Leading Online Shoppers to the Finish Line

BCG and Shopify looked at 1 billion data points across more than 220,000 sites to determine the best ways to optimize e-commerce conversion rates.

June 2023
By Stephen Robnett, Scott Wilder, Jason Holman, Suchi Sastri, Tawfik Hammoud, and Ruslan Askerov
As e-commerce continues to increase its share of overall sales activity, it is more important than ever for sellers to optimize the number of customers who buy merchandise when they visit the sellers’ site.

In recent years e-commerce has grown and changed in irreversible ways. When the COVID-19 pandemic hit, commerce of all kinds—from sellers to distributors to manufacturers going direct-to-consumer or direct-to-business—moved to digital platforms. It became critical to invest in e-commerce and an enhanced digital experience. Today online shopping activity remains well above its pre-pandemic levels, years after the initial spike in usage that came in response to COVID-19. (See Exhibit 1.) Shoppers’ expectations have not returned to pre-pandemic levels either. Customers now expect a seamless, tailored shopping experience across channels and devices. They expect the online experience to offer them a wide range of merchandise, convenient access to details or instructions, and customer-friendly return policies. They expect a quick, frictionless payment process that accommodates the customer’s preferred payment system, whether it be basic credit cards, bank payments, or digital wallets.
From the seller’s perspective, however, there is no exact science for determining what makes a customer visit a site, select items, and remain there throughout the lower funnel stages of the shopping process—entering the checkout flow and completing the purchase. In this study, based on a comprehensive analysis by Shopify and BCG of more than 220,000 e-commerce sites and more than 1 billion data points, we examine the key drivers of lower funnel and overall e-commerce conversion rates. Our research examined what it takes to optimize conversion rates in light of consumer expectations, seller needs, and technology platform evolution.

When we talked to e-commerce marketers about their customer relationships, they said that customers now expect a wide variety of features:

- “In a world where the average checkout time is two minutes, driving toward a 30-second experience will optimize conversion.”
  — E-commerce marketing manager for a multinational food and beverage company

- “Consumers don’t want to wait more than three days or pay for shipping, due to the standard Amazon has set.”
  — Chief customer officer (CCO) at a national retailer

Sellers realize that they face a rapidly changing environment. Advanced tracking and analytics platforms help them learn about customer demographics, lifestyles, tastes, and shopping patterns, but it’s equally important to anticipate what their customers may want in the future. Today’s best-selling product will give way to another product six months from now.

Moreover, customer analytics grow ever more complex as sellers bring more and more types of products online. Many e-commerce platforms are branching beyond goods into services, for example, with different configuration and customization requirements. E-commerce also serves increasingly diverse customer segments, with a need to bring unique experiences to each customer.
Here is what we’ve heard from sellers and e-commerce platform providers about the demands that they face:

“<It’s great when an e-commerce platform can show me who abandoned cart and why they abandoned cart>.”

— CCO at a national retailer

“Sellers recognize that optimizing the mobile experience is difficult, so their goal is to make the process as simple as possible.”

— Chief technology officer (CTO) at an e-commerce development agency

“Most sellers desire customer journey analytics, SEO, and shipping integration plug-ins through their e-commerce provider.”

— Senior sales director at a large US-based e-commerce provider

“Every big corporation has a preferred method of reporting analytics that requires customized plug-ins.”

— E-commerce marketing manager for a multinational food and drink company

Technology continues to evolve as well. When major players like Nike, Amazon, and Walmart first built their e-commerce offerings a quarter of a century ago, they developed almost everything in house. In many cases, their e-commerce offering was a basic storefront with an open-source backbone or, if they were large enterprises that relied on big legacy technology vendors, customized software. This was the Wild West of e-commerce technology. Design, performance, and quality varied dramatically. Breakages and bugs were frequent.

Today, most businesses, whether large or small, have the option of leveraging any of a multitude of all-in-one commerce platforms instead of developing everything in house. As a result, sellers can concentrate on what they know best—the product, brand, and marketing—and rely on the technology provider to keep the engine up to date. Continuous updating, of course, is crucial at a time when technology continually offers new ways to shop.

Whereas 15-odd years ago most e-commerce shopping took place on a desktop, today approximately 70% of all transactions occur on a customer’s smartphone. The major platforms have fully democratized access to world-class e-commerce experiences with app ecosystems that enable any store to easily customize its site. Technology options from social media to augmented reality have exploded, and artificial intelligence (including generative AI) is becoming a bigger and bigger part of the shopping experience.

With so many variables, e-commerce sellers need to determine which customer requirements and technology enhancements are most critical to attracting shoppers and getting them to the finish line. Of course, what makes a shopper decide to buy a certain product depends on the individual’s state of mind, needs, and interests—but our findings indicate that a seller can influence the decision at each step of the shopper’s experience. In this report, we look at the multiple ways to achieve optimal engagement between shopper and seller.

How We Think About E-Commerce Performance

No single metric defines strong e-commerce performance. Most sellers would agree that one extremely important element of performance is the conversion rate, which measures how many customers who begin their digital shopping journey actually complete their purchase. Nevertheless, sellers define and measure conversion rate in different ways.

One key difference in the ways that various sellers calculate the conversion rate relates to where they place the assumed starting point and endpoint of the conversion funnel. (See Exhibit 2.) Does the process begin at the moment an ad shows up on a consumer’s Instagram feed? Or the moment the consumer reaches a page displaying the product or service of interest? Or when the customer clicks on “Add to cart”—or “Checkout”? Another issue involves how to count visitors. Does the definition rely on the number of unique visitors or on every visit? And what time frame does “unique” cover? There are many ways to think about the starting point and the endpoint, and a wide range of factors that can determine success or failure at each stage of the conversion funnel. For example: How long does it take to get to an interactive page? Is the customer offered a discount? Is there a one-click checkout option? What payment choices does the site support?

The basic e-commerce performance measures can be depicted as Traffic x Conversion x Average order value = Sales. However, that equation contains multiple elements that can vary and have an impact on the result.
There are two main ways to measure conversion. One is at the session level, which typically begins the moment a customer arrives anywhere on a seller’s homepage. The second focuses on lower funnel conversion, where the performance metrics kick in when the customer has found an item to purchase and starts the checkout process. The customer has shown an intention to buy, but the seller needs to ensure that the action results in a sale.

These two paths may seem relatively straightforward, but countless variables can impact conversion over the course of the purchase funnel. To obtain a more accurate measure of what leads a customer to reach the finish line and complete the purchase, sellers can assess the conversion rate at each step of a customer’s digital—and omni—experience. Doing so is a key part of analyzing the performance of a company’s e-commerce site. Each customer’s e-commerce journey includes several generally agreed-upon steps. (See Exhibit 3.)

The first step is awareness. The customer finds the shopping experience through ads, social media, or organic discovery (such as word-of-mouth recommendations).

The customer might drop off at this point for any of a number of reasons:

- The digital experience is too slow and cumbersome.
- The customer doesn’t view the store as a known entity and doesn’t trust it.
- The presence of too many ads or pop-ups creates a poor first impression.
- Nothing on the site immediately promotes brand loyalty.

The second step is consideration. The customer browses through store offerings and product listings, viewing product descriptions, conducting in-depth product research, and comparing the site’s prices with those of competitors.

At this point the customer might choose to add products to the virtual shopping cart. On the other hand, the customer might drop off if one of these factors prevails:

- The customer finds a better price elsewhere.
- The customer can’t find the desired product.
- The desired product is unavailable.
- The site’s product description is too complicated or unclear.

Having reached the lower funnel at the end of the second step, the customer starts the third step: checkout. The vast majority of site visitors don’t make it to this point. Consequently, a customer who has made it this far and added an item to the cart is very valuable, and the seller must ensure that the checkout process is as seamless as possible once the customer clicks on a “buy now” or “checkout” button or the equivalent.
At this critical third stage, the customer might drop off for any of these reasons:

- The checkout process is too complicated—for example because it involves too many substeps or pages.
- The customer doesn’t want to provide personal information.
- The customer is redirected to an external payment site.
- The item turns out to be too expensive because of hidden fees or other charges, such as for added features or accelerated delivery.
- Delivery or payment issues crop up. For example, the shipping may take longer than expected, or the site may not accept the customer’s preferred credit card.

If the checkout experience goes smoothly, however, the customer successfully places the order.

All of these steps may seem clear cut, but anyone who has spent time in the e-commerce world knows that achieving an optimized conversion rate hinges on the interplay of many variables.

Here is what one CEO told us:

“There are a thousand things I have to think about running a business, and I am not an e-commerce expert. I’ve learned there is no silver bullet, but every minor change I make in my e-commerce experience always seems to have unintended consequences. It’s difficult to keep up with the pace of change.”

— CEO at a midsize e-commerce retailer

Our research confirmed what many sellers would intuitively expect regarding the complexity that surrounds conversion rates: of the more than 100 variables that we examined closely, not one explains more than 1.4% of the variation in lower funnel conversion rates. Certain variables—particularly accelerated payment methods and the type of device that the customer is using—carry greater weight than others when it comes to conversion success, but every element has to be in place to achieve an optimal conversion rate. (See Exhibit 4.)
In addition, many variables related to optimizing the e-commerce conversion rate can exert countervailing influences. Traffic and conversion rates, for example, often move in opposite directions; a seller might increase site traffic, only to see a corresponding drop in the conversion rate. Likewise, average order value (AOV) and conversion rates can have an inverse relationship.

Since every e-commerce experience is unique, we highly recommend continuously performing robust A/B testing, which entails split testing of two or more versions of multiple variables. The variables may include anything from core experience flows, such as pages and configurators, to basic user interface/user experience optimization, such as through alterations in graphics and design, to merchandising, such as through changes to the content of product detail pages. Testing of this sort enables e-commerce sellers to assess which version receives the best response and improve the experience accordingly.

Given the degree of confounding variables, one of the greatest challenges in measuring and understanding e-commerce performance involves producing like-for-like samples of disparate data sets in order to understand what drives conversion performance. Our study leveraged rigorous data science methodology to create like-for-like samples that we then used to explore key variables across the e-commerce conversion funnel that are most relevant to industry participants. (See the Appendix, page 32.)

Exhibit 4 - Although No Single Variable Explains Conversion, Several Have Outsize Impacts When Gauged Correctly

Random forest model feature importance ranking

<table>
<thead>
<tr>
<th>Feature</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accelerated payment methods</td>
<td>50.4%</td>
</tr>
<tr>
<td>Device type</td>
<td>7.7%</td>
</tr>
<tr>
<td>Simplified checkout flows</td>
<td>18.9%</td>
</tr>
<tr>
<td>Customer accounts and subscriptions</td>
<td>15.5%</td>
</tr>
<tr>
<td>Apps and customizations</td>
<td>3.5%</td>
</tr>
<tr>
<td>Website performance</td>
<td>0.2%</td>
</tr>
<tr>
<td>Buy now, pay later</td>
<td>11%</td>
</tr>
</tbody>
</table>

Source: Internal Shopify data.

1 Lower funnel conversion across store revenue sizes.
2 Upper funnel conversion uplift.

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Conversion Rate Fundamentals

Although multiple factors can affect conversion rates, these variables fall into two broad categories. Some are fundamental to the store or business category itself and therefore are not easy for sellers to change or control. Others are more amenable to control and optimization to maximize conversion.

In this chapter we will discuss critical fundamentals that tend not to be controllable, although sellers can and should assess them regularly. In measuring e-commerce performance, companies need to understand how these fundamental factors impact their individual business and the market they play in. From there, awareness of critical fundamentals will help shape strategic choices. (See Exhibit 5.)

Industry Type

Average conversion rates can vary greatly from one industry to another. In most, however, overall funnel conversion rates range from 1% to 4%. Industries whose average overall conversion rates are likely to exceed 3% include software; media; business and industrial; and food, beverage, and tobacco. (See Exhibit 6.)

The wide range of conversion rates reflects, to a large extent, customers’ expectations and frame of mind when they click on a site. Relevant factors may include strong familiarity with the product, a social or word-of-mouth component, the product’s cost, or the typical timeframe involved in deciding to purchase such products.
### Exhibit 5 - Fundamental Factors Cause Wide Variations in Lower Funnel Conversion Rates

**Lower funnel conversion rate range by factor (%)**

<table>
<thead>
<tr>
<th>Industry</th>
<th>Device type</th>
<th>Store size</th>
<th>Average conversion</th>
</tr>
</thead>
<tbody>
<tr>
<td>[54.8%]</td>
<td></td>
<td>[55.7%]</td>
<td></td>
</tr>
<tr>
<td>29.8%</td>
<td></td>
<td>45.2%</td>
<td>42.7%</td>
</tr>
<tr>
<td>52.8%</td>
<td></td>
<td>40.4%</td>
<td></td>
</tr>
</tbody>
</table>

*Source: Internal Shopify data.*

### Exhibit 6 - Conversion Rates Show a Wide Range Based on Industry Alone

**Conversion rate by industry (%)**

<table>
<thead>
<tr>
<th>Industry</th>
<th>Total conversion (based on sessions)</th>
<th>Lower funnel conversion (based on checkouts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software</td>
<td>3.8</td>
<td>54.8</td>
</tr>
<tr>
<td>Media</td>
<td>3.8</td>
<td>53.0</td>
</tr>
<tr>
<td>Food, beverages, and tobacco</td>
<td>3.3</td>
<td>48.1</td>
</tr>
<tr>
<td>Animals and pet supplies</td>
<td>3.1</td>
<td>49.8</td>
</tr>
<tr>
<td>Apparel and accessories</td>
<td>2.9</td>
<td>44.6</td>
</tr>
<tr>
<td>Home and garden</td>
<td>2.0</td>
<td>49.7</td>
</tr>
<tr>
<td>Toys and games</td>
<td>2.0</td>
<td>45.6</td>
</tr>
<tr>
<td>Electronics</td>
<td>1.9</td>
<td>43.9</td>
</tr>
<tr>
<td>Baby and toddler</td>
<td>1.9</td>
<td>45.0</td>
</tr>
<tr>
<td>Sporting goods</td>
<td>1.8</td>
<td>39.6</td>
</tr>
<tr>
<td>Vehicles and parts</td>
<td>1.6</td>
<td>42.5</td>
</tr>
<tr>
<td>Furniture</td>
<td>1.4</td>
<td>41.3</td>
</tr>
<tr>
<td>[29.8%]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: BCG analysis and case experience.*
Industries with relatively high conversion rates often have a lower bar to purchase. At the other extreme, an overall conversion rate of 1% might be above average in an industry such as home furnishings. In this category, the customer is considering a high-end purchase that may require weeks or even months of deliberation and comparisons to evaluate such factors as color, size, comfort, and material. In general, products that customers are likely to buy only after much consideration will present barriers to purchase and, therefore, will yield lower conversion rates.

Device Mix

Our research indicates that customers are much more likely to complete their purchase when they shop from desktop devices. Although mobile is in many cases the dominant traffic source, we see higher conversion rates across the board via desktop sources than via mobile. Shoppers frequently conduct their initial exploration on a mobile device, but many desktop shopping experiences are optimized to allow the seller to showcase more information, thereby reducing customers’ doubt during the purchase process. At the same time, when we isolate the impact of device type, by minimizing or negating the effects of other confounding variables (see Appendix Exhibit 3), we find that the conversion advantages associated with desktop devices begin to diminish as AOV increases. (See Exhibit 7.)

Exhibit 7 - Desktop Shopping Shows Lower Funnel Conversion Uplift, but the Difference Between Devices Shrinks as Average Order Value Increases

There is a 23% overall uplift in conversion rate on desktops versus mobile

Without controls, the highest uplift is observed in higher-AOV stores...

...but controlling for store variation reveals less uplift in higher-AOV stores

Source: Internal Shopify data.
Note: Results are significant at 0.05 level with robust standard errors. AOV = average order value.
Any useful analysis of the impact of the devices that customers use when shopping should be cognizant of overall shifts in traffic. Mobile use now accounts for more than 70% of overall e-commerce traffic, up from less than 10% a decade ago, and its share continues to climb. Most present-day e-commerce experiences adapt to the customer’s screen size. It is also important for sellers to take into account the different types of customer journeys. We have found, for example, that B2B customers are more likely to use desktop devices for both traffic and conversion.

### Overall Revenue and AOV

Lower funnel conversion typically increases with the overall revenue of the store, but it is negatively correlated with AOV. (See Exhibit 8.) The reasons likely have to do with product familiarity, which can drive increases for better-known, higher-revenue stores, along with the counterbalance of higher stakes when a consumer is considering a high-value purchase—hence the negative relationship with AOV.

In analyzing customer demographics, it is helpful for sellers to know what devices their customers use and how they use them. Understanding an industry’s usual conversion rates on the basis of external fundamentals makes it possible for a seller to benchmark its site’s performance metrics against what its customers expect from its store and against the competing sellers.

### Exhibit 8 - Conversion Rates Rise as Overall Revenue Grows, but They Tend to Decline as a Seller Matures or as Average Order Value Increases

<table>
<thead>
<tr>
<th>GMV</th>
<th>Lower funnel conversion rate by GMV (%)</th>
<th>...and has a maximum uplift in experienced stores of 2 to 5 years...</th>
<th>...but is negatively correlated with AOV</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0–$50,000</td>
<td>42.7</td>
<td>43.3</td>
<td>47.0</td>
</tr>
<tr>
<td>$50,000–$100,000</td>
<td>+12%</td>
<td>+11%</td>
<td>+2%</td>
</tr>
<tr>
<td>$1 million–$10 million</td>
<td>+6%</td>
<td>-7%</td>
<td>-10%</td>
</tr>
<tr>
<td>$10 million+</td>
<td>+4%</td>
<td></td>
<td>-21%</td>
</tr>
<tr>
<td>New (0–2 years)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experienced (2–5 years)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mature (&gt;5 years)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Internal Shopify data.

Note: AOV = average order value; GMV = gross merchandise value.
The truism “If you build it they will come” rarely applies to an e-commerce site in today’s highly competitive digital commerce landscape. Having a desirable product and brand is important for attracting clicks, but once customers arrive on the site, they expect an experience that anticipates their tastes, needs, and questions, along with a seamless purchasing process. No factor guarantees lower funnel conversion, but often a single glitch in the process can result in a lost sale. A lack of hurdles can’t guarantee a sale either. However, e-commerce sellers can optimize six key areas. (See Exhibit 9.)

Those six major drivers of optimization are as follows:

- Traffic sources
- Basket building
- Checkout experience
- Payments
- Customization
- Performance
Traffic Sources

Traffic sources that lead customers to the site can make a big difference all the way to the lower funnel. We have found that organic channels have a clear edge over paid channels in overall conversion rate. The importance of the traffic source can vary depending on difficult-to-control factors. For smaller stores, channels such as word-of-mouth marketing and social media recommendations seem to be far more effective than controllable paid advertising. On the other hand, stores with higher-value purchases are more likely to reach lower funnel conversion through paid sessions.

Despite these challenges, paid advertising channels are often essential to a business, no matter how large or well known it is, first to establish the brand and target customers, and later to sustain name recognition. Many businesses that deliver the most effective marketing return on investment do so through a combination of new traffic and return traffic that comes to the site via paid and organic channels.

Traffic that arrives through integrations linked to the site can enhance the conversion rate if the seller uses integrations strategically. There are many ways for a seller to set up external augmentation through an integrated link that enables an added function or a new user experience. For example, the seller might implement social media integrations to drive traffic, email marketing integrations to drive outreach, customer reviews to recommend specific products, or user experience integrations to improve brand performance. (See Exhibit 10.)

The conversion rate across different integrations can vary according to the business, so sellers must think critically about which ones are most relevant to their site. In general, we find that integrations with social media platforms are more effective in driving revenue when paired with email marketing and user experience options. (See Exhibit 11.) Our research also indicates that most businesses haven’t taken full advantage of potential pairings, meaning that significant opportunities to expand this kind of integration remain available.
**Exhibit 10 - Integrations Can Be an Important Traffic Source When Used Strategically**

Integrations can be a key differentiator of conversion performance between stores...

Proportion of our data sample that includes an installed integration tagged with the category (%)

<table>
<thead>
<tr>
<th>Category</th>
<th>Social media</th>
<th>Email marketing</th>
<th>Reviews</th>
<th>User experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not installed</td>
<td>15</td>
<td>85</td>
<td>66</td>
<td>61</td>
</tr>
<tr>
<td>Installed</td>
<td>33</td>
<td>67</td>
<td>34</td>
<td>39</td>
</tr>
</tbody>
</table>

...with multiple options and use cases

- **Category** | **Top integration** | **Use case** |
- Social media | Facebook and Instagram, Pinterest, TikTok | Create ads, track ad performance, synchronize inventory on platform |
- Email marketing | Klaviyo, Mailchimp, SMSBump | Send abandoned cart reminders, price drop alerts, stock notifications |
- Reviews | Judge.me, Areviews, Ryviu | Review requests, review display, import reviews from other platforms |
- User experience | Pagefly, Booster, Avada | Add landing pages, increase page speed, add widgets/designs |

Sources: Internal Shopify data; BCG analysis.

Note: Only the top 50 apps installed by shops in this sample were analyzed. App categories defined on this slide are custom-created, mutually exclusive categories.

**Exhibit 11 - Social Media Integrations Are More Effective When Paired with Email Marketing and User Experience Integrations**

Shops that install only social media integrations tend to have lower revenue...

Additional store revenue for shops with only social media integrations (%)

- Social media + email marketing: AOV < $50: -7, AOV $750+: -6
- Social media + user experience: AOV < $50: -9, AOV $750+: -11

...but pairing them with email marketing or user experience integrations increases revenue

Additional store revenue for stores that installed social media and email marketing integrations (%)

- Social media + email marketing: AOV < $50: 10, AOV $750+: 22

Significant opportunities to expand relevant pairings across shops still exist

Proportion of stores that have installed certain combinations of integrations (%)

- Social media + email marketing: 66%
- Social media + reviews: 39%
- User experience + reviews: 22%
- Social media + user experience: 35%

Sources: Internal Shopify data; BCG analysis.

Note: AOV = average order value.
Basket Building

Basket building has also proven to be a key factor in conversion. Carts that contain more than five to ten items tend to result in demonstrably higher conversion. The conversion rate can increase by as much as 63% when a customer who initially puts just one or two units in the cart continues to shop and ends up with more than ten. (See Exhibit 12.)

Evidently, a customer who builds up the shopping basket is most likely serious about the purchase. Conversely, giving customers incentives to build up the items in the cart will likely encourage them to complete the purchase. The full shopping cart factor applies equally to low- and high-priced items. When paired with AOV, carts that hold a high monetary value and a large number of items can see a conversion increase of as much as 200% above baskets with the same AOV but only one or two items. We see this trend across all industries.

With this optimization driver in mind, sellers might consider adding new ways to encourage customers to add items. A critical analysis of relevant items that a customer might want to add may help the seller promote higher value purchases while at the same time helping the customer overcome any lingering elements of doubt.

Checkout Experience

Another critical area for conversion rate is the checkout experience. Customers increasingly expect to be able to move through their checkout experience swiftly and easily. A customer who reaches this stage will encounter multiple steps, any one of which can be a deterrent if it doesn’t work in a way that feels secure and convenient. One approach that many brands use to get around this barrier is with autofill of known or easily predictable information. Our research shows that more than 99% of stores enable autofill when it is available, and the feature has become a table-stakes offering for simple information such as shipping and billing addresses.

Exhibit 12 - Carts Containing More Than Six to Ten Items Result in Demonstrably Higher Conversion

Most stores average fewer than five units per cart...

...with overall conversion increasing as much as 63%...

...and more consistent growth of ~20% in the lower funnel

Sources: Internal Shopify data; BCG analysis.

Note: Because of rounding, not all bar chart segments add up to 100%.
Fraud detection is essential to enhancing customers’ peace of mind and security, but it should not impede the checkout flow. Sellers should equip their sites with state-of-the-art fraud monitoring systems via a platform application or plug-in. We have found that using Captcha to test whether a user is human or a bot deters some customers from continuing to checkout, as it slows the process and can be difficult for some shoppers to navigate. (See Exhibit 13.)

Here is what e-commerce sellers told us about the importance of creating a speedy and efficient checkout experience:

"Keep the customer targeted on completing checkout, and avoid asking for information you don’t need; you don’t want the customer asking questions or building doubt.”

— CEO of a small retailer

"If you rely on one-time, impulse purchases, your goal to maximize conversion should be to create a sense of urgency and get people through checkout as quickly as possible.”

— E-commerce marketing manager at a multinational food and beverage company

"Customers may be hesitant to give up personal information if they do not find the appropriate payment or shipping information in their checkout experience.”

— Former CPO at an e-commerce provider

"The customer is yours to lose after they add an item to the cart; the quicker you get someone through the checkout process, the less time you give them to think about their decision.”

— Research lead for an e-commerce provider

Exhibit 13 - Autofill Is Necessary for Conversion Uplift, but the Presence of Captcha Tends to Reduce the Conversion Rate

Autofill is table stakes across stores and not a reliable indicator of conversion uplift...

Proportion of stores utilizing autofill (%)

<table>
<thead>
<tr>
<th>GMV Range</th>
<th>No autofill</th>
<th>Autofill offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0–$50,000</td>
<td>99</td>
<td>1</td>
</tr>
<tr>
<td>$50,000–$1 million</td>
<td>99</td>
<td>1</td>
</tr>
<tr>
<td>$1 million–$10 million</td>
<td>99</td>
<td>1</td>
</tr>
<tr>
<td>$10 million+</td>
<td>99</td>
<td>1</td>
</tr>
</tbody>
</table>

...but Captcha reduces lower funnel conversion rates

Lower funnel conversion rate grouped by GMV (%)

<table>
<thead>
<tr>
<th>GMV Range</th>
<th>No Captcha</th>
<th>Captcha used</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0–$50,000</td>
<td>42.7</td>
<td>32.9</td>
</tr>
<tr>
<td>$50,000–$1 million</td>
<td>48.0</td>
<td>40.6</td>
</tr>
<tr>
<td>$1 million–$10 million</td>
<td>51.8</td>
<td>47.3</td>
</tr>
<tr>
<td>$10 million+</td>
<td>55.6</td>
<td>51.7</td>
</tr>
</tbody>
</table>

Checkouts increase when the product detail page offers a direct path to checkout

Increase in number of checkouts by AOV with multivariate controls (%)

<table>
<thead>
<tr>
<th>AOV Range</th>
<th>No Captcha</th>
<th>Captcha used</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0–$50</td>
<td>8.6</td>
<td>3.9</td>
</tr>
<tr>
<td>$50–$250</td>
<td>3.9</td>
<td>2.7</td>
</tr>
<tr>
<td>$250–$750</td>
<td>2.7</td>
<td>18.9</td>
</tr>
<tr>
<td>$750+</td>
<td>18.9</td>
<td>15.1</td>
</tr>
</tbody>
</table>

Sources: Internal Shopify data; BCG analysis.
“Today, fraud detection technologies are really good at what they do, running without user input and rarely letting fraudulent accounts through.”

— E-commerce marketing manager at an enterprise consumer goods company

Although each site is unique, another possible way to move customers through the checkout experience quickly is to streamline the path to checkout itself. To prevent customers from leaving in midstream, the seller can move them directly into the checkout flow from the product detail page. **In this specific use case, a simplified process can increase the number of checkouts that get started by upward of 18%**.

In addition, delivering a centralized identity in an e-commerce experience and prefilling known customer information are critical to driving conversion, though sellers must present these measures appropriately. Customers want to feel recognized on sites where they’ve shopped in the past.

One key feature that can reduce the speed and efficiency of the checkout experience is the use of discount or coupon code fields. A notable majority of stores offer discount coupons as table stakes, yet coupon code fields can lower conversion rates by as much as 30%. This is true even in the case of high-value purchases, although fewer stores offer discounts as AOV increases. Our model shows that, contrary to perception, discount code fields do not have a strong impact on conversion when AOV is high.

The problem with blank coupon code fields is that they can introduce elements of doubt into the checkout experience. Customers who see that a coupon is available might decide to abandon the checkout process today and wait for the next great sale. Or they might leave the checkout flow in search of a coupon from a third-party site, especially if they are contemplating a high-value transaction.

We have heard these cautions from various e-commerce providers:

“**The biggest rookie mistake is leaving the coupon field open. People abandon checkout to try and fill it.”**

— Former product manager at an e-commerce business

“**Including a coupon field in a site that does not offer coupons will kill the conversion rate.”**

— Former CPO at an e-commerce business

E-commerce sites should optimize their pricing to drive maximum value for their stores. Although discounts or promotional material can increase traffic, we encourage sellers to consider how promotional pricing fits into their larger approach to customer engagement.

**Payments**

Accelerated payment methods tend to increase lower funnel conversion. Nearly all major e-commerce platforms offer customers multiple payment choices that include accelerated options through top digital payment providers as well as basic credit or debit card transactions. Our analysis of accelerated payment methods—which included Meta Pay, Amazon Pay, PayPal, Apple Pay, and Google Pay—found that use of these methods in North America can increase lower funnel conversion rates dramatically. **Our analysis of these six methods showed that offering them, as opposed to offering a guest checkout experience that lacks any accelerated payment method, can increase lower funnel conversion rates by upward of 50%**. (See Exhibit 14.)
Not only does using accelerated payment methods lift conversion by as much as 50%, but also simply offering them as an option can increase conversion. As an example, we found that Shop Pay’s presence in the conversion flow generates a conversion lift of approximately 5%. (See Exhibit 15.)

Similarly, a buy now, pay later (BNPL) option can increase both traffic and sales for stores with higher revenues and average order values. A BNPL offer seems to boost traffic for stores whose average order value exceeds $50, while stores with $1 million or more in revenue are likely to see spending increases. (See Exhibit 16.)
Exhibit 15 - Shop Pay Realizes an Average Conversion Lift of Approximately 5% on the Lower Funnel When Present

Shop Pay is used across most AOV thresholds

Proportion of stores with or without Shop Pay grouped by AOV (%)

Stores with Shop Pay tend to have higher conversion rates

Conversion rate of sellers that offer Shop Pay vs those that do not (%)

Multivariate regression shows that Shop Pay availability increases conversion for all stores

Conversion uplift when using Shop Pay grouped by AOV (%)

Sources: Internal Shopify data; BCG analysis.

Note: Results are significant at 0.05 level with robust standard errors. AOV = average order value.

Exhibit 16 - Buy Now, Pay Later Increases Traffic and Spending for Stores with Higher Revenues and Average Order Values

Buy now, pay later appears to boost traffic for stores with an average order values over $50

Total monthly unique visitors by AOV grouping

Stores with revenue of $1 million or more see spending increases

AOV by store size ($)

Sources: Internal Shopify data; BCG analysis.

Note: AOV = average order value.
Customization

Customization matters in the shopper experience. An e-commerce site might offer a customized experience at any point in the conversion funnel for various reasons. Examples include design customization to improve the user experience, temporary promotional codes to align with key holidays, ancillary offerings (such as insurance) attached to payments, or even the ability to monitor the site’s traffic and performance with advanced analytic tools.

Generally, websites with front-end customization—such as a simplified user experience, obvious gateways to specific products, or an appealingly uncluttered product page—seem to have higher conversion rates than those that offer back-end customization only. Back-end customization may be needed or beneficial for internal business reasons, but the most direct impact to the conversion rate occurs where customers interact most—at the front end. (See Exhibit 17.)

Exhibit 17 - Sites with Front-End Customization Appear to Have Higher Conversion Rates Than Those with Back-End Customization Only

<table>
<thead>
<tr>
<th>Store count</th>
<th>Very small (&lt;$50,000)</th>
<th>Small (&lt;$1 million)</th>
<th>Medium ($1 million–$10 million)</th>
<th>Large (&gt;=$10 million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall conversion rate (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall conversion rate (%)</td>
<td>1.8</td>
<td>2.0</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td>Lower funnel conversion (%)</td>
<td>35.0</td>
<td>36.0</td>
<td>39.0</td>
<td>43.0</td>
</tr>
<tr>
<td>Sources: Internal Shopify data; BCG analysis.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LEADING ONLINE SHOPPERS TO THE FINISH LINE
Customer loyalty programs tend to be particularly successful at increasing overall conversion rates. (See Exhibit 18.) We found loyalty incentives to be the most effective customizations across stores of all sizes, especially when stores are in their startup phase. Our research shows, further, that stores with AOV below $200 can see a lift of 4% to 6% in lower funnel conversion by implementing a loyalty program.

Although loyalty customization consistently ranks as a top performer, sellers can consider many other customization options as well. These include tag manager tracking, analytics support, or targeted incentives to build a customer’s basket. Some sites might offer related or complementary items, or encourage a higher-end purchase through a customer-friendly message such as, “People who bought this also liked….” Merchants might also try adopting an analytics or A/B testing customization, which can deliver critical insights about customers’ use of a site and identify key areas for optimization.

### Exhibit 18 - Loyalty Customization Tends to Yield the Highest Uplift on Lower Funnel Conversion

<table>
<thead>
<tr>
<th>Lower funnel conversion by loyalty customization (%)</th>
<th>Lower funnel conversion by upsell customization (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>$0–$50,000</td>
</tr>
<tr>
<td>$50.8</td>
<td>53.2</td>
</tr>
<tr>
<td>$50.8</td>
<td>51.0</td>
</tr>
</tbody>
</table>

Other customizations that we tested—address validation, input validation, insurance customization, and chat customizations—demonstrated lower uplift.

Sources: Internal Shopify data; BCG analysis.

Note: N/A = not applicable, due to low statistical significance.
On average, our research found, customization has less impact on the smallest e-commerce sites, but produces a notable lift in lower funnel conversion for larger stores (those with revenues of $10 million or more). Most larger stores have at least one type of customization in their checkout flow. (See Exhibit 19.)

Exhibit 19 - Although the Impact of Checkout Customization Varies, the Greatest Uplift Is for Stores with Revenue of $10 Million or More

Most high-revenue stores have at least one customization in their checkout flow

<table>
<thead>
<tr>
<th></th>
<th>Very small (&lt;$50,000)</th>
<th>Small (&lt;$1 million)</th>
<th>Medium ($1 million)</th>
<th>Large (&gt; $10 million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No customization</td>
<td>1</td>
<td>4</td>
<td>38</td>
<td>11</td>
</tr>
<tr>
<td>Customization</td>
<td>99</td>
<td>62</td>
<td>89</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Simply customizing a checkout flow does not seem to generate a lift in conversion across most stores

<table>
<thead>
<tr>
<th></th>
<th>Very small (&lt;$50,000)</th>
<th>Small (&lt;$1 million)</th>
<th>Medium ($1 million)</th>
<th>Large (&gt; $10 million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>2.6</td>
<td>2.7</td>
<td>2.8</td>
<td>N/A</td>
</tr>
</tbody>
</table>

However, we see a lift in lower funnel conversion for stores with at least one customization and $1 million in revenue

<table>
<thead>
<tr>
<th></th>
<th>Very small (&lt;$50,000)</th>
<th>Small (&lt;$1 million)</th>
<th>Medium ($1 million)</th>
<th>Large (&gt; $10 million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>50.7</td>
<td>51.1</td>
<td>51.8</td>
<td>52.9</td>
</tr>
</tbody>
</table>

Performance

Performance, too, carries a great deal of weight in the shopping experience. Improved speed at every step correlates with higher conversion rates across most industries. Faster time to interactive enhances the total conversion rate, but this fundamental technical performance metric doesn’t seem to make a major difference by the time a customer has demonstrated enough commitment to reach the lower funnel. (See Exhibit 20.)

Sources: Internal Shopify data; BCG analysis.

Note: GMV = gross merchandise value; N/A = not applicable, due to low statistical significance.
At the lower funnel stage, customers will tolerate slightly slower performance on the way to completing a purchase, though only to a point. Starting from the moment the checkout experience begins, we have noticed a significant increase in the conversion rate when customers can complete the full checkout process in less than 90 seconds. If the process takes longer, the lower funnel conversion rate may decrease by around 47% on average.

**Exhibit 20 - Faster Time to Interactive Correlates Positively with Total Conversion Rate but Yields Less Impact in Lower Funnel Conversion Rate**

**Most stores have fast TTI**

Number of stores by TTI range (%)

<table>
<thead>
<tr>
<th>TTI Range</th>
<th>Fast</th>
<th>Moderate</th>
<th>Slow</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0–$50,000</td>
<td>42</td>
<td>37</td>
<td>29</td>
</tr>
<tr>
<td>$50,000–$1 million</td>
<td>58</td>
<td>63</td>
<td>23</td>
</tr>
<tr>
<td>$1 million–$10 million</td>
<td>71</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>$10 million+</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TTI correlates positively with overall conversion**

Average overall conversion rate by TTI, grouped by size (%)

<table>
<thead>
<tr>
<th>TTI Range</th>
<th>Fast</th>
<th>Moderate</th>
<th>Slow</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0–$50,000</td>
<td>2.0</td>
<td>2.3</td>
<td>2.6</td>
</tr>
<tr>
<td>$50,000–$1 million</td>
<td>2.3</td>
<td>2.5</td>
<td>2.6</td>
</tr>
<tr>
<td>$1 million–$10 million</td>
<td>2.6</td>
<td>2.7</td>
<td></td>
</tr>
<tr>
<td>$10 million+</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Speed has a lesser impact on conversion in the lower funnel**

Average lower funnel conversion rate per TTI grouped by size (%)

<table>
<thead>
<tr>
<th>TTI Range</th>
<th>Fast</th>
<th>Moderate</th>
<th>Slow</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0–$50,000</td>
<td>42.2</td>
<td>48.1</td>
<td>51.5</td>
</tr>
<tr>
<td>$50,000–$1 million</td>
<td>47.9</td>
<td>50.5</td>
<td>53.3</td>
</tr>
<tr>
<td>$1 million–$10 million</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$10 million+</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sources:** Shopify internal data; BCG analysis.

**Note:** ms = milliseconds; TTI = time to interactive.

1 TTI range according to Google Lighthouse performance scoring.
Sellers can measure performance by the speed and ease with which a customer can move through the site to find items and complete a checkout flow, but also by behind-the-scenes core engineering metrics such as the time it takes to complete interactive functions, the time to first byte, and loading time. To a certain extent, shoppers will tolerate slight delays if these slowdowns are offset by strong interactive components and functionality. (See Exhibit 21.) Nevertheless, each of these metrics has an effect on the conversion rate, so it’s important that they work in unison to help boost conversion.

These six optimization drivers work together, and each is essential. Sellers should explore their main drivers not only with the aim of optimizing conversion rates, but also to ensure that the complete shopping experience continues to reflect the seller’s desired brand identity and the customer’s expectations. Continuously monitoring an e-commerce site’s performance relative to industry benchmarks and investing in engineering for the front-end and back-end experiences are essential to maintaining a strong customer base.

Exhibit 21 - Slower Performance Decreases Conversion

Our model suggests that, on average, every second of delay in TTFB decreases overall conversion by ~0.14%

Change in overall conversion rate for each second of TTFB increase (%)

Sources: Shopify internal data; BCG analysis.
Note: TTFB = time to first byte; Ø = average value.
The business fundamentals that affect conversion rates and the major drivers of optimization are two critical factors in delivering a customer experience that will make products more enticing and the buying process easier. Before that can happen, however, an e-commerce seller must determine how it will build and deliver its shopping experience—that is, how the platform itself will support the shopping experience.

In the previous two chapters, we examined the factors that should inform a seller’s vision of what is realistically attainable with regard to creating a strong lower funnel conversion rate. Once that vision is in place, nothing is more critical to success than choosing the right platform. The platform supports all endeavors—from building awareness of the site to delivering a consistent and speedy shopping experience to supporting opportunities for growth and adjustment as business needs change. The considerations that go into selecting a platform will play a critical role in determining how customers perceive and experience an e-commerce site—and by extension, the conversion rates that are the final determinant of a seller’s success.

Platforms
Not all platforms are created equal, so sellers must decide which platform to use and, potentially, whether to buy a platform or build their own. As part of our comprehensive analysis, we looked at overall e-commerce platform performance, creating like-for-like comparison samples of offerings available in the market. All else being equal, we found a significant fundamental difference in the average conversion rates of different platforms, suggesting that the platform a seller chooses can directly impact the seller’s conversion performance and thus its revenue.

Selecting a platform is a key decision that a merchant must make, and not all solutions are created equal. Each external e-commerce platform has different features, and sellers must identify which features matter most to them. In our examination of leading platforms, we found that average conversion rates differ by platform, with one platform outperforming the others by an average of 15%—although obviously performance may vary depending on the optimizations that the seller adds to a platform’s base offering.

Sellers confirm that the features that go into the platform make a big difference, but they note that it isn’t always easy to identify which platform will be best for their particular needs:

“Cost, flexibility of the platform, and ease of use are the most important deciding factors.”

— Retail e-commerce lead at a small business

“Finding someone with similar needs to mine would mean asking my competitors which platform works best for them.”

— Former senior sales director at an e-commerce business

Generally, a platform provider will offer e-commerce sites the ability to integrate with multiple payment gateways or to integrate some functions with other seller systems. Most providers focus on built-in marketing tools, such as discount codes, SEO optimization, social media integration, and product recommendations. Many offer advanced analytics and reporting capabilities, scalable platforms that can adapt as a seller’s business grows, and user-friendly interfaces for entrepreneurs who want to create an online store but may not have high-end coding skills. Many can supply a wide range of customizable templates and themes, and nearly all stress reliable hosting and 24/7 customer support as features.

Many providers offer setup support, but sellers need to gauge how much support their site will require at the outset and on a continuing basis, and they should verify whether the provider will be available to provide that level of support. A platform may offer enablement of any number of elements—streamlined checkout, deep integrations, relevant customization, accelerated payment options, and much more—but the seller must determine which elements are most critical to its business. As important as finding a platform that matches the seller’s needs is calculating the total costs of the platform and the necessary investment relative to the seller’s conversion rate goals. The costs are likely to include a monthly subscription fee, transaction fees that encompass both a percentage of the gross merchandise value and a flat per-transaction fee, a payment gateway fee, and hosting fees.
Often platforms may offer an arrangement in which the business pays no fee, or a very low fee, upfront but the seller commits to using the provider’s own payment platforms, which take a percentage of each transaction amount as a transaction fee. These agreements are subject to individual negotiations in which the parties may determine the percentage on the basis of the total gross merchandise value that passes through the platform from that particular site.

When it comes to deciding whether to use an external e-commerce solution or to build their own, most companies think that only deep-pocketed firms can afford to opt for a custom-built solution, due to the many upfront and ongoing costs required to build, maintain, and improve the platform’s functions. Our analysis bears out this view; we found that more than 95% of sellers that use custom-built platforms have annual revenues in excess of $100 million. This holds true across all AOV groups. (See Exhibit 22.)

**Exhibit 22 - Stores with Custom-Built Platforms Tend to Have a Similar Distribution of Traffic Across Device Types**

Both types of stores have similar distributions across AOV groups

<table>
<thead>
<tr>
<th>AOV Group</th>
<th>Custom</th>
<th>Off-the-shelf</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;$50</td>
<td>128</td>
<td>258</td>
</tr>
<tr>
<td>$50–$200</td>
<td>334</td>
<td>994</td>
</tr>
<tr>
<td>$200–$1,000</td>
<td>191</td>
<td>511</td>
</tr>
<tr>
<td>$1,000+</td>
<td>28</td>
<td>26</td>
</tr>
</tbody>
</table>

Desktop and mobile device traffic split similarly across both categories

<table>
<thead>
<tr>
<th>AOV Group</th>
<th>Mobile</th>
<th>Desktop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-the-shelf</td>
<td>72</td>
<td>72</td>
</tr>
<tr>
<td>Custom</td>
<td>28</td>
<td>27</td>
</tr>
</tbody>
</table>

**Sources:** Grips Intelligence; Shopify internal data; BCG analysis.
However, a custom platform is not necessarily the right strategic choice for every business—or every large retailer. Initial factors that should go into a build-or-buy decision include issues of time to market, opportunity costs, user enablement, market differentiation, and the scale that an out-of-the-box provider can offer. (See Exhibit 23.)

Beyond weighing these initial factors, each seller must critically examine its personnel to ensure it has the talent needed to build and maintain any solution. Even some very large sellers don’t have the engineering capabilities or other professional resources necessary to continually optimize a custom platform. Maintaining such a platform requires an in-house team of talented engineers to “keep the lights on” and continually optimize for the future. These engineers will need to complement one another with varied skill sets—and they’ll need to keep upskilling to continue to be a best-in-class team as technology changes. Finding such high-level talent can be difficult, and the costs can be prohibitive.
Operating a custom platform also requires a talent pool with expertise in product management, analytic and testing strategies, and design, among other key skill sets. The need to stay up to date in the rapidly changing e-commerce platform space is sometimes enough by itself to dissuade sellers from pursuing a custom-built tool. In our research, we found that the conversion rate at sites that use fully custom-built solutions is often worse than at sites that use a leading ecommerce platform. (See Exhibit 24.)

Although many e-commerce platforms can be customized to meet different needs, sellers must critically examine and question each provider’s expertise to determine which one seems best able to meet the needs of their particular store. In evaluating whether to build or buy, where to buy, and what optimizations to make thereafter, sellers need to understand how each factor may impact their particular business, both in isolation and in combination with the full package of features. The best e-commerce companies in the world test and learn frequently. They adjust their technology quickly and optimize their offerings to meet their customers’ evolving needs.

Exhibit 24 - Our Like-for-Like Sampling Indicates That Custom-Built Solutions, on Average, Underperform Leading External Commerce Solution Conversion Rates

Overall conversion rate (%)

<table>
<thead>
<tr>
<th>Custom-built conversion rate</th>
<th>Representative sample (Platform A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.77</td>
<td>2.94</td>
</tr>
</tbody>
</table>

+6%

Sources: Grips Intelligence; Shopify internal data; BCG analysis.
In earlier chapters we noted the importance of setting goals and benchmarks for lower funnel conversion on the basis of business fundamentals and conditions that help optimize the shopping experience. Improving overall and lower funnel conversion rates can be a cost-neutral way to increase a seller’s profit margins. For an illustrative store with annual revenue of about $100 million and 53 million unique customer sessions, we found that a lower funnel conversion rate improvement of only 1 percentage point can generate an incremental $6 million per year. Investing responsibly across the e-commerce funnel can boost a seller’s bottom line without corresponding increases in marketing costs.

It is also essential to optimize the conversion funnel so that it generates not only immediate improvement, but also long-term repeat customers. This involves factoring in both the direct impact on revenues and the lifetime value of the customer relationship. The estimated value of a customer engagement will vary dramatically depending on the industry and the overall revenue of the business, but every e-commerce seller should consider how this value might affect both revenue and margins.
Sellers that have optimized their lower funnel conversion rate can use their customer relationships and insights in ways that enhance the likelihood of continued engagement. At the most basic level, a seller can follow up to ensure that a customer is satisfied with the experience on the site and the quality of the merchandise. The seller can use this feedback, together with platform analytics, to determine the best next action for specific purchasers—for example, recommendations for other products that might complement past purchases. Sellers that increase their repeat customer rate don’t have to spend as much on customer acquisition.

Each seller’s game plan should reflect its products and customer base, but several basic strategies have been effective in most sectors. Our like-for-like comparisons suggest that nearly all e-commerce businesses can benefit from adapting strategies such as the following four:

• **Drive loyalty.** Consider adopting loyalty offerings as rewards for repeat purchases or desired behavior. Loyalty programs tend to be particularly effective in lower AOV industries, offering purchasing incentives such as points and discounts, or referral programs in which a satisfied customer receives special offers, discounts, or other incentives for recommending the seller’s site. The seller can also use customer data to monitor social media mentions. Whatever form they take, word-of-mouth recommendations from customers or influencers can be an effective way to attract new customers while spending less on marketing, thereby generating higher margins.

• **Invest in personalization.** Marketing campaigns should use customer analytics to create and deliver targeted, personalized messages. Each time a customer hears from a seller, the message should be designed to achieve a particular impact, speaking to something the customer might have in mind. As a result, the engagement will feel more like organic word-of-mouth than paid marketing.

• **Meet customers where they are.** As an aspect of the personalization experience, customers appreciate it when a seller remembers them at the checkout phase. Autofilling their address and payment options on the site will facilitate a speedy purchase. The checkout process should be familiar to them—not something that changes frequently—with accelerated and recognized payment options. To ensure that customers feel well served, it’s important to create a feedback loop so that the seller can hear directly from them. In trying out new features, the seller should use A/B—or split—testing, randomly displaying two or more versions of the page to assess the experience and the sales impact of each. Continuous feedback can alert the seller to problems as well as to features that might be enhanced, so it can be beneficial to seek evaluation of every shopping experience through surveys or email messages asking customers for some quick responses.

• **Invest in an innovative and well-engineered e-commerce platform.** Whether a seller uses a custom-built solution or a third-party e-commerce platform, its efforts to build long-term customer value require the support of a system that can respond rapidly to all customer needs. The seller must keep a critical eye on its customers’ requirements while also bearing in mind the larger backdrop of best practices with regard to customer privacy and preferences. The e-commerce space is rapidly evolving, so choosing a solution that can optimize conversion and keep pace with a shifting environment is essential to success.

At a minimum, all e-commerce companies should develop an analytics system to continually measure progress and should put a strong leader in charge of each key function. Successful organizations tend to invest heavily in centralized data analytics, which serves as the primary source for site monitoring and direct customer contact. Minor changes to the shopping experience can have a huge impact on a seller’s business and customers. For businesses of all sizes, it’s essential to regularly monitor the experience being delivered to ensure that it meets the seller’s needs and the customer’s expectations.
Conversion Rate

Our treatment of conversion rate has the following features (see Appendix Exhibit 1):

- Overall conversion rate = Total number of sessions with order completed ÷ Total number of sessions
- Lower funnel conversion rate = Total number of checkouts completed ÷ Total number of checkouts started
- Bot activity excluded
- Total of 220k+ sellers studied

Key Assumptions and Methodology in the Analysis

Our analysis incorporates the following key assumptions and methodology (see Appendix Exhibit 2):

- Sellers with $5,000+ in annual sales, 100+ annual orders, and within 4 standard deviations of the conversion rate per industry
- Shops with complete CY 2022 conversion data
- Conversion rates averaged at store level
Appendix Exhibit 1 - We Look at Both Overall Conversion Rate and Lower Funnel Conversion Rate

Overall conversion rate

- Overall conversion is the metric primarily used across the industry when comparing merchants and platform success.
- Our available external data set focuses on overall session conversion rate, defined as: Overall CVR = Total number of sessions with order completed ÷ Total number of sessions.
- This metric establishes a baseline from which individual variables can be isolated to determine impact on overall or lower funnel rate.

Lower funnel conversion rate

- Lower funnel conversion rate is the metric that Shopify most commonly uses to measure the success of checkout flow.
- This metric enables us to more easily identify the impact of individual variables on checkout success.

Leveraging both variables enables us to jointly address critical topics in the most complete way possible.

Source: BCG analysis.
Note: CVR = conversion rate.

Seller Definitions

The seller definitions we use are as follows (see Appendix Exhibit 3):

- Large sellers: More than $10 million in annual sales
- Medium sellers: From $1 million to $10 million in sales
- Small sellers: From $50,000 to $1 million in sales
- Very small sellers: Less than $50,000 in sales
Appendix Exhibit 2 - How We Define Conversion Rate Consistently and Other Key Methodology Assumptions

**Conversion rate**

1. Overall conversion rate: \( \frac{\text{Total number of sessions with order completed}}{\text{Total number of sessions}} \)
2. Lower funnel conversion rate: \( \frac{\text{Total number of checkouts completed}}{\text{Total number of checkouts started}} \)
3. Bot activity excluded
4. A total of 220,000+ sellers studied

**Key assumptions and methodology in the analysis**

- Shops with $5,000 or more in annual sales, 100 or more annual orders, and within 4 standard deviations of the conversion rate per industry
- Shops with complete CY 2022 conversion data
- Conversion rates are averaged at the store level
- **Store definitions**
  - Large stores: More than $10 million in annual sales
  - Medium stores: From $1 million to $10 million in sales
  - Small stores: From $50,000 to $1 million in sales
  - Very small stores: Less than $50,000 in sales

**Source:** BCG analysis.

1 Conversion rate in this study is based on sessions not unique users.
2 Bot filtering in third-party data is done by the web-tracking tools (in this case, mostly Google Analytics).
Appendix Exhibit 3 - We Leveraged Initial Exploratory Analysis to Develop a Model That Identifies Each Variable’s Impact

Exploratory data analysis:
- We performed visualization of raw data as a further robustness check for the modeling
- We sliced data across multiple angles (AOV, revenue, shop age, etc.)
- We then split the sliced data into groups (e.g., with/without a feature) and plotted metrics alongside the model results

Model:
- Multivariate ordinary least squares (final numbers)
- Fractional logit (robustness check)

Leveraged noise reduction features:
- Comprehensive data resampling (bootstrap)
- Noise robust confidence interval
- Data slicing across revenue, AOV, industry, region, etc.

A robust set of controls complements the model

- Payment method (binary payment method flag)
- Available features (binary flags for streamlined path to checkout, pay later, Captcha, accounts, etc.)
- Shop characteristics (maturity, unique visitors, revenue, social/paid sessions, country, industry, etc.)
- Cart characteristics (mobile/desktop used, distinct items, total number of items, time for checkout, session time, etc.)
- Website fluidity (median time to first byte)
- Apps (binary flags and counts for apps installed from the Shopify app store, with internal and custom category tags)

Source: BCG analysis.
Note: AOV = average order value.
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Acknowledgments

The authors would like to thank Vadim Glinskiy, Sebastian Sanchez, Chioma Nwamah, Shane Wilkinson, and Sean Zhang for their contributions to this article.
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