Chapter 12 Learning Objectives

After reading this chapter, students should be able to:

- Understand the principles underlying optimal mobile web design, including technical constraints of mobile devices and the unique intentions of mobile users.
- Determine how a company's digital advertising strategy should be adapted for mobile users.

Beginning with the introduction of the iPhone in 2007, mobile phones were fully equipped to access many websites. As these early mobile users began browsing websites on their phones, webmasters noticed that mobile users rarely made purchases on their phones. This observation led some webmasters to conclude that mobile users held no value and could be ignored. The reality is that mobile users can be very valuable to companies, but realization of that value requires a thorough understanding in two areas. First, marketers must understand the constraints of the mobile device and the implications for web design. Second, marketers must understand the usage intention of the mobile user and how that differs from a desktop user. This latter principle has implications for both web design as well as more general internet marketing practices surrounding mobile.

In the first section of this chapter, we discuss web design principles for mobile. Interacting with a website is more difficult from a mobile device, so internet marketers must design mobile websites with these constraints in mind. In addition, because mobile users often have different intent than desktop users, the mobile version should provide content more suited to the likely intentions of mobile users.

The second section of this chapter discusses more general internet marketing principles surrounding mobile. While a conversion from a desktop user is typically straightforward and therefore easy to measure, a mobile conversion encompasses a wider variety of behaviors. Measuring these various mobile conversions and encouraging them requires a more nuanced understanding of the mobile market.

In general, webmasters have three technical options for designing a website that is optimized for both desktop and mobile users. First, a site can be set up to detect mobile users, and can serve a different page to mobile users using the same URL. Second, a site can send mobile users to a different URL that has been created for mobile users. Finally, a site can use responsive web design (RWD), which seeks to optimize the presentation of the same website across any screen size, by changing the site layout and/or image sizes. Generally, RWD is the recommended approach, though the best approach depends on the technical skills of the web-design team.

A mobile-optimized website must keep two major considerations in mind. First, the mobile website should be designed in keeping with the technical constraints of mobile devices. Second, the mobile website should provide the content most applicable to mobile users, keeping in mind that mobile users may not be looking to make a purchase from their mobile device but might still be encouraged to take other profitable actions.

Technical Constraints

Smaller screens. A website made for a desktop computer will be difficult or impossible to read if shrunk to a mobile screen size. In addition, certain website features may not fully fit on the screen, making interaction with the website clumsy. As a result, written content likely needs to be pared down and images shrunk to fit on the screen. Some content portions will have to be cut, so strategic decisions must be made about the most important content for mobile users.

Difficult clicking. Fingertips are not as precise as mouse icons, so navigating a website through internal links is difficult on a mobile device unless it provides large buttons instead of text links.

Difficult typing. Retail sites need a more streamlined checkout process for a mobile device, on which typing in shipping and financial information is more cumbersome.

Slow load times. A mobile site should be less data intensive than the full site, because mobile sites will load more slowly, because of both the slower mobile CPU and a slower internet connection. Even though mobile CPUs continually increase in speed and wireless networks continually improve, mobile pages can still be frustratingly slow for users, which is why Google and many other large companies support the open source Accelerated Mobile Pages (AMP) project—an effort to standardize, and therefore speed up, mobile content.

User Differences

Purchase intention. Desktop website users are more likely than mobile users to be looking to make an online transaction. This likelihood does not mean mobile users are not valuable. A mobile user may be looking for the location of the store to make an in-store purchase. As such, the mobile site should more prominently feature location information for the store.

Research. Side-by-side product comparisons and in-depth consideration of complex product information is much more feasible on a desktop computer or even a tablet computer of large screen size. Users on mobile devices with smaller screens, on the other hand, will conduct more cursory research on products and brands. This increase in research can be a huge opportunity for any brand with a good mobile presence, because it can influence the user's search when he/she is unlikely to thoroughly investigate the competition.

In-store browsing. Mobile users might be inside a physical store and use their mobile device to search online for product information on competing websites like Amazon.com. Showrooming, or using a retail store as a showroom for products purchased online, is a disconcerting trend for brick-and-mortar retailers. A brick-and-mortar retailer can create mobile content specifically designed to combat this practice.

Urgency. In many categories, desktop users are making plans for a more distant future, whereas mobile users are looking to purchase or book something immediately. Appealing to the urgent needs of mobile users can dramatically improve conversion rates.

Case Study – Home Depot

Consider the desktop homepage for homedepot.com versus the mobile homepage.

MESSAGE TO OUR CUSTOMERS – UPDATE ON DATA BREACH

PRO SITE

THE HOME DEPOT

More saving. More doing.

Tool & Truck Rental | Installation Services and Re

Your Store: **Provo #4416**

Use My Current Location or find store

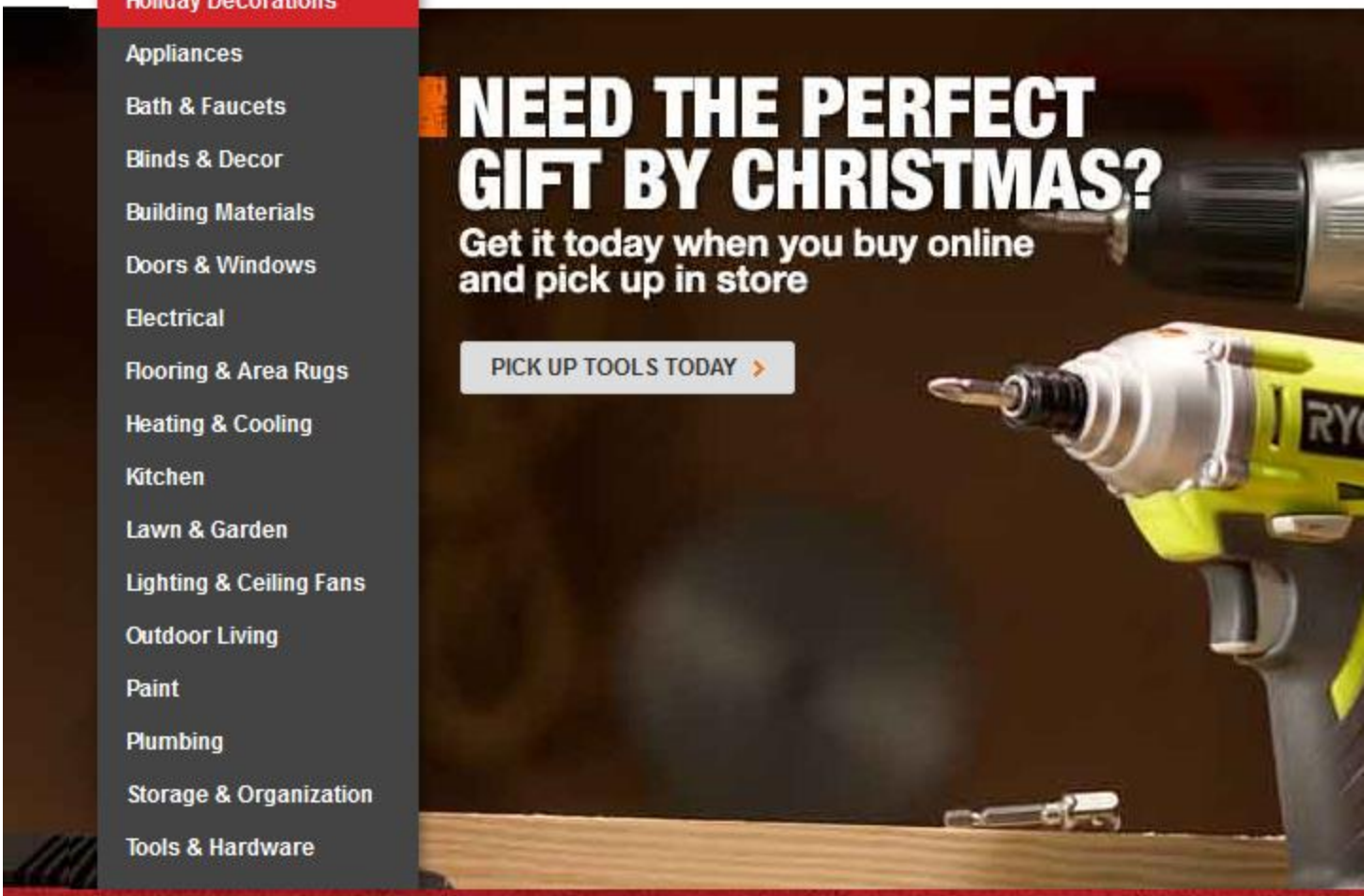
Local Ad | Store Finder |

Shop By **Department**

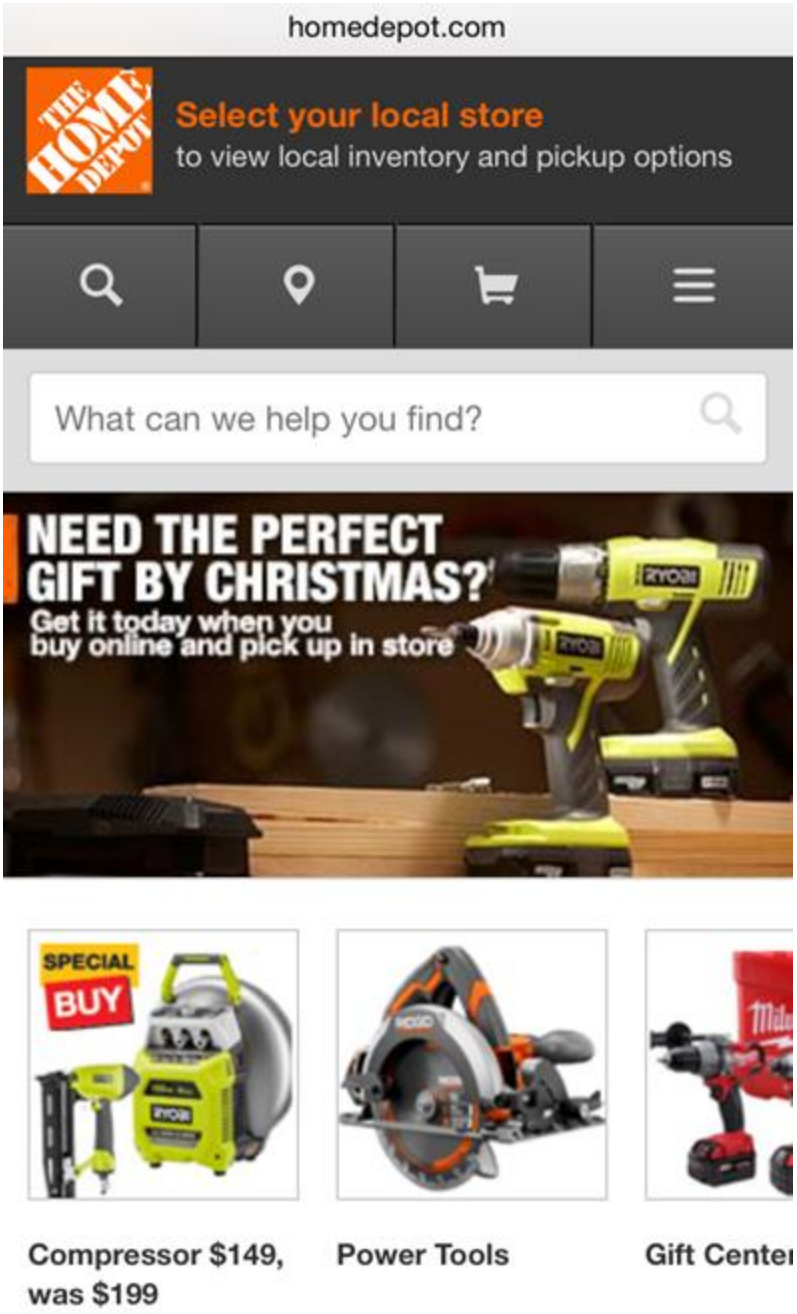
- Holiday Decorations
- Appliances
- Bath & Faucets
- Blinds & Decor
- Building Materials
- Doors & Windows
- Electrical
- Flooring & Area Rugs
- Heating & Cooling
- Kitchen
- Lawn & Garden
- Lighting & Ceiling Fans
- Outdoor Living
- Paint
- Plumbing
- Storage & Organization
- Tools & Hardware

Search All | What can we help you find?

DI



OVER 700,000 ITEMS SHIP FREE EVERY D



Home Depot's mobile site has been pared down to display only four basic pieces of content: (1) local store information, (2) navigation bar, (3) promotional ad, and (4) featured products.

1. The full site also provided local store information, but it was only a small portion of the header. Many mobile users do not want to make a purchase from their phone, but rather want to find the closest store, so Home Depot facilitates this alternative conversion by putting this information at the top. Allowing users to browse inventory available at their local store further facilitates this in-store conversion. Note that enabling mobile users to browse local inventory levels required more than

simply providing a link—it required a major retooling of Home Depot's database. Some mobile web-design decisions require approval and coordination outside of the web-design department.

2. The navigation bar provides four options—search, store locator, shopping cart, and a drop-down navigation menu. Mobile users are less likely to make lengthy visits through navigation menus, so Home Depot has shrunk its navigation options and instead given more prominent space to search, so that users with a specific product in mind can find it quickly.
3. Both the desktop and mobile sites were accessed on December 22, and both feature the same promotion for online purchase and in-store pickup in time for Christmas. On the desktop site, this promotion was accompanied by a gray call-to-action box, "PICK UP TOOLS TODAY." On the mobile site, this gray box was removed in favor of making the entire promotion area clickable, because of mobile users' greater difficulty clicking on small areas.
4. The thumbnail size on the featured products for the mobile site was chosen purposefully so that the third product would be cut off, thus letting mobile users know they could scroll across to see additional featured products.

Another difference worth noting is the fact that the desktop site promotes free shipping. Mobile users are less likely to purchase directly on their phones, so no screen space is dedicated to this promotion.

If a user clicks on the Christmas promotion, the layout of the product page also differs considerably between the full and mobile sites, as seen below.

SELECT TO COMPARE

$99.00 / each
Was $149.00 Save 34%

Ryobi 18-Volt ONE+ Lithium-Ion Drill/Driver and Impact Driver Kit (2-Tool)

Model # P882

★★★★★ (620)

• Ship to Home
Free

• Pick Up In Store TODAY
Free

+ ADD TO CART

CHECK STORE INVENTORY

SELECT TO COMPARE

$249.00 / each

Husky 46 in. 9-Drawer Mobile Workbench with Solid Wood Top

Model # HOTC4609B1QBD

★★★★½ (179)

• Pick Up In Store TODAY
Free

+ ADD TO CART

CHECK STORE INVENTORY

SELECT TO COMPARE

$149.00 / each
Was $199.00 Save 25%

Ryobi 6 gal. Vertical Pancake Compressor with 3 Nailers Combo Kit

Model # YG63CK

★★★★½ (21)

+ ADD TO CART

VIEW PICK-UP OPTIONS

SELECT TO COMPA

$225.00 / each
Was $299.00 Save 25%

DEWALT 15-Amp 10 in. Compact Job Site Table

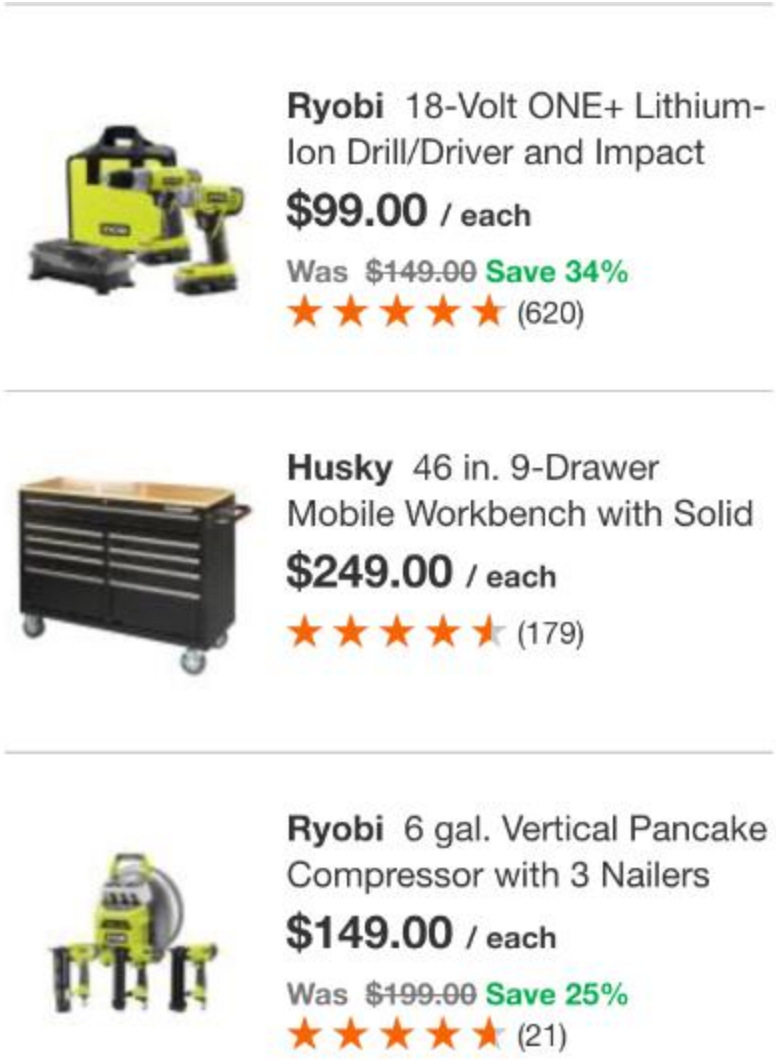
Model # DW745

★★★★★ (137)

• Pick Up In Store TODAY
Free

+ ADD TO CART

CHECK STORE INVENTOR



Mobile users make shorter visits, so they are not given the option to select multiple products to make a side-by-side comparison, and such a comparison would not fit well on the screen anyway.

Case Study – Priceline.com

Consider the differences between Priceline's full and mobile sites.

priceline.com

Hotels Cars Flights Vacation Packages Cruises

Hotels | Flights | Cars | Vacation Packages | Cruises | M

Search and Save on Hotels

Where are you going?

City, Airport, Point of Interest, Hotel Name or U.S. Zip Code

Check-in Choose Date

Check-out Choose Date

Rooms 1 Roo

Search Hotels

Express Deals® - Save up to 55% on Hotels*

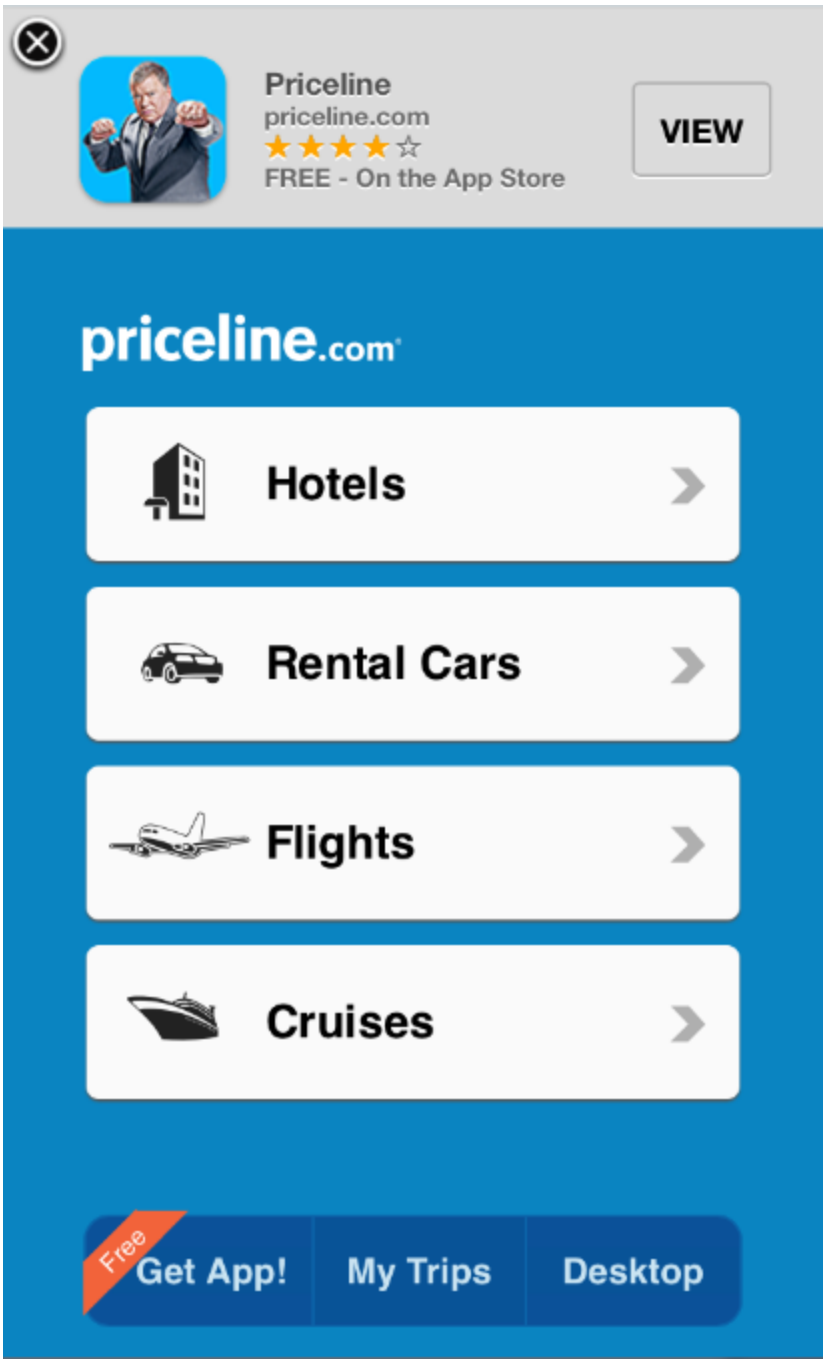
Get exclusive savings on your hotel with Priceline's Express Deals®.
Save time and money with no bidding required!

Search Express Deals®

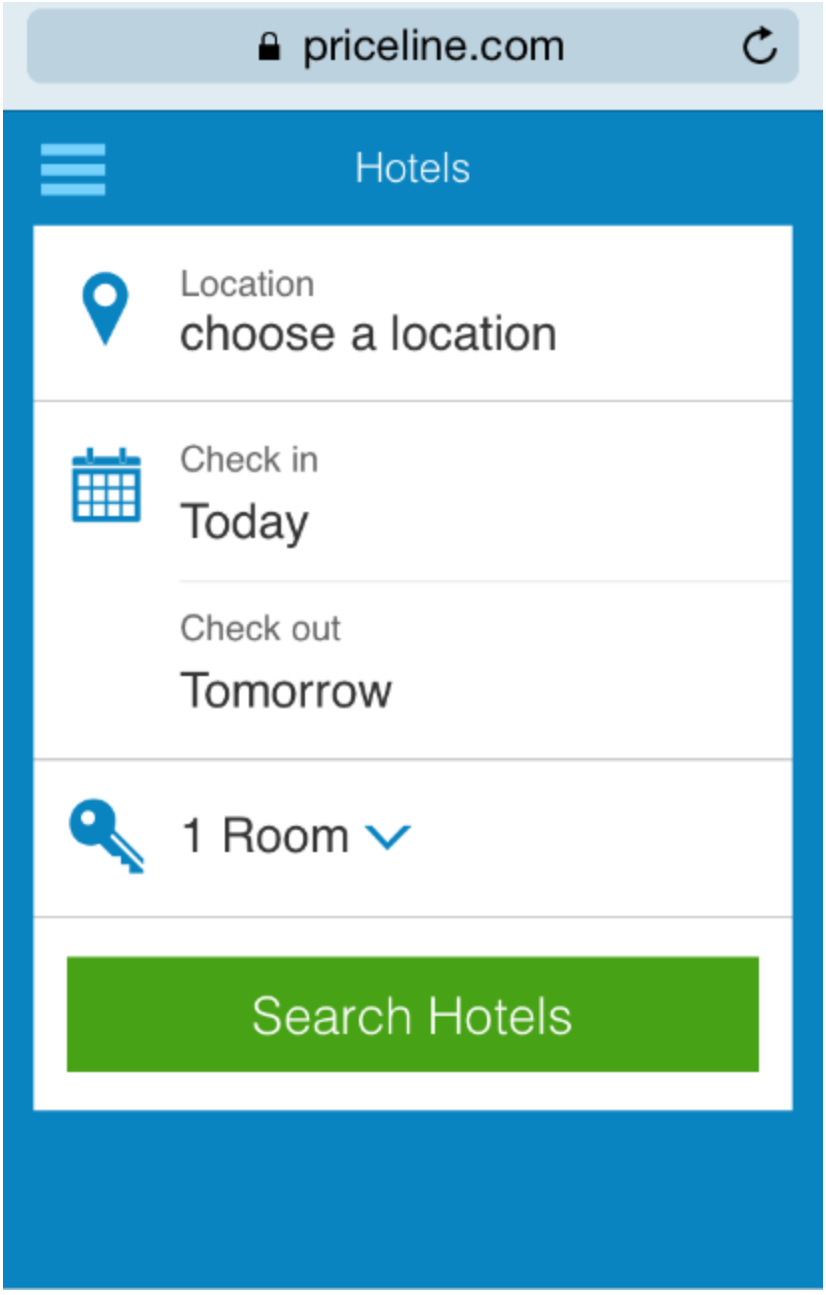
For Deeper Discounts - Name Your Own Price®

Save up to 60% on Hotels*
Bid Now »

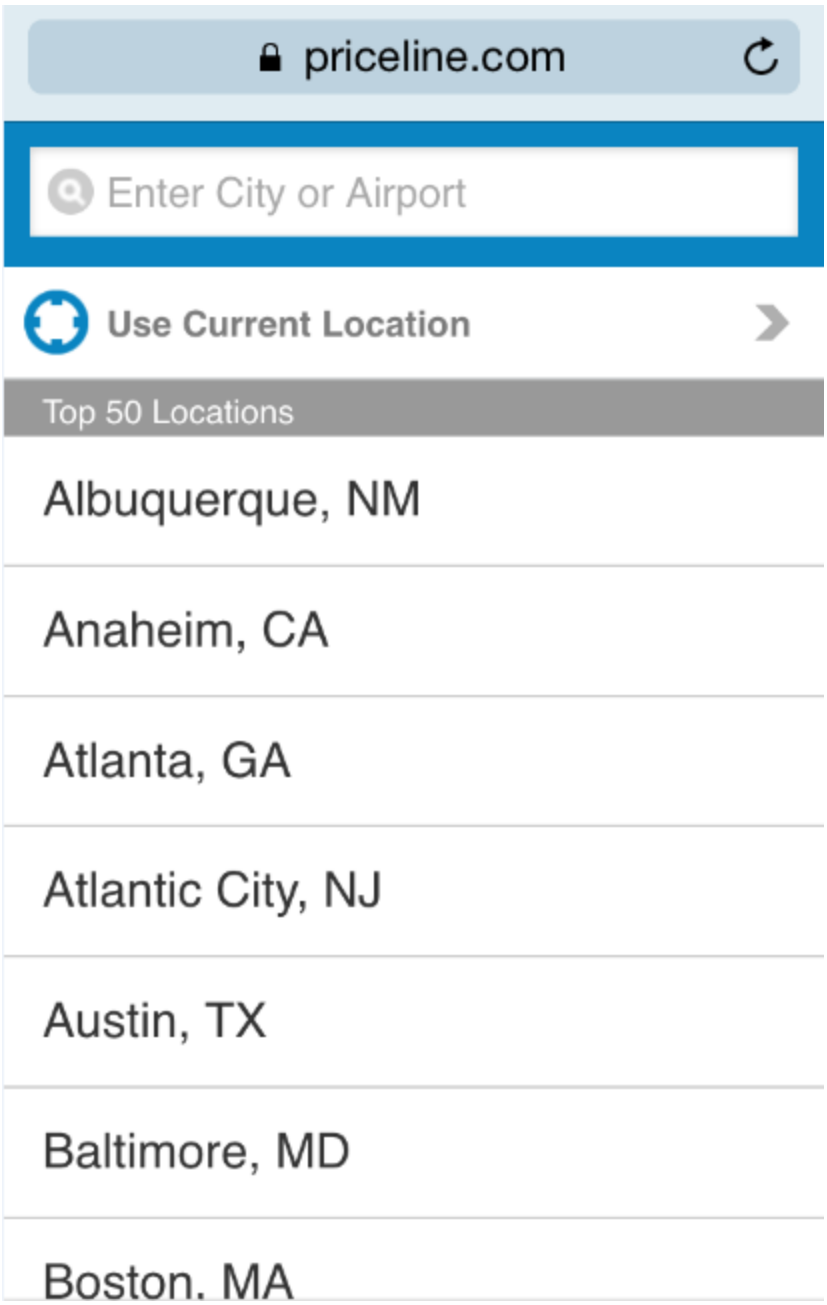
Save up to 40% on Flights*
Bid Now »



Priceline's full site wants to encourage users to complete a search, so the homepage loads the search form for hotels, its most searched-for service. Keyboard usage is clumsier on mobile phones, so whenever possible, Priceline's mobile site avoids making users type. When a user selects Hotels from the mobile site, rather than see the same entry forms shown on the full site, the user sees the following:



And when the user taps the location box, he/she sees the following:



If the user chooses, he/she can enter the destination from the keyboard, but scrolling to find the destination is also an option for those who prefer not to type. (Note that the list of cities only includes major metropolitan areas so that scrolling is not overly laborious.) To streamline the booking process for mobile, the check-in and check-out dates default to today and tomorrow, because Priceline has noticed that mobile users are much more likely than desktop users to be looking for a last-minute hotel stay. Users booking a hotel stay for further in the future typically do so from a desktop computer.

Priceline's mobile homepage includes in two different locations a call-to-action to download the Priceline mobile application. The next section will cover the issue of whether to create a mobile application in addition to a mobile-optimized website. Priceline has clearly determined the mobile app improves user loyalty, so it encourages app downloads whenever possible.

The My Trips button and the bottom of the mobile homepage is for Priceline users to check on bookings. This function is important for users who are mid-trip and need to access information about their next flight/car rental/hotel stay.

Designing a well-optimized mobile site requires the simplification and prioritization of content that is most pertinent for mobile users. This process should consider both the technical constraints of mobile devices, as well as differences in mobile as opposed to desktop users' intentions. Making these decisions correctly requires in-depth and continual study of the website's users. Web designers should pay close attention to analytics data from mobile users to ensure users are behaving as desired. A site that is mobile optimized today might become obsolete tomorrow, so mobile optimization requires continued monitoring.

Mobile Conversion

In chapter 1, we discussed conversions for various types of websites. Although some ambiguity existed in the definition of a conversion for some website types, determining the desired behavior of website visitors was nonetheless rather straightforward. In the mobile world, defining and measuring a conversion is more difficult. Any of the following behaviors from mobile traffic can be counted as a conversion, though none of them is an online purchase.

App download. Downloading a company's mobile application may make that person a long-time loyal customer, even though the app download does not lead to an immediate purchase.

In-store visit. Mobile users often find the physical location of a store on their mobile devices. If the subsequent store visit resulted in a purchase, the mobile traffic that led to that store visit was profitable, even if it does not show up in analytics.

Phone call. If a restaurant's mobile-optimized website leads to a phone call to order takeout or to make a reservation, the restaurant has earned a customer that did not come from an online transaction.

Research. Customers perform product research on the device that is most convenient, and throughout most of the day, a person's mobile device is handy. Online research from a mobile phone often leads to a later purchase from a different device.

Of course, online transactions do take place on mobile phones, so the obvious conversion of an online purchase should not be forgotten. Mobile marketers must consider the wide variety of desirable behaviors that mobile traffic can influence. Failure to consider these other profitable behaviors will cause a marketer to underestimate the ROI generated by spending on mobile development and advertising.

Should We Build a Mobile Application?

The first step in a mobile strategy should always be mobile optimization of the website. After (and only *after*) full optimization of the mobile site, the next step should be to determine whether to build a mobile application. For most major national B2C companies, the answer is a clear *yes*. Whereas a mobile site lets a company interact with all of its customers, a mobile application can enable a company to interact with its most loyal customers in ways that increase the loyalty and share of wallet of this customer group. For most small, local companies, the answer is a clear *no*. Creating a valuable mobile application is expensive and requires significant upfront expense in both the creation of the app and in advertising at the launch to generate a sizeable install base. In addition, creating an app that truly adds value for customers is difficult and typically outside the talent level of a small company (especially one whose core competency resides outside of internet marketing).

For other companies, the question of whether to create a mobile application rests in the value that the application provides to customers beyond the value already provided by the mobile website. If the company plans to simply port the mobile website into a stand-alone application, doing so is unlikely to generate

profits for the company. On the other hand, a well-designed mobile application can enable customer interactions that can increase customer loyalty and hence improve company profits. The mobile application space is an extremely innovative and creative one, so creating a great mobile application has no list of rules and guidelines. But we now provide examples of some innovative mobile applications that have created value for customers.

Delta. Unlike the retail sector, in which customer interaction ends at purchase, in the travel sector, the customer interaction begins at purchase. After an airline purchase, the customer undertakes a prolonged interaction with the airline when the flight time arrives. Delta designed its mobile application to help customers through this prolonged interaction. Customers can use the application to check in, upgrade seats, make flight changes, get alerts on flight status, use their phone as their boarding passes, and book new flights. The value of this application to Delta is likely not adequately measured by the new bookings received on the app. Most air travel is planned with enough foresight that users likely prefer to book from their desktop computers. But by making air travel a little bit easier, the airline's customers are more likely to book a Delta flight rather than that of a competitor for their next trip.

Kohl's. A large share of Kohl's customers shop at Kohl's for the great bargains and promotions. Kohl's offers frequent sales and several other types of promotional offers to encourage customers to make regular visits to the store. The mobile application gives customers additional ways to save money on purchases. It offers promotions only available to app users, which can induce additional online purchases for customers who typically purchase only in store. Kohl's also hopes the application reduces showrooming. With the app, customers can scan the barcode of any product in the store and find customer reviews on the product. By providing this information for the customers, customers are less likely to look up the product on Amazon.

Volvo. Owners of a new Volvo vehicle can use their app to remotely activate some of the car's features. They can remotely lock the car, check fuel levels, and heat up the car. They can also use the app to locate their car or call roadside assistance. Such novel capabilities help Volvo salespeople close a deal with customers who the find the capabilities unique and useful, while also increasing these customers' loyalty for future vehicle purchases, because they may lament losing the app functions if they switch to another car brand.

Mobile Marketing Strategy

Prior sections of this chapter have already mentioned many of the important aspects of mobile marketing strategy, so we first review these important strategic considerations for mobile marketing. We then introduce some additional decision points for mobile strategy.

The first step in a viable mobile marketing strategy is to create a mobile-optimized website. The mobile website should (1) be designed to display well on the full range of mobile devices, (2) prioritize content so the mobile site only displays content most relevant to mobile users, and (3) encourage mobile users to convert, recognizing that a conversion might mean something other than an online transaction.

Once the mobile site is optimized, the company should determine whether to create a mobile application. Creating and maintaining a mobile application is expensive, so a company should only undertake development if the mobile application will create significant value for customers above and beyond the mobile-optimized website.

The aspects of mobile strategy mentioned thus far are focused on content. Another important aspect of mobile strategy is advertising. All of the same advertising types available for desktop computer users—search ads, display ads, video ads, and so on—are available for mobile. But differences between mobile and desktop users mean that mobile ad strategy should differ from the desktop advertising strategy. Below, we list some major considerations for mobile advertising strategy.

Vary ads by time of day (dayparting). When a mobile user searches for "restaurants" at 11:59 am, she is likely looking for a place to eat at 12:00 pm. Mobile users are often looking for information that they will

act on immediately. A mobile user who looks for store locations is worth more during regular store hours than after closing, so an advertiser should adjust bids (or activate and deactivate ads) accordingly.

Mobile-specific keywords. Search terms on mobile tend to be shorter and include more spelling errors than on desktop computers. Advertisers should thus create separate keyword lists and campaigns for mobile and desktop.

Different bid amounts for mobile. On Google's display ad platform, advertisers are automatically opted in to their ads displaying on mobile sites. But advertisers can specify a lower bid amount for ads that display on mobile. Advertisers should track the value of mobile display ads and adjust bids accordingly. Mobile display ads may be worth much less than desktop ads because mobile ads may yield a large share of "fat-finger" clicks—unintentional clicks that occur because mobile clicks are less precise. But advertisers should also note that mobile clicks might be worth more than is immediately apparent from analytics, if the clicks result in conversions outside of an online transaction.

Use video. Video is one of the few ad formats that are as effective with mobile users as they are with desktop users. While banner ads and search ads seem to be less valuable on mobile, a video ad is just as valuable when shown to a mobile user as when shown to a desktop user. For this reason, in April 2016, Google announced Bumper ads, 6-second video ads meant to increase reach with mobile users. Bumper ads and other video ad formats are likely to be effective for targeting mobile users.

Activate ad extensions. Ad extensions such as click-to-call will increase conversion dramatically on mobile devices, so mobile marketers should ensure these extensions are activated.

Accelerated mobile pages. Google and other search engines have long recognized slow page load times as a serious source of frustration for users. Slow load times have long damaged a site's organic rankings. It is speculated that Google will likely give a rankings boost to accelerated mobile pages.

Mobile Past and Future

Several novel technologies surrounding mobile devices have been put into practice with a varied amount of success. Other technologies will doubtless be developed in the near future, and one cannot reliably predict which technologies will take hold and which will have minimal effect, but past technologies provide some lessons for the use of mobile technology.

Geofencing. Geofencing allows a company to create a virtual "fence" around a location and alert passersby if they enter into the "fenced" territory. For example, a bakery could set up a geo fence 200 yards around its store and offer a 25% discount to people walking by. Although this strategy seems like a marketer's dream, it is also a customer's nightmare. Customers do not want to receive unsolicited messages from companies, especially not obtrusive text messages, so this practice has never come into widespread practice.

QR Codes. QR Codes allow mobile phone users to easily scan a simple square icon (like the one below), and the mobile device will be taken to a website with promotional content. The advantage of QR Codes is that they save users from having to manually enter a URL, but most consumers never even downloaded the app that allows them to scan the codes in the first place. Many marketers overestimate consumers' desire to connect with their brand, not realizing most consumers do not desire a "relationship" with a brand. So consumers rarely have an incentive to scan a QR Code.

Augmented Reality (AR). AR utilizes a cell phone's camera and augments the picture with content that complements the image that the camera sees. For example, in the figure below, AR recognizes the grocery store aisle and offers discounts on select items in the aisle. The technology is impressive, and the opportunity for marketers is seemingly endless, especially if technology like Google Glass becomes popular. But marketers need to keep in mind that most consumers prefer an unaugmented reality if the augmentation is simply obtrusive promotional content. AR will only take off if the additional content is truly valuable to customers.

Bluetooth technologies. Mobile phones are already equipped with GPS, and the location information provided from GPS is important to many applications, such as mapping applications and location-based search results. But GPS does not work indoors and is not accurate enough for some applications. For example, if a subway system created an application to guide riders to their destination, GPS would not work. Similarly, if a performance venue or sporting arena wanted to guide event attendees to their seats via their mobile device, GPS would not be an option. But if the subway system or sporting arena installed Bluetooth low energy beacons in various locations, mobile devices could receive notifications based on their locations to guide them. There are many potential applications for this technology, but the expense so far has been prohibitive. In addition, the need to download a separate application for each usage situation is likely to be an enormous barrier to widespread adoption. The Web Bluetooth API may soon solve this latter problem, as it promises to allow phones to interact securely with bluetooth beacons directly from a web browser rather than through an application. But neither technology is likely to take off without several compelling use cases being pioneered by many different companies.