IDC MarketScape: Worldwide Enterprise Mobile Application Development Platform 2016 Vendor Assessment — B2E Apps Alignment

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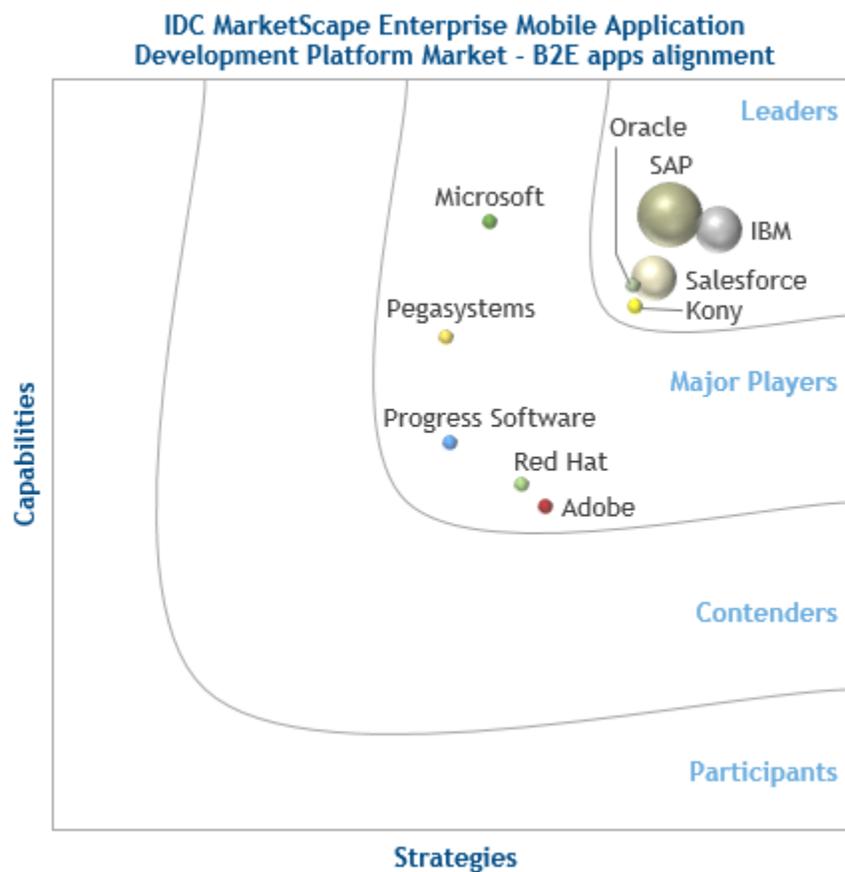**THIS IDC MARKETSCAPE EXCERPT FEATURES: IBM**

IDC MARKETSCAPE FIGURE

FIGURE 1

IDC MarketScape Worldwide Enterprise Mobile Application Development Platform Vendor Assessment — B2E Apps Alignment

Source: IDC, 2016

Please see the Appendix for detailed methodology, market definition, and scoring criteria.

IN THIS EXCERPT

The content for this excerpt was taken directly from DC MarketScape: Worldwide Enterprise Mobile Application Development Platform 2016 Vendor Assessment – B2E Apps Alignment (Doc # US41916016). All or parts of the following sections are included in this excerpt: IDC Opinion, IDC MarketScape Vendor Inclusion Criteria, Essential Guidance, Vendor Summary Profile, Appendix and Learn More. Also included is Figure 1.

IDC OPINION

Mobile app development platforms are critical for businesses that are mobilizing their workforce, external marketing, customer interactions, operations, and business processes. The ability to create custom apps targeted for specific end users and use cases is a powerful capability and allows organizations to increase operational scale and efficiency while reducing costs. Mobile app development platform technology also allows businesses to put powerful and innovative services, such as location, intelligence, and analytics, directly into their mobile business processes and workflows via custom mobile app integrations. Mobile app development platforms are used for both business-to-consumer (B2C) and business-to-employee (B2E) scenarios. From the B2E perspective, a critical function of the mobile app development platform is the creation of powerful, productivity-driving apps for a company's own internal employees, customized to the business' unique operations, workflows, and operating parameters. To this end, mobile app development platform characteristics that are well aligned with businesses' B2E mobile app development needs include:

- **Optimized integration with the breadth of related mobile app deployment and management solutions that enterprises need to help ensure that employee apps are used successfully.** Achieving such optimized integration requires investment in mobile application management (MAM) and other such capabilities.

- **Breadth of front-end client-side mobile app development tools.** These tools help enterprises create mobile apps, including the ability to influence the road map of the development tools, the breadth of options to accommodate the wide range of developer technical expertise in-house and, most importantly, proven low-code tools that enable employees in the lines of business (LOBs) to actively participate in user experience prototyping without detracting from the security of the holistic mobile app being developed.

- **Proven expertise in understanding enterprise needs for back-office software, databases (DBs), and cloud services.** Well-entrenched enterprise software and services vendors bring with them a vision for scalable solutions that allow enterprises to leverage their prior investments as a deeply integrated jumping off point in mobile app creation.

IDC MARKETSCAPE VENDOR INCLUSION CRITERIA

This IDC MarketScape looks at enterprise-focused mobile app development platform vendors, with particular attention to each vendor's alignment with enterprises' business-to-employee mobile app development needs.

The criteria for inclusion of vendors in this IDC MarketScape analysis are as follows:

- Vendors must offer a mobile application development platform that has a balanced focus on both front-end client-side and back end-as-a-service capabilities. Mobile front-end client-side runtime is one of the requirements in addition to mobile back end-as-a-service capabilities.
- Vendors must be cross-platform focused.
- Vendors must have a customer base currently developing 40%+ of their applications to business users.
- Vendors must have annual revenue of $10+ million from enterprise mobile app development platform offerings.

In this study, the mobile app development platforms are reviewed as they were in general availability as of November 2016.

IDC estimated recognized software revenue totaling $10+ million for calendar year 2015. Note: IDC's assessment of vendor shares for enterprise mobile app development platforms will be published as an update to *Worldwide Enterprise Mobile Application Development Platform Market Shares, 2014: An Evolving Market* (IDC #US40704415, December 2015), accordingly.

In addition to the companies that met the criteria for 2016's study, there are a number of other companies that play in this space that may qualify for future IDC MarketScape documents. These companies include Amazon, AnyPresence, Appcelerator, Appery.io, Apple, Built.io, Catavolt, Google/Apigee, Mad Mobile, Kinvey, and Sencha.

ESSENTIAL BUYER GUIDANCE

The vendors in this study are all worthy of consideration by enterprises looking to develop mobile apps, with strong emphasis on developing mobile apps for employees' use. These apps are commonly referred to as B2E apps. Note that all of the vendors in this study have platforms that are suitable for the development of not only mobile B2E apps but also apps that are targeting consumers (B2C) and business partners (B2B). Each vendor has strengths and challenges in its platform's approach, lending to the development of B2E mobile apps in particular. Enterprise buyers should consider the following major areas to help them make a decision that best meets their B2E mobile app development needs:

- **Platforms that target the line-of-business developer in addition to the technical developer:** Synergy across mobile app platform capabilities is desirable. LOB developers need to build complex mobile app experiences using little or no code because of time pressures to improve collaboration internally between employees and improve operational efficiencies internally when it comes to accessing and manipulating enterprise databases, CRM software, and/or technical expertise constraints. On the other hand, the IT team must securely and tightly integrate the mobile app experience with these server-side capabilities that allow for data to be synched, pushed, analyzed, and more. The IT team must also manage and monitor the usage of the ongoing mobile apps for the organization.
- **Platforms that have priority and unique focus on integration with key enterprise back-office software and processes:** Mobile app development platforms that are born from expertise in leveraging scalable, secure, and flexible enterprise software and services will suit the immediate needs of the enterprise. Employee-facing mobile apps are a significant area of focus for today's enterprises. Mobilizing existing enterprise software and processes is even more of a priority to today's enterprises.

- **Platforms with a clear vision of their future evolution:** Proven ability to set and meet frequent platform updates that are aligned with management's vision helps ensure that an enterprise's selection in a mobile app development platform is the right one for the long run. Key areas to look for in a mobile app development platform are the vendor's commitment to serving major existing clients and the ability to efficiently build the platform road map and deliver on the platform road map by leveraging investments in services in the cloud.

VENDOR SUMMARY PROFILES

This section briefly explains IDC's key observations resulting in a vendor's position in the IDC MarketScape. While every vendor is evaluated against each of the criteria outlined in the Appendix, the description in this section provides a summary of each vendor's strengths and challenges.

IBM

IBM is an IDC MarketScape Leader in mobile app development platform worldwide for enterprises looking to develop business-to-employee mobile apps. IBM's offerings include IBM MobileFirst Foundation service on IBM Bluemix and IBM Mobile App Builder. IBM has breadth and depth of capabilities across its mobile app development offering that meets the core needs of enterprises looking to deploy scalable and secure mobile apps integrated with enterprise software and services. IBM's legacy in providing secure and scalable solutions to the enterprise is visible in how the company prioritizes integrations and even ownership of adjacent solutions that strongly align with the enterprise's needs for employee mobile app usage scenarios. Nowhere is this more evident in IBM's mobile app development platform offerings portfolio than in the company's capabilities and strategy for mobile security and application management. IBM has invested in a microservices approach to providing services in the cloud that are able to be used in mobile apps through its investments in IBM MobileFirst Foundation service on IBM Bluemix. With IBM's continued investment in the services in the cloud, mobile apps can benefit from the company's overarching investment in business logic advances, cognitive services, and analytics services.

Offering Overview

IBM's overarching approach to the company's mobile app development platform offering portfolio is one of the interoperability with the widest range of front-end client-side app development technologies. The IBM MobileFirst Foundation provides runtime client APIs usable in native, hybrid, and mobile web applications. These APIs have been integrated by IBM to work with common approaches to mobile app development on the front end, including Xcode, Android Studio, Visual Studio (VS), Ionic, and Xamarin. Open source Eclipse plug-ins for hybrid apps and server-side business logic in Java and JavaScript are also made available to enterprise developers as part of the IBM MobileFirst Foundation. IBM is essentially providing a common integrated development environment for enterprise mobile app developers, and native development tools are available through IBM's SDKs. On a deeper level, IBM is working with Apple to help ensure that enterprises are well guided in the Swift server-side language that Apple has developed for iOS and Linux users. This is a programming language that IBM has made available to developers through IBM Bluemix. It brings security advantages and app design. For the less technical or time-pressed developers, IBM offers low-code, no-code tools, such as vertical and horizontal iOS mobile app templates. IBM's investment in the company's back-end mobile app development approach is notable. IBM owns services in its cloud to which it has optimized integrations. For example, IBM MobileFirst Foundation services on IBM Bluemix offers enterprises access to operational analytics; intelligent services, including Watson cognitive services; and

predictive analytics as the enterprises build their mobile apps. IBM has invested in this microservices approach to providing services in the cloud that are able to be used in mobile apps. IBM's approach to the back end of mobile app development is one of the diversity of integrations on the back end.

The expectations of enterprises developing mobile apps for employees' use increasingly demand integrated solutions to help ensure business content is secure and apps are up to date. IBM has invested and continues to invest in maintaining a portfolio of adjacent offerings with appeal to the enterprise. IBM resells Arxan software for app hardening and also integrates its app testing tools with Arxan. IBM also offers code scanning capabilities of its own, as well as a wide range of security and authentication and protection capabilities. IBM has streamlined the integration of its IBM MobileFirst Foundation with its MaaS360 mobile device management and mobile application management solution. It is interoperable with other major MDM and MAM vendor offerings. Further, IBM has invested in making data storage options available through Cloudant NoSQL DB and Cloudant Sync mobile SDK; mobile app storefront capabilities through the IBM MobileFirst Foundation's App Center, a private app store that enables distribution within enterprises, and more advanced mobile app storefront capabilities as part of IBM MaaS360. IBM MobileFirst is integrated with adjacent offerings within IBM's asset portfolio, such as with IBM's DevOps tooling (UrbanCode Deploy and IBM DevOps Services), IBM MobileFirst Quality Assurance, IBM Rational Quality Manager, and IBM Rational Test Workbench.

Strengths

Whereas IBM's strategy is to be interoperable on the front-end client-side mobile app development, the company's ownership of a variety of software and services in the cloud leads to unique breadth and depth of back-end mobile app integration opportunities.

Enterprise mobile app development requirements can often be part of more holistic mobility initiatives. While these requirements can often be met by point solutions, trusted partners that have expertise in solving broad mobility challenges for enterprises at scale are well positioned for success. IBM has itself and through partnerships proven its expertise in addressing broad functional issues around security, mobility management, back-end integration with databases and systems of record, analytics and reporting, cloud provisioning, hardware procurement and, increasingly, as it moves forward, cognitive capabilities.

Challenges

IBM's professional services-oriented approach to the company's MobileFirst for iOS may scare some enterprises off, with the fear of the associated level of effort, length of engagement, and/or costs. While all professional services-oriented firms face this perception in the market, IBM has made significant investment to alleviate at least part of the burden on the enterprise. IBM continues to make available a variety of vertical and horizontal mobile app iOS templates, which alleviate roughly 70% of the work effort required to develop mobile app experiences. Further, IBM continues to invest in its IBM MobileFirst Foundation on Bluemix services, which are consumable by an enterprise in a variety of pricing arrangements, depending on the actual services being consumed.

IBM's focus on interoperability drives the company's limited investment in developer-focused marketing and ecosystem development. This can leave enterprises that are just beginning the mobile app journey unaware of what IBM can offer in the way of mobile app development, especially when inundated with developer tools marketing from other mobile app development platform owners. IBM should continue to emphasize its broad selection and availability of mobile apps in similar ways as

other mobile app development platform vendors if it wants to be in the consideration set of an increasing number of enterprises.

APPENDIX

Reading an IDC MarketScape Graph

For the purposes of this analysis, IDC divided potential key measures for success into two primary categories: capabilities and strategies.

Positioning on the y-axis reflects the vendor's current capabilities and menu of services and how well aligned the vendor is to customer needs. The capabilities category focuses on the capabilities of the company and product today, here and now. Under this category, IDC analysts will look at how well a vendor is building/delivering capabilities that enable it to execute its chosen strategy in the market.

Positioning on the x-axis, or strategies axis, indicates how well the vendor's future strategy aligns with what customers will require in three to five years. The strategies category focuses on high-level decisions and underlying assumptions about offerings, customer segments, and business and go-to-market plans for the next three to five years.

The size of the individual vendor markers in the IDC MarketScape represents the market share of each individual vendor within the specific market segment being assessed.

IDC MarketScape Methodology

IDC MarketScape criteria selection, weightings, and vendor scores represent well-researched IDC judgment about the market and specific vendors. IDC analysts tailor the range of standard characteristics by which vendors are measured through structured discussions, surveys, and interviews with market leaders, participants, and end users. Market weightings are based on user interviews, buyer surveys, and the input of a review board of IDC experts in each market. IDC analysts base individual vendor scores, and ultimately vendor positions on the IDC MarketScape, on detailed surveys and interviews with the vendors, publicly available information, and end-user experiences in an effort to provide an accurate and consistent assessment of each vendor's characteristics, behavior, and capability.

Market Definition

Enterprise Mobile App Development Platforms

IDC defines enterprise mobile app development platforms as an integrated set of technologies for the creation and deployment of mobile applications by the enterprise. Mobile app development platforms are made up of the integrated technologies of one vendor or the technologies of numerous vendors. The platform is a middleware solution that serves as the intermediary between mobile applications and enterprise systems and other services in the cloud. While platforms range on the solution spectrum from end-to-end front-end and back-end solutions to those that are more focused on either the front-end or the back-end mobile app development needs, this IDC MarketScape is focused on the end-to-end platforms. As such, these enterprise mobile app development platforms have front-end client-side mobile app development tools that are integrated with enterprise, mobile, and cloud back-end services. The capabilities of mobile app development platforms are defined as follows:

- The front-end client-side mobile app development approaches include mobile and/or enterprise cloud-native platform-as-a-service development approaches. These approaches include native development tools, rapid web tools, rapid low-code tools, no-code tools, hybrid development frameworks, templates, and open source plug-ins. Software development kits (SDKs) are often available as alternatives to client-side mobile app development approaches.

- Integration to back-end services is typically offered as APIs or microservices that can be shared and reused among applications. Available integrations to back-end services may include integrations to enterprise software and applications and mobile-specific services, such as authentication, push notifications, location, database access, and analytics, as well as integrations to the more enterprise-oriented cloud development tools commonly referred to as PaaS, such as location services, analytics, intelligent services, and marketing services.

- Mobile app development platforms incorporate mobile app management software and security solutions to varying degrees, such as enterprise mobile app stores, mobile application code hardening, or mobile security functionality plug-ins. Mobile app development platforms are available for deployment on-premise, in the private cloud, in the public cloud, or in a hybrid cloud.

LEARN MORE

Related Research

- *Market Analysis Perspective: Worldwide Enterprise Mobility Platforms and Security, 2016* (IDC #US41812916, September 2016)
- *Enterprise Mobility Survey Results: Strategic Imperatives* (IDC #WC20160908, September 2016)
- *IDC PlanScape: Integrated Mobile App Development Platforms* (IDC #US41672316, August 2016)
- *Exploring the Enterprise MADP Market Opportunity* (IDC #WC20160310, March 2016)
- *Two Sides to the Coin: Enterprise Rapid App Development Tools* (IDC #US41035516, March 2016)
- *Worldwide Enterprise Mobile Application Development Platform Market Shares, 2014: An Evolving Market* (IDC #US40704415, December 2015)
- *Worldwide Enterprise Mobile Application Development Platform Forecast, 2015-2019* (IDC #US40705615, December 2015)
- *Enterprise MBaaS: Differentiation in a Fragmented Market* (IDC #259428, November 2015)

Synopsis

This IDC study provides an assessment of 10 vendors providing enterprise mobile app development platforms. Mobile app development platforms are critical for businesses that are mobilizing their workforce, external marketing, customer interactions, operations, and business processes. The ability to create custom apps targeted at specific end users and use cases is a powerful capability and allows organizations to increase operational scale and efficiency while reducing costs. Mobile app development platform technology also allows businesses to put powerful and innovative services, such as location, intelligence, and analytics, directly into their mobile business processes and workflows via custom mobile app integrations. Mobile app development platforms are used for both business-to-consumer and business-to-employee (B2E) scenarios. From the B2E perspective, a critical function of the mobile app development platform is the creation of powerful, productivity-driving apps for a

company's own internal employees, customized to the business' unique operations, workflows, and operating parameters.

"Vendors that continue to invest in their platforms' alignment with B2E mobile app development needs will bring enterprises great advantage," says Denise Lund, research director, Enterprise Mobility, at IDC. "We expect enterprises will look for not only mobile app development platform vendors that deeply integrate with software and services critical to the business' operations but also vendors that have a proven stake in enterprise solutions at large."

About IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications and consumer technology markets. IDC helps IT professionals, business executives, and the investment community make fact-based decisions on technology purchases and business strategy. More than 1,100 IDC analysts provide global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries worldwide. For 50 years, IDC has provided strategic insights to help our clients achieve their key business objectives. IDC is a subsidiary of IDG, the world's leading technology media, research, and events company.

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