eBook

UserTesting™

Why Mobile Doesn't Convert, and How to Fix It

Results from real-world tests of smartphone and tablet users

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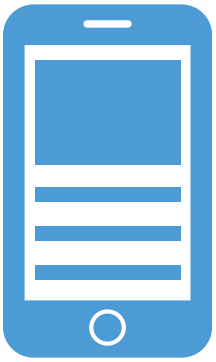
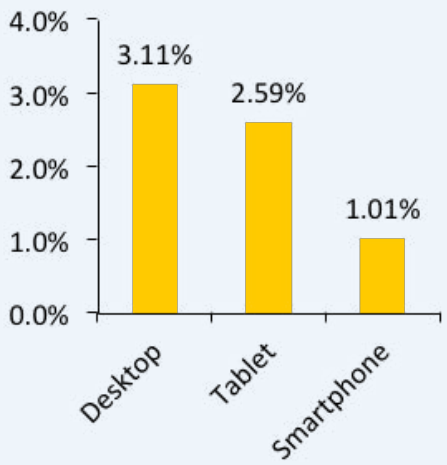
Contents

The Situation



If there's a consensus about anything in the fast-changing mobile market, it's the idea that e-commerce conversion—the ability to move a customer from interest to purchase—is lower on mobile devices than it is on personal computers. Smartphones have the lowest conversion, but the conversion rate on tablets is also lower than that of computers.



For example, Monetate reported that conversion on personal computer websites is three times the rate on smartphones.

– Monetate's reported e-commerce conversion rates, Q4 2013
Higher rates are better.

Other sources tell a similar story:

"It doesn't matter which category your business is in, it's highly likely that your mobile conversion rates are still below 1%, even with a smartphone-optimized site."

– Mobify, February 2014

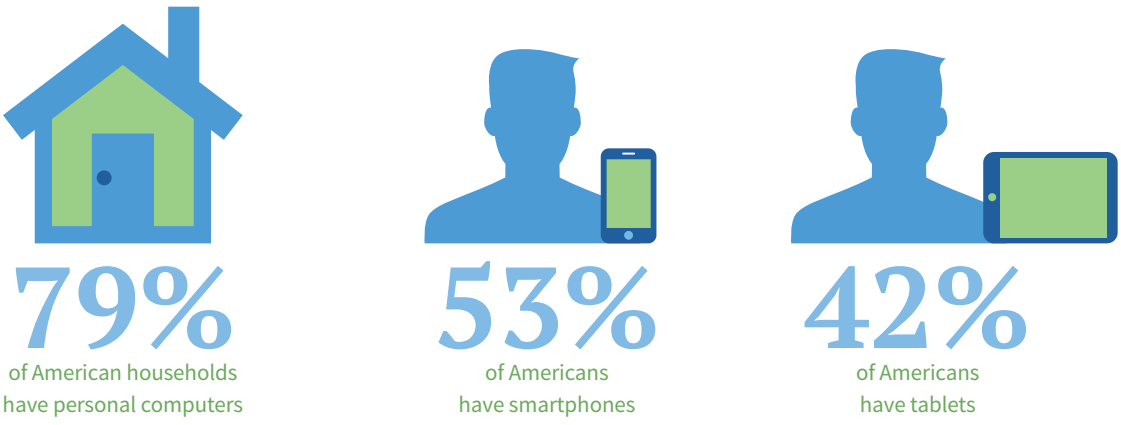
"Crate & Barrel reported a tablet conversion rate of 2.35% but a smartphone conversion rate of only 0.92%."

– Wired, February 2014

Why Doesn't Mobile Convert?

Although we all agree that conversion is usually lower on mobile, there's not a consensus on why it happens. A common explanation is, "Smartphones are more of a browse or research platform rather than a buy platform."[1] But that's like saying that an egg is round because it doesn't have sharp corners: It describes the situation but doesn't explain why it's happening.

Another common explanation is that "only rich people use tablets." According to this idea, tablets convert at a higher rate because the rarefied group of tablet users spends more money on everything. But in reality, tablets, smartphones, and personal computers have all become mainstream devices in the developed world. About 79% of American households have personal computers, 53% of Americans have smartphones, and 42% have tablets.[2] If average income were the driver, PCs ought to have the lowest conversion rate because they have the broadest user base.



[1] http://www.smartinsights.com/ecommerce/ecommerce-analytics/ecommerce-conversion-rates/

[2] Pew Internet and U.S. Census Bureau, 2012-14.

A third explanation is that smartphones are used on the go, when people don't have time to shop. But if people weren't shopping on mobile at all, there would be no Web traffic from smartphones to commerce sites. Instead, commerce companies report a lot of mobile traffic but not a lot of actual purchasing. So there's something about mobile that discourages people from moving from research to purchase.

Thousands of user studies by UserTesting suggest that there are three overlapping reasons for low mobile conversion:

1. Some of the problem is inherent to mobile. There are indeed some features of mobile devices, especially smartphones, that discourage purchasing. But that's not the dominant factor. Much more important are the following factors.

2. The purchasing experience on mobile devices is poor, because we as an industry haven't adapted our sites to the needs of mobile, and

3. In many cases, mobile sales actually do convert, but our current tracking technologies don't let us see it.

This eBook covers all three causes, explaining why they happen and what can be done to fix them. Most mobile conversion problems can be fixed. The problem is not in our smartphones, but in the design of our mobile commerce websites and apps.

Issue 1:
Smartphone Hardware Limits Hurt Shopping

There are two limitations of mobile device hardware that interfere with purchase conversion. One is very obvious, but the other isn't.

Computer, tablet, and smartphone screen sizes

Screen size. This is the obvious difference. Personal computers generally have much more screen real estate for displaying information, and that extra space benefits e-commerce. It's much easier for computer users to view side by side comparisons of products. They can easily see information that supports purchase, such as background information, reviews, and multiple images of products. And tools that help users navigate choices, such as filter buttons, are usually easy to find.

In contrast, the smaller screens of mobile devices make it impossible to display the same supporting information all at once. It's harder for users to make product comparisons, supplemental information is often missing or hidden, and filtering tools are often limited. As a result, users sometimes feel that they're not getting enough information to complete a purchase. In user tests, we find it's common for people to get partway through the purchasing process on a smartphone, and then stop and say they'll make the final purchase on a personal computer, where more information is available.

> *"I feel like there would be more product photos if I viewed the store on my PC, so I'll wait and complete the purchase there."*
>
> – Participant comment from a user test

Network speed. This is the other characteristic of mobile devices that appears to affect conversion. Most personal computers are connected through cables or Wi-Fi to high-speed network connections. In contrast, most smartphones connect through a cellular data network. Although cellular network speeds have increased substantially in recent years, they're not as fast as wired connections. They also have higher latency than wired connections, meaning that they can be slower to initially respond to network requests such as loading a web page. The combination of latency and lower network speeds can make it slower to browse websites and make transactions on a smartphone. In our tests, these small delays accumulate and produce user frustration quickly.

Tablets vs. smartphones. Tablets are generally believed to have a conversion rate that's lower than that of PCs but higher than that of smartphones. The screen size and latency issues help to explain this. Tablets have more screen real estate than smartphones, allowing users to view more information at once (although not as much as they can on a computer). And tablets frequently connect to a network through WiFi, giving them a faster and more responsive shopping experience.

So the more computer-like shopping experience on tablets leads to a more computer-like conversion rate.

What to do: Don't give up. Faced with these inherent limitations, it's very tempting for a company to accept the lower mobile conversion rate as something that can't be helped. That's a big mistake. Our tests show that there are workarounds that can help overcome the shortcomings of mobile.

For example, give a mobile user the option to view an item on the full version of a website. Although we don't recommend forcing people to use a PC-formatted website on mobile (it frustrates users very quickly), giving them the option to do so feels like a service rather than an imposition. If nothing else, it can enable users to reassure themselves that they aren't missing important sales support information on the mobile site, making them more likely to go ahead with a mobile purchase.

If you're creating a mobile commerce app, there are many things you can do to reduce perceived latency. For example, it's often possible to pre-cache information that users might ask for, allowing your app to display them without waiting for the network. Animation of buttons and other screen elements can sometimes be used to mask short delays while the network is accessed.

But more important than any particular fix, you need to understand that most mobile commerce problems are not caused by screen size or latency. Instead, they're tied to subtle usability mistakes that companies often make in mobile commerce apps and websites. In the next section, we'll dig into those problems.

Issue 2:
Mobile Commerce Companies Make Usability Mistakes

Taking the fun out of shopping. The first, and biggest, mistake that we see companies make when designing for mobile commerce is that they try to shift customers from shopping to buying. Shopping on a personal computer, when it's implemented well, is a seductive process. There are usually an enormous number of products to choose from, it's easy to browse around, and years of design work have gone into creating a smooth, seamless shopping experience.

On mobile, that process doesn't just break down; it's often mistakenly sabotaged by the vendor. In an effort to respond to smaller screens and slower connections, companies often try to strip down their mobile shopping experience to the basics. A particular focus is on enabling a purchase with a minimum number of taps. **Here's some typical industry advice:**

> *"Research has shown that (mobile) conversion rates are directly impacted by streamlined paths to purchase—conversion should occur within three touch events. Two will be table stakes in the near future."* [3]

[3] Adobe Mobile Consumer Survey, 2013

There's no question that minimizing taps is a good idea—after the customer has decided what to buy. But we see many companies try to compress the whole shopping process into a small number of taps. The result is a mobile app or website that forces the user to make a quick purchase decision, rather than providing a great shopping experience. To the user, it feels like the site switches from gentle enticement to issuing demands.

Our research shows that the best results happen when a site or app adapts to where the user is in the decision process. Once someone decides what to buy, they should be able to do it with a minimal number of taps. But if they are undecided, they should feel free to explore and compare.

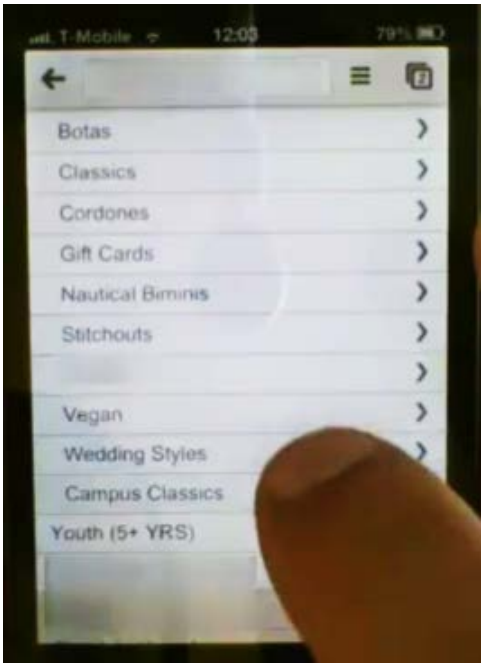
That's challenging to many companies because they want to create a single master site design for personal computers and then use responsive design to adapt it to mobile. Our research suggests that conversion will be higher when the shopping process on mobile is rethought and tested from the bottom up, before a site design is locked in. That's expensive and inconvenient for many companies, but as desktop traffic shifts to mobile, it will be more and more necessary.

Beyond that basic design issue, we also see a wide array of small usability problems in many commerce sites and apps. Individually, they don't necessarily make a big difference, but each one eats away at conversion, and taken together, they often make mobile commerce deeply irritating to users.

Here are the most common mobile commerce flaws we see in our studies:

Confusing terminology. Because the smartphone screen is so small, every word used in it needs to be carefully considered. This is far more important in mobile than on a desktop, where there is more room for redundant information. Sometimes companies use terms to describe store departments and product types that are not necessarily understood by all users. In the example below, a clothing company has chosen product categories that aren't familiar to most people. In a test, a user asked to find boots was stopped dead by these menus.

The menu titles aren't necessarily wrong, as long as the company is certain that its customers all understand them. But this site would definitely be intimidating if the company wanted to reach beyond its core customers. **The lesson:** know your target customers extremely well, and use their language, not your own.

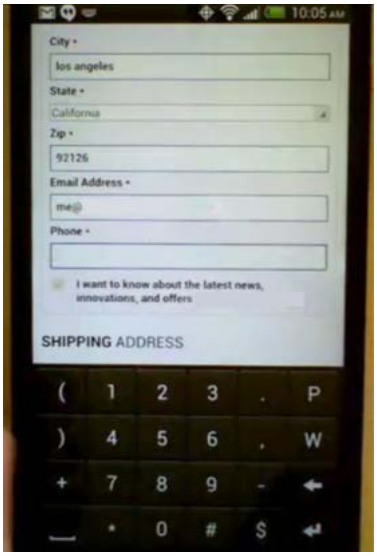


Menu titles can be baffling if the user doesn't understand your terminology

Number pad blues. Entering any sort of data on a mobile device is a painful experience. As a general rule, the more information you make people enter, the more of them will drop out of the buying process. This has led to well-publicized techniques to save taps, like asking the user to enter their ZIP code first in an address, and then auto-filling the city and state for them.

Another frequent mistake we see is the failure to use the number pad when asking a user to fill in numeric information. The example below has a couple of problems in it. In the screen at left, the user is being asked to fill in the ZIP code after manually entering the city and state. So the company has already missed an opportunity to make life easier for the user. Worse yet, the keyboard used for the ZIP code entry isn't optimized for numbers. But later in the same form, when the phone number is input (right image), the number pad is used. This sort of inconsistency shows that the company hasn't thought systematically about mobile. In user tests, a mistake like this often produces extreme user irritation.

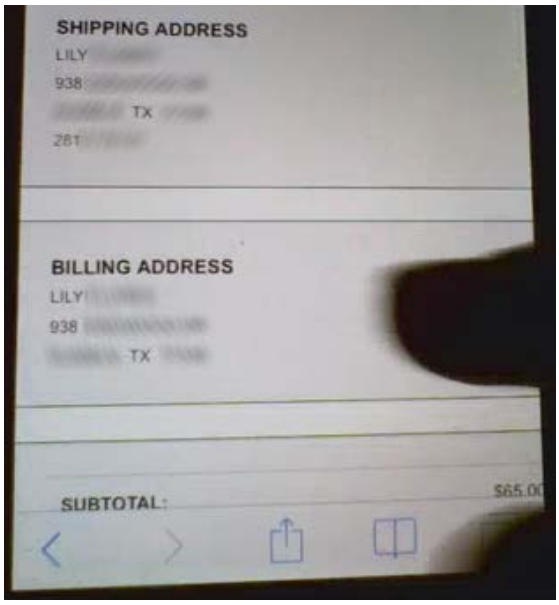
ZIP code is entered after the city and state, and doesn't use the number pad...



...but the phone number entry does use the number pad.

Untappable items. Smartphone and tablet interfaces are built around the idea of direct manipulation. Any on-screen information that the user might want to modify can generally be tapped or swiped and edited in place. Mobile users come to expect this sort of interface. Mobile commerce companies sometimes violate this principle by presenting static screens of information that can't be tapped. Instead, if users want to make a change, they are expected to use a back button or some other sort of navigation tool, the way they would in a PC web browser. Mobile users often overlook nav buttons and become frustrated when tapping does nothing.

In the example below, taken from the checkout process of a mobile commerce site, the user is trying to edit her billing address. She repeatedly tapped the address and swiped up, down, left, and right, with no effect.



"How do I change my billing address?"

Carousel confusion. Carousels (a series of images that automatically slide across the screen) are controversial even on the desktop (do a web search for "carousels suck" and see what you find). But on mobile, they present a bigger problem. In tests, we frequently see carousels whose images have been adapted from a PC website. The text is too small and the images are too crowded for easy viewing on a mobile device.

We also see many cases in which the developer uses a mobile carousel as a supplement to the site navigation. The company has some features of its PC site that won't fit into the navigation scheme on a smaller screen, so they are bumped into the carousel. This inevitably confuses customers who expect site navigation to be done through the site's main menu.

Some of the text in this carousel image is so small that it's almost unreadable.

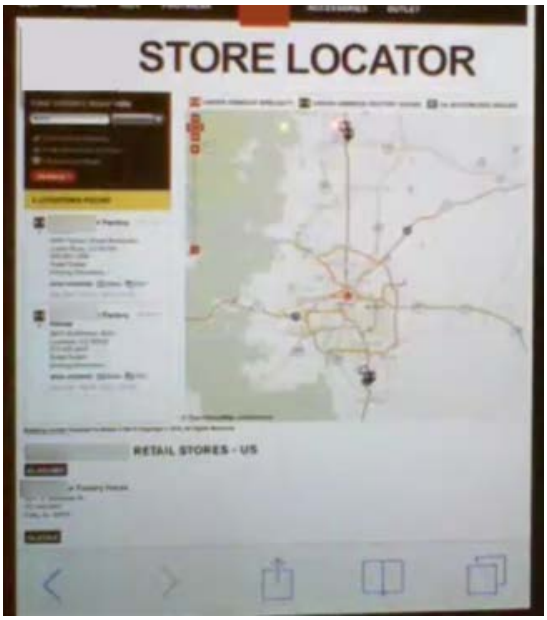
Note the large text and simple photo in this carousel image.

PC surprises. Although our research shows that it can be helpful to give mobile users the option of viewing an item in the PC version of a site, it's not helpful to force people into a PC view with no alternative and no warning. The result is usually alarm and frustration as the user struggles to read tiny text and pinch and zoom the page. It's like a highway that suddenly switches from concrete pavement to gravel.

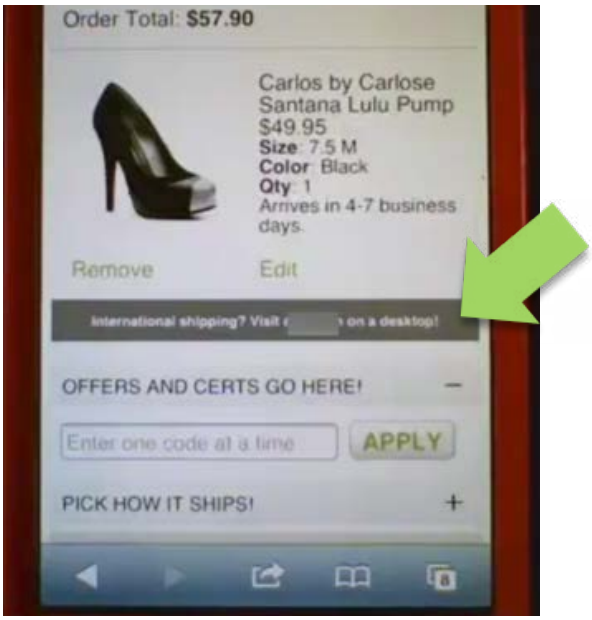
This is a common problem when a company relies on responsive design to reformat a PC site for use on mobile. Although responsive design is better than nothing, it should not be used blindly. You should always yourself ask whether a page should be redesigned rather than just resized. In the example found on the next page on the left, a PC-designed store locator has been reformatted for mobile use. The result is text that's far too small to read and a map that's an eye test.

In the example below on the right, the site does not have a mobile-formatted page for international shipping. But instead of dropping the user into that page unexpectedly, the feature is presented as a benefit, while at the same time, the user is warned that it'll display as a computer-formatted page.

The lesson: It's best to make sure that all of your screens are rethought for mobile. If that's not possible, at least warn people before you throw them onto the gravel.



This store locator page features unreadable text and a map that's as detailed as a Faberge egg.

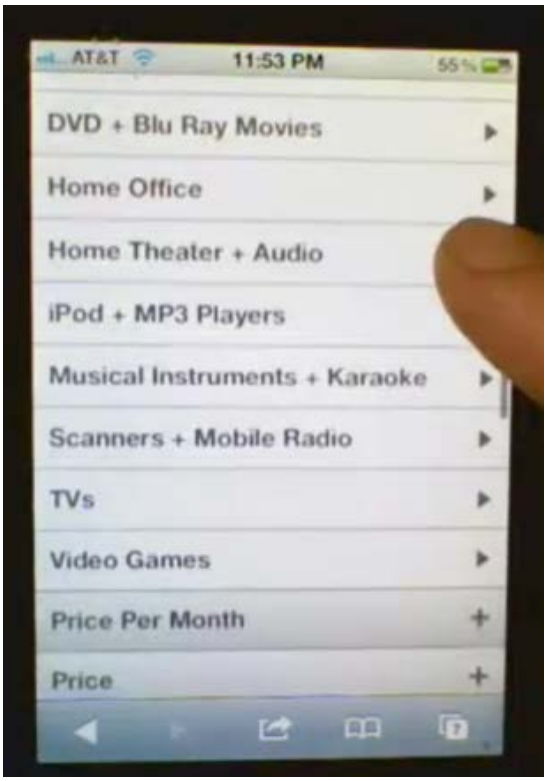


It would be best if this site had a mobile-optimized page for international shipping, but at least it warns the user before taking them to the desktop view.

Menu mania. It seems so logical: Most online stores are really a list of products, sorted by category. So why not have the user navigate through a set of hierarchical menus that list the categories? Unfortunately, our tests show that people are rapidly confused by most menu systems that run more than two levels deep. Even relatively short menu lists can be intimidating if they contain unfamiliar terms.

In the example below, the consumer electronics site shown at left has attempted to arrange its offerings into a series of logical categories. The result is a labyrinth of related product terms that most users can't navigate. Contrast that menu structure to the one in the store shown at right. Arrows pointing up and down show whether a category is expanded (rather than the right-pointing arrow, which can lead some users to expect the screen to shift to the side). Sub-menus are indented and made smaller, which makes them easier to understand at a glance. And there are only two levels of menus. Tapping on a sub-menu will take you to a landing page for that part of the store (where you may see another two levels of menus).

In the left-hand example, the menus are a maze. In the right-hand example, the menus are like the elevators between floors in a department store. They don't try to explain everything; they just move you between broad categories of goods.



These menus are a labyrinth.

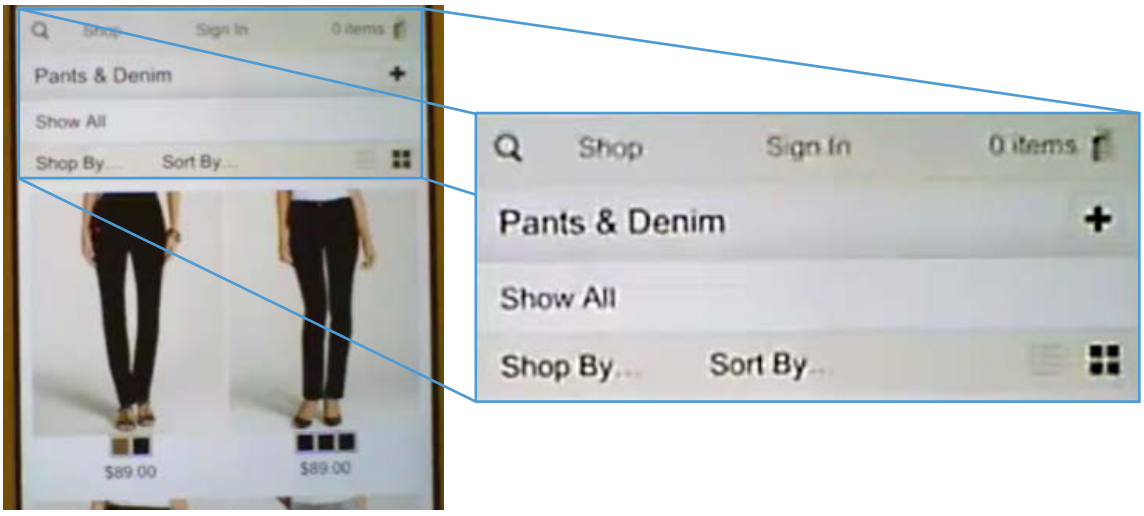
Note the indentation and variable font sizes that help users tell where they are in the menu hierarchy.

Search and filter follies. One of the most difficult design tasks in mobile commerce is site navigation. The relatively large screen size on a computer enables a site to display several different navigation tools at the same time (for example, a menu of departments and a set of filters can be displayed on the same screen). On mobile, those features are usually on different screens, and in our tests, users often struggle to find them.

We also frequently see problems with wording. Often, a developer will think that the name they chose for a button or function is intuitive, but users do not understand it the same way. Or users will use the site's search function to look for a particular term and not find what they're expecting because items in the inventory have not been tagged that way. These are all problems on desktop sites, but they're magnified by the other restrictions of mobile devices.

For example, the site below has too many overlapping ways to navigate. There's a search button at the upper left (the magnifying glass), a "Shop" button, a "+" button next to Pants & Denim, a "Shop by..." button, and a "Sort By..." button. In tests, users were flummoxed by these five choices. They might try one or two of them, but if they weren't able to quickly find what they wanted, they just gave up.

One way to help with this problem is to carefully test your site to find the terms that people are most familiar with (for example, "filter" may be a better choice than "sort by"). There's also a good argument for combining several related functions into a single button so there's no risk of the user pushing the wrong one. For example, we've seen mobile stores that combine filtering and sorting controls on a single screen, accessed through a button labeled "Filter." Chances are very good that a user who wants to sort will push the Filter button anyway because it's the only choice.



This site tried to give users a helpful array of navigation choices. But in tests, users could not tell the difference between the Search, Shop, +, Shop By, and Sort By buttons.

Issue 3:
Look Beyond Traditional Conversion

As you can probably tell, there is an almost limitless number of small usability gotchas that need to be identified and gradually refined. That process took years on the desktop, and there's no reason to assume it'll be any faster in mobile.

But at the same time as you're fine-tuning your mobile sites and apps, it's also important to be open to the bigger changes in commerce being driven by mobile technology. Just as the personal computer forced people to rethink accounting and word processing, mobile devices challenge us to rethink how shopping should work. Here are several issues that show up in our research.

How do you accommodate both searching and browsing? People will usually come to a mobile commerce site for one of two reasons: either they want to shop recreationally, by browsing through products, or they want to go directly to a particular product they're considering. These two motivations conflict: browsing calls for a leisurely and entertaining experience, rich with media, while buying calls for a quick jump to specific product information.

These two shopping processes are difficult to accommodate even on a desktop site, but on mobile, it's even tougher because of the small screen area. In our tests, the most successful sites try to figure out which path the user is on, and adjust accordingly. For example, users who start with a search are probably looking for a particular product, while if they jump to a category, they are probably browsing.

Understand how shopping can cross devices. The early pioneers in mobile computing talked about the personal "real estate" that various devices occupy. The smartphone lives in a pocket or purse and is used for short sessions throughout the day. The notebook computer is used for relatively long, immersive sessions when the user is sitting down, often at a desk. We're still figuring out the geography of the tablet, but increasingly, it appears to live on a side table next to the easy chair at home, where it competes with the television for attention.

It's increasingly common for the purchasing process to extend across all three devices. A user might receive a smartphone message from a friend mentioning a pair of shoes. During the day, the user might check them out on a notebook computer. Then, in the evening, over a glass of wine, the shoes are ordered via tablet. Traditional analytics would say that the tablet produced the sale, but actually, all three devices were responsible.

UserTesting clients are starting to test this sort of cross-device shopping behavior. The research is still in the early stages, but already one clear finding is that commerce companies need a broader definition of sharing. Most sites make it easy for a user to share product info with a friend, often via a Facebook link. But it's also important to make it easy for a user to share information with him- or herself. For example, a user should be able to tag a product listing on a smartphone and come back to it on a tablet, preferably without the need to log in (which most users won't bother to do).

Let the smartphone be a smartphone. Although it's possible to improve the mobile conversion of almost any commerce company, it's likely that the biggest improvements in mobile commerce will come from creating new forms of shopping that leverage the unique strengths of mobile. For example, flash sales take advantage of the immediacy and personal nature of a smartphone. We're also seeing tests in which smartphones are used synergistically with other channels. One example is the use of a smartphone to improve the buying process in a store, by allowing a customer to get product information and reviews easily while in a store, or to order it for delivery when there's a long line at checkout.

Amazon's new Fire Phone features Firefly, an app that can recognize photos or names of products and lets the user instantly order them. This raises the possibility that mobile shopping could in the future be a feature of the smartphone rather than a separate app or website that the user visits (in other words, the device becomes the store, rather than the device being used to access the store).

This is potentially a very disruptive change to the shopping process. Retailers need to track it, and explore building similar functionality into their sites and apps. It's also worthwhile to explore plugging into Amazon's Firefly app, which has an API that allows companies to add their own extensions to it.

Conclusion:
An Action Plan for Mobile Conversion

The mobile conversion problem can't be solved instantly. It's driven by a large number of small issues rather than one big thing that can be easily fixed. Mobile site design is a harder job than desktop, because the screens are smaller and because the best practices for mobile are still being discovered.

Because of the complexity of mobile, many companies try to farm out its execution to contractors, or focus on a single panacea, such as responsive design. That's dangerous. Although mobile is still a minority of mobile commerce traffic, it's growing rapidly. Some companies, including Facebook and Yelp, report that mobile accounts for the majority of their business. Commerce companies that treat mobile as a second-class citizen are putting themselves at risk as the move to mobile accelerates.

Here are steps to ensure that your mobile presence is the best it can be:

1. **Standardize your terminology.** Make sure the language you use in your store matches the vocabulary used by your customers. This applies to the tags and menus you use to identify your products and the button labels you use for navigation within your store. When in doubt, copy the terms used by the biggest e-commerce leaders. They're the ones being seen by the most customers.

2. **Limit the use of menus.** We think that two levels of menus, with each list filling about one screen, is about the maximum you should do. If you need more than two levels, add a landing page after the second level to keep people oriented. Think like an elevator in a department store.

3. **Use carousels with caution.** If you must include a carousel, keep the images clear and the words few (and large). And don't use the carousel for something that should be a navigation button.

4. **Make everything tappable.** The mobile paradigm is to tap and edit in place, rather than going forward and back.

5. **Give access to the PC view** of your store, but not by surprise.

6. **Optimize for two paths.** Find ways to determine whether a visitor is shopping or browsing and adjust the experience to them. Remember, mobile is all about immediacy and personalization.

7. **Take advantage of what mobile does best.** Rather than struggling to turn a mobile device into a computer, optimize for the things it does best. Test flash sales and instant ordering. If you have brick and mortar stores, ask how mobile can enhance the in-store experience.

8. **Integrate shopping across device types.** Track users across device types, and make it easy for them to share a discovery or shopping session with themselves, so they can resume later on a different device.

9. **Rethink for mobile.** This is the hardest task, but also the most important one. Learn how mobile can change the shopping process. Track experiments like Fire Phone, and if you have a brick-and-mortar presence, explore ways that mobile can supplement your in-store experience. The real question isn't how mobile converts, but how your whole business converts.

10. **Assume nothing; test everything.** If your business is successful in the desktop web, you'll have a set of unstated assumptions about dos and don'ts for online shopping. Some of those assumptions will turn out to be wrong in mobile, but it's impossible ahead of time to say which ones. Continuous user testing is critical to optimize your mobile presence. It's better to test in small batches continuously, rather than large groups at the end of development, so you can learn constantly and identify any problems as early as possible. Contact UserTesting to design a testing program that's fitted to your needs.

How Mobile Testing Works at **UserTesting**

If you've never done a user test before, you may be surprised by how easy and inexpensive it can be. You design your test online, specifying the tasks you want users to perform and the questions you want to ask them. You specify the type of people you want tested. Then, you give us a URL to access your mobile site, or upload your app to us. That's it. We field your test to our panel of mobile users, who record themselves doing the test and describe what they think and where they get confused. It's like watching over the shoulder of users as they complete your test.

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