 2023 levels, declining **4%** and **6%**, respectively. Notably, medicines moved up the list of products consumers were willing to pay more to pick up if they thought it would help the environment, moving from tied with health and beauty products in the third position in 2023 to the second most likely in 2024.

In addition to the influence of cost, convenience is a major factor impacting online shopping and delivery choices. In fact, according to the [Descartes 2024 ecommerce home delivery study](#), of the **39%** of respondents who increased their volume of purchases in 2024, **57%** cited convenience as the top reason for buying more goods.

Indeed, despite consumer interest in improving the sustainability of the supply chain, this year's results revealed that delivery convenience takes precedence over minimizing the environmental impact when making delivery choices. **Forty-two percent** of respondents indicated convenience was slightly/most important, compared with **20%** citing environmental impact as slightly/most important (see Figure 3). However, a significant percentage (**37%**) of respondents—down **1%** from 2023—say both factors are equally important.

Figure 3 | Importance of convenience vs environmental impact of deliveries

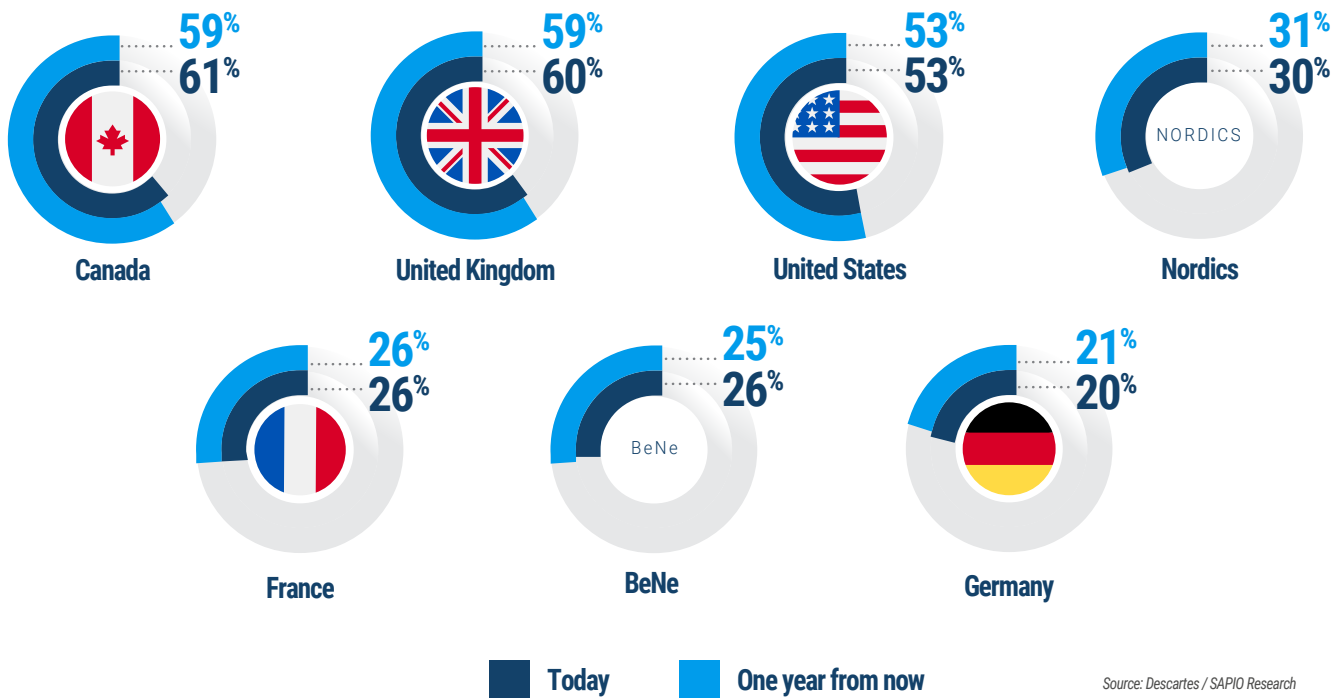


Delivery preferences

As anticipated, home delivery was the top choice (**41%**) of consumers when buying goods online, while **30%** of respondents pick up purchases at a self-service locker or pick-up point and **28%** choose the in-store pick-up option. These trends are not expected to change over the next year.

Interestingly, regional preferences varied significantly, with a sizeable spread—more than 3X (see Figure 4)—between Canada with the highest percentage of respondents who have online purchases delivered to their home (**61%**) and Germany with the lowest percentage (**20%**) choosing home delivery.

Figure 4 | How consumers receive their online purchases today vs next year – by region

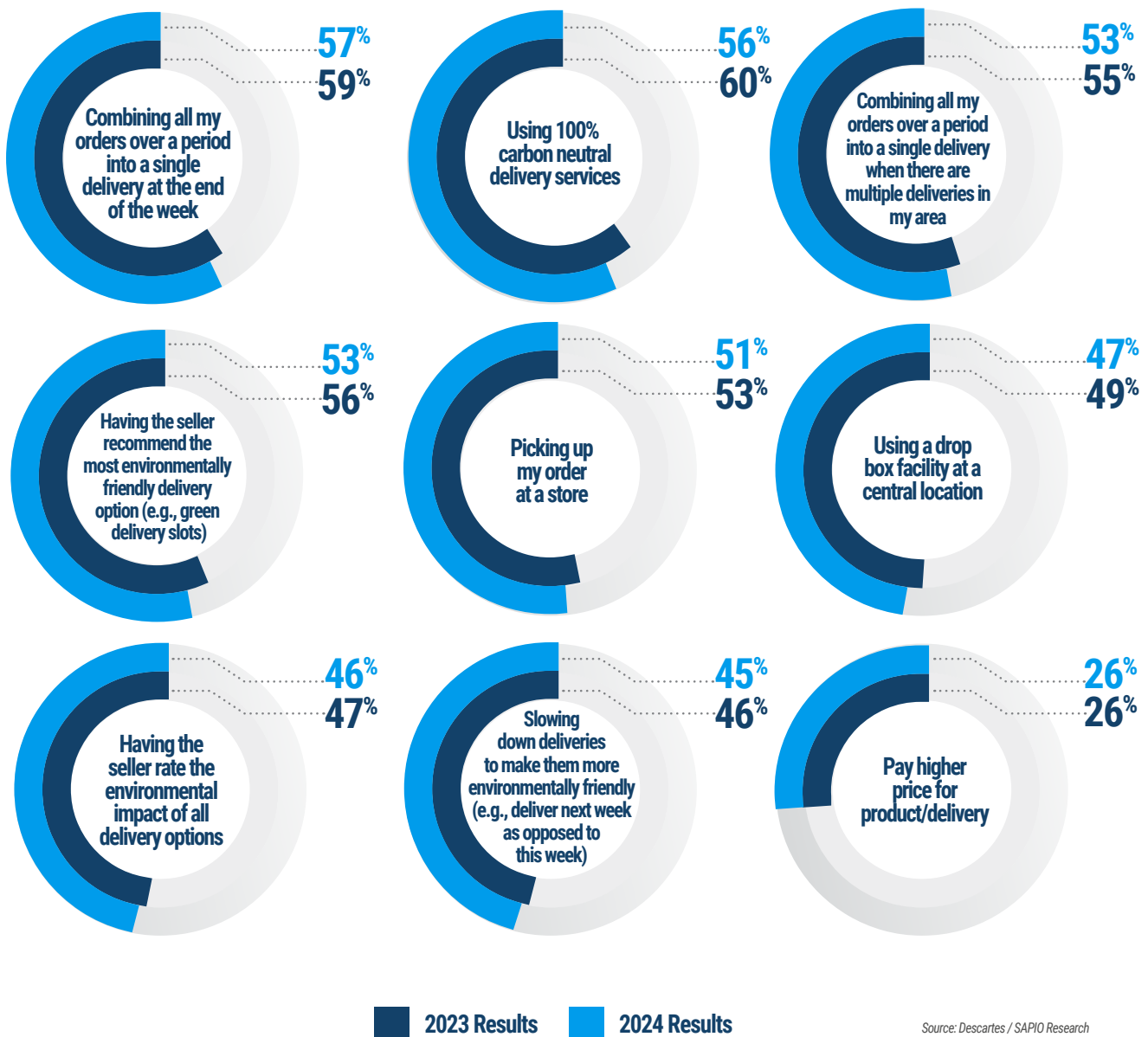


30% of respondents pick up purchases at a self-service locker or pick-up point.

Consumers continue to be very interested in receiving deliveries using more sustainable delivery methods. The top delivery option in 2024 is combining orders and delivering them at the end of the week, with **57%** of respondents quite/very interested. Last year's leading choice of environmentally friendly delivery methods—using 100% carbon neutral delivery services—has been knocked from the top spot, experiencing the greatest YoY gap of all the options.

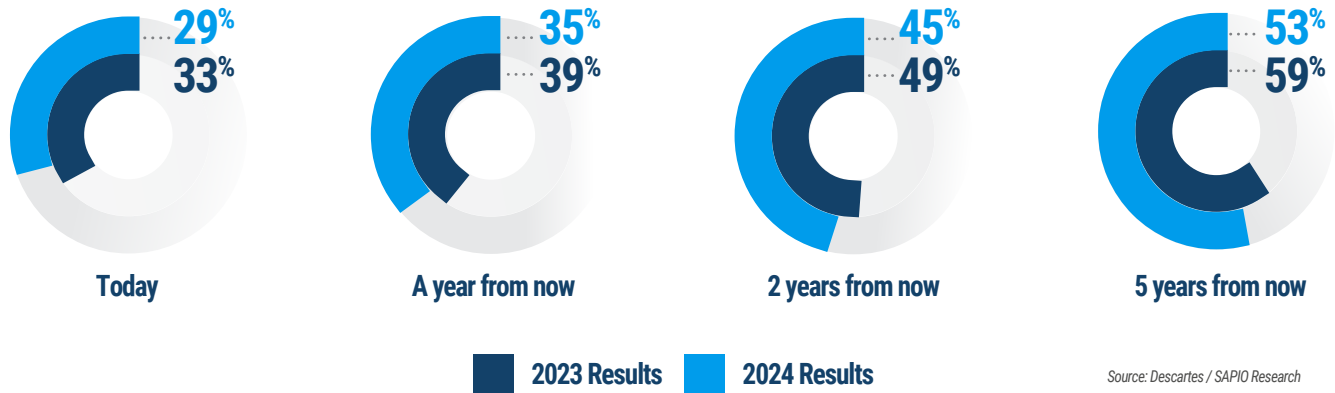
Consumer interest in most delivery options presented in the 2023 and 2024 surveys remains relatively consistent (see Figure 5). The good news is that the majority of the environmentally friendly options drive delivery density and increase delivery efficiency, reducing transportation costs for retailers.

Figure 5 | Respondents quite/very interested in receiving deliveries using more environmentally friendly delivery methods such as the following:



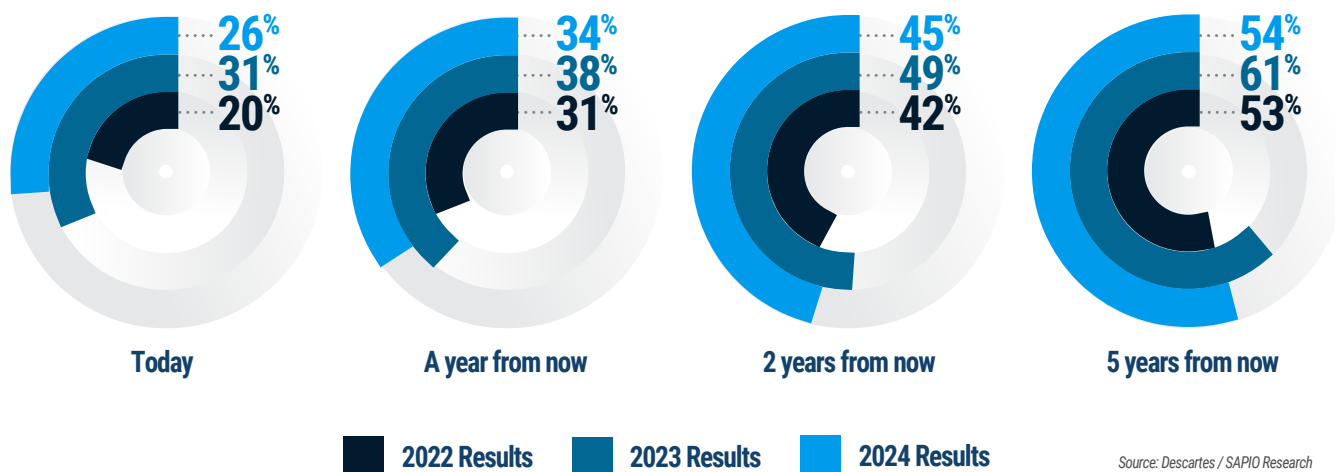
Consumers value retailers' ability to publish their carbon footprint for deliveries, albeit at a slightly lower level than last year's results (see Figure 6). Today, nearly a third (**29%**) of respondents say that retailers' ability to publish their carbon footprint is quite/very important, gradually increasing over five years to more than half (**53%**) in 2029.

Figure 6 | Importance of retailers publishing carbon footprint of individual deliveries



One way consumers expect to see retailers provide more eco-friendly delivery options is through the use of electric vehicles, although interest has cooled slightly compared to 2023 results (see Figure 7). Today, **26%** of respondents feel the use of electric vehicles is quite/very important, increasing to **54%** five years down the road—an optimistic expectation given the constrained availability currently of electric delivery vehicles. The trend will likely see the electrification of delivery vehicles beginning with smaller vans, which favors parcel deliveries as opposed to large-format two-person delivery items.

Figure 7 | Consumer expectations for the use of electric vehicles in home delivery



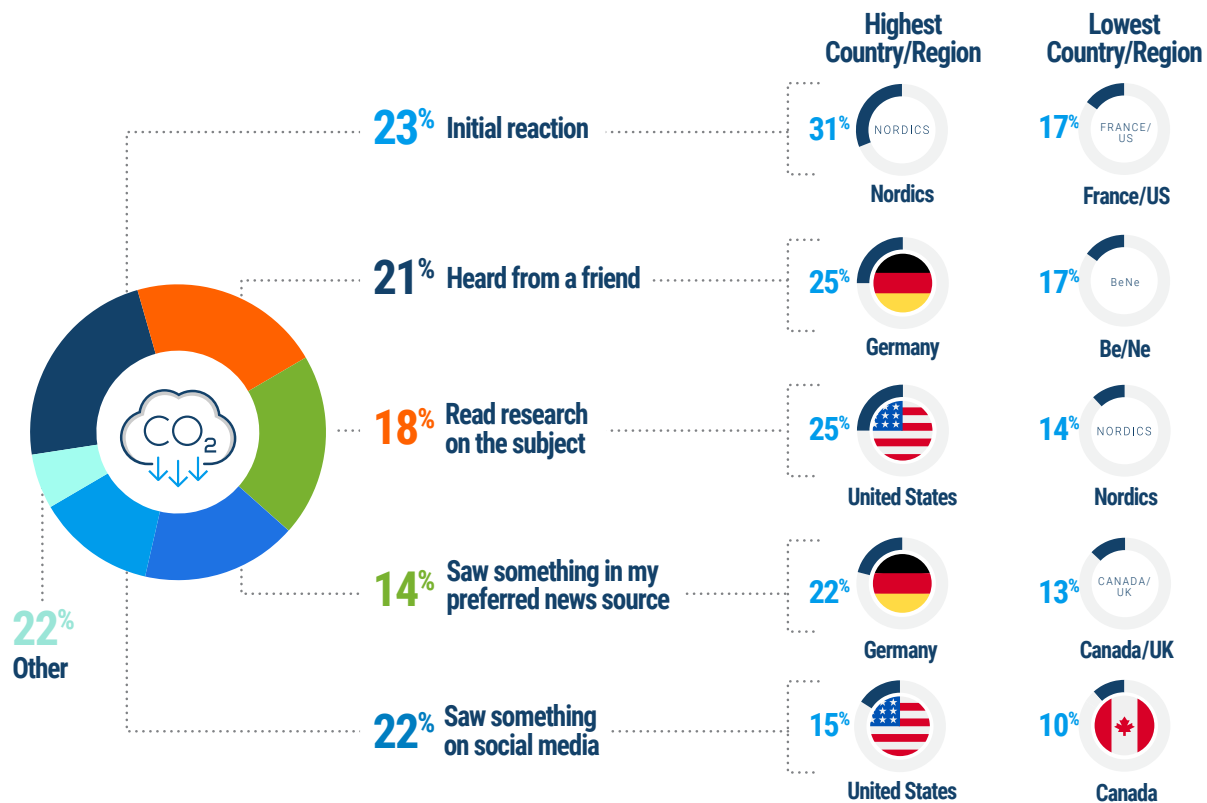
Since many retailers use third parties to deliver their goods, the role of the delivery agent in sustainability is becoming more important. Overall, **35%** of respondents indicated that it is quite/very important for delivery agents to offer environmentally friendly delivery services, with only **4%** indicating it was not important. Results across the board decreased slightly YoY from 2023, likely a reflection of the economic situation's impact on consumer priorities.

Perception vs. reality: an opportunity for retailers

Consumers are definitely interested in sustainable delivery options, but which options do they believe are more environmentally friendly and why? This year's results reveal that when it comes to the potential environmental impact of home delivery, perception is reality for consumers. Just over a third (**35%**) of respondents believe that buying online and picking up their items at the store is the more environmentally friendly delivery option, followed by buying online and having packages delivered to their home (**27%**) and, lastly, buying online and picking up at a locker (**18%**).

How did respondents come to their conclusions? Consumer perceptions are largely not data-based nor grounded in facts and vary considerably by geography (see Figure 8). Nearly a quarter of respondents (**23%**) said their view was based on their initial reaction, with **21%** hearing from a friend.

Figure 8 | How consumers conclude which delivery option is more environmentally friendly

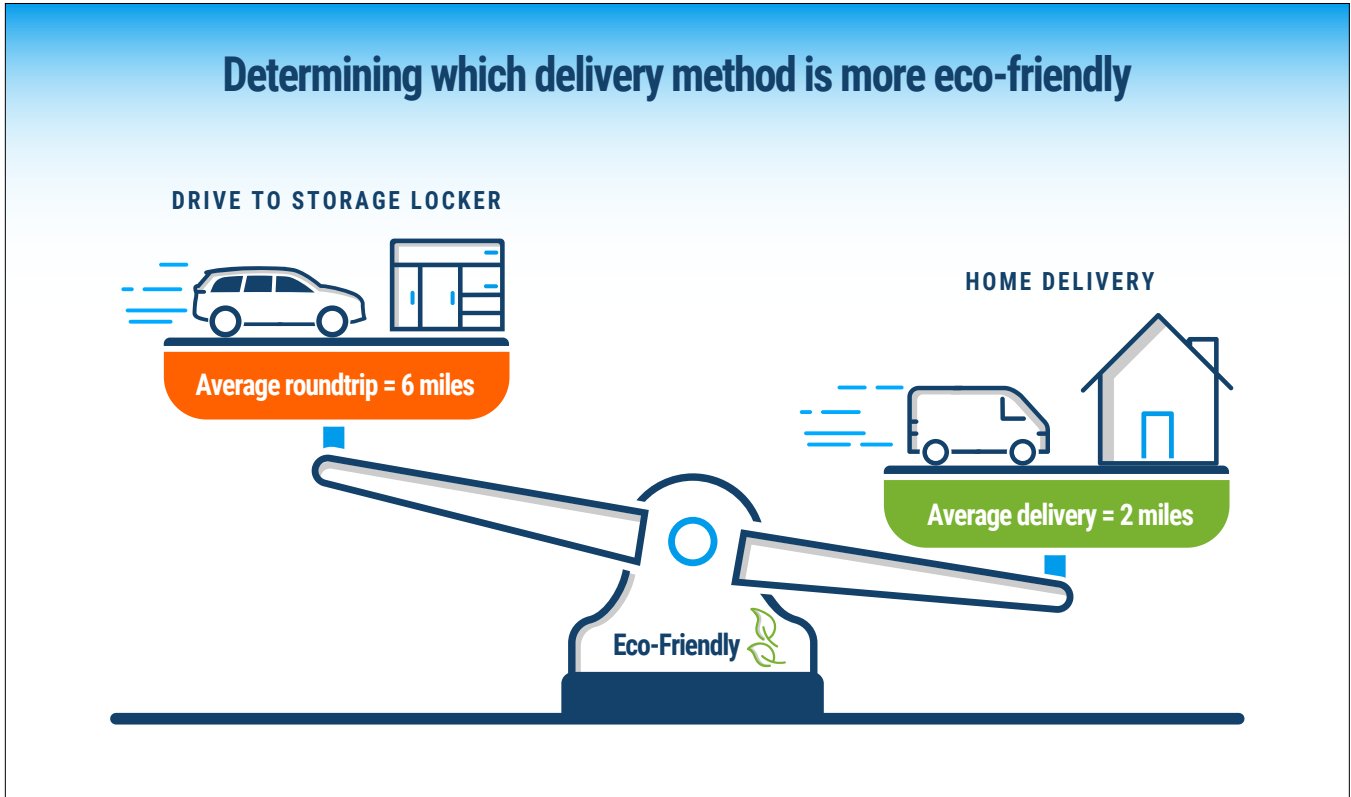


Source: Descartes / SAPIO Research



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While home delivery can be more environmentally friendly in certain scenarios, this fact is not well understood by consumers. For example, if a consumer had to drive three miles to a parcel storage locker, their round-trip travel would be six miles. If a delivery van, however, averaged two miles per delivery and consumed **50%** more fuel per mile travelled, the van would be the eco-friendlier option.



This lack of understanding of environmental impact represents an opportunity for retailers and home delivery logistics companies to demonstrate that they can be more eco-friendly—such as switching to low-emission vehicles or using third-party delivery agents with a track record of sustainability—while educating the market about their other sustainable last mile practices that also save the consumer money.

For example, by encouraging consumers to bundle their orders for delivery on the same day, offering green timeslots that group deliveries in the same area together, or providing flexible delivery options to avoid missed deliveries, retailers can reduce their delivery costs through increased delivery density and less miles travelled while promoting cost-competitive, sustainable options that consumers value.

Notably, consumers have proven that they are willing to choose environmentally friendly options to reduce their eco footprint, with **57%** of respondents quite/very interested in combining their orders into a single delivery at the end of the week and **56%** quite/very interested in using **100%** carbon-neutral delivery services. Combining orders into a single delivery when there are multiple deliveries in the respondent's area (**53%** quite/very interested) and having the seller recommend the most environmentally friendly option (**53%**) are also popular choices amongst consumers. Twenty-six percent of respondents are even willing to pay a higher price for the sustainable option.

With more than half of respondents indicating they would select eco-friendly delivery options, the “sustainable delivery persona” has become a powerful delivery persona for retailers to build ecommerce sales and marketing strategies around—especially when targeting younger generations of buyers who are growing increasingly concerned about the health of the planet and will vote with their wallets.

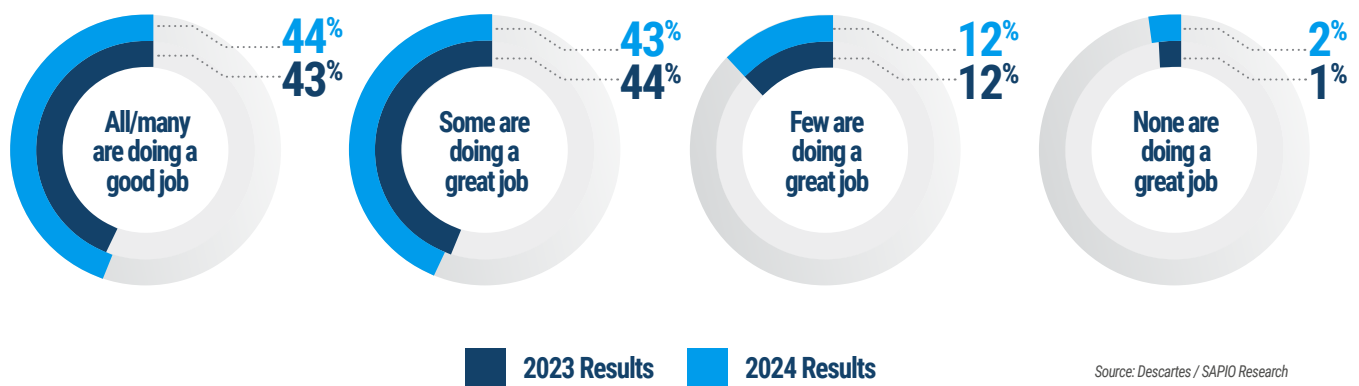
Using the sustainable delivery persona to tailor both delivery options and messaging to appeal to customers seeking to reduce the environmental footprint of their purchases not only demonstrates a retailer’s commitment to sustainability, but also translates to a favorable brand reputation, increased brand loyalty, and a healthier top and bottom line. To learn more about how delivery personas help retailers maximize revenue and customer loyalty, [read here](#).

Consumer action

Are consumers putting their beliefs into action with respect to making sustainable choices? When asked whether they had reduced their online shopping due to environmental concerns, **43%** of respondents said yes, with a further **18%** having considered it. While consumers as a whole are conscious of their carbon footprint, there is a wide gap between the behavior of the younger generational cohorts (Millennials and Gen Z) and older groups. In fact, more than half (**56%**) of respondents aged 18-34 years have reduced their online shopping due to environmental concerns, while only **26%** of those aged 55 and older have cut back on their purchases.

If consumer expectations for sustainable home delivery continue to intensify, how are retailers performing? Results are in line with last year’s survey, with **44%** of respondents feeling that all/many retailers are doing a good job, but the majority of consumers (**57%**) believe retailers still have a long way to go (see Figure 9).

Figure 9 | Consumers who feel all/many retailers are doing a good job using sustainable delivery practices



While consumer perception of whether retailers are doing a good job of implementing sustainable delivery practices in 2024 is encouraging, a large number of consumers (56%) are taking some form of action to express their displeasure if they feel retailers' home delivery practices are not living up to their expectations.

'Stopped shopping at that company' (24%) and 'told family and friends to avoid the company' (24%) were the most common responses to poor delivery practices. Sixteen percent of respondents posted about their negative experience on social media, 15% took action in the form of a negative review, 14% of respondents signed a petition, and 10% participated in a protest. While these percentages may seem low, social media and other community-based actions, whether online or in person, have incredible reach and velocity, amplifying consumers' messages well beyond the impact of telling friends and family and potentially damaging the retailer's brand.

Evaluating consumer actions by demographics reveals a clear difference in willingness to act and the severity of the action across generational cohorts (see Figure 10). Retailers selling to younger consumers (e.g., Gen Z, younger Millennials) must be acutely aware that this age group is much more cognizant of retailers' home delivery environmental performance and equally much more willing to act in ways that can cause retailers monetary and reputational damage—77% of respondents aged 18-34 years took action in response to retailers' unsustainable practices. On the opposite side of the coin, a whopping 72% of respondents aged 55+ years took no action in response to poor environmental delivery practices, compared to only 23% of 18-34-year-old consumers who didn't act.

Figure 10 | Consumer action by age based upon retailers' poor environmental delivery practices



Source: Descartes / SAPIO Research



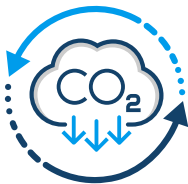
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The Generational Divide

To ensure brand resilience in the sustainability arena, retailers must be aware that the age of consumers significantly impacts their views on the importance of the environment in their day-to-day lives, the role of sustainability in home delivery, and whether they will take action to reduce their eco-footprint (see Figure 11). Younger generations place greater value on environmentally friendly practices than their older counterparts and are willing to stand up for their beliefs.

Figure 11 | Demographic differences among consumers



83% of consumers aged 18-24 and 71% of 25-34-year-olds consider the environment when making a purchase vs. 43% of consumers aged 65+



56% of respondents aged 18-34 have reduced online shopping due to environmental concerns vs. 26% aged 55+



72% of 55+ refrain from taking action in response to retailers' poor sustainable delivery practices vs. only 23% of respondents aged 18-34 who don't act

By promoting eco-friendly delivery options, retailers could attract younger buyers who may buy more—but merchants must remember that the younger generation of shoppers may also retaliate to a greater extent if the retailer does not meet their sustainability expectations.



Looking ahead

Although the intensity of the progress of sustainability across home delivery operations stalled in 2024 due to persistent inflation worries, economic uncertainty, and financial fallout at the individual level, consumers' desire to do their part to help the environment didn't waver, with **99%** of respondents open to doing more to reduce their environmental impact. Compared to 2023 findings, the influence of environmental factors on purchase decisions stayed consistent, with respondents more willing to buy from retailers with sustainability baked into their delivery operations—in spite of the fiscal challenges consumers faced this year.

Sustainability matters to consumers—which means it should matter to retailers. Offering green delivery slots is a prime example of how retailers can help customers make more informed decisions about the sustainability of their delivery choices while demonstrating retailers' commitment to considering the environment in their business decisions. Plus, by encouraging shoppers to choose delivery slots with a lower environmental impact, such as a green slot that bundles multiple deliveries over a period into a single delivery—which we learned **56%** of respondents are keen to adopt—retailers can reduce transportation costs to benefit their bottom line.

Given that the last mile of the supply chain is mistakenly considered by consumers as the most cost-intensive, now is the time to educate consumers about the potential reciprocal relationship between affordability and sustainability ensuing from environmentally friendly delivery choices. By building consumer loyalty today through sustainable offerings—while driving delivery costs down in the process—retailers will reap the benefits when the economic ship is righted and online shoppers have more disposable income to spend.

Footnote:

1. The use of standard numerical rounding conventions may make the summation of some charts appear to be off by 1%



About Descartes Systems Group

Descartes (Nasdaq:DSGX) (TSX:DSG) is the global leader in providing on-demand, software-as-a-service solutions focused on improving the productivity, security and sustainability of logistics-intensive businesses. Customers use our modular, software-as-a-service solutions to route, track and help improve the safety, performance and compliance of delivery resources; plan, allocate and execute shipments; rate, audit and pay transportation invoices; access global trade data; file customs and security documents for imports and exports; and complete numerous other logistics processes by participating in the world's largest, collaborative multimodal logistics community. Our headquarters are in Waterloo, Ontario, Canada and we have offices and partners around the world.

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Uniting the People & Technology That Move the World.