Digital consumer behavior

How technology, the pandemic, and changing consumer sentiment will transform the fashion marketplace

AVERY DENNISON

GWI.

In this report

Click the dots to navigate

Glossary of terms

Digital 'triggers' or 'touchpoints' in this paper refers to interactive data exchange technology including:

QR

Quick Response (QR) codes have become a go-to method for accessing information and creating contactless payment experiences that customers have now come to expect. A QR code can be scanned either with an app or directly with a smartphone camera.

NFC

Near Field Communication (NFC) technology allows wireless communication between two compliant devices up to 10 centimeters apart. Thanks to the deployment of NFC in smartphones, this technology is widely accessible and offers seamless access to information with a simple tapping motion by the user.

Bluetooth

Bluetooth is powered by harvesting radio frequency energy from its surroundings and can be applied to products, labels, and packaging for data exchange between existing Bluetooth devices.

RFID

Radio Frequency Identification (RFID) is a type of tracking system that uses smart tags or labels to identify items. Data is captured by a reader via radio waves. Predominantly used in a retail or supply chain environment, its use-cases span from inventory management to tracking vehicles.

Foreword

by
MICHAEL HU
Director, Digital Solutions,
Avery Dennison, Retail Branding
and Information Solutions

In a world in which our interactions with digital channels continue to grow and evolve, fashion shoppers are faced with a great deal of influences when it comes to purchasing behavior. Meanwhile, brands and retailers are tasked with rethinking the retail environment and the role of digital in response to COVID-19 disruptions in order to meet the needs of their audiences. Continued shifts in consumer demand and expectations have led to an emphasis on direct-to-consumer selling-inviting new ways of engaging with audiences that are exciting, compelling and differentiating. Through our partnership with GWI, we set out to discover the driving forces of consumer attitudes and desires, and the implications this may have going forward.

Growing concerns about environmental challenges, as well as heightened expectations around societal issues, have brought sustainability to the forefront for both consumers and businesses. Recognising that consumer behavior is integral to driving change, we are reassured that the research in this paper shows that sustainability, eco-friendliness, and transparent product information are key priorities for fashion buyers. Yet while there is undoubtedly a paradigm shift in consumer awareness for social and environmental change, there is work to be done by those who lack the data to share accurate and actionable information about their products and second life opportunities. What's more, providing enhanced, personalized benefits that speak to an individual's values is seemingly a surefire way to build brand loyalty and trust.

As digital continues to advance at a rapid pace, the apparel industry is challenged to become more forward-thinking, responsive, and agile than ever before. Avery Dennison is at the forefront of this transformation, bringing innovation to both product and process-driven operations. Our holistic approach to digital solutions is designed to enable traceability and efficiency, powered by digitized triggers, cloud-based data systems, and applications that add value for all stakeholders. It is fascinating and motivating for us to delve deeper into consumer behavioral insights as a means of connecting the dots between supply chain, consumer use, and enabling circularity.

by
CHASE BUCKLE
Head of Global Trends,
GWI

At GWI, we're always trying to understand and predict consumer trends - whether that means where people get their news from, what they think about brands, and, of course, how they shop. But that's easier said than done - the most predictable thing about consumer behavior, perhaps, is that it's always changing.

Never has that been more true than over the past 18 months, as a global pandemic upended everything we knew about the world.

Now, we're making sense of a new reality that is pushing consumers into exponential rather than linear change. Trends that were already in motion have been kicked into overdrive. This is especially the case when it comes to things like technology and retail, and it raises many important questions for what that means for the future.

Consumers overwhelmingly turned to online shopping during the pandemic, for example; but to what extent will that last? Many who were hesitant to use things like QR codes and mobile payment apps quickly embraced these solutions - so what happens now that we've stepped out of our technology comfort zone?

When it comes to the new reality, it's very difficult to truly say what comes next. But research can help us make predictions by understanding consumer sentiment and intention. That's why we've partnered with Avery Dennison on this report. Together, we've explored some of the big questions around the changing consumer purchase journey, the impact of technology, and the future of retail more broadly. No matter what their role in the supply chain, companies are having to consider all of these factors and adapt. We hope the insights in this report can help.

Key insights

Connecting offline and online retail experiences is now crucial

The retail landscape is shifting. While there is huge movement toward ecommerce, few consumers are willing to give up the physical storefront entirely- their optimal way to shop is through a mix of both. To remain relevant, physical retail locations need to adapt by building better links between online and offline touchpoints. For fashion buyers, this will be a welcome future, as these consumers are very receptive to solutions that improve the physical retail experience. This is particularly true for anything that enhances convenience.

Integrating technology solutions end-to-end adds value for consumers

Technology solutions like QR codes, RFID or NFC add value for every stakeholder in the product's lifecycle, including the end buyer. This is not just hypothetical; consumers themselves say they would be more likely to visit physical stores if they could benefit from digital services and experiences. And the time is right to embrace these, as the pandemic has accelerated consumer adoption and comfort levels with the technology behind digital touchpoints.

Consumer demands for sustainability, transparency, and circularity underscore the need for this technology

Sustainability has become a key priority for buyers in more recent years as climate degradation worsens and issues around ethical labor come to light. Fashion buyers, especially, have high expectations from brands in driving sustainability forward, and are increasingly asking for transparency in how their products are manufactured and shipped. The technology behind item-level ID solutions is equipped to meet these expectations head on. Without these, only a fraction of the lifecycle of a fashion product would be accounted for and visible to stakeholders and customers in the fashion supply chain.

ID-level solutions facilitate product repair, recycling, resale, and rental exchange

Consumer interest in sustainable fashion practices, such as repairing, recycling, and reselling their fashion items, or in renting vs. buying, has skyrocketed in recent years. The growth in consignment and fashion rental platforms is proof of this. Now, buyers have a clear expectation that brands take an active role in enabling these latter lifecycle activities. ID-level solutions are ideal to facilitate this, offering buyers the relevant information they need, providing product authentication details, and allowing for verified secondary market purchases to happen. Without these tools to help facilitate the growing resale economy, the fashion industry leaves a huge amount of value on the table.

01

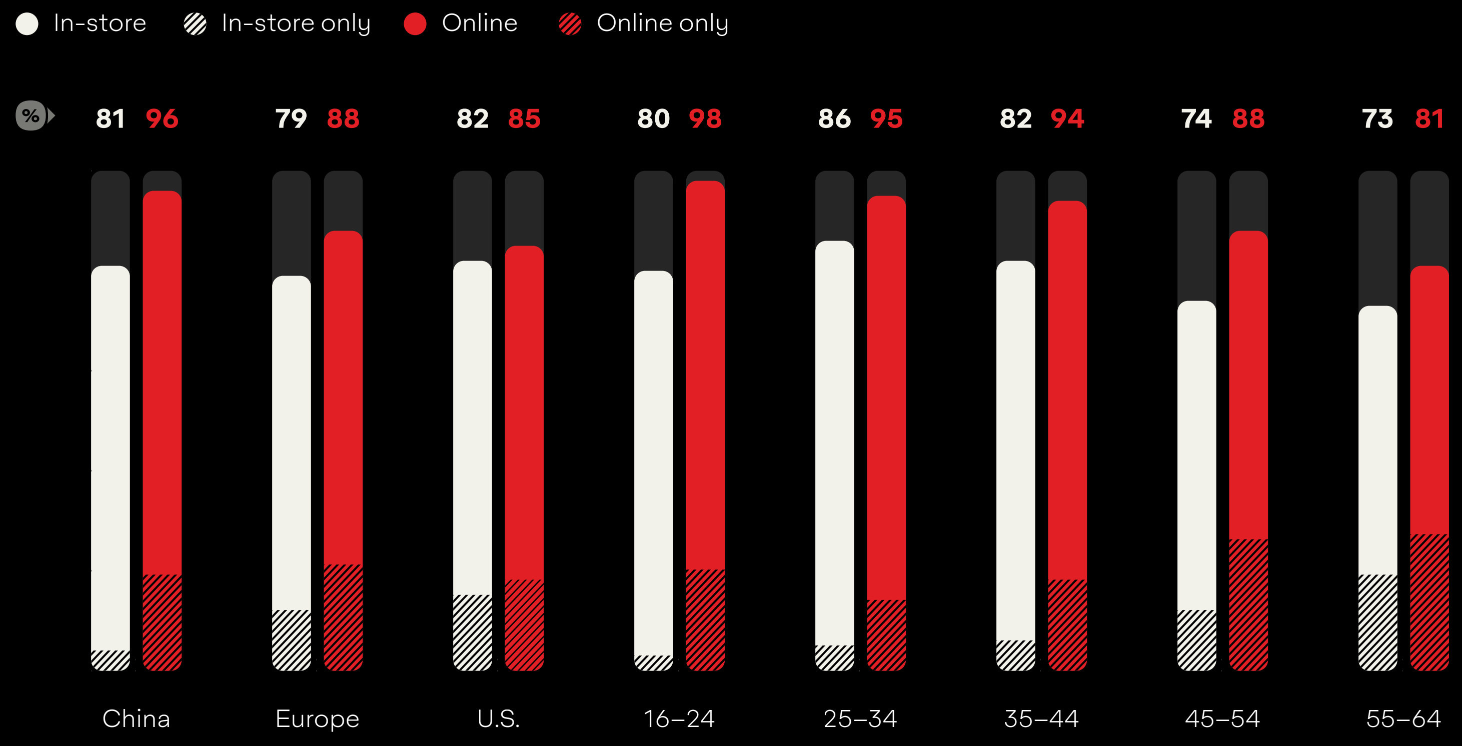
The future of retail

Using one purchase channel doesn't lead to the exclusion of the other; buyers seek a mix of options

Fashion buyers seek a mix of online/in-store channels

1

% who have purchased clothing, shoes, or accessories through the following channels



GWI Custom Study 2021

5,056 fashion buyers in the U.S., UK, France, Germany & China aged 16–64

The online/offline balance shifts

Fashion retailers grappling to understand a post-pandemic reality often come back to a fundamental question: what will be the balance of in-store vs. online shopping in the future? In our study of fashion buyers, we sought some insight into this by asking consumers how they typically shopped for apparel and accessories, as well as how they expect to shop for these items once the pandemic is under control.

One of the key insights we found was that, despite a huge movement toward online shopping, in-store purchases in categories like clothing, shoes, and accessories (jewelry, handbags, etc.) remained quite strong. In certain markets, notably France, consumers actually reported buying more of these types of products *in-store* vs. online recently.

What's also clear from our results is that fashion buyers gravitate toward a mix of online and in-store: using one channel doesn't lead to the exclusion of the other. For example, while 85% of U.S. consumers surveyed said they had purchased fashion items in-store, only 15% reported they had purchased items in-store *only*. Similarly, while 96% of Chinese buyers were purchasing goods online, just 19% said they did so *exclusively* online.

Looking at future shopping intent further validates this idea that consumers will continue to want a mix, but there are interesting demographic nuances to consider.

Using self-reported shopper data on buying mainly online, mainly in-store, or a mix of both, we created a composite score to visualize which way the pendulum was swinging – and how significantly. The results show considerable variation by both region and age. U.S. shoppers fall on the positive side of the scale for both pre-pandemic buying (0.26) and buying intent post-pandemic (0.14): this indicates that they're generally more inclined to shop in-store – though less so than they used to be. China's score reveals the complete opposite: at -0.47 for future intent, it shows a dramatic swing online. Europe, meanwhile, falls in fairly neutral territory, indicating the offline/online mix will likely be the most equitable there.

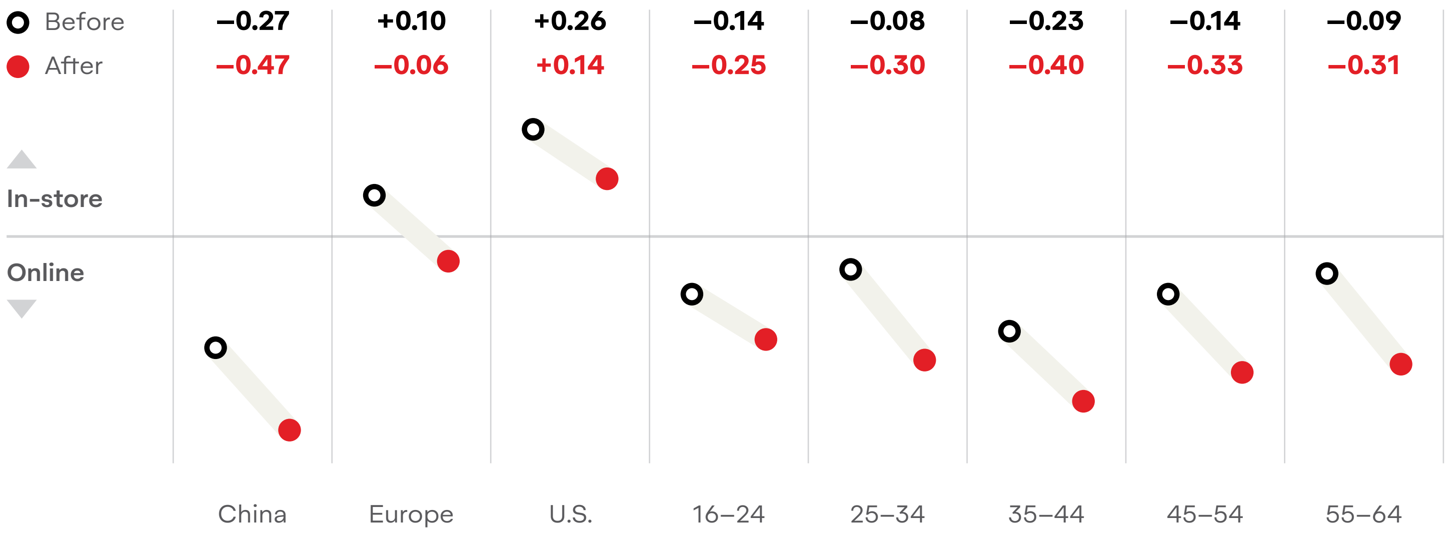
Another notable insight is the age difference. The biggest swings from in-store to online we saw in our research came from older age groups, whose overall adoption technology was accelerated by the pandemic.

On the whole, however, scores across the board tend to hover close to zero. This indicates that, rather than seeking one extreme or the other, shoppers globally will continue to want a mix of options.

Shopping behaviors: pre- versus- post-pandemic

2

Average score (–2 shop mainly online, 0 use a mix of both, +2 shop mainly in-store)



% of those who mainly shopped the following ways pre-pandemic who plan on shopping these ways post-pandemic

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The role of in-store

To remain relevant in this changed environment, physical retail locations need to adapt by building better links between online and offline touchpoints. Omni-channel retail is not new; but, since the pandemic, online channels have taken on new meaning in the shopping journey, especially among countries and demographics where the biggest shifts toward digital have happened. Now is the time to reimagine omni-channel, where elements of the physical storefront connect to the online discovery, purchase, and advocacy experiences in new ways facilitated by technology.

Through our study, we've found fashion buyers to be very receptive to solutions that improve the physical retail experience. Across the countries we surveyed, buyers said they want the physical retail experience to be improved through convenient, frictionless payment and delivery options. Three-quarters of fashion shoppers want retailers to offer up more solutions, with self checkout (32%), curbside pickup (26%), and mobile payment compatibility (22%) topping the list. Much of this is borne out of safety concerns or convenience, or a mixture of both.

Many fashion retailers during the pandemic have encountered logistical challenges when reconciling fulfilment between online and in-store orders, and this data paints a very clear picture of how prevalent omni-channel shopping will be looking ahead. Digital ID technologies and smart labeling of apparel and footwear are being used by **innovative companies** to gain greater visibility and inventory accuracy.

Alongside this demand for fulfilment on the consumer's terms is a desire for more digital touchpoints within the store itself, especially among younger age groups. Between one-fifth and one-quarter of 16-44s in these countries say QR codes in-store providing product information or payment would improve the retail experience. This stands in contrast to older groups who place more emphasis on getting in and out of the store as quickly and safely as possible, particularly through frictionless in-store options like **self-checkouts**.

Fashion buyers want retailers to improve the in-store experience through convenient, frictionless payment and delivery options

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Ways of improving the retail experience

3

% of consumers who say they want stores and retailers to offer the following

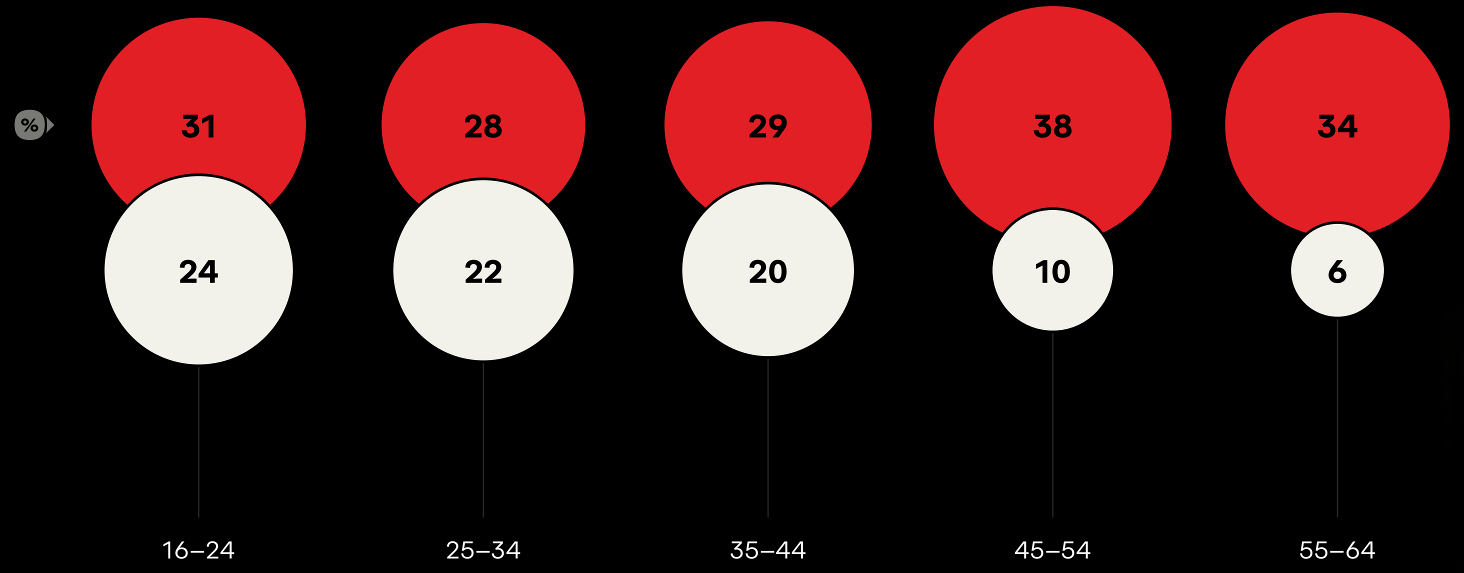
QR codes providing product info improves the retail experience for younger shoppers

Age trends

4

% of consumers who say they want stores and retailers to offer the following

Self-checkout QR codes in-store



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02

Digital consumer engagement

Over 90% of shoppers want technology-based solutions to improve their retail experience

Technology benefits all stakeholders from in-store to post-purchase

How successfully these retail improvements are implemented depends on the versatility of the technology behind them. Whether it's frictionless touchpoints improving the in-store experience, or digital labels for consumer interaction post-purchase, technology solutions like QR codes, RFID, or NFC can add value for every stakeholder in the product's lifecycle.

This is not just hypothetical, the benefits brought by this technology are important drivers of in-store footfall according to fashion buyers themselves. Over half of global shoppers we surveyed said that receiving a personalized offer on their phone that they can use in-store would increase their likelihood of visiting a physical shop. Similarly, 44% said the same thing about digital experiences in-store (such as the ability to scan a QR code for product information), and 40% said that connected/smart fitting rooms would motivate them to visit. Only 9% of shoppers were apathetic to these types of technology solutions, indicating the mass appeal that retailers can likely expect if they were to integrate more of these solutions into their infrastructure.

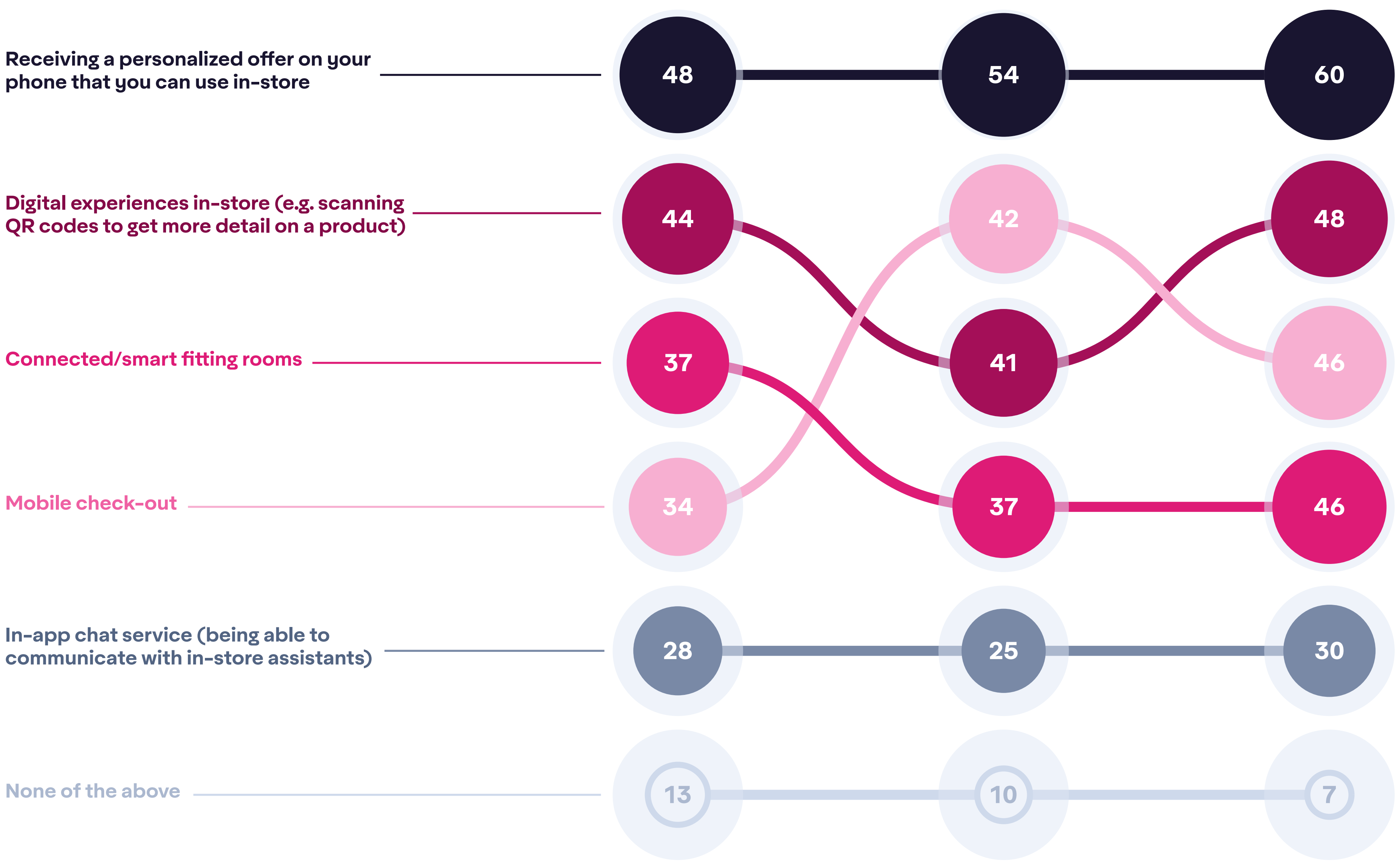
Breaking the results out between fashion buyers who plan to shop differently following the pandemic provides some additional insight. It's actually those who plan to shop mainly online that are most receptive to technology solutions that might drive them in-store. For example, 60% of predominantly online intenders are interested in personalized mobile offers to drive them in-store vs. 48% of those who planned to mostly shop in-store to begin with.

The key message here is somewhat ironic: digitally-enabled store experiences might actually have the most impact among the very people who physical retailers are most at risk of losing due to the pandemic. Brands and retailers must meet their customers online even if they want to get them offline.

Technology-based solutions can increase shopper engagement through the purchase journey and beyond

Driving footfall in-store

% of fashion buyers in each group who say these would increase their likelihood of visiting a physical retail store post-pandemic



5

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40% of fashion buyers in the U.S. and Europe say they feel more comfortable using QR codes since the pandemic

Engagement with digital interaction tools

Comfort levels with the technology behind these digital touchpoints have vastly improved thanks to the pandemic. The U.S. and European countries have witnessed the greatest improvement. Over the course of 2020, for example, monthly usage of QR codes rose by as much as 50% in the UK and by nearly 20% in the U.S. Mobile payment usage also became more popular, rising by 13% in the U.S.

This helps explain why around 40% of fashion buyers in these countries say they feel more comfortable using QR codes since the pandemic, with a similar proportion believing triggers like QR codes and NFC taps are easy ways of opening digital experiences.

Although these figures stand well below those seen in China, it's worth remembering that such digital tools, in particular QR codes, have a long commercial history in China. Also, these Western countries have older skewing populations, impacting attitudes and behaviors toward technology. Rebase these metrics among Gen Z and millennials and we see significantly greater comfort and usage of digital tools and experiences.

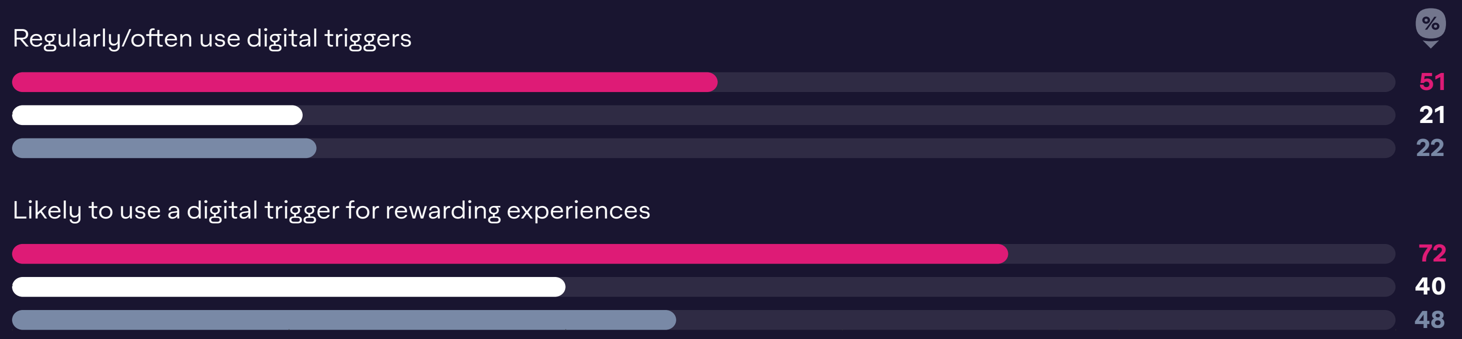
Attitudes toward digital triggers

6

% of fashion buyers who say the following

Usage of digital triggers

% of fashion buyers who do/say the following



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Use cases for digital touchpoints

Convenience, sustainability, and circularity are the most important motivators that encourage users to engage with digital touchpoints. This is evident from our analysis on the following page, in which we grouped specific rationale options under umbrella themes. Self-service checkout, ease of returns, and brand discovery, for example, were all grouped under the theme of "convenience".

This analysis revealed that 67% of shoppers surveyed said they'd be likely to scan digital triggers related to increasing convenience, compared to 41% who said the same of digital triggers focused on personalization. When it comes to regional variation, it's fashion buyers in European countries and the U.S. who place the highest premium on convenience.

This mirrors how important convenience and sustainability are as overall purchase drivers. Convenience, especially, is a big part of why online shopping has been so explosive. In the U.K., for example, many of the most important factors that increase people's likelihood to buy products online are convenience-related, such as an easy returns policy (42%), next-day delivery (40%), and most significantly, free delivery (71%). The story is very similar in other Western markets, with quick/easy online checkout processes also coming through as a strong purchase driver in the U.S. (30%) and Germany (29%).

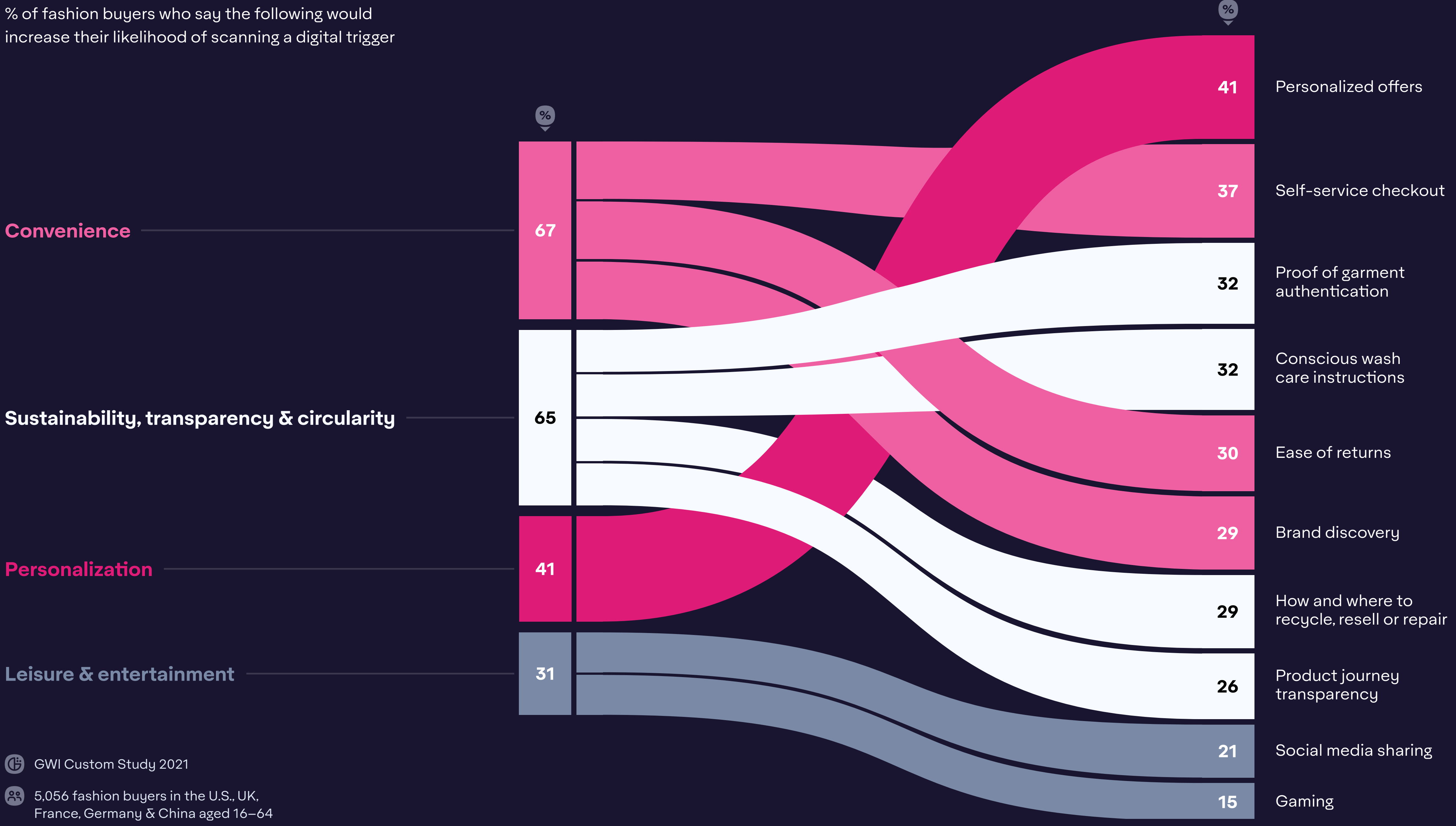
While consumers have always gravitated toward convenience, sustainability has become a key priority for buyers in more recent years as climate degradation worsens and issues around ethical labor come to light. Across all of the global markets we surveyed, consumers name being "eco-friendly" and being "socially responsible" as among the top initiatives they want brands to be implementing today. In Germany (58%) and France (58%), being eco-friendly came through as number one. In China, where so much of the global fashion supply chain starts, being socially responsible is the biggest concern for shoppers (33%).

The good news is that tech-enabled solutions, like QR codes, RFID, and NFC, hold a great deal of potential in bringing the fashion industry toward greater levels of sustainability and circularity, particularly when attached to the garment. These ID solutions give stakeholders instant access to information relevant to that product's entire lifecycle, from manufacture to reselling, recycling, or disposal – all areas of huge impact when it comes to making the industry more environmentally conscious.

Digital triggers provide value for multiple use cases, including brand discovery and authentication

Encouraging digital trigger uptake

% of fashion buyers who say the following would increase their likelihood of scanning a digital trigger



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03

Sustainability, transparency, and circularity

Sustainability and the pandemic

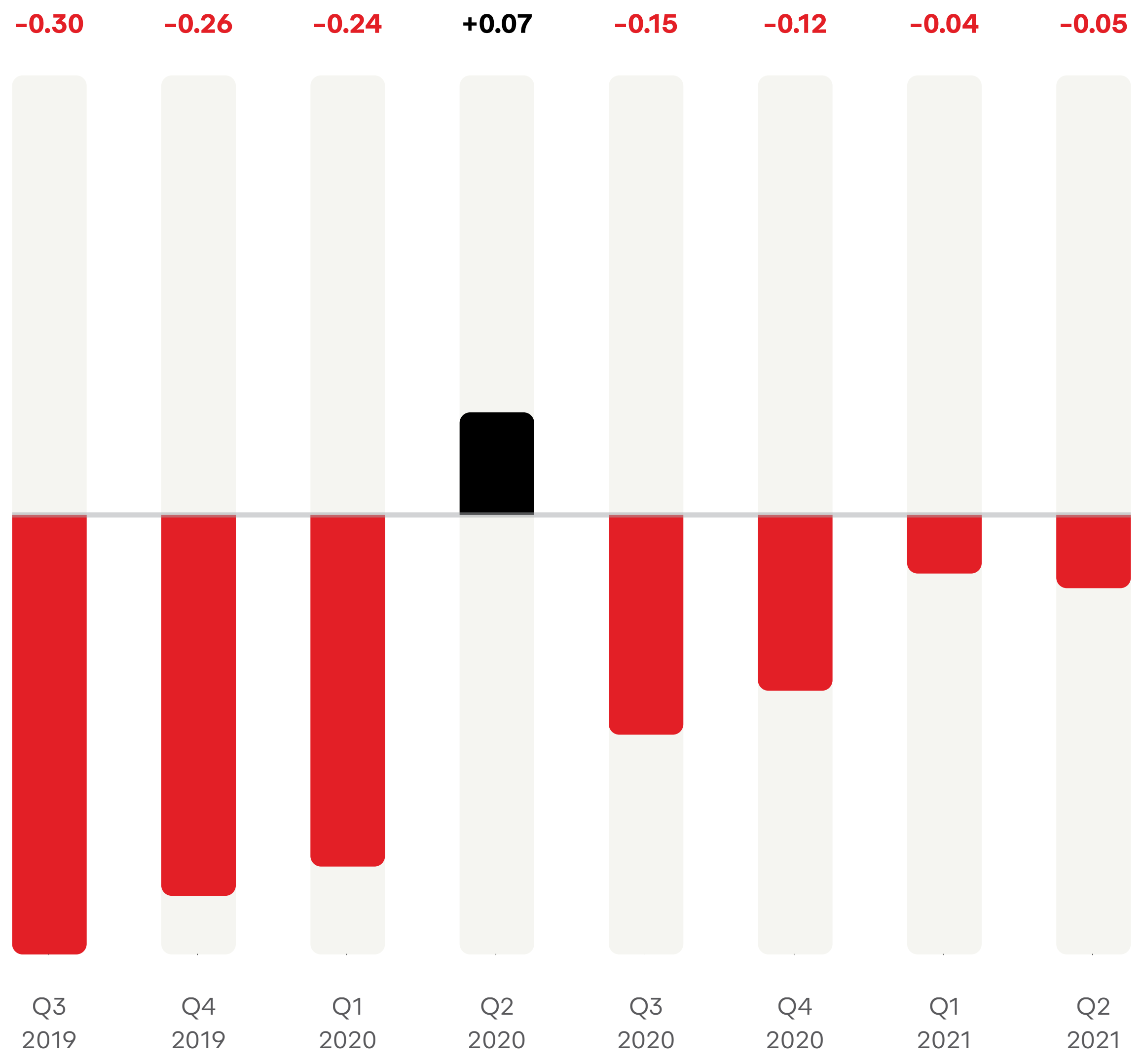
Attitudes toward sustainability have been particularly sensitive to the pandemic. Given the nature of the global lockdowns and the temporary reduction of industry and transport, many consumers – especially those outside China – became very hopeful for the future of the environment. But this spike in eco-positivity was soon corrected by Q3 2020 as activity resumed and it became clear that even shutting down cross-sections of the economy is not enough to reverse climate change.

Even so, since that point, positivity toward the environment has crept back, likely because many have seen the pandemic as a reckoning moment in pushing society and industry toward better alternatives. These volatile attitude shifts toward the environment reflect how receptive consumers are toward initiatives which further the sustainable agenda.

Future outlook toward the environment

Average score showing future outlook for the environment in the next 6 months

8



How to read:

the higher the score, the more positive the future outlook

+1 Get better
0 Stay the same
–1 Get worse

GWI Core Q3 2019–Q1 2021 | 362,251 internet users in the U.S., UK, France & Germany aged 16–64

Over 60% of fashion buyers want more transparency about the journey their clothes went on before making a purchase

The importance of transparency

Fashion buyers have high expectations of fashion brands in driving sustainability forward, and the technology behind ID solutions is equipped to meet these expectations head on. Demands for environmentally-conscious fashion are multi-layered, stretching from the use of sustainable materials and packaging to carbon-neutral shipping, permeating throughout the entire lifecycle of a brand's product. Using intelligent labels and ID solutions, the entire footprint of a fashion item can be visible not just to companies, but to the consumers themselves.

This level of transparency is not only necessary, but it's in demand. Fashion buyers express a strong interest in having transparency over the manufacturing and movement of their products. What's interesting here is that the demand for product transparency remains high across all groups; it's not just those with an established interest in sustainability who are asking for this. More than 40% in the U.S., more than 50% in Europe, and almost 70% in China say they want to have more information about the journey their clothes went on before they make a purchase.

Item-level ID solutions uniquely allow us to meet these growing consumer demands. Without this technology, only a fraction of the lifecycle of a fashion product would be accounted for and visible to stakeholders and customers in the fashion supply chain. This broad recognition that digital triggers bring significant value toward greater sustainability underpins the importance for stakeholders to rally behind these solutions. It will better enable the industry as a whole to meet sustainability goals.

Sustainability in fashion

9

% of fashion buyers who agree with the following statements (in descending order based on aggregate results)

%	China	Europe	U.S.
I try to buy environmentally-friendly fashion products/brands	74	50	43
I try to buy from fashion brands that are socially responsible	73	48	45
A fashion brand's values and the causes they support are very important to me	69	46	46
It is important to me that fashion brands have eco-friendly/carbon-neutral shipping	68	56	42
It is important to me that fashion brands use sustainable packaging	65	59	47
It is important to me that fashion brands use recycled fabrics and materials	66	50	40

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Transparency in fashion

10

% of fashion buyers who agree with the following statements (in descending order based on aggregate results)

%	China	Europe	U.S.
The fashion industry has a responsibility to be more environmentally and sustainable	76	68	56
It is important to me that fashion brands source materials ethically and sustainably	73	62	55
The fashion industry has a responsibility to help consumers to live more sustainably	73	61	50
It is important to me that fashion brands are transparent about their manufacturing practices	68	63	57
I want to have more information about the journey my clothes went on before I purchase them	66	54	43
I would be interested in digital experiences about how and where designers make their clothes	66	48	42

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Circularity, recycling, repair

Currently, once a fashion item leaves the store, stakeholders in the supply chain lose visibility of that item, yet they still retain the responsibility in the consumer's eyes. Across the global markets we surveyed, 62% of people said that brands and retailers themselves should be making end-of-life options accessible for their products, with 58% saying fashion brands should help consumers repair items, and 57% saying brands should help consumers resell items when they no longer want to keep them. In China, all of these sentiments came through especially strongly.

Worse still, the product's lifecycle falls far short of its potential, and the forward value and authenticity of that product is diminished. This means that brands cannot adequately take advantage of the growing second-hand and resale market. 41% of buyers we surveyed said they buy second-hand fashion, and one-third of people said they have become more inclined to do so in the last 5 years. Without tools to help facilitate the resale exchange smoothly, the industry leaves a huge amount of value on the table.

End-to-end data solutions represent a viable solution. They amplify value and visibility for products throughout each stage of the supply chain. Every stakeholder stands to benefit from this innovation, even those who do not have to invest directly into the technology, such as multi-brand retailers, recyclers, and consumers.

Focusing on consumers, this innovation can deliver tangible value, whether that's through extending their usage of an item through proper care and repair, supporting them in responsibly disposing of that product, or reselling that item with assurances of authenticity.

Whether it's product care support, recycling, repairing, or reselling, there's ample consumer demand for brands to take an active role in enabling these latter lifecycle activities. Over half of buyers we surveyed said they had repaired fashion items that were broken, stained, or lacklustre over time. In Europe, the inclination to repair is even higher – at 67%. Even among those who haven't historically invested in repairing items, there's strong interest; 43% of those who hadn't done so in the past still say they would be interested in repairing their goods in the future, indicating the opportunity for brands and retailers to facilitate a movement toward giving old clothes new life.

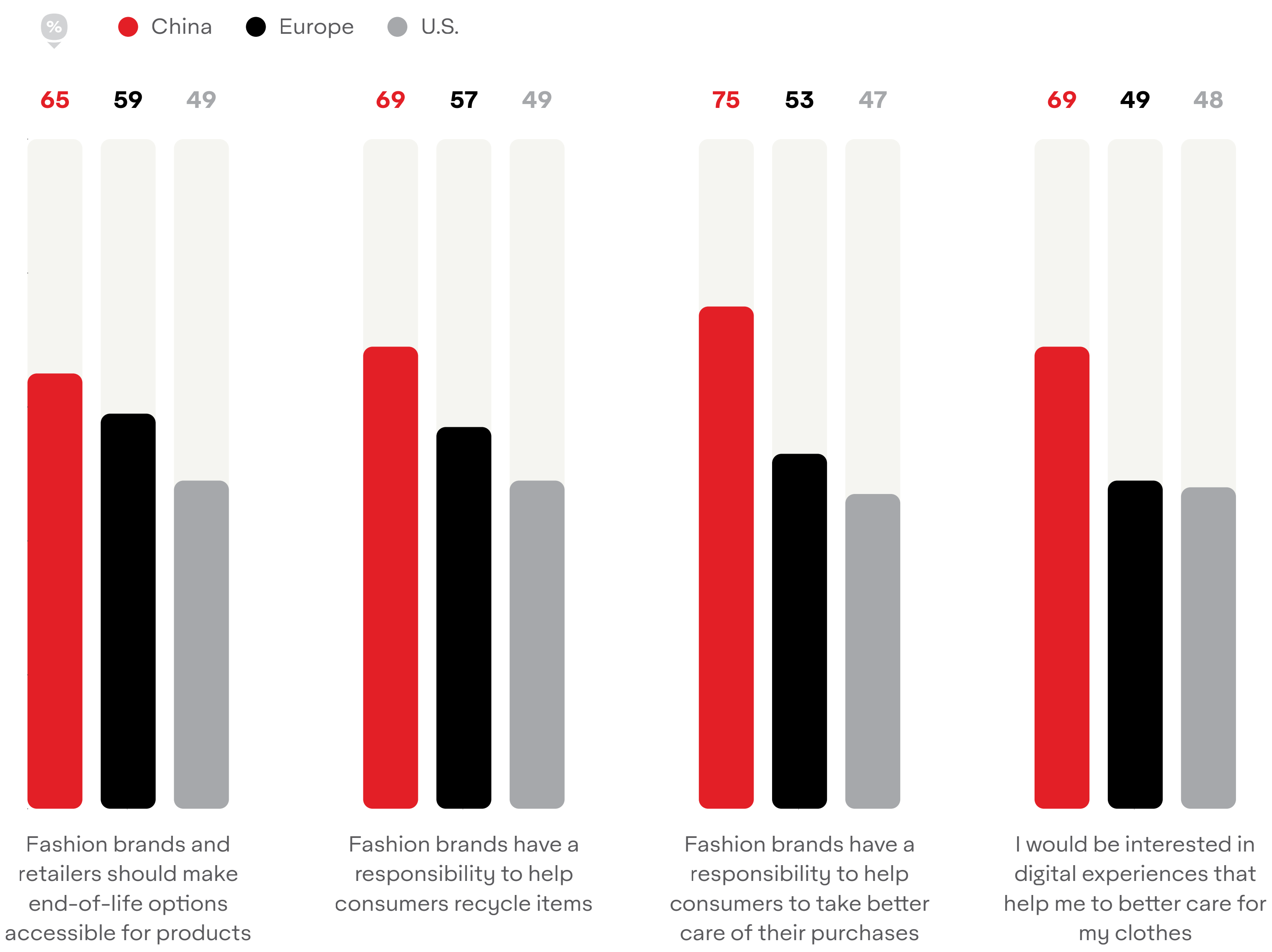
Through QR codes giving consumers relevant information, or product authentication allowing for verified secondary market purchases, the future promises greater circularity once the fashion industry implements item-level digital ID technology.

Nearly half of those who haven't invested in repairing their clothes before want to do so in the future

Post-purchase support

% of fashion buyers who say/do the following

11



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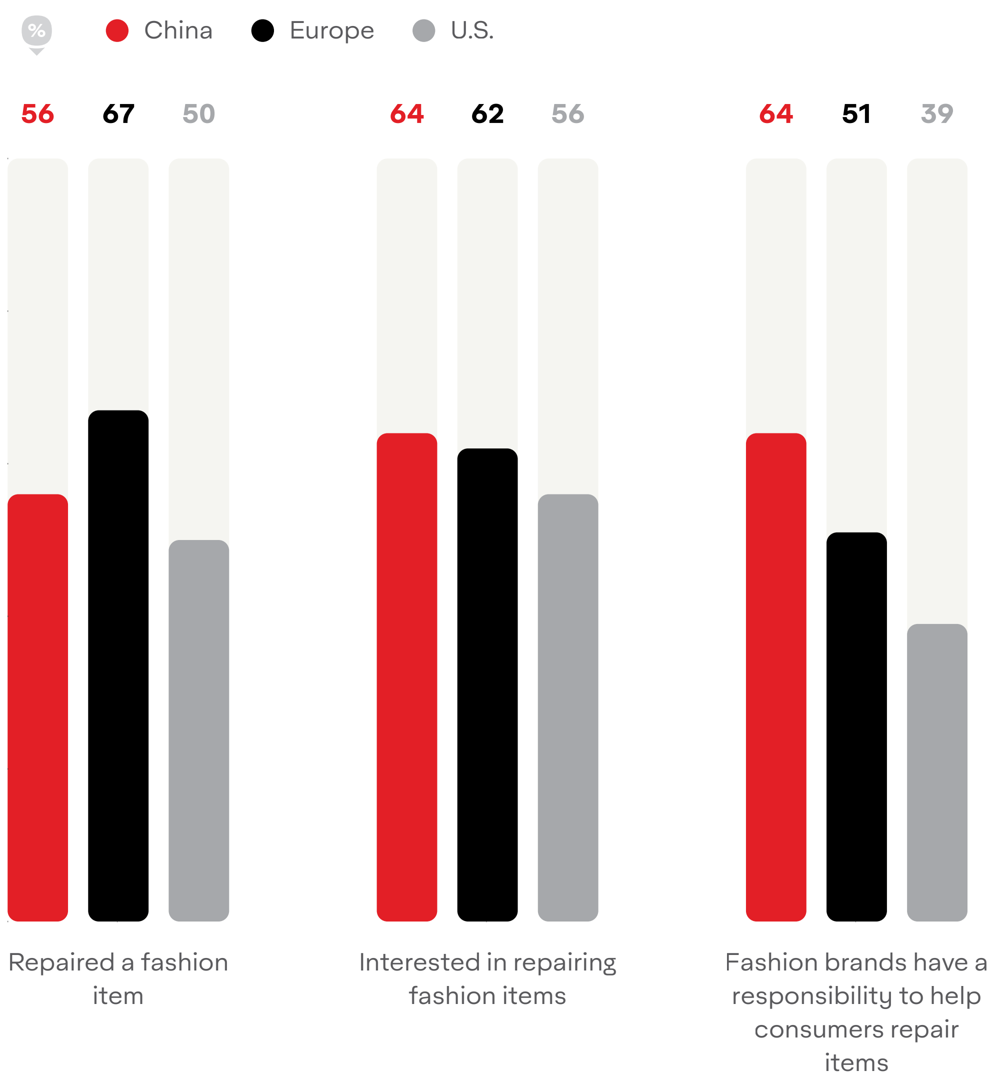
Over 60% of buyers think that brands and retailers should be making end-of-life options accessible for their products

Fashion repair

% of fashion buyers who agree with the following

12



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The secondary marketplace

These secondary marketplaces in the fashion industry are thriving, and the implementation of smart labels and digital ID technologies can further invigorate them, directly benefiting consumers.

More than half of fashion buyers in the European countries that we surveyed and the U.S. say they purchase second-hand fashion items. There are strong age-based patterns here too – the younger a person is, the more likely they are to be purchasing second-hand fashion goods. Females and lower income fashion buyers are also more prone to this activity.

Many fashion buyers – particularly in China where counterfeit goods remain an issue – cite proof of garment authentication as a key reason for using digital triggers. If we isolate those who buy second-hand fashion goods, around 1 in 3 say they would use digital triggers for garment authentication. Secondary marketplaces like eBay are already making moves to implement NFC technology for authentication purposes across luxury handbags and sneakers.

Rental of fashion goods may be a more nascent prospect for consumers in the U.S., where only 14% of fashion buyers report having done so in the past. In Europe, fashion rental rises to over a fifth of buyers, and rises even further to one-third in China, making rental nearly as popular as second-hand purchasing in this APAC market. What's more, there is proven interest in fashion rental platforms in every region. Together with the pronounced interest in understanding a product's history through digital triggers, the future of circularity in fashion won't just benefit the environment and reduce waste, it will also offer another touchpoint for consumers to get deeper product stories and better engage with brands.

Authentication is a key use case for digital triggers, especially in the growing luxury resale market

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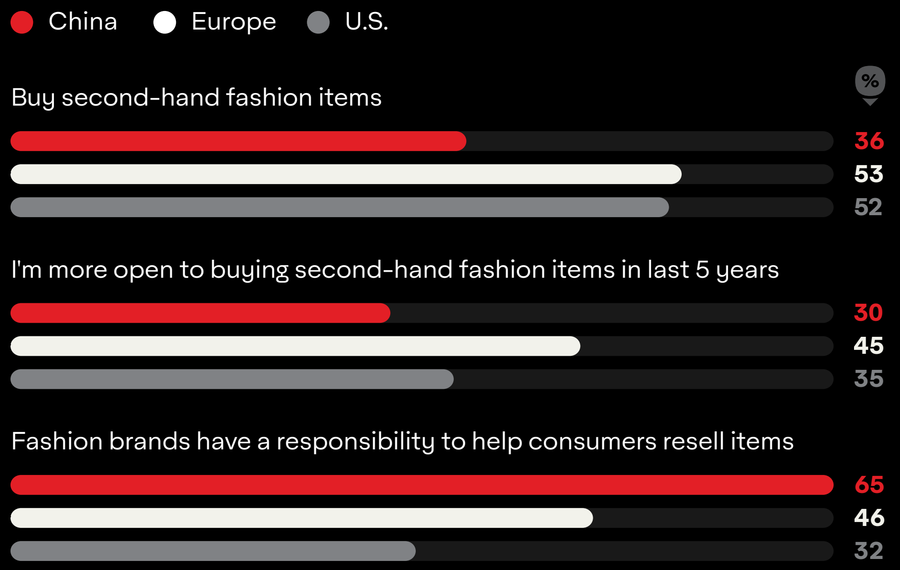
Buying second-hand fashion

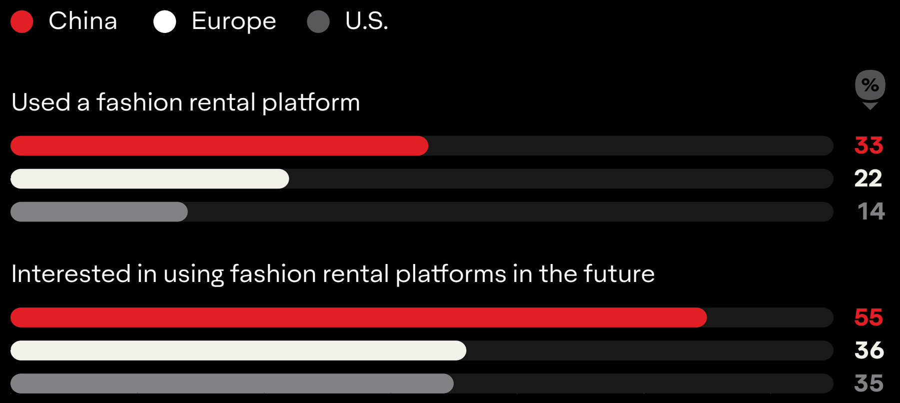
13

% of fashion buyers who agree with/do the following



Fashion rental

% of fashion buyers who say/do the following



Appendix

1. In the last month, which of these items did you purchase in-store or online?

2. In the last month, which of these items did you purchase in-store or online?

3. Which of these features, if any, do you want to see more stores and retailers offering?

4. Which of these features, if any, do you want to see more stores and retailers offering?

5. Which of the following would increase your likelihood of visiting a physical retail store when buying clothing/footwear?

6. To what extent do you agree/disagree with the statements below? I How likely are you to scan a digital trigger (e.g. QR code, mobile tap NFC) on a fashion product or packaging for a useful or rewarding experience? I How often do you scan digital triggers (e.g. QR code, mobile tap NFC) on a fashion product or packaging?

7. Which of the following experiences would you be willing to scan a digital trigger (e.g. QR code, mobile tap NFC) on a garment label or packaging in exchange for?

8. In the next 6 months, how do you think the following will change? (The environment)

9. To what extent do you agree/disagree with the statements below?

10. To what extent do you agree/disagree with the statements below?

11. To what extent do you agree/disagree with the statements below? I Have you ever repaired a fashion item that was broken, stained or lacklustre over time? I On a scale from 1-5, how interested would you be in repairing garments that are broken, stained or lacklustre over time?

12. To what extent do you agree/disagree with the statements below? I Have you ever repaired a fashion item that was broken, stained or lacklustre over time? I On a scale from 1-5, how interested would you be in repairing garments that are broken, stained or lacklustre over time?

13. Has your interest in second-hand fashion changed in the last 5 years? I Do you buy second hand fashion items? I Have you ever used an online fashion rental platform? I On a scale from 1-5, how interested would you be in using an online fashion rental platform in the future?

Notes on methodology

Introduction

All figures in this report are drawn from GWI's online research among internet users aged 16-64. Please note that we only interview respondents aged 16-64 and our figures are representative of the online populations of each market, not its total population.

Our research

Each year, GWI interviews over 700,000 internet users aged 16-64 across 47 markets. Respondents complete an online questionnaire that asks them a wide range of questions about their lives, lifestyles and digital behaviors. We source these respondents in partnership with a number of industry-leading panel providers. Each respondent who takes a GWI survey is assigned a unique and persistent identifier regardless of the site/panel to which they belong and no respondent can participate in our survey more than once a year (with the exception of internet users in Egypt, Saudi Arabia and the UAE, where respondents are allowed to complete the survey at 6-month intervals).

When reading this report, please note that we use a mixture of data from our ongoing quarterly global research, as well as insights from a custom study conducted in the UK, U.S., France, Germany, and China in partnership with Avery Dennison in August 2021.

Our quotas

To ensure that our research is reflective of the online population in each market, we set appropriate quotas on age, gender and education – meaning that we interview representative numbers of men vs women, of 16-24s, 25-34s, 35-44s, 45-54s and 55-64s, and of people with secondary vs tertiary education.

To do this, we conduct research across a range of international and national sources, including the World Bank, the ITU, the International Labour Organization, the CIA Factbook, Eurostat, the US Bureau of Labor Statistics as well as a range of national statistics sources, government departments and other credible and robust third-party sources.

This research is also used to calculate the "weight" of each respondent; that is, approximately how many people (of the same gender, age and educational attainment) are represented by their responses.

Sample size by market

This report draws insights from GWI's Q2 2021 wave of research across 47 countries, with a global sample of 186,925 respondents.

Argentina	1,492
Australia	4,276
Austria	1,294
Belgium	1,289
Brazil	5,797
Canada	4,851
China	25,167
Colombia	2,551
Denmark	1,494
Egypt	1,853
France	5,067
Germany	5,041
Ghana	970
Greece	1,244
Hong Kong	1,785
India	13,538
Indonesia	5,189
Ireland	1,280
Israel	1,488
Italy	5,256
Japan	5,283
Kenya	1,028
Malaysia	3,837
Mexico	4,258
Morocco	980
Netherlands	1,287
New Zealand	1,276
Nigeria	991
Philippines	3,132
Poland	2,100
Portugal	1,297
Romania	1,277
Russia	4,337
Saudi Arabia	1,527
Singapore	3,041
South Africa	1,578
South Korea	1,927
Spain	5,114
Sweden	2,525
Switzerland	1,485
Taiwan	2,273
Thailand	3,808
Turkey	2,099
UAE	1,731
UK	10,430
USA	24,783
Vietnam	2,599

Mobile survey respondents

From Q1 2017 on, GWI has offered our Core survey on mobile. This allows us to survey internet users who prefer using a mobile or are mobile-only (who use a mobile to get online but do not use or own any other device). Mobile respondents complete a shorter version of our Core survey, answering 50 questions, all carefully adapted to be compatible with mobile screens.

Please note that the sample sizes presented in the charts throughout this report may differ as some will include both mobile and PC/laptop/tablet respondents and others will include only respondents who completed GWI's Core survey via PC/laptop/tablet. For more details on our methodology for mobile surveys and the questions asked to mobile respondents, please download this **document**.

Internet penetration rates: GWI versus ITU figures

As GWI's Core Research is conducted among 16-64 year-olds, we supplement the internet penetration forecasts for a country's total population (reproduced above) with internet penetration forecasts for 16-64s specifically. Forecasts for 16-64s will be higher than our forecasts for total population, since 16-64s are the most likely age groups to be using the internet.

Internet penetration rates across GWI's markets

GWI's research focuses exclusively on the internet population and because internet penetration rates can vary significantly between countries (from a high of 90%+ in parts of Europe to lows of c.20% in parts of APAC), the nature of our samples is impacted accordingly.

Where a market has a high internet penetration rate, its online population will be relatively similar to its total population and hence we will see good representation across all age, gender and education breaks. This is typically the case across North America, Western Europe and parts of Asia Pacific such as Japan, Australia and New Zealand. Where a market has a medium to low internet penetration, its online population can be very different to its total population; broadly speaking, the lower the country's overall internet penetration rate, the more likely it is that its internet users will be young, urban, affluent and educated. This is the case throughout much of LatAm, MEA and Asia Pacific.

Internet penetration rates (GWI's Forecasts for 2020 based on ITU 2017 and 2018 data)

This table provides GWI forecasts on internet penetration (defined as the number of internet users per 100 people) in 2019. This forecasted data is based upon the latest internet penetration estimates from the International Telecommunication Union (ITU) for each market that GWI conducts online research in.

	%
Argentina	83
Australia	91
Austria	91
Belgium	92
Brazil	77
Canada	95
China	66
Colombia	69
Denmark	98
Egypt	59
France	87
Germany	93
Ghana	51
Greece	80
Hong Kong	93
India	47
Indonesia	49
Ireland	88
Israel	90
Italy	79
Japan	94
Kenya	42
Malaysia	86
Mexico	74
Morocco	74
Netherlands	96
New Zealand	94
Nigeria	51
Philippines	68
Poland	83
Portugal	79
Romania	78
Russia	89
Saudi Arabia	93
Singapore	91
South Africa	64
South Korea	98
Spain	93
Sweden	96
Switzerland	96
Taiwan	91
Thailand	63
Turkey	80
UAE	99
UK	97
USA	92
Vietnam	73