

WHAT'S IN-STORE FOR ONLINE GROCERY SHOPPING

**OMNICHANNEL STRATEGIES TO REACH
CROSSOVER SHOPPERS**

JANUARY 2017

nielsen
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THE BLURRING LINES BETWEEN ON AND OFFLINE SHOPPING

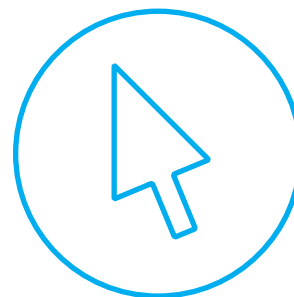
AROUND THE WORLD

- Durable and service-oriented categories continue to lead the way in self-reported online purchasing among survey respondents, but several consumable categories are growing in popularity—especially personal-care and beauty categories and meal-kit and restaurant services.
- Online and offline switching behaviors suggest that the majority of consumers who have purchased certain durable and service-related products online continue to shop online more frequently than in store for these categories. The opposite is true for fresh and packaged groceries and medicine or health-care products.
- For online purchasing of consumables, the most effective activation strategy among “trialists” (purchased online in the past but not recently) and “considerers” (currently don’t buy online but would consider buying) is a money-back guarantee for products not matching what was ordered. For fresh foods, strategies that address quality concerns top the list.
- For consumable categories, the most impactful way to reach consumers with messaging that influences purchase behavior is with traditional touchpoints, such as visits to a physical store. For consumer electronics and fashion purchasing decisions, the most commonly cited information sources are digital touchpoints, such as store or brand websites.
- Only a small percentage of consumers around the world say they’re using in-store and online digital technologies to aid in their shopping, but usage is growing.

If we had to choose a single word to describe today's consumers, "connected" would surely rise to the top of the list. In fact, with 3.5 billion people using the internet, 7.4 billion mobile-phone subscriptions and 1.79 billion active Facebook users,¹ connected might not even adequately describe the current marketplace. Increasingly, everything and everyone is moving online, resulting in the breaking of old habits and establishment of new ones. Indeed, digital has disrupted a whole host of interactions, including the way we watch video content and the ways we communicate with friends and family.

The way we shop is no exception. Digital retailing gives consumers more ways to shop and more access to products and services than ever before. It's clear that consumers are embracing the freedom of shopping whenever and wherever they please, as online sales are capturing a double-digit share of retail dollars in some markets. In China—the world's largest e-commerce market—online retail sales accounted for 12.9% of the total retail purchases in 2015; in South Korea, it was 11.6%.² In Great Britain, online accounted for an average of 12.5% of all retail spending through the first 10 months of 2016, and in the U.S., e-commerce represented an average 8.1% of total retail sales through the first three quarters of 2016,³ a rate that Nielsen projects will grow at a compound annual growth rate (CAGR) of 12.2% through 2020.

While these measures show more sales going online, the actual consumer behavior is a little more complicated, as the lines between online and offline channels continue to blur. Traditional brick-and-mortar retailers are expanding their digital presence, while pure-play retailers are opening physical stores. The notion of being connected is taking on new meaning: Retailers are implementing innovative digital technologies that are transforming the shopping experience, in order to become more relevant to consumers' lifestyles and shopping occasions. Thinking in terms of bricks *versus* clicks is outdated; bricks-*and*-clicks is the current and future retail reality.



**BRICKS VERSUS
CLICKS IS
OUTDATED; BRICKS-
AND-CLICKS IS
THE CURRENT AND
FUTURE RETAIL
REALITY.**

¹Mobile-phone subscriber data from International Telecommunication Union (2016). Facebook user data from Facebook (September 2016).

²National Bureau of Statistics of China; Statistics Korea.

³U.K. Office for National Statistics; Census Bureau, U.S. Department of Commerce.

“As shoppers increasingly move seamlessly between offline and online channels, purchase habits are changing. Simply adapting to keep pace is no longer sufficient,” said Kristen Cocco, vice president, global e-commerce measurement, Nielsen. “Savvy marketers know that using digital tools in new and innovative ways to engage with shoppers and influence shopping decisions must be a part of their growth plan for the future. To create maximum ROI in an omni-channel environment, winning brands and retailers must know their shoppers—their demands and how and what they’re buying online and in-store—and then leverage the specific touchpoints that will maximize their shopping experience.”

The Nielsen Global Connected Commerce Survey polled online respondents in 63 countries to understand the underlying factors that influence the evolving digital path to purchase. We examine the pain points and barriers associated with buying fresh and other consumable products online, and we uncover the activation strategies that can help overcome these obstacles. We also provide a view into the digital technologies consumers are using in stores today and the ones that hold promise for tomorrow. Finally, we outline the biggest disruptive trends that will fuel the growth of connected commerce in the years to come.

ABOUT THE STUDY

Nielsen Global E-Commerce spans over 20 countries around the world. Measurement may rely on direct from retailer data (ePOS), data collected via Nielsen’s Consumer Panels, other licensed data, or a combination of the foregoing. Retail sales data for China and France is for the two years beginning September 2014 and ending in August 2016.

Survey findings are based on more than 30,000 respondents with online access in 63 countries. While an online survey methodology allows for tremendous scale and global reach, it provides a perspective on the habits of only existing internet users, not total populations. In developing markets where online penetration is still growing, respondents may be younger and more affluent than the general population of that country. In addition, survey responses are based on claimed behavior, rather than actual metered data. Cultural differences in reporting sentiment are likely factors in the outlook across countries. The reported results do not attempt to control or correct for these differences; therefore, caution should be exercised when comparing across countries and regions, particularly across regional boundaries.

THE CONNECTED CATEGORY STORY: DURABLES DOMINATE, BUT CONSUMABLES GAIN TRACTION

Globally, more than 93% of respondents in Nielsen's online Connected Commerce Survey say they've ever shopped online—not surprising, given that the findings are based on internet-connected consumers. But the significance of this number is noteworthy. Not only does it speak to how pervasive online shopping is among the growing online population, but also provides an insightful view into purchase behaviors that will only accelerate as internet penetration continues to grow. And when it comes to buying online, category dynamics are fluid and evolving.

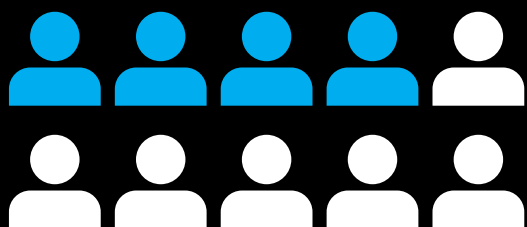
Durable and service-oriented categories continue to lead the way in self-reported online purchasing, as expected. These categories formed the baseline of entry for e-commerce, and their popularity continues to expand. More than half of global respondents in the online study say they've purchased fashion products (58%) or travel products or services (55%) online, and half say they've purchased books, music or stationery.

Consumable categories, in contrast, have been slower to gain popularity among online shoppers, but that is changing—especially for categories that are filling particular need states exceptionally well. In fact, nearly four in 10 global respondents (38%) say they've purchased personal-care and beauty products online, and about one-fourth say they've ordered meal-kit or restaurant delivery services (27%) or packaged grocery food (24%) online.

Meal-kit services are an interesting example of a new retail model that has taken the U.S. by storm in the past few years, with companies catering to just about every food preference, from vegan to gluten free. These services have gained traction for several reasons. Ingredients are delivered straight to consumers' doors with cooking instructions, eliminating the drudgery of having to plan meals and go to the store to get the required ingredients. In addition, they have wide appeal, offering exotic flavors and a more convenient solution to traditional cooking for busy food enthusiasts, while providing guidance for less confident cooks.

"Meal-kit delivery services meet consumers' needs for convenience and customization, allowing time-crunched consumers to choose from myriad options that best fit their lifestyles," said Cocco. "They also tap into the trend toward more healthful eating by offering fresh, high-quality ingredients, which is creating a powerful recipe for growth. Many opportunities exist for retailers to leverage their ability to grab the in-store purchase and delivery-to-home option by offering meal kits in addition to expanding the prepared-meal space to better compete with restaurant delivery services. While direct-to-consumer meal-kit companies tend to focus on organic or locally sourced products, as more retailers expand their meal-kit offerings, large manufacturers have an opportunity to partner and incorporate their specific ingredients."

When it comes to fresh groceries, images simply can't replace the physical look, feel and smell of these products. Even so, online shopping in this category is gaining traction in certain markets. About four in 10 online respondents in China (40%) and South Korea (39%) and just over one-third in India (35%) say they've purchased fresh groceries online. Nevertheless, the category has significant barriers to overcome to achieve widespread e-commerce adoption: less than one-tenth of respondents in Europe (9%), North America (9%), Africa/Middle East (7%) and Latin America (7%) say they've purchased fresh groceries online. While not being able to hand-pick fresh groceries is a clear barrier to online adoption, as grocery delivery services expand and improve, and quality assurance is guaranteed, the allure of purchasing fresh groceries will expand.



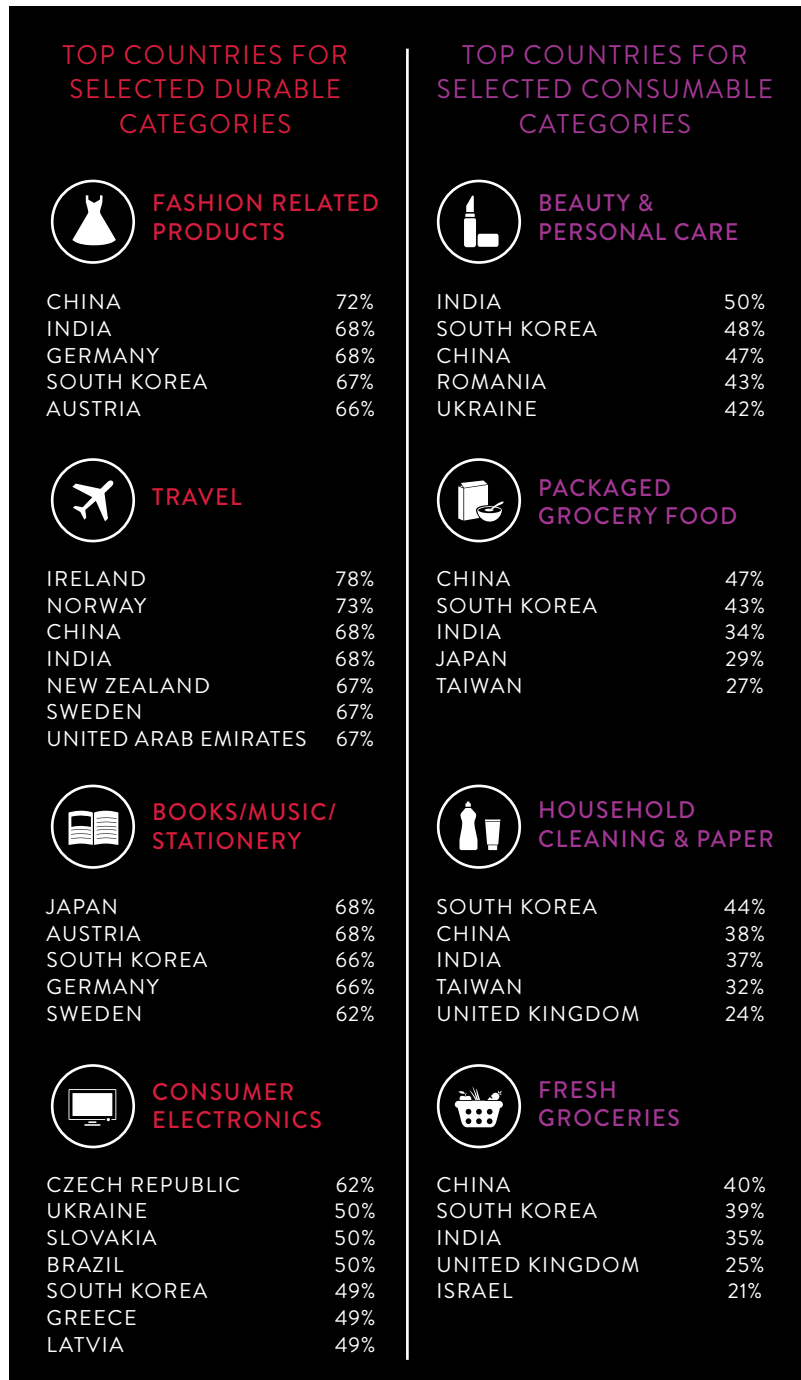
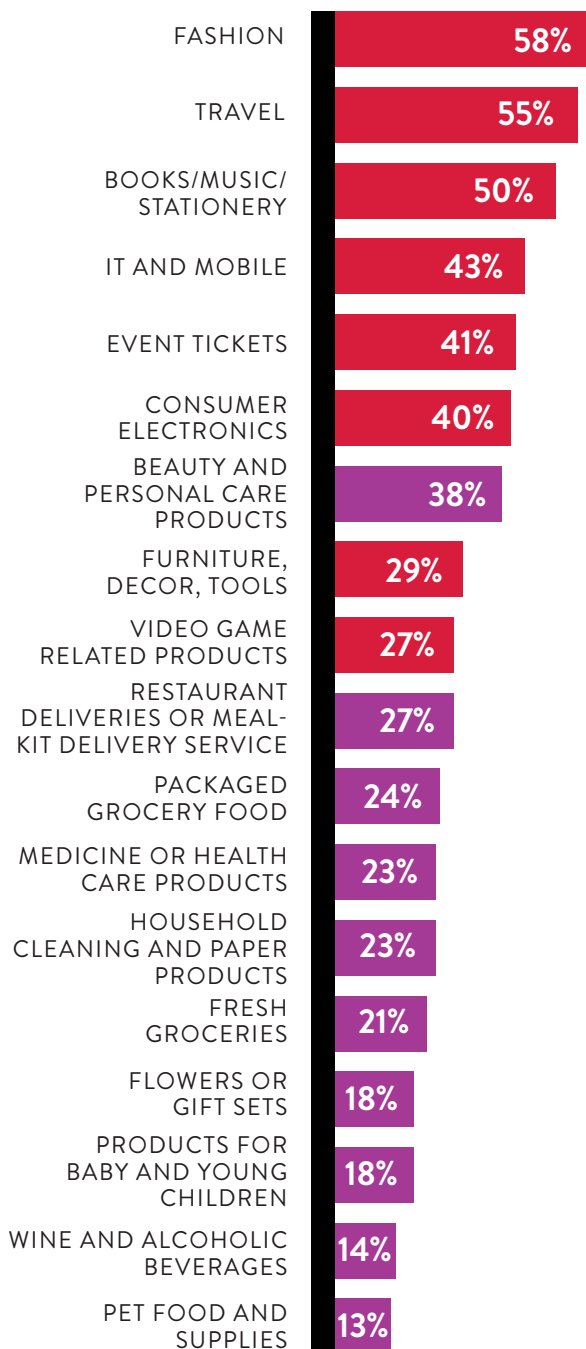
ABOUT FOUR IN 10 ONLINE RESPONDENTS IN CHINA AND SOUTH KOREA SAY THEY'VE PURCHASED FRESH GROCERIES ONLINE.

4 IN 10

BUYING CONSUMABLES ONLINE HAS ROOM TO GROW

GLOBAL PERCENTAGE WHO SAY THEY'VE EVER PURCHASED THE CATEGORY ONLINE

● DURABLES ● CONSUMABLES



Source: The Nielsen Global Connected Commerce Survey, Q3 2016

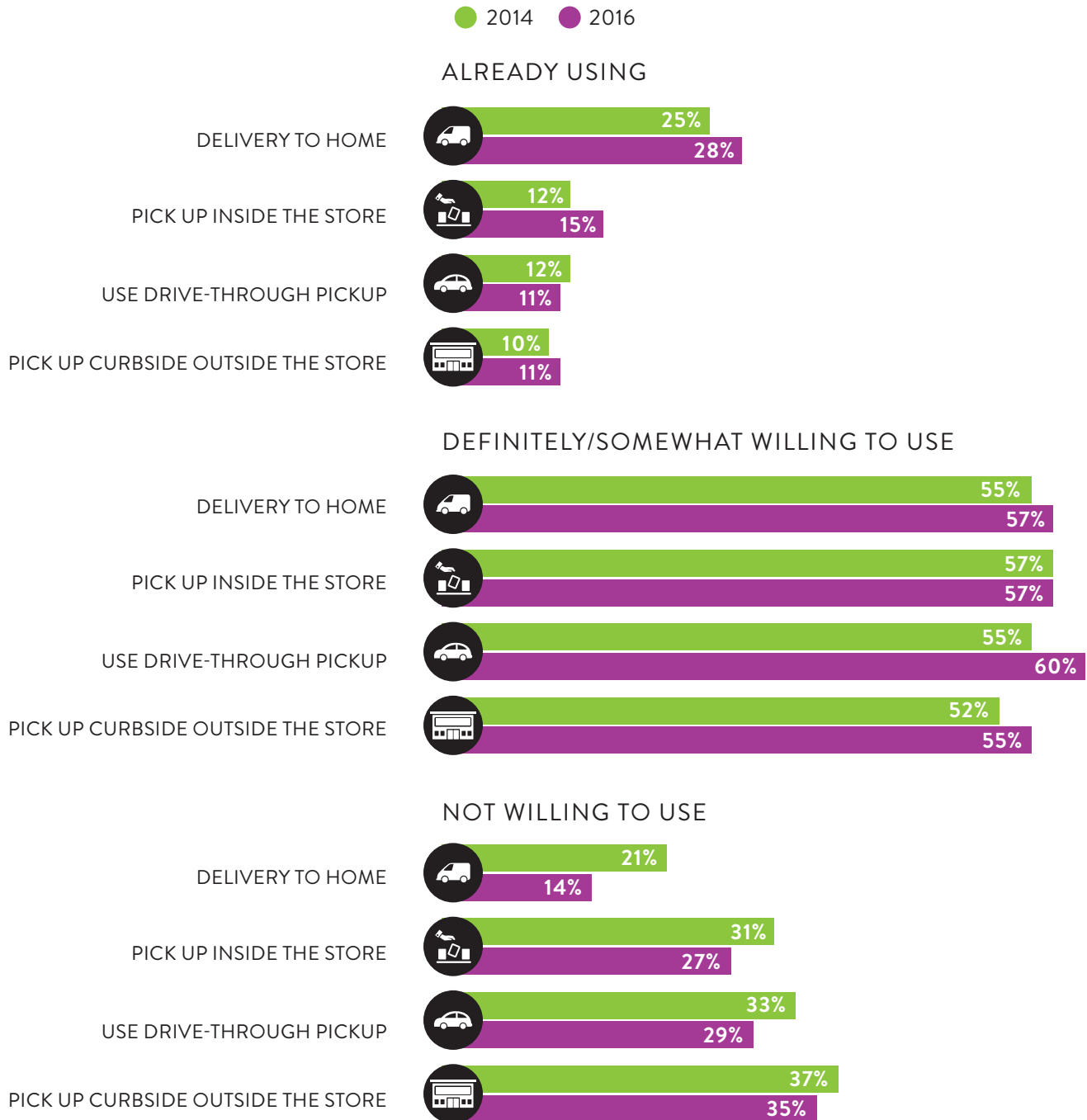
Innovative fulfillment options, however, could be a catalyst for growth. Ordering online for home delivery has been the traditional model for connected commerce, and it's still the most preferred. However, home delivery isn't particularly well suited to fresh categories, where perishability is a concern and refrigeration is a basic requirement.

To overcome these barriers, retailers in a host of countries are experimenting with new models that offer the convenience of e-commerce without the spoilage concerns; examples include refrigerated lockers at terminal stations, instant delivery services within a one- or two-hour window and "to go" models where consumers can order online for pick up at the retailer during a specified time slot. More consumers are open to these options than have been in the past. Nielsen's 2014 E-commerce and the New Retail Survey showed that 31% of global respondents were unwilling to order online for pick up inside the store, and 33% were unwilling to order online for drive-through pickup (the click-and-drive model popular in France). In 2016, resistance to each of these options declined by four percentage points to 27% and 29%, respectively.



INNOVATIVE FULFILLMENT OPTIONS CAN BE A CATALYST FOR ONLINE SHOPPING GROWTH

GLOBAL PERCENTAGE: WILLINGNESS TO USE FULFILLMENT OPTIONS FOR ONLINE GROCERY SHOPPING

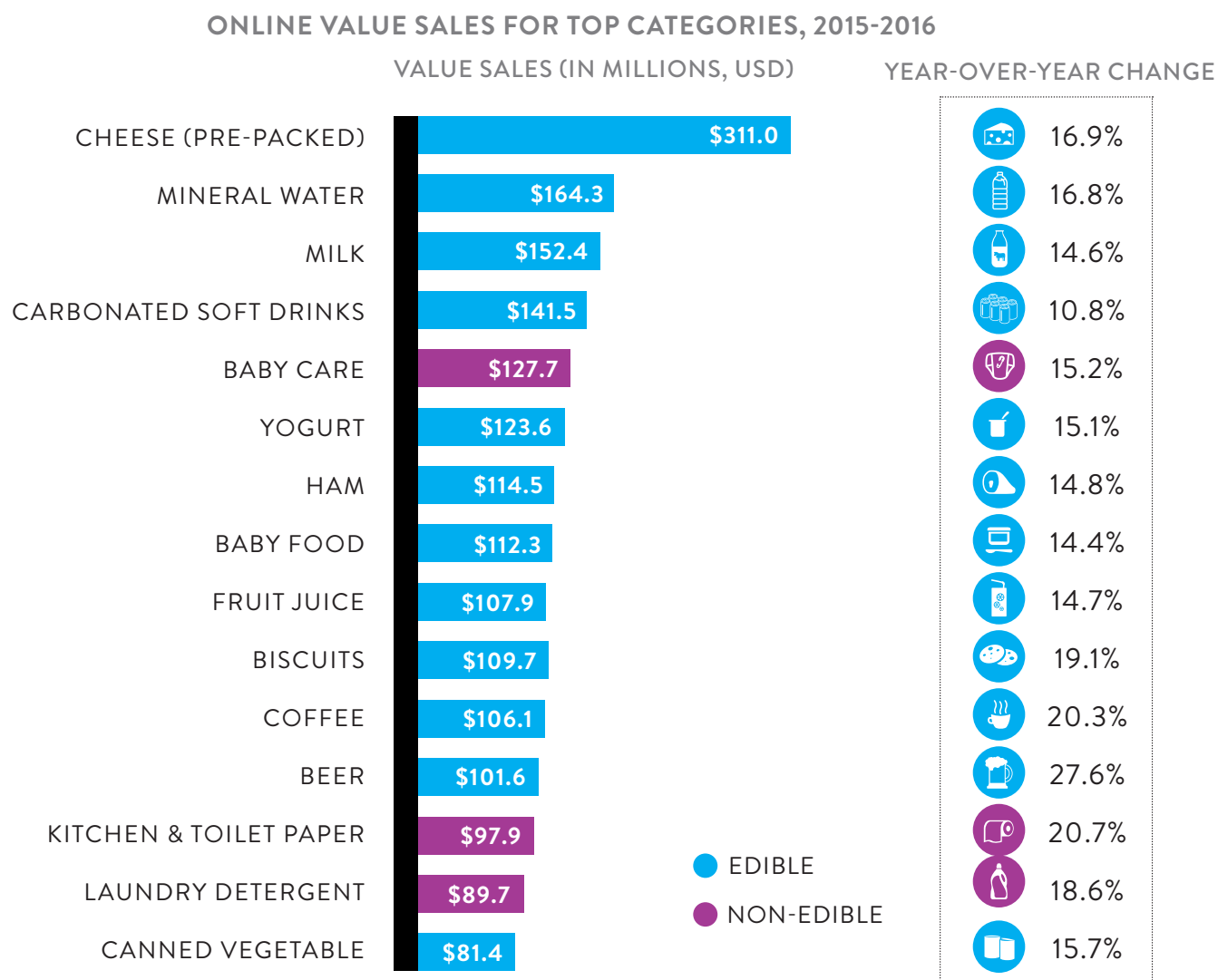


Note: Percentages may not equal 100% due to rounding
 Source: The Nielsen Global Connected Commerce Survey, Q3 2016

Nielsen e-commerce sales data from France, where click-and-drive is the dominant model for online sales of consumer packaged goods (CPG), suggests that alternative fulfillment models can be very effective in driving sales of edible products. In fact, the majority of the top 15 online CPG categories in France are edible. Prepackaged cheese is by far the largest online CPG category, with sales of over \$311 million between September 2015 and August 2016, a 16.9% increase over the previous 12 months. Yogurt, ham and biscuits are also among the top online CPG categories.

The double-digit growth in the top online categories is particularly impressive given these categories are experiencing only modest growth, or even declining, in brick and mortar stores. For example, prepackaged cheese sales were up 1.2% in stores, while yogurt and ham sales declined 0.5% and 0.1%, respectively. Growth was also modest in several beverage categories including milk (1.9%), carbonated soft drinks (0.6%) and mineral water (0.2%).

EDIBLE CATEGORIES DOMINATE FRANCE'S TOP 15 ONLINE CPG CATEGORIES



Source: Nielsen Global E-Commerce Measurement Sales data, September 2015 to August 2016

SPOTLIGHT ON CHINA

AN E-COMMERCE POWERHOUSE

China is the most powerful e-commerce market today. Furthermore, considering that the country is home to 1.4 billion people and has online penetration of only 52%, there is significant room to grow.

Online sales of all CPG categories measured by Nielsen totaled \$23.2 billion between September 2015 and August 2016, up 25.4% over the previous 12 months. Of the top 15 CPG categories purchased online, the majority were nonedible, covering the personal-care, home-care and baby-care categories. In terms of value sales, skin moisturizer was the largest online CPG category, with sales of \$3.4 billion, up 24% over the previous 12 months. Facial masks were the third-largest online CPG category in China, with sales of \$2.0 billion, up 1% year-over-year.

The online baby-care market in China also is quite sizable. Online sales of infant milk formulas totaled \$2.8 billion for the 12 months ended August 2016, while online diaper sales totaled \$1.8 billion, up 22.8% over the previous year.

Beyond infant formula, edible categories haven't achieved the same online success as their nonedible counterparts, but they're growing rapidly. Pet food is the second largest edible category, with \$697.0 million in online sales between September 2015 and August 2016, up 45.5% over the previous 12 months. Liquid milk and biscuits also are showing strong online growth, with sales up 80.2% and 50% year over year, respectively.

As was the case in France, the majority of the top online CPG categories are experiencing stronger growth online than in stores. Online sales of infant diapers grew 22.8% year-over-year, compared to 9% in stores. Similarly, online sales growth greatly exceeded that in brick and mortar for liquid milk (80.2% versus -4%, respectively), biscuits (50% versus -1%, respectively) and skin moisturizer (24% versus 2%, respectively). There are, however, notable exceptions to this trend. In fact, brick and mortar growth exceeded online sales growth for infant milk formula (7% versus -9%, respectively) and facial masks (16% versus 1%, respectively).

NON-EDIBLE CATEGORIES DOMINATE CHINA'S TOP 15 ONLINE CPG CATEGORIES

ONLINE VALUE SALES FOR TOP CATEGORIES, 2015-2016



Source: Nielsen Global E-Commerce Measurement Sales data, September 2015 to August 2016

ONCE ONLINE, ALWAYS ONLINE?

As important as what consumers are buying online is how connected commerce is affecting in-store behaviors. Once consumers make an online purchase for a particular category, do they shop for it more often online? Or do they switch back to in-store purchase behaviors?

In several durable or service-related categories, findings suggest that once a consumer makes an online purchase, the online channel remains the favorite shopping destination. Among global respondents who say they've purchased travel products or services online, more than two-thirds (69%) say they buy the category more often online than in store. The same is true for event tickets and video-game-related products, where roughly six in 10 respondents who've purchased the categories online say they purchase more frequently online (62% and 58%, respectively) than in store.

But the story isn't the same for all durables. For categories with high price tags, infrequent purchasing cycle and an experiential dimension (where interacting with the product is important), the online channel isn't nearly as dominant. For example, among global respondents who purchased consumer electronics online, only 37% say they buy the category more often online; 21% say they buy more often in store, and 43% say they buy online and in store at the same frequency. For fashion, 33% say they buy more often online, and 26% buy more often in store. And for furniture and décor, the percentage saying they buy more often in store (30%) is greater than the percentage saying they buy more often online (25%), though the largest percentage say they buy in store and online equally (46%).

ONLINE IS THE FAVORITE SHOPPING DESTINATION FOR SOME CATEGORIES

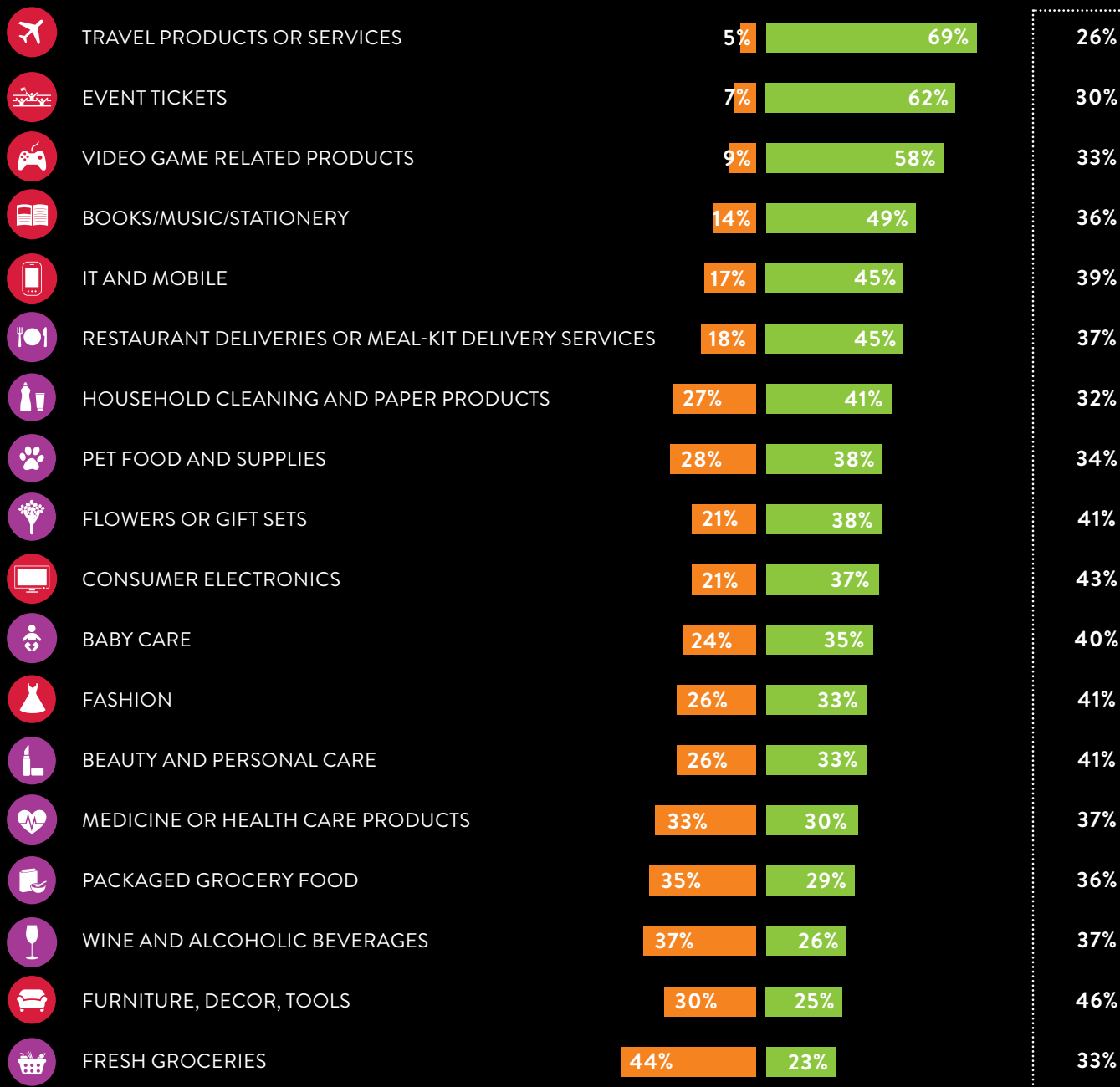
GLOBAL PERCENTAGE: ONLINE SHOPPERS WHO SAY THEY SHOP MORE OFTEN ONLINE OR IN-STORE BY CATEGORY

● DURABLES

● CONSUMABLES

BUY MORE OFTEN IN-STORE BUY MORE OFTEN ONLINE

BUY ONLINE AND IN-STORE AT SAME FREQUENCY



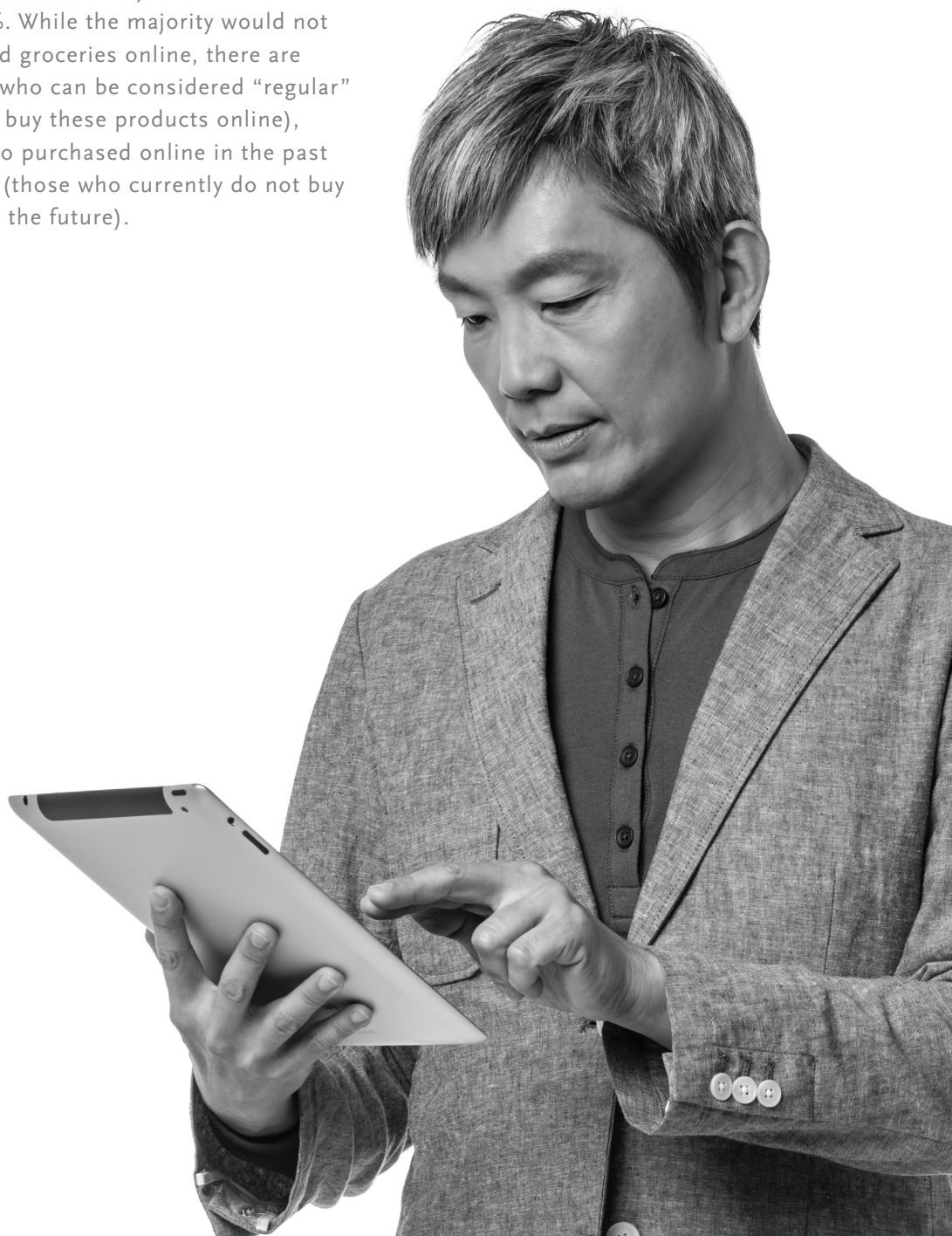
Note: Percentages may not equal 100% due to rounding

Note: Among those who say they have purchased respective categories online.

Source: The Nielsen Global Connected Commerce Survey, Q3 2016

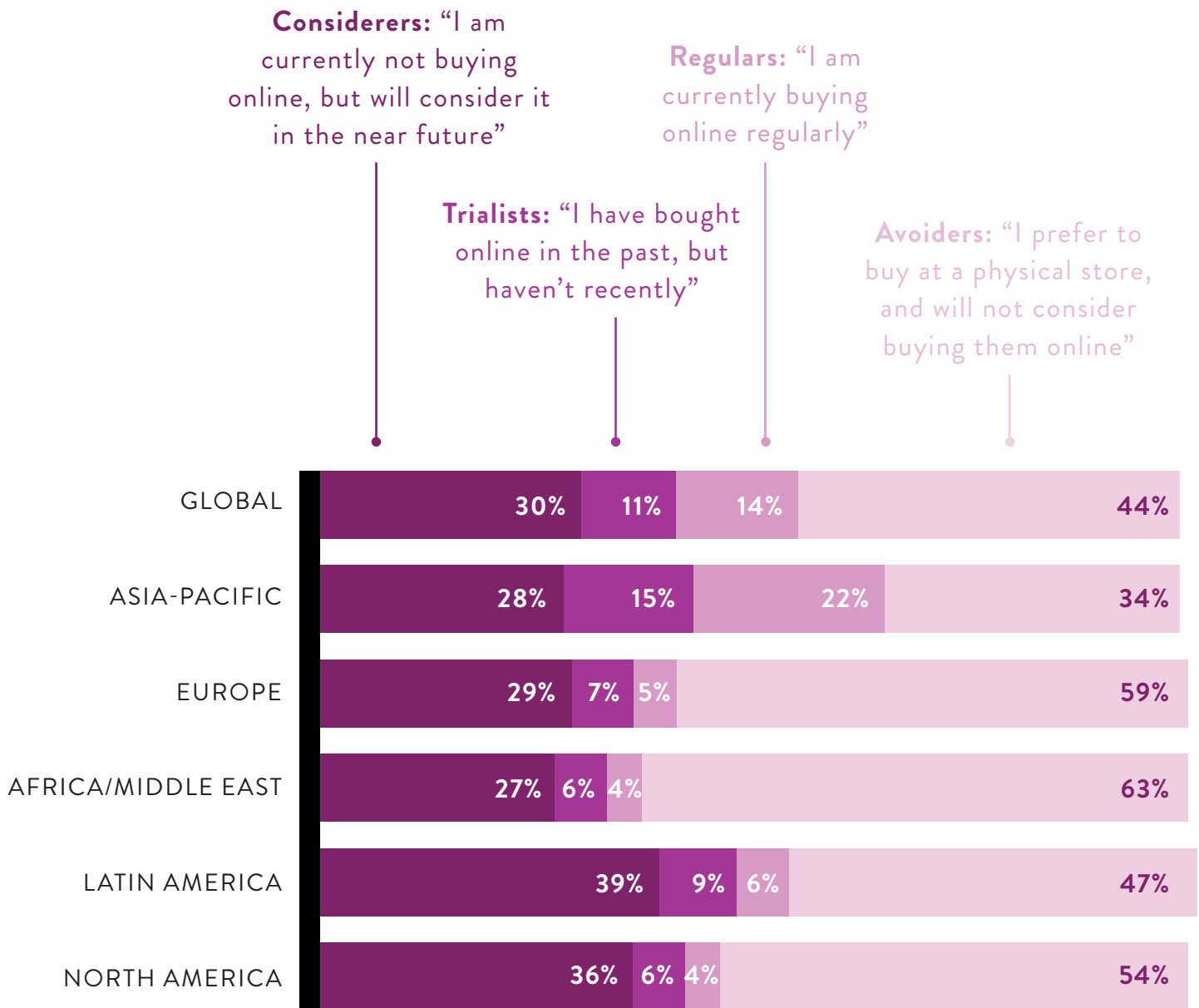
The story is equally mixed when it comes to consumable categories. Among respondents who have purchased household cleaning and paper products online, respondents are likeliest to say they buy more often online (41%). For beauty and personal care, one-third say they buy more often online, while 41% say they buy online and in store with the same frequency.

For edible categories, particularly fresh, online faces a more difficult climb to widespread adoption. Sixty-three percent of online respondents in Africa/Middle East say they prefer to buy their fresh and household groceries at a physical store and will not consider buying them online. In Europe, the share who say the same is 59%, and in North America, it's 54%. While the majority would not consider buying fresh and household groceries online, there are sizable proportions of respondents who can be considered "regular" online shoppers (those who already buy these products online), "trialist" online shoppers (those who purchased online in the past but not recently) and "considerers" (those who currently do not buy online but would consider buying in the future).



IDENTIFY BEST-FIT ONLINE GROCERY SHOPPERS

ATTITUDES ABOUT BUYING FRESH AND HOUSEHOLD GROCERIES ONLINE



Note: Percentages may not equal 100% due to rounding
 Source: The Nielsen Global Connected Commerce Survey, Q3 2016

CONVERTING TRIALISTS AND CONSIDERERS TO REGULAR ONLINE SHOPPERS

Converting trialists and considerers to active online shoppers for consumable products such as food and beverages, personal-care products, and health and beauty products requires overcoming several barriers.

The biggest obstacles to online shopping for consumable categories are the inability to inspect goods and uncertainty about product quality and freshness. More than two-thirds of online respondents to Nielsen's 2015 Connected Commerce Survey (69%) agreed that they prefer to examine products personally, while more than six in 10 online respondents (64%) agreed that they were concerned about the freshness or quality of products purchased online.

Secondary online shopping barriers are concerns about order accuracy and delivery scheduling. More than half of online respondents in the 2015 survey said they were concerned that the groceries they received wouldn't accurately match what they ordered (57%) or that grocery deliveries would take place when they weren't home (55%).

How can brands convince lapsed purchasers and those who have never purchased online to buy online?

For consumables in general, the most effective strategies address accuracy concerns. By far the most effective activation strategy cited among both trialists and considerers is a money-back guarantee for products not matching what was ordered. Fifty-eight percent of considerers and 56% of trialists say this strategy would definitely encourage them to buy consumable products online.

Strategies addressing respondents' pricing and delivery-scheduling concerns also have the potential to be quite effective. Half of considerers (50%) and 46% of trialists say precise delivery windows (at 30-minute intervals) or free delivery Tuesday to Thursday would definitely encourage them to buy consumables online. Similar percentages—49% of considerers and 47% of trialists—say free delivery for purchases above a minimum spending level would encourage them to buy.

ACTIVATION STRATEGIES TO OVERCOME ONLINE SHOPPING BARRIERS FOR CONSUMABLES

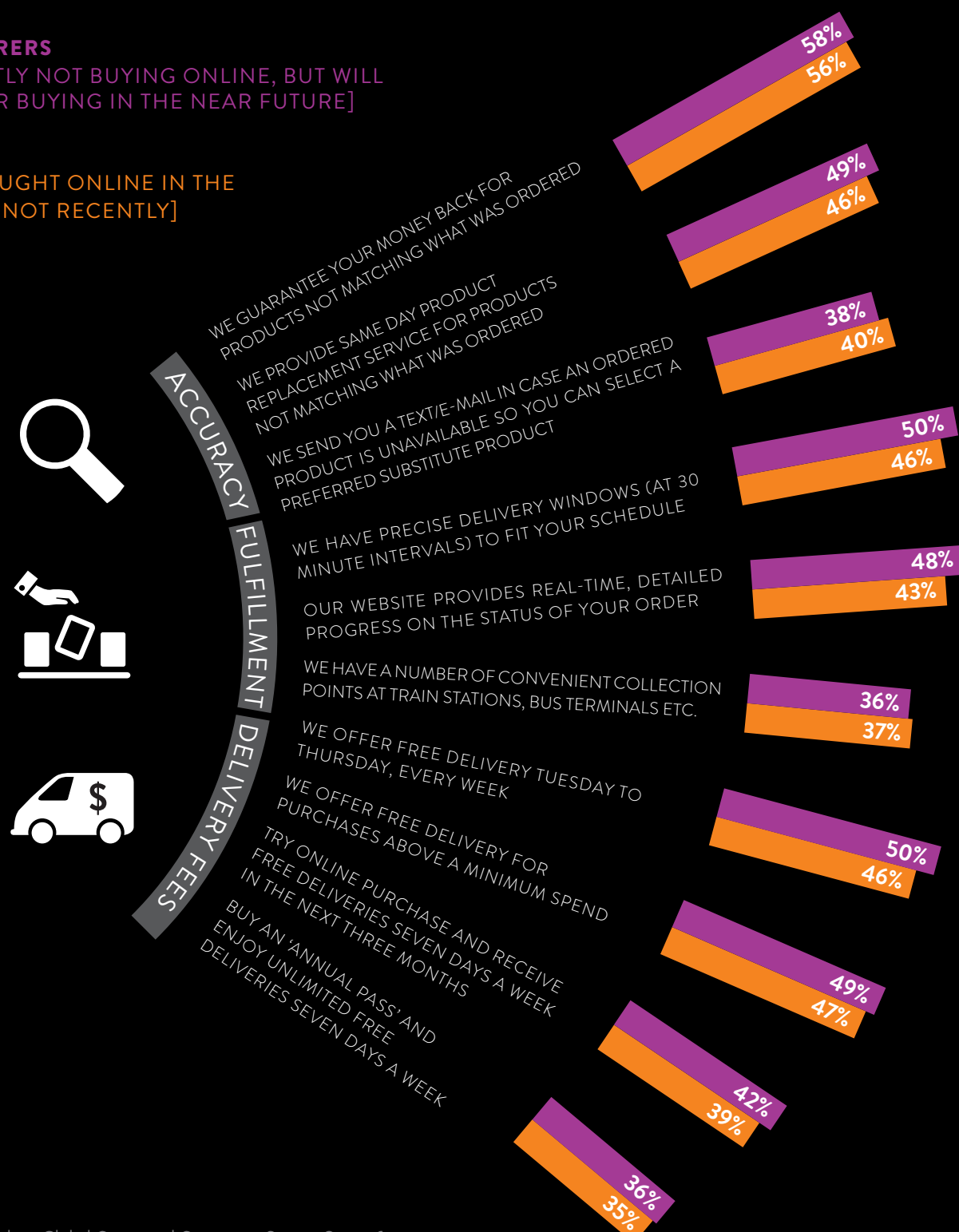
GLOBAL PERCENTAGE IN EACH GROUP WHO SAY THE STRATEGY WOULD DEFINITELY ENCOURAGE THEM TO BUY CONSUMABLES ONLINE

CONSIDERERS

[CURRENTLY NOT BUYING ONLINE, BUT WILL CONSIDER BUYING IN THE NEAR FUTURE]

TRIALISTS

[HAVE BOUGHT ONLINE IN THE PAST, BUT NOT RECENTLY]



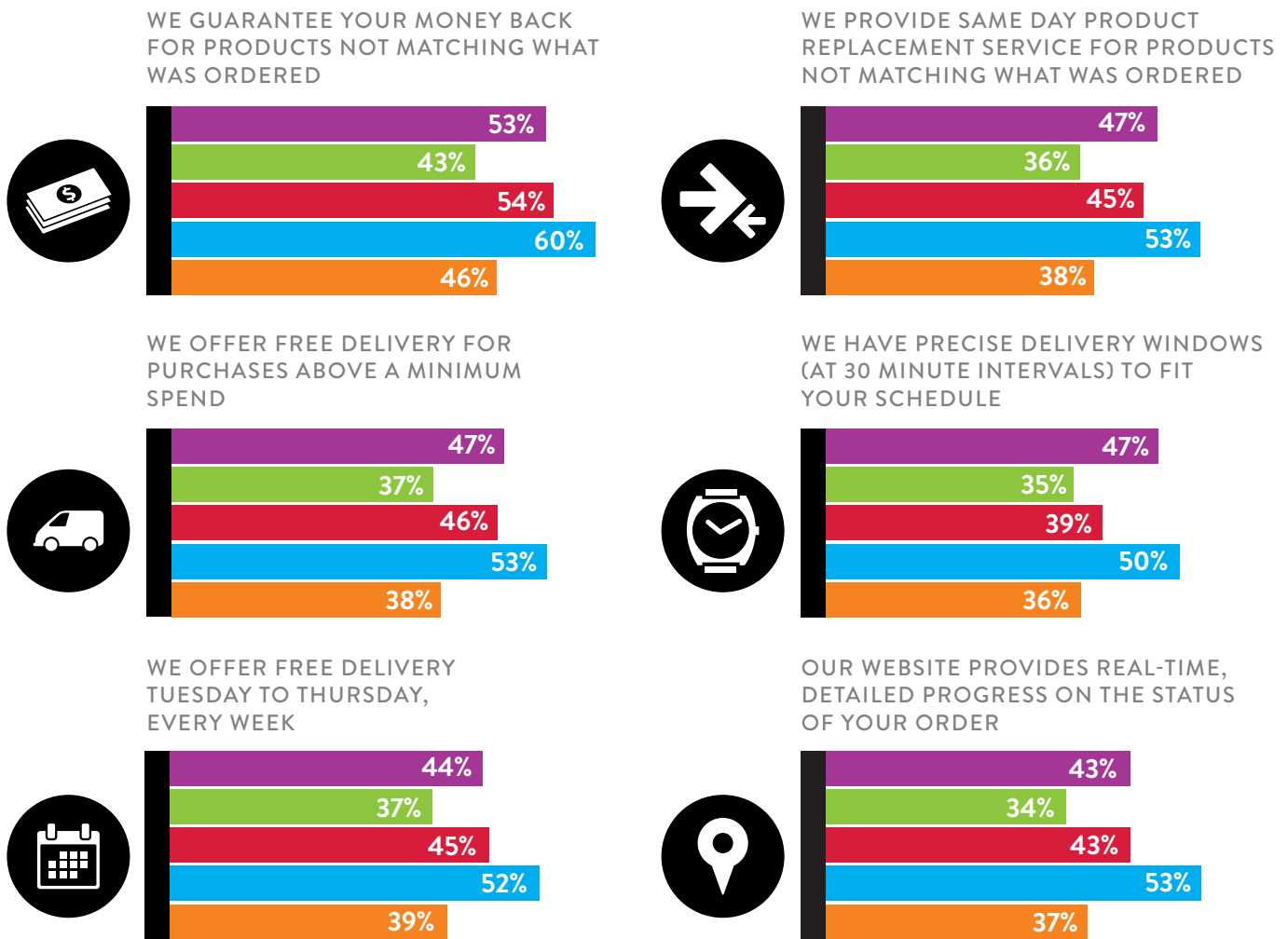
Source: The Nielsen Global Connected Commerce Survey, Q3 2016

The effectiveness of these messages, however, can vary by region. A money-back guarantee is the most effective message in every region, but it is more influential in developing markets than advanced markets. Sixty-two percent of respondents in India, 58% in Southeast Asia, 52% in China and 54% in emerging European countries say a money-back guarantee would definitely encourage them to buy consumables online, compared with 46% in North America, 37% in the advanced Pacific and Asian markets, and 36% in the advanced European markets. This pattern holds true for all of the activation strategies reviewed.

A MONEY-BACK GUARANTEE IS THE MOST EFFECTIVE STRATEGY TO ENCOURAGE ONLINE SHOPPING FOR CONSUMABLES

PERCENTAGE WHO SAY THE STRATEGY WOULD DEFINITELY ENCOURAGE THEM TO BUY CONSUMABLES ONLINE

● ASIA-PACIFIC ● EUROPE ● AFRICA/MIDDLE EAST ● LATIN AMERICA ● NORTH AMERICA



Source: The Nielsen Global Connected Commerce Survey, Q3 2016

The most effective activation strategies are consistent across generations, with a money-back guarantee the clear winner among respondents of all ages. However, all of the strategies reviewed are more likely to be effective with younger respondents than older ones, perhaps not surprising, given their level of comfort with technology. More than half of global Millennials (54%) say a money-back guarantee would encourage them to buy consumable categories online, compared with 45% of Baby Boomers. Outside the top strategies, the gap is even wider. For example, 49% of Millennials say they'd definitely be encouraged to buy if retailers offered same-day product replacement service for products not matching what was ordered; only 36% of Boomers agree.

YOUNGER RESPONDENTS ARE MOST RECEPTIVE TO ONLINE SHOPPING ACTIVATION STRATEGIES FOR CONSUMABLES

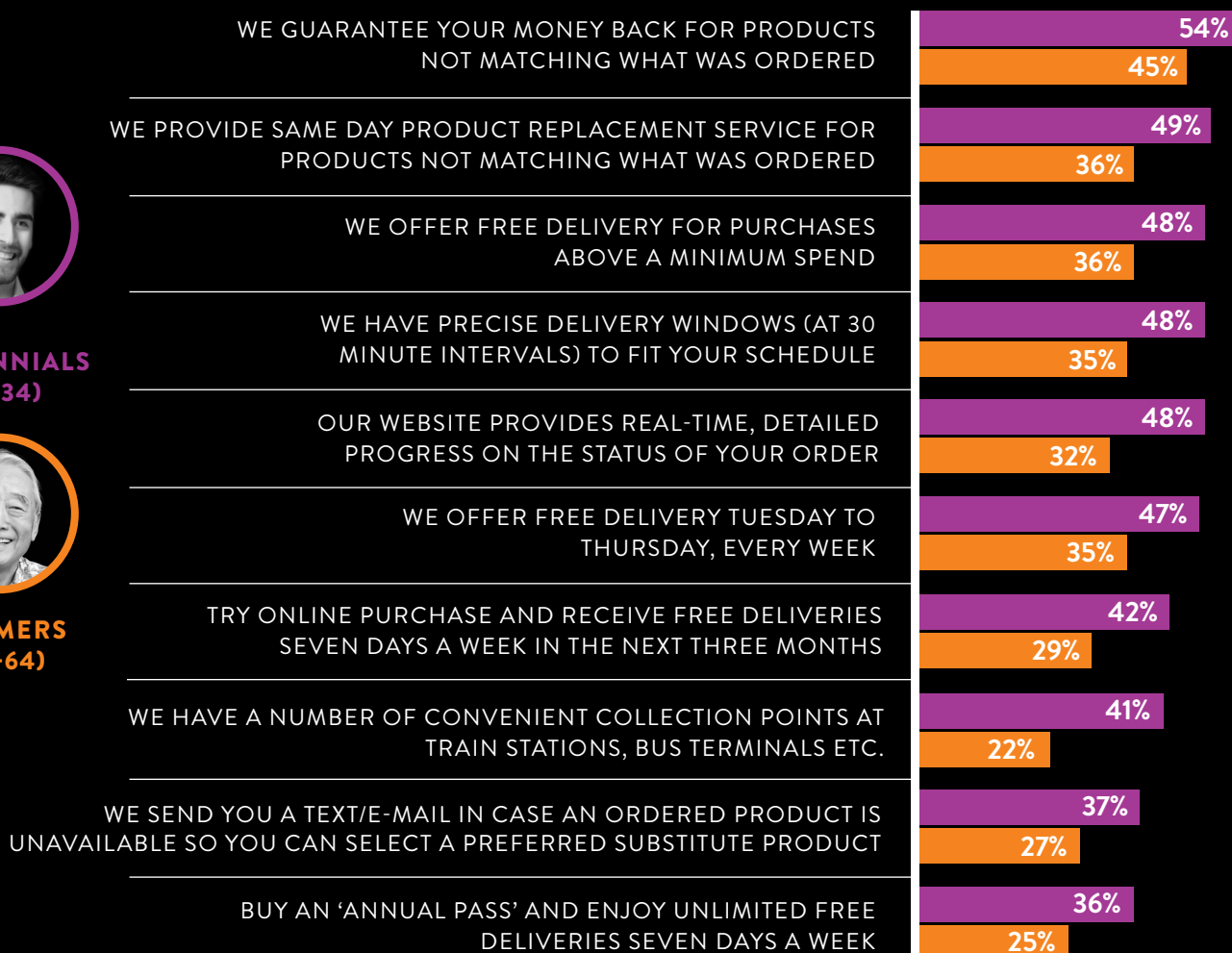
GLOBAL PERCENTAGE IN EACH GROUP WHO SAY THE STRATEGY WOULD DEFINITELY ENCOURAGE THEM TO BUY CONSUMABLES ONLINE



MILLENNIALS
(21-34)



BOOMERS
(50-64)



THE MOST PROMISING PRODUCE PITCH: FRESHNESS GUARANTEED

When it comes to online purchases of fresh foods, such as fruit, vegetables, meat and dairy, there is a clear hierarchy in terms of strategy effectiveness, and it's remarkably consistent among both trialists and considerers. At the top of the list are strategies that address consumers' quality concerns. A full refund for fresh produce that doesn't meet consumers' expectations is most influential among both trialists and considerers. However, while considerers are most satisfied with a refund alone (54%), trialists say a refund paired with a replacement product on their next trip is most influential (54% versus 50% for a refund only).

“Retailers need to assure strict quality standards and be willing to stand by them when consumer expectations fall short,” said Cocco. “Including freshness labels to tell how many days the product stays fresh after it's delivered would encourage more than four in 10 trialists and considerers (46% and 45%, respectively) to buy fresh foods online, and 42% in each group say they would definitely be encouraged by the inclusion of detailed product descriptions about the origin of the supplier and nutritional information.”

ACTIVATION STRATEGIES THAT ADDRESS QUALITY CONCERNS ARE MOST IMPACTFUL FOR FRESH CATEGORIES

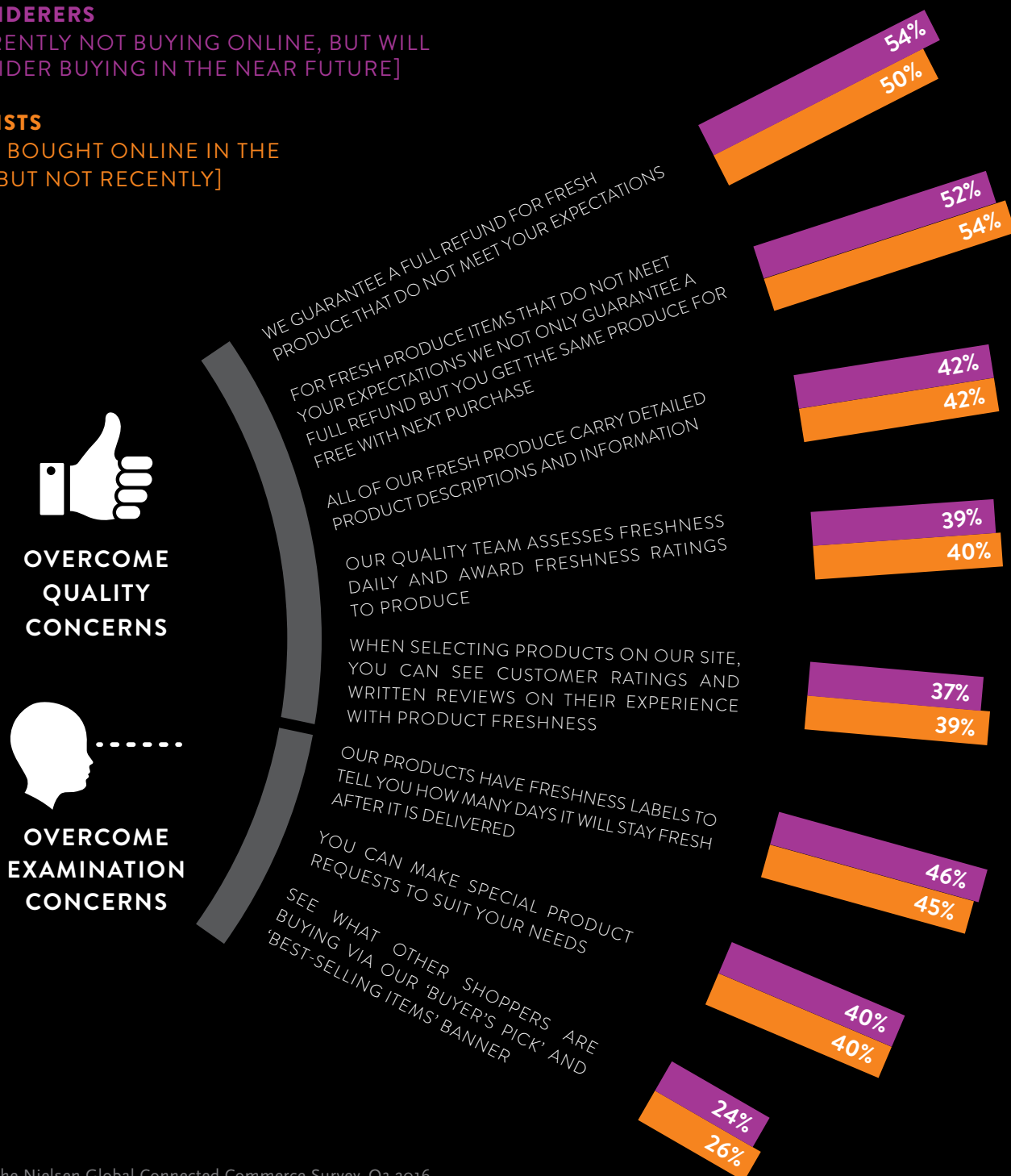
GLOBAL PERCENTAGE IN EACH GROUP WHO SAY THE STRATEGY WOULD DEFINITELY ENCOURAGE THEM TO BUY FRESH PRODUCTS ONLINE

CONSIDERERS

[CURRENTLY NOT BUYING ONLINE, BUT WILL CONSIDER BUYING IN THE NEAR FUTURE]

TRIALISTS

[HAVE BOUGHT ONLINE IN THE PAST, BUT NOT RECENTLY]



OVERCOME QUALITY CONCERNS

OVERCOME EXAMINATION CONCERNS

Source: The Nielsen Global Connected Commerce Survey, Q3 2016

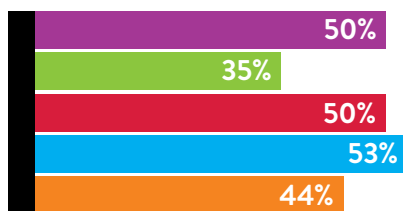
As was the case for consumables in general, the activation strategies for fresh products showed greater adoption willingness among respondents in developing markets than advanced markets. However, the relative influence of each strategy (how effective it is in relation to the other messages) is consistent across the regions, with only a few exceptions: While a full refund (either with or without replacement product) is the most effective strategy in almost every region, freshness labels top the list in the emerging European markets, where this strategy was cited by 49% of respondents. In addition, while a full refund is the most effective strategy in India, a full refund with replacement product ranks significantly lower (sixth of eight messages).

FRESH ACTIVATION STRATEGIES ARE MOST IMPACTFUL IN DEVELOPING MARKETS

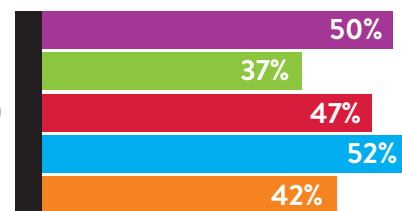
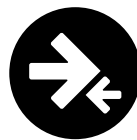
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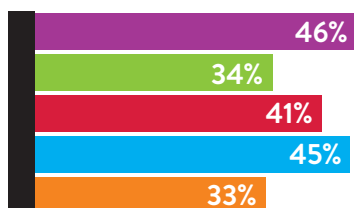
WE GUARANTEE A FULL REFUND FOR FRESH PRODUCE THAT DO NOT MEET YOUR EXPECTATIONS



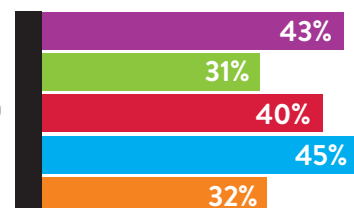
FOR FRESH PRODUCE ITEMS THAT DO NOT MEET YOUR EXPECTATIONS WE NOT ONLY GUARANTEE A FULL REFUND BUT YOU GET THE SAME PRODUCE FOR FREE WITH NEXT PURCHASE



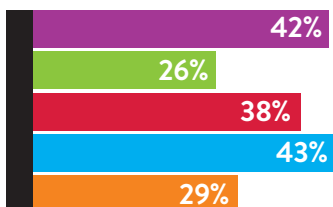
OUR PRODUCTS HAVE FRESHNESS LABELS TO TELL YOU HOW MANY DAYS IT WILL STAY FRESH AFTER IT IS DELIVERED



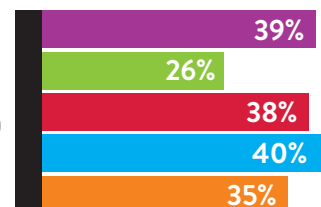
ALL OF OUR FRESH PRODUCE CARRY DETAILED PRODUCT DESCRIPTIONS AND INFORMATION



OUR QUALITY TEAM ASSESSES FRESHNESS DAILY AND AWARD FRESHNESS RATINGS TO PRODUCE



YOU CAN MAKE SPECIAL PRODUCT REQUESTS TO SUIT YOUR NEEDS



Source: The Nielsen Global Connected Commerce Survey, Q3 2016

POWERFULLY PERSUASIVE INFORMATION SOURCES

When it comes to reaching consumers with messaging to influence purchasing, what sources are most effective? For consumable categories, the most widely cited information sources used in purchasing decisions are traditional touchpoints. Visits to a physical store are helpful for all product categories, but they're clearly the most influential source for personal-care and fresh-grocery products. Forty-four percent of global respondents say in-person store visits help them decide which fresh groceries to buy, and the percentage is 39% for personal-care and beauty products. Globally, word of mouth is the second-most-influential source for the fresh-grocery (27%) and personal-care and beauty (32%) categories.

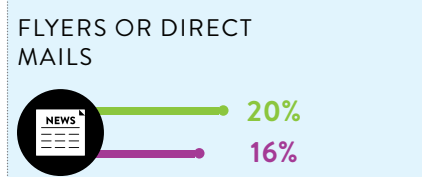
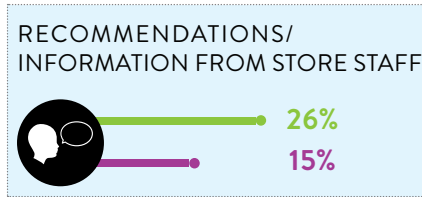
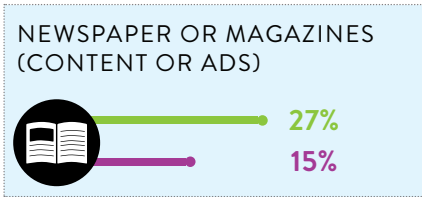
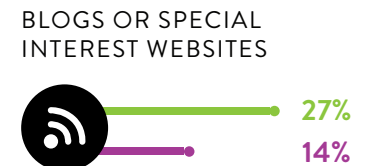
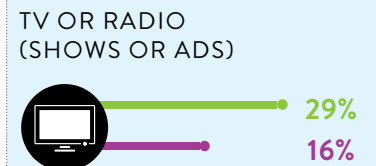
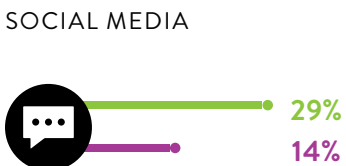
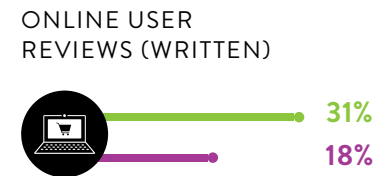
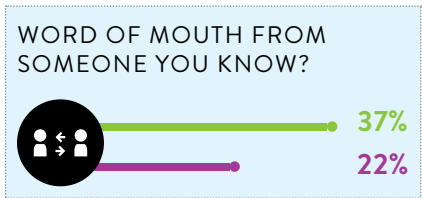
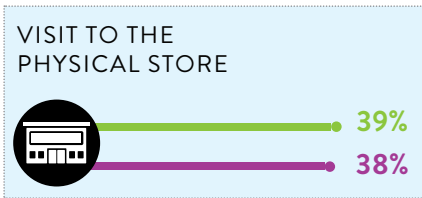
In North America, in-person store visits are particularly influential for decisions to purchase fresh groceries (52%) and personal-care products (46%). Other sources more widely used for fresh-grocery purchase decisions in North America than globally are flyers or direct mail and coupon websites. About one-quarter of North American respondents say they use flyers or direct mail (25%) or coupon and discount websites (24%) when making purchasing decisions about fresh groceries, compared with 18% for each of these globally.

TRADITIONAL INFORMATION SOURCES ARE MOST IMPACTFUL FOR BUYING ONLINE CONSUMABLES

PERCENTAGE WHO SAY THE INFORMATION SOURCE HELPS WHEN MAKING A PURCHASE DECISION

● DEVELOPING MARKETS ● ADVANCED MARKETS

BEAUTY & PERSONAL CARE



■ TRADITIONAL INFORMATION SOURCES

Note: See last page of report for list of advanced and developing markets
 Source: The Nielsen Global Connected Commerce Survey, Q3 2016



Conversely, for consumer electronics and fashion, the most commonly cited information sources for purchasing decisions are digital touchpoints. Store websites top the list of sources used to make purchasing decisions about fashion products (49%), and that source is the second most commonly cited for consumer electronics (42%). For consumer electronics, brand websites are the most widely cited source, while store websites placed third (35%), behind in-person visits (40%).

For all categories, social media is more influential in purchasing decisions in developing markets than advanced ones. In fact, it's among the top three sources used for fashion purchasing decisions in India, Southeast Asia and Africa/Middle East, and for personal-care and beauty decisions in Southeast Asia and Africa/Middle East. In all regions, social media has little influence in fresh-grocery purchasing decisions.

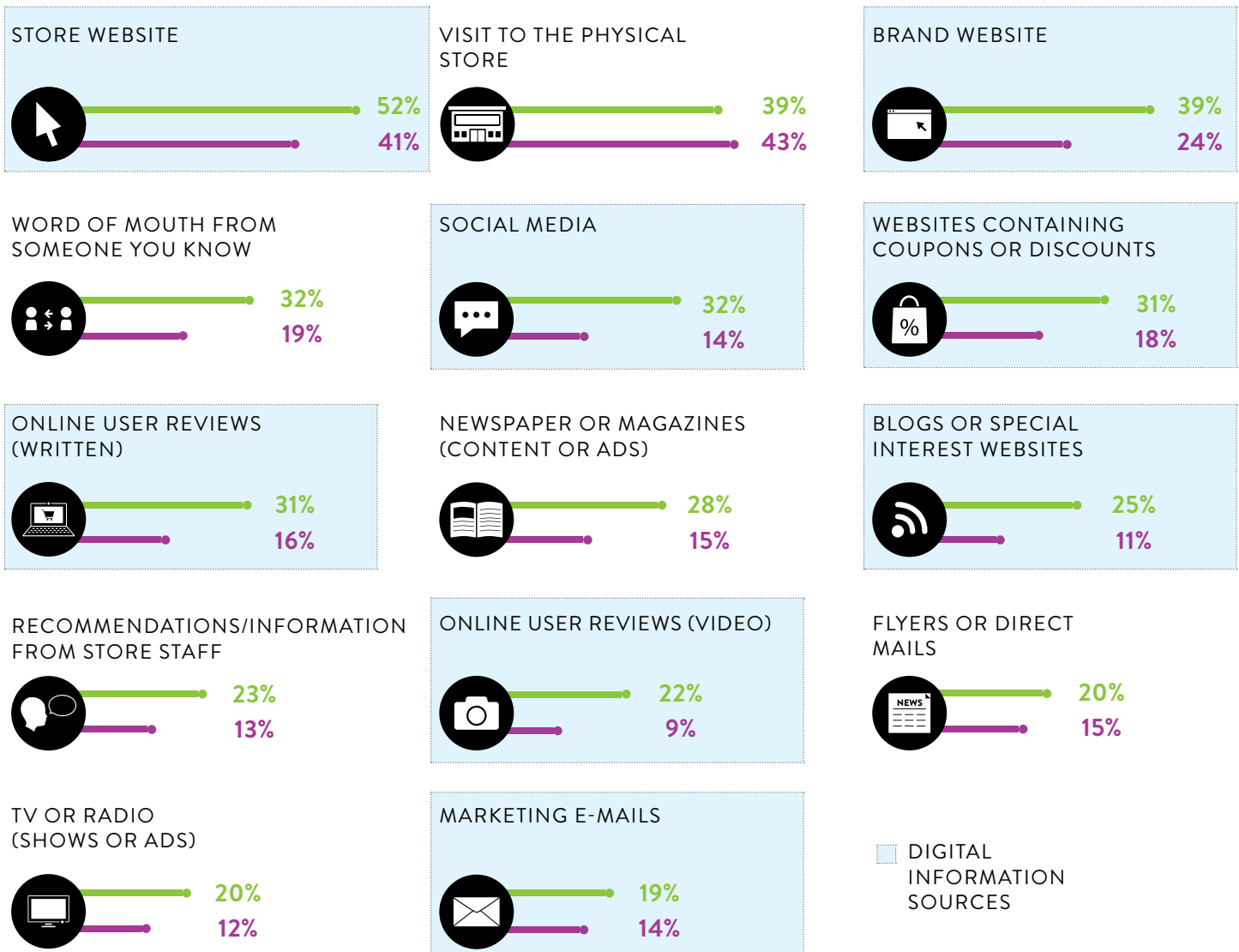
“Depending on the category and the country, the mix of traditional and digital sources used to influence purchasing must be carefully considered,” said Cocco. “The most effective strategies start with a keen understanding of how shoppers make decisions along the path to purchase—both online and in store—and then offering touchpoints that are specific and relevant to their needs.”

DIGITAL AND TRADITIONAL INFORMATION SOURCES ARE IMPACTFUL FOR BUYING ONLINE NON-CONSUMABLES

PERCENTAGE WHO SAY THE INFORMATION SOURCE HELPS WHEN MAKING A PURCHASE DECISION

● DEVELOPING MARKETS ● ADVANCED MARKETS

FASHION



Note: See last page of report for list of advanced and developing markets
 Source: The Nielsen Global Connected Commerce Survey, Q3 2016

WHAT'S NEXT FOR IN-STORE DIGITAL-TECHNOLOGY ADOPTION?

E-commerce is only part of the digital picture. Increasingly, stores are going digital as retailers incorporate a variety of digital tools—from digital coupons to smart shelves to virtual stores. These technologies bridge the online and physical worlds, bringing the ease, convenience and personalization of online into brick-and-mortar stores. And they're not just “cool” nice-to-have features; they create real value for retailers. In-store digital-enablement options have been shown to increase dwell time, engagement levels, basket size and shopper satisfaction.

While only a small percentage of consumers around the world say they're using digital technologies—for example, in-store handheld scanners, self-service checkouts and mobile apps—to aid in their shopping, usage is growing.

The availability of many in-store digital technologies is most prevalent in the advanced markets, where modern trade is well developed and internet and smartphone penetration rates are high. Israel is a leader when it comes to mobile-based features. Nearly four in 10 Israeli respondents say they're using online or mobile coupons (38%) and shopping lists (24%), both up from 2014 (up five percentage points and four pp, respectively). One-fifth (20%) have downloaded a retailer or loyalty program app to their device to receive information or offers while in store (no change from 2014).

Switzerland is another digital leader, with some of the highest rates of self-reported digital coupon and retailer-specific app use in the worldwide study. Twenty-eight percent of Swiss respondents say they're using digital coupons (up 12 pp), and 17% say they've downloaded a retailer or loyalty program app (up eight pp). Swiss retailers also have incorporated several technologies to speed up the checkout process that have gained traction with shoppers. Thirty-six percent of Swiss respondents say they've used a self-service checkout (up five pp), and 28%

USAGE OF IN-STORE DIGITAL TECHNOLOGIES IS MOST PREVALENT IN DEVELOPED MARKETS

PERCENTAGE WHO SAY THEY'RE ALREADY USING SPECIFIED DIGITAL TECHNOLOGY FOR GROCERY SHOPPING

TOP COUNTRIES FOR SELECTED DIGITAL OPTIONS



USE ONLINE OR MOBILE COUPONS

ISRAEL	38%
INDIA	36%
SWITZERLAND	28%
UNITED STATES	28%
SOUTH KOREA	28%



USE SELF-SERVICE CHECKOUTS

SLOVENIA	46%
IRELAND	45%
PORTUGAL	41%
NEW ZEALAND	40%
ESTONIA	39%



USE A HAND-HELD STORE SCANNER TO PURCHASE PRODUCTS AS YOU SHOP

SWEDEN	35%
SWITZERLAND	28%
BELGIUM	28%
ESTONIA	28%
NETHERLANDS	26%



USE ONLINE OR MOBILE SHOPPING LISTS

INDIA	37%
ISRAEL	24%
TURKEY	24%
THAILAND	22%
SAUDI ARABIA	21%

Source: The Nielsen Global Connected Commerce Survey, Q3 2016

are using handheld scanners as they shop, rather than standing in checkout lines to purchase products (down one pp). The only country with higher self-reported use of handheld scanners is Sweden. Thirty-five percent of Swedish respondents say they use handheld scanners to avoid checkout lines (down three pp). Slightly more (36%) say they use self-checkout (down two pp).

Why have these tools gained traction in these markets? Above all, availability is central. In Israel, a large pharmacy chain has a very popular app that includes a shopping-list feature as well as personalized and general coupons. In Switzerland, two major retailers dominate the grocery market—with 80% share—reaching nearly every Swiss shopper. Both of these retailers have incorporated digital technologies in their stores—for example, introducing mobile apps that include mobile coupons and payments. Finally, in Sweden, handheld scanners have been in the market for over 10 years and are available in almost all of the hypermarkets. Attitudes toward technology and high adoptions rates also are important growth drivers. Israel has a high concentration of early adopters and one of the highest smartphone penetration rates in the world, while Sweden and Switzerland are global leaders in terms of smartphone and internet adoption.

While use of some digital tools may be higher in advanced markets, the examples from Israel, Sweden and Switzerland demonstrate that as these tools become more widely available, adoption in other markets will likely grow, especially considering the high percentages of respondents who say they're willing to use them.

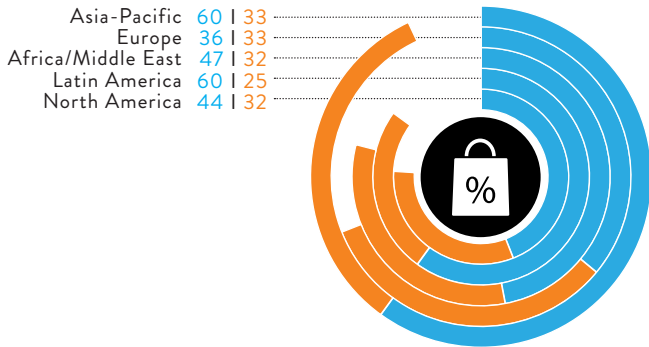


WILLINGNESS TO USE IN-STORE DIGITAL OPTIONS IS HIGH IN DEVELOPING MARKETS

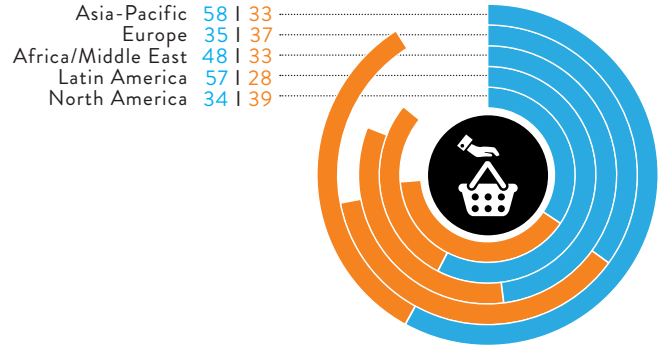
PERCENTAGE WHO SAY THEY'RE WILLING TO USE DIGITAL OPTIONS FOR GROCERY SHOPPING*

● DEFINITELY WILLING ● SOMEWHAT WILLING

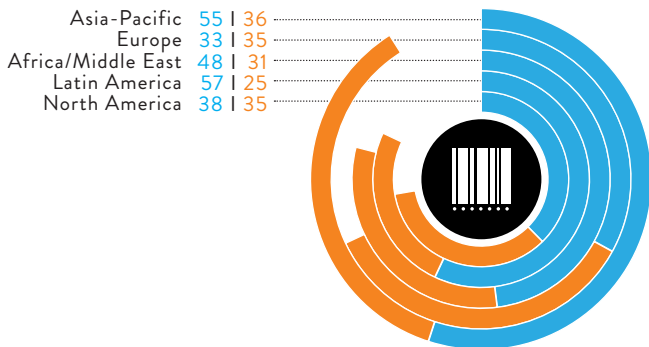
USE ONLINE OR MOBILE COUPONS



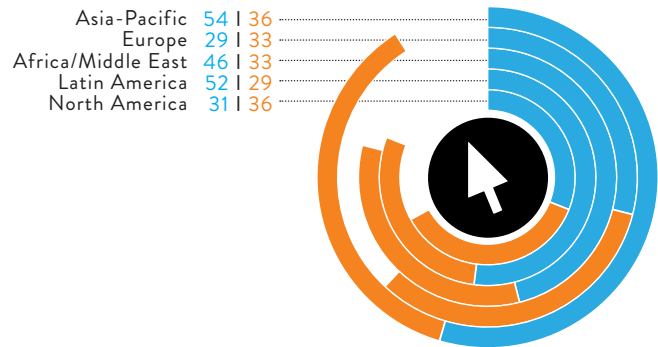
USE SELF-SERVICE CHECKOUTS TO REDUCE CHECKOUT TIME



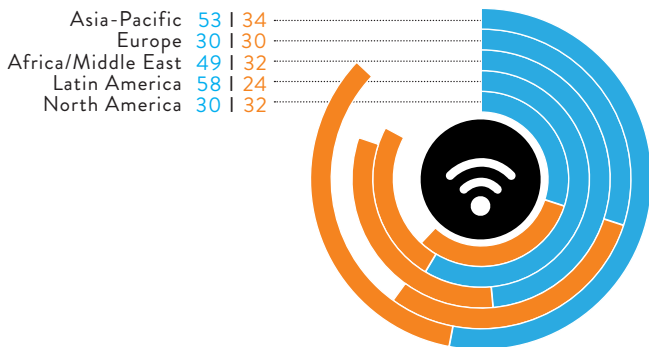
USE A HAND-HELD STORE SCANNER TO PURCHASE PRODUCTS AS YOU SHOP TO AVOID CHECKOUT LINES



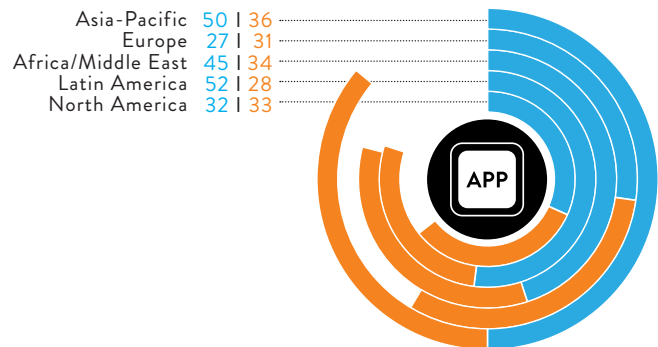
USE ONLINE OR MOBILE SHOPPING LISTS



LOGIN TO STORE WIFI WITH MY MOBILE TO RECEIVE MORE INFORMATION OR OFFERS WHILE IN STORE



DOWNLOAD RETAILER APP OR LOYALTY PROGRAM APP TO MY MOBILE PHONE TO RECEIVE INFORMATION OR OFFERS WHILE IN STORE



*Note: Among those who say they are not already using specified technology. Percentages may not equal 100% due to rounding.
Source: The Nielsen Global Connected Commerce Survey, Q3 2016

DISRUPTIVE TRENDS THAT WILL CONTINUE TO DRIVE CONNECTED- COMMERCE GROWTH

Several major economic and consumption trends will drive connected commerce's growth and reshape traditional definitions of shopping:

- **Business model innovation.** E-commerce is reshaping what it means to shop, as new retail models gain traction. The click-and-collect model has gained traction in France, and consumers around the world indicate they're open to using this and other pickup models in the future. In the U.S., meal-kit services, direct-to-consumer models and automatic-subscription models have seen tremendous growth. Eighteen percent of online purchases in the U.S. are based on subscriptions, including 30% of health and 29% of personal-care purchases. As more retailers and manufacturers continue to define their vision for the future and experiment with new formats that blend the digital and physical worlds, what it means to shop and what consumers expect from stores will continue to evolve. But no single model is right for everyone, and the challenge is to determine how to take the best of the online and offline worlds and blend them in a way that deepens the relationship with shoppers.

- **Rising connectivity.** The Demand Institute, jointly operated by Nielsen and The Conference Board, projects that an additional 1.2 billion people will come online by 2020. The majority of this growth will occur in emerging markets, driven largely by the spread of mobile devices, which will bring billions of consumers online for the first time. GSMA, a mobile-operator trade association, predicts that the number of smartphone subscriptions worldwide will rise from 2.6 billion in 2015 to 5.8 billion by 2020.

Many of these new users will be in remote areas with underdeveloped retail infrastructure. While online retailers must overcome logistical challenges in reaching these consumers, limited retail infrastructure may actually be a boon for connected commerce, as consumers with limited choices will likely enthusiastically welcome access to new products and services made possible by e-commerce. Moreover, worries about internet security are not barriers to online purchasing for most. In fact, 62% of global respondents in Nielsen's survey—including 81% in India and nearly two-thirds in Southeast Asia (66%) and Latin America (65%)—say they're confident that their personal information is secure when buying items online.

Emerging markets are not the only ones where retailers will benefit from the mobile explosion. It's already an important growth engine in advanced markets. In the U.S. in 2016, Black Friday and Cyber Monday retail sales via mobile devices were up 33% and 34% over the previous year, and Black Friday became the first day ever to generate over a billion dollars in sales via mobile devices (\$1.2 billion).⁴ As retailers continue to improve the mobile experience and consumers grow more comfortable transacting on their phones, tremendous growth will continue.

- **Digital-payment disruption.** Mobile also is helping to address another major challenge for online retailers: the large unbanked population in much of the developing world. According to GSMA, mobile money services are now available in 90 countries worldwide, enabling billions of new consumers to engage in e- and m-commerce and consumer credit markets for the first time. The Demand Institute estimates that growth in access to cashless payments could lead to as much as \$10 trillion in additional consumer spending over the next decade.

⁴Adobe Digital Insights (November 2016).

Mobile payment systems aren't just bringing new consumers online, they also are a critical part of the digital disruption that's transforming what it means to shop. Mobile payments are a critical part of Amazon's vision for the retail store of the future, with shoppers entering the store and paying for goods without ever taking out their wallet. But mobile payments aren't just a distant fantasy; they're already affecting the way many consumers shop. Just look at the popularity of Uber and Lyft, which allow consumers to hail and pay for a ride completely via mobile device. In Nielsen's Global Mobile Shopping, Banking and Payment Survey, more than 28% of global respondents, including 35% of Millennials, said they were highly likely to use mobile payments in bars, restaurants or retail stores in the next six months. As these methods gain traction, their impact on consumers' expectations will be tremendous.

- **Rising economic prosperity and consumption-led growth.** According to the World Bank, consumer purchasing power is growing between 7% and 9% per year in China, India and sub-Saharan Africa. In addition, the Organization for Economic Cooperation and Development predicts the global middle class will increase from 1.8 billion in 2009 to 4.9 billion by 2030. Rising prosperity will be a growth engine for consumption, with young consumers—digital natives entering their prime spending years—being a particularly powerful force. The McKinsey Global Institute projects that increased consumer spending will drive three-quarters of global consumption growth between 2015 and 2030.
- **Urban living.** According to the United Nations, the world is currently undergoing the largest wave of urban growth in history. More than half of the world's population (54%) lives in an urban area—up from 47% in 2000—and this number will rise to nearly two-thirds (66%) by 2050. This trend presents retailers with challenges and opportunities. Urban areas often have the digital and physical infrastructure necessary to facilitate connected-commerce growth. At the same time, urban consumers typically have ready access to stores, and they're often the first with access to innovative new store or service formats, digital technologies and order fulfillment options. As a result, these shoppers have very high expectations when it comes to flexibility and efficiency, and optimizing the shopping experience will be critical for retailers of all formats.

COUNTRIES IN THE GLOBAL SURVEY

ASIA-PACIFIC

MARKET	INTERNET PENETRATION
Australia	93%
China	52%
Hong Kong	80%
India	37%
Indonesia	34%
Japan	91%
Malaysia	68%
New Zealand	94%
Philippines	53%
Singapore	81%
South Korea	92%
Taiwan	84%
Thailand	60%
Vietnam	52%

NORTH AMERICA

MARKET	INTERNET PENETRATION
Canada	93%
United States	87%

LATIN AMERICA

MARKET	INTERNET PENETRATION
Argentina	79%
Brazil	68%
Chile	80%
Colombia	59%
Mexico	56%
Peru	59%
Venezuela	62%

EUROPE

MARKET	INTERNET PENETRATION
Austria	83%
Belarus	59%
Belgium	85%
Bulgaria	57%
Croatia	75%
Czech Republic	80%
Denmark	96%
Estonia	84%
Finland	94%
France	84%
Germany	88%
Greece	63%
Hungary	76%
Ireland	83%
Israel	73%
Italy	62%
Kazakhstan	54%
Latvia	82%
Lithuania	82%
Netherlands	96%
Norway	96%
Poland	68%
Portugal	68%
Romania	56%
Russia	71%
Serbia	66%
Slovakia	83%
Slovenia	73%
Spain	77%
Sweden	95%
Switzerland	87%
Turkey	60%
United Kingdom	92%
Ukraine	43%

Advanced and emerging European markets are referenced throughout. Classifications are based on the International Monetary Fund's definitions. Advanced markets include Austria, Belgium, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Israel, Italy, Latvia, Lithuania, Netherlands, Norway, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and U.K.

Emerging markets includes Belarus, Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania, Russia, Turkey and Ukraine.

AFRICA/MIDDLE EAST

MARKET	INTERNET PENETRATION
Egypt	37%
Morocco	61%
Pakistan	18%
Saudi Arabia	65%
South Africa	49%
United Arab Emirates	92%

Source: Miniwatts Marketing, *Internet World Stats*, June 30, 2016 (Europe is updated through Nov. 30, 2015), www.internetworldstats.com

Classifications of advanced and developing markets are based on the International Monetary Fund's definitions. Advanced markets include Australia, Austria, Belgium, Canada, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Netherlands, New Zealand, Norway, Portugal, Singapore, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Taiwan, U.K., and U.S.

Developing and emerging markets include Argentina, Belarus, Brazil, Bulgaria, Chile, China, Colombia, Croatia, Czech Republic, Egypt, Hungary, India, Indonesia, Kazakhstan, Malaysia, Mexico, Morocco, Pakistan, Peru, Philippines, Poland, Romania, Russia, Saudi Arabia, South Africa, Thailand, Turkey, Ukraine, United Arab Emirates, Venezuela and Vietnam.

ABOUT NIELSEN GLOBAL E-COMMERCE MEASUREMENT SALES DATA

Nielsen Global E-Commerce spans over 20 countries around the world. Measurement may rely on direct from retailer data (ePOS), data collected via Nielsen's Consumer Panels, other licensed data, or a combination of the foregoing. Specific methodologies may vary from country to country, in accordance with each country's rules and regulations. Data for China is a combination of direct from retailer data (ePOS) and other licensed data projected to a total country number. France is an aggregation of direct from retailer data for the click and collect market (which accounts for 85% of all CPG e-commerce sales in France).

ABOUT THE NIELSEN GLOBAL SURVEY

The Nielsen Global Connected Commerce Survey was conducted October 31–November 18, 2016, and polled more than 30,000 online consumers in 63 countries throughout Asia-Pacific, Europe, Latin America, the Middle East/Africa and North America. The sample includes internet users who agreed to participate in this survey and has quotas based on age and sex for each country. It is weighted to be representative of internet consumers by country. Because the sample is based on those who agreed to participate, no estimates of theoretical sampling error can be calculated. However, a probability sample of equivalent size would have a margin of error of $\pm 0.6\%$ at the global level. This Nielsen survey is based only on the behavior of respondents with online access. Internet penetration rates vary by country. Nielsen uses a minimum reporting standard of 60% internet penetration or an online population of 10 million for survey inclusion.

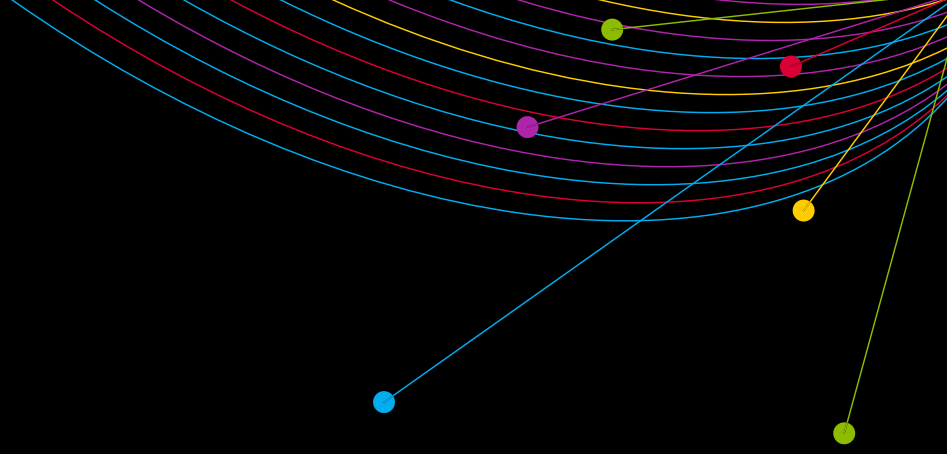
ABOUT NIELSEN

Nielsen Holdings plc (NYSE: NLSN) is a global performance management company that provides a comprehensive understanding of what consumers watch and buy. Nielsen's Watch segment provides media and advertising clients with Total Audience measurement services for all devices on which content — video, audio and text — is consumed. The Buy segment offers consumer packaged goods manufacturers and retailers the industry's only global view of retail performance measurement. By integrating information from its Watch and Buy segments and other data sources, Nielsen also provides its clients with analytics that help improve performance. Nielsen, an S&P 500 company, has operations in over 100 countries, covering more than 90% of the world's population.

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