

Magic Quadrant for Multiexperience Development Platforms

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The digital user experience increasingly spans multidevice, multitouchpoint and multimodal interactions, and is therefore a multiexperience journey. This report evaluates vendors of MXDPs – platforms on which to build user experiences across web, mobile, conversational, immersive and wearable apps.

Strategic Planning Assumption

By 2024, one in three enterprises will use a multiexperience development platform to increase the speed at which IT and business fusion teams work to deliver successful digital products.

Market Definition/Description

Great companies don't just build apps, they build experiences. To do this, they will increasingly need a multiexperience development platform (MXDP), which will enable them to deliver, efficiently and rapidly, distinctive user experiences (UXs) that span multiple devices, digital touchpoints and interaction modalities.

An MXDP offers development teams an "opinionated" – that is, firmly guided – and integrated set of front-end development tools and "back end for front end" (BFF) services. This approach is more productive than using a collection of diverse, independent UX frameworks. An MXDP's purpose is to enable distributed and scalable development (in terms of teams and architecture) of fit-for-purpose apps across digital touchpoints and interaction modalities.

An MXDP must, at minimum, have the ability to create – and customize for specific companies – mobile apps, responsive websites/web apps and support for third-party chatbots (like Slack and Facebook Messenger) or voice apps supported by Amazon Alexa and/or Google Assistant.

Advanced capabilities may include:

- Software development kits (SDKs) for native iOS and Android development
- SDKs for third-party mobile frameworks (such as React Native, Flutter and Xamarin)
- The ability to create progressive web apps
- Tools to build custom chatbots and voice apps

- Tools to build apps for wearables and Internet of Things (IoT) devices

To be included in this Magic Quadrant, vendors had to offer an MXDP that met this definition.

Some vendors in this Magic Quadrant have offerings that overlap with products in the low-code application platform (LCAP) market. But even a low-code-oriented MXDP must support professional development teams, have the ability to use high-control development tools and enable custom coding. Most MXDPs do support low-code application development in some fashion, to increase developers' productivity. However, the primary purpose of MXDPs is to enable the creation of apps that deliver sophisticated UXs across devices, touchpoints and interaction modalities.

The MXDP market contains some of the largest enterprise software vendors. Enterprises frequently evaluate IBM, Microsoft, Oracle, Salesforce, SAP and ServiceNow, based on these vendors' incumbent positions for software as a service (SaaS) and platform as a service (PaaS) products. They also often consider Google and Amazon, although these two vendors, rather than offering their own integrated MXDPs, currently provide only individual development tools and services that complement other vendors' MXDPs.

In this second edition of the Magic Quadrant for MXDPs, there are three new entrants: Neptune Software, Resco and XOne. Their entry shows that this market is not confined to the large vendors and that multiexperience (MX) innovation is increasing. Significantly, too, for this edition Gartner raised its expectations for vendors' Completeness of Vision and for their Ability to Execute by helping customers with their MX strategies. This has contributed to shifts in the positions of several vendors that also appeared in the first edition (see Figure 1).

Magic Quadrant

Figure 1. Magic Quadrant for Multiexperience Development Platforms



Source: Gartner (July 2020)

Vendor Strengths and Cautions

Appian

Appian is a Niche Player in this Magic Quadrant; in the previous edition it was a Visionary. Its MXDP is the Appian Platform, which is focused on mobile, web and conversational apps. Appian's operations are based in North America, but it also has an increasing presence in EMEA and Asia/Pacific. Its customers tend to be large enterprises, with a concentration in the finance and government sectors. Appian continues to invest in tools that unify the development experience on its platform, but its vision for MX is lagging behind that of others in this market. Appian's investment in its extensive security certifications make its platform compelling for customers who need a highly secure MXDP.

Strengths

- **Customer experience:** Appian received above-average scores from surveyed reference customers for their overall experience with the vendor and for its professional services and technical support. Gartner Peer Insights reviewers have given it similar praise in this regard.
- **Industry strategy:** Appian's focus on the financial services, government, healthcare, energy and other industries has enabled it to help customers who need deep domain-specific applications. Coupled with strong localization and internationalization capabilities, Appian's platform appeals to global, distributed and diversified companies.
- **Geographic presence:** Appian has a strong North American presence, along with a rapidly increasing customer base in Europe and Asia/Pacific. With an international customer base of large enterprises and government organizations, as well as implementation partners, Appian is a strong option for global, diversified companies.

Cautions

- **Marketing execution and strategy:** Appian goes to market mainly as a low-code and business process management (BPM) platform provider, rather than as an MXDP supplier. It primarily targets complex automation use cases. Customers seeking more of a front-end development platform to unify a range of MXDP use cases should check whether Appian can meet their requirements.
- **Offering strategy:** Appian's strategy to support augmented reality/virtual reality (AR/VR), wearables and IoT use cases remains immature, relative to its core mobile and web capabilities. Appian has been slower than other vendors to support the building of immersive and IoT applications. For both these use cases, reference customers scored Appian below the average for vendors in this Magic Quadrant.
- **Innovation:** Compared with the rapid innovation by Leaders in this market, Appian's innovation in relation to MX is incremental. Its chatbot support, released in 2018, has not evolved much beyond its integration with Google Dialogflow. Reference customers expressed below-average satisfaction with the platform's ability to support conversational apps. A few reference customers also hesitated to state that Appian was their strategic MXDP partner.

GeneXus

GeneXus is a Niche Player in this Magic Quadrant; in the previous edition it was also a Niche Player. Its MXDP is the GeneXus Platform, which is mainly used as a code generator for web and mobile apps (including Apple Watch and TV apps), as well as modeling for chatbots and back ends for wearables and IoT apps. GeneXus' operations are primarily in South America and Japan, but it also has some presence in North America. Its customers tend to be relatively small enterprises, mainly in the technology and transportation and logistics sectors. GeneXus continues to invest in its code generation capabilities and in using artificial intelligence (AI) to support MX development. Its pricing model is based on developer seats, which helps drive its growth primarily through channel partners.

Strengths

- **Customer experience:** GeneXus received reference customer scores above the average for vendors in this Magic Quadrant for overall experience with the vendor, evaluation and contract negotiations, integration and deployment, and professional services for design and development. However, reference customers also indicated longer deployment times (of 12 months or more) than for most other vendors.
- **Developer experience and tools:** GeneXus provides a rich Windows-based integrated development environment (IDE) in which professional developers can use a declarative approach to building and generating apps. Reference customers gave above-average scores for the platform's ability to bring internal development activities together and increase sharing and reuse of code, components and services, and for the ease of integration using standard APIs and other development tools.
- **Innovation:** GeneXus is expanding its MX support for deploying "miniprograms" or microapps inside Chinese "superapps" (such as WeChat). It has also added code generation for Angular progressive web apps (PWA) and plans to support React and Vue. Customers seeking a platform to support these advanced capabilities should evaluate GeneXus' MXDP.

Cautions

- **Marketing execution and strategy:** Outside Japan and South America, GeneXus continues to lack market recognition. Its marketing budget is very small for a vendor that aspires to have a global presence – it mainly relies on word-of-mouth marketing through its partner and developer community, which is not enough in this complex and competitive market. Enterprises may not be able to engage easily with GeneXus.
- **Operations and customer support:** GeneXus has a relatively small operations team and limited staff presence around the world. Scores from its reference customers were below average for responsiveness to product or service questions, quality of peer or developer community, and quality of technical support.
- **Offering strategy:** Unlike all the other vendors in this Magic Quadrant, GeneXus does not sell a public cloud service offering for its platform, instead leaving deployment and the choice of a cloud provider to customers or partners. GeneXus is lagging behind in this regard, because most platform deployments in this market are on a public cloud.

IBM

IBM is a Niche Player in this Magic Quadrant; in the previous edition it was also a Niche Player. Its MXDP is called IBM Mobile Foundation, which includes back-end and front-end capabilities to build mobile and web apps, including support for Android, iOS, Ionic, React Native, Xamarin and Apache Cordova. IBM's Digital App Builder is a low-code tool. IBM Mobile Foundation offers Watson Assistant adapters to integrate with chatbots, and can also employ Digital App Builder to add and train chatbots. IBM's operations are global, and its customers span a variety of industries,

including many in banking, finance and insurance, and manufacturing. IBM has also introduced a Cloud Pak for Applications for application modernization, using container technology based on OpenShift and tools for app development.

Strengths

- **Mesh app and service architecture (MASA) capability:** IBM's platform enables developers to build microservices and miniservices using a variety of out-of-the-box adapters and others custom-built using Java. The interface is compliant with the Open API specification. Cloud Pak for Applications uses tools from Appsody to manage the development life cycle of microservices. Appsody includes a tool called Stacks that helps developers simplify the task of building apps that require a specific set of technologies or development patterns.
- **AI services:** IBM Mobile Foundation provides out-of-the-box adapters for some IBM Watson cognitive services, such as Conversation, Discovery and Natural Language Understanding. Other Watson services, such as speech-to-text and text-to-speech, can be accessed using Watson APIs, and code can be generated using adapters.
- **Core back-end services:** Much of the value that IBM's MXDP delivers stems from its robust and comprehensive back-end services. Logic can be written in adapters or can reside in microservices hosted on containers. Using a BFF pattern, this data can be delivered to a specific channel for consumption. When connecting to an enterprise back end, it is possible to draw on the security and analytics of IBM Mobile Foundation using the IBM Mobile Foundation API Proxy to handle the requests.

Cautions

- **Process and workflow orchestration capability:** Reference customers gave IBM Mobile Foundation the lowest scores in this Magic Quadrant for native process and workflow capability. Supporting such orchestration requires separate IBM products, notably IBM Business Process Manager. Customers can use the IBM business process management adapter for IBM Mobile Foundation, which provides access to IBM's BPM REST APIs.
- **UX design capability:** IBM Mobile Foundation received below-average satisfaction scores from reference customers for its UX tools. Its Digital App Builder tool is still maturing, while complex UX requirements are typically sourced to the IBM Interactive Experience (IX) division, which provides services to build rich experiences for customers.
- **Developer experience:** Gartner views IBM's front-end tooling as a competitive weakness against leading vendors in this market. However, IBM Digital App Builder should help close the gap as it matures. IBM Digital App Builder requires Cordova and Ionic to be used, and it received React Native support in 2019 to support the building of hybrid apps.

Mendix

Mendix, a subsidiary of Siemens, is a Leader in this Magic Quadrant; in the previous edition it was also a Leader. Its MXDP is the Mendix Platform, which interprets application models in runtime,

and provides a model API and SDK for customization. Mendix's mobile client is based on React Native, and PWAs are supported. Conversational apps are created using the Dialog Builder within the Mendix Conversation Framework or with third-party tools. Mendix has offices mainly in North America and Europe, and most of its customers are in those regions. Its customers span a variety of industries. Mendix offers tight integration with Siemens MindSphere to provide digital twin experiences.

Strengths

- **MASA capability:** Mendix's MXDP is based on an advanced MASA foundation that has enabled Mendix to extend its core web and mobile capabilities. This, in turn, enables developers to use a common set of app services to provide tailored user experiences across each touchpoint in a user's journey. With the release of Mendix's Data Hub functionality, developers can discover and explore data and business capabilities, and assemble and orchestrate them using the same Mendix visual modeling tools that they use to build business logic and application data models.
- **Developer experience:** Mendix's MXDP emphasizes visual and model-driven development in support of a broad range of developer profiles. The MXDP provides a separate design-time environment for citizen developers (Mendix Studio) and a more robust development environment for professional developers (Mendix Studio Pro), thereby enabling apps to be supported across the two tools. Mendix has begun to draw on the technology and expertise of Siemens to bring advanced AI and 3D capabilities to both the Mendix modeling experience and out-of-the-box platform services.
- **Business model:** Siemens has a very diverse and geographically broad customer footprint, which Mendix can target. The Siemens channel has expanded Mendix's reach greatly, with multiple offices in India and China. Mendix has also used Siemens' partner business channel to expand into markets such as Australia and Singapore. Siemens and Mendix customers should benefit from the MXDP's capabilities to enhance and extend their investments.

Cautions

- **Geographic presence:** Although Mendix has a strong presence in the U.S., followed by Europe, it has no offices or staff in Latin America. Also, only in the past year has it started to expand in Asia/Pacific, where, Gartner has observed, the Mendix brand is not widely known. Continued expansion will depend on how well Mendix can exploit Siemens' global reach. Customers in Latin America and Asia/Pacific, among other regions, should check for access to local resources and that Mendix grows in terms of partners.
- **Marketing strategy:** Mendix's go-to-market approach focuses on low-code development and, increasingly, citizen development, and this overshadows its MXDP offering. Furthermore, Mendix's large increase in marketing expenditure in 2019 went solely toward the U.S. and EMEA, and therefore did not address its lack of recognition in regions such as Asia/Pacific and Latin America by customers searching for an MXDP.

- **AI services:** Mendix received below-average scores from reference customers, compared with other vendors in this Magic Quadrant, for its platform's AI services. Bots and other conversational UI frameworks are supported by binding APIs and connectors with the Mendix Conversation Framework. Mendix claims there is increasing demand for natural language processing and natural language understanding (NLP/NLU) services and therefore plans to make its own available through the Mendix App Store marketplace.

Microsoft

Microsoft is a Challenger in this Magic Quadrant; in the previous edition it was also a Challenger. Its MXDP consists of the Microsoft Power Platform (comprising Power Apps, Power Automate and Power Virtual Agents), supported by professional developer tools such as Visual Studio with Xamarin, Azure App Service and Azure DevOps. Together, these products form a platform suite that is widely adopted for MX development. Microsoft's operations are in locations worldwide. Its customers are in a variety of industries and of varying sizes. Innovations on Microsoft's roadmap include expansion of the platform to deliver deeper cloud-based automation capabilities.

Strengths

- **Developer tools:** Microsoft Visual Studio can be used to extend the app UX of Power Apps and enable professional developers to build custom controls through the Power Apps CLI (command line interface). The platform also supports extensions for Apache Cordova and React Native for Visual Studio Code. Developers can use the make.powerapps.com IDE to build PWAs and publish them to the Power Apps player app.
- **AI services:** As part of Azure Cognitive Services, language services enable third-party AI services to process natural language with prebuilt scripts, evaluate sentiment, identify intent and process text. Microsoft's bot development offerings – Power Virtual Agents for citizen developers and Microsoft Bot Framework for professional developers – utilize the Azure Bot Service to connect customer applications to 14 public and custom chat experiences (in addition to those implemented by community-provided adapters).
- **DevOps support:** Microsoft provides its own extensive DevOps toolchain via Visual Studio App Center and Azure DevOps, but it can also support and integrate with any third-party tool as part of the software development life cycle. Visual Studio App Center also includes a device farm for testing apps across different browsers and devices.

Cautions

- **Market understanding:** Although the Microsoft Power Platform can be a starting point for MX development, Microsoft still takes a "developer first" approach and pursues a bottom-up go-to-market strategy for its MXDP. Compared with other vendors with a stronger platform vision, Microsoft lacks a high-level, unified strategic value proposition for its MXDP when targeting enterprise buyers.

- **Offering strategy and innovation:** Microsoft has not shown significant innovation from a unified MXDP roadmap perspective. Instead it is focused on bringing together separate Microsoft product lines – Azure, Visual Studio, Dynamics and Power Platform – to create a suite of products for professional and citizen developers alike. Microsoft believes such cross-product flexibility will amplify its customer value. The risks of this strategy include increased customer confusion about the licensing and pricing of these products as part of an MXDP.
- **Process and workflow orchestration capability:** Power Apps supports app workflows, but the interface for business process flows is separate and only available in model-driven apps. More complex process orchestration may require the use of separate products, such as Microsoft Azure Logic Apps. Additionally, although Power Automate can support BPM notations, this requires tight integration with Microsoft Visio.

Neptune Software

Neptune Software is a Niche Player in this Magic Quadrant; it did not appear in the previous edition. Its MXDP is the Neptune DX (Digital Experience) Platform. Users of this offering, which is focused on mobile apps, web apps and PWAs, can develop conversational and immersive applications via building blocks available through the vendor's marketplace. Neptune Software's operations are based primarily in Europe, but there is also a subsidiary in the U.S. Most of Neptune Software's customers are small enterprises in manufacturing, energy and utilities, and retail sectors. It plans to deliver its own PaaS offering in 2020, while continuing to enhance the developer experience.

Strengths

- **Developer experience:** Neptune Software's focus on speeding up the experience for technical application developers resulted in above-average scores from its reference customers for the developer experience. It positions its platform as the bridge between low-code and high-control development, and counts developers as key influencers of its platform.
- **Pricing:** Neptune Software's pricing model is attractive for customers keen to start at a departmental level and then to expand use of its platform into more complex use cases. This vendor's ability to integrate natively within the SAP application server is a benefit for enterprises needing to develop MX apps that work with SAP software.
- **Market responsiveness:** Neptune Software is highly responsive to its customers' feedback, releasing updates every other week. It also allows customers and partners to contribute solutions, templates and other building blocks to the Neptune DX Platform marketplace.

Cautions

- **Marketing execution and strategy:** Neptune Software focuses on a niche, crowded SAP-dominated IT landscape. SAP itself offers an MXDP and is building MX capabilities into its business applications. Other MXDP platforms are also building deep integrations with SAP and other enterprise business applications. The core capabilities of Neptune Software's MXDP

currently lag behind those of most of the MXDPs from other vendors in this Magic Quadrant, but the vendor is focused on improving them.

- **Overall viability:** Neptune Software is a small, venture-capital-backed company that needs to invest further in organizational growth, headcount and marketing to compete against much larger vendors. Customers should check its financial health, limit the length of any contract and plan a potential exit strategy from the platform.
- **Offering strategy:** Compared with the platform capabilities offered by Leaders in this Magic Quadrant, Neptune Software's MXDP is weak in its implementation of MASA, support for leading design systems (other than SAP Fiori), AI services and AR/VR capabilities. The lack of native capabilities in these areas and the lack of deep integrations with well-known providers of AI services represent gaps that Neptune Software must fill, if it is to help customers realize the full potential of an MXDP.

Oracle

Oracle is a Challenger in this Magic Quadrant; in the previous edition it was a Leader. Its MXDP consists of Oracle Visual Builder, Oracle Digital Assistant, Oracle Mobile Hub and Oracle Developer Cloud Service. This offering is focused on creating web apps, mobile apps and chatbots for Oracle SaaS applications and other custom applications running on Oracle Cloud Infrastructure (OCI). Oracle's operations are global, and its customers span all industries. Oracle's conversational capabilities with Oracle Digital Assistant are gaining traction with customers, but its broader, integrated MX vision lags behind that of some competitors for other use cases.

Strengths

- **Customer experience:** Oracle received above-average scores from reference customers, compared with other vendors in this Magic Quadrant, for overall experience with the vendor, integration and ease of deployment, service and support, and the product roadmap for its MXDP. In line with what Gartner has seen in the market as a whole, these reference customers said they adopted Oracle's MXDP primarily to improve the UX layer of Oracle applications.
- **Conversational apps capability:** Oracle's reference customers reported above-average satisfaction with its support for conversational app development. They also reported a higher percentage of production deployments for conversational apps than any of the other vendors' reference customers. The Oracle Digital Assistant product is worthy of consideration by customers who prioritize a conversational interface for their Oracle applications.
- **Pricing:** Reference customers gave Oracle above-average scores for pricing and contract flexibility, evaluation and contract negotiation, and value for money. Gartner Peer Insights reviewers have rated Oracle similarly. Oracle's pricing is based on consumption of requests and API calls, and Oracle Visual Builder and Oracle Developer Cloud Service are included in OCI.

Cautions

- **Marketing execution and strategy:** Prospective customers might struggle to identify all the pieces needed to form Oracle's MXDP and to understand Oracle's vision for the offering. The constituent products are somewhat hidden under the umbrella of OCI, and general awareness of Oracle's MXDP is lower than for the MXDPs of other major vendors in this Magic Quadrant. Gartner still sees Oracle's MXDP evaluated primarily by Oracle-centric organizations.
- **Offering strategy:** Oracle takes more of a product suite approach than other vendors in this Magic Quadrant, which leads to a fragmented developer experience across its tools. Investment in other Oracle offerings, such as Oracle Content and Experience (a digital experience platform) and Oracle Integration Cloud (an integration PaaS), may be necessary to optimize its MXDP's capabilities. Prospective customers must clearly identify the products they need to ensure they get all the appropriate capabilities.
- **Innovation:** Oracle's mobile app client architecture is based on Apache Cordova, a widely used but aging technology. In recent years, Gartner has seen more enterprises and other vendors moving off Cordova. Because of its dependency on Cordova plug-ins, Oracle has not improved its support for AR development.

OutSystems

OutSystems is a Leader in this Magic Quadrant; in the previous edition it was also a Leader. Its MXDP is the OutSystems Platform, which supports the full life cycle of web, PWAs and mobile apps using a modular architecture. OutSystems' operations are primarily in Europe and North America, but it also has an increasing presence in Asia/Pacific. Its customers mainly come from those regions and they tend to be large enterprises, with the majority in the financial and government sectors. OutSystems is enhancing its governance capabilities and adding builders for workflow and UX, to make development easier.

Strengths

- **Product capabilities:** OutSystems supports broad MX use-case scenarios, which are enabled by the extensibility of its platform architecture, as well as its ability to generate code and add modules created in code and through the use of SDKs. Reference customers' satisfaction with OutSystems' product capabilities was among the highest expressed for any vendor in this Magic Quadrant, and Gartner Peer Insights reviewers have also indicated strong satisfaction.
- **Sales execution and pricing:** Reference customers gave OutSystems above-average scores, compared with other vendors in this Magic Quadrant, for value for money and meeting all deployment expectations set during the sales process. Additionally, OutSystems has overhauled its pricing model by moving from application object packs to user and usage-based subscription models. Customers may find its new licensing simpler to understand and manage.
- **Operations and market responsiveness:** OutSystems received above-average scores from its reference customers for service and support, integration and deployment, and developer training. OutSystems has a large and active developer community to supplement its own services and support. It also has centers of excellence within strategic partners.

Cautions

- **Marketing strategy:** Despite having strong MXDP capabilities, OutSystems is typically known as an LCAP vendor. Its marketing strategy in the MXDP market is secondary to low-code and mainly covers mobile app use cases. Prospective customers need to dig deeper to uncover the AI, IoT and MX features they are likely to need.
- **Customer support:** Reference customers for OutSystems expressed a need for better access to technical support and a stronger methodology for global teams with a mix of onshore and offshore development resources. These customers also gave OutSystems below-average scores for the quality of the vendor's peer user and/or developer community and for the availability of quality third-party resources. Gartner Peer Insights reviewers have been generally positive, but a few have given OutSystems comparatively low scores for support.
- **AR/VR capability:** OutSystems supports AR primarily through an integration with Wikitude for mobile devices and AR headsets such as those of Vusix and Microsoft (HoloLens). Only a few of its reference customers used it for AR and wearables, and their scores for these use cases were below the average for vendors in this Magic Quadrant.

Pega

Pega is a Niche Player in this Magic Quadrant; in the previous edition it was a Visionary. Its MXDP, Pega Infinity, is mainly aimed at sophisticated business process automation needs that require web, mobile and conversational apps. Pega's operations are global and its customers tend to be large enterprises, with the majority in the banking, finance and insurance, telecom and public sectors. Pega has invested in making its platform microservices-based and enhancing its serverless messaging capability, but its overall vision for its MXDP lags behind that of others in this market.

Strengths

- **Overall viability:** Pega has grown steadily as a public company for many years and the Pega Infinity platform has a solid track record. It is used by large enterprises for critical applications, so prospective customers should feel confident about the viability of Pega and its platform.
- **Process orchestration and UX design capabilities:** Pega's strength lies in low-code development for process automation using the Pega Infinity platform. It is increasing its focus on enabling and improving a consistent UX via its Pega Digital Experience API and Cosmos design system.
- **Geographic presence:** Pega has a strong presence in North America, along with a rapidly increasing customer and partner base in Europe and Asia/Pacific. The Pega Infinity platform also has many language packs and can export its apps for translators to help with localization.

Cautions

- **Pricing:** Reference customers for Pega gave it below-average scores, compared with other vendors in this Magic Quadrant, for contract negotiations and pricing, and for contract flexibility. A few expressed concerns about the total cost at scale and about confusing licensing structures, particularly when upgrading. In addition, reference customers highlighted a need for prospective customers to budget for professional services to ensure successful deployment.
- **Offering strategy:** Most development work done on Pega's MXDP is for web and mobile apps – its other MX capabilities are not widely used. Pega's focus on business process automation and its CRM applications means that its MXDP is more of an ancillary offering. Reference customers use Pega Infinity mainly for automation, and Gartner mainly sees Pega evaluated by organizations with BPM and case management needs.
- **Operations:** Pega's reference customers gave it below-average satisfaction scores for ease of deployment and developer training and support. A few said they faced upgrade challenges and that expert resources were hard to find.

Progress

Progress is a Visionary in this Magic Quadrant; in the previous edition it was a Leader. Its MXDP consists of Progress Kinvey, with NativeChat and SDKs for NativeScript, Xamarin and other frameworks. This offering is broadly aimed at enterprise developers and independent software vendors (ISVs), to help them build native mobile apps, PWAs and chatbots. Progress' operations are global, but most of its staff are in the U.S. and Europe. Its customers are mainly relatively small organizations, and a significant percentage are in the technology industry. Progress continues to build on its developer-oriented offering, but has not executed as well as competitors in this market in terms of reaching enterprise customers.

Strengths

- **Business model:** Progress has a large community of nearly 2 million developers using its MXDP technologies. Playing to that strength, Progress has changed its go-to-market strategy, so that its MXDP can be online-driven for customer acquisition and onboarding. Its community is valuable to customers, and the change makes it easier for prospective buyers to get started.
- **Customer support:** Reference customers for Progress gave it above-average scores, compared with other vendors in this Magic Quadrant, for integration and deployment, service and support, quality of third-party resources and end-user training. These capabilities are critical to quickly enabling internal development teams to use an MXDP.
- **Pricing:** Progress' products are competitively priced and the company continues to lower the entry price to help development teams get started. Reference customers gave it above-average scores for pricing and contract flexibility.

Cautions

- **Marketing execution and strategy:** Despite the open-source developer community for NativeScript, awareness of Progress is low in the MXDP market. The survey of reference

customers indicates that Progress was rarely evaluated by companies that bought other platforms. Gartner's client conversations also indicate that IT decision makers typically do not know of Progress' MXDP, especially as Progress is de-emphasizing its enterprise-direct sales strategy for its MXDP.

- **Industry strategy:** Progress has only one industry-specific solution, the Progress Health Cloud platform, which is built on Progress Kinvey but has not gained much traction. Customers with industry-specific requirements may find Progress' MXDP lacking broader support for industry solutions.
- **Operations:** Progress has realigned resources within its overall product portfolio, and as a result the number of resources dedicated to its MXDP offering has fallen. Customers should watch for any changes to product engineering, service, and sales support and responsiveness.

Resco

Resco is a Niche Player in this Magic Quadrant; it did not appear in the previous edition. Its MXDP consists of Resco Cloud and Resco Woodford. This offering is focused on mobile apps, PWAs, AR and wearables, and takes a low-code development approach. Resco operates from three offices across North America and Europe. Its customers are mainly small organizations, but they span many industries. Currently, the platform does not support conversational experiences, but Resco plans deeper AI service integration.

Strengths

- **Core back-end services:** Resco Cloud received above-average satisfaction scores from reference customers, compared with other vendors in this Magic Quadrant, for its core back-end service capability. Out of the box, there are SaaS and on-premises connectors for Microsoft Dynamics, Salesforce and TIBCO Scribe, which are popular with customers. The platform also supports Open Data Protocol (OData) and REST interfaces, but does not have API mediation capabilities.
- **AR/VR capability:** Resco Cloud received above-average satisfaction scores from reference customers for its AR capability. It supports Microsoft HoloLens, as well as ARKit and ARCore, along with support for Google Glass Enterprise Edition 2.
- **Offering strategy:** Resco Cloud is popular with Microsoft-centric organizations as it has prebuilt connectors for Microsoft Dynamics 365, supports Windows 10 and uses Xamarin for the client runtime. Enterprises looking for an MXDP with a focus on supporting Microsoft technologies will find Resco a good fit.

Cautions

- **AI services:** Resco Cloud does not support virtual assistants, such as Apple Siri, Amazon Alexa and Google Assistant. It also lacks support for third-party chatbots and bot frameworks. Consistency across touchpoints extends only to synchronization of data – there is no remembrance of state for more complex interaction flows.

- **Market responsiveness:** Resco has made incremental product enhancements to qualify as an MXDP vendor, but overall it has not been as responsive to market shifts as other vendors in this Magic Quadrant. Although it started to add AI support in 2019, Resco has no built-in AI services (such as NLP/NLU, sentiment analysis and image analysis), which are features of other vendors' MXDPs.
- **DevOps support:** Resco received below-average satisfaction scores from reference customers for its DevOps support. Although its platform uses Microsoft's Visual Studio App Center for mobile app life cycle management activities and integrates with GitHub, there is a lack of built-in support for continuous integration, control and versioning, and performance monitoring of the back end.

Salesforce

Salesforce is a Leader in this Magic Quadrant; in the previous edition it was also a Leader. Its MXDP is the Salesforce Customer 360 Platform, consisting of Heroku, Salesforce Mobile SDK, Einstein Voice and Einstein Bot Builder. This offering is broadly focused on combining low-code and high-control development, backed by a common metadata model and app components. Salesforce's operations are global, and customers come from a variety of industries. Salesforce has expanded its global partnerships with major cloud vendors such as Alibaba, Amazon, Apple, Google and Microsoft.

Strengths

- **Developer experience:** Salesforce provides a variety of low-code approaches to web app, mobile app and chatbot development, which are supported by extensive training available from its Trailhead community. Additionally, the Einstein Bot Builder plugs into the Customer 360 Platform for an integrated developer experience. Furthermore, the Salesforce Lightning Design System helps enforce UX consistency for development teams.
- **Market understanding and industry strategy:** Salesforce demonstrates strong market understanding in terms of applying its Customer 360 Platform, so that customers can build and deploy MX apps across employee, partner and consumer use cases. Salesforce also offers industry solutions for consumer-packaged goods, manufacturing, retail, financial services, healthcare, nonprofit and higher education sectors, to help accelerate MX delivery.
- **Innovation:** Salesforce has increased its low-code support for embedding AI capabilities into the Customer 360 Platform, so that professional developers can create AI-powered, conversational apps. Salesforce also plans to launch Vision and Search in mid-2020. These features, along with Einstein Voice (currently in open beta) and Skills Builder, can be added to MX apps built on the platform.

Cautions

- **AI services:** Salesforce Einstein Sentiment and Einstein Intent are less robust than the conversational APIs offered by some competitors. Organizations looking for a more

comprehensive set of NLP API services for developing conversational apps may find better options in other MXDPs.

- **AR/VR capability:** Although Salesforce offers SDK integration with third-party tools like ARKit and ARCore, the platform requires the Einstein Vision service to create enhanced experiences. Currently, Einstein Vision APIs are useful primarily in limited sales, support and marketing contexts, and are not suitable for broad or industrial use cases.
- **Offering strategy:** Salesforce's MXDP has the makings of a powerful platform, but the separate product components indicate a lack of a cohesive platform packaging strategy. The offering is spread across the Customer 360 Platform, with Lightning, Heroku and Einstein products, which leads to ambiguity and uncertainty for customers who have, in effect, to decipher their options.

SAP

SAP is a Leader in this Magic Quadrant; in the previous edition it was a Challenger. Its MXDP is the SAP Cloud Platform Extension Suite, which consists of SAP Business Application Studio, MX Development Kit (MDK), Fiori development tools and Conversational AI Bot Builder. Its offering is broadly focused on building modern web apps, mobile apps and chatbots for SAP business applications and custom apps on SAP Cloud Platform. SAP's operations are global, and its customers are mostly large enterprises across many industries. SAP's vision for its MXDP has evolved substantially, with a focus on standards-based technologies in its tools, and support for third-party technologies.

Strengths

- **Sales execution and pricing:** The number of SAP Cloud Platform customers increased by 15% in 2019, with a significant percentage using its MXDP capabilities. SAP offers simple licensing based on its Cloud Platform Enterprise Agreement (CPEA), which can be consumption or subscription-based. Reference customers gave SAP above-average scores, compared with other vendors in this Magic Quadrant, for value for money and for pricing and contract flexibility.
- **Core back-end services:** Advances in its MXDP architecture and tools enable SAP more easily to address the range of MX requirements. SAP has transformed its Mobile Backend Generator tools into a universal MX service architecture based on the SAP Cloud Application Programming Model (CAP) – a declarative service model. This back-end architecture enables a cloud-native BFF design pattern on a service mesh architecture to support development of fit-for-purpose apps.
- **Innovation:** SAP continues to evolve its MXDP with enhanced capabilities centered on a flexible microapp-based architecture and SDKs that enable productivity and flexibility. Also, SAP Conversational AI is used to build ML-driven conversational interfaces that integrate with more than 17 chat and virtual personal assistant platforms, including SAP's CoPilot.

Cautions

- **UX design capability:** SAP's Fiori libraries, templates and apps are primarily aimed at internal apps, not high-end customer-facing apps – although the newer MDK SDK and native iOS and Android SDKs provide more capable UXs. As a result, reference customers gave below-average scores for SAP's UX design capabilities and noted some UI limitations. Customers can, however, choose to use third-party tools to build the front-end UX.
- **Customer support:** Although reference customers gave SAP good scores for service and support, they voiced concerns about its support portal and the need for support packages and certified resources to work with development teams. Customers must plan for these potential challenges to ensure successful delivery.
- **Marketing strategy:** SAP has continued to change the names of the products that comprise its MXDP (for example, SAP Web IDE is now SAP Business Application Studio), and its overall approach to packaging and marketing its MXDP remains fragmented. Reference customers gave SAP below-average scores for its MXDP product roadmap, and many customers whom Gartner has talked to still focus on just SAP Fiori.

ServiceNow

ServiceNow is a Niche Player in this Magic Quadrant; in the previous edition it was also a Niche Player. Its MXDP is the Now Platform, which is focused on web apps, mobile apps and chatbots for workflow-driven applications. ServiceNow's operations are based primarily in North America and Europe. Half of its customers are large enterprises, and they come from all major industries. ServiceNow is investing significantly in integrating the AI and ML capabilities it gained through its acquisitions of Parlo, Attivio, Loom Systems and Passage AI.

Strengths

- **Business model:** ServiceNow's MXDP app engine can be bought on a stand-alone basis or as an add-on to its solutions. The combination of MX capabilities with ServiceNow's workflow-driven capabilities enables customers to turn to ServiceNow for an MXDP to extend their Now Platform investments.
- **Innovation:** ServiceNow is investing significantly to integrate NLP, NLU and natural language search capabilities into its platform. These innovations will enable better conversational experiences and the ability to extract insights from user-generated content.
- **Operations:** Reference customers gave ServiceNow above-average scores, compared with other vendors in this Magic Quadrant, for technical support and responsiveness to issues. Most of ServiceNow's reference customers reported using its cloud offering to develop and deploy apps. The rest took a hybrid cloud approach. ServiceNow's cloud infrastructure is private, with globally distributed architecture.

Cautions

- **Sales execution and pricing:** Reference customers scored ServiceNow's licensing and pricing below the average for vendors in this Magic Quadrant – they highlighted complexity, inflexibility

and high costs as key challenges. These customers, as well as some Gartner clients, also expressed frustration with ServiceNow's inflexibility when negotiating contracts. Some indicated that costs escalated when developing the full range of MXDP applications. ServiceNow is, however, addressing these challenges with a simplified licensing model that charges for licenses only for app developers.

- **Marketing strategy and execution:** ServiceNow's investment in its MXDP is overshadowed by shortcomings in the marketing of its solutions. Enterprise awareness of ServiceNow's MXDP is lower than for the offerings of other major vendors in this Magic Quadrant. Moreover, the Now Platform is primarily positioned for low-code workflow extension use cases, and increasingly targets citizen developers. Prospective customers with more professional development team needs should carefully consider how suitable ServiceNow is for high-control development.
- **Offering strategy:** Reference customers scored ServiceNow's professional services and the availability of third-party resources for its MXDP below the average for vendors in this Magic Quadrant. Customers should check on ServiceNow's investments in these areas to increase the adoption and success of its MXDP. Reference customers also expressed below-average satisfaction with ServiceNow's current platform capabilities to develop conversational, immersive and wearable/IoT apps, which are key use cases for MXDPs.

Temenos

Temenos, which acquired Kony in 2019, is a Visionary in this Magic Quadrant; in the previous edition Kony was a Leader. Temenos' MXDP is called Temenos Quantum, an offering broadly targeted at mobile apps, PWAs, chatbots, AR and wearable apps. Temenos' operations are based in Europe, Asia/Pacific and North America. Its platform runs on a multicloud infrastructure. Most of its customers are large enterprises, and, although Temenos is a banking software provider, the Quantum platform is a cross-industry offering. Temenos is investing heavily in explainable AI capabilities as it positions its platform for more AI-augmented development and use of AI services in apps, but its execution in this market has slipped over the past year.

Strengths

- **Market understanding:** Temenos has a solid grasp of the MXDP market's needs, with a strong focus on empowering development teams to build very high-quality user experiences. Its vision for immersive app use cases is strong. Similarly, its vision for emerging IoT use cases is ahead of many competitors because it supports popular IoT protocols and integrations with leading IoT service vendors.
- **Offering strategy:** Reference customers for Temenos identified Quantum Fabric as the main aspect they like about the platform, because of its flexibility and ability to integrate various back-end services quickly. Nitro Engine and Visualizer IDE are the unifying front-end technologies for building MX apps across teams. Temenos is also starting to address edge computing IoT use cases and augmenting physical "things" with digital information.

- **Innovation:** Temenos continues to innovate – for example, by building explainable AI (XAI) into its MXDP. This is an important feature that will differentiate the platform for use cases where transparency and ethics matter in relation to AI-powered experiences.

Cautions

- **Customer experience:** Temenos' reference customers gave it below-average scores, compared with other vendors in this Magic Quadrant, for their overall experience with the vendor. They also gave it below-average scores for quality of technical support, quality of end-user training, and professional services for app design and development. Following Temenos' acquisition of Kony, prospective customers need to watch for any service and support quality issues.
- **Operations:** Temenos clients whom Gartner has spoken to, as well as a few of Temenos' reference customers, have identified a lack of sufficient professional services to assist their development staff. Given the acquisition of Kony by Temenos, customers might experience operational changes that could disrupt what they had been doing under Kony.
- **Sales execution and strategy:** Temenos needs to provide a stronger sales message and vision for nonbanking organizations, which have expressed reservations about investing in its MXDP because of Temenos' focus on the banking sector. Reference customers outside the banking sector gave Temenos below-average scores for contract negotiation, pricing and contract flexibility, and value for money. Temenos' strategy for these organizations is centered on its recently signed, exclusive agreement with HCL Technologies, so customers should monitor developments for signs of improvement.

XOne

XOne is a Niche Player in this Magic Quadrant; it did not appear in the previous edition. Its MXDP is the XOne platform, which is focused on web and mobile apps, but also offers narrower support for AR and wearable apps. XOne's operations are primarily in Europe, especially Spain. Its customers tend to be midsize and small enterprises, with a large percentage in the transportation and logistics and retail industries. XOne has long been a supplier of a mobile app development platform, which still supports Windows Mobile. It has enhanced its platform to support chatbots through a prebuilt integration with the Microsoft Bot Framework.

Strengths

- **Customer experience:** Reference customers scored XOne above the average for vendors in this Magic Quadrant for overall experience with the vendor, and for service and support. Many of them have been with XOne for more than seven years, which reflects a strong level of commitment to customer satisfaction on XOne's part, while it evolves its platform to meet more MX requirements.
- **Sales execution and pricing:** XOne grew strongly in 2019, while offering both subscription licensing and perpetual licensing options. The main reason reference customers selected XOne

is its pricing. They gave it above-average scores for contract negotiations, pricing and contract flexibility, and value for money.

- **Mobile app capability:** XOne's background is in mobile app development, specifically using its proprietary framework to generate native mobile apps for iOS, Android, and even Windows 10 and Windows Mobile. Its platform also offers mobile device management and mobile app management capabilities to help secure, deploy and manage mobile apps.

Cautions

- **Overall viability:** XOne is a self-funded, private company and one of the smaller vendors in this Magic Quadrant. It has high exposure to businesses in Spain and South America, which could prove a volatile combination for a vendor of this size. Prospective customers should check its financial health, limit contract length and plan a potential exit strategy from the platform.
- **Operations and geographic presence:** XOne's staff are mainly located in Spain and other parts of Europe, as are its customers and partners. Although it has been in business since 2001, its operations remain small. Potential customers outside Europe need to investigate the level of support available in their region.
- **MASA capability:** Although XOne's MXDP is deployable as Docker packages in public clouds, its platform architecture is mostly monolithic and proprietary. It has its own XML scripting language and cascading style sheets for cross-platform development and generates native code for specific types of app. It also uses an integration bus that supports external REST APIs, but API mediation is lacking.

Vendors Added and Dropped

We review and adjust our inclusion criteria for Magic Quadrants as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant may change over time. A vendor's appearance in a Magic Quadrant one year and not the next does not necessarily indicate that we have changed our opinion of that vendor. It may be a reflection of a change in the market and, therefore, changed evaluation criteria, or of a change of focus by that vendor.

Added

- Neptune Software
- Resco
- XOne

Dropped

None.

Inclusion and Exclusion Criteria

To qualify for inclusion in this Magic Quadrant, each vendor had to satisfy the following criteria:

- The vendor must demonstrate a go-to-market strategy for its MXDP across mobile app, web app and conversational app development.
- At minimum, the vendor's platform must support cross-platform development and building of custom iOS and Android app binaries – that is, it should not require separate vendor involvement or services to generate or build any new custom binaries. It should do the same for responsive web apps, as well as at least three of the following:
 - Progressive web apps (PWAs): There must be PWA service worker support within the development tool (see [“Progressive Web Apps”](#)).
 - Chatbots: There must be a built-in chatbot framework or tight integration between the development tool and external bot frameworks (such as Amazon Alexa/Lex, Google Dialogflow, IBM Watson and Microsoft Bot Framework).
 - Voice apps: There must be built-in NLP and speech-to-text functionality or tight integration between the development tool and voice platforms (such as Amazon Alexa and Google Assistant).
 - Wearable and IoT apps: There must be support within the development tool for wearable and/or IoT apps (such as for Apple Watch, Google Wear OS, Microsoft HoloLens and Tizen).
 - AR and VR apps: There must be immersive UI support within the development tool (for example, for Android ARCore, iOS ARKit and Wikitude).
- Each vendor must also offer back-end services within its platform for all of the following:
 - Offline data synchronization
 - User authentication services
 - Push notifications
 - Location services

At minimum, each vendor had also to satisfy one of the following two criteria:

- The vendor must have generated at least \$40 million annual revenue in 2019 from MXDP software and/or subscription licensing (excluding professional services).
- The vendor must have had, in 2019, at least 50 existing paying enterprise customers with production deployments of its MXDP for a minimum of 100 end users per customer.

Additionally, each vendor had to:

- Have gained at least 20 new paying enterprise customers for its MXDP – new contracts signed in 2019 for a minimum of 100 end users per customer – in at least two of the following geographies:
 - North America
 - South America
 - Europe
 - Middle East and Africa
 - Asia/Pacific
 - China

We excluded from this Magic Quadrant vendors that:

- Offered only PaaS or back-end services *without* a front-end development tool/IDE for building apps or experiences.
- Required a specific third-party component or product that was *not* already included in the platform on an OEM basis – that is, any such component or product had to be branded, sold and supported directly by same vendor.
- Only sold their platform along with development/professional services, where the tool is used exclusively by the vendor's consultants.
- Required the purchase and/or installation of other unrelated products or platforms offered by the same vendor – for example, a CRM application or content management system.
- Did not sell a commercial enterprise offering – that is, one without software or subscription fees – or that would retire the platform by the end of 2020.

Evaluation Criteria

Ability to Execute

Product or service: We evaluate the breadth and depth of each vendor's products and features across the software development life cycle, and look favorably on support for a broad range of app types. We look for, among other things, design and user experience capabilities, simplicity of development, ease of integration, richness of back-end services, DevOps support (such as continuous integration/continuous deployment [CI/CD], testing, version and release management) and analytics. More specifically, we examine:

- **Developer experience:** How does the platform support development teams' productivity using low-code approaches, collaboration, AI-augmented development, and other approaches to create a variety of app types?

- **Developer tooling:** How does the platform provide development teams with tool options to design and build a variety of app types using SDKs, an IDE or a CLI supplied by the MXDP vendor or as a plug-in to a popular IDE (such as Eclipse or Visual Studio Code)?
- **Microapp patterns:** How does the platform support reusable app components or app building blocks from a design and architecture perspective to enable portability across app types?
- **MASA:** How does the platform architecture support microservices, API mediation, serverless and event-driven requirements?
- **UX design:** How does the platform enable rich UI design and UX interaction functionality for apps?
- **Core back-end services:** How does the platform provide reusable app services (such as location services, push notifications, offline synchronization, user management, and data and file storage), as well as integration and API design and orchestration?
- **AI services:** How does the platform provide built-in or tightly integrated cloud AI services (such as NLP, image recognition and sentiment analysis) for use within apps?
- **DevOps support:** How does the platform offer native or integrated tooling to support agile development, CI/CD, test automation, and monitoring and analytics to facilitate DevOps?
- **Process and workflow orchestration:** How does the platform support the designing and orchestrating of app workflows and processes from existing systems or as new ones, within and across touchpoints?
- **AR/VR support:** How does the platform support immersive interfaces using SDKs (such as ARKit, ARCore, WebXR and Wikitude) or specific device platforms (such as HoloLens and Oculus)?

Overall viability: We examine each vendor's research-and-development spending and resources, the growth of its MXDP business, and its financial profitability or funding/capitalization.

Sales execution/pricing: We look for a broad sales reach across geographies and industries, effective sales operations – in light of, for example, long or short sales cycles – and simple pricing models.

Market responsiveness/record: We examine how quickly each vendor's products are released and adopted, and how new MX capabilities are supported, both using the vendor's resources and through partnerships.

Marketing execution: We look for general awareness of the vendor in the market, and any negative or positive perceptions of the vendor across IT and business units. We also consider how easily buyers understand a vendor's differentiators.

Customer experience: We examine customer deployments across a variety of app types and use cases, the vendor's ability to meet and exceed customers' expectations, and the ease of onboarding and training on its platform. Results from our survey of reference customers are important measures of customer satisfaction.

Operations: We look for growth in the vendor's MXDP business operations and staffing level, stability of leadership vision and strength of customer service.

Table 1: Ability to Execute Evaluation Criteria

Evaluation Criteria ↓	Weighting ↓
Product or Service	High
Overall Viability	Medium
Sales Execution/Pricing	High
Market Responsiveness/Record	Medium
Marketing Execution	High
Customer Experience	Medium
Operations	Low

Source: Gartner (July 2020)

Completeness of Vision

Market understanding: We look for an understanding of how to address the needs of development teams in IT and business units, as well as third-party developers, for delivering a wide range of apps in support of an MX strategy.

Marketing strategy: We look for strong brand recognition, thought-leading product messaging and outreach programs that succeed in an emerging market category.

Sales strategy: We look for a strong go-to-market strategy focused on selling an MXDP to CIOs, enterprise IT leaders and business unit leaders responsible for application delivery and the UX.

Offering (product) strategy: We look for a strong understanding of enterprise needs across the development life cycle of web, mobile, conversational and immersive apps.

Business model: We examine product revenue growth and the ease of doing business with customers. We also look for a strong partner ecosystem that amplifies the vendor's go-to-market

strategy.

Vertical/industry strategy: We look for differentiating capabilities built for specific industries and MX vertical solutions – for example, industry-specific connectors, app templates and support for regulatory compliance. Vendors may have a focused go-to-market approach for specific industries, including industry-specific partnerships.

Innovation: We look for technological advances that support broader MX development, and other capabilities that support MASA, multicloud deployment and IoT gateways.

Geographic strategy: We look for diverse customer deployments across regions, delivery and reseller partner networks, and market awareness across the globe, as well as in-country presence.

Table 2: Completeness of Vision Evaluation Criteria

Evaluation Criteria ↓	Weighting ↓
Market Understanding	High
Marketing Strategy	Medium
Sales Strategy	Medium
Offering (Product) Strategy	High
Business Model	Medium
Vertical/Industry Strategy	Low
Innovation	High
Geographic Strategy	Low

Source: Gartner (July 2020)

Quadrant Descriptions

Leaders

Leaders have strong capabilities in mobile app and web development, and demonstrate a compelling product vision and commitment to MX development in their platforms. They have large customer bases and robust partner ecosystems, and have shown healthy growth in this market. However, this market is rapidly evolving, so Leaders might not stay Leaders for long.

Challengers

Challengers have compelling technology and significant customer deployments and partner channels. However, they lack a clear vision and direction with regard to the product and business aspects of meeting the needs of the MXDP market. Challengers need to focus on improving their platform packaging, pricing and other components of their go-to-market strategy in order to compete better.

Visionaries

Visionaries demonstrate excellent understanding of the MXDP market and have the technical and go-to-market wherewithal to excel. However, they are typically less well known than Challengers and Leaders, and have smaller or narrower customer bases for their MXDPs. Visionaries need to “outmarket” their competitors and gain more scale through partnerships in order to succeed in this market in the long run.

Niche Players

Niche Players are not widely known for their MXDP capabilities. From a go-to-market perspective, they focus narrowly on specific MX use cases, and they have yet to show as much commitment as other MXDP vendors to their product vision and sales and marketing strategy globally. Niche Players have the technological foundation to compete in this market, but they must invest decisively as MXDP providers, if they are to outmaneuver their competitors.

Context

Adopting an MXDP helps bring together development activities for many different types of apps, so that the UX across them is seamless and more engaging. An MXDP is not merely a loose collection of tools and services, but rather an “opinionated” development platform stack, which means it offers guidance and includes certain prescribed approaches to development to ensure consistency and productivity.

The core value of an MXDP lies in its ability to coalesce software development life cycle activities across a range of apps to address digital user journeys.

The survey of reference customers conducted for this Magic Quadrant found that:

- Almost all (96%) of the reference customers were either satisfied or completely satisfied with their MXDP’s ability to bring together internal development team activities and technologies across app use cases.
- The vast majority (92%) of reference customers were either satisfied or completely satisfied with their MXDP’s ability to increase the sharing and reuse of code, components and services across app types and device touchpoints.

The need for an MXDP will increase as the number of devices, digital touchpoints and modes of interaction increases. Based on Gartner's analysis of customers with successful MXDP implementations, application leaders must evaluate an MXDP investment and MXDP strategy in four main ways. They must:

- Ensure whichever MXDP they choose has the functional depth to meet their app development and business needs in the short term – the next 12 to 18 months.
- Assess each vendor's vision and roadmap for its MXDP, to ensure it aligns with their organization's ambitions beyond the next 24 months. This may include assessment of how well a vendor can support richer conversational, immersive, wearable and IoT use cases, and the potential to scale development across business units and geographies.
- Evaluate how well-integrated each vendor's tools and services are, both within the platform and with complementary or supplementary external tools and services, in order to support the entire design-to-DevOps life cycle.
- Determine how well-suited each MXDP vendor is to being a strategic technology partner to their organization. The MXDP will be a cornerstone of the customer's digital business technology platform, and its vendor should likewise play a strategic role alongside core systems, such as those for CRM and ERP.

Market Overview

An MXDP is a foundational platform for developing digital apps and products that span multiple touchpoints and interaction modalities for customers, partners and employees. It enables product development teams to improve their delivery and to innovate by introducing "composable experiences" to the front-end UX layer, in line with Gartner's vision for the future of applications.

The survey of reference customers showed that decision makers – typically CIOs and IT leaders – purchased an MXDP for three reasons especially:

- To drive digital business transformation (73% of respondents)
- To drive innovation (68%)
- To improve UX quality (64%)

This is the second year in which Gartner has published a Magic Quadrant for MXDPs, and market expectations for vendors' execution and vision are now higher. This change has resulted in shifts in quadrant position for several of the vendors that also appeared in the first edition of this Magic Quadrant.

Adoption of MXDPs is still just emerging, however, having reached between 5% and 20% of the target market. The survey of reference customers underlined this emerging nature by finding that 46% of the respondents "went live" with their MXDP within the past two years.

The vast majority of MXDP development activities are for mobile and web apps, and conversational apps account for nearly half the total. The percentage of respondents with apps either in the pilot/developmental phase or already deployed in production environments were as follows:

- Mobile apps: 91%
- Web apps and PWAs: 81%
- Conversational apps: 48%
- Immersive apps: 34%
- Wearable and IoT apps: 25%

Gartner expects further growth in this market, based on an increase in the number of client inquiries we receive on this topic and vendors' continued addition of MX capabilities to their platforms. Gartner expects more competitors to enter the MXDP market in the coming years, especially large application PaaS vendors that already target development teams for web, mobile and conversational use cases. Additionally, acquisitions of smaller, best-of-breed mobile, conversational or immersive app development vendors could propel the acquirers into the MXDP market. We expect the market's expansion to accelerate as the underlying technologies for PWAs, conversational and immersive apps mature during the next two to five years.

Evidence

For this Magic Quadrant, Gartner's primary research included analysis of vendors' product demonstrations. We also conducted surveys of vendors and of reference customers identified by vendors between February and March 2020. In addition, we used information from Gartner's client inquiry service and Gartner Peer Insights during the evaluation process.

Evaluation Criteria Definitions

Ability to Execute

Product/Service: Core goods and services offered by the vendor for the defined market. This includes current product/service capabilities, quality, feature sets, skills and so on, whether offered natively or through OEM agreements/partnerships as defined in the market definition and detailed in the subcriteria.

Overall Viability: Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit, and the likelihood that the individual business unit will continue investing in the product, will continue offering the product and will advance the state of the art within the organization's portfolio of products.

Sales Execution/Pricing: The vendor's capabilities in all presales activities and the structure that supports them. This includes deal management, pricing and negotiation, presales support, and the

overall effectiveness of the sales channel.

Market Responsiveness/Record: Ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor's history of responsiveness.

Marketing Execution: The clarity, quality, creativity and efficacy of programs designed to deliver the organization's message to influence the market, promote the brand and business, increase awareness of the products, and establish a positive identification with the product/brand and organization in the minds of buyers. This "mind share" can be driven by a combination of publicity, promotional initiatives, thought leadership, word of mouth and sales activities.

Customer Experience: Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups, service-level agreements and so on.

Operations: The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure, including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

Completeness of Vision

Market Understanding: Ability of the vendor to understand buyers' wants and needs and to translate those into products and services. Vendors that show the highest degree of vision listen to and understand buyers' wants and needs, and can shape or enhance those with their added vision.

Marketing Strategy: A clear, differentiated set of messages consistently communicated throughout the organization and externalized through the website, advertising, customer programs and positioning statements.

Sales Strategy: The strategy for selling products that uses the appropriate network of direct and indirect sales, marketing, service, and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

Offering (Product) Strategy: The vendor's approach to product development and delivery that emphasizes differentiation, functionality, methodology and feature sets as they map to current and future requirements.

Business Model: The soundness and logic of the vendor's underlying business proposition.

Vertical/Industry Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including vertical markets.

Innovation: Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes.

Geographic Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the "home" or native geography, either directly or through partners, channels and subsidiaries as appropriate for that geography and market.

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