Mobile Technology and You:

A Guide for Arts Organizations

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technology IN THE ARTS

exploring the intersection of arts management and online technology

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Title page photo credits (L-R):
Kennedy Center mobile site main screen, Karey Helms
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Introduction

Mobile technology is a channel that many arts organizations know that they must utilize in order to remain relevant and accessible to their patrons, but their unique needs make it challenging to decide exactly how to best approach such a project. While it is essential to take advantage of the ever-changing trends in this area of technology, mobile strategies that are primarily driven by these trends may not be the best fit for every organization. Specifically, although mobile apps have been extremely popular in recent years, their ubiquity alone does not guarantee value for all institutions.

The nonprofit arts sector has highly specific functionality requirements for mobile technology that run alongside the challenges of a limited budget. Organizations are seeking additional – or at least more streamlined – outlets for the transactional activities central to their revenue, such as ticketing and merchandise sales. However, they are also looking to deepen their patrons' engagement experience and understanding of the art form they present. This multifaceted operational environment can complicate an organization's decision of what kind of mobile technology to implement.

This paper is intended to clarify some of the often-nebulous types of mobile technology that companies and organizations currently utilize:

- Mobile apps
- Mobile-friendly websites
- Mobile-optimized websites
- Responsive design

These different mobile technologies may seem interchangeable on the surface, but each has their own benefits and shortcomings. There is no single "correct" type of mobile tech for every arts organization, but making an informed decision of which type to choose is unquestionably the best way to avoid incurring unnecessary project expenses.

What is the purpose of an app?

At its most basic, an app is a piece of software intended for use on a portable device, such as a phone or tablet. "Native" mobile apps, or those designed with a specific device in mind, can essentially be viewed as a mobile equivalent to PC programs, since both have a specialized and often standalone (i.e. independent from the internet) functionality. Much in line with the PC's longtime history as a gaming platform, programs with high levels of interactivity are among the best types of mobile apps for user satisfaction. Managing data-driven tasks that require the saving and storage of information would also benefit from an app. Regardless of its eventual functionality, apps tend to be rather expensive to develop and maintain. A so-called "out of the box" customizable app, like those provided by mobile developer InstantEncore, can cost upwards of several thousands of dollars per year for midsize to large organizations.

When an organization embarks on an app development project, they hope their patrons will both engage with the app frequently and remain loyal to it over an extended period of time. However, user behavior indicates that this may not be happening in reality. A study conducted by analytics company Localytics between July 2011 and May 2012 concluded that 69 percent of mobile app users opened their apps 10 times or fewer after they first downloaded them at the start of the study. This means, of course, that only 31 percent of the users surveyed opened their apps 11 times or more over the course of those nine months. These two categories of users were determined because app developers use the 11-visit benchmark to identify consumers as "loyal" or "retained." Of the several categories of apps studied, news and reference apps showed the highest rate of user retention, but sales and "event planning" apps had extremely low retention rates in comparison.

Only 31% of mobile app users are considered "loyal" or "retained" by app developers' standards.

App strengths:

- Potential for long-term user engagement
- Opportunity for interactive features

App weaknesses:

- Expensive
- Requires maintenance/updating

Apps: a passing trend?

Recent research is suggesting that the mobile app may be past its peak as a medium, citing advancements in web development and a preference for more efficient and robust mobile browsing. Jenna Wortham of the *New York Times* presents the concept of "mobile app burnout," during which early adopters of mobile apps have become overwhelmed by the sheer quantity and ubiquity of available apps. These "burnt out" consumers admit to only using a select few of the apps on their devices on a regular basis.

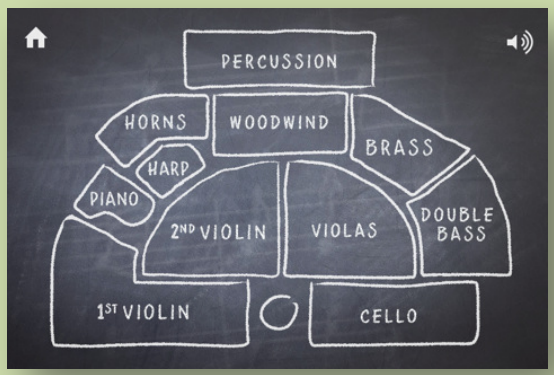
In January 2013, Apple reported that there were over 775,000 apps available for iPhone and iPad through their App Store. Additionally, Nielsen found that while the number of apps on a typical smartphone is continuing to increase, the amount of time users spent engaging with apps has not shown the same trend. This evidence, along with the Localytics study, supports the notion that designing and downloading mobile apps are extremely fad-driven behaviors: hype surrounding an app's release might compel consumers to download it, but it may not be enough to sustain their interest and loyalty over time.

The Melbourne Symphony Orchestra's *MSO Learn* App

https://itunes.apple.com/ie/app/mso-learn/id441422027?mt=8

Touted as the "first app of its kind," the Melbourne Symphony Orchestra's MSO Learn iPhone and iPad app provides an interactive educational experience for its users. The interface is clean and graphically driven, allowing users to navigate app content through an orchestra section "map" called Take Your Seat. Selecting any part of the orchestra zooms in on that section, revealing the individual instruments that make up the section. From each section of the orchestra, users can read symphony musicians' biographies and descriptions of their role in the ensemble. The app also features integration with the iTunes Store: choosing the "Recommended Listening" option under any instrument's description leads to an album that features that instrument prominently.

Although it could benefit from more frequent updates that rotate the musicians profiled in each section, MSO Learn wonderfully illustrates the case for using a mobile app as an interactive learning tool for patrons. Arguably, the app's most successful accomplishment is that it offers educational value for anyone interested in learning more about symphony orchestras in general, not only the regular attendees of Melbourne Symphony Orchestra concerts. This widespread relevance proves that MSO Learn was a worthy investment for the orchestra to make, and can serve as a model for other organizations interested in creating a distinctive, mission-fulfilling mobile app.



"Take Your Seat" menu screen
Photo credit: http://img-ipad.lisisoft.com/img/9/1/910-2-mso-learn.jpg

Example instrument description screen
Photo credit: http://wosu.org/2012/classical101/?attachment_id=33837

Mobile websites: three app alternatives

Mobile device-based web browsing may surpass computer browsing as early as 2013.

Users are making a noticeable switch from computer web browsing to mobile device browsing. The NPD Group's Connected Intelligence Application and Convergence Report, released in early 2013, states that 37 percent of consumers who used to access certain content on their computers now access the same content on their mobile devices. The top two activities that were affected by this transition were general web browsing and visiting Facebook. Smartphone- and tablet-based web browsing have not yet overtaken computer-based browsing, but the NPD Group report predicts that it may happen in 2013.

The following is an overview of three major types of mobile websites. Distinguishing between the various types can be difficult because their names are often used interchangeably. Specifically, while all three of the types outlined below can be considered "mobile friendly" (i.e. instead of being viewable only on a computer), they vary in terms of development processes and degree of "smart" technology.

1) Mobile-friendly

To be considered "mobile-friendly," a website must be predominantly HTML-based and fully functional on both computers and portable devices. The content of the website uses a relatively small amount of data to facilitate successful loading on mobile devices. Elaborate animations that use Adobe Flash, for example, are ideally not used. Also, the site design accommodates the operational limitations of certain devices. Mobile-friendly websites are becoming accepted as a best practice in the web development sector. A 2012 Google survey concluded that 72 percent of mobile users claim that mobile-friendly websites are important to them.

One major drawback of mobile-friendly websites is the fact that the layout is not adjusted for the dimensions of the device on which it is being viewed. Users may still need to zoom in on certain parts of the page in order to read or engage with them. In many cases, they will also have to scroll both vertically and horizontally to read the text. Opting for too much content or high-resolution design elements on a mobile-friendly site may lead to loading speed issues, especially on WiFi and non-3G networks.

The Google survey mentioned above found that 96 percent of respondents had encountered a so-called "mobile-friendly" website that did not work well on their devices. A negative experience with an organization's website leaves the frustrated user with a poor impression of the organization itself. Although mobile-friendly websites are becoming a best practice for businesses, users' needs

Pew Research Center findings:

As of December 2012, 45% of American adults own a smartphone.

As of January 2013, 31% own a tablet computer.

and preferences evidently go beyond what this baseline technology can provide.

2) Mobile-optimized

Mobile-optimized websites improve upon the capabilities of mobile-friendly websites. The site converts to a certain layout based on a list of browser and device types, but is specially designed with mobile devices in mind. The priority for a mobile-optimized layout is user efficiency. As such, mobile-optimized web sites boast fast loading speeds and, in some cases, seamless integration with a mobile device's other functions (camera, contact list, GPS, etc.).

Comparison of mobile-friendly and mobile-optimized website interfaces
Photo credit: http://www.jacobtyler.com/creative-blog/tag/mobile-optimized/

Mobile optimization accounts for user behaviors that are specific to mobile devices; for example, buttons or "touchpoints" are large and have clear text to accommodate a user's thumb. Graphics are kept to a minimum in terms of quantity and size in order to pique users' interest while maintaining an efficient browsing experience. Mobile optimization eliminates the horizontal scrolling and zooming necessary with mobile-friendly websites. The most successful mobile-optimized sites minimize the amount of typing required of the user by including dropdown menus and checkboxes whenever possible.

While most mobile-friendly sites do not pare down content to accommodate for smaller devices, mobile-optimized ones exclude features of the full site that the creator thinks are less important to the user. Choosing what content to leave out of the mobile-optimized version of a website is largely dependent on each organization's knowledge of what their constituents need. Since content on the website is excluded from the mobile-optimized version, the creator must ensure that users have the option of reverting to the full version of the site so they still have access to the missing information.

Although mobile optimization is generally an immense improvement over mobile-friendly web design, its emphasis on ease of use and simplicity can be limiting for those who want to present more visually dynamic content on their mobile site. However, mobile optimization's ability to give patrons a positive, practical mobile web experience still makes this type of technology a worthy investment, especially for transactional tasks.

Examples of mobile-optimized websites:

- Seattle Symphony: seattlesymphony.cloudtix.com/mobile/
- CNN: m.cnn.com
- Panera Bread: m.panerabread.com

Mobile optimization strengths:

- Highly efficient user interface

Mobile optimization weaknesses:

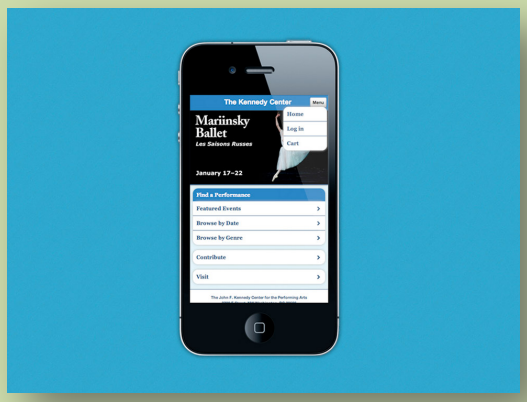
- Not conducive to design-heavy content
- Features only the most important parts of the website

The Kennedy Center's Mobile-Optimized Website

www.kennedycenter.org/m

The Kennedy Center developed a streamlined, mobile-optimized version of their website that emphasizes the performing arts institution's diverse calendar of programs. It features a simple interface with a minimum of text and large buttons (or "touchpoints") on each screen. The main menu requires virtually no horizontal or vertical scrolling, allowing users to navigate to the page they need as quickly as possible. The dropdown menu at the top of each page only contains three choices: Home, Log In, and Cart. Among the actions that the Kennedy Center chose to include in their mobile-optimized website is the convenient option of making a donation right from the mobile site by filling out a 3-field form, only one of which requires typing. The small amount of text per screen yields very fast loading speeds, and selecting the option to view the full HTML site results in similarly fast navigation. The single picture advertising an ongoing or upcoming event keeps users well informed, providing visual impact without sacrificing efficiency.

The primary downside of this mobile-optimized website is that the touchpoints can be overly sensitive. For example, selecting a category under the "Browse by Genre" performance menu sometimes makes the site "skip" a screen because it interprets the finger tap as two taps in a row. Nonetheless, the Kennedy Center provides an excellent example of mobile optimization for arts organizations, offering a helpful and intuitive product that enhances the patron experience.



Main menu of the Kennedy Center's mobile-optimized website
Photo credit: http://www.kareyhelms.com/wp-content/uploads/2011/04/kc-mobile-011.jpg

3) Responsive design

Demonstration of Mashable's responsive design website on several devices
Photo credit: http://mashable.com/2012/12/11/responsive-web-design/

The layout of a responsive design website automatically adapts to the screen size of the device it is accessed from. It is a more advanced technology than both mobile-friendly and mobile-optimized web design because responsive design sites are intuitive enough to resize based solely on a device's dimensions instead of relying on a predetermined (translation: incomplete) list of common devices and browsers. In other words, a website with responsive design is easily adaptable to most new mobile devices that enter the market.

Examples of responsive design:

- Adaptistration: http://www.adaptistration.com/
- The Boston Globe: http://www.bostonglobe.com/

Developing a responsive design site is technically cheaper than creating an app, but may be more expensive than the mobile-friendly and mobile-optimized options. It may also require going through the process of reassessing, rearranging, and optimizing existing website content, depending on the characteristics of the current website. Once each element of the website is formatted with responsive design, though, the content is easier to update because there is only one version of the website to tend to, rather than several separate renditions designed for certain devices. The added advantage of having one site for all devices eliminates the need for separate URLs for mobile and non-mobile versions, like the "m"-prefixed URLs that are so common in mobile-optimized websites.

One argument against responsive design is that the fluidity of the website elements defies the user's expectations of layout. For instance, navigation menus that usually appear at the top of the page on a computer browser may unexpectedly become hidden at the bottom of the page when the same site is viewed on a phone. In this regard, responsive design results in a slightly less user-friendly product than mobile optimization. Nonetheless, it provides a good balance of benefits for the organization and the site's users, and has potential as a feasible alternative to a mobile app.

Responsive design strengths:

- Cheaper than designing an app
- No need to maintain separate (i.e. mobile and non-mobile) sites

Responsive design weaknesses:

- Fluidity of layout may be confusing to users
- Can be more expensive than mobile-friendly and mobile optimization projects

What's best for arts organizations?

In the arts sector, organizations have objectives that transcend simply selling more of their products to more people, and yet they often have financial constraints to take into account. Due to this reality, there is no straightforward mobile solution for every arts institution.

Marc van Bree, author of the blog Dutch Perspective, expresses concerns with app development for performing arts institutions despite the popularity of apps in recent years. His research indicates that apps are ideal for "narrowly defined repetitive tasks" that appeal to a very broad user base, explaining the success of gaming apps that have simple and intuitive controls, such as Angry Birds. These kinds of apps may not be particularly relevant to an arts organization: most have geographically specific core audiences, and need their mobile tech to have more mission-focused capabilities in order to

	Native Mobile App	Mobile Website	Responsive Design
User experience			
Design for mobile users' needs and usability	★★★	★★	★
Load speed	★★★	★★	★
Offline access	★★★	n/a	n/a
Distribution (findability)	★	★★	★★★
Using phone functions (camera, location etc.)	★★★	n/a	n/a
Management			
Ease of updating content	★	★★	★★★
Tracking conversions and web metrics	★	★★	★★★
Optimized for search engines	★	★★	★★★
Development			
Time to develop	★	★★★	★★
Cost to develop	★	★★★	★★
Multi-platform adaptability	★	★★	★★★
Third-party approval process	★	n/a	n/a

★★★ Best option ★★ Second best option ★ Third best option

Chart summarizing the advantages and disadvantages of apps, responsive design, and other types of mobile websites
Photo credit: http://mcmvanbree.com/dutchperspective/why-performing-arts-organizations-are-not-app-ropriate

justify the investment to staff, the board of directors, and other stakeholders.

Van Bree supports responsive design as a powerful and more cost-effective alternative to apps for arts organizations. Namely, he praises its flexibility across devices and ease of tracking and metric analysis compared to apps and the other types of mobile websites. He concludes that a majority of the functions that arts organizations want in an app could be performed by a responsive design website. Currently, many apps created by arts organizations provide content that is already readily available on their websites.

Conclusions

While it would be ideal for organizations to have a presence in both the app and mobile website worlds, the reality is that most nonprofit arts institutions may not be able to focus their energy, time, and resources on both at once. Though it is instinctive to follow industry trends when it comes to technology, being easily enticed by those shifting trends should not happen at the expense of long-term functionality and engagement. This cautious viewpoint is supported by evidence that the app's popularity may be on the wane.

App: best for the purpose of furthering patron engagement and learning
Mobile website: ideal for making transactions and customer service easier

It is important for organizations to make the distinction between the transactional and engagement-focused aspects of their operations. Thus, the critical question to ponder before deciding to create an app is: Can this function be performed by a mobile website instead? Answering this question could be critical to reducing your organization's marketing or technology budget. By updating your website to one of the three types outlined in this paper, your organization may be able to provide what your patrons want from your mobile tech offerings without the added expense of app development. Nonetheless, as organizations such as the Melbourne Symphony Orchestra have proven, mobile apps still offer a valuable channel for engaging and educating arts patrons.

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