IDC MarketScape: Worldwide Enterprise Mobile Application Development Platform 2016 Vendor Assessment — B2C Apps Alignment

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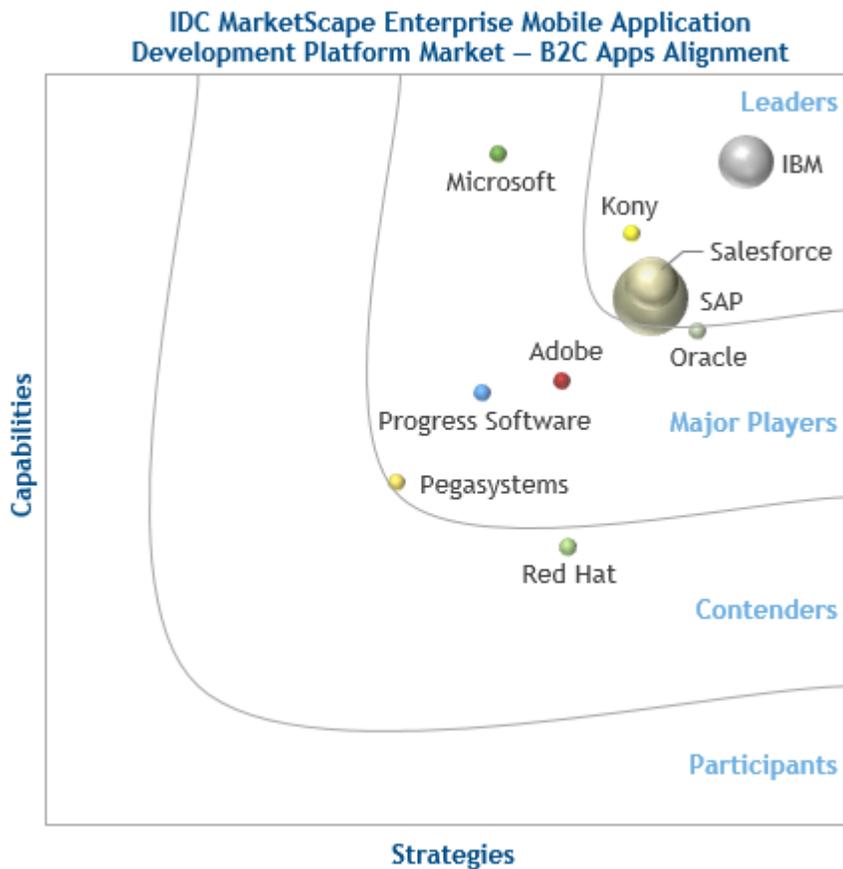**THIS IDC MARKETSCAPE EXCERPT FEATURES: IBM**

IDC MARKETSCAPE FIGURE

FIGURE 1

IDC MarketScape Worldwide Enterprise Mobile Application Development Platform Vendor Assessment — B2C 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 IDC MarketScape Worldwide Enterprise Mobile Application Development Platform Vendor Assessment – B2C Apps Alignment (Doc # US41915916). 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

Integrated, end-to-end mobile application development platforms (MADPs) are critical to the success of enterprises mobilizing operations, marketing interactions with consumers, and other business operations. The use of a mobile app development platform to develop mobile apps that are targeted at employee user or consumer engagement with the enterprise brings varying degrees of scalability and cost effectiveness to the enterprise. This is not to mention that the use of a mobile app development platform brings with it the opportunity for the enterprise to leverage some of the market's newest and most innovative services that incorporate location, intelligence, and analytics as part of the mobile app use case. Integrated mobile app development platforms are designed to meet the needs of enterprises across business-to-employee (B2E) and business-to-consumer (B2C) mobile app use cases. The breadth of platform capabilities across the front-end client-side and the back-end services integrations often meets a core set of needs of the enterprise in both scenarios. Crucial to the mobile app development platform decision-making process are key capabilities and platform vendor strategies that suggest better alignment with business-to-employee mobile app development needs versus B2C mobile app development needs. Mobile app development platform characteristics that are well aligned with enterprises' B2C mobile app development needs include:

- Optimized integration to cloud-based services that can infuse apps with on-demand intelligence services (i.e., bots, machine intelligence, and big data) and context services (i.e., location, customer status, and time)

- A strong portfolio of adjacent offerings that include services such as content authoring, management, and delivery; mobile app engagement analytics; responsive app experiences; and intelligence that can be used to create innovative, interactive applications

- Capabilities that resonate with the needs of line-of-business (LOB) professionals, such as marketing and sales management (These capabilities include front-end client-side platform tools that facilitate speed to market, including rapid prototyping and templated mobile apps.)

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-consumer 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 (MBaaS) 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 this year's study, there are also 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, Kinvey, Mad Mobile, 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 consumers' use. These apps are commonly referred to as B2C apps. Note that all vendors in this study have platforms that are suitable for the development of not only mobile B2C apps but also apps that are targeting employees (B2E) and business partners (B2B). However, IDC research reveals that each vendor has strengths and challenges in its platform's approach lending to the development of B2C mobile apps in particular. Enterprise buyers should consider the following major areas to help them make a decision that best meets their B2C 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. The LOB developer has the need to develop a mobile app experience using little or no code because of time pressures surrounding the deployment of B2C apps. These apps may be targeted for inclusion in a coordinated marketing campaign, so simplified development of a compelling user experience (UX) by a nontechnical developer is often ideal. 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.

- **Vendors that have a broad portfolio of adjacent cloud-based software and services for enterprises:** Reusable connectors are prebuilt and able to be leveraged in a variety of mobile app user experiences. The ability to use APIs to connect consumer-facing mobile apps to updatable content is invaluable to many a consumer promotion or interaction between the enterprise and the consumer.

  Mobile app development platforms that are born from expertise in leveraging scalable, secure, 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 of 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 here 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-consumer mobile apps. IBM offerings include IBM MobileFirst Foundation, IBM MobileFirst Foundation on IBM Bluemix services, and IBM Mobile App Builder. IBM has the 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 IBM 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 portfolio of mobile app development platform offerings than in IBM'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 on IBM Bluemix. With IBM's continued investment in the services in the cloud, mobile apps can benefit from the overarching investment of IBM in its business logic advances, cognitive services, and analytics services.

Offering Overview

The overarching approach of IBM to its mobile app development platform offering portfolio is one of 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, 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 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 software development kits (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, including 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 on IBM Bluemix services offer enterprises access to operational analytics; intelligent services, including Watson cognitive services; and predictive analytics as they 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 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 AppCenter, 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 (IBM UrbanCode Deploy and IBM DevOps Services), IBM MobileFirst Quality Assurance, IBM Rational Quality Manager, and IBM Rational Test Workbench.

Strengths

Although 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 a unique breadth and depth of integrations on the back end of mobile app development.

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

The professional services-oriented approach of IBM to its 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 IBM Bluemix services, which are consumable by an enterprise in a variety of pricing arrangements, depending on the actual services being consumed.

The emphasis of IBM on marketing agencies is less clear than its emphasis on building its partner ecosystem of technology vendors. This can challenge IBM when it is partnering with enterprises to

show them a vision for where to take their consumer mobile apps. IBM has invested in a workshop-based approach to bringing enterprise clients along the journey of envisaging what mobile app templates will best meet their needs, but it would be to the advantage of IBM to expand its digital marketing agency ecosystem and emphasis with its clients.

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 (B2C) and business-to-employee (B2E) scenarios. From the B2C perspective, a critical function of the mobile app development platform is the availability of optimized integrations to cloud-based services, such as intelligence services and location services, as well as the requisite breadth and depth of front-end client-side platform tools that facilitate speed to market, including rapid prototyping and templated mobile apps.

"Vendors that align best with enterprises' B2C mobile app development needs have incorporated a strong portfolio of adjacent offerings and LOB-targeted capabilities into their platform," says Denise Lund, research director, Enterprise Mobility, at IDC. "While content management, responsive mobile app experiences, analytics, and intelligence services are some of these critical needs, the path is wide open for vendors to expand the set of innovative capabilities and services for enterprises."

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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