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Everything that can be Mobile WILL BE

Top Ten Things to consider while choosing your mobile solutions

The power of mobile usability has brought success to *AppStores* of various mobile device manufacturers. Now, it is time to focus on the enterprise mobility imperative in the changing landscape of mobile device evolution.

Early enterprise mobile solutions were by and large, custom applications developed for mobile devices that suited a section of mobile users in an enterprise with specific need(s), with little or no ability to enhance or run them on newer devices, without incurring the cost of a major re-write of those applications.

The evolution of feature-rich mobile devices has accelerated the rapid adoption of newer devices by enterprise-users, often rendering the archaic non-portable mobile solutions useless, stressing the need for the development of an enterprise-wide strategy for mobile application development/deployment.

Enumerated below are the top 10 criteria as per several recent studies that every enterprise should consider today, in order to ensure successful deployment of their enterprise-wide mobile solutions.

1. Point Solution Vs. Platform-based:
Point solutions are typical mobile-extensions provided by traditional back-office software vendors that enable use of their back-end application(s) on mobile devices. Usually, these solutions provide a quick path to mobile to enable a back-end application of a vendor while offering no flexibility to aggregate several back-office applications, which may be required for meaningful transactions in the field. Field-users often have the need to interact with more than one enterprise-back-end-application/data. So, there is a greater need for a platform-based solution, which besides offering the ability to aggregate and enhance several back-office applications/data for mobile-users, provides the flexibility to make field application(s) independent of the back-office software applications. Thus, giving enterprise the ability to control the features and evolution of field-applications based solely on its needs, and not limited by any back-office application.

2. Multi-platform availability:
The need for device-features may somewhat vary within the user-groups of an enterprise. E.g. some users may need rugged devices with sensory features like bar-codes scanner or RFID, while others may prefer their devices to be small and sleek, while both having the need to access similar application/functionality. Given the rapid evolution of feature-rich mobile devices today, it is conceivable that having the ability to run application on many types of mobile devices continues to be a requirement for meaningful adoption of enterprise applications in the field.

3. Offline/Online Operation:
One of the biggest lessons learnt from field-deployment of early enterprise solutions has been that the solutions that depended on ***always-on connectivity*** were often rendered useless, due to lack of network connectivity at the points of use. In spite of recent advances in the WWAN/WLAN coverage offered by various wireless network operators, there will always be gaps in coverage at points of use for foreseeable future. Thus a given mobile-application-platform must architecturally provide the ability to design/develop applications that can still function in both offline and online modes with robust synchronization support with disparate back-end data-sources.

4. Portable peripheral access:
Most newer mobile devices pack functionality like built-in Camera, GPS, Media Player, Barcode/RFID scanner etc. that can greatly enhance the quality of data captured in the field. How-

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The ability to run an application on many types of mobile devices is a requirement for meaningful adoption of enterprise applications in the field

ever, leveraging these features on disparate devices using conventional device-specific API from within an application often makes them non-portable across various popular mobile devices. A good enterprise-mobile-application-platform should shield application developers from such nuances, offering them portable way to leverage these rich features from within their mobile applications.

5. Network Portability:
Mobile users today move in and out of their offices, often roaming from an enterprise WLAN environment to WWAN outside the four-walls of the enterprise. The platform therefore must accommodate such frequent switching of networks by users seamlessly.

6. Security & Encryption:
Providing data/application access outside the four-walls of an enterprise has always been a cause for concern for people implementing enterprise-security. Conventional user-id/password mechanism does not adequately establish users' identity when they are mobile. Therefore, enterprises should seek to augment that method with a platform that supports two-or-more factors of authentication (which would be the case, if the employee were to gain physical-access to the systems within the four-walls of the enterprise) such as security certificates/tokens on the device, biometric verification etc. Further, the platform must also keep any temporary data stored on the device encrypted in accordance with enterprise policies for such data storage with an ability to lock and/or destroy should the device be lost/stolen.

7. Usability:
The success of any deployed mobile solution largely depends on how-usable it is. Users-on-the-move often need hands-free access, while driving or using while performing other job-functions in the field. Thus, a good enterprise mobile-platform today must provide for easy incorporation of speech and multimodal interaction in to mobile applications seamlessly, without compromising any portability needs.

8. Open Data Format:
In order to achieve true scalability and inter-operability, the platform must enable collection and maintenance of all data captured using open-data-formats, allowing applications to share data across multiple back-end systems. Open-data-format allows enterprises to choose from a range of data-adaptors/transformations as their needs for enterprise-integration evolve over time.

9. Device & Application Management:
Having the ability to remotely update and manage applications in the field, without requiring users to bring-in the devices to back-office greatly enhances the RoI (return on investment) for any mobile solution. Therefore, choosing development-platform(s) that facilitates remotely managing applications on disparate devices in the field using open-standards would protect the investment on the platform across device/application upgrade-cycles.

10. Performance Metrics Data Collection:
One way to achieve greater adoption of the mobile applications is to constantly monitor mobile accesses to the applications. The pattern of usage by users and device-classes provides invaluable help in improving user-experience. The mobile application platform must therefore, support collection of various attributes of data/information accesses from the field.

In summary, choosing open-standards based platform that would enable development of highly usable multimodal applications, which can be easily deployed and managed on a variety of mobile devices and networks would ensure great return-on-investment and reduce total-cost-of-ownership.