

MOBILE MARKETING GUIDE

HOW TO BUILD A MOBILE WEBSITE

If you're a professional marketer or business owner looking to create a mobile-friendly version of your website and market on mobile, this white paper is for you! We will demystify your options by outlining the different methods of building a mobile website, and help you make the right choice to achieve your goals.

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INTRODUCTION

Even if you've never been to a horse race, you may have seen one or two movies about them. The race begins with the horses and jockeys behind the starting gate and they're raring to go. All of a sudden the gates open and the horses surge forward in a massive thundering cloud of energy. This is exactly what what comes to mind when I think of mobile marketing today—someone must have just opened the gates, because everyone is in a mad race to build a mobile website!



If you're a professional marketer or business owner looking to create a mobile-friendly version of your website and market on mobile, this white paper is for you! One of your biggest challenges will be choosing between the many companies that promise mobile website platforms and solutions, but how do you sort the good from the bad? We will demystify your options by outlining the different kinds of horses that are in the race for your business, and help you make the right decision. We have researched this topic thoroughly because we looked at the same choices when we built BlueTrain Mobile.

Let's begin by establishing a framework for our evaluation. First We'll list some common challenges you may face while creating a mobile website, and then offer solutions that will provide your consumer with the best possible mobile experience. Later, we'll use this framework to evaluate how well each kind of mobile website implements these best practices. This will help us determine the best option for you!



“In the last year, mobile search increased by 400%.”

Google

“9 out of 10 mobile searchers have taken action as a result of a smartphone search.”

Google

“Email activity on mobile devices accounts for 42% of US mobile internet time.”

The Nielsen Company

“Worldwide mobile advertising forecast to reach \$3.3 bil. in 2011.”

Gartner



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KNOW YOUR OPTIONS

In my opinion, Dan Wineman has written the funniest description of common difficulties encountered while browsing the mobile web in a imagined conversation with a restaurant website. It begins like this:

Dan Wineman: (tries to visit a local restaurant's website via iPhone)

Restaurant website: I require Flash. F*ck off.

DW: I just want to know how late you're open.

Website: Nope.

DW: But I'm on my phone. Don't you have a little "HTML Version" link up in the corner or something?

Website: I'm ignoring you.

DW: What if I'm on my phone because I'm out, looking for a place to eat? Didn't that ever occur to you?

Website: F*ck entirely off.

DW: (gives up, switches to computer)



Read the entire post

<http://venomousporridge.com/post/389785000/a-conversation-i-have-every-month-or-so>

Fortunately (phew!) most people who care about mobile audiences are savvy enough to avoid using Flash and present a mobile-friendly website. Here are 5 challenges the must be overcome to create an effective mobile website. We'll use these challenges to evaluate our options later.

Challenge	Solution
<p>Keep mobile content short and succinct Most desktop websites have pages that are too lengthy for a mobile user. Typical desktop websites have 250-400 words per page, this is too much content for a typical web page on a smartphone and would require the user to scroll extensively to read all the content.</p>	<p>A mobile website should present shorter and more succinct content as compared to a desktop website to be more digestible for the mobile user. The average word count of a mobile page should be around 70-110 words.</p>
<p>Automatically feed frequently updated content to mobile website Although most of your mobile website content should be tailored specifically to the mobile user, frequently updated content (blog posts, news, events, jobs, product information, etc.) should be automatically updated on your mobile website whenever it changes on your desktop site. Much of this frequently updated content can also be published as is, this is because a news article or blog post contains content that is appropriate to publish in its full length.</p>	<p>A mobile website should display both of these kinds of content effectively: succinct content tailored for the mobile audience, and automatic updates for content that changes frequently and can be displayed full-length. You can accomplish this by setting up a direct content feed from your desktop website to your mobile website using RSS or XML to output structured data.</p>
<p>Use fewer & smaller images on mobile A regular desktop website has too many graphics and images for a mobile audience and these graphics and images are very large, so they take a long time to download and display on a mobile device. They may even include media that is not compatible with some smartphones.</p>	<p>A mobile website should present fewer graphics and the graphics should be optimized for the mobile user, meaning that they should have very small file sizes so that they can download rapidly.</p>
<p>Reorganize navigation for mobile audience There are too many navigation links on a regular desktop website and they are not necessarily the links that are useful to a mobile user.</p>	<p>A mobile website should have fewer navigation links and those navigation links should be tuned specifically for someone on a smartphone. For example, location-based links (directions, maps) and touch-to-call phone numbers tend to be much more important to the mobile user.</p>
<p>Enable mobile user to find content quickly and easily Most desktop websites have extensive nested navigation links: for example, an "About Us" section contains a "Team" page, which contains individual biography pages of people in your company. Many websites have 3-5 layers of content. This nested content is hard to render well on mobile without waiting for each page to load and looking through pages after pages of menus.</p>	<p>A mobile website should have an advanced navigation control that enables people to quickly and easily link directly to the content they are looking for, even if it's 2-3 layers deep in the website.</p>

Now that we understand the typical problems that mobile users encounter while trying to view a regular website on a mobile device, let's outline the options for building a mobile website and evaluate each one:

Option	Suited for marketing websites?	Best matched with	Comment
1. Custom built mobile platform	Poor	Mobile web app for a product	<p>Pros: Best suited for very large software companies like LinkedIn and Facebook that can afford dedicated mobile engineers. Provides a good experience of the product.</p> <p>Cons: Very expensive and time consuming to build and maintain. Do you have a lot of time and an unlimited budget? If not, let's move on.</p>
2. Mobile template or plugin from desktop CMS	Poor	Personal blog and website built with a desktop CMS	<p>Pros: You can make very large websites function on mobile phones. Enables blogs to display the same content and same comments on both mobile and desktop.</p> <p>Cons: Difficult to navigate, difficult to maintain, text is too long, images are too large, websites take too long to load and are not optimized for touch devices, complex websites (not blogs) require expert coding skills.</p>
3. Transcoding	Poor	None	<p>Pros: You may be able to have a mobile website in 60 seconds and you only have to update your content in one place.</p> <p>Cons: It will look not look pretty and will break unless your technical web team and mobile folks can tango perfectly. Hire an Argentinian team, they know how to tango!</p>

(continued)

Option	Suited for marketing websites?	Best matched with	Comment
4. DIY Template-driven mobile CMS	Good	Website for small local business	<p>Pros: Great solution if you're the owner of a corner coffee shop; your budget is between free and about one cup of coffee per month.</p> <p>Cons: You get what you pay for, this is a cookie cutter solution.</p>
5. Responsive design	Good	Online magazine or newspaper or high profile blog	<p>Pros: The Rolls Royce of mobile websites, these things will polish your shoes in the morning and serve you tea.</p> <p>Cons: Responsive design could cost about as much as a small country and will take few months to a year to plan and develop. This is especially true when coupled with a content management system that has many different page layout templates. Some responsive websites are easier to build, but they still display the same (lengthy) content and only reformat the images, which results in long loading time.</p>
6. Hybrid mobile website	Best	Website for mid-size to large business	<p>Pros: These platforms incorporate the best of the other options, without their limitations. The websites are professional, functional, and beautiful. They are customized to your brand. Frequently updated content is automatically and reliably updated from your website</p> <p>Cons: None that we can think of! This means that any option outlined above will require effort to keep up-to-date, but a hybrid mobile website provides the best balance of automatic updates and pages that are custom crafted for the mobile audience. Hybrid mobile websites are the best choice for mid-size businesses and professional marketers.</p>

In Brief

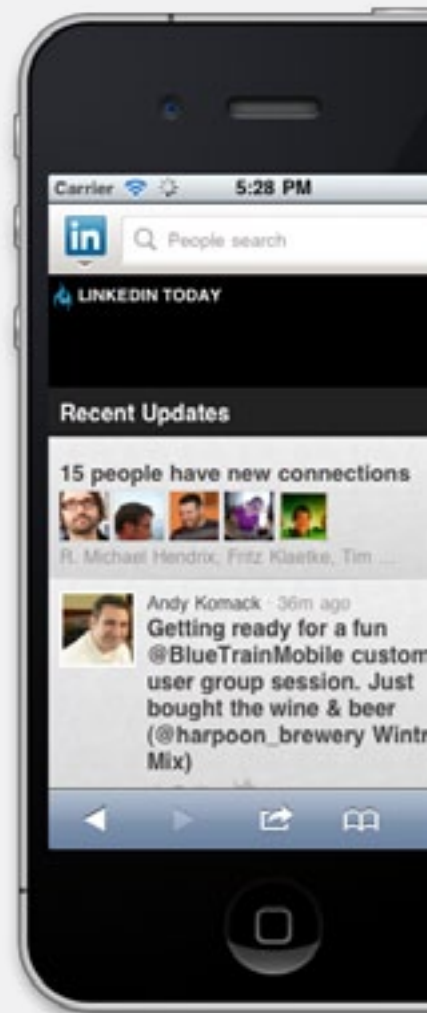
Jay Leno can afford to build a complete custom car, but for the rest of us, it makes sense to buy from a manufacturer regardless of whether we want a Cadillac or Kia. Building a custom mobile platform is a poor choice for a marketing website, a good choice for a highly complex product or web brand with a lot of resources.

Definition

A custom built mobile platform is one that has been created usually using XHTML/HTML, CSS, Javascript, and a custom back-end.

Evaluation

If you have a lot of time on your hands, an unlimited budget, and you're not in a rush to build a mobile website, then a custom built mobile platform might be a great choice for you! You get complete freedom in your design and technologies, but the downsides are many. Because a custom built mobile platform requires to be fully pre-tested on multiple devices, your engineers will need to either acquire multiple hardware devices or purchase a third-party testing service that will enable them to test your website on iPhones, Android and BlackBerry devices, and the multitude of other smartphones. Those engineers will then be on the hook for resolving any inconsistencies, errors, and problems that are found in the testing process. Once that custom mobile platform has been launched and is live on the internet, it will be almost impossible to maintain efficiently with limited resources. Whenever a new smartphone comes onto the market, additional testing will be required in order to ensure that your mobile website is compatible



with that new device. If, as is often the case, you're unable to retain the same engineers to update your mobile website over the long-term, then you'll have to find a new engineer who will need to get up to speed on someone else's custom code in order to maintain it. Whenever you want to make a small change to your mobile website, your first step will have to be to e-mail or call a software engineer. This will provide a marketer with very limited flexibility and freedom.

When is this a good option? If you are a product manager in a company that has a very complex product, then a custom mobile platform may be the best choice for you. For example, when LinkedIn and Facebook needed to build mobile websites they didn't sign up for a third party platform. The right choice for them was to make a significant investment with a highly trained and highly skilled team that can build a complex mobile website uniquely suited to their needs. However, if you are a marketer who is looking to build a mobile website, a custom mobile platform is overkill, pure and simple. It would be too expensive, too time-consuming to build, and too difficult to maintain.

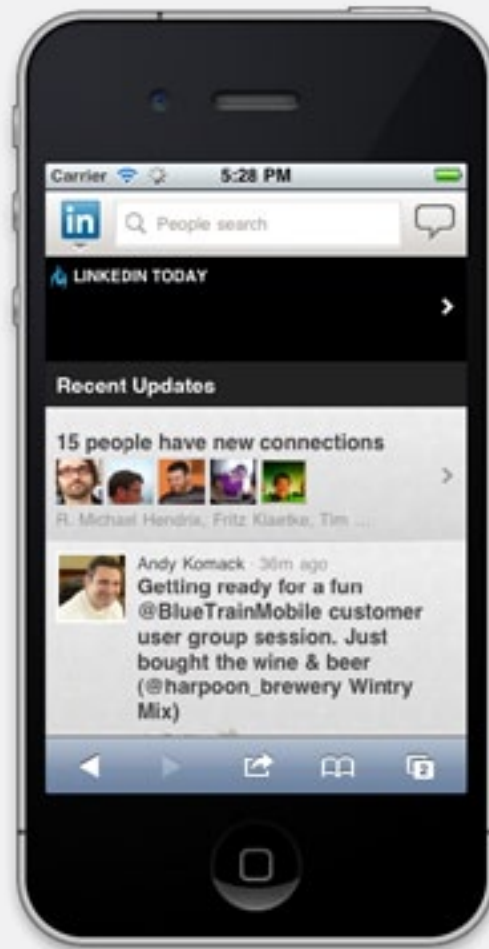
Who should use it

LinkedIn, Facebook, Twitter, and other large software companies whose products are web-based.



<http://www.popularmechanics.com/cars/jay-leno/4206704>

“Jay Leno can afford to build a complete custom car, but for the rest of us, it makes sense to buy from a manufacturer regardless of whether we want a Cadillac or Kia.”



Twitter, LinkedIn, and Facebook are great fits for this option

Scorecard for marketer

- Fully customized, so branding, layout, and navigation are completely optimized for mobile
- Images that are small and load fast
- Slick custom controls and user interface
- Expensive and time-consuming to build and maintain
- Best suited for large web brands

2. MOBILE TEMPLATE/PLUGIN FROM DESKTOP CMS

In Brief

Perfect for a personal blog, but for mobile marketing website? Not so hot. Mobile templates/plugins are a poor choice for a marketing website, but a good choice for a simple blog website in which you want to display the exact same content and comments for all users.

Definition

A mobile template re-formats the layout of the content, altering the presentation layer (CSS and HTML) for mobile. A mobile template itself doesn't solve any of the 5 challenges of creating a mobile website. According to Wikipedia, “[a] cascading stylesheet (CSS) is designed primarily to enable the separation of document content (written in HTML or a similar markup language) from document presentation, including elements such as the layout, colors, and fonts.” In the case of a mobile stylesheet, separation enables the layout, colors, and fonts (but not necessarily the content) to be optimized for smartphones. This allows the “same markup page to be presented in different styles for different rendering methods, such as on-screen, in print, and mobile.” It doesn't shorten that content.

Evaluation

The only problem that a mobile template/plugin from desktop CMS solves is style – that is, it helps you update the stylesheets and templates of your website so that they technically fit on a smartphone screen, but websites using mobile templates alone face many usability issues. They are often difficult to navigate, difficult to



Example of default Wordpress mobile plugin

maintain, deliver the same desktop website content that is too long for the mobile user, and offer up the same images that take too long to download.

A mobile template/plugin may be good for you, but here's what you'll have to live with:

- Navigation may be difficult to use, because very few companies that offer mobile templates have figured out how to present 3-5 or more layers of nested navigation in an efficient and intuitive way.
- Your information architecture will not be tuned specifically to the mobile audience. That means the taxonomy or structure and organization of your pages will remain the same for both desktop and mobile users. It may not be optimized for just what the mobile user is looking for.
- Your pages will be too long, and your images will likely be too big and will take too long to download.
- The design will probably not look very polished or customized to your branding because it is a template.

Who should use it

People running simple blog websites. Also, companies with very large websites with literally thousands of pages (who also want to display the same exact content) would consider a mobile template because it's the simplest (although not the most elegant) way to publish.

Although these websites may not look good on mobile, at least they will work. This option is especially good for you if you operate a large website that meets these 3 conditions:

1. Do you have thousands of pages on your desktop website?
2. Must you display all those pages to the mobile audience?
3. Are you unwilling to edit down your content length or image sizes for the mobile audience?



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Scorecard for marketer

- Good for bloggers and companies with no budget to spend on mobile, but not marketers
- Templated approach constrains branding freedom
- Content not edited down for mobile audience
- No advanced nested navigation to go 2~3 levels deep

In Brief

If you really liked aluminum siding in the 1970's then this is for you! You get to put a mobile facade on your otherwise non-mobile friendly website. The only problem is that if you make any structural changes to your house, you may break your facade and have to reapply the siding. This means that if you make any structural changes to your website, your mobile website may break.

Definition

Transcoding, also known as “screen scraping”, is a process that sits between the user and the desktop website and reads the desktop presentation layer, makes some additional transformations, applies a different stylesheet to it, and then renders it in a new presentation layer. Transcoding places a presentation layer on top of a presentation layer which is why I describe it as similar to adding a layer of aluminum siding on top of your clapboard house. Your underlying house had its own exterior, but you're adding another layer that gives your house a new facade.

Evaluation

There are two common types of mobile website vendors out there that use transcoding. The first promises that you'll have a mobile website in a few seconds. These providers ask you to simply input your web address, then you wait a few seconds, and they instantaneously show you what they claim to be a mobile version of your website. This results in very basic websites that are hard to navigate and look pretty awful. The second type of vendor that uses transcoding is more sophisticated; using their system usually

requires you to line up an expert who is capable of editing raw HTML and CSS. Even when you're done with that transcoded website, several problems remain:

- **Slow:** Transcoding requires that a request is processed through a proxy back to the original desktop website, which has to download its entire content including long content and large images, which are then in-turn scaled for mobile. The process of transcoding cannot begin until the main website has been served. This will not render your page very fast unless the whole process is cached. If it is cached, it will still have to be updated frequently, if it is not updated frequently, then the content will be out of date.
- **Prone to break:** If someone changes your underlying website, resulting in a structural change to the HTML, and there is a significant risk of that change breaking your mobile website. Your transcoded mobile website is completely dependent on a consistent presentation layer structure provided by your regular desktop website. Any time a change is made to your regular website layout, your mobile website is at risk.
- **Less functional:** Because transcoded pages are based on existing pages of your regular website, they do not take advantage of specific functionality that is unique to a mobile device, such as location awareness.
- **Less reliable:** A transcoded mobile website can be dependent on the reliable delivery of both your regular website and your mobile website provider, this provides two potential failure points. If there is a problem with your regular desktop web server, your mobile website may not display at all.
- **Harder to test:** If you make a change to your regular website and it breaks your mobile website, you may never know.



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Who should use it?

People who aren't aware that there are better options out there!

Example



Scorecard for marketer

- Transcoded websites place navigation links or images that have been scraped from the desktop site, and don't display mobile friendly navigation menus
- Content that has been transcoded is difficult to shorten without rewriting. If you rewrite your content, why transcode it?
- Shows a patchwork of graphics and content that has been displayed from the regular site



In Brief

Much like the guy who walks into Home Depot to buy some plumbers' tools and then goes to town on his bathroom, so-to-speak, there are some options out there for folks with a very limited budget who want to build something themselves. These companies enable you to design a completely new mobile website from scratch using a very basic do-it-yourself (DIY) template. This turns out to be a pretty good solution for someone who has a very low budget and is looking for a free or very cheap website. If you're the owner of a small coffee shop and you're looking for an inexpensive solution, you can build a mobile website yourself and they look okay. You get what you pay for; it's not a great mobile website, but it'll do.

Definition

A standalone template-based mobile website does not automatically update when you make a change to the desktop website. It is completely separate from your desktop website and generally you will build it by going through a step-by-step process. The first step usually involves picking one of several cookie-cutter templates with predefined styles, colors, and fonts. You'll then add content and images before you publish.

Evaluation

With these kinds of websites, you'll get what you pay for, they are generally free or about \$10 per month. Your website won't win any awards, and it won't be the best looking mobile website, but it will work, and considering how much you invested (which is not much at all), that's not a bad deal.

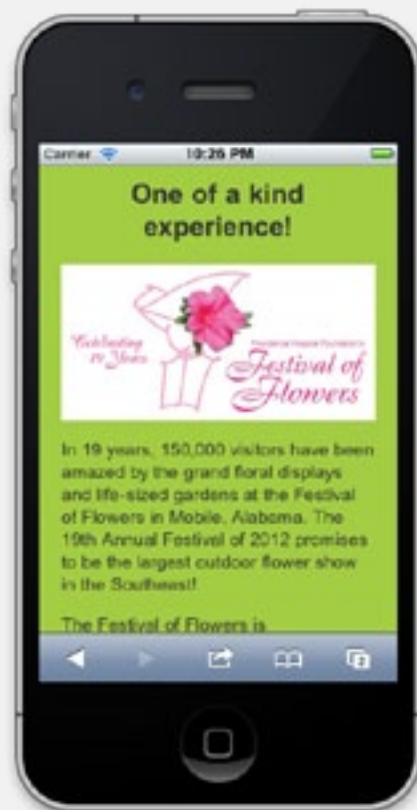
Who should use it?

Small local businesses, like the corner coffee shop or hair salon.

Example

Scorecard for marketer

- Very basic templates, colors, and layouts
- Simple navigation doesn't work well if you have more than a handful of pages
- Pre-canned templates don't provide a lot of options for laying out images and text efficiently
- Many cookie cutter templates present a stack of buttons on most pages, navigation tends to crowd out messaging



In Brief

The Rolls Royce of mobile websites, these things will polish your shoes in the morning and serve you tea! It comes with a price—some responsive design could cost about as much as a small country and will take 9 months to a year to develop. In some cases, you have to rebuild the desktop website from scratch to fit this responsive technique.

Definition

Responsive websites are able to dynamically change their layout according to the type of browser and resolution of the device that is rendering the page. In Ethan Marcotte's article entitled "Responsive Web Design," which is credited with establishing the method, Ethan explains that there are three important ingredients required to create a responsive website: Fluid grids, flexible images, and media queries.

- Fluid grids refer to the ability for one website to render in one, two, three or four columns (or grids). On a tablet or smart phone, a four-column page may render in one or two columns.
- Flexible images enable responsive websites to show a single image larger or smaller depending on the browser and resolution of the user. Taking it to the next level, it's also possible to use context aware image sizing. These are both very sophisticated techniques.
- Media queries were developed by the W3C standards body as part of the CSS3 specification to enable developers to target device classes and characteristics. This means that a website can tailor what you see according to your browser and device resolution.

Evaluation

Responsive design could be as easy as adding a few lines of CSS media queries, but if you want to do it right, the biggest challenge in implementing a responsive website is that you have to rebuild your desktop website with a new unified website for all devices. For a lot of marketers that have invested a significant amount of time and financial resources in the desktop website, this may be an unnecessarily expensive and time-consuming option. Here are some other challenges:

- The tools for this kind of website are very immature.
- You need some of the most highly skilled presentation layer engineers to build a responsive website.
- Such a website may take a long time to build and will be expensive to maintain.
- Updating a responsive website is not going to be that easy for someone unless they have advanced HTML and CSS skills.
- You're going to be tied to your engineering team to be able to update, enhance and modify your website.
- The mobile version displays the same core content as the desktop version.

Who should use it?

Responsive design is a great solution for the publishing industry, an for newspapers in particular. In the Boston Globe example below, this daily newspaper has the challenge of needing to publish the exact same content to desktop users, tablet users, and smartphone users. They invested a significant amount of time and energy in order to build a single website through which this identical content can be formatted appropriately for each device. If you're someone at a large newspaper, and you have a significant budget that you're prepared to



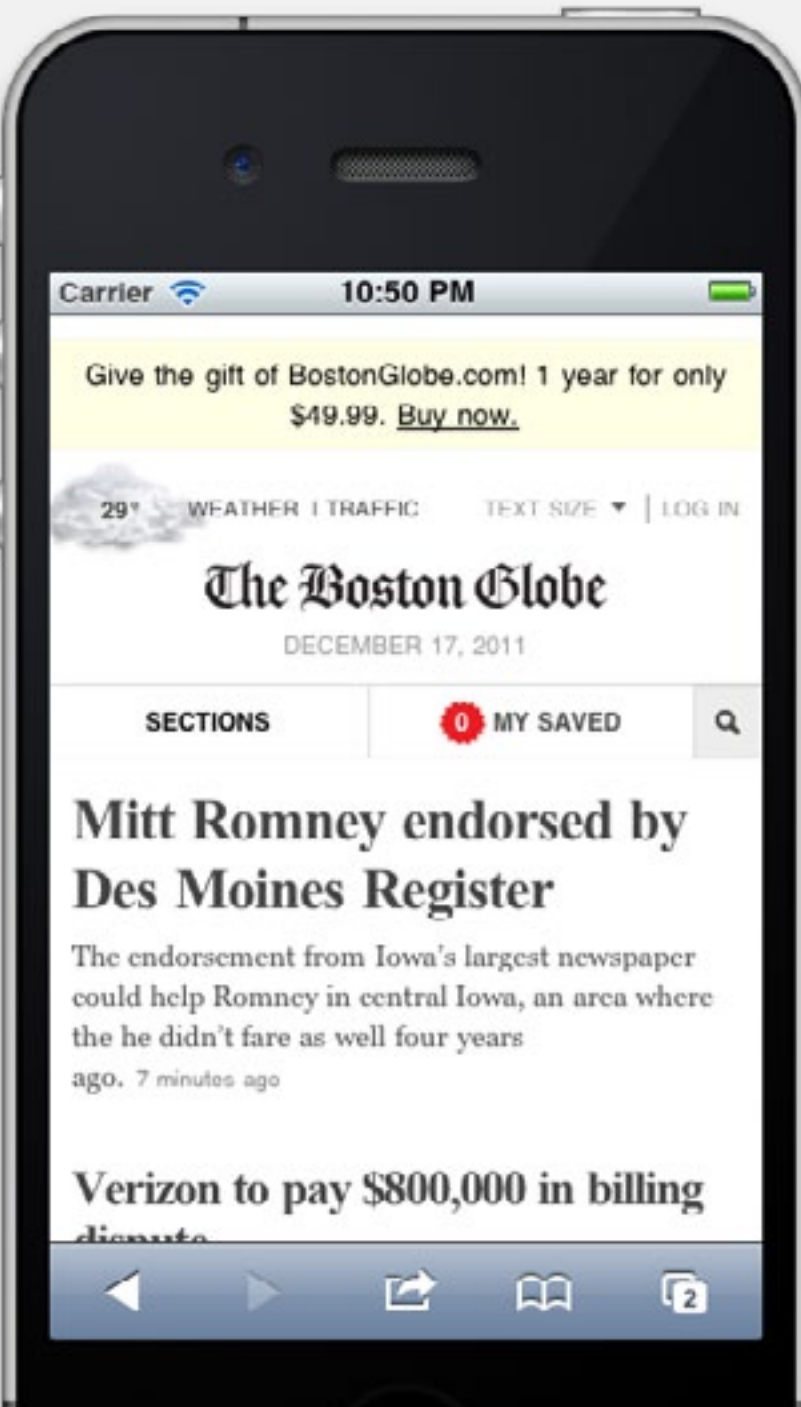
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invest in a responsive website, this may be a good solution for you. For a typical marketer, a responsive website is not practical, requires throwing out your existing website, and is too expensive.

Example



Scorecard for marketer

- Great for publishers and newspapers
- Technically elegant
- Text is too long for mobile readers
- Navigation and content location isn't optimized for smartphone users
- Very expensive to develop and maintain; may require rebuilding your desktop website as well



In Brief

A hybrid mobile website is the best way to build a website for marketers trying to reach the mobile audience because it combines the strengths of several design patterns (custom coded, mobile stylesheets, responsive design) while eliminating their weaknesses. Hybrid mobile websites provide you with complete creative freedom to design a mobile website that is uniquely tailored to your brand. They enable you to create pages that are custom tailored for the mobile audience with short, succinct content, and images that have been specifically selected and optimized for a mobile display. Content that is frequently updated on your website can also be automatically displayed on your mobile website without the disadvantages of transcoding.

Definition

A hybrid mobile website enables you to determine which pages from your website you would like to custom tailored for the mobile audience and which pages should automatically be updated from your desktop website. The content that automatically updates from your website will be displayed using a feed via RSS, XML, or other common feed formats. The content that is custom tailored can be entered using a content editor (WYSIWYG). Your graphic designer has nearly complete freedom to use imagery, video, fonts, and messaging that is completely unique to your brand. A hybrid mobile website combines two powerful marketing features: a completely custom look and feel with a robust content management system that's very easy to use and maintain.

After a brief one-time configuration of dynamic content, this kind of

website does not require any technical skills to maintain. Once the configuration is in place, all changes, updates, and modifications can be completed by someone in a marketing department. The navigation for a hybrid mobile website can be customized specifically for someone who is on a smartphone, enabling you to list only those links that are most important for the mobile user. Location-based links (directions, maps) and touch-to-call phone numbers can easily be prioritized. This kind of website also uses an advanced navigation control that enables people to quickly and easily link directly to the content they are looking for, regardless of whether the mobile website is 15 pages or 150 pages.

Features

- Easy to use.
- Enables you to quickly and easily create mobile content.
- Completely customized information architecture and navigation.
- Will work seamlessly with your regular desktop website to accept content feeds via XML, RSS or a CMS plugin.
- Feed frequently updated content directly into the mobile website and have it automatically update.
- Produces beautiful, functional, effective websites.

Evaluation

Hybrid mobile websites are the best choice for mid-sized or larger organizations and professional marketers. We think this is the best approach, that's why BlueTrain Mobile is a hybrid mobile website platform.

Who should use it?

Marketers at mid-size or large businesses.



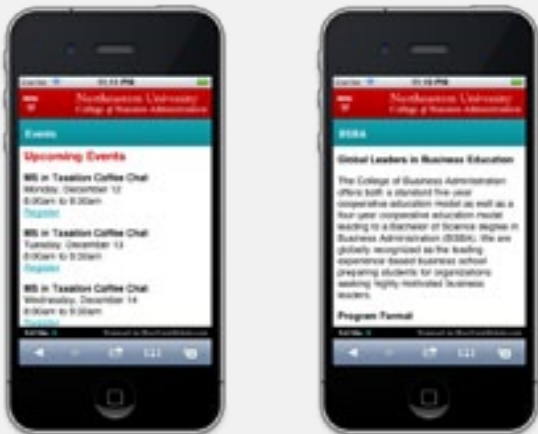
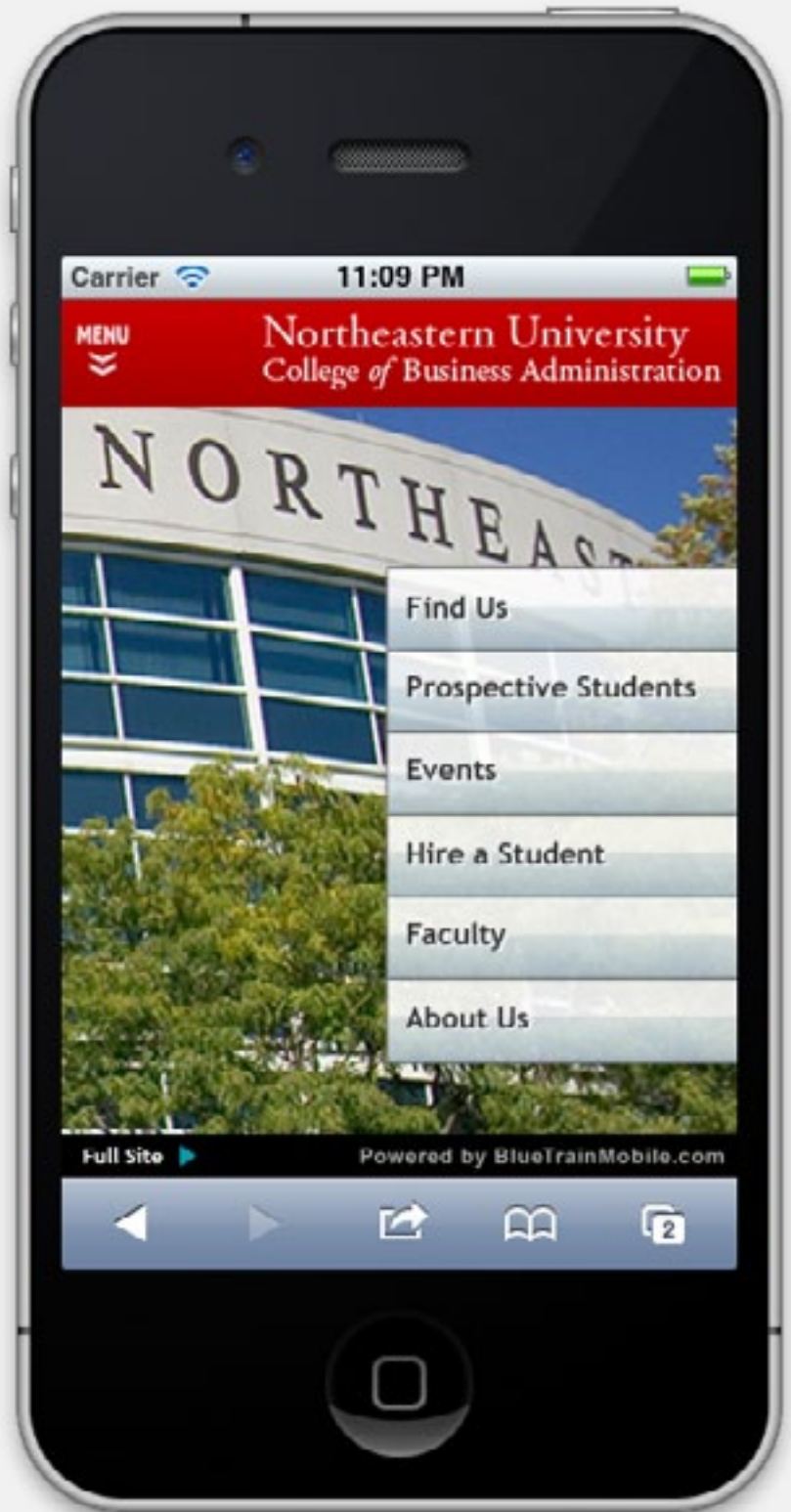
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Scorecard for marketer

- Best solution for marketers
- Enables you to create beautiful, professional, and unique designs connected to a completely standardized CMS backend
- Plenty of space for branding
- Clear navigation, optimized for the mobile audience
- Menu is available when you need it, nested navigation enables users to find exactly what they need
- Combines content that is tailored to the mobile audience AND also content that is fed directly via a CMS plugin: hence “hybrid”



Steffan Berelowitz

CEO & Conductor of BlueTrain Mobile



Steffan Berelowitz is a serial entrepreneur, web consultant, and now train conductor. In the past 19 years, Steffan founded 3 companies in online technology—all are in business today. In '93, he co-founded ArtNet. In '95, Steffan founded Bit Group, an award-winning New England

web agency. In 2010, he co-founded BlueTrain Mobile. Previously, Steffan served as an Internet consultant to presidential candidate Sen. Bill Bradley, leading the development of the first presidential campaign website to raised more than \$1 million online. Steffan also served as a trustee of the Massachusetts Software Council from 2001 to 2005, representing the industry's interests among state and national lawmakers.

About BlueTrain Mobile

We deliver your brand directly into your customers' hands, enabling you to create professional and compelling mobile websites. We also offer personalized advice on how to effectively translate the design and personality of your brand's desktop site into a streamlined mobile experience for your customers.

Simply put, we help you engage and delight your customers wherever they are, on any smartphone. Take full advantage of the growing mobile marketing channel by requesting a demo today, and we'll show you how the BlueTrain engine can power your brand!

Our Customers

"BlueTrain Mobile's CMS enables CBA to create and maintain content for the mobile site while ensuring that it is compatible with the latest smartphones."

— **Northeastern University
College of Business
Administration**

"We saw the need for providing easy access to information to our patients, visitors, employee candidates, and the many others in our community. We based the design of our mobile website on what our data showed people were looking for most from their hand-held devices. We are continuing to add new content each week, to further enhance the patient/customer experience."

— **Rhonda Mann, BIDMC's
Director of Marketing
Communications**

"We're particularly excited to really take advantage of a mobile-optimized platform. When our clients and subscribers want to look for our content on their mobile phones, we'll be there."

— **Retail Systems Research**



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