Amazing Mobile Applications for IBM i

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Abstract

Mobile devices and apps have revolutionized the way we live and work. For many of us smartphones and tablets have become essential tools for our personal and work activities, providing unprecedented access to our family members, friends, colleagues and customers. In addition to communicating more easily, many of the applications that we have been using on laptop and desktop PCs are now available to us in a mobile form factor.

Providing IBM i application developers the ability to leverage these devices in the right way will deliver significant business benefits – the most prominent being 'anywhere, anytime' access for your end users. In this white paper we will explore how to not only take advantage of this revolution, but how to do it efficiently, optimally and deliver amazing results.

The mobile revolution

The last few years have seen an undisputed revolution in worldwide adoption of mobile phone technology. At the end of 2011, there were 6 billion mobile subscriptions. Whilst many of these devices are considered 'feature' phones, with some functions like email and basic web browsing capabilities, an increasing percentage are smartphones. Smartphones & mobile devices of today have more capabilities, processing power and memory than the desktop PCs of just a few years ago.

Worldwide smartphone sales to end-users soared to 149 million units in the fourth quarter of 2011. Apple had an exceptional fourth quarter, selling 35.5 million units, and became the world's largest smartphone vendor:
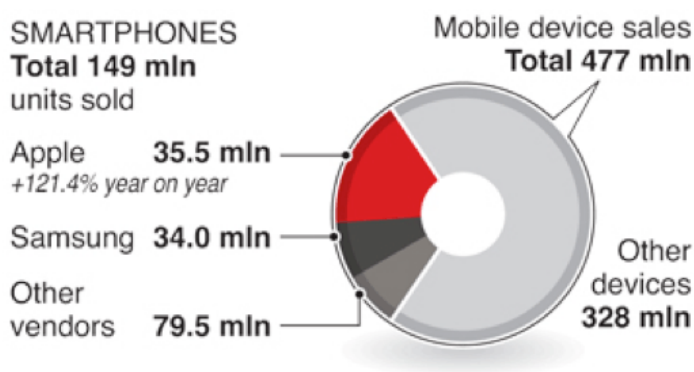
The battle for dominance between hardware manufacturers, and more importantly mobile Operating System market share, is extremely competitive and difficult to predict. Here are the market share stats that were reported at the end of 2011:
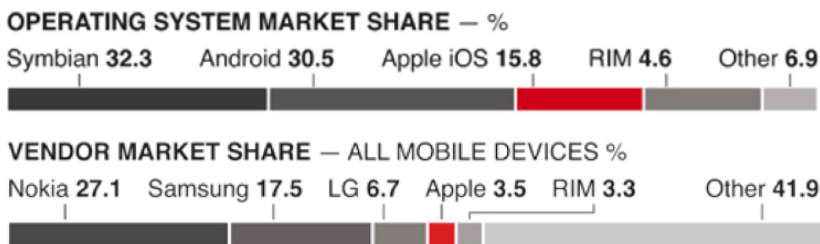
Tablet computers, led by Apple's iPad have started to make impact not only in the consumer marketplace, but also increasingly in corporate environments. Just look at the rapid adoption growth that has taken place, and predicted growth for the coming year (millions of units):
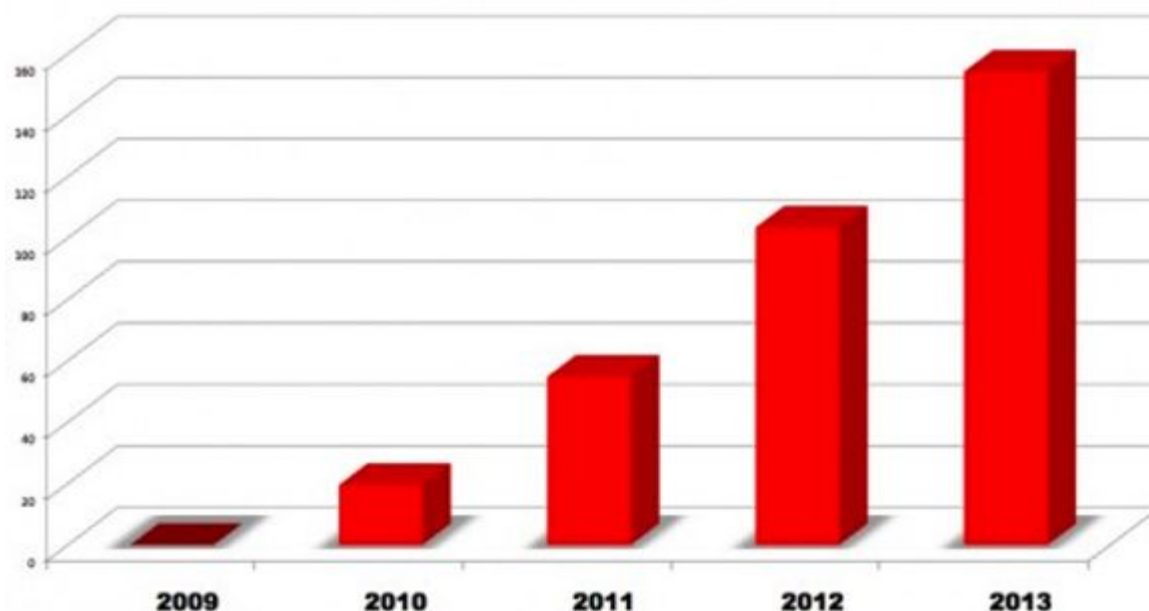
Traditional applications running on the IBM i are perfect vehicles for leveraging these handheld devices. You have the applications and your users have the mobile devices. Taking advantage of this will make your applications accessible wherever and whenever your users need them.

Why is this important? Here are 4 of the key benefits of leveraging mobile devices:

1. Anytime, anywhere access for your users
2. Improved efficiencies
3. Greater customer satisfaction
4. Better business results

Transitioning from single to multi-screen & device delivery

As we know, traditionally the IBM i has relied on the 5250 interface - which is becoming more inefficient as a primary interface channel - to deliver its applications. It's greatest strength, the ability for end users to perform rapid data entry, has been eroded by the different requirements of knowledge workers and remote users.

For example, consider a typical IBM i system:
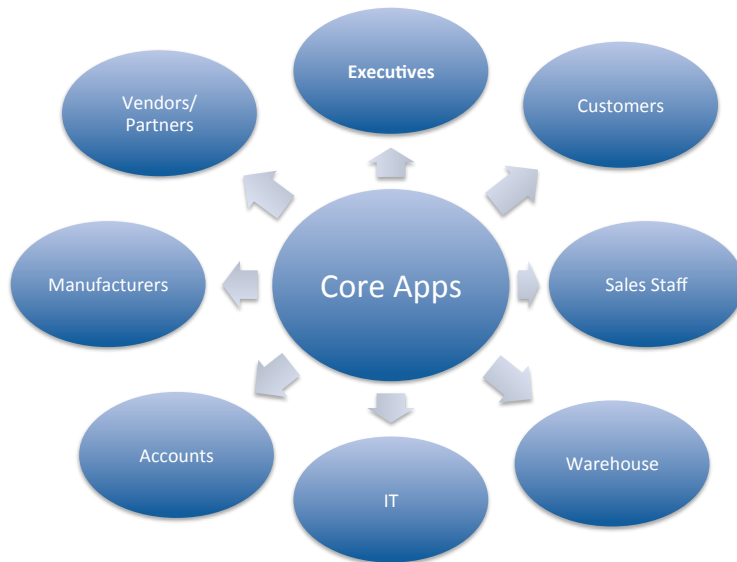
These applications and functions are typically accessed like this:

How do we go about making them accessible like this?:

Simplicity – Our most powerful weapon!

When IT managers and developers are asked why they haven't deployed to mobile devices, the push back is that it is just too complex, too difficult to do with the budget and timeframe given – especially when security and integrity are so important in IBM i business applications.

If approached incorrectly, this is in fact true. The idea that your existing applications must be re-developed, requiring learning new development languages coupled with the big delta between 5250 on a large screen and a small touch-based interface.

We must find a way to do this as simply and efficiently as possible. There are 2 key factors that can make a significant difference to simplifying your approach:

1. Reuse your existing business logic. It is often thought that if your applications are developed in RPG or COBOL that they must be re-developed in another language that can deliver a mobile optimized interface. This is not true, there are tools and approaches available that allow you to separate business logic from the user interface layer.
2. Take a complete/holistic approach to multi-screen development and deployment. We often see IBM i developers tackle 5250, windows PC, web & mobile development as completely separate projects, using different tools and approaches for each interface. This is a very inefficient approach and can be solved if taking a centralized and complete view of the architecture.

Integrating with the device

Whilst enabling your IBM i applications so they are available to mobile users is a huge step forward, it is just the tip of the iceberg when it comes to exploiting the potential of what can be achieved. Smartphones and tablets have many functions and features that can be leveraged to provide enhanced integration and automation of tasks. Here are some examples:

-   VPN/SSL – For secure access to the IBM i server
-   The Internet – For accessing associated links & web content
-   Email – For automating communication with co-workers, prospects and customers
-   GPS/Compass/Geo-location – For mapping and navigation assistance

- Video/Images – For multi-media support. Being able to take pictures and video on location and upload can be very useful in a variety of use-cases
- Bar-code scanning – For supply-chain integration

There are even more creative and useful functions that can be leveraged. By understanding the business requirements and supporting them using these types of features can really improve efficiencies.

looksoftware support for 'anywhere, anytime, any channel ' access

looksoftware provides a single integrated solution for extending IBM i application access across a variety of delivery methods, including support for 'anywhere, anytime, any channel' access.

Reuse

IBM i applications have typically matured over many years of continual use and enhancement. They are robust, highly functional business solutions that don't need to be rebuilt to support modern delivery methods. Providing 'Anywhere, anytime, any channel' support does not require changes to the applications. The same underlying business logic can be used to support information delivery through multiple delivery channels. Where desired, the dynamically generated UIs may be customized to suit channel characteristics, such as the smaller PDA devices. Similarly, older versions of browsers are supported ensuring reliable global access from the diverse range of devices found in internet cafés, airports and coffee lounges.

Non-intrusive modernization means these new capabilities can be delivered without changing any of the underlying application code or structure, reducing time to market, risk and costs.

Multi-channel delivery

Diverse audiences demand flexible user interface support. Knowledge workers and users of heavy transaction-based applications need the responsive, productive experiences offered by smart or rich clients. Global partners and customers may be better suited to zero-deployment, pure web-based interfaces, while a sales force may need to access business applications via phones, PDAs and other mobile devices. The same tool and a single repository to support multiple web-based delivery channels can be used. For those that demand it, emulation access is also available. The single toolset including drag and drop designer, dynamic rules engine and a lightweight development capability provide complete support for multi-channel delivery.

Easy customization

looksoftware's integrated development environment (IDE) makes customization of screen layout easy. Simple drag-and-drop interface and simple modification of properties make design changes a snap, and global rules save significant time too. Coupled with standards such as HTML, RPG and JavaScript mean that integration is quick and easy also.

Summary

You can do this! The underlying technologies and devices are already mature and there are a variety of solutions available to make the process much easier than you think. What's important to remember is that 'Anywhere, Anytime' is just another delivery channel, so consider solutions that can support all your delivery channels including smart, thin, mobile clients and web services that build on what your existing IT applications and infrastructure already deliver.

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