



SITEK Inc. INSIGHT – App Development – Where Is It Taking Us?

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As application development continues to evolve, outdated and older development methods will not be adequate to address the needs of and let alone the shifting and future technology landscape of the Modern Business Enterprise. Let's define what is meant by "Application Development for the Modern Business Enterprise."

Simply, an enterprise application is a "Big" business application. In today's corporate environment, these applications can be very complex, must be scalable, component-based and in some cases mission critical. In the past, these applications have been deployed on PC platforms across large corporate networks encompassing intranet or internet connectivity. Technology now includes an array of PC's, tablets and smartphones. Now the enterprise application becomes more complex as they are mostly data-centric therefore, requiring them to be user-friendly, employ stringent security requirements, etc.

ENTERPRISE APPLICATIONS ARE NOW HIGHLY COMPLEX SYSTEMS!

Specifically, application development as we know it today is experiencing and going through some significant changes. In the very near future, 2020 those leading business organizations who keep up with this changing landscape will have an advantage over those organizations that do not!

Question: In the coming year and beyond where is application development for the enterprise headed?

Leading some of the change is the notion that development tactics, in general, are changing. Meaning, older styles of development cannot and will not deliver results that the modern business enterprise requires (i.e., the JVM is not just for Java anymore). Let's take a quick history tour (spanning the last 20+ years). Many scripting languages like Python or JavaScript have evolved from handling mid-scale projects to full enterprise-wide rich script applications. Now they are the foundation for some very creative, complex and large-scale work. Programmers who didn't like JavaScript then created CoffeeScript and like programs to serve as a "preprocessor" that lets them code, without time-consuming and required punctuation. Now there are dozens of variations that are capable of "pre-slicing /pre-dicing" the syntax in a much different way. Accordingly, programmers who loved dynamic typing created Groovy, to serve as a simpler, extensible version of Java.

HTML5: What about it? Concerning development, the mobile App landscape is changing at an accelerated rate. To expand development options, programmers are incorporating HTML5 and JavaScript as development options, allowing for a "write once" advantage. However, hybrid App development using HTML5 with JavaScript isn't the only alternative to native App development. Other cross-development platforms include Xamarin which allows writing the App in C# with the ability to compile the App to native code for multi-platform integration including iOS, Android, and Windows.

The debate continues, regarding whether to develop enterprise Apps using HTML5, native or hybrid approaches. Currently, there is no real clear end or std. in sight. However, one could agree that in some situations, one framework might be better.

Modern Business Enterprise – Tactics

Programming is not enough...Now for some talk on tactics. A significant trend in the enterprise that will continue to take hold is the increased adoption rate of “Hybrid” application development. Let’s face it mobile usage is growing and as Millennials influence in the enterprise continues to take root and as “Gen-Y” follows the “Hybrid App” has the potential to play an even greater role in the modern business enterprise.

A recent study indicated: “...The mobile usage of internet has increased quickly, from 40% in 2012 to 68% in 2016, and it is forecasted to reach 79% by 2018...”

Most can agree that the demand for new Enterprise Apps will continue to escalate and the focus must be to deliver actionable and meaningful output (internally/externally). IT must take the lead in managing this increasing need for the use and analysis of data required across the enterprise (i.e., sales, marketing, production, supply chain, engineering, CRM, etc.). IT and Development must keep in mind that not all applications will be created equal as desperate business and LOB’s could decide to bypass IT/Development and utilize cloud sourced applications in effect developing an internal organizational “Shadow IT” type of development effort (could be a topic for another SITEK INSIGHT – Stay tuned).

IT and Development in the enterprise must start to plan in forging a concrete organizational plan addressing technology and related software applications both strengths and drawbacks. Additionally, the focus of the enterprise must be to evaluate and question specific areas of impact, implications and future longevity. Please note:

- **Innovate** – Legacy is old news, and new innovative approaches to App development for the enterprise will continue to evolve and prevail. However, IT must leverage new skill sets and attract developers who are fluent in a host of languages, capabilities and the ability to plan.
- **DevOps will Continue to Evolve** – As businesses become more integrated and multifaceted the demand to move larger amounts of data will continue, the necessity for DevOps is imperative. Therefore, IT must plan to ensure that the integration of Development and Operations is seamless so that key strategic business requirements and hardware, software, and systems are easily incorporated and structured across platforms with the goal of delivering value to the enterprise.
- **Design for a Hybrid Future** – Developers must design Apps and systems with a hybrid future in mind. Planning must include making sure that future integration and interoperability are a priority while securing the enterprise at the same time.
- **Secure the Enterprise** – With the emergence of new technology, distributed systems, mobile, cloud, implementation of various scripting languages and use of cross-development platforms, etc. the enterprise becomes extremely vulnerable regarding the “attack surface” that could be potentially exposed. IT must implement new protocols for security.
- **Responsive Web Design (RWD) is Here** – As technologies evolve and web design practices mature RWD will allow and provide for a more customized viewing experience by end-users when using different platforms (e.g., iOS/Android - phone, tablets, laptops, etc.). The modern business enterprise must now understand the dynamics, impact, and transition (points of pain) from simply “Web” (one platform) to “Everything-web” (multiple platforms). Therefore, do not think of “web design” in a singular platform tense.

IT must also develop, integrate and manage new enterprise protocols, design capabilities, policies and use practices in more creative and dynamic ways that are designed to support innovation in this new technology landscape.

Is the Modern Business Enterprise Ready?

Gartner states, “By the end of 2017, market demand for mobile app development services will grow at least five times faster than internal IT organizations’ capacity to deliver them.” However, another interesting statistic from a study of “...1,000 full-time and part-time employees reveals that 43% of smartphone users and 41% of tablet users are not impressed with the corporate mobile apps they’re expected to use...” (Source: B2C Business 2 Community).

As these trends continue to take shape the enterprise will face many challenges. They include:

- Every new web application that is developed must also “Go Mobile” and be available on all platforms
- Businesses must think “digitally” and “integration” must be seamless to the organization and end-user
- Applications must focus on design, ability to move actionable data, be dynamic and allow for flexibility
- IT and development must coordinate the use and programming practices as not all languages are equal
- The enterprise will have to evaluate the issue of organizational “skills gap” as it relates to development
- Assess development cost and options (i.e., Native is expensive, time consuming but still a std. approach)

At SITEK we understand “everything” language, App development and “Web” its application(s), and how to best leverage and maximize capabilities in **Delivering Value**. It is important for the enterprise to seek competent guidance (internally and externally) in managing this ever changing and new landscape.

SITEK Can:

- ✓ **Deliver capable** application/solution support services whether remote or on-site
- ✓ **Deliver proficient** web application development, programming and coding expertise and services
- ✓ **Deliver proven** modern, scalable and cost-effective software solutions for a wide range of businesses
- ✓ **Deliver expertise and consulting services** that will best chart your total application strategy and initiatives
- ✓ **Deliver custom and creative** application development services designed to deliver competitive advantage
- ✓ **Deliver cost-effective** development solutions designed to meet your future business needs / requirements

Please feel free to contact **SITEK** so that we can discuss your business needs, priorities and offer solutions that are designed for success: www.siteksolutions.com.

About SITEK Inc., founded in 2006 and headquartered in Lexington, Kentucky, SITEK provides technology-driven solutions for clients large and small. SITEK has delivered solutions for global clients in diverse industries including; Healthcare, Manufacturing, Utilities, Insurance, Government and Education. SITEK also provides innovative solutions to technology staffing needs. SITEK has the experience to place qualified candidates in the U.S. and internationally, delivering the right resources for any company.

SITEK – Core Competencies

- System Architecture and Design
- Application Development
- Project Management
- Document Management
(SharePoint/ImageNow)
- Testing and Quality Assurance
- Placement and Recruiting

SITEK – Key Differentiators

- Proven track record
- A decade of customer satisfaction
- Complete software life cycle experience
- Experienced in diverse technologies
- 100% Minority owned small business
- Located centrally with global reach

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