JABIL

CONNECTED PACKAGING PERCEPTIONS AND ATTITUDES

A Consumer Insights Survey

JULY 2021

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INTRODUCTION

Triggered by the global pandemic, the consumer packaged goods (CPG) industry has undergone perhaps its biggest challenge yet. The customer acquisition funnel CPG brands have relied on for over three decades fundamentally transformed in just 18 months. Consumer buying patterns changed—likely permanently—introducing new unknowns into the brand loyalty equation.

But it's not all bad news. Today's uncertainties are tomorrow's opportunities.

CPGs can meet the moment, supported by digital tools, increasingly affordable sensors and the Internet of Things (IoT). Creating connected devices that transform the consumer experience while driving value and insights for brands is now a reality.

The future is coming into greater focus for connected packaging—which allows the delivery of content and the creation of a direct relationship between brand and consumer. How do consumers view this evolution of the consumer experience? How do they feel about new innovations like auto-replenishment and home inventory management? In which ways do consumers prefer to interact with product brands and how can technology enable this? What concerns do they have about data privacy?

In a follow-up to our 2020 report, we surveyed over 1,124 consumers from the United States about their perceptions on subscription services, auto-replenishment, data privacy and more. All participants made at least five online purchases of physical goods in the past year, own a smartphone and have responsibility for purchasing a significant portion of their household's staple goods.

The January 2020 survey was conducted pre-pandemic, capturing the perspectives of consumers who did not know what the year had in store for them. This survey focuses on the changing attitudes and perceptions of those who have been living in a significantly altered world. And the changes? Well, they're dramatic and present new opportunities for CPGs.

Sometimes the best user experience is an invisible one. It's taking care of tedious tasks behind the scenes, ordering products you need at just the right time or giving the instructions only when needed. At Jabil we are working towards that seamless involvement in everyday life because we see it as the holy grail for connected consumer packaging.

Consumers are ready for connected packaging. Are you?

KEY FINDINGS

SUBSCRIPTIONS AND AUTO-REPLENISHMENT SERVICES ARE ON THE RISE

- While 93% of participants buy household staples online, attitudes for shopping in person and online are similar
- Millennials and households with higher incomes, smart speaker owners and city-dwellers enjoy online shopping more than others
- **68% use a subscription service to buy household staples, with the most popular categories being personal care, home care and food and beverage**
- **Nearly 80% of pet owners use subscription services for household services, with pet care and personal care categories leading their purchases**
- Households with infants are also more likely to purchase household staples through subscriptions
- Millennials, men, households with higher incomes and smart speaker owners are more likely to have a subscription service
- Subscription services are relatively new for most: two-thirds have been using these services for less than two years
- 77% say they are open to purchasing a subscription service in the future
- Consumers who use subscription services say their biggest dislikes are that the services are not easy to cancel, causing them to over-buy, or that products are more expensive
- **In 2020, 17% said they used auto-replenishment services; today that percentage has grown to 27%**
- **79% are interested in auto-replenishment services, up from 63% in 2020**
- Participants say that the product categories best fit for auto-replenishment are home care, personal care and pet care

KEY FINDINGS

DIRECT-TO-CONSUMER COMMUNICATIONS DIFFER BASED ON GENERATION

- 78% of participants report that they communicate with product companies in some way
- Millennials and Gen Z are more likely to communicate with product brands, especially through social media and smartphone apps
- **Better pricing, such as promotions and coupons, are consumers' favorite thing about communicating directly with product brands**
- 65% of participants say their biggest dislike about communicating with product brands is the spam and irrelevant information they receive from product brands

INVENTORY MANAGEMENT CAN BE SIMPLIFIED

- 94% say they have mistakenly bought things they already own in the past
- Accidentally repurchasing items has a clear downside: 38% say they run out of storage space
- **94% would find an automatically updated list of what they own useful when they are shopping**
- 54% say they would prefer an app that tracks the items they use frequently to check on items in their home when out shopping

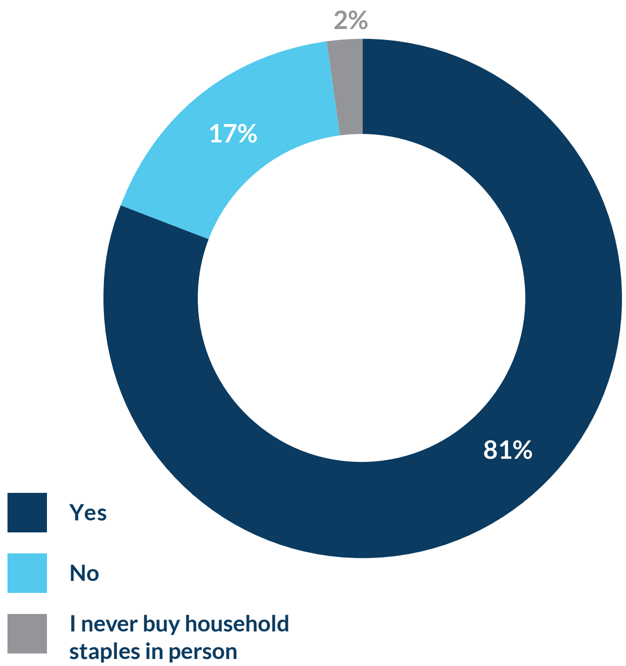
DATA PRIVACY CONTINUES TO BE A CONCERN

- Online shoppers are slightly more concerned about smart home speakers than consumption sensors when it comes to data privacy
- 90% of consumers understand that user data helps brands create better products
- **Consumers trust product brand manufacturers and retail companies most when it comes to their personal data, such as order history, specific product use data and consumer communications**
- **66% agree that they don't mind if companies collect data on how they use the products they purchase as long as they know how the company will use the data**
- **45% say they distrust technology companies with their personal data**
- 58% of participants don't mind if companies collect product usage data as long as they use it to make consumers' lives better

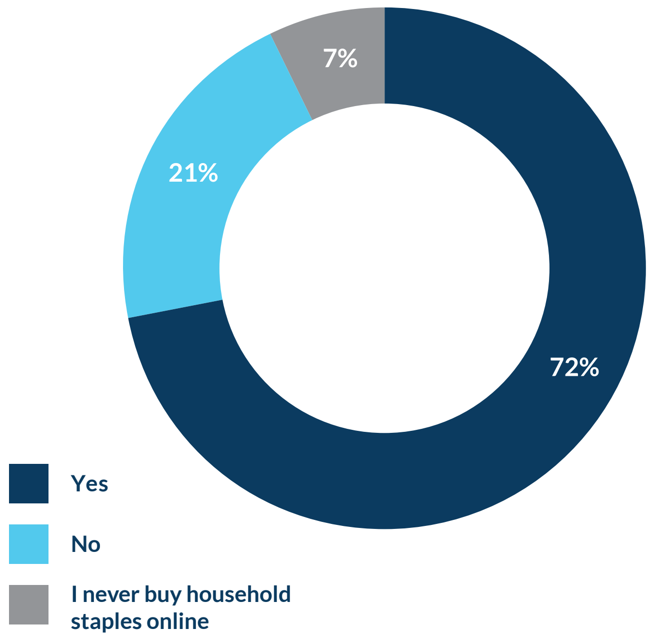
PERCEPTIONS ON SUBSCRIPTIONS AND AUTO-REPLENISHMENT

ATTITUDES FOR SHOPPING IN PERSON AND ONLINE ARE SIMILAR

Do you enjoy shopping for household staples IN PERSON?



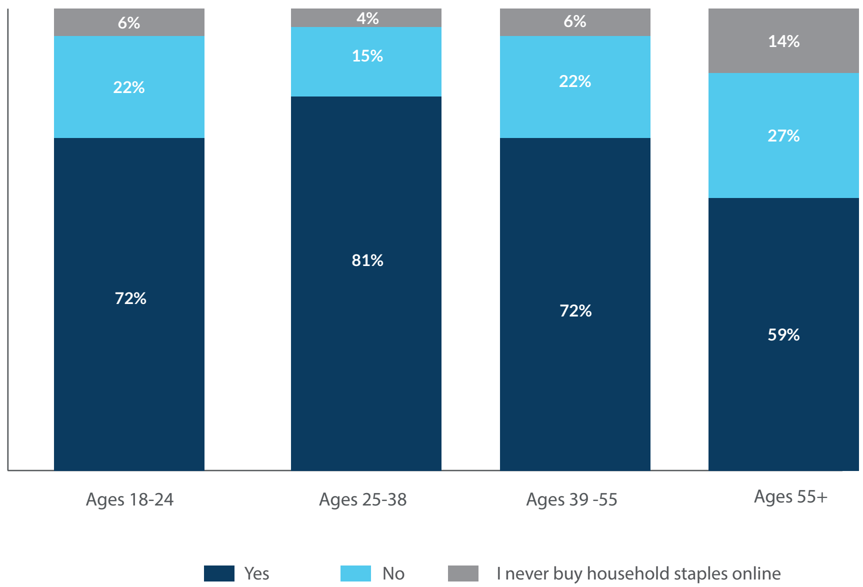
Do you enjoy shopping for household staples ONLINE?



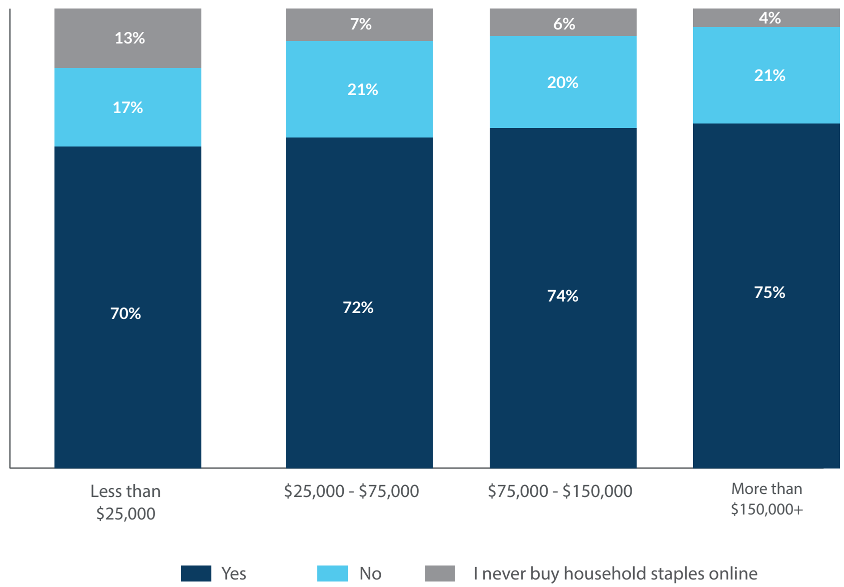
While 93% of participants indicated that they shop for household staples online, the attitudes for shopping in person and online are similar. Two out of 10 don't enjoy shopping for these goods online while 17% don't enjoy shopping for them in person. With the impact of the pandemic over the last year, the percentage of those who never buy household staples online have dropped from 15% to 7% since our last survey.

MILLENNIALS AND PEOPLE WITH HIGHER INCOME ENJOY ONLINE SHOPPING MORE

Do you enjoy shopping for household staples ONLINE? (Age)



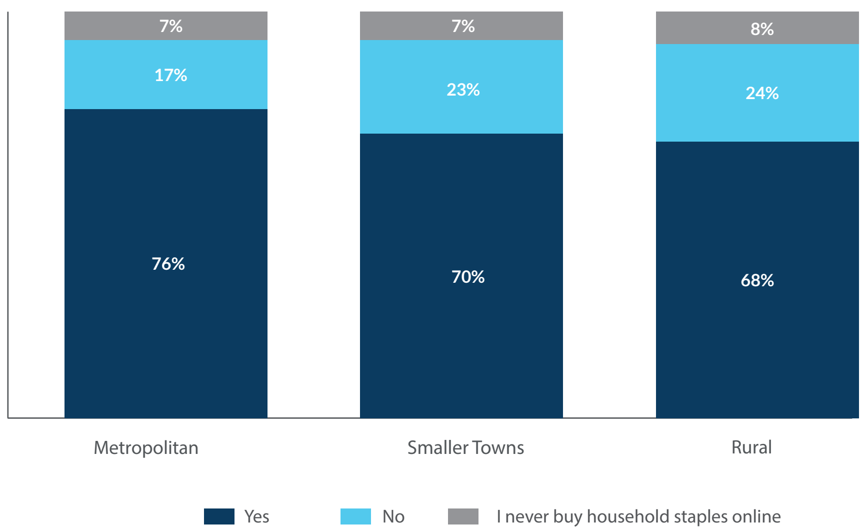
Do you enjoy shopping for household staples ONLINE? (Annual Household Income)



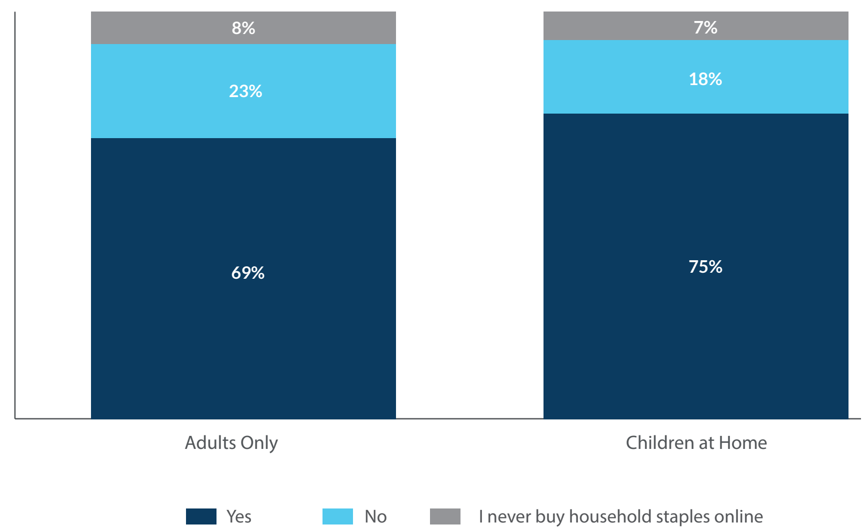
A deep dive into the demographics show that millennials and those with higher incomes enjoy online shopping more than other demographics. But the pandemic has generationally impacted who shops online as well. Last year, nearly a quarter of baby boomers stated that they never buy household staples online, which stands at 14% today. Those baby boomers who've started buying household staples online in the last year have mixed feelings about the experience. Millennials are most likely to shop online and to enjoy doing so.

CITY DWELLERS AND HOUSEHOLDS WITH CHILDREN ENJOY ONLINE SHOPPING MORE

Do you enjoy shopping for household staples ONLINE? (Living Environment)



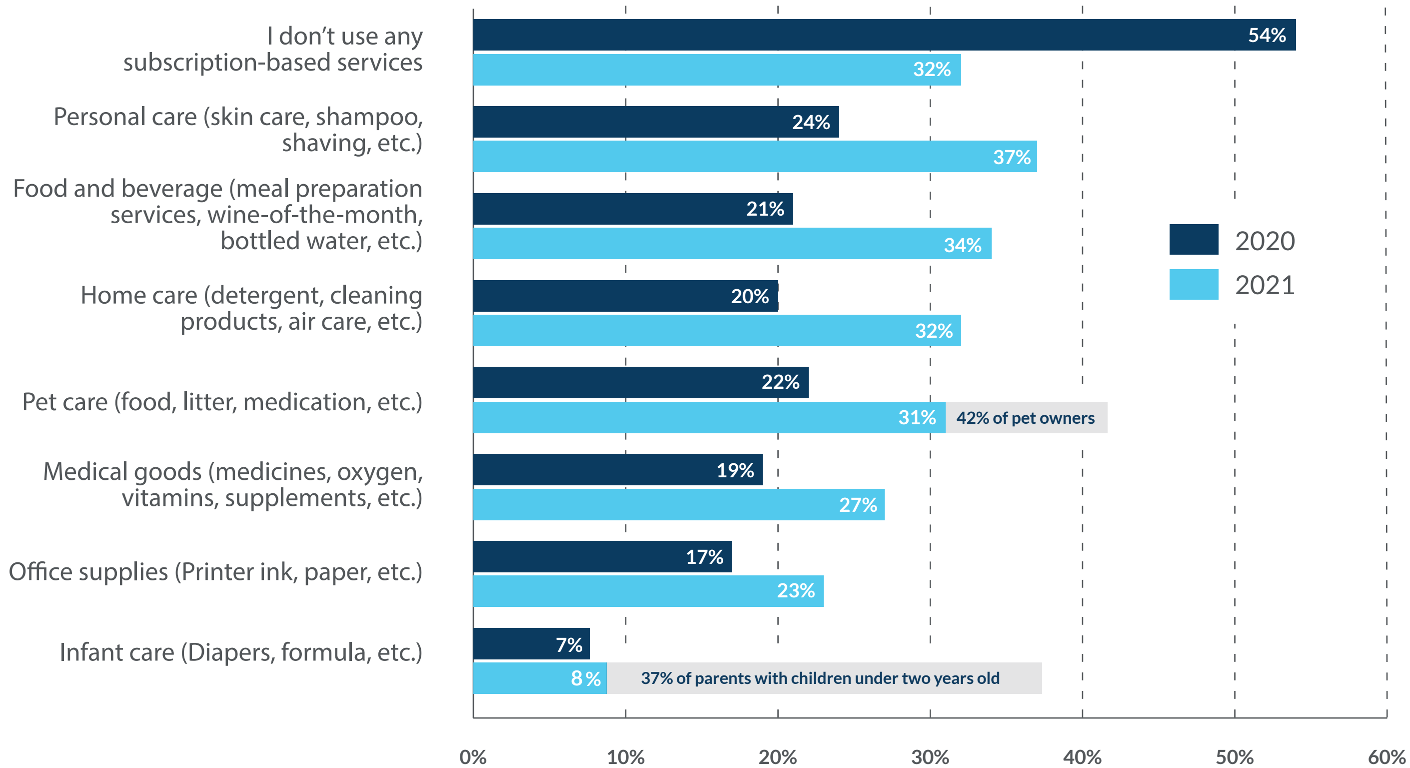
Do you enjoy shopping for household staples ONLINE? (Household)



Participants who live in cities, along with those who have children at home, are more likely to say that they enjoy shopping online for household staples. Those living in rural locations are more likely to say they don't enjoy shopping for household staples online, which may speak to some of the delivery options currently available in those types of locations.

SUBSCRIPTION SERVICES HAVE EXPERIENCED MAJOR GROWTH IN ONE YEAR

What types of household staples do you purchase using a subscription? Choose all that apply.

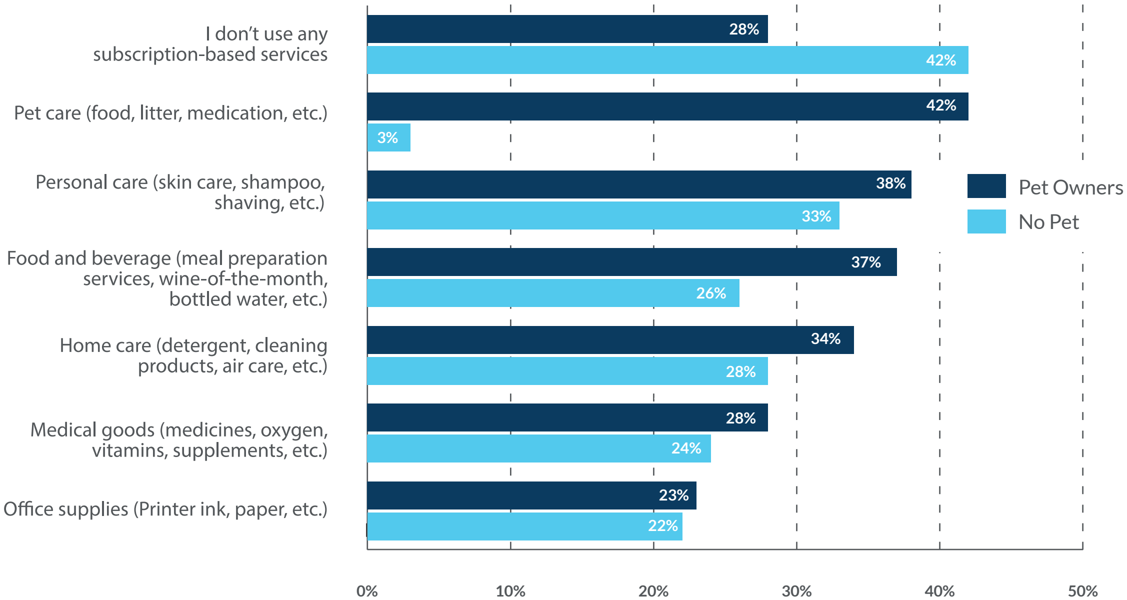


Nearly seven in 10 participants say they now purchase certain household staples using subscription services. Last year, less than half stated that they were using subscription services. Of those who use subscription services, the most common goods they purchase include personal care, food and beverage and home care.

It is also important to note the significant growth across categories over the last year. Personal care subscriptions grew from 24% to 37%; food and beverage from 21% to 34%; home care from 20% to 32%. CPGs have an opportunity to ride on the coattails following the pandemic to sell more subscription services.

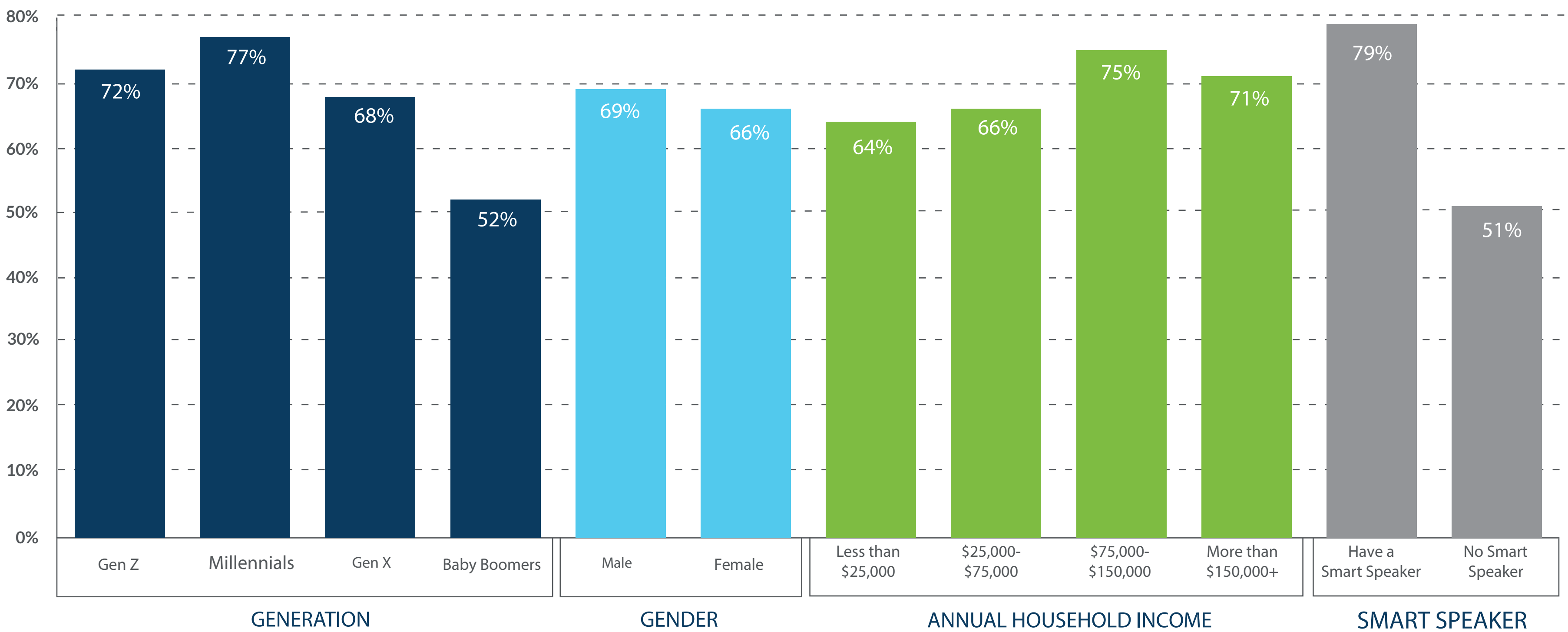
PET PARENTS MORE LIKELY TO USE SUBSCRIPTIONS

What types of household staples do you purchase using a subscription? Choose all that apply. (By pet ownership)



Pet owners represent more than 70% of survey participants. The most common household good they purchase through subscriptions is, naturally, pet care. But when we examine their subscription habits, they are also more likely to purchase household staples, food and beverage and home care through a subscription.

MILLENNIALS, MEN, HIGHER INCOME AND SMART SPEAKER OWNERS MORE LIKELY TO HAVE A SUBSCRIPTION SERVICE

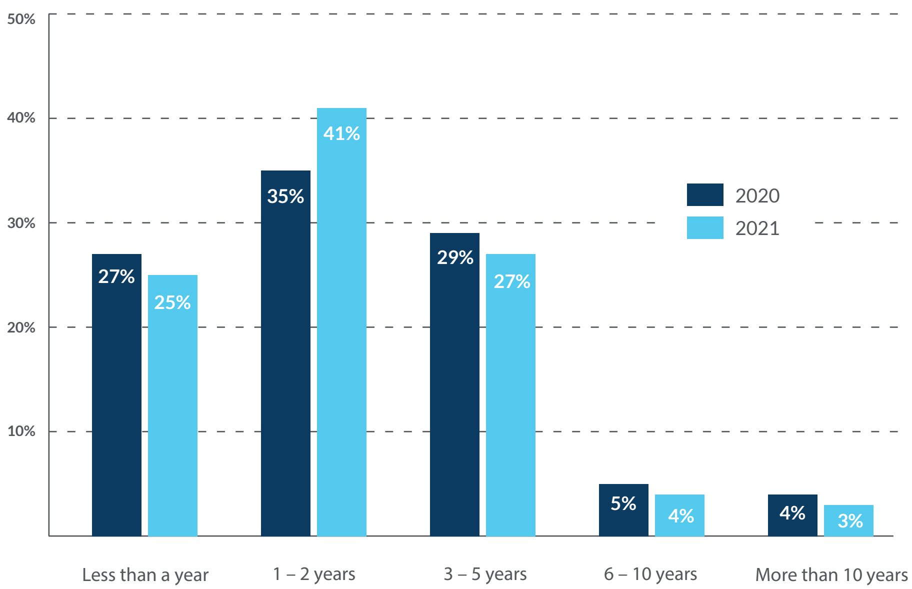


According to the survey results, millennials are more likely to purchase household staples using a subscription, with 77% affirming this information. In 2020, less than half of Gen X and baby boomers stated that they used subscriptions for household staples, at 44% and 32% respectively. Today, nearly seven in 10 of Gen X participants and just over half of baby boomers use subscriptions. In addition, nearly eight in 10 participants with a smart speaker say they use subscriptions.

SUBSCRIPTION SERVICES ARE RELATIVELY NEW FOR MOST AND INCREASING FOR MORE THAN HALF

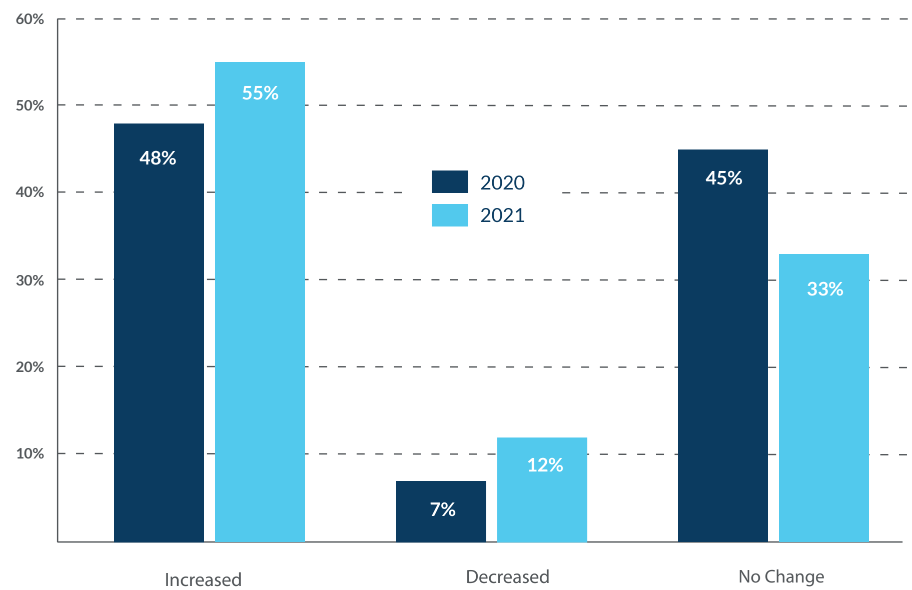
How long have you been using subscription services for household staples?

n = Have a subscription service



How has your use of subscription services for household staples changed in the past year?

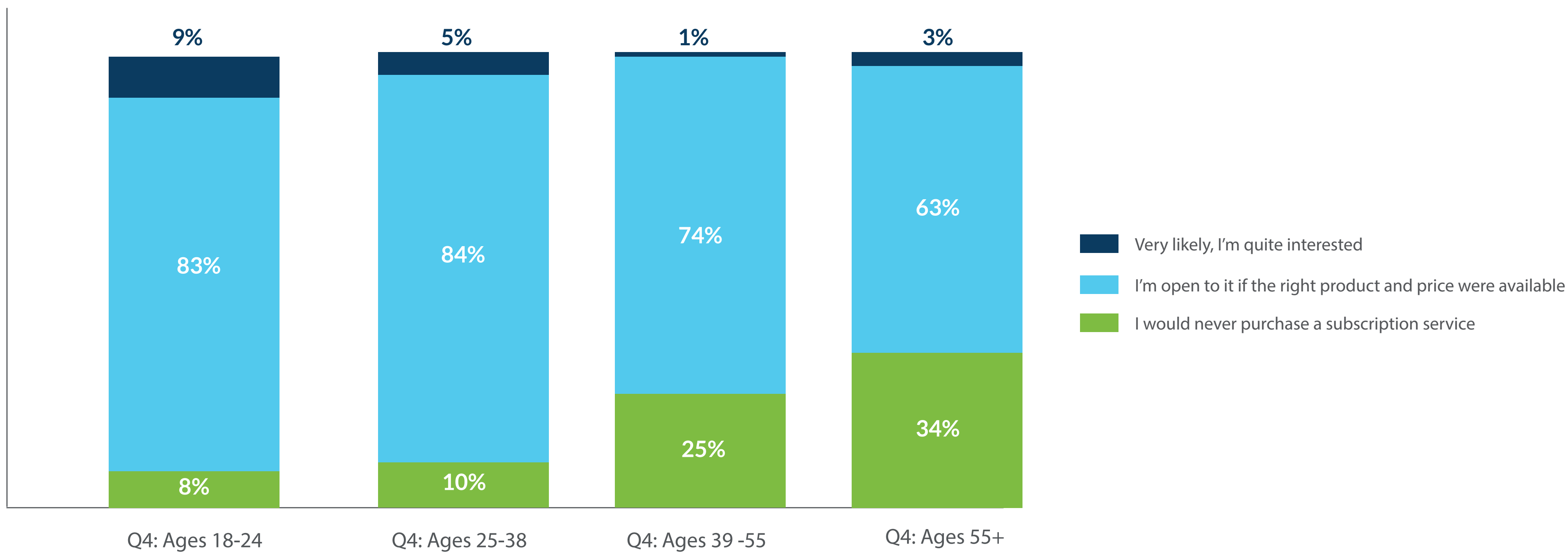
n = Have a subscription service



Two-thirds of participants say they have been using subscription services for at least two years but the concept is still relatively new for most users. More than half of participants say their use of subscription services has increased just in the last year with 12% reporting a decrease in use. Participants that self-reported no change in subscription usage dropped from 45% in 2020 to 33% in 2021, suggesting that the pandemic was a significant catalyst for habit change. Will these behaviors continue to trend toward a new normal or slowly revert back to a pre-pandemic baseline?

MOST OF THOSE WHO DON'T HAVE SUBSCRIPTIONS ARE INTERESTED – FOR THE RIGHT PACKAGE

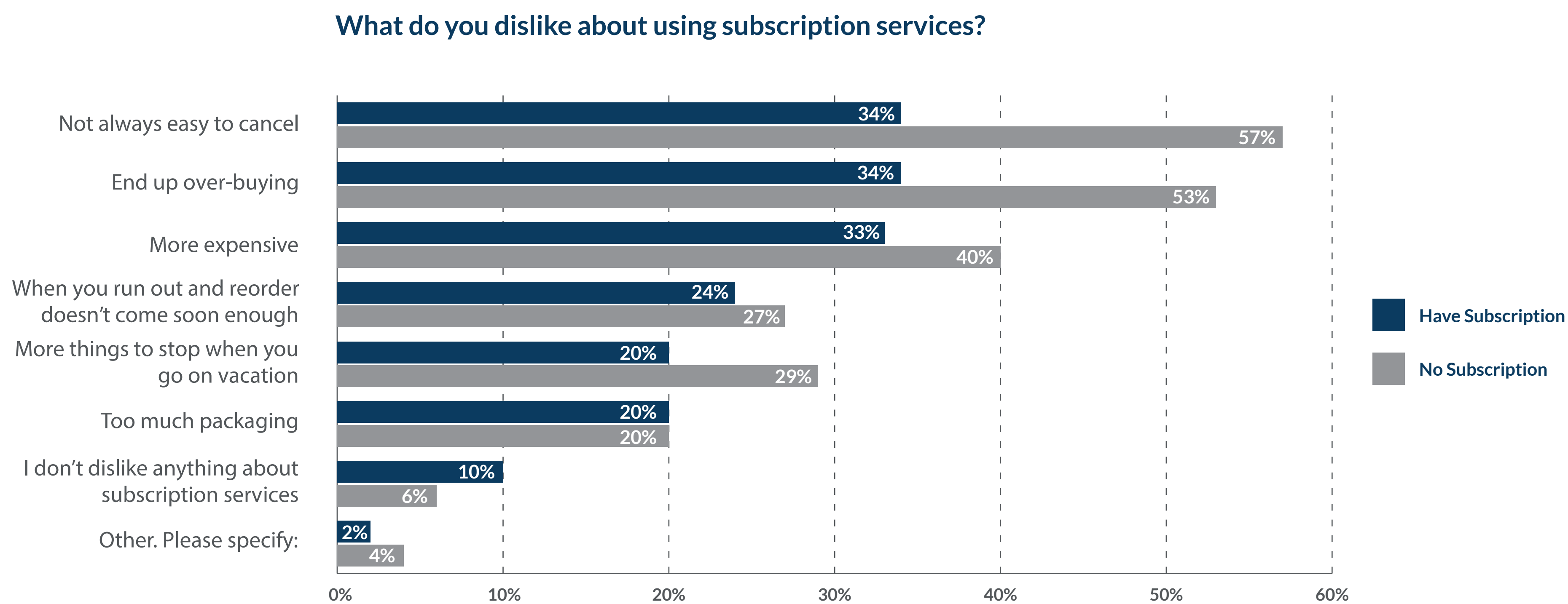
How likely are you to purchase a subscription service in the future?



Out of those who don't currently have a subscription service, three out of four participants say they are likely to purchase a subscription service in the future. more Than 74% say they are open to it if the right product and price were available for the subscription category they are seeking. Still, approximately 24% of participants say they will never purchase a subscription service.

When we take a deep dive into the results by generation, over 90% of Gen Z and nearly 90% of millennials say they are interested in purchasing a subscription service in the future. Three in four Gen Xers say the same, while baby boomers are the least likely to say they're interested in subscription services.

THE REALITY OF SUBSCRIPTIONS IS BETTER THAN PERCEPTION



When we ask those who use subscription services what they dislike about them and similarly ask those who don't currently use the services what they think they would dislike about them, there are stark differences. In fact, the reality of subscription is better than perception. Those who currently use a service say their biggest dislikes are that they end up over-buying, their orders don't come soon enough once they've run out and that the services are not always easy to cancel. On the other hand, those who don't currently have subscriptions are more likely to think subscription services are difficult to cancel.

They also believe subscribers would end up over-buying and spending more money overall. CPGs have an opportunity to educate consumers about the realities of subscription services.

The most common "other" option for those using subscriptions was the difficulty of managing their subscriptions and finances. Those without subscriptions said they would be worried about the quality of the products and the shipment schedules.

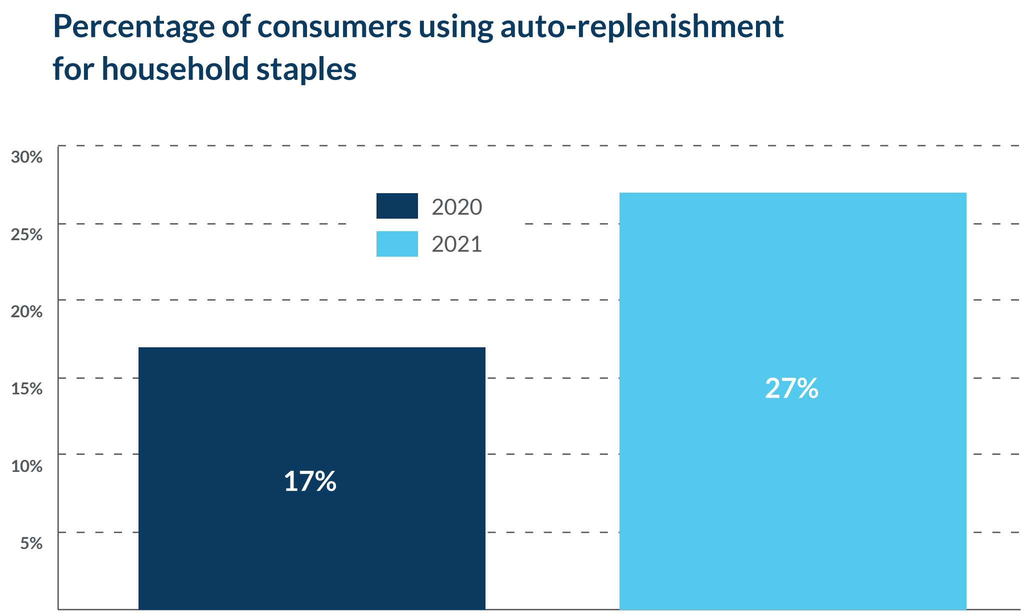
INTRODUCING AUTO-REPLENISHMENT

Before introducing the concept of auto-replenishment, the participants were provided with this description:

Auto-replenishment

DEFINITION: Auto-replenishment is a way to re-purchase products only when you need them. An auto-replenishment system would detect when you are running low on household staples (laundry detergent, diapers, pet food, coffee, etc.) then automatically order more or reorder after you give your approval.

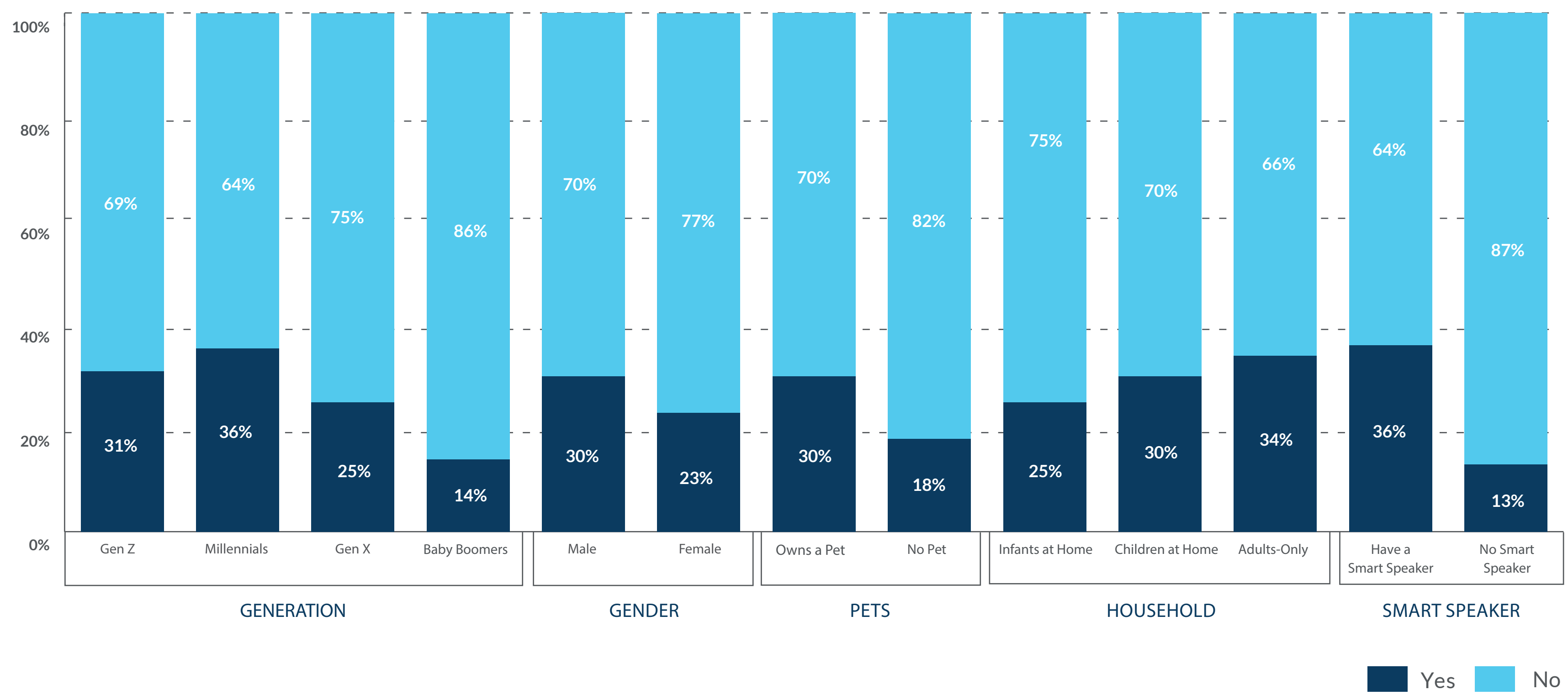
AUTO-REPLENISHMENT SERVICES ARE USED BY NEARLY 3 IN 10



Just over a quarter of participants say they subscribe to auto-replenishment services for household staples, a 60% growth year-over-year. But those who use auto-replenishment services tend to be millennials, male, households with children, pet owners and those owning a smart speaker.

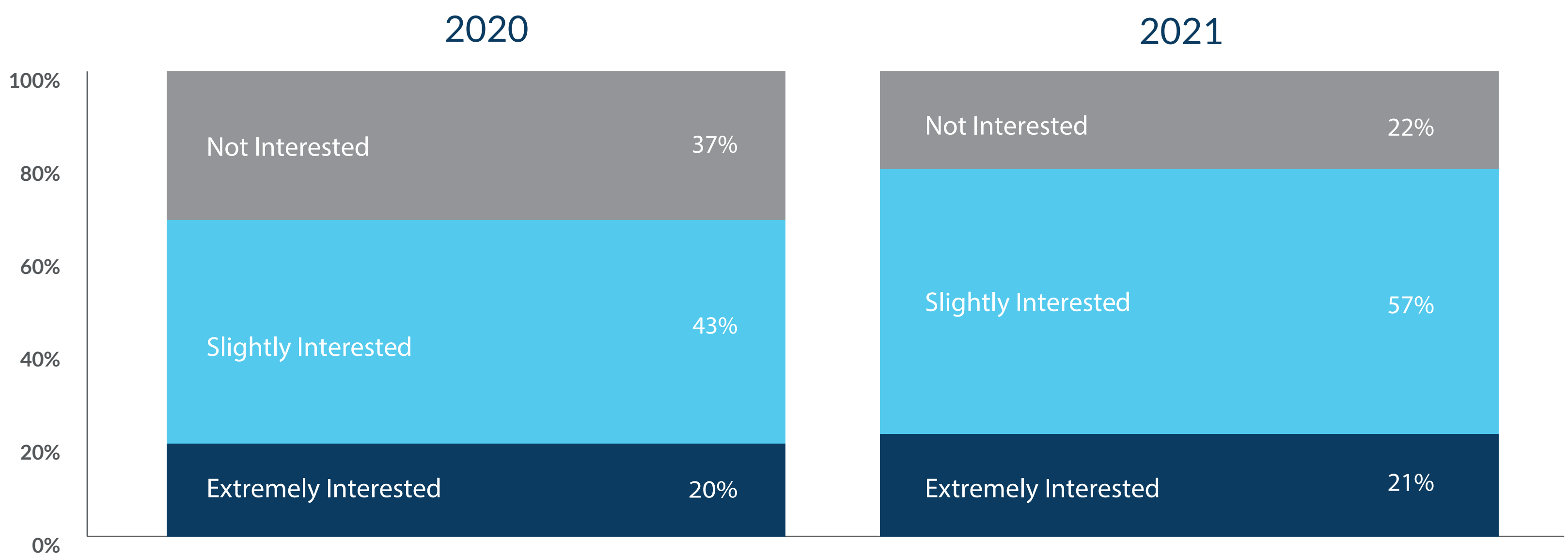
AUTO-REPLENISHMENT SERVICES ARE USED BY NEARLY 3 IN 10

Do you currently subscribe to any auto-replenishment services for household staples?



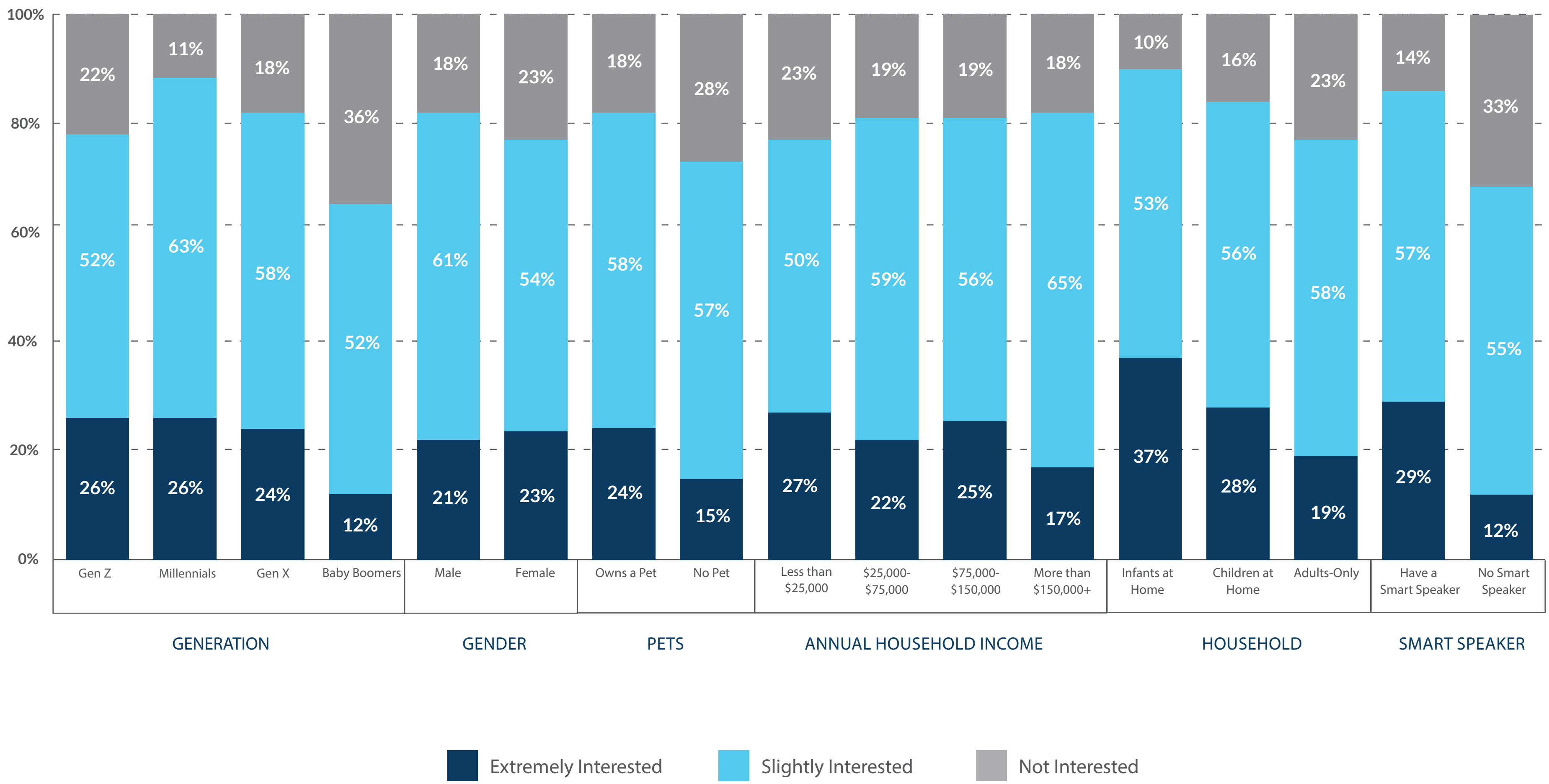
ALMOST 8 IN 10 ARE INTERESTED IN AUTO-REPLENISHMENT

How interested are you in auto-replenishment services?



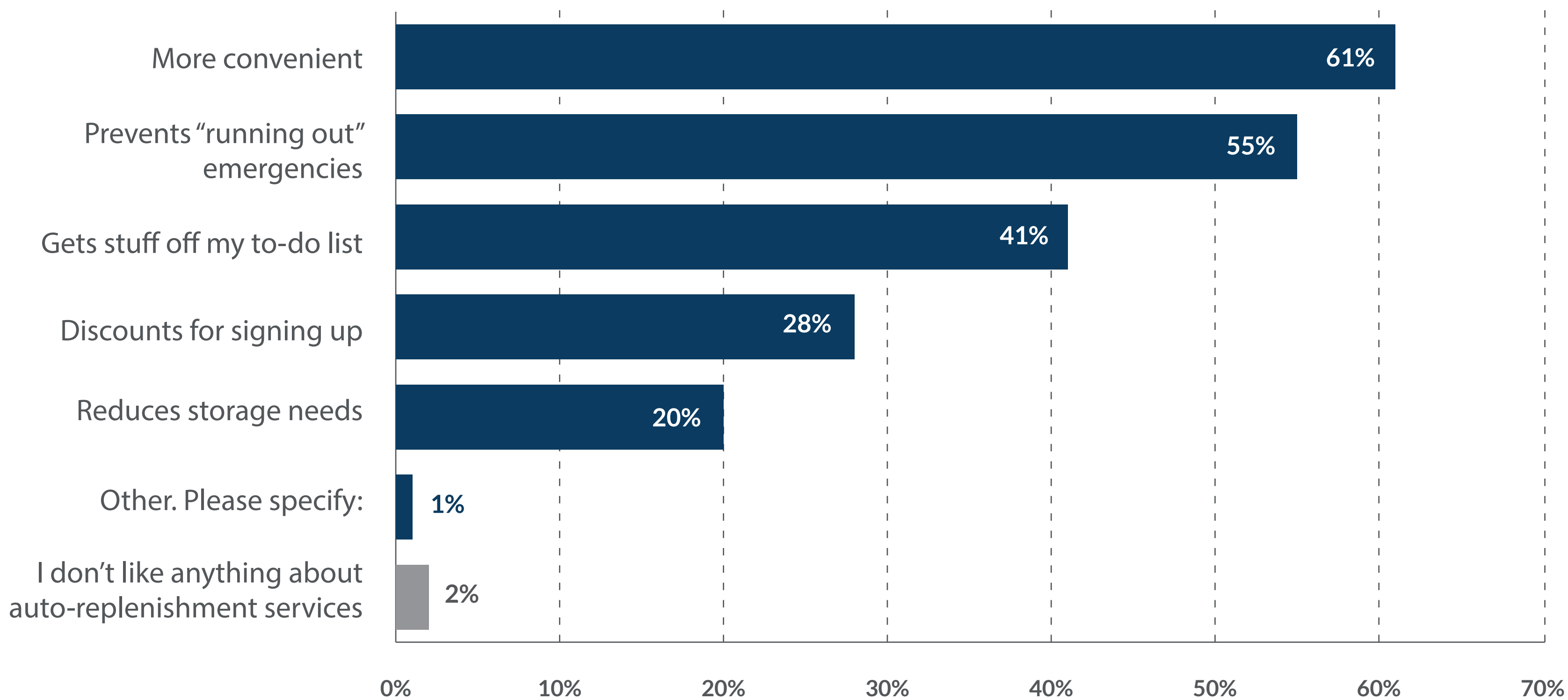
Although the concept of auto-replenishment is still relatively new, 79% say they are interested in these types of services, with a growth rate of 25% year-over-year. Millennials, men, high-income households, those who have smart speakers and participants with children in their home are more likely to be interested in auto-replenishment. Over one-third of baby-boomers and one-third of households without smart speakers say they are not interested.

ALMOST 8 IN 10 ARE INTERESTED IN AUTO-REPLENISHMENT



AUTO-REPLENISHMENT USERS ARE MORE POSITIVE THAN THOSE WITH NO EXPERIENCE

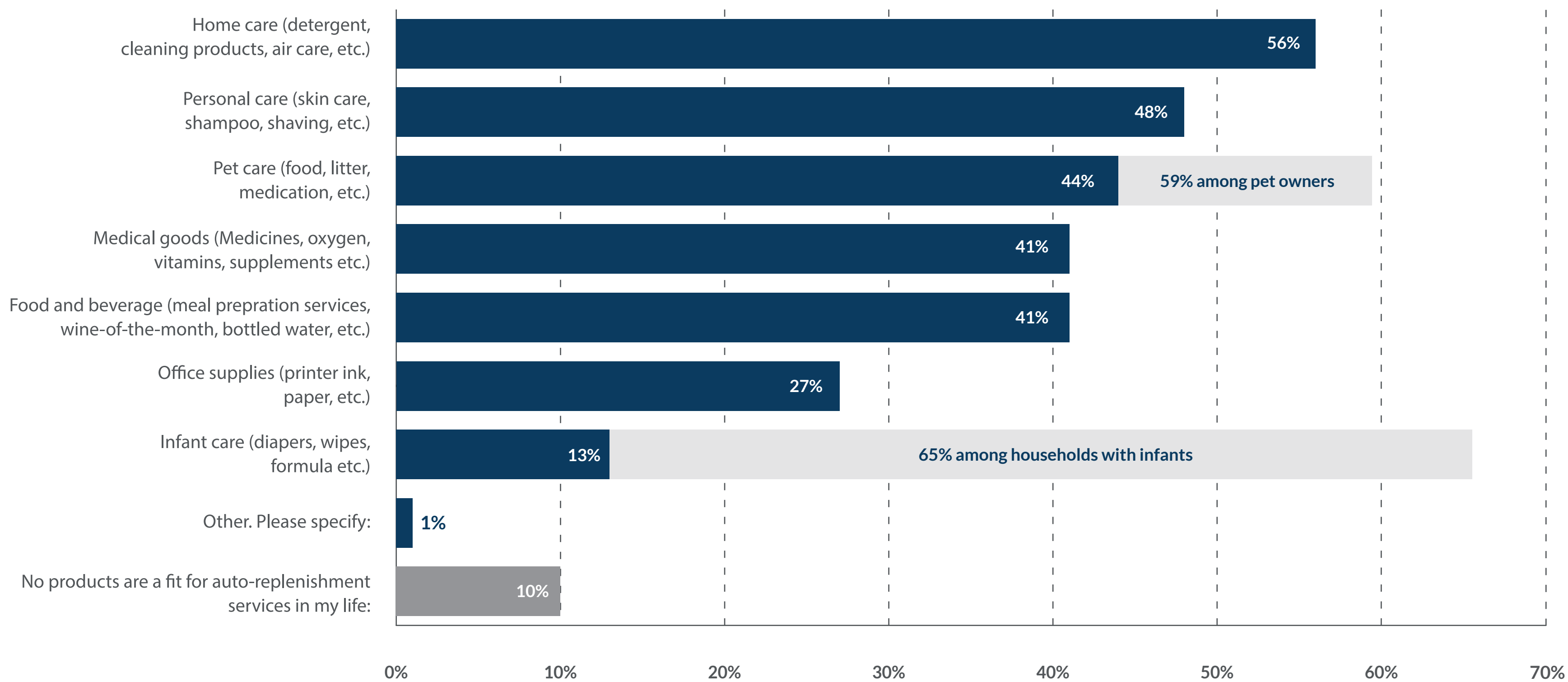
What do you like about using auto-replenishment services? Choose all that apply.



Auto-replenishment users are generally happy with using this service. Over half of users say auto-replenishment is more convenient and nearly six in 10 say it helps prevent "running out" emergencies. Discounts for signing up and getting stuff off their to-do list was another benefit of auto-replenishment. When we asked participants without auto-replenishment services about what they think they would like about it, the top four responses were very similar to those who report what they currently like about it.

MANY PRODUCTS ARE CANDIDATES FOR AUTO-REPLENISHMENT SERVICES

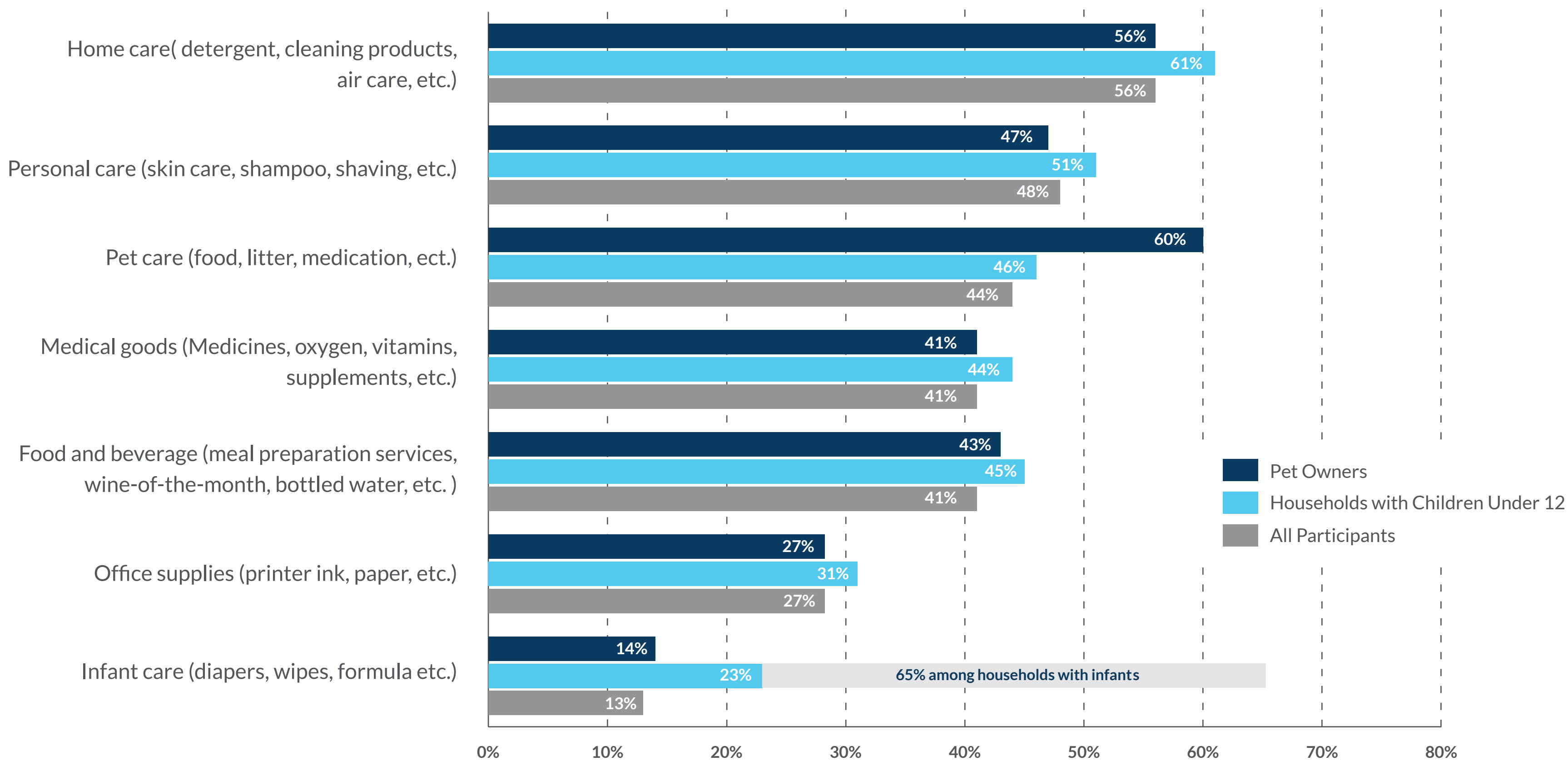
In your life, what kinds of products are the best fit for auto-replenishment services? Choose all that apply.



For this question, we asked participants to think about what kind of product categories are the best fit for auto-replenishment in their lives. The general participant pool picked home care, personal care and pet care as their top categories, aligning with our earlier finding of what subscription services participants currently use. This may be an early indication for CPGs that these categories are most suited for auto-replenishment pilot programs and rollouts. In addition, it's important to note that households with pets put pet care at the top of their list and those with infants place infant care goods at the top of their list.

PET OWNERS AND PARENTS FIND MOST OPPORTUNITY IN AUTO-REPLENISHMENT

In your life, what kinds of products are the best fit for auto-replenishment services? Choose all that apply.



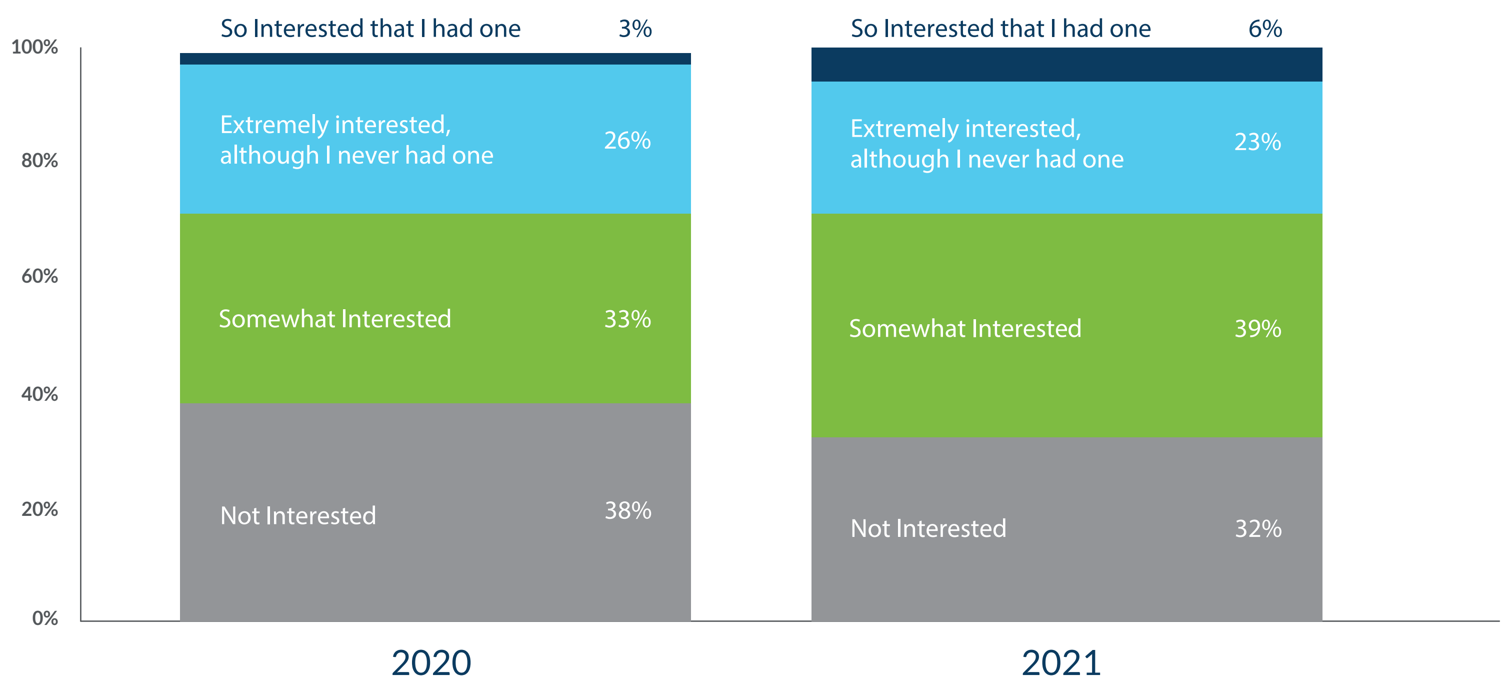
Out of the many participants of this survey, pet owners and parents are most likely to find strong value in auto-replenishment services. The heightened interest across multiple categories for pet owners and parents shows great opportunity for the development of connected ecosystems of CPG products. Forward thinking brands will develop and launch connected product ecosystems for pets and babies that transform the care experience for busy parents and pet owners.

68% HAVE INTEREST IN SOMETHING LIKE THE AMAZON DASH BUTTON

The Amazon Dash Button, shown above, is a connected device that automatically orders the product shown when the button is pushed. This device (which is no longer available) was designed to be placed around the home in convenient areas so you would never forget to reorder a household staple that was running low.

68% HAVE INTEREST IN SOMETHING LIKE THE AMAZON DASH BUTTON

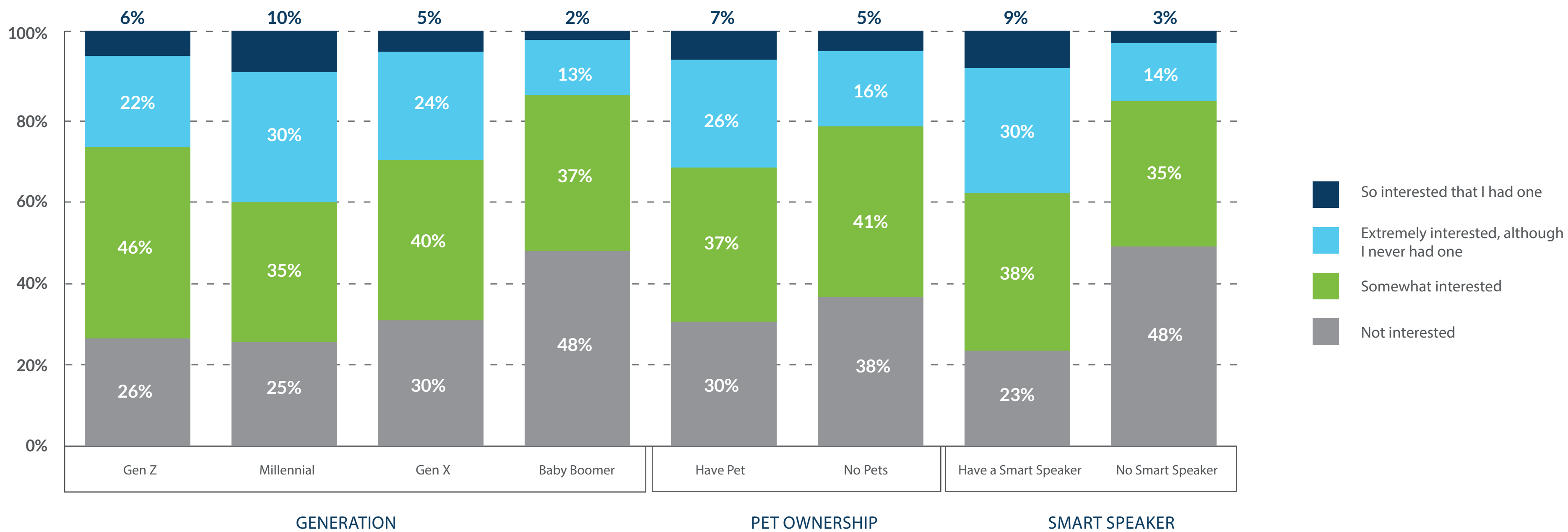
How interested would you be in something like the Amazon Dash Button to replenish household staples that are running low?



Participants were shown the information below about the Amazon Dash Button during the survey. Just over 65% said they are interested in something like the Amazon Dash Button to replenish household staples that are running low. Only 6% said that they actually had these devices in their home. Participants are more interested in such solutions this year than the last.

GEN Z, PET OWNERS AND SMART SPEAKER OWNERS MOST INTERESTED

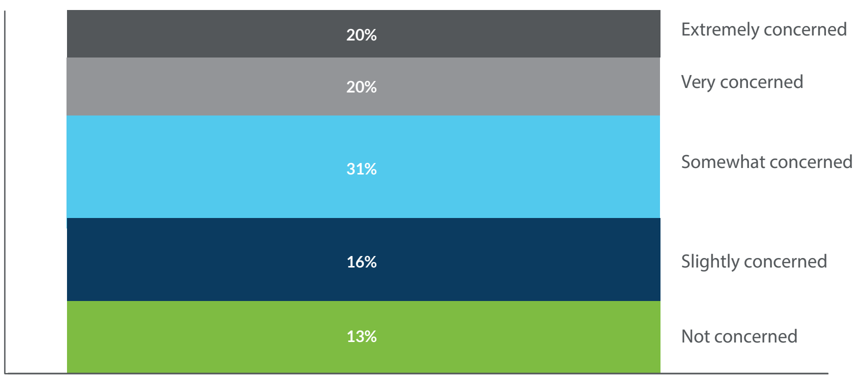
How interested would you be in something like the Amazon Dash Button to replenish household staples that are running low?



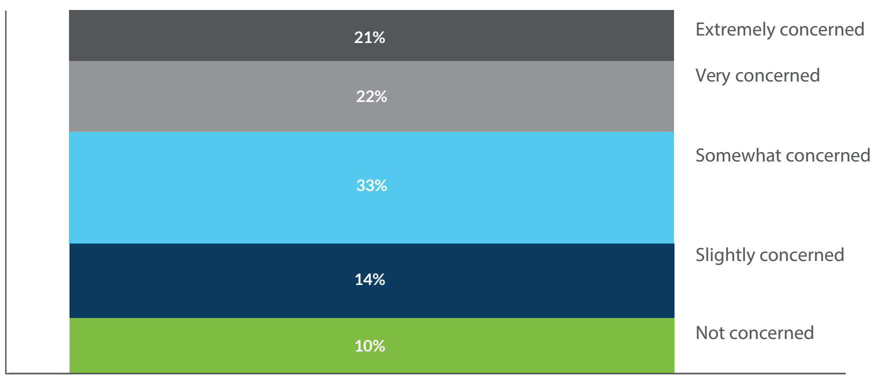
Aligning with our earlier findings, millennials, men, city-dwellers, pet owners and smart speaker owners were most interested in a solution to replenish household staples that are running low.

ONLINE SHOPPERS ARE SLIGHTLY MORE CONCERNED ABOUT LISTENING DEVICES THAN SENSORS

How concerned would you be about privacy with regards to sensors or other technology that track consumption of household staples for the purposes of auto-replenishment?



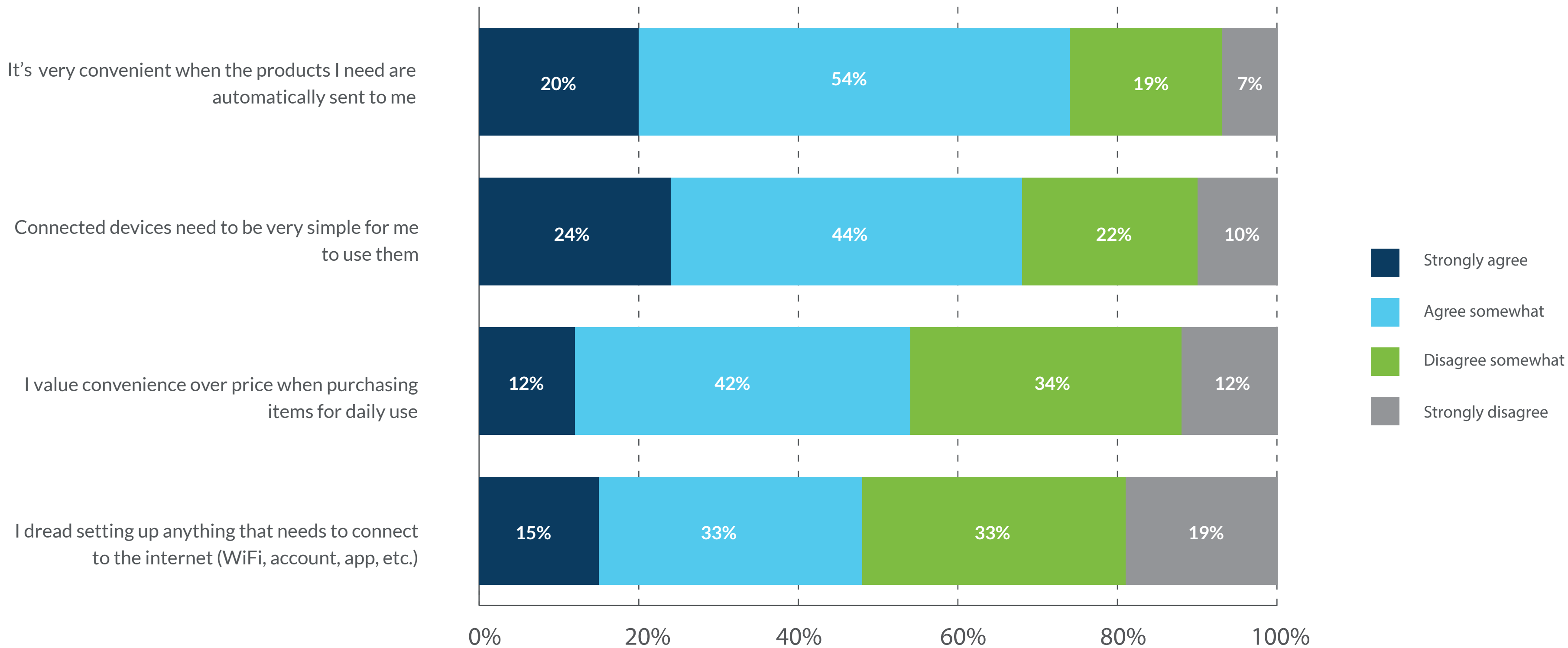
How concerned are you about privacy of smart home devices like Amazon Echo and Google Home that record voices?



As with anything regarding technology, consumers are always concerned about data privacy but in reality that concern doesn't always translate into delayed or blocked adoption. Of the participants, 39% say they would be very or extremely concerned about privacy with regards to sensors and other technology that track consumption of household staples for auto-replenishment. In addition, 43% say they are very or extremely concerned about their smart home speakers' data privacy, even though the rate of adoption is rising very quickly (52% growth YoY). Participants who don't own a smart home speaker currently show more concern about their data privacy from these devices.

OPINIONS ON VALUE AND PRICE ARE SPLIT

For each of the following statements, please indicate your level of agreement.



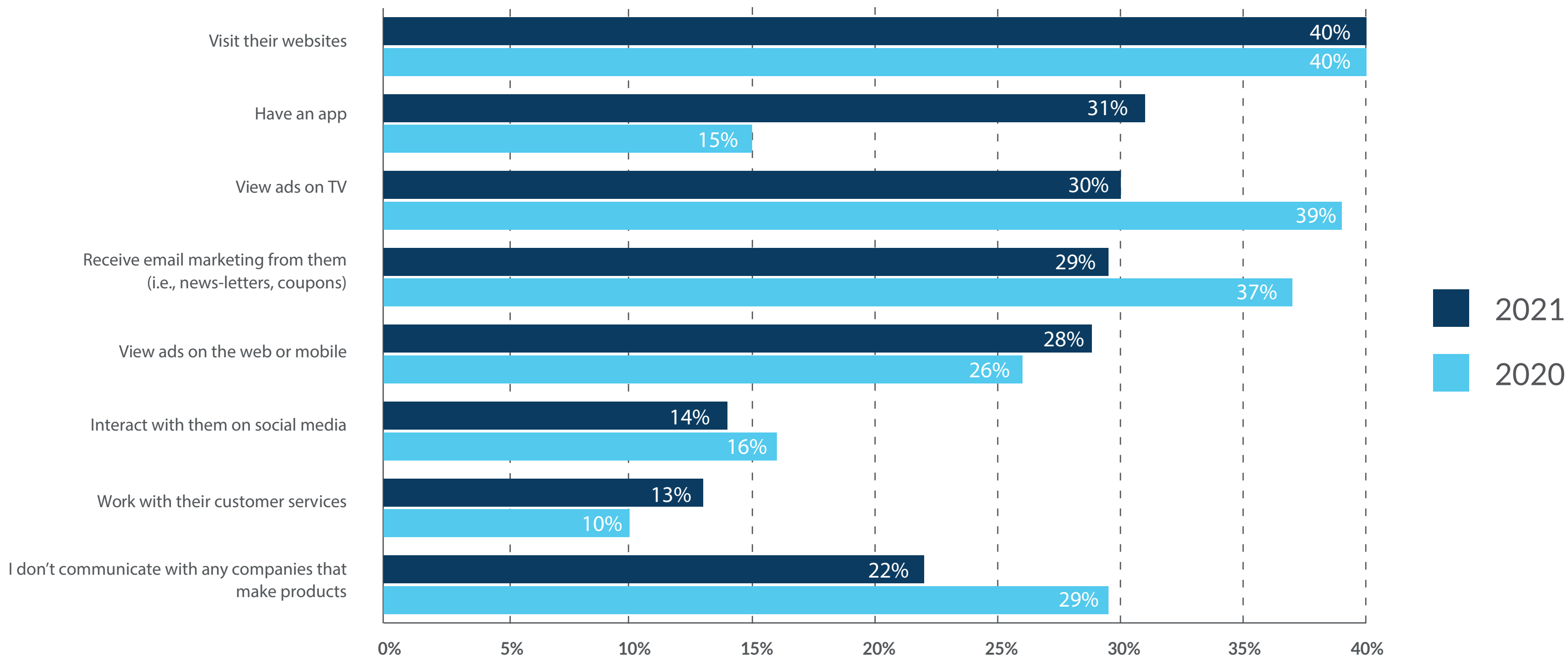
When shown some general statements, 74% agree that it's very convenient when the products they need are automatically sent to them. Another 68% say connected devices need to be simple for them to use it. On the other hand, participants are split over convenience and price when it comes to purchasing items for daily use. The most successful CPG brands will not force consumers to choose between price and convenience as operational efficiencies in sales and fulfillment soften new costs associated with connectivity. Finally, 48% of participants say they dread setting up anything that needs to connect to the internet—meaning that CPGs must make connected packaging work seamlessly to introduce consumers to this new concept.

DIRECT-TO-CONSUMER COMMUNICATION PREFERENCES

78% REPORT THEY INTERACT WITH PRODUCT COMPANIES IN SOME WAY

Take a moment to think of a few household staples that you use regularly–toiletries, pet food, paper towels, etc. In what ways do you interact or communicate with companies that make those products?

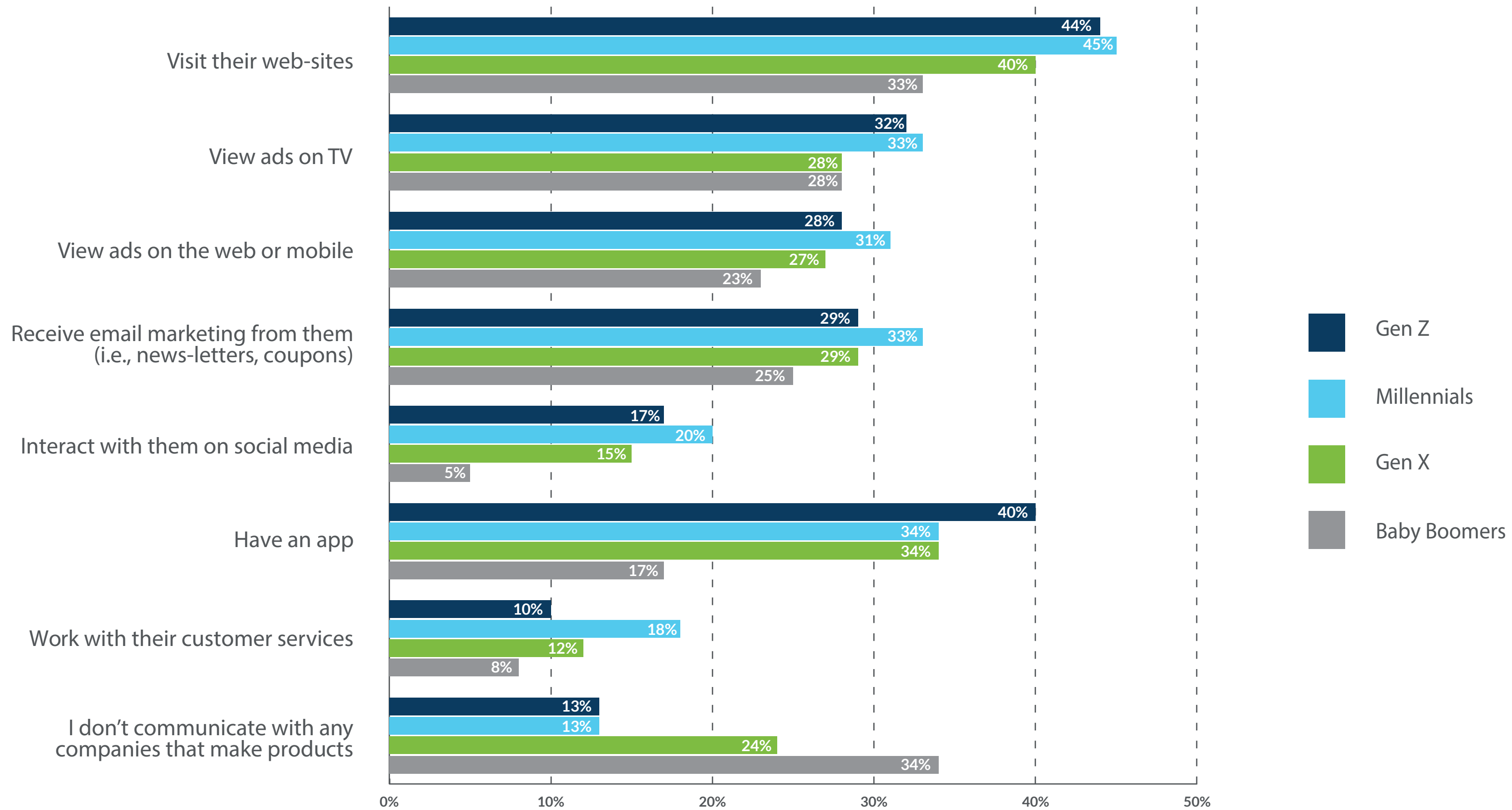
When answering this question, think of who makes the product, not the store where you buy the product (i.e., think of Coke and Tide, not Safeway or Amazon).



Consumers continue to increase their engagement with brands (up 7% YoY from 2020 to 2021). Broadcast media has declined while traditional internet engagement channels such as email marketing, website visits and advertising have held steady. Interestingly, the percentage of consumers who interact with brands through their apps has doubled since 2020. Brands have historically viewed apps as having high barriers to entry but this may be changing as consumers gain access to faster internet speeds, nearly ubiquitous universal sign-in options and larger phone storage options.

MILLENNIALS MORE LIKELY TO COMMUNICATE WITH PRODUCT BRANDS

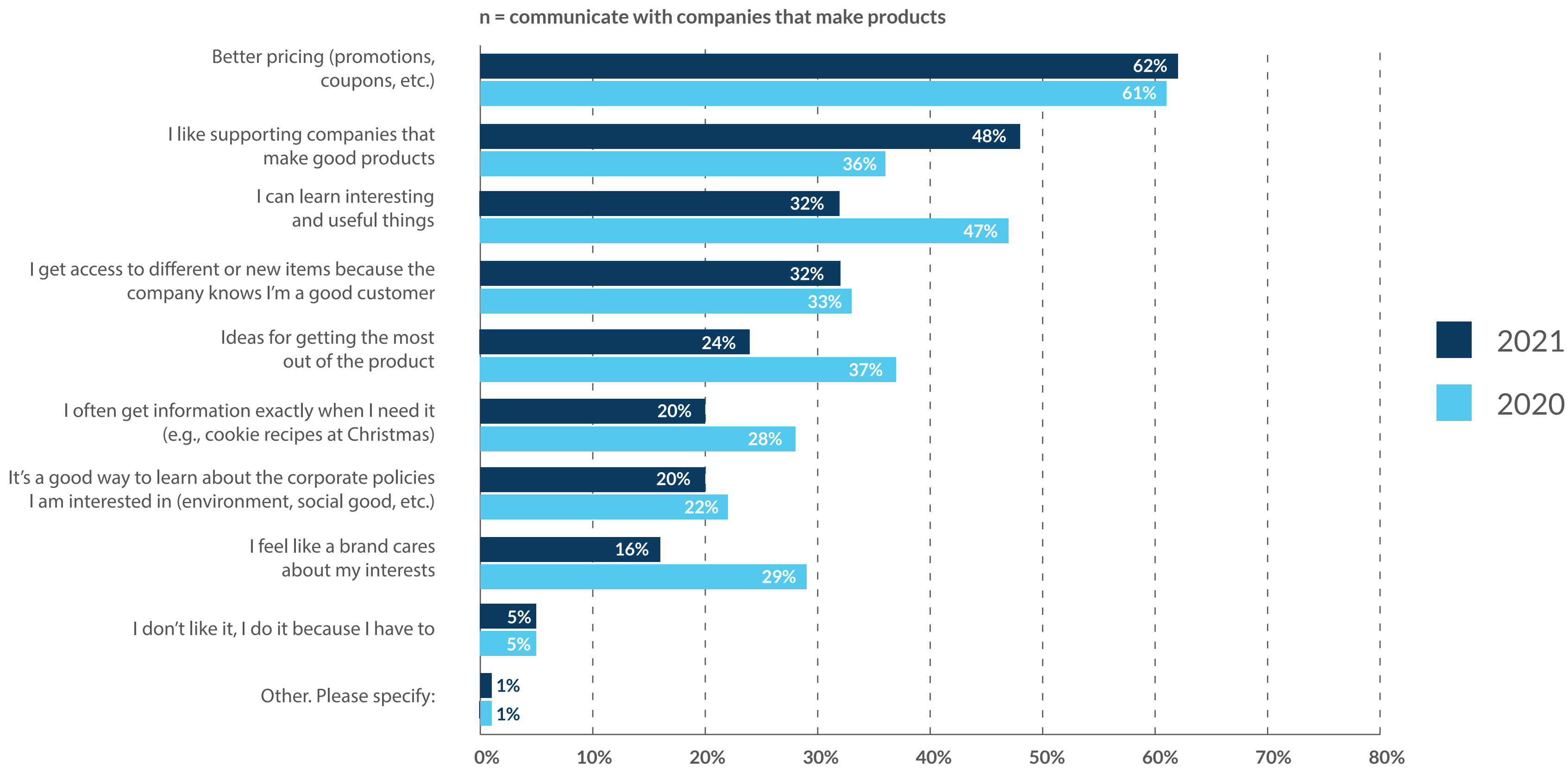
Take a moment to think of a few household staples that you use regularly–toiletries, pet food, paper towels, etc. In what ways do you interact or communicate with companies that make those products?



There are some generational differences in how consumers interact with these brands. Millennials are more likely to view ads on the web or on their mobile devices than baby boomers and almost four times more likely to interact with them on social media. Baby boomers are almost twice as likely than millennials to not communicate with brands. Gen Z is most likely to use an app.

BETTER PRICING IS THE TOP BENEFIT OF COMMUNICATING DIRECTLY WITH PRODUCT BRANDS

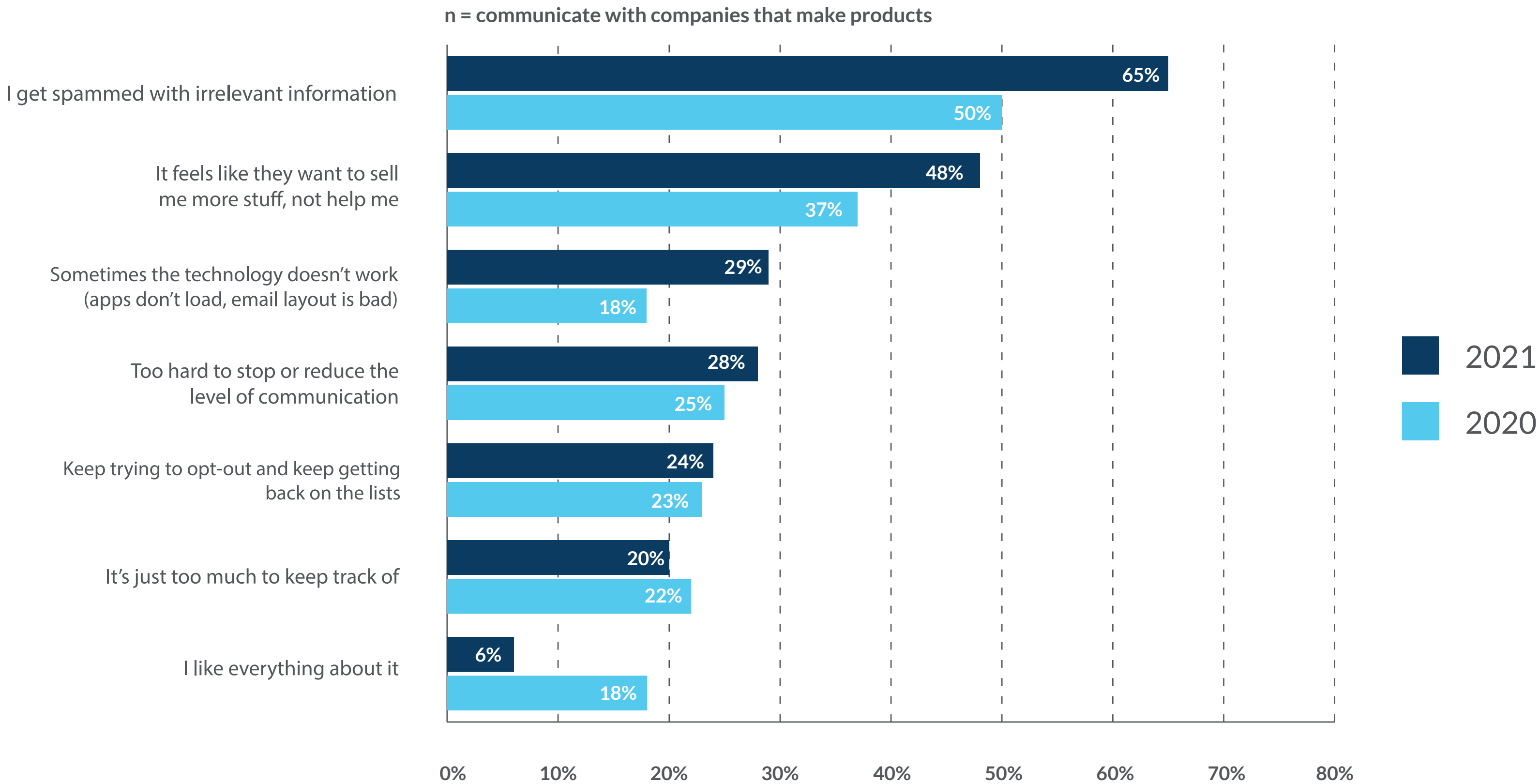
What do you LIKE about communicating directly with the companies that make products you regularly use? Choose all that apply.



Of those that communicate with brands that make products, the top four reasons they like communicating with them include better pricing, supporting companies that make good products, learning interesting and useful things and gaining exclusive access for being a good customer.

IRRELEVANT INFORMATION TOP LIST OF DISLIKES WHEN COMMUNICATING WITH PRODUCT BRANDS

What do you DISLIKE about communicating directly with the companies that make products you regularly use? Choose all that apply.

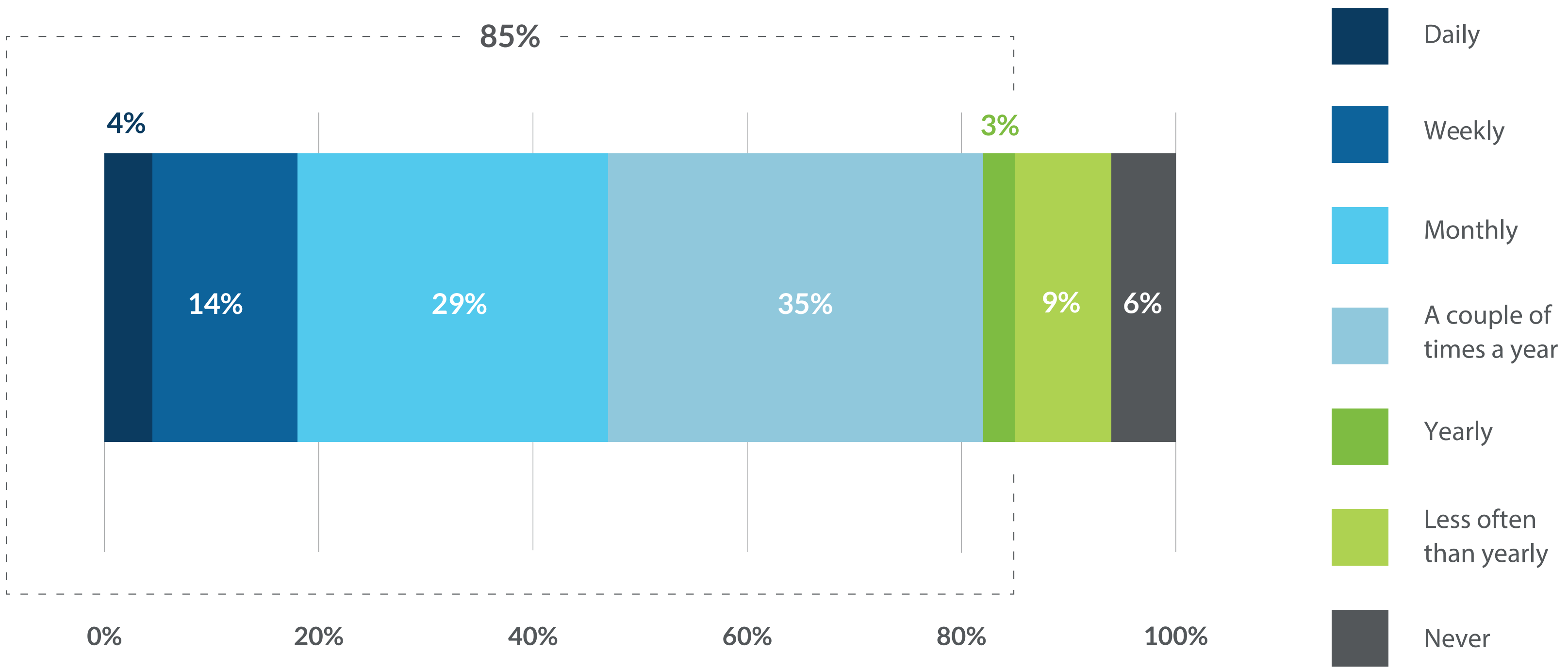


The top three things consumers dislike about interacting with product brands include being spammed with irrelevant information, the feeling that brands just want to sell more not help the consumer and that it's too hard to stop or reduce the level of communication. Households with higher incomes are more likely to dislike being spammed.

HOME INVENTORY MANAGEMENT CHALLENGES AND WISHES

94% MISTAKENLY BUY THINGS THEY ALREADY OWN

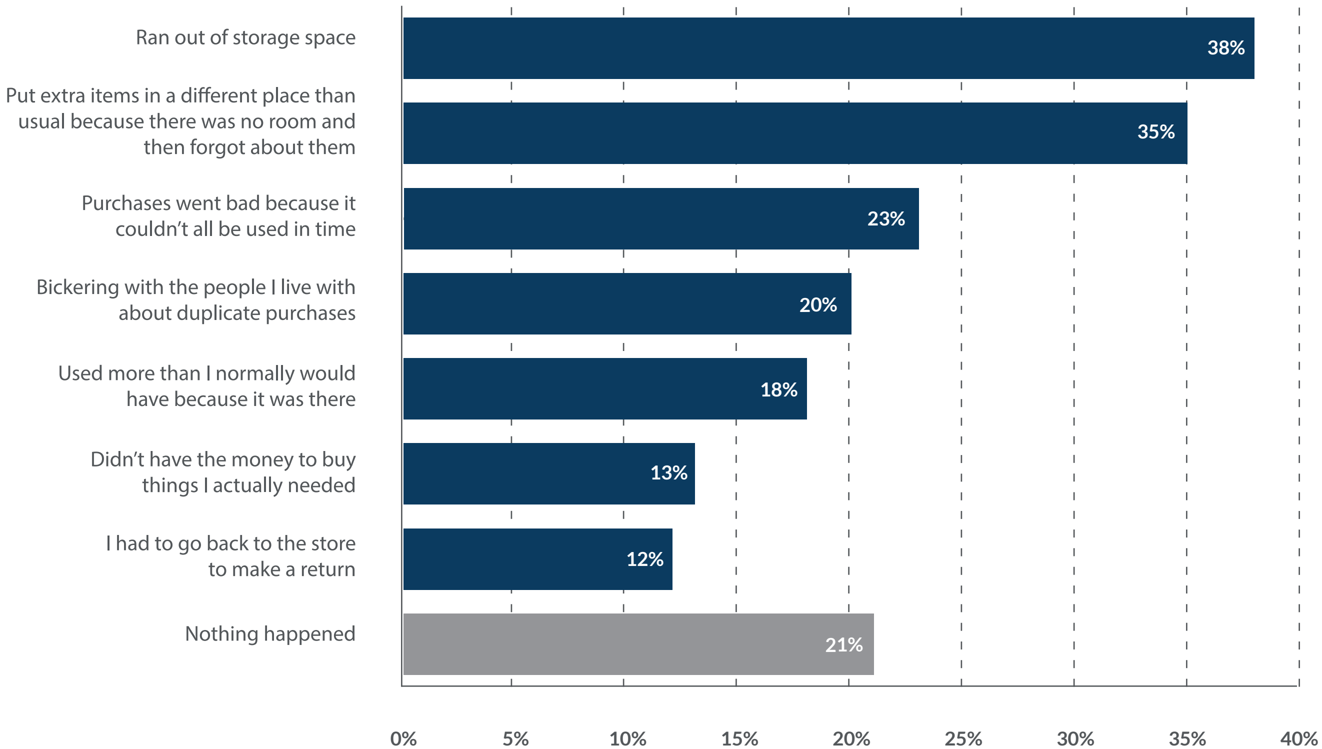
How frequently do you buy something you already have because you forgot that you had it or didn't know someone else in your household had bought it?



Nearly half of participants (47%) say they buy something they already have on a monthly basis. This number jumps up to 85% of participants on a yearly basis. CPGs have an opportunity to help solve this pain point for consumers through auto-replenishment or other services.

ACCIDENTAL RE-PURCHASING COMES WITH A CLEAR DOWNSIDE

What has happened because you bought items that you already own? Choose all that apply.



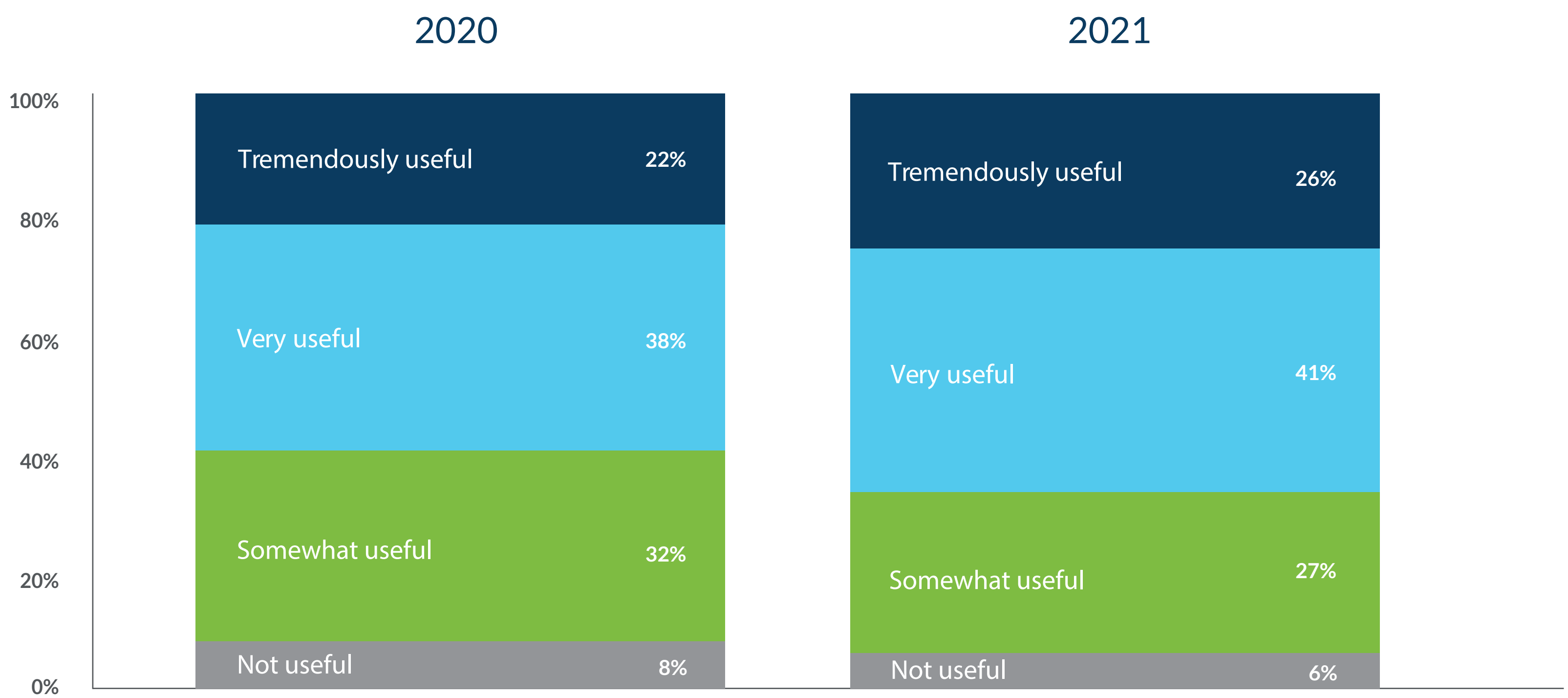
Here's what one participant had to say:

"Due to multiple remodeling, moving items from one room to another and then another room, it's difficult to find something that's hidden in boxes on the bottom of the heap somewhere in the house. Hubby moves stuff and doesn't tell me so I have no idea where it may be hidden. When asked, he's clueless. It's easier for me to buy it again than start World War III."

Most participants report downsides to accidentally purchasing items that they already own. The biggest issues these consumers face include putting extra items in a different place than usual and forgetting about them, running out of storage space and purchases going bad because they couldn't be consumed on time. Millennials are twice as likely to bicker with the people they live with over these purchases than baby boomers and more than twice as likely to use more than they normally would have.

94% WOULD FIND AN UPDATED LIST OF WHAT THEY OWN USEFUL

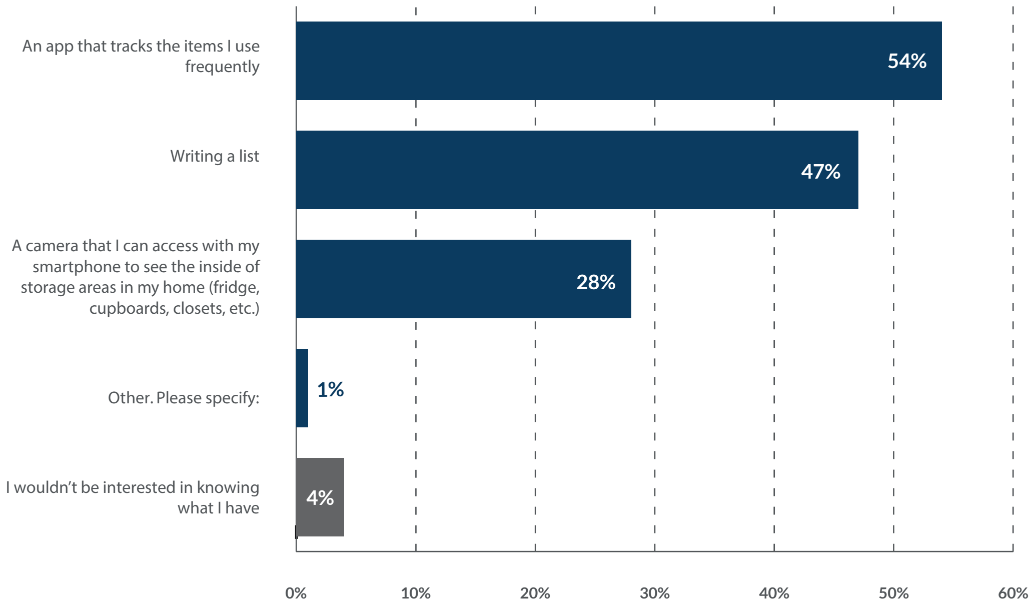
How useful would it be to have an updated list of what you currently have (i.e. items in your fridge, pantry, or bathroom cupboard) when you are shopping?



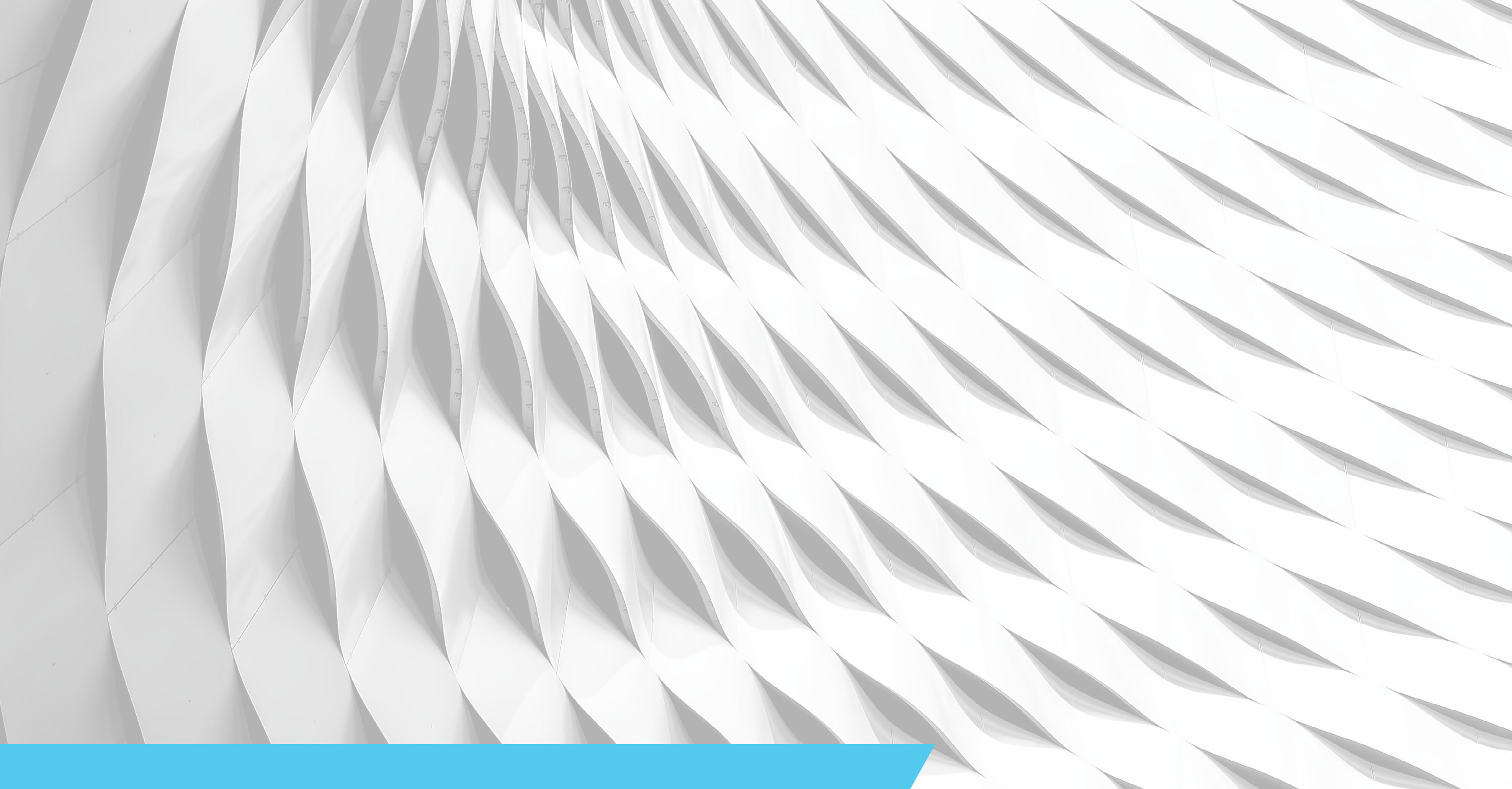
More than nine in 10 participants say it would be useful to have an updated list of what they own. Millennials are nearly twice as likely than baby boomers to say a list would be tremendously useful. Participants find an automatically updated list slightly more useful over last year.

TRACKING APPS PREFERRED TO CAMERAS IN STORAGE SPACES

What method would you prefer for checking on items in your home when you are out shopping? Choose all that apply.



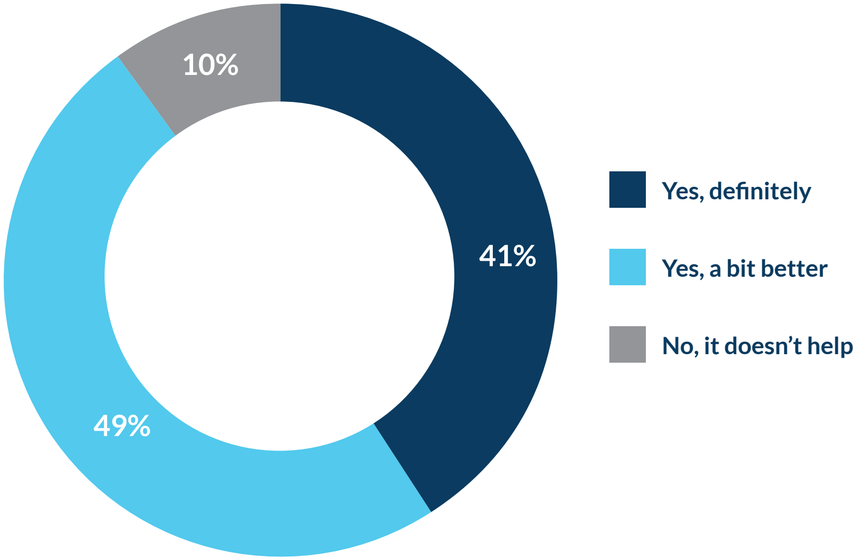
While 54% say they would prefer to use an app that tracks the items they use frequently, 47% would prefer to go the manual route and write a list. Nearly three in 10 say they would like a camera in their storage areas.



DATA PRIVACY CONCERNS

90% OF CONSUMERS UNDERSTAND THAT USER DATA HELPS CREATE BETTER PRODUCTS

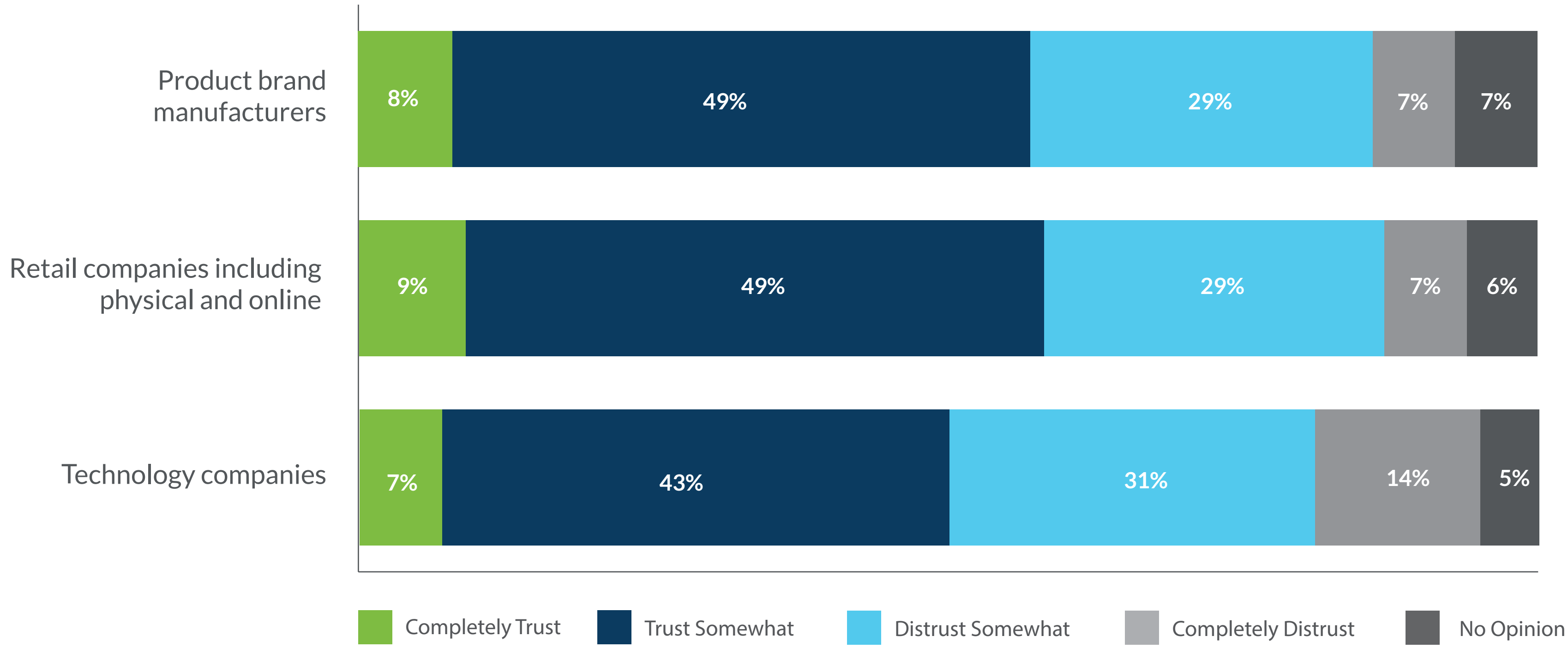
Do you think product brand manufacturers could create better user experiences if they understood exactly how customers use their products in real life?



There is widespread agreement that product brands could deliver better user experiences if they understood exactly how consumers use their products. For example, imagine if a soap brand could keep track of how many times the dispenser is pressed at each use. The brand may decide to change the amount the dispenser ejects based on user behavior.

PRODUCT BRAND COMPANIES MORE TRUSTED THAN TECH COMPANIES WITH USER DATA

How much do you trust each of the following kinds of company with personal data including order history, specific product use data and customer communications?

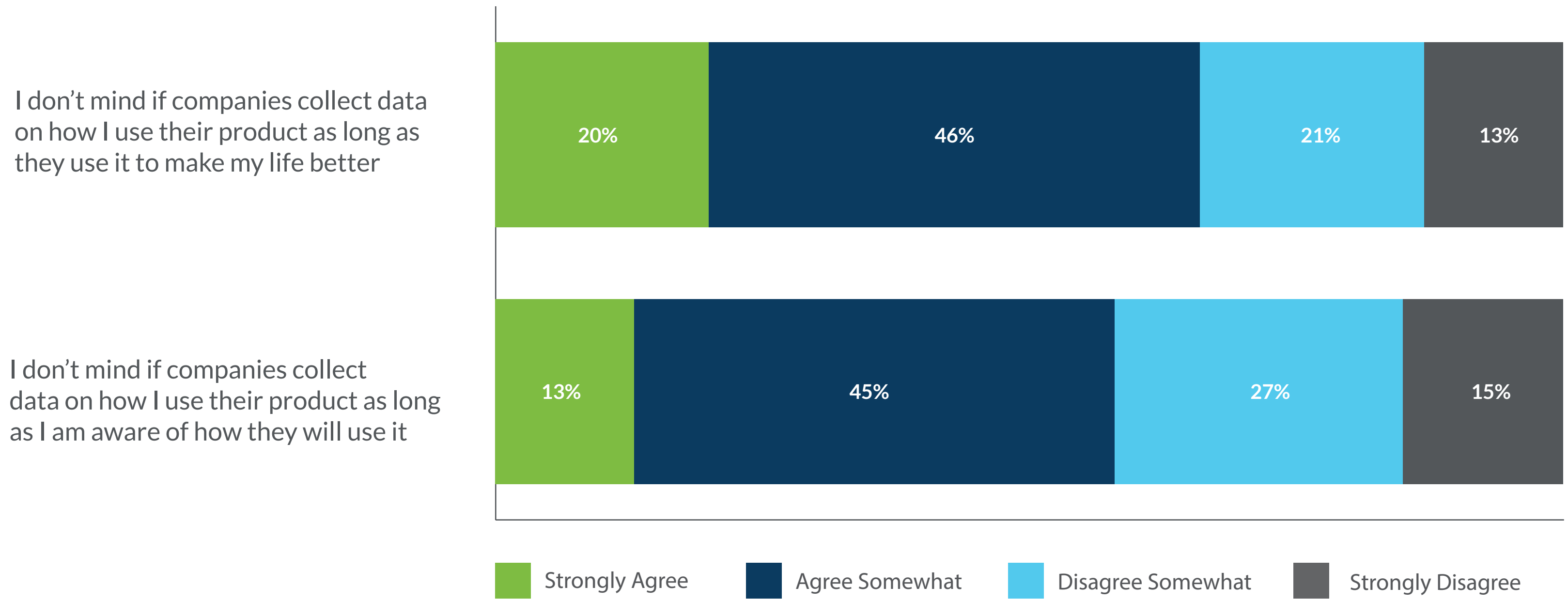


When asked about how much participants trust three categories of companies (product brand manufacturers, retailers and technology companies), product brands and retailers are neck-and-neck. Participants are more likely to distrust technology companies.

However, we can see from rising smart speaker and voice assistant uptake (52% YoY growth from 2020 to 2021) that this hasn't impeded device adoption. A clear, transparent stance on user data usage and privacy is highly recommended for CPG brands entering the space.

CONSUMERS DON'T MIND DATA COLLECTION IF THEY ARE AWARE AND IT BENEFITS THEM

For each of the following statements, please indicate your level of agreement.



When presented with the following statements, most participants agree they don't mind if companies collect data on their product usage just as long as the consumer is aware of how the brand will use the information. Most also agree that they don't mind the aggregate data collection as long as brands use the information to make life easier for consumers.

SURVEY METHOD AND PARTICIPANTS

Research Goal

The primary research goal was to gather hard data to investigate consumer perceptions toward subscription-based purchasing of household staples, auto-replenishment and data privacy.

Methodology

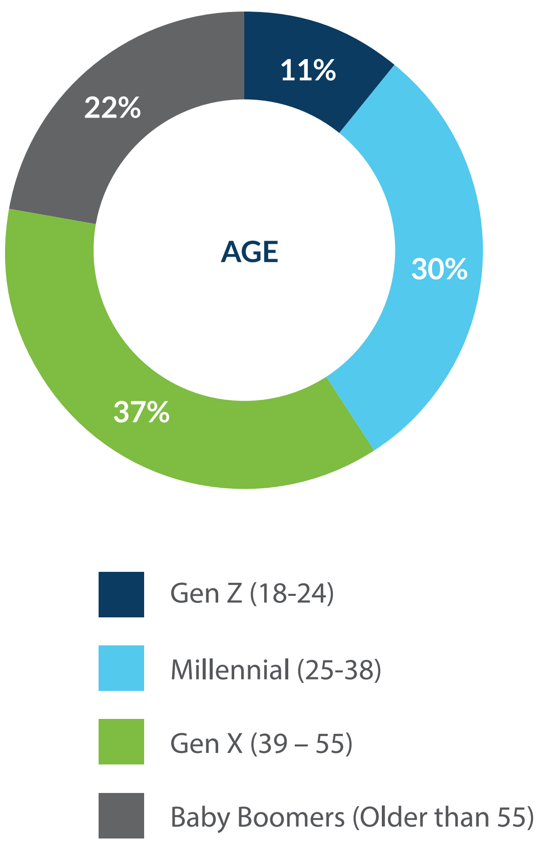
Independent sources of online shoppers invited to participate in an online survey conducted through SurveyMonkey. A variety of questions were asked on a wide range of topics, including subscription purchases, auto-replenishment services, direct-to-consumer communication, inventory management and data privacy concerns. A survey from 2020, originally developed in collaboration with Dimensional Research, was repeated to capture trends on the evolution of perceptions and attitudes.

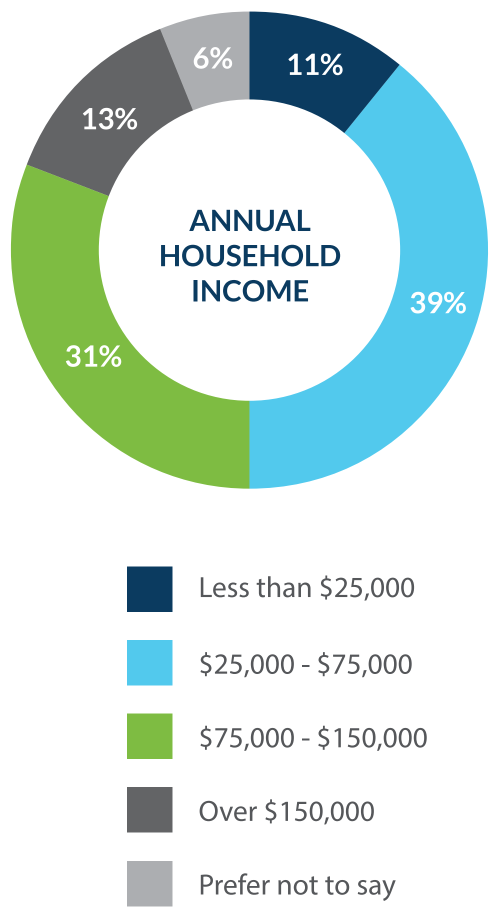
Participants

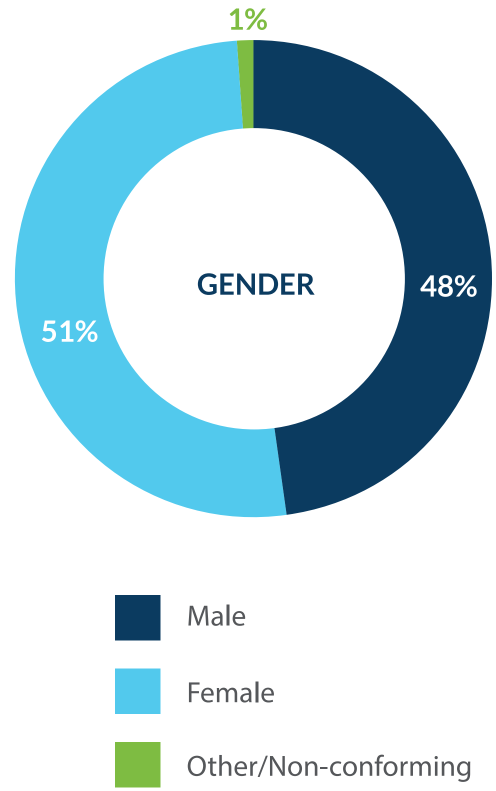
A total of 1,124 qualified individuals from the United States completed the survey. The participants were filtered using closely replicated criteria from the *2020 Connected Packaging Perceptions and Attitudes* survey as follows:

- Made at least five online purchases of physical goods in the past 12 months
- Own a smartphone
- Responsible for purchasing a significant portion of their household's staple goods

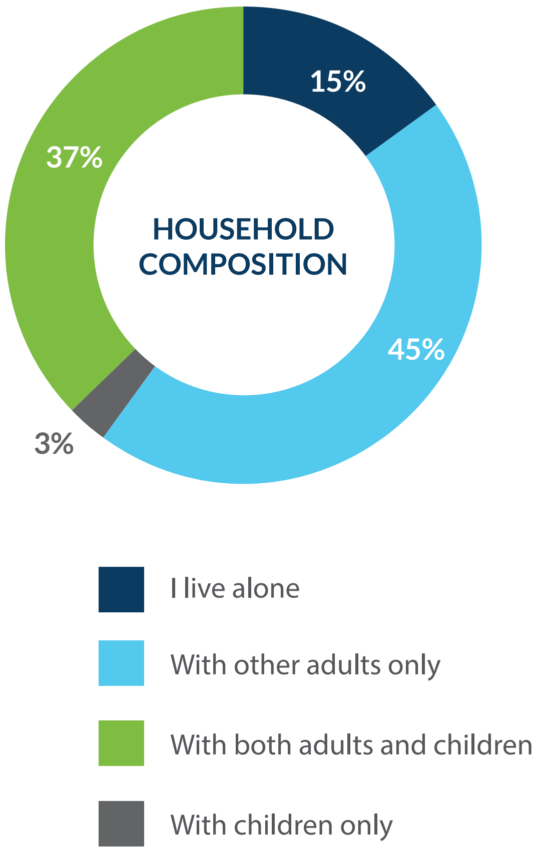
INDIVIDUALS REPRESENTED

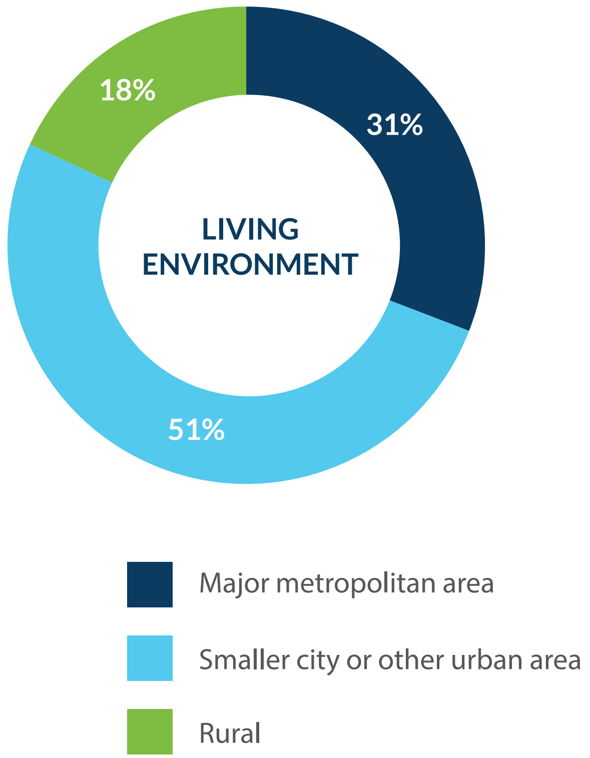


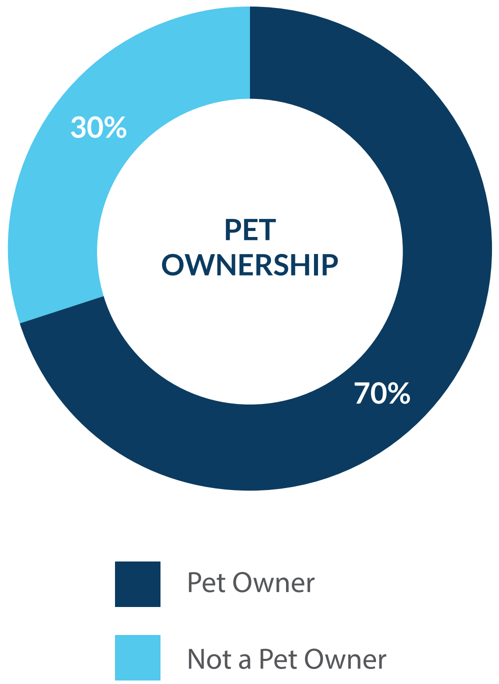




INDIVIDUALS REPRESENTED

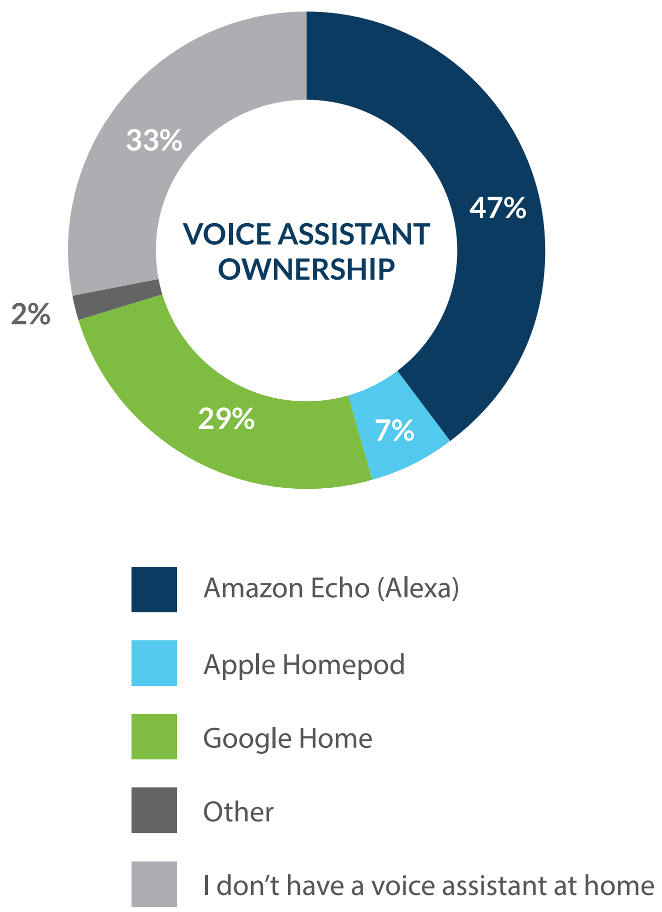


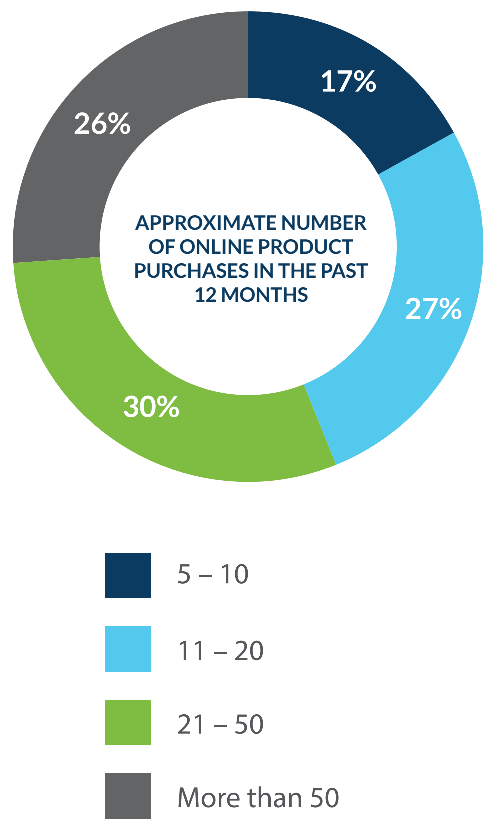




INDIVIDUALS REPRESENTED

*Some people own more than one voice assistant





JABIL PACKAGING SOLUTIONS

Consumers will change the way they shop more in the next 10 years than they have over the last four decades–and the world of packaging is being altered forever. Online shopping has created more choices, less brand loyalty and fragmented marketing. Sellers don't control the buyer's journey any more. Buyers are calling the shots. And the pandemic has accelerated some of the most transformational trends.

That means brands and retailers risk losing consumers' loyalty and declining revenues if they do not create new packaging that enables personalization, convenience, sustainability and accessibility.

Jabil Packaging Solutions leverages three unique solutions suites to incorporate packaging, electronics and digital capabilities into intelligent ecosystems that connect brands and retailers with evolving consumer needs.

Learn more about Jabil Packaging Solutions:
www.Jabil.com/Packaging

FOR MORE INFORMATION

Jabil (NYSE: JBL) is a manufacturing solutions provider with over 260,000 employees across 100 locations in 30 countries. The worlds leading brands rely on Jabil's unmatched breadth and depth of end-market experience, technical and design capabilities, manufacturing know-how, supply chain insights and global product management expertise. Driven by a common purpose, Jabil and its people are committed to making a positive impact on their local community and the environment.

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