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CONNECTED PACKAGING PERCEPTIONS AND ATTITUDES

A Consumer Insights Survey

MARCH 2020

dimensional research

INTRODUCTION

Until recently, much of the product learning and selection process took place in a brick & mortar store at a retail shelf. Fast-Moving Consumer Goods (FMCG) companies have historically made major investments in R&D and marketing to win store-buying consumers. But the brand loyalty equation is changing fast, challenging FMCGs to rethink their organizational structures, cultures and product development processes.

Traditionally, FMCGs could meticulously control the channels through which consumers received product information. But in an omnichannel world where consumers purchase goods physically or online, through their smart home speaker or on their mobile phone, the customer acquisition funnel FMCGs have relied on for more than 30 years has fundamentally changed.

In fact, disrupting technologies like e-commerce and smartphones have turned the world of fast-moving consumer goods upside down, leading to declining market shares and profits. Today, buying decisions and customer loyalty tend to be motivated more by convenience and value than by which product has a stronger brand name or a more compelling look and feel.

FMCGs need to take the opportunities offered 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 sharpening and coming into greater focus for smart 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? Which ways do consumers prefer to interact with product brands and how can technology enable this? What concerns do they have about data privacy?

The following report, sponsored by Jabil, is based on an online survey of 1,047 consumers from the United States. 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.

Please note that participants were specifically chosen for high level of online purchasing and technology use. Therefore, the findings will not represent trends across all consumers.

KEY FINDINGS

SUBSCRIPTIONS AND AUTO-REPLENISHMENT

- While 85% of participants buy household staples online, attitudes for shopping in person and online are similar
- Millennials, men, households with lower incomes, smart speaker owners and city-dwellers enjoy online shopping more than others
- 46% use a subscription service to buy household staples, with the most popular categories being personal care, pet care and food and beverage
- Millennials, men, households with higher incomes and smart speaker owners are more likely to have a subscription service
- Households with infants and pets are more likely to use subscription services
- Subscription services are relatively new for most; nearly two-thirds have been using these services for less than two years
- Seven out of 10 respondents 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 when products don’t arrive soon enough
- Auto-replenishment services are used by less than one in five
- 63% are interested in auto-replenishment services
- 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

- 71% of participants report that they communicate with product companies in some way
- Millennials 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
- 50% of participants say their biggest dislike about communicating with product brands is the spam and irrelevant information they receive from product brands

HOME INVENTORY MANAGEMENT

- 92% say they have mistakenly bought things they already own in the past
- Accidentally repurchasing items has a clear downside: 30% say they store them in a different place and forget about the purchases
- 92% would find an updated list of what they own useful when they are shopping
- 61% say they would prefer an app that tracks the items they use frequently to check on items in their home when out shopping
- Millennials and higher income households are more likely to want a camera they can access with their smartphone to check their storage spaces (cupboards, fridge, etc.) while out shopping

KEY FINDINGS

DATA PRIVACY

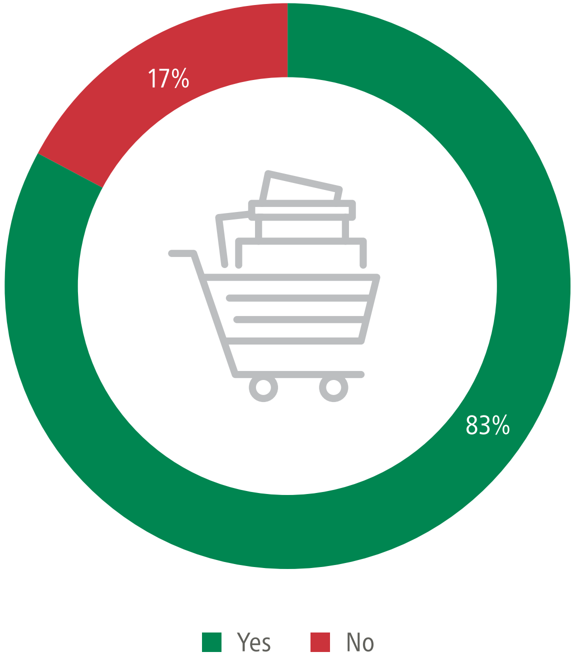
- Online shoppers are slightly more concerned about smart home speakers than consumption sensors when it comes to data privacy
- 91% of consumers understand that user data helps brands create better products
- Consumers trust product brand manufacturers most when it comes to their personal data, such as order history, specific product use data and consumer communications
- 65% 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
- 42% say they distrust technology companies with their personal data
- 63% 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

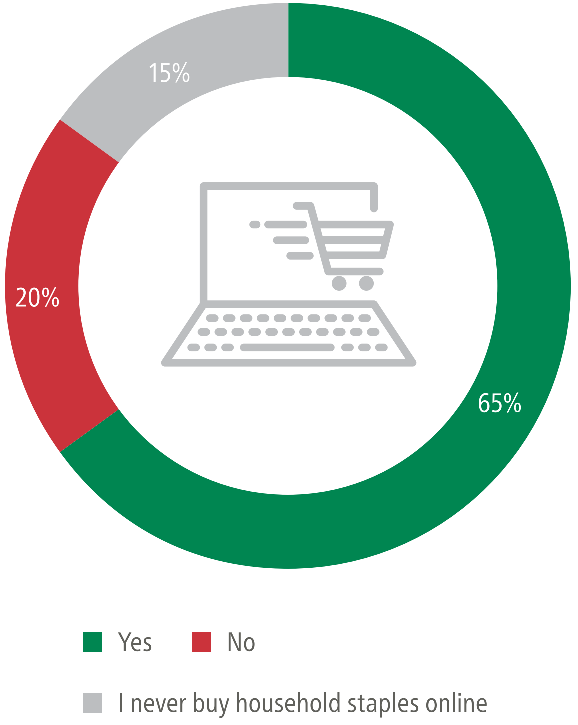
ATTITUDES FOR SHOPPING IN PERSON AND ONLINE ARE SIMILAR

While 85% 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.

Do you enjoy shopping for household staples IN PERSON?



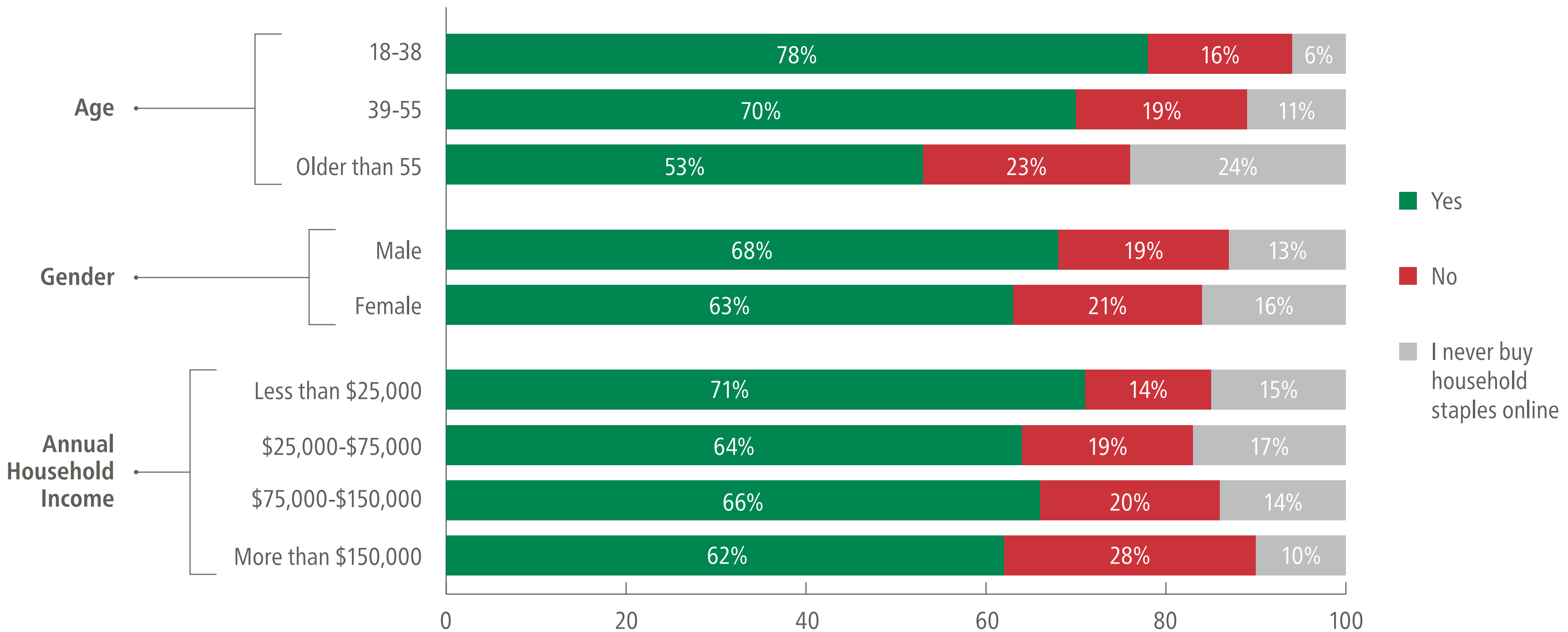
Do you enjoy shopping for household staples ONLINE?



MILLENNIALS, MEN AND PEOPLE WITH LOWER INCOME ENJOY ONLINE SHOPPING MORE FOR HOUSEHOLD STAPLES

A deep dive into the demographics show that millennials, men and people with lower income enjoy online shopping for household staples more than other demographics. The generational differences are stark; nearly a quarter of baby boomers don't buy household staples online, whereas that number drops to 6% with millennials. Households with annual incomes of more than $150,000 are least likely to enjoy shopping for these goods online.

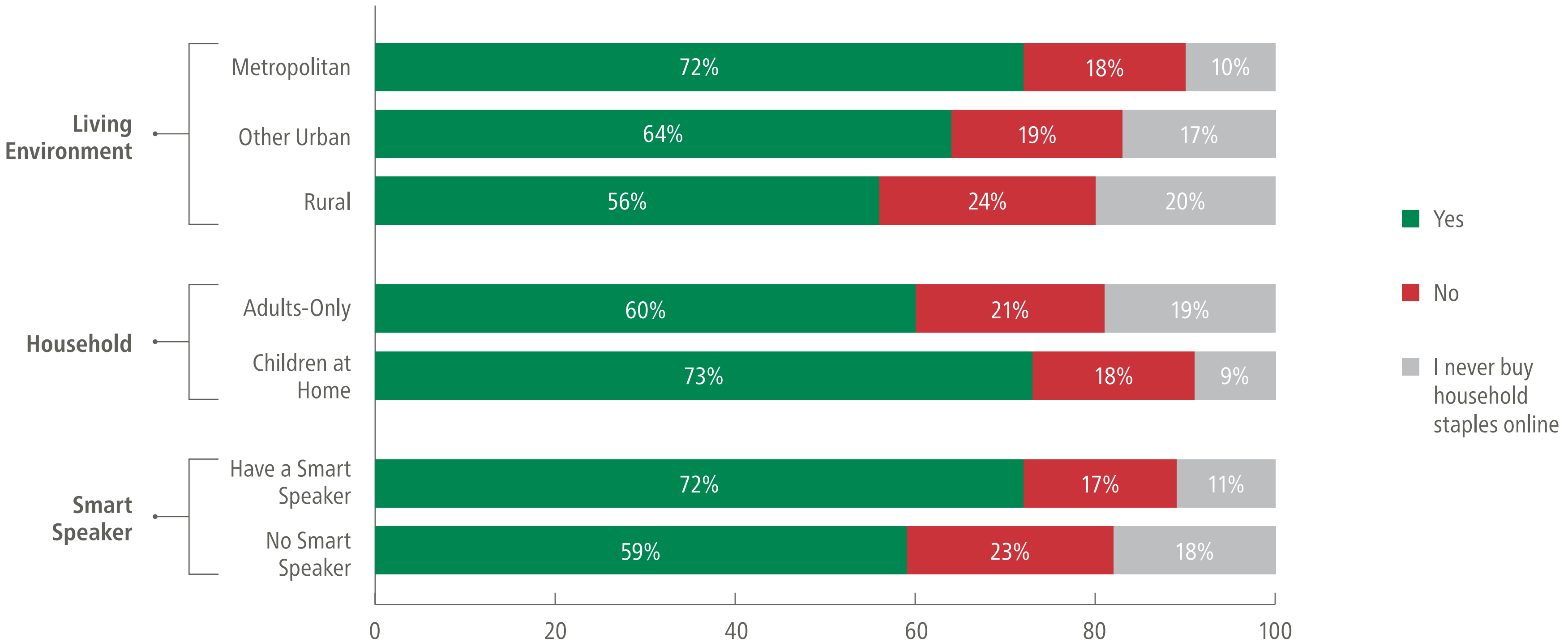
Do you enjoy shopping for household staples ONLINE?



CITY DWELLERS, HOUSEHOLDS WITH CHILDREN AND SMART SPEAKER OWNERS ENJOY ONLINE SHOPPING MORE

Participants who live in cities, have children at home and own a smart speaker are more likely to say that they enjoy shopping online for household staples. While 72% of participants said they own a smart speaker, 11% of them say they don't buy household staples online. 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.

Do you enjoy shopping for household staples ONLINE?

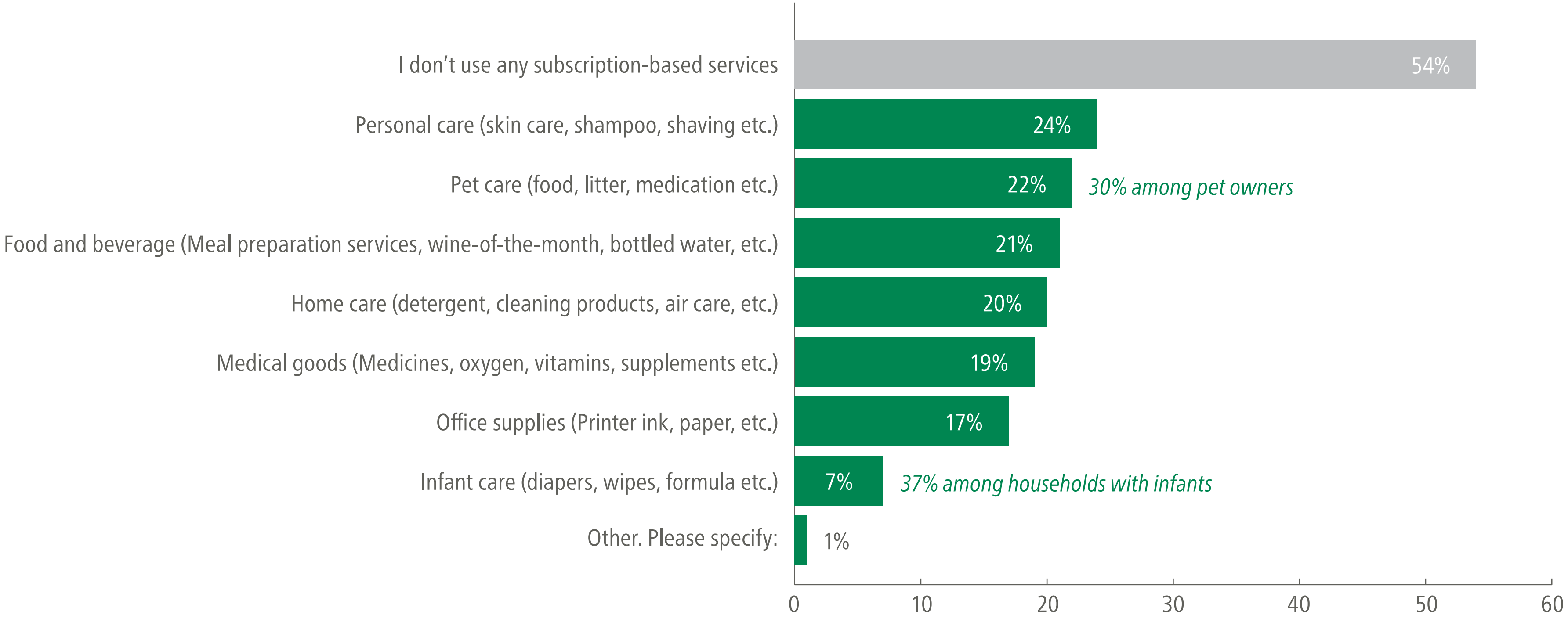


46% USE A SUBSCRIPTION SERVICE TO BUY HOUSEHOLD STAPLES

Most participants say they don't currently purchase household staples using subscription services. But of those who use subscriptions, the most common goods they purchase through a subscription include personal care, pet care and food and beverage.

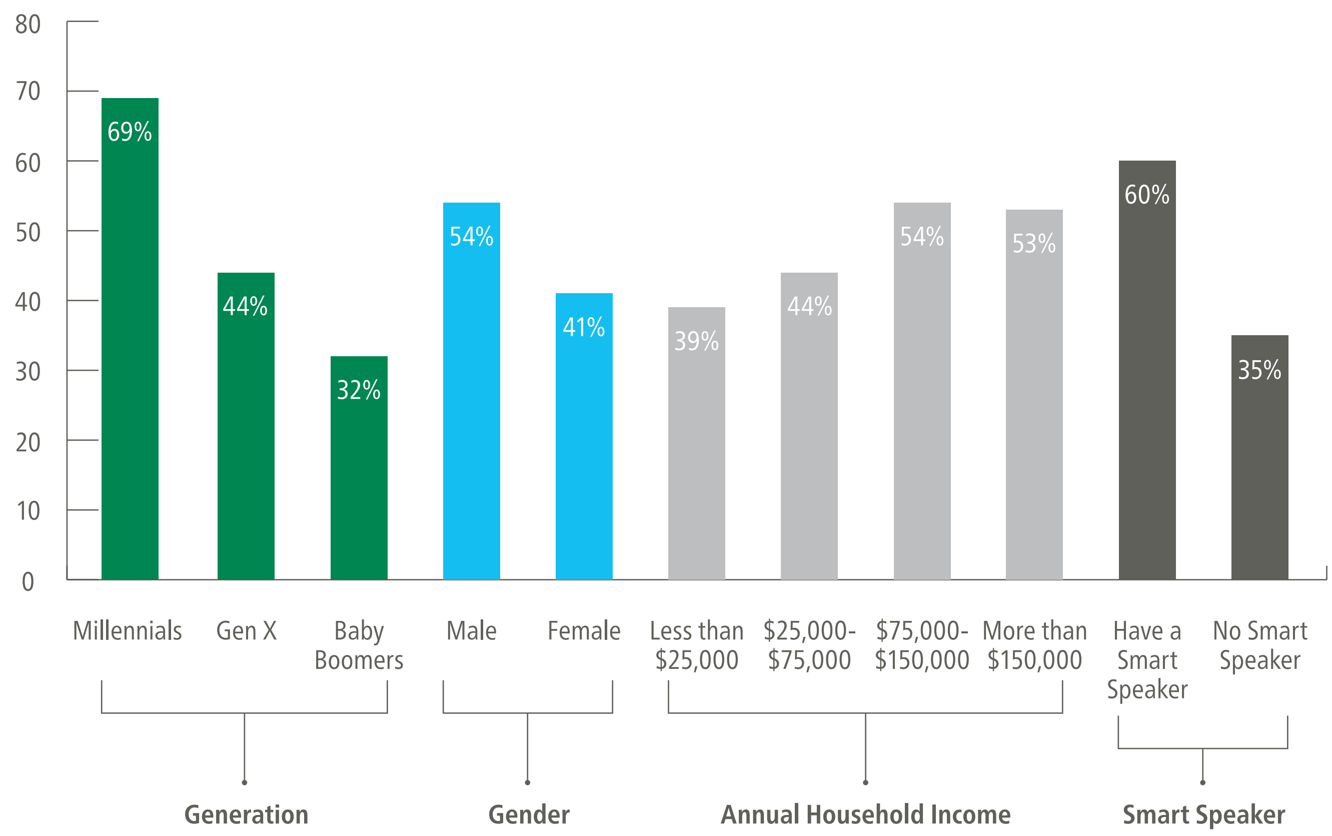
The numbers show stark differences for pet owners and households with infants. Participants with pets, which represent 70% of all respondents, say they purchase pet care goods using a subscription. Meanwhile, households with infants are more likely to subscribe to receive these goods through a subscription. The most common "other" responses included art and craft supplies.

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



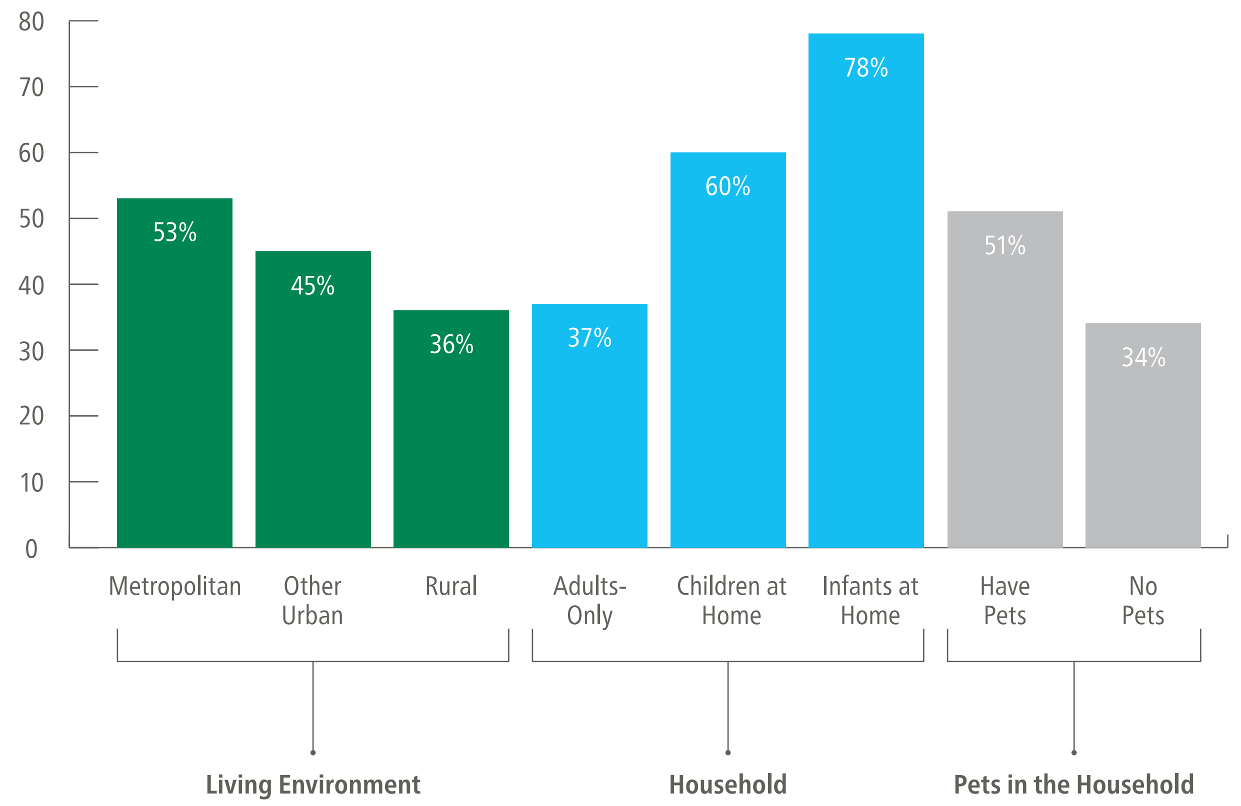
MILLENNIALS, MEN, HIGHER INCOME AND SMART SPEAKER OWNERS MORE LIKELY TO HAVE A SUBSCRIPTION SERVICE

According to the survey results, millennials are more than twice as likely to purchase household staples using a subscription, with 69% affirming this information. Only 32% of baby boomers purchase through subscriptions. Participants who own a smart speaker are much more likely (60%) than those without one (35%) are more likely to use subscription services. Finally, males and households with higher incomes (above $75,000) are also more likely to have a subscription service.



HOUSEHOLDS WITH INFANTS AND PETS MORE LIKELY TO USE SUBSCRIPTION SERVICES

Out of all the participants, households with infants at home are the ones most likely to use subscription services for household staples. Similarly, those living in metropolitan cities and those who own pets are more likely to use subscription services. Those with children or infants at home are most likely to purchase personal care goods through a subscription service than any other demographic.

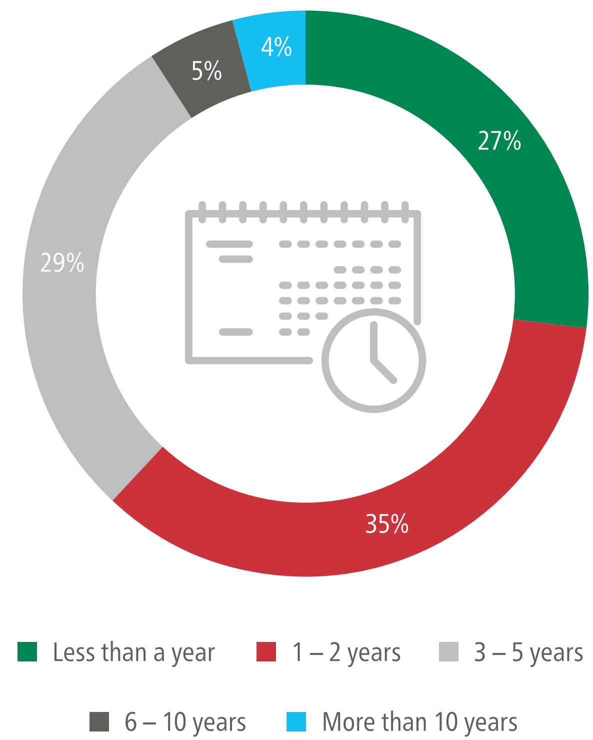


SUBSCRIPTION SERVICES ARE RELATIVELY NEW FOR MOST AND INCREASING FOR ALMOST HALF

Nearly two-thirds of participants say they have been using subscription services for at least two years. The concept is still relatively new for most users while almost half say their use of subscription services has increased just in the last year. As FMCGs launch new product categories to subscribe to, we can expect this number to grow in the coming years.

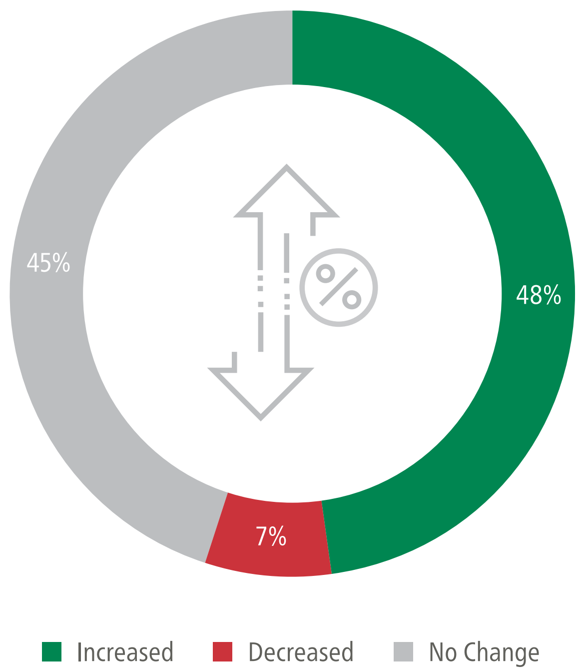
How long have you been using subscription services for household staples?

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

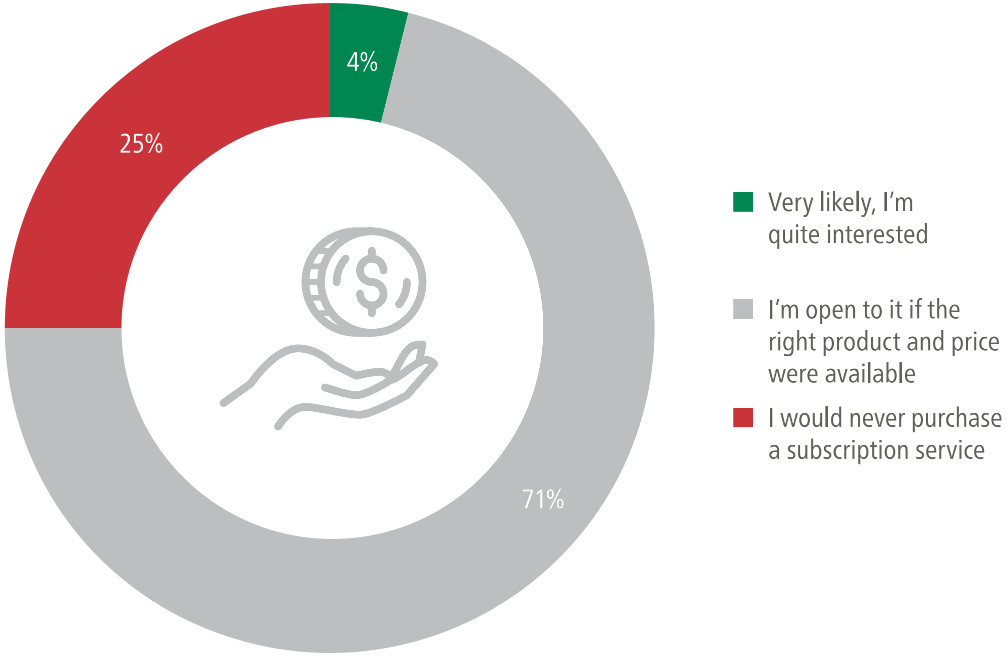


MOST OF THOSE WHO DON'T HAVE SUBSCRIPTIONS ARE INTERESTED – FOR THE RIGHT PRODUCT

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 seven out of 10 say they are open to it if the right product and price were available for the subscription category they are seeking. Still, approximately a quarter of participants say they will never purchase a subscription service. Those who selected this option tend to be male, older than 55 and living in rural communities.

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

n= Do not have a subscription service



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 having a subscription for household staples 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 for household staples are almost twice as likely to think subscription services are difficult to cancel. They also believe subscribers would end up over-buying and spending more money overall. FMCGs have an opportunity to educate consumers about the realities of subscription services.

The most common "other" option for those using subscriptions was the thresholds for discounts and shipping, while those without subscriptions said they don't like that you can try the product first and that they have changing needs and wants.

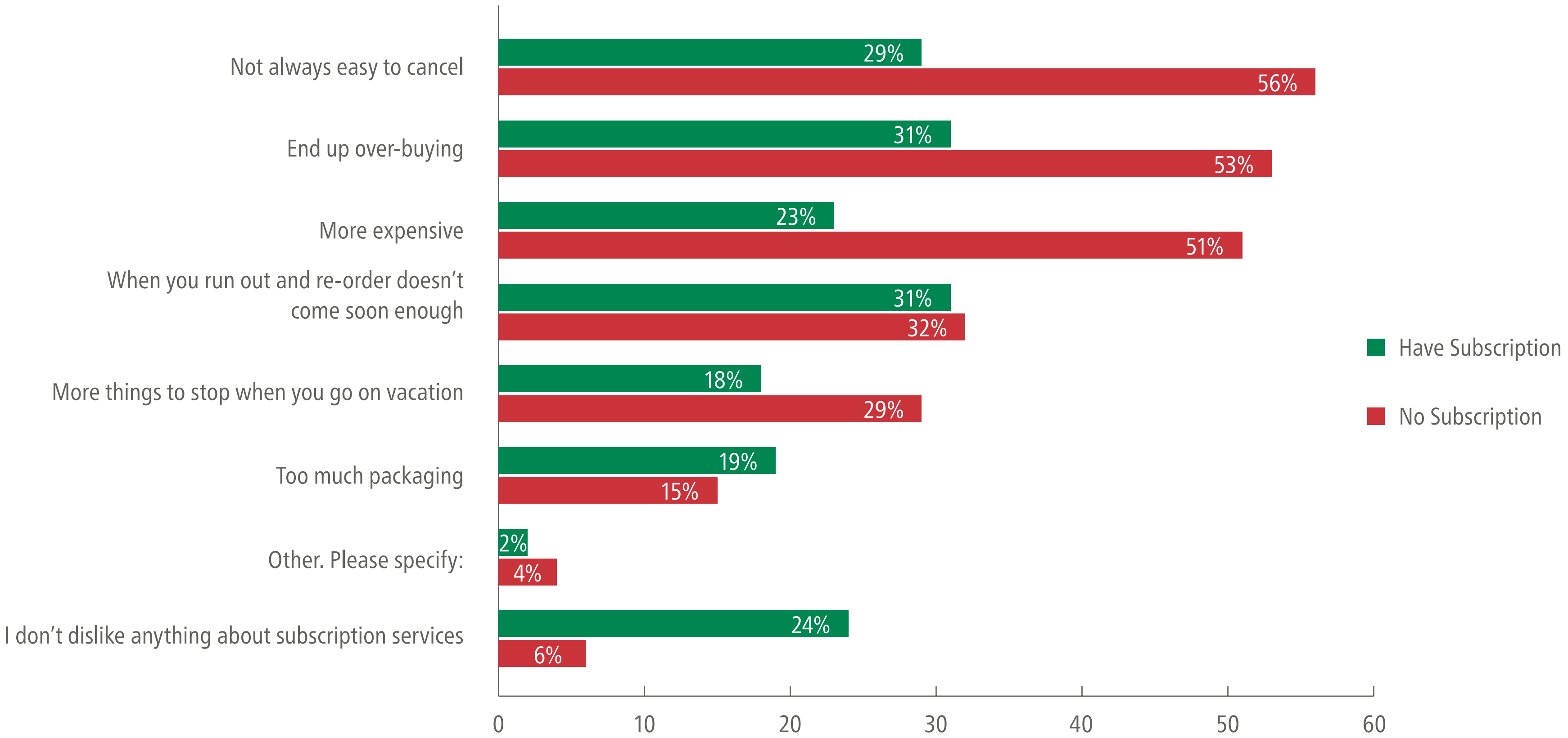
THE REALITY OF SUBSCRIPTIONS IS BETTER THAN PERCEPTION

What do you dislike about using subscription services?

n = Have a subscription service

What do you think you would dislike about using subscription services?

n = Do not have a subscription service



INTRODUCING AUTO-REPLENISHMENT

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

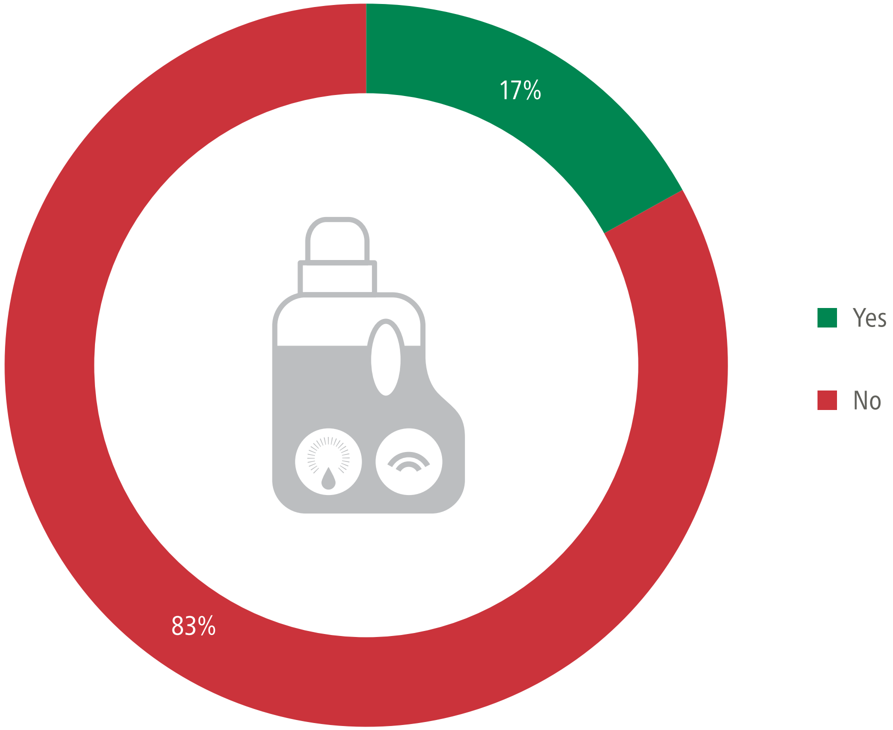
AUTO-REPLENISHMENT

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 re-order after you give your approval.

AUTO-REPLENISHMENT SERVICES ARE USED BY LESS THAN 1 IN 5

With the freshness of the concept, it's not surprising that only 17% of participants say they subscribe to auto-replenishment services for household staples. But those who use auto-replenishment services tend to be millennials, male, households with higher incomes, have children living in their home and own a smart speaker.

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



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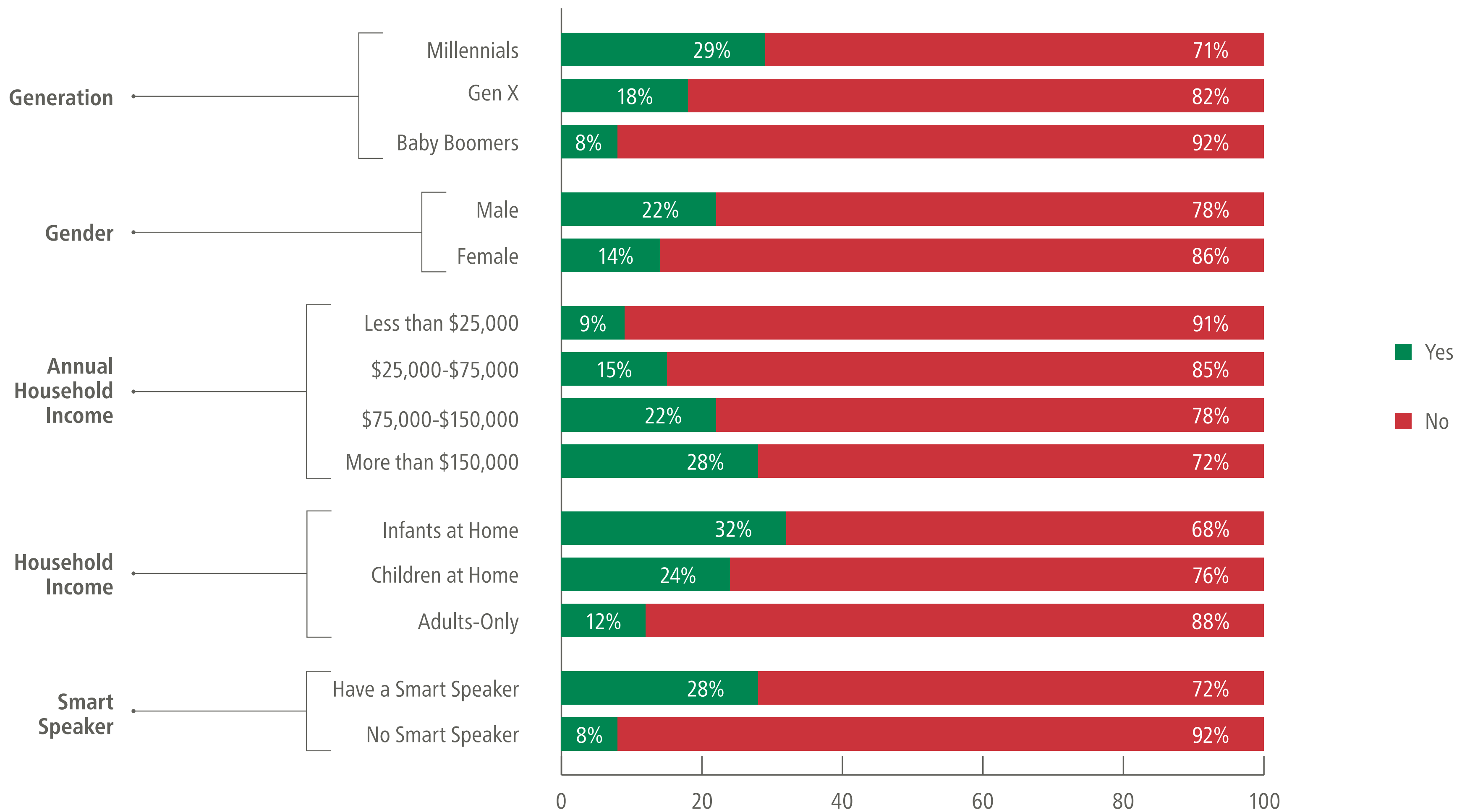
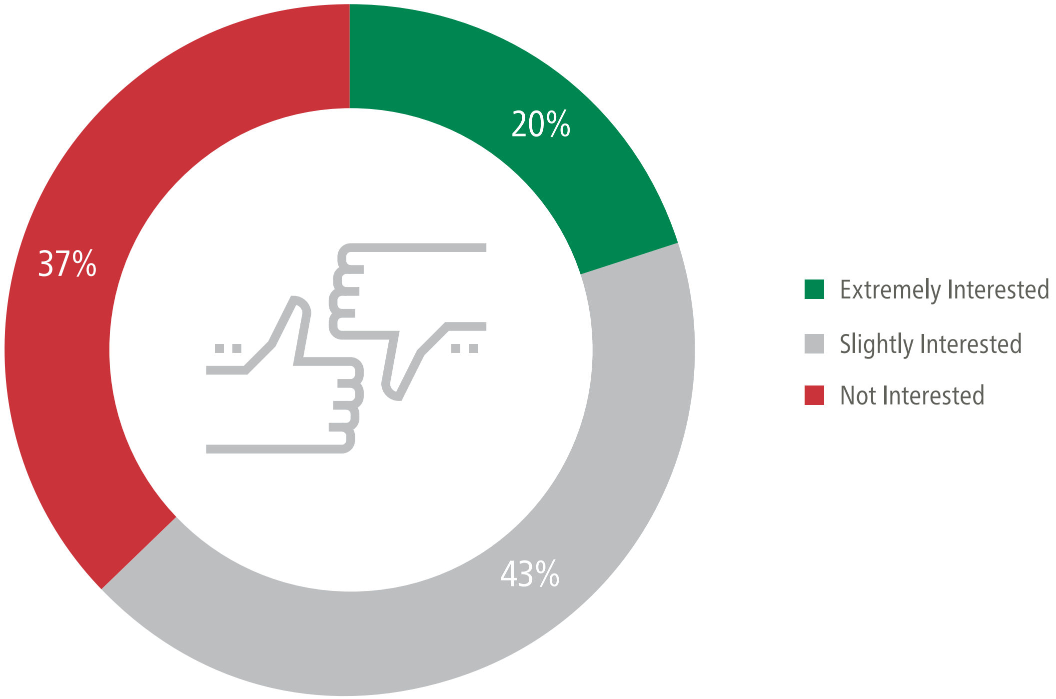


ALMOST 2 IN 3 ARE INTERESTED IN AUTO-REPLENISHMENT

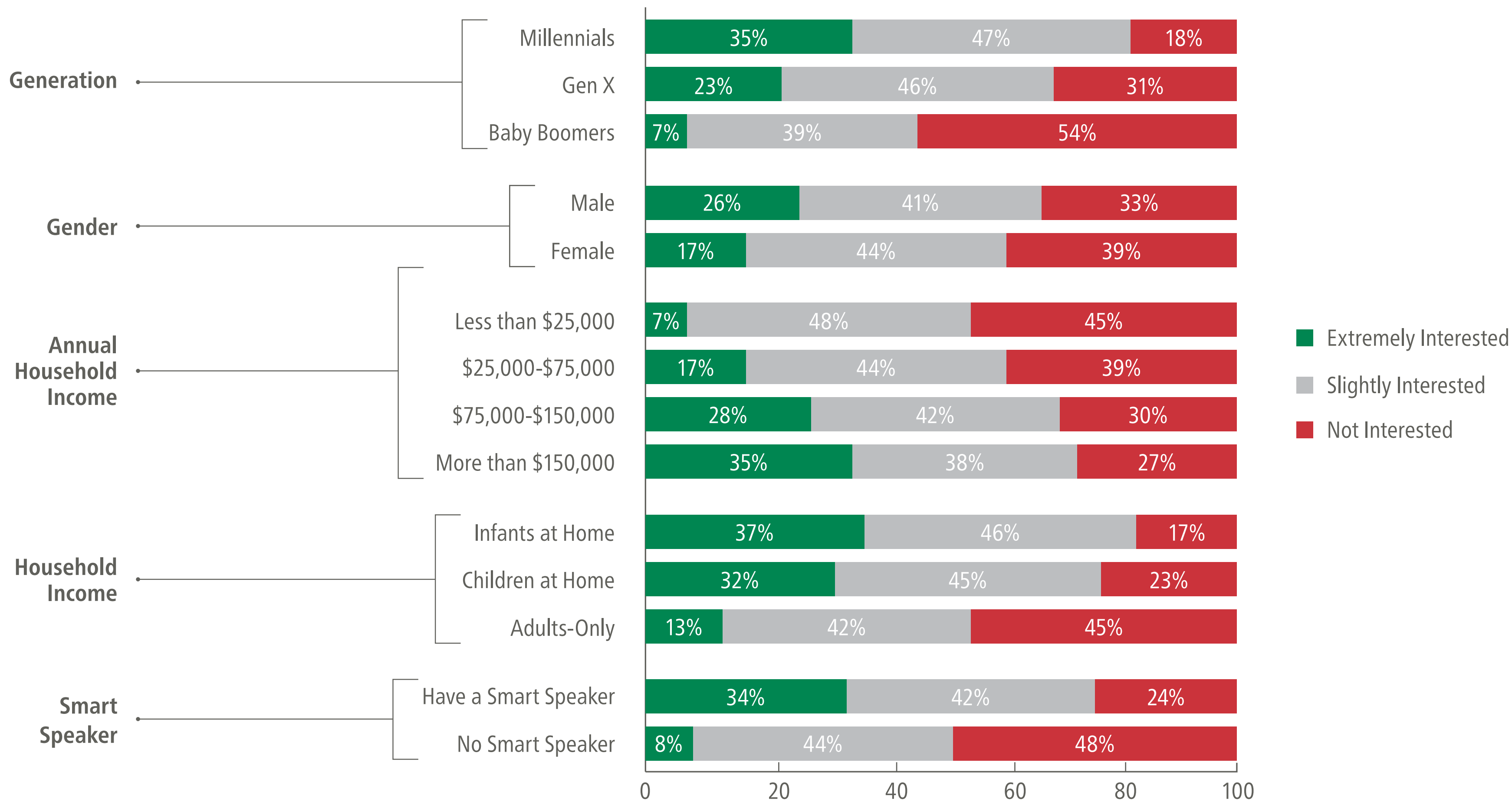
Although the concept of auto-replenishment is still relatively new, 63% of participants say they are interested in these types of services. Once again, millennials, men, high income households, those who have smart speakers and participants with children in their home are more likely to be interested in auto-replenishment. More than half of baby-boomers and nearly half of the households without smart speakers say they are not interested at all.

How interested are you in auto-replenishment services?



ALMOST 2 IN 3 ARE INTERESTED IN AUTO-REPLENISHMENT

How interested are you in auto-replenishment services?



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

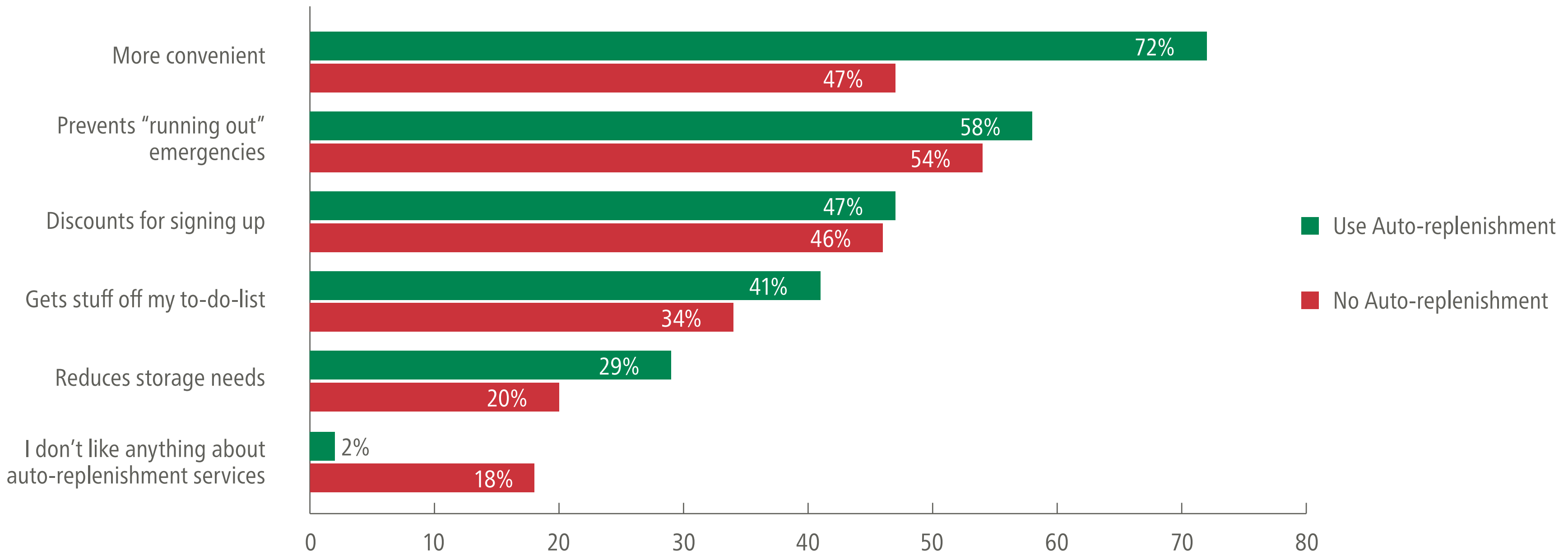
Auto-replenishment users are generally happy with using this service. Almost three in four users say auto-replenishment is more convenient and nearly six in 10 say it helps prevent "running out" emergencies. Discounts for signing up and getting stuff off their to-do-list was another benefit of auto-replenishment. 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.

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

n = use auto-replenishment service

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

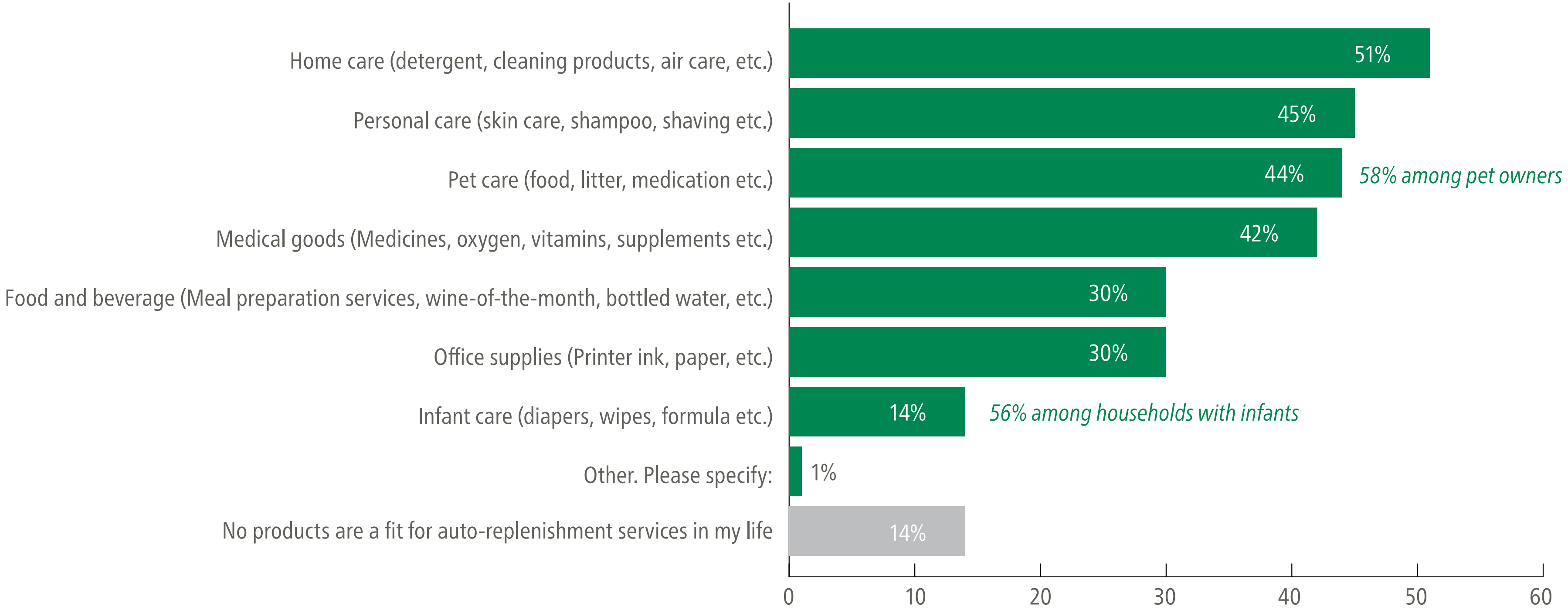
n = do not use auto-replenishment services



MANY PRODUCTS ARE CANDIDATES FOR AUTO-REPLENISHMENT SERVICES

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. Perhaps what's most interesting are the results from pet owners and households with infants. 58% of pet owners said pet care products would be the best fit for auto-replenishment services, while 56% participants with an infant chose infant care products as their top category. This may be an early indication for FMCGs that these categories are most suited for auto-replenishment pilot programs and rollouts.

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

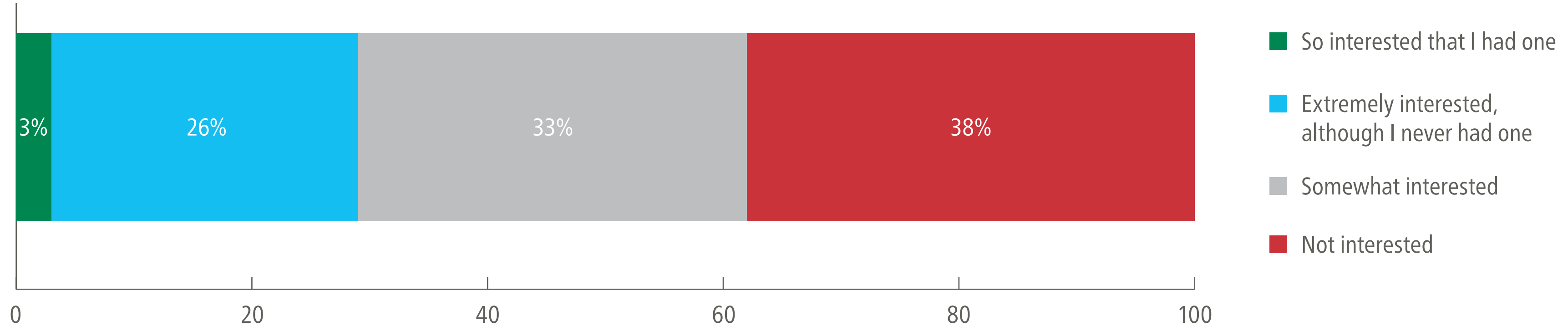


61% HAVE INTEREST IN SOMETHING LIKE THE AMAZON DASH BUTTON

Participants were shown the information below about the Amazon Dash Button during the survey. Just over 60% said they are interested in something like the Amazon Dash Button to replenish household staples that are running low. Only 3% said that they actually had these devices in their home.

The Amazon Dash Button, shown below, 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.

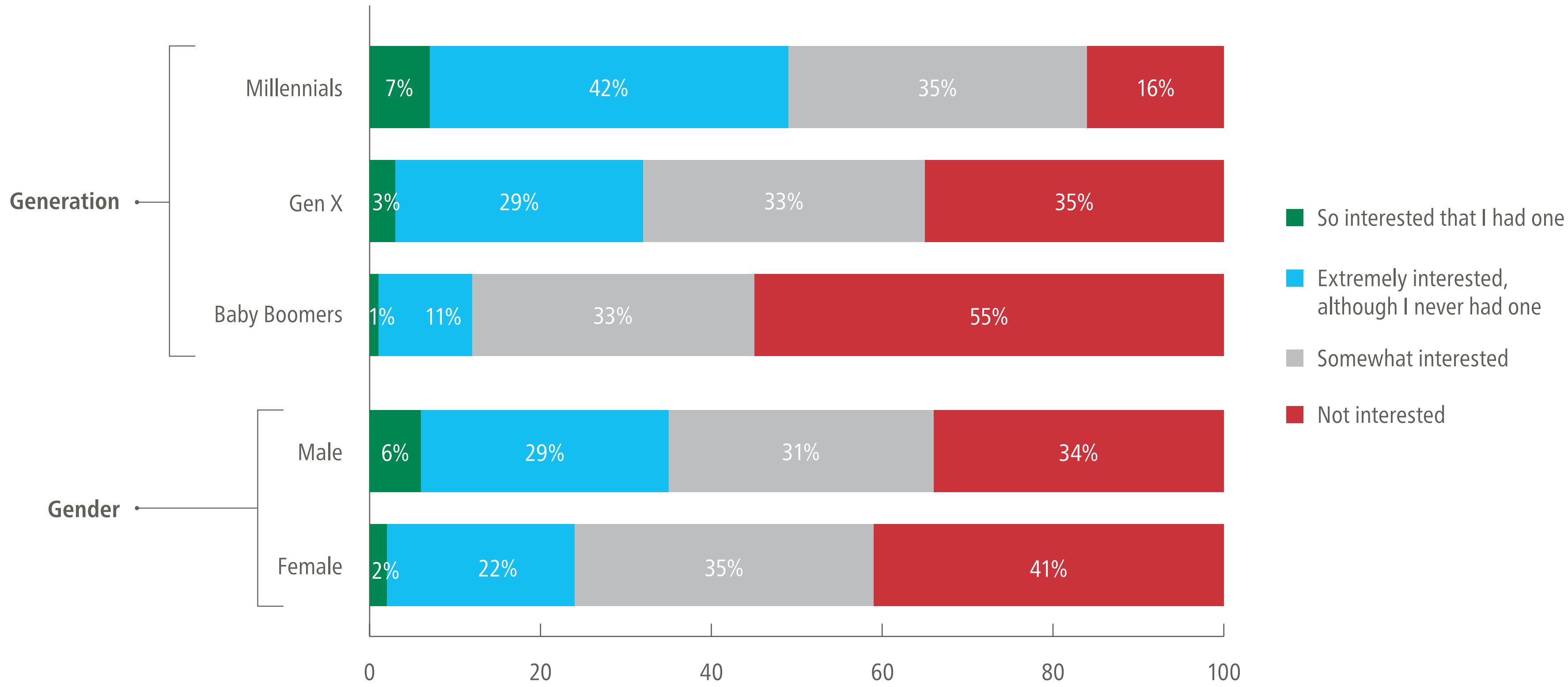
How interested would you be in something like the Amazon Dash Button to replenish household staples that are running low?



MILLENNIALS, MEN, CITY-DWELLERS, PET OWNERS AND SMART SPEAKER OWNERS MOST INTERESTED

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.

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



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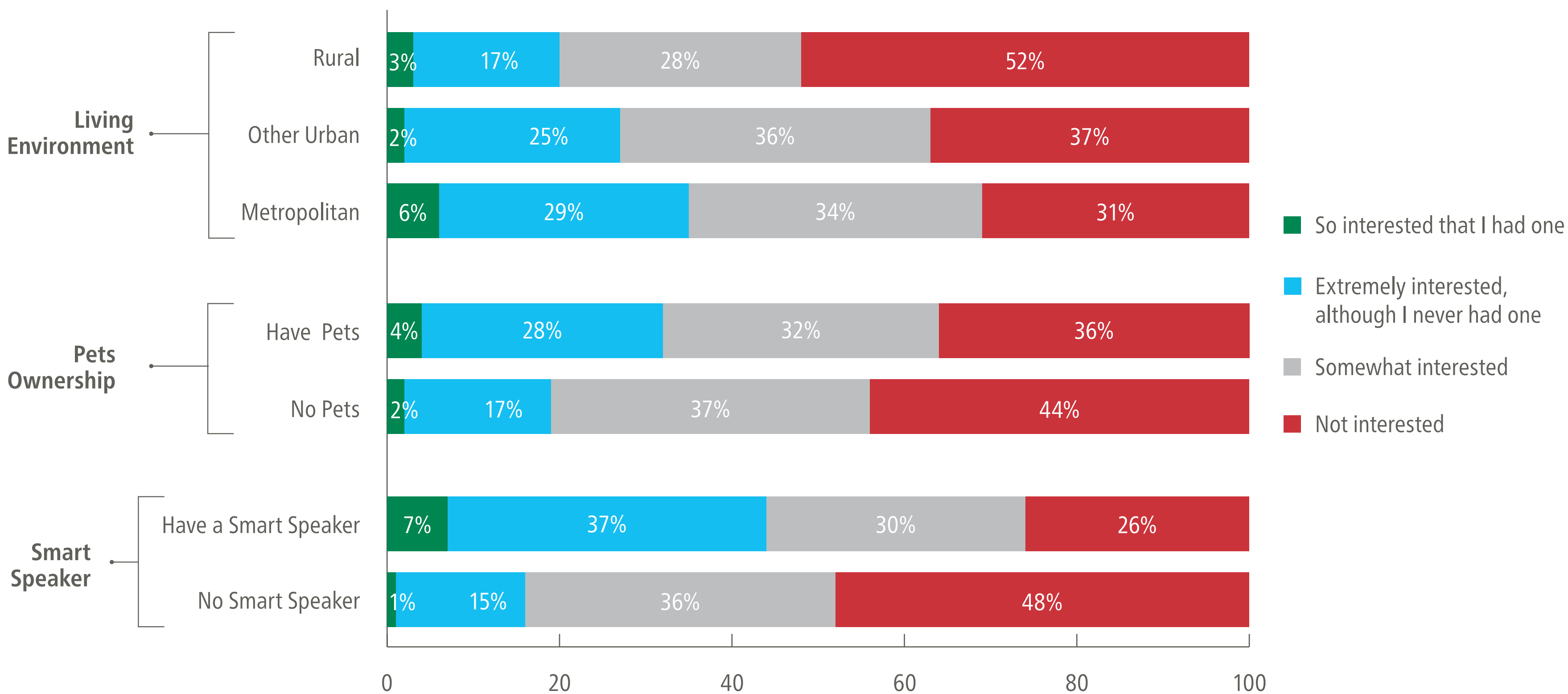
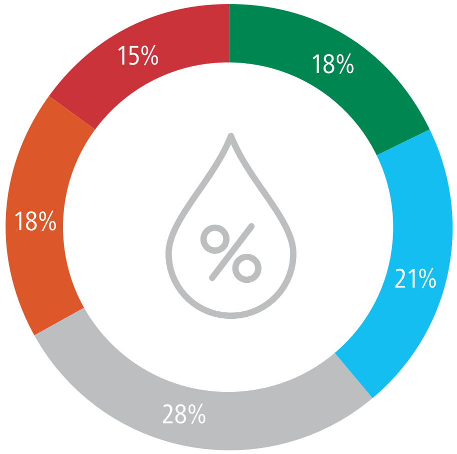


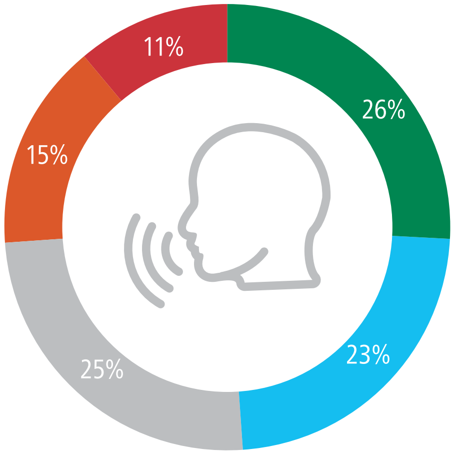
ONLINE SHOPPERS ARE SLIGHTLY MORE CONCERNED ABOUT LISTENING DEVICES THAN CONSUMPTION SENSORS

As with anything regarding technology, consumers are always concerned about data privacy. Smart packaging is no exception. Of the participants, 85% say they would be concerned about privacy with regards to sensors and other technology that track consumption of household staples for auto-replenishment. In addition, 89% say they are concerned about their smart home speakers' data privacy, even though the rate of adoption is rising very quickly. Participants who don't own a smart home speaker currently show more concern about their data privacy from these devices.

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?

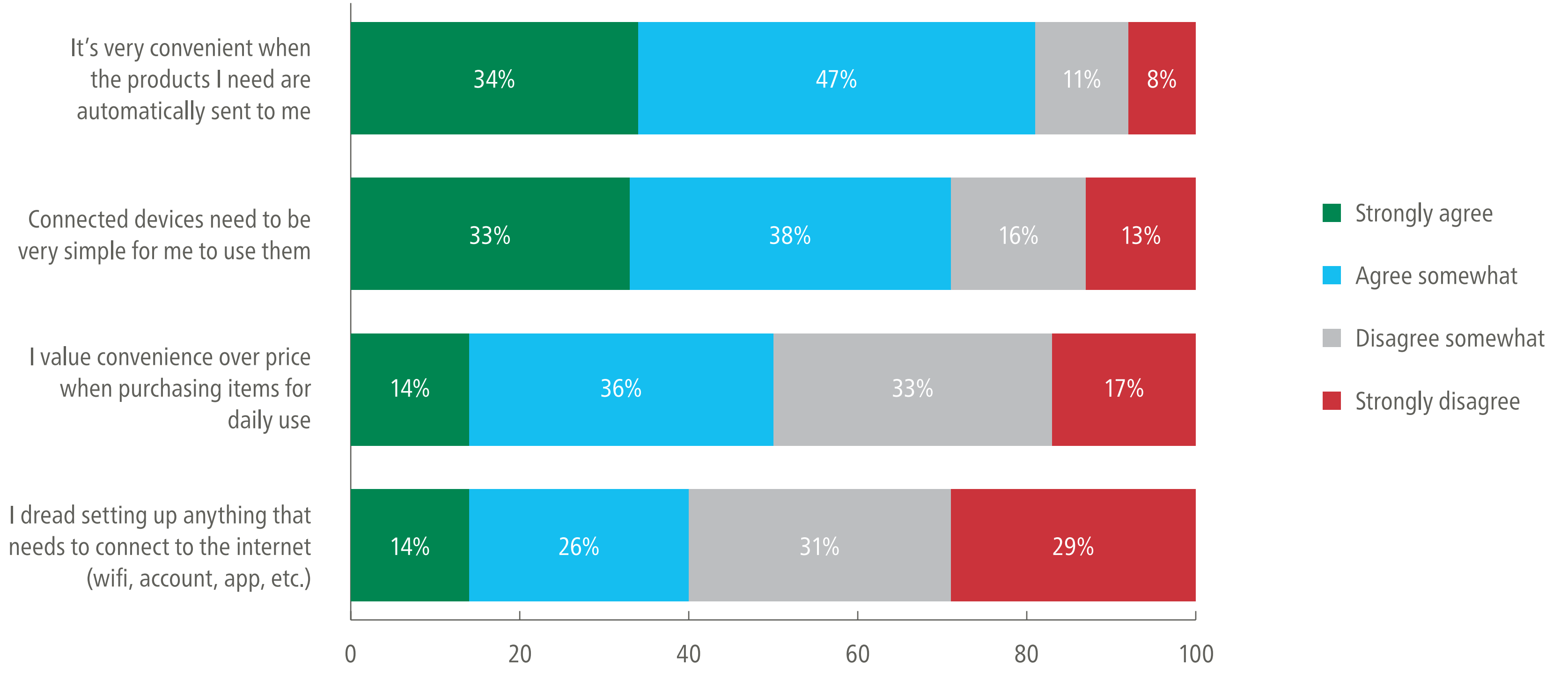


Extremely concerned | Very concerned | Somewhat concerned | Slightly concerned | Not concerned

OPINIONS ON VALUE AND PRICE ARE SPLIT

When shown some general statements, 81% agree that it's very convenient when the products they need are automatically sent to them. Another 71% 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. Finally, 40% of participants say they dread setting up anything that needs to connect to the internet—meaning that FMCGs must make smart packaging work seamlessly to introduce consumers to this new concept.

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



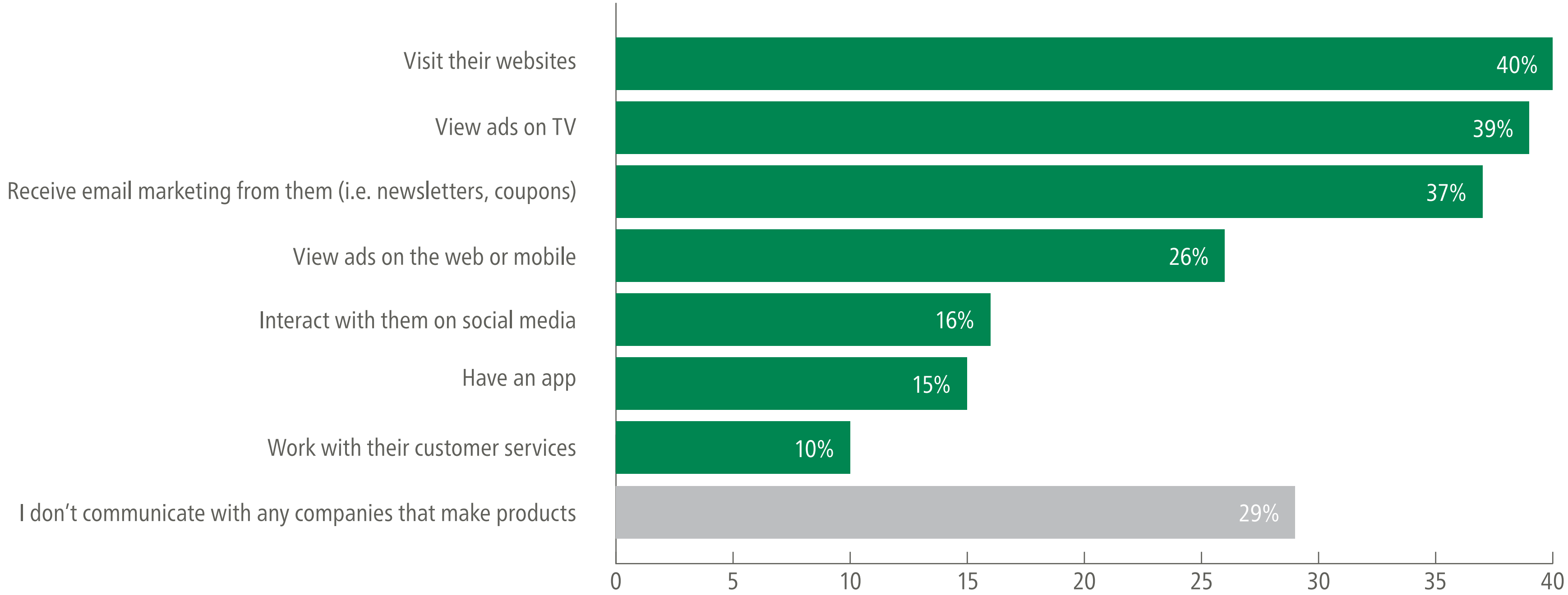
DIRECT-TO-CONSUMER COMMUNICATION PREFERENCES

71% REPORT THEY INTERACT WITH PRODUCT COMPANIES IN SOME WAY

Consumers have numerous opportunities to interact with the brands that make their favorite household staples. The top ways consumers interact these brands include visiting their websites, viewing ads on TV or receiving email marketing from them. Almost three out of 10 say they don't communicate or interact with any companies that make products.

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?

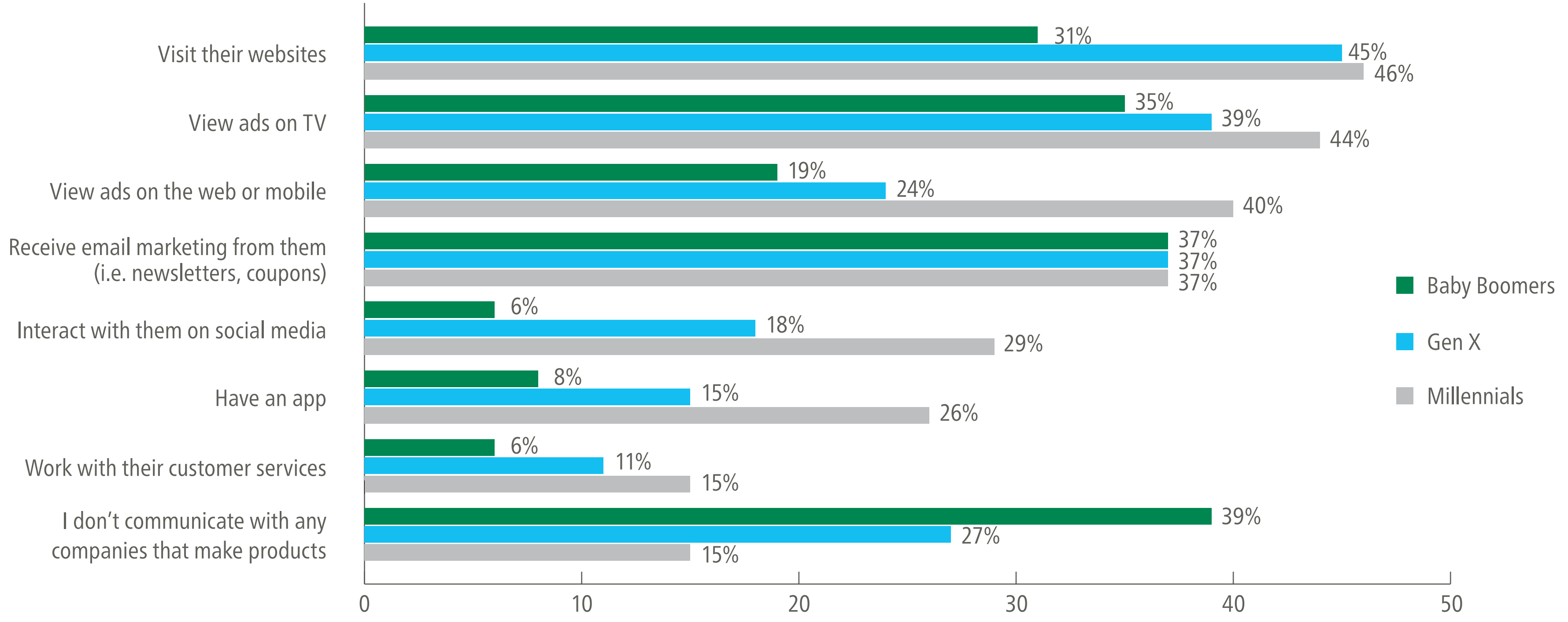
When answering this question think of who makes the product, not the store where you buy the product (i.e. think of Coca-Cola and Henkel, not Safeway or Amazon).



MILLENNIALS MORE LIKELY TO COMMUNICATE WITH PRODUCT BRANDS

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

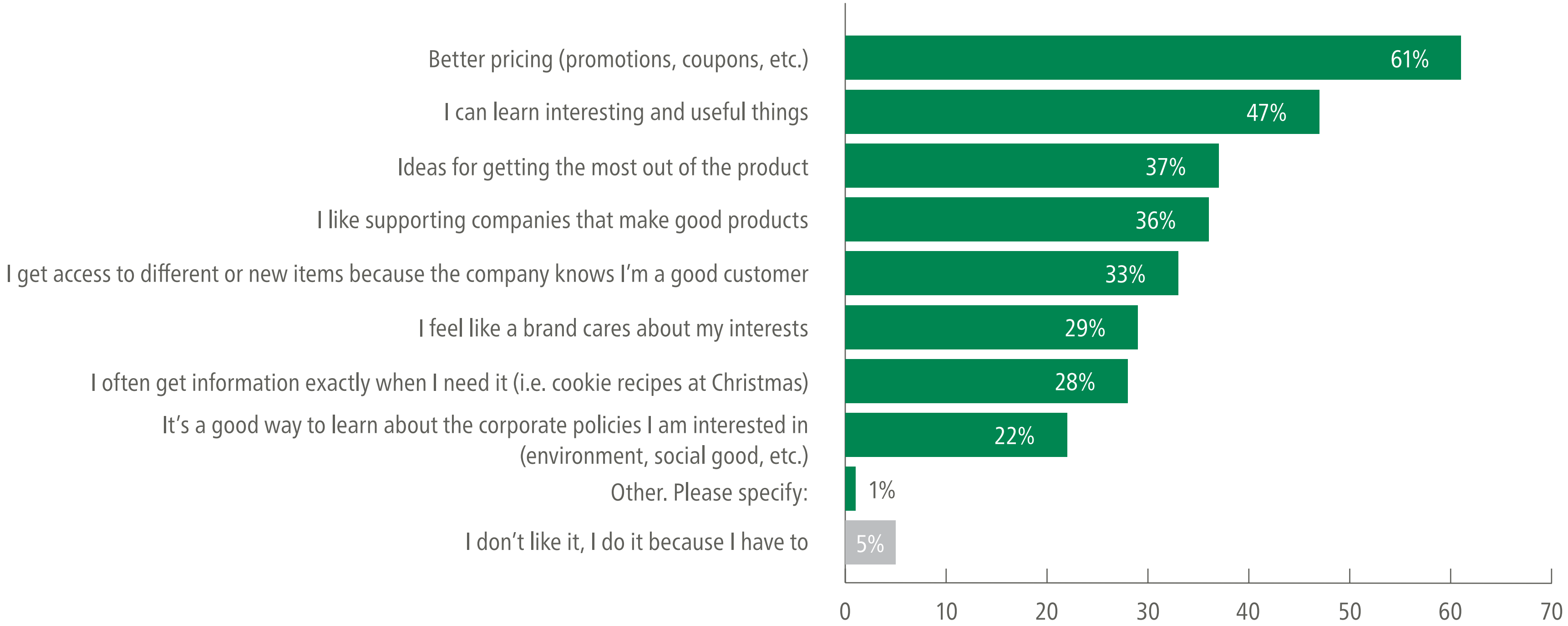


BETTER PRICING IS THE TOP BENEFIT OF COMMUNICATING DIRECTLY WITH PRODUCT BRANDS

Of those that communicate with brands that make products, the top three reasons they like communicating with them include better pricing, the opportunity to learn interesting and useful tips and ideas for getting the most out of the product.

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

n = communicate with companies that make products

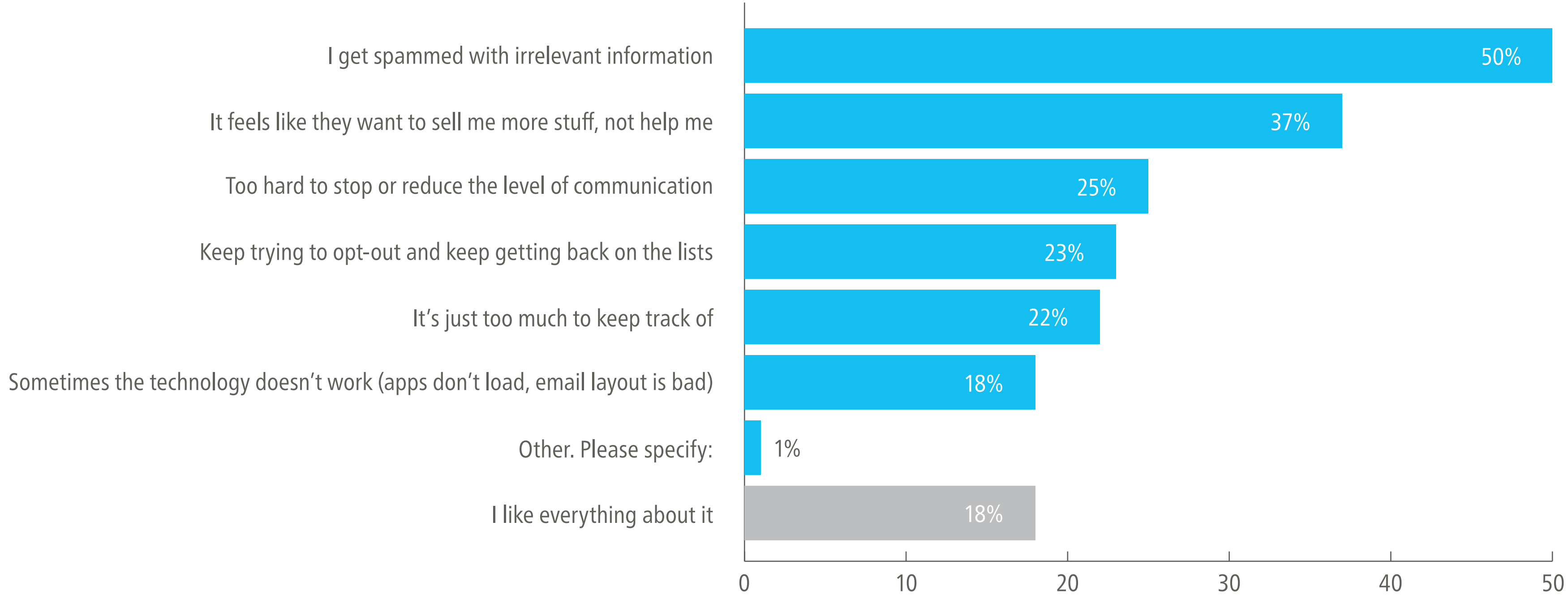


IRRELEVANT INFORMATION TOP LIST OF DISLIKES WHEN COMMUNICATING WITH PRODUCT BRANDS

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.

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

n = communicate with companies that make products

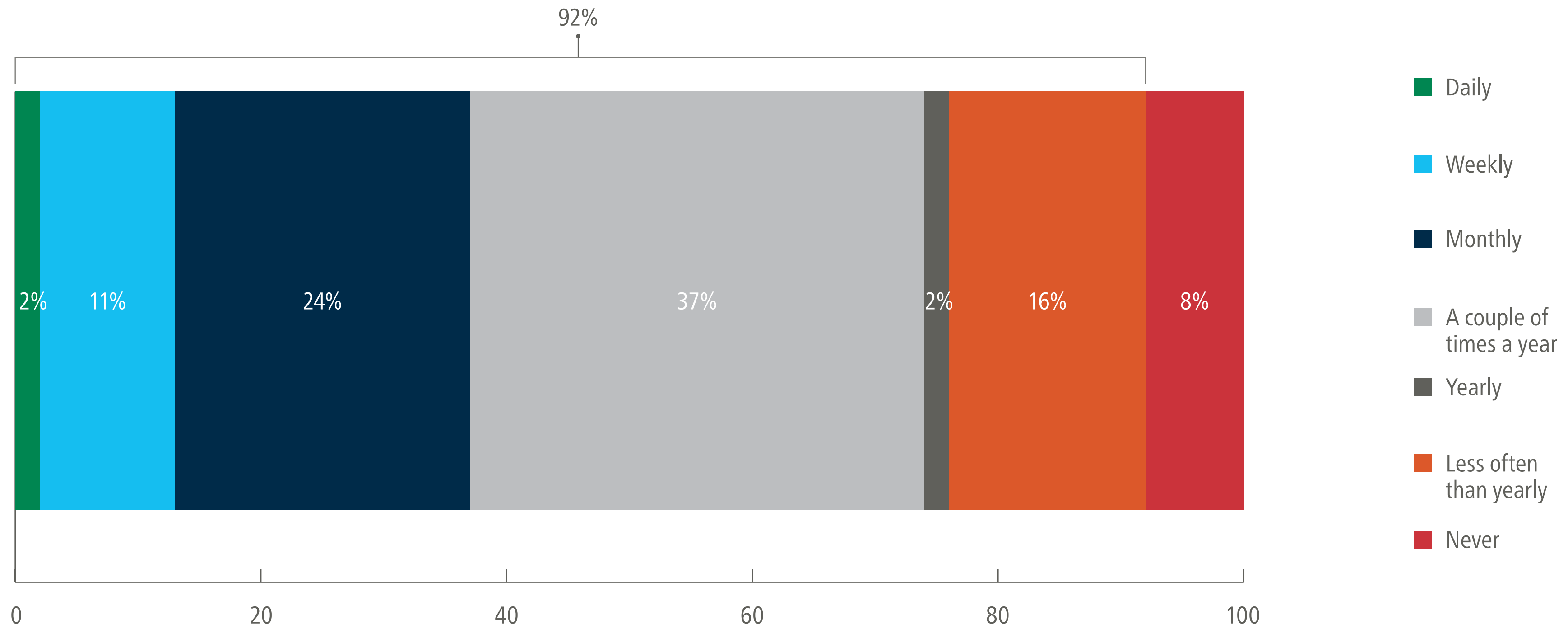


HOME INVENTORY MANAGEMENT CHALLENGES AND WISHES

92% MISTAKENLY BUY THINGS THEY ALREADY OWN

Nearly four of 10 participants say they buy something they already have on a monthly basis. This number jumps up to three out of four participants on a yearly basis. FMCGs have an opportunity to help solve this pain point for consumers through auto-replenishment or home inventory management services. Millennials are seven times more likely than baby boomers and nearly twice more likely than Gen X to purchase things they own on a weekly basis.

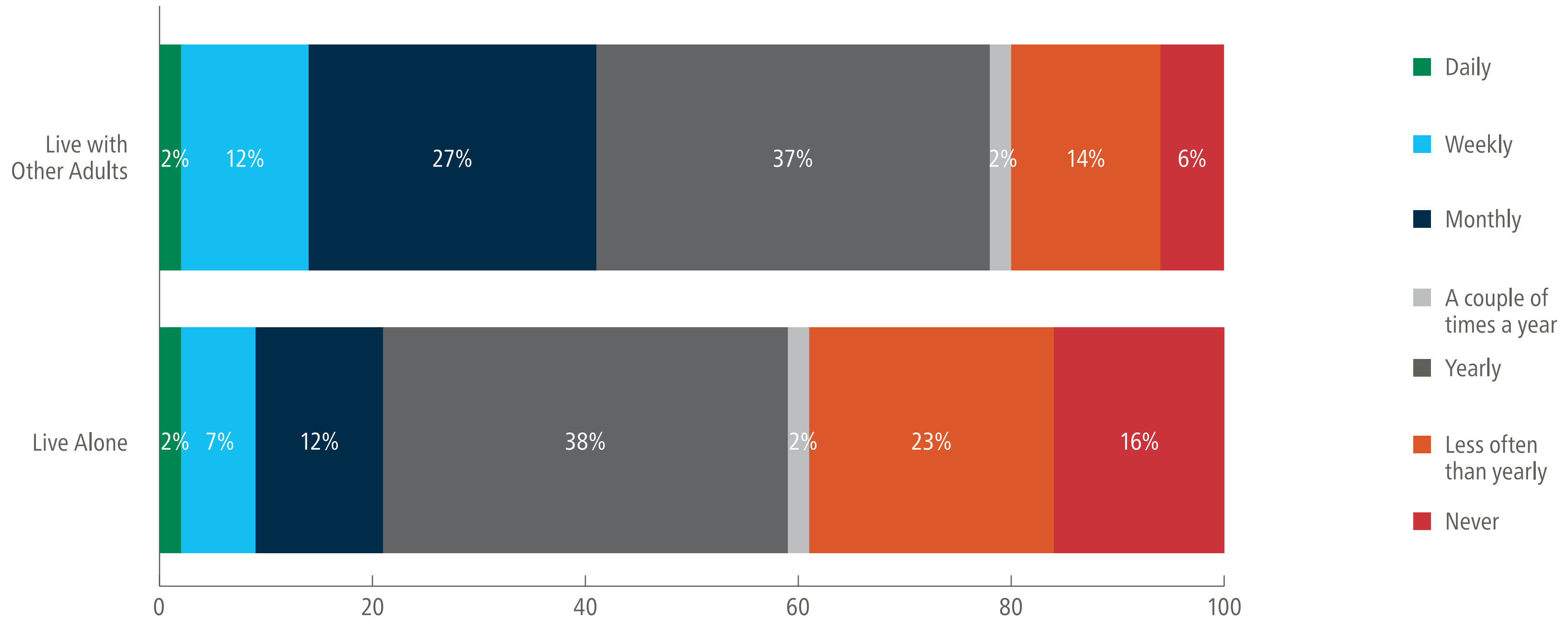
How frequently do you buy something you already have because you forgot that you had it or didn't know someone else in your household had bought it?



REPEAT PURCHASES HAPPEN EVEN TO THOSE THAT LIVE ALONE

Repeat buys don't happen just to those living with other adults. Six of 10 participants who live alone say they run into this issue on a yearly basis. But participants living with other adults are more than twice as likely to run into this issue on a monthly basis than those who live alone.

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?



ACCIDENTAL RE-PURCHASING COMES WITH A CLEAR DOWNSIDE

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 more 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.

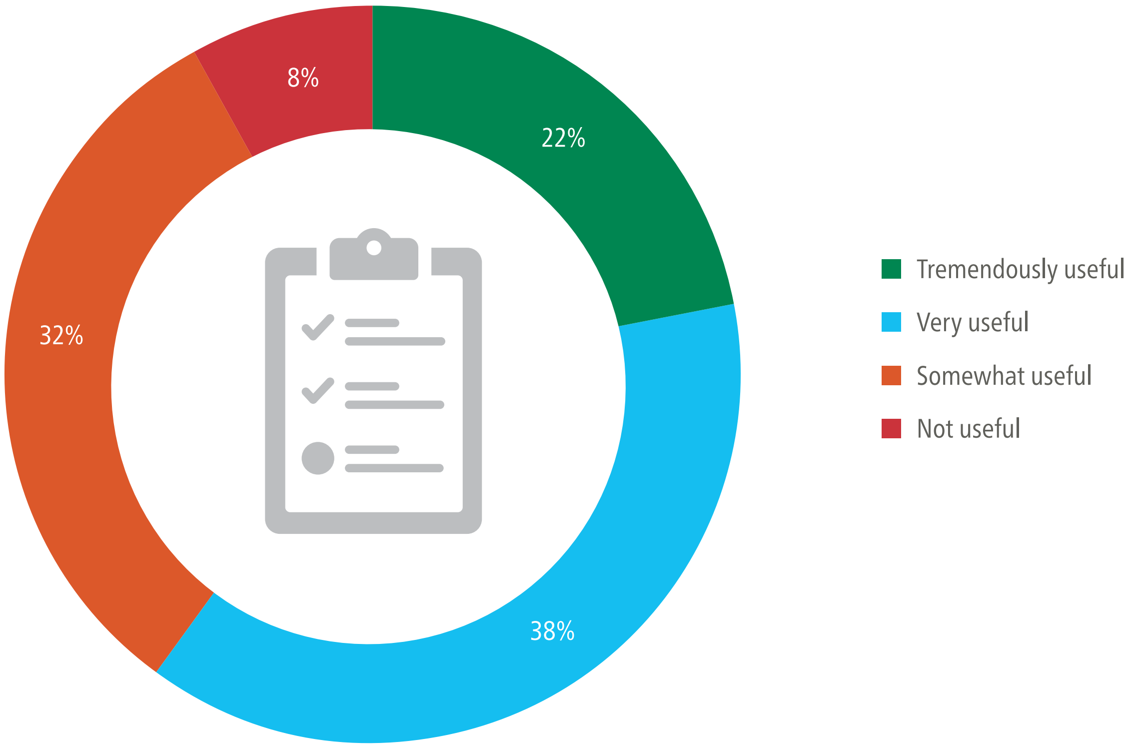
What has happened because you bought items that you already own? Choose all that apply.

n = Purchased something they already had

92% WOULD FIND AN UPDATED LIST OF WHAT THEY OWN USEFUL

More than nine in 10 participants say it would be useful to have an updated list of what they own. Once again, millennials are more than twice as likely than baby boomers to say a list would be tremendously useful.

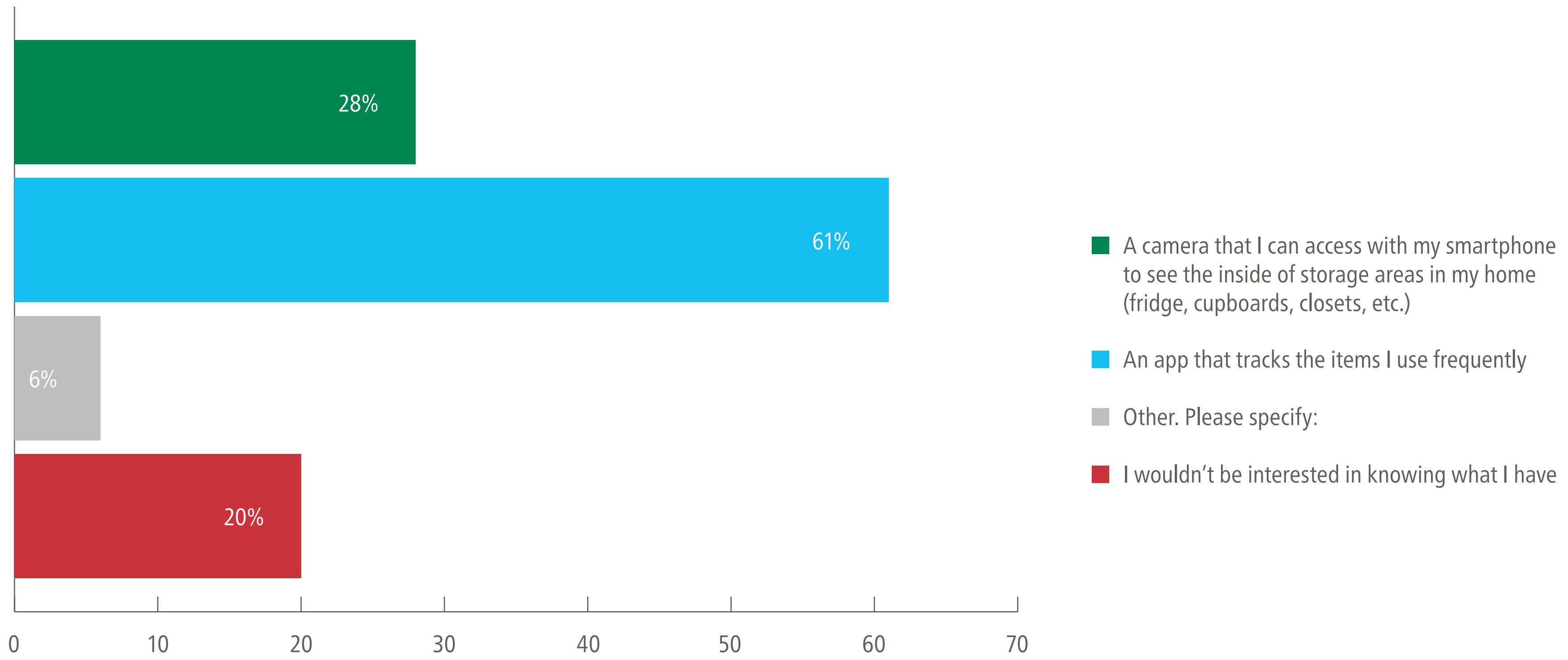
How useful would it be to have an updated list of what you currently have (i.e. items in your fridge, pantry, or bathroom cupboard) when you are shopping?



TRACKING APPS PREFERRED TO CAMERAS IN STORAGE SPACES

When out shopping, 61% of participants would prefer to refer to an application that tracks the items they use frequently in their home. Nearly 30% of respondents say they would prefer to have a camera they can access with their smartphone to see the inside of storage areas in their home. The most frequent "other" was a self-written paper or smartphone list, showing how manual this process can be currently.

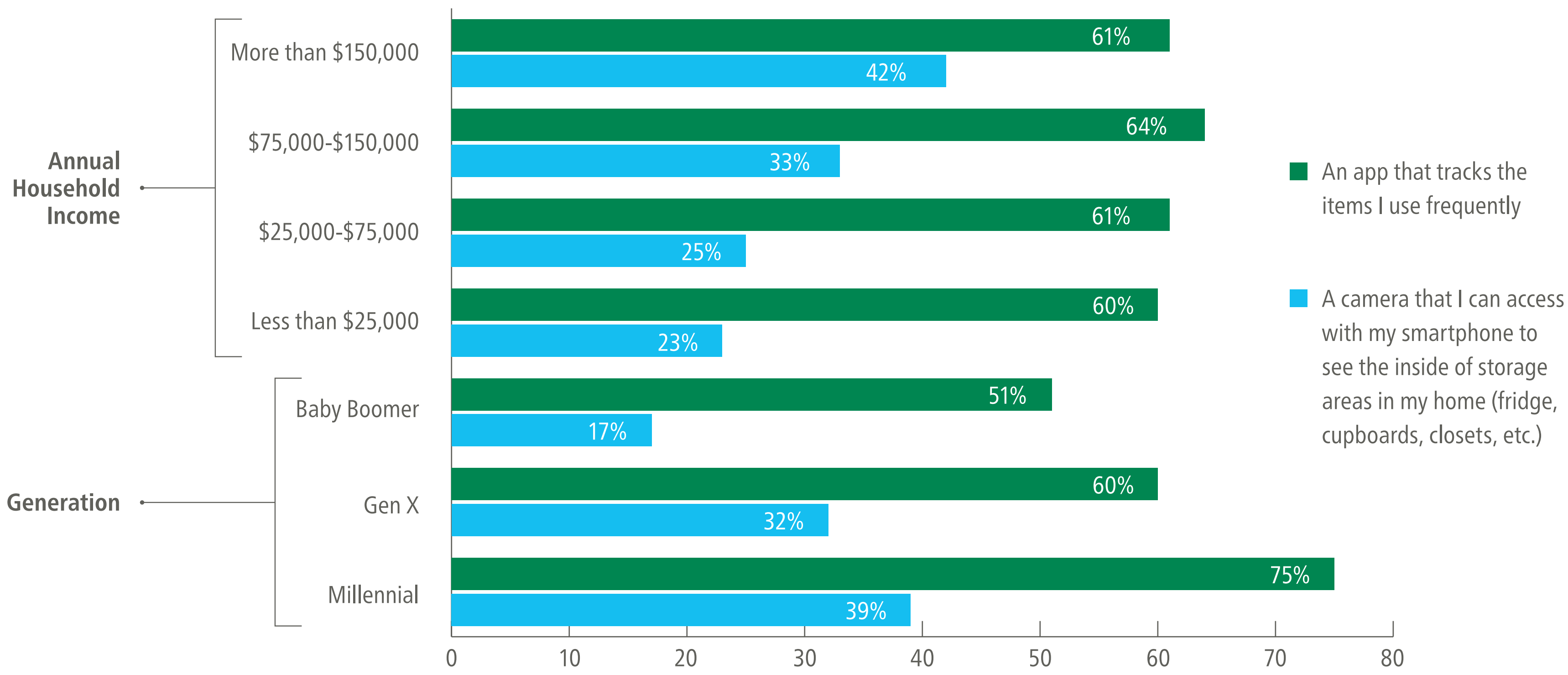
What method would you prefer for checking on items in your home when you are out shopping? Choose all that apply.

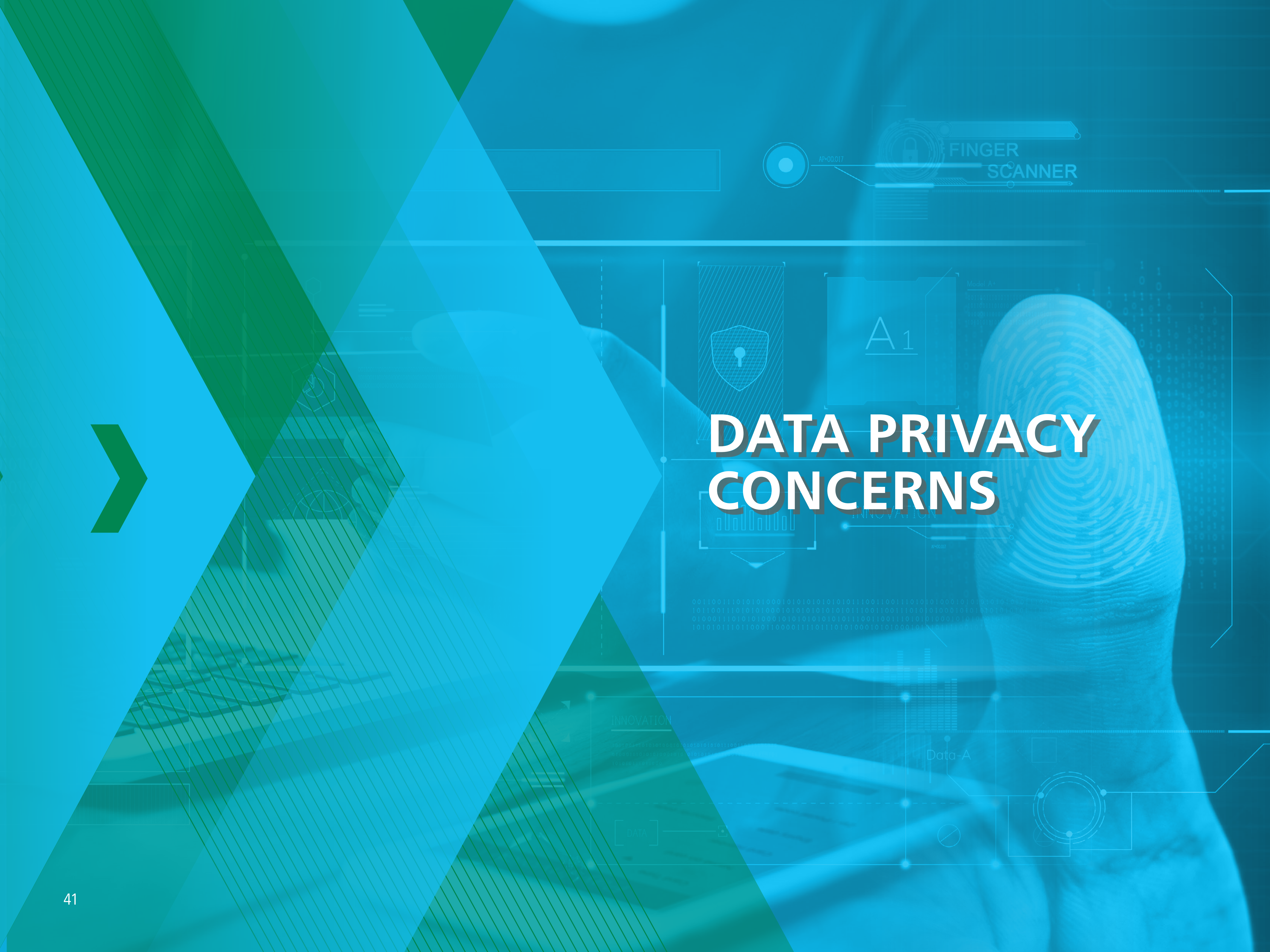


RESPONDENTS ARE MOST INTERESTED IN AN APP THAT TRACKS THE ITEMS THEY USE FREQUENTLY

Millennials are more than twice as likely to prefer cameras than baby boomers and high-income households are the most likely to choose this option. Three out of four millennials picked apps that track their product use compared to 60% of Gen X and 51% of baby boomers.

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



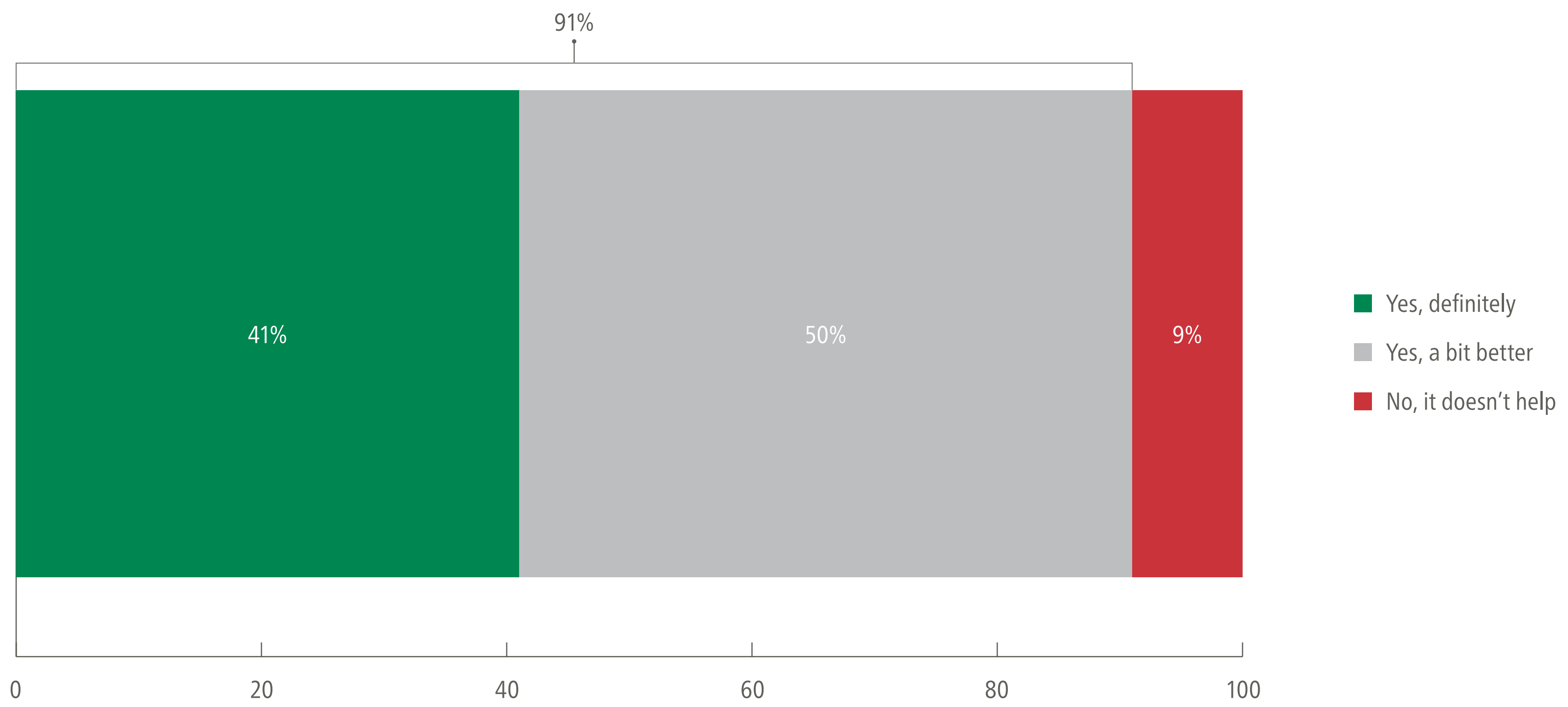


DATA PRIVACY CONCERNS

91% OF CONSUMERS UNDERSTAND THAT USER DATA HELPS CREATE BETTER PRODUCTS

There is widespread agreement that product brands could deliver better user experiences if they understood exactly how consumers use their products.

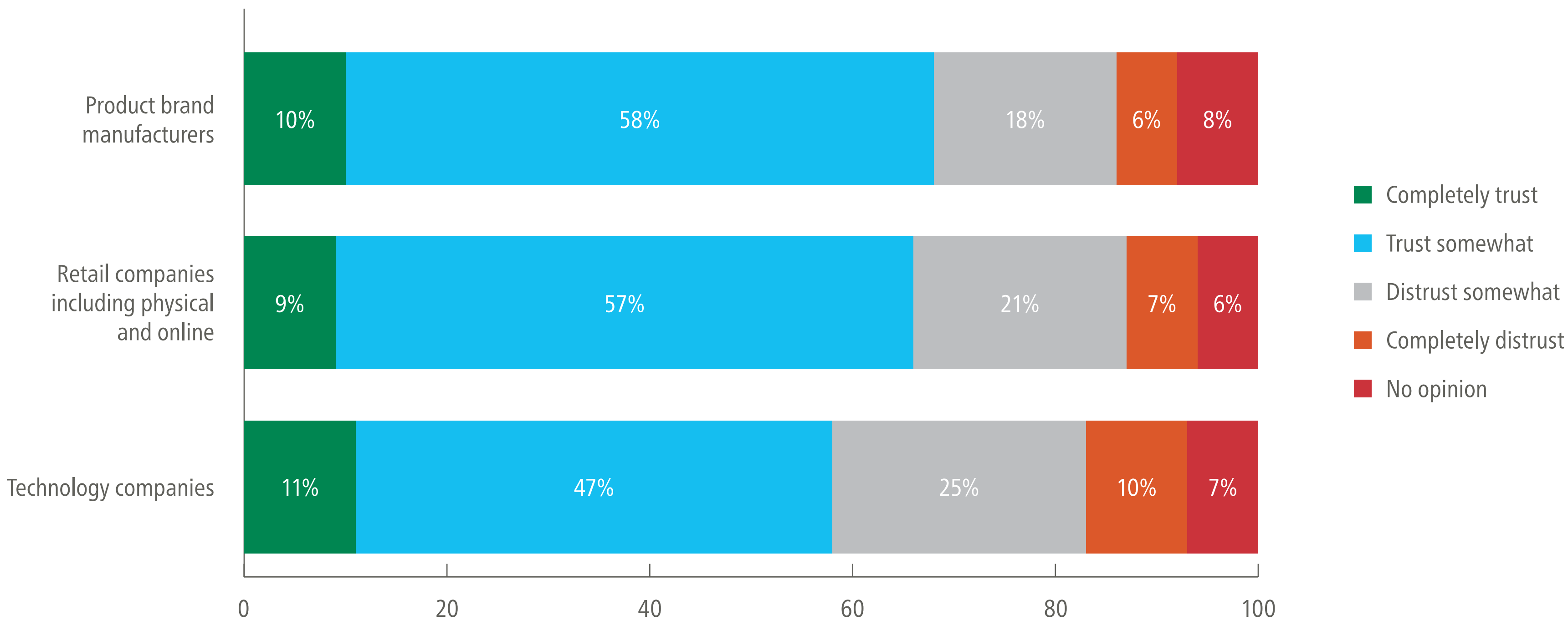
Do you think product brand manufacturers could create better user experiences if they understood exactly how customers use their products in real life?



PRODUCT BRAND COMPANIES MORE TRUSTED THAN TECH COMPANIES WITH USER DATA

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

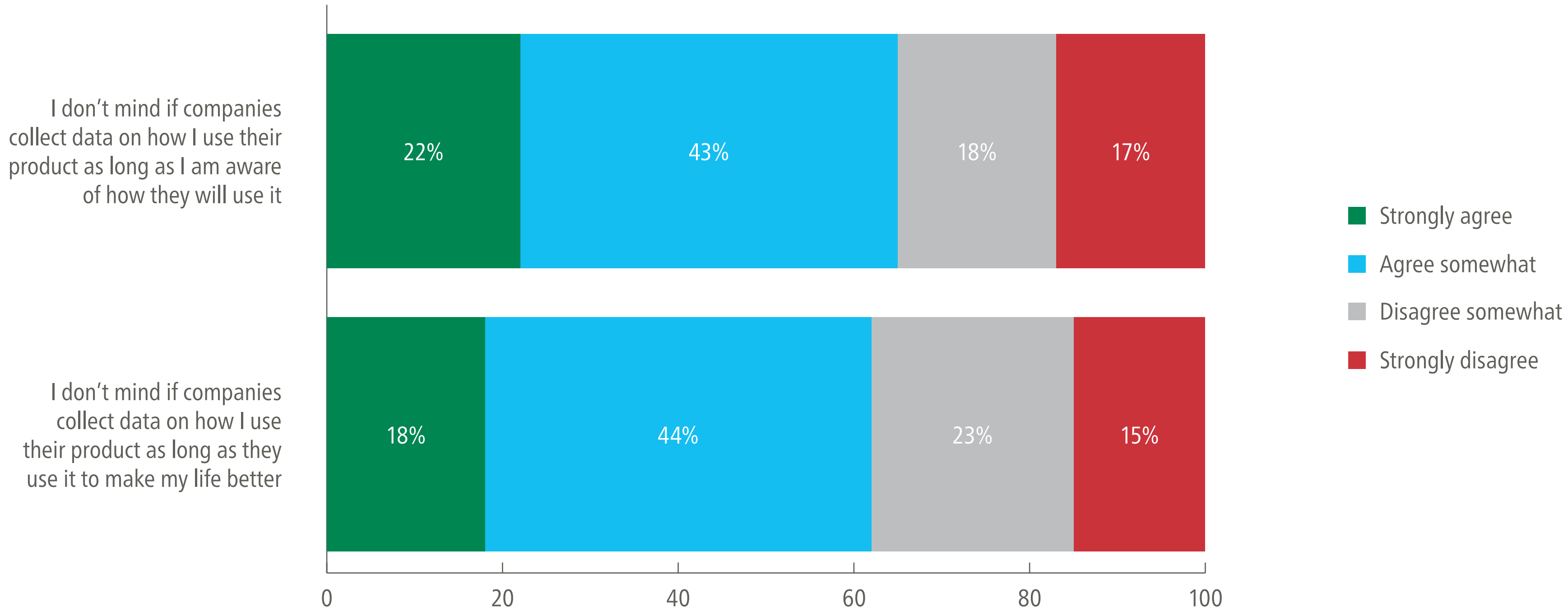
How much do you trust each of the following kinds of company with personal data including order history, specific product use data, and customer communications?



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

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.

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



SURVEY METHOD AND PARTICIPANTS

Research Goal

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

Methodology

Independent sources of online shoppers invited to participate in an online survey. 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.

Participants

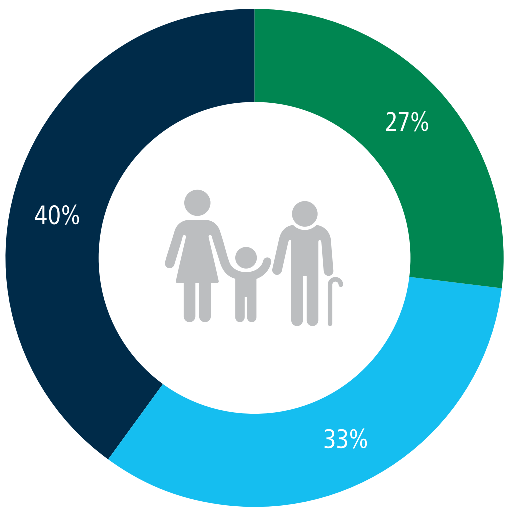
A total of 1,047 qualified individuals from the United States completed the survey. All meet the following criteria:

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

Please note that participants were specifically chosen for high level of online purchasing and technology use. Findings are not representative of trends across all consumers.

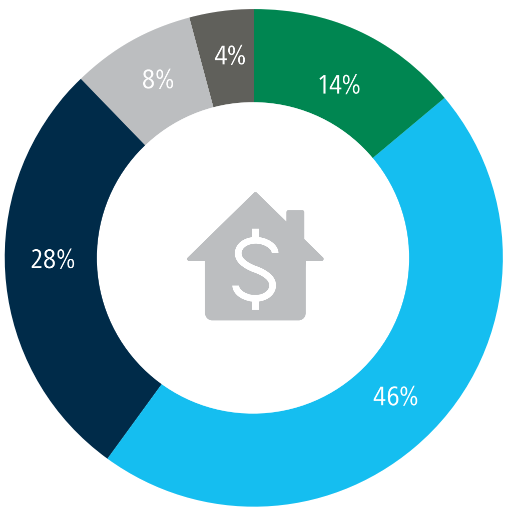
SURVEY METHOD AND PARTICIPANTS

Age



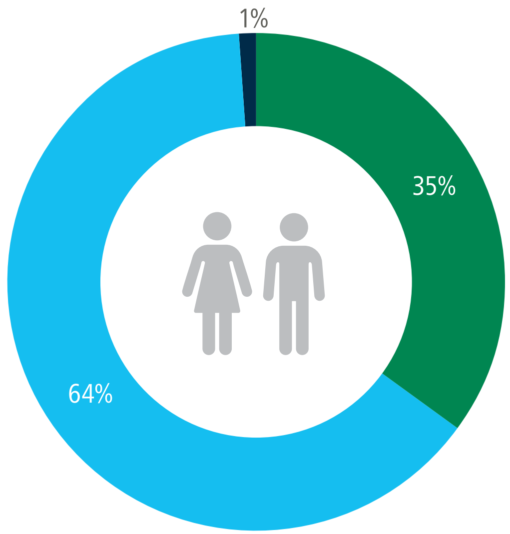
- Millennial (Younger than 38)
- Gen X (39 – 55)
- Baby Boomers (Older than 55)

Annual Household Income



- Less than $25,000
- $25,000 - $75,000
- $75,000 - $150,000
- Over $150,000
- Prefer not to say

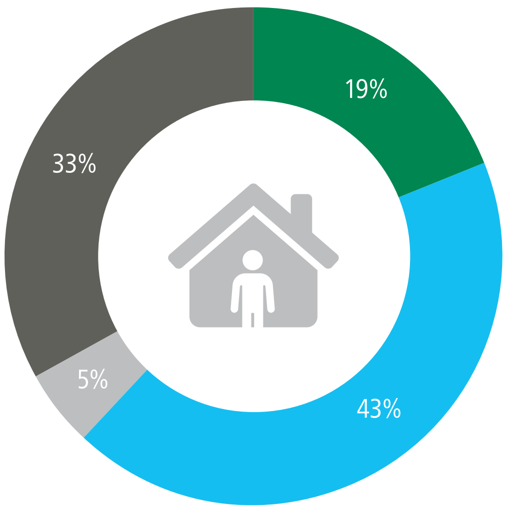
Gender



- Male
- Female
- Non-conforming

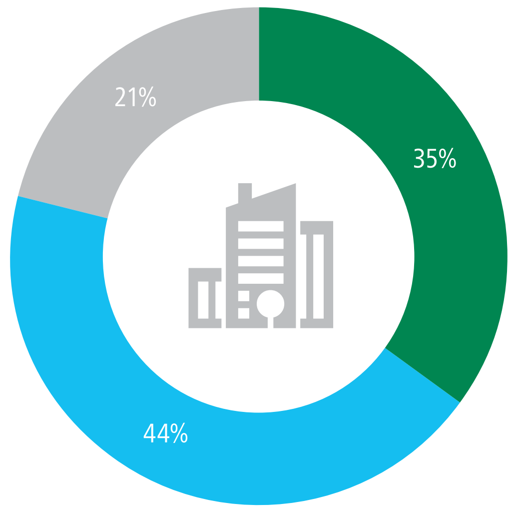
SURVEY METHOD AND PARTICIPANTS

Household Composition



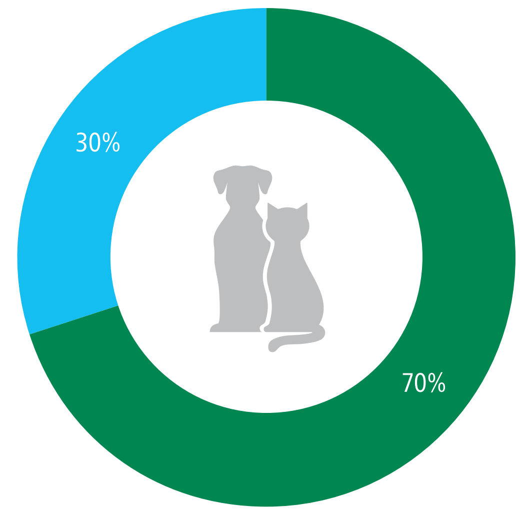
- I live alone
- With other adults only
- With children only
- With both adults and children

Living Environment



- Major metropolitan area
- Smaller city or other urban area
- Rural

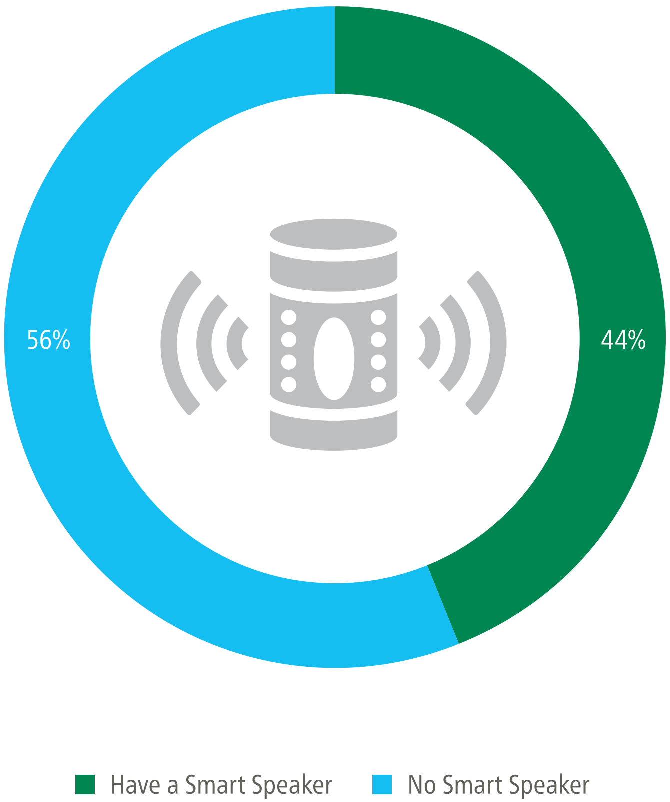
Pet Ownership



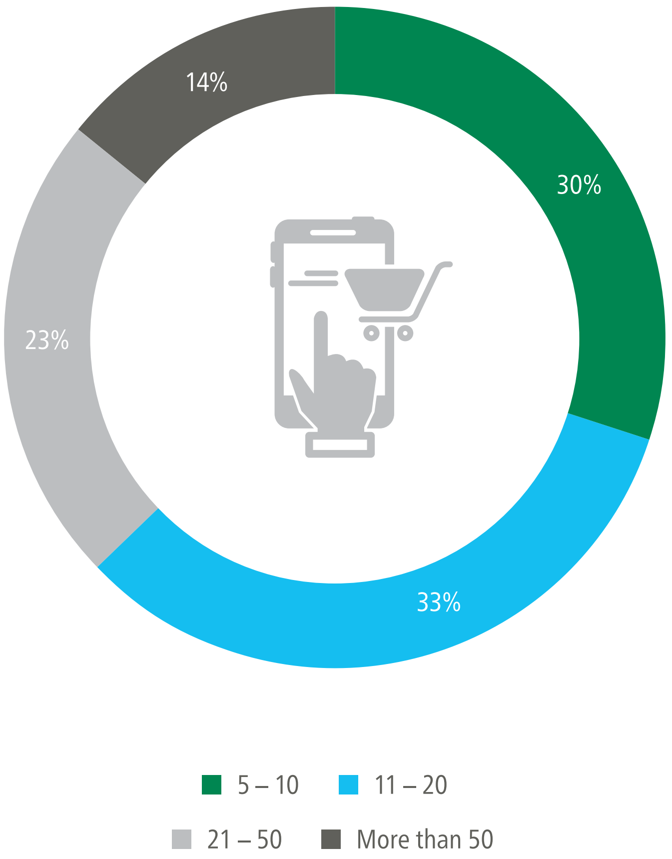
- Pet Owner
- Not a Pet Owner

SURVEY METHOD AND PARTICIPANTS

Smart Speaker Ownership



Approximate Number of Online Product Purchases in the Past 12 Months



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 buyers journey any more. Buyers are calling the shots.

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

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Dimensional Research® provides practical market research for technology companies. We partner with our clients to deliver actionable information that reduces risks, increases customer satisfaction, and grows the business. Our researchers are experts in the applications, devices, and infrastructure used by modern businesses and their customers.

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