It is important to distinguish which type of solution best suits the needs of the company. There are three types of mobile applications: native apps, web apps, and hybrid solutions.

Native apps are programmed using Objective C on the iPhone or using Java on Android devices.

- Native apps make use of all the phone's features, such as the mobile phone camera, geolocation, and the user's address book.
- Native apps do not need to be connected to the internet to be used.
- A native app is specific to the mobile handset it is run on, since it uses the features of that specific handset.
- Native apps can be distributed on the phone's marketplace (e.g. Apple Store for iPhone or Ovi store for Nokia handsets).

Web apps run in the phone's browser.

- This means the app works across all devices, and ensures cross-platform compatibility.
- The same base code can be used to support all devices, including iPhone and Android.
- However, web apps do not make use of the phone's other features, such as the camera or geolocation.
- Web apps cannot be deployed to the phone's marketplace.

Hybrid mobile apps are a mix between these two types of mobile applications.

- Using a development framework, companies can develop cross-platform applications that use web technologies (such as HTML, JavaScript and CSS), while still accessing the phone's features.
- A hybrid app is a native app with embedded HTML.
- Selected portions of the app are written using web technologies.
- The web portions can be downloaded from the web, or packaged within the app.
- This option allows companies to reap all the benefits of native apps while ensuring longevity associated with well-established web technologies.
- The Facebook app is an example of a hybrid app; it is downloaded from the app store and has all the features of a native app, but requires updates from the web to function.

Advantages and disadvantages of native mobile applications

There is evidence to show that smartphone users are more affluent and have a higher disposable income. According to a study about smartphone users from Ask.com and Harris Interactive, the most affluent respondents in the survey were most likely to say they had downloaded an app.

Native apps also have better functionality. Because they use the features of the smartphones, such as the camera phone, the user's address book, geolocation and augmented reality, companies can offer a richer, more immersive experience.

Native apps do not need necessarily to be connected to the internet to be used. Since they make use of the phone's functionality, **they can work in offline mode** when there is no internet connection. However, some apps may require an internet connection, depending on functionality and available data.

In terms of distribution, native apps get good visibility with consumers because they are distributed through the phone manufacturer's app store. This also means that they have an in-built revenue model, since consumers may have to pay to download the app.

The decision to create an application or not depends on the nature of the company and its products and services. If there are a significant proportion of customers using smartphones and mobile apps, then there is a case for investing in app development.

It is also important to **consider which platform customers are mostly using**. To maximise the number of consumers reached through an application, it is important to create an app for different mobile handsets, to ensure compatibility with the widest range of handsets.

The disadvantage of native mobile apps is that it can restrict the number of users that can be reached, if the app is not compatible with all handsets. It also requires additional development time as different apps need to be developed for each type of platform.

Third-party approval can also be another barrier. As the app will be distributed through the phone's store, companies need to wait for approval before the app is released, and this can be a time-consuming process. In addition, if the app is not approved, there is usually little, if any feedback on why it was rejected.

Advantages of mobile web applications

The main advantage of a web app is that it is compatible across all platforms and devices. As the application runs in the browser, it is independent of the handset it is run on. This means that the web app has effectively more reach, and that only one app has to be designed for several handsets.

Web apps make use of existing web technologies, such as Java and CSS, which means the technical barriers to entry are low. Developers can use their existing skills to develop a web app, whereas native apps may require additional training given that the technologies are newer.

Companies can also make use of mobile search to allow their consumers to find the app. Native apps need to be downloaded in advance to be used, whereas web apps can be found and used simply through a search on the browser.

Because the app is not distributed through the phone's store, no third-party approval is required before release. The site can be updated in real-time and changed without requiring sign-off by the mobile provider.

There is also some evidence to suggest that browser-based mobile applications will grow faster than the app market, which may bode well for a long-term strategy.

Which is the right approach?

To cover all bases, it is important to recognise that consumers are not using these channels in a mutually exclusive manner. They are using both native applications and browser-based apps, so the best strategy is to develop both types.

The decision to invest in an app or in a mobile website depends on the company's target audience and the functionality of the app. Companies also need to consider time, budget and resources to develop each solution.

Native, web or hybrid mobile app development?

Source: Worklight

An inherent trade-off

Source: Worklight

Case study: The Financial Times vs. Apple

Another good example of a hybrid mobile app is the Financial Times mobile web application. Many publishers are unhappy that Apple plans to retain 30% of the revenue from the subscriptions sold on iTunes and to keep customer data from the sales.

To get around this, The Financial Times designed a new app that includes much of the functionality of an iPhone or iPad app, but can be deployed within the browser. The web app uses the web technology standard, HTML5, which allows developers to create a single application that can be run on a variety of devices, while also making use of the benefits of native mobile apps.

Although the Financial Times uses both native mobile apps and web apps, the newspaper is encouraging its users to migrate to the new web app to circumvent Apple's app store terms and conditions. Mobile customers currently make up 15% of the FT's digital subscriber growth, and a large proportion of them are iPhone or iPad users.

While this is a risky strategy, publishers can collect 100% of their revenue via a web app, while 30% of the revenue generated through the native would be collected by Apple.

A key advantage of native apps is that they can be given a high profile within the app store. However, in the case of the FT, their brand is strong enough that users will remember to visit the website, and the FT may not need the extra exposure the app store provides. Employing a multichannel approach also means that the FT is not reliant on a single channel.