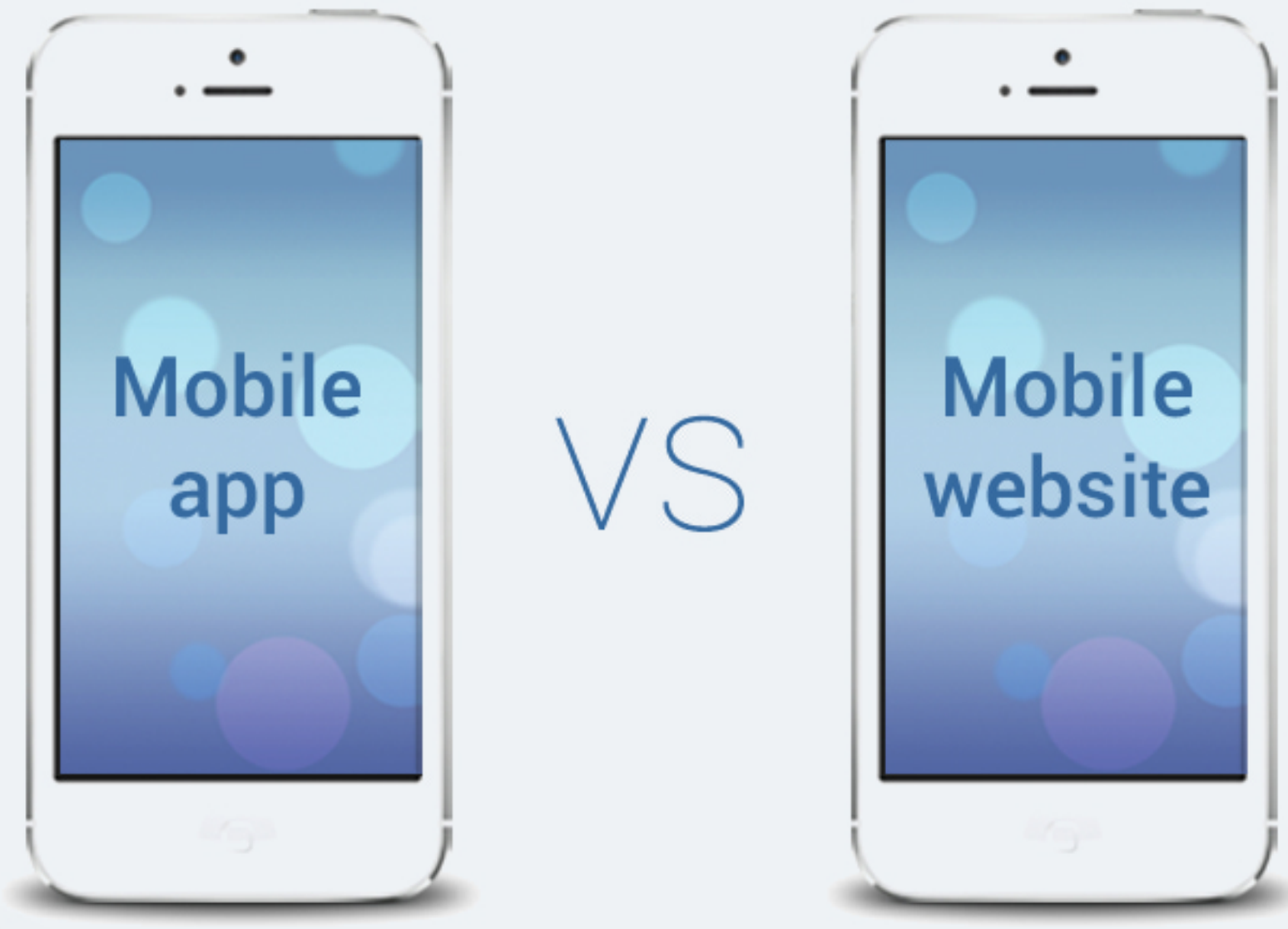
WHITE PAPER ON

MOBILE WEB APPS VS. **MOBILE NATIVE APPS : WHY IS THE** DISTINCTION SO IMPORTANT?



dci
Dot Com Infoway

Learn more at http://www.dotcominfoway.com

INTRODUCTION

With increased focus on mobile apps these days, many are studying the distinction between web apps and native mobile apps as they move towards the mobile web. The increase in mobile application usage is skyrocketing, with little chance of slowing down as the market landscape continues to become mobile dominant. Because of that, companies working on exposing their brand in the mobile space are approaching a web-centric strategy, a native-mobile strategy, or both. The purpose of this paper is to look at precisely the differences between the two-- as well as analyze which strategy is most successful for a particular business.

WHAT IS A WEB APP AS OPPOSED TO A NATIVE APP?

When iOS, Android, and other mobile platforms created their respective development environments, each development language was platform-centric, designed to take advantage of the features of a particular mobile platform (and at least in iOS's case, the hardware built specifically for that platform). This meant in many cases that developers had to take a "compartmentalized" approach that varied somewhat from platform to platform (in the early days the mobile web could see different companies utilize different approaches for platform-specific apps, often finding that features would be missing from one version of a particular app that were found in another one.

One solution to the problem of this compartmentalization came with the rise of responsive design on the web: to solve the problem of a lack of native depth on smart devices viewing websites designed for a desktop platform such as Windows or Linux, developers applied a "responsive grid" system that would make it easier to create websites that were functional and consistent across both smart devices and desktop systems. Because of this, many apps (and this is still possible to do on major platforms) were in fact websites using a wrapper system: the wrapper would fetch content from the responsive website and display it internally. While this was far from a perfect solution, it-- for the most part-- provided the mobile user with a consistent, if limited experience overall.
The power of web apps, however, was naturally limited by what the host device could do, and thus a bare-minimum approach had to be adopted in order to create a consistent experience. As many smartphones are now more advanced "under the hood" than many desktop systems, this would eventually become an unworkable solution. Thankfully, as more native cross-platform solutions for mobile devices take shape and the technology gap between mobile platforms is virtually non-existent, a new age of mobile app design has taken shape, which takes advantage of the unique features and abilities that mobile apps provide.

New mobile apps are in many ways closer to actual programs on desktops than they are websites, regardless of how much memory they use in the cloud or on the device. Apps no longer "display" information; from complex games to accounting to full programming environments, native mobile apps are now more powerful than they have ever been, and this is undoubtedly the direction of the future.

THE ADVANTAGES OF MOBILE NATIVE APPS

The biggest and most obvious advantage to designing a mobile native app is familiarity: native apps are designed for the system and can take advantage of an environment more effectively.

There are a number of advantages to designing mobile native apps, but the first and most important is that the experience of a mobile app is intensely more personal than that of a desktop system. While it is undoubted that many love their desktops, the design of the desktop interface (with the exception of recent moves in this direction by Microsoft's Windows operating system) is built around storage and retrieval, whereas mobile design is based almost entirely around personal preferences.

Without getting into a turgid discussion of design elements which personalize a site, the simple reality is that the mobile native app experience is and will likely remain a personal experience. The desktop web remains built around the idea of accessing "the web" as a primary component, an online destination ultimately a secondary concern. By contrast, a mobile experience can be designed around the direct experience of a user with a native mobile app, and in fact is often incorporated into its design principles: its primary focus is on the interaction between the user and the user interface. This direct connection makes a very big difference; while most websites which require user logins have some level of personalization, the native app, once authenticated, can act as a direct conduit to the user's wishes.

A good example of this can be found-- to use an ubiquitous example-- with Spotify. Largely known as a mobile service, there is a web and desktop platform. But both of these experiences require intermediary steps unknown in the mobile universe. Going to the browser, search for or going to a bookmark, and then connecting are a far cry from looking at a button and "turning on your online radio". The nature of the mobile authentication process makes it far easier for a user to get connected to a favorite app-- meaning that engagement on a well-used app will make it that much higher a priority to the user. The mobile native developer has a real advantage in an environment that is user-centric and a platform designed with unique, uniform multimedia abilities.

WHEN MOBILE WEB APPS ARE USEFUL

Successful mobile native apps, therefore, are the pinnacle of mobile achievement; a "holy grail" if you will for the app developer. No matter what the monetization strategy in use, engaged users are lifeblood of successful app development. For example, a restaurant would much rather have an app on a user's phone than have a generic web app which looks like the website, or a website itself. With a sufficiently simple login and authentication process, that user can contact a restaurant directly (on a phone app), make an order, and much more. The risk of potentially losing a customer through advertising on other platforms is higher. Because of this, many businesses have native apps that they use to retain their customer bases, even using them for promotions.

Because of the unique nature of the relationship between mobile native apps and their users, however, the cost and amount of time spent in developing a proper native app can make it cost-inefficient to design for some businesses. While almost any niche business can create a winning app, few businesses can or know how-- leading to inefficient web app development. A plumbing company, for example, isn't called all that often to warrant the space on a mobile app (they're usually called for emergencies) and simply doesn't always have much with which a real killer app can be developed-- because only a small share of users genuinely focus on their smartphones for home maintenance. Because of this, however, there is still an opening for a mobile web application which "packages" the website for easy contact and location in the app store if that is the first place a customer looks.

Where a mobile-first design can become useful in the future is with the advent of the smart home, as more and more of our home maintenance systems become tied to the web. At that point, it would be a smart idea to begin integrating a plumbing app with a smart home app through deep linking for direct contact with a client. Smart home installers would then do well to know that their affiliate maintenance companies have a direct connection to their consumers, and could even monetize deep links by ratio of home visits.

Another advantage of using a mobile web app is consistency for clients with a large desktop base of users. Wrapping the web app for mobile in this case makes the mobile app an extension of the web platform for their users. This is particularly common for online systems with an involved server-side back-end which would benefit less in the short term from developing truly native applications.

By contrast, most sites today that are still using "wrapper" systems are finding themselves increasingly outdated. There is no going back to the past, and it is far more likely that the best way to design an app will be through native mobile platforms (the two largest, iOS and Android, make up over 90% of the market) and desktop usage will slowly conform to mobile platform standards and die out.

MOVING TOWARDS A MOBILE WEB: THE END OF THE DESKTOP AS WE KNOW IT

If the last paragraph seemed impossible, there are two trends that contribute directly to this position: the decrease year-over-year in desktop market share and the rise of desktop systems which make use of what were traditionally mobile platforms. Because desktops are now overtaken by mobile in search and being replaced with everything from hybrid tablet-notebook systems and desktop systems running under Android, the traditional desktop market is slowly reducing its visibility. As desktops once served as smaller substitutes for mainframes, mobile platforms are becoming more personal than personal computers.

Mobile platforms are now overtaking traditional desktop platforms in search volume and much more. How a company chooses to approach that mobile base-- whether through wrapping their desktop presence for mobile or creating a mobile-centric system-- must be viewed in the lens of defining how they want to relate to their client base over the long-term.

ABOUT DOT COM INFOWAY

Dot Com Infoway (DCI) is a premier IT company located in India providing offshore IT outsourcing solutions to businesses across the globe. DCI provides enterprise solutions that include software solutions, web solutions, mobile application solutions, Internet marketing and a whole gamut of IT solutions and products to clients. Leveraging the innate offshore value advantage of our development centers in India, we provide customized, scalable and cost effective solutions to businesses.

Banking on our rich and versatile industry intelligence and experience, we provide solutions that streamline business processes and galvanize enterprise productivity. With well-structured development methodologies, Global Delivery Model and rigid QA systems, we deliver business-critical solutions on-time, within budgets and within desired levels of performance

For more information, please contact ask@dotcominfoway.com

Dot Com Infoway

Learn more at http://www.dotcominfoway.com