

Magic Quadrant for Enterprise Integration Platform as a Service

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Summary

Application leaders responsible for integration are being tasked with integrating hybrid application portfolios as well as providing easy access to the data within those systems. This Magic Quadrant can be used to assess the ability of integration PaaS vendors to meet these rapidly evolving needs.

Market Definition/Description

An integration platform as a service (iPaaS) provides capabilities to enable subscribers (aka "tenants") to implement data, application, API and process integration projects spanning cloud-resident and on-premises endpoints. This is achieved by developing, deploying, executing, managing and monitoring "integration flows" (aka "integration interfaces") – that is, integration applications bridging between multiple endpoints so that they can work together.

iPaaS capabilities typically include:

- Communication protocol connectors (FTP, HTTP, AMQP, MQTT, Kafka, AS1/2/3/4, etc.)

- Application connectors/adapters for SaaS and on-premises packaged applications

- Data formats (XML, JSON, ASN.1, etc.)

- Data standards (EDIFACT, HL7, SWIFT, etc.)

- Data mapping and transformation

- Data quality

- Routing and orchestration

- Integration flow development and life cycle management tools

- Integration flow operational monitoring and management

- Full life cycle API management

See "*Gartner Reference Model for Integration PaaS*."

An iPaaS is typically used for cloud service integration (CSI) and application to application (A2A) integration scenarios. Increasingly, they are also being used for business to business (B2B) integration, mobile application integration (MAI), API publishing and Internet of Things

(IoT) integration scenarios.

Gartner considers an iPaaS to be an "enterprise iPaaS" if it:

Is designed to support enterprise-class integration projects (that is, projects requiring high availability, disaster recovery, security, service-level agreements [SLAs] and technical support from the provider)

Can support several of the use cases mentioned above

This market includes only companies that provide public iPaaS offerings. Providers that sell only iPaaS-enabling software or that provide iPaaS capabilities either embedded in other xPaaS solutions, such as aPaaS, or with SaaS applications are not considered to be players in the enterprise iPaaS market.

See "Platform as a Service: Definition, Taxonomy and Vendor Landscape, 2016" for an expanded form of the definition of iPaaS and other forms of cloud application infrastructure services.

Magic Quadrant

Figure 1. Magic Quadrant for Enterprise Integration Platform as a Service



Source: Gartner (March 2017)

Vendor Strengths and Cautions

Action

Founded in 1980 and based in Palo Alto, California, U.S., Action obtained its iPaaS offering through its acquisition of Pervasive Software in 2013. Action focuses on big data and how data can be transformed into value for global businesses, using analytics and data management technologies. Action DataCloud is its iPaaS offering for data and message integration between SaaS applications. An additional iPaaS product, Action Business Xchange, targets B2B data integration.

The data integration capabilities of these offerings are available as cloud-based delivery as well as via the Actian Concierge service, whereby customers contact Actian subject matter experts to configure, install, manage and support integrations on the cloud platform on their behalf. Actian's customers are mainly in North America. The vendor emphasizes partner marketing programs to equip channels for developing market reach.

STRENGTHS

Performance and targeted focus. Usage of DataCloud is characterized by high-performance data throughput and centralized management of integration processes. This appeals to cloud developers who need to create integration flows that exploit Actian's data and analytics tooling.

Portfolio synergy. Consistent interfaces across DataCloud and Actian's on-premises design environments provide users with a standardized experience. Actian plans to align key integration products in its portfolio, including Business Xchange and DataConnect, into a unified iPaaS.

Customer relationship. Reference customers value their relationship with Actian, both before purchasing and after implementation, reflecting a posture for partnering and interests to address business needs. This contributes to longer-term, recurring engagements.

CAUTIONS

Versatility. DataCloud is frequently regarded as driven by needs of tactical- or targeted-scope projects only taking advantage of a small portion of Actian's application, data and B2B integration capabilities. Actian plans to unify and expand capabilities such as workload-specific optimized patterns, rapid trading partner onboarding and real-time analytics.

Mind share and legacy-market perception. Market awareness of Actian's iPaaS remains low, as Actian is still thought of as aligned predominantly to addressing the enterprise IT arena rather than business-role-oriented opportunities. Actian plans to broaden awareness of its iPaaS efforts through a unified go-to-market approach.

Implementation services and support. Actian customers have identified challenges with limited availability of skilled practitioners. To address needs, Actian is investing in a new developer community platform and product capabilities to ease learning, accelerate and optimize deployment, and improve access to self-service guidance for issue resolutions.

Adaptris

Established in 1998 in the U.K. and acquired by RELX Group in 2015, independently operated Adaptris now has over 4,500 customers using its iPaaS offering. Cirrus is used for B2B, cloud-based and on-premises application integration. The vendor's strong EDI heritage has helped it expand into the B2B-focused iPaaS market for clients seeking software, services and/or managed service offerings.

Adaptris also offers integration brokerage – an outsourcing offering to support document exchange between trading partners. While Cirrus is available as a stand-alone offering, the vendor often sells it and integration brokerage service together. IoT and big data support

became its primary focus for 2016, underpinning a new "precision agriculture" solution aimed at the agri-food industry.

STRENGTHS

Vertical focus. Selling iPaaS and integration brokerage together, along with APIs for IoT and strong support for B2B integration, has helped Adaptris win clients in complex ecosystem markets such as the agri-food, energy, healthcare and transportation sectors.

Market growth. Adaptris added nearly 850 customers in 2016, including global enterprises adopting Cirrus for their cloud and on-premises integration needs. It has many market opportunities related to its ownership by RELX – for example, integrating Adaptris into the RELX-owned LexisNexis HPCC Systems (high-performance computing cluster) for big data and analytics.

Client satisfaction. Reference clients scored Adaptris above average for the overall technical quality, reliability and service of Cirrus, as well as for the vendor's ability to meet SLAs, its pricing and its technical support.

CAUTIONS

Awareness. A historic lack of international marketing and sales has limited global market awareness of Adaptris, which was rarely considered by respondents to Gartner's iPaaS survey. The vendor plans enhanced marketing programs in 2017 to address this challenge.

Product depth. While its client base tends to have complex requirements, Adaptris received below-average reference client scores for its cloud characteristics as well as iPaaS functional depth and completeness.

Ease of use. Adaptris scored well below average for the overall ease of use of Cirrus. This is of critical concern as buyers are increasingly looking to enable both ad hoc and citizen integrators with iPaaS.

Attunity

Founded in 1988 and based in Burlington, Massachusetts, U.S., Attunity serves more than 2,000 customers in 60 countries with its data integration products. CloudBeam, its iPaaS offering, enables near-real-time data movement and replication across heterogeneous enterprise data platforms and cloud environments.

For each customer, a unique instance of CloudBeam is offered through Amazon Web Services (AWS) and Azure Marketplace, for loading and synchronizing data into Amazon Redshift, Elastic Compute Cloud, Relational Database Service, Simple Storage Service and Elastic MapReduce. Other environments supported by CloudBeam include Microsoft Azure SQL Data Warehouse, and Google Cloud SQL and Cloud Dataproc.

STRENGTHS

Product depth and focus. Recognition for business longevity and a proven on-premises capability for change data capture and data replication are key strengths of Attunity CloudBeam, to enable data consistency and augment cloud-related data sharing.

Time to deployment. Reference customers favored the overall ease of use, reliability and performance of CloudBeam, as well as its flexibility in complementing Attunity's broader portfolio to accelerate data warehouse automation in Amazon Redshift implementations.

Big data focus. With a focus on big data, CloudBeam's evolving capabilities target integration activities involving Kafka, Spark and Hadoop on cloud environments. It seeks to meet the increasing needs of NoSQL data movements required for supporting BI/analytics and data warehousing scenarios, in which Attunity has established experience.

CAUTIONS

Versatility. CloudBeam appeals to tactical needs, recognized primarily in Amazon-related requirements only. Attunity is looking to expand its iPaaS market coverage, with growing traction in AWS and Azure environments, Hadoop partner certifications and additional deployment support (e.g., Google Cloud, SAP, Apache Spark/Kafka).

Implementation support. Deployments in increasingly complex scenarios are raising customers' expectations of Attunity's implementation guidance and support for best practices, including administrative operations, which reference customers scored low.

Market messaging and engagement. With the vendor's expanding portfolio that includes iPaaS, reference customers expressed confusion about overlapping products and functionality. They want improvements to Attunity's pricing and their overall relationship during pre/postsale.

Built.io

Built.io is based in San Francisco, California, U.S., and was founded in 2007 as a consultancy before expanding into a PaaS solution business in 2013. It offers iPaaS, mobile back-end cloud services (mBaaS) and content management cloud services (cmsPaaS). The vendor's iPaaS, Built.io Flow, focuses on easy and quick enablement of integration flows. It connects mobile apps, cloud services (e.g., Salesforce, G Suite, Amazon Web Services, etc.), social networking (e.g., Slack) and devices/things (e.g., connected cars) via prebuilt integration templates and model-driven design. Built.io Flow has two editions: Express for business users and Enterprise for IT teams.

Built.io Flow is available in the cloud, and will be available on-premises in 2017. It also supports a hybrid deployment model with Enterprise Gateway to connect applications on-premises (e.g., Oracle, SAP).

STRENGTHS

High-productivity focus. Built.io Flow is a high-productivity integration platform. The Express edition supports self-service configuration-driven integration; the Enterprise edition provides more built-in features and extensibility for custom integrations. Reference client scores for Built.io's productivity were best in class.

Growth and customer relationship. Built.io Flow has acquired 400 paying customer since its 2015 launch. Built.io reference client scores for sales support and professional services were some of the best in the market.

Innovation. Built.io's vision is that everything must be integrated in a personalized and automated manner. The platform is built utilizing microservices and continuous integration/delivery/DevOps practices, enabling the vendor to releases new Flow features and capabilities every two weeks.

CAUTIONS

Functionality. Since its integration focus is more on personal interactions and workflow, Built.io Flow does not support industry-specific standards (e.g., HIPAA, HL7, ACORD, etc.). Support for API management is minimal, with no developer portal or life cycle support, though Built.io plans to address this in 2017.

Versatility. Due to its focus on personal interactions, Built.io Flow may not meet the requirements of enterprises with non-API-enabled applications on-premises. It may also be less attractive to those with batch-based and complex data integration requirements across complex applications and a big volume of data sources.

Mind share. Due to its relatively new entrance into the market, limited visibility and relatively small customer base, Built.io might not be perceived as a suitable strategic partner for more-complex enterprises.

Celigo

Founded in 2006 and based in San Mateo, California, U.S., Celigo launched its second-generation iPaaS offering, integrator.io, in February 2016. The new platforms replaced its original Celigo Integrator offering.

On top of integrator.io, Celigo provides a wide range of prepackaged integrations (Celigo SmartConnectors) and packaged composite applications (Celigo productivity tools), which are sold as independent SaaS offerings.

STRENGTHS

Adoption. While launching integrator.io, scaling business operations and moving established customers to the new platform, Celigo was able to add approximately 400 new clients, thus breaking the 1,000 organizations mark.

SMB-focused growth strategy. Celigo aspires to be dominant in the fast-growing midsize-organization market, especially in the NetSuite and Salesforce ecosystems. This ambition is supported by ad hoc- and citizen integrator-oriented tooling (well-rated by reference clients) and by investments in its direct sales organization, marketing and indirect channels, with a particular focus on the ISVs and SaaS market.

Diversified go-to-market strategy. In addition to a classic IT-centric iPaaS proposition, Celigo's go-to-market strategy strongly targets business buyers. Its SmartConnectors are designed to appeal to business leaders, and its productivity tools, sold by a dedicated sales organization, are totally focused on business buyers.

Value for money. Reference client scores for Celigo were well above average, and among the industry's best in terms of perceived value. This supports the company's ambitions in the midsize-organization space and positions it to enter the market of cost-conscious large

and global organizations.

CAUTIONS

Versatility and functional coverage. Celigo integrator.io lacks API management capabilities and provides minimal support for EDI-based B2B, mobile app, IoT and big data/analytics integration. It received below-average reference client scores for functional completeness. Based on its 12-month roadmap, these limitations will only be partially addressed, so Celigo might not appeal to organizations looking for a versatile and functionally rich iPaaS

Scaling challenges. The deep transitions Celigo went through in 2016 stretched its resources, resulting in below-average reference client scores for overall customer satisfaction, professional services, reliability of the sales team and quality of service for the platform.

North America focus. The company's direct sales organization is primarily focused on supporting the North America market. Despite Celigo's effort to recruit more partners in EMEA and Asia/Pacific, integrator.io will likely have limited appeal for organizations with an international footprint.

DBSync

Founded in 2009 and based in Brentwood, Tennessee, U.S., DBSync provides capabilities for integrating data among databases, applications and cloud sources, via on-premises and cloud deployment models.

With a focus on the integration needs of SMBs to support CRM and accounting operations, DBSync's iPaaS offering, Cloud Workflow, provides replication and integration capabilities for provisioning, monitoring and managing data across heterogeneous applications, data and cloud environments. Environments include Salesforce, Microsoft Dynamics, Intacct, ServiceMax, SkuVault, PocketAdvantage, various popular cloud and on-premises DBMSs, NetSuite and QuickBooks. DBSync pursues a direct-sale strategy and is expanding its focus on providing integration capability via a partner network. ISVs and solution providers can extend their platforms to offer Cloud Workflow functionality on their environment for their customer base.

STRENGTHS

Relevant capabilities and TCO. Reference customers cited overall TCO, speed of implementation and ease of use as key reasons for adopting DBSync, as well as its ability to support data requirements in cloud service integration for business applications, with a focus on SMBs.

Embeddable platform to extend market reach. With a focus on an embeddable iPaaS using ApiCode functionality, DBSync sets out to enable portability of Cloud Workflow integration artifacts in Docker, AWS, Azure and other platforms. This broadens OEM tractions and the partner network, and enables ISVs to develop integrated iPaaS for customers using DBSync.

Alignment to data ecosystems. Reference customers favored its ability to support data that needs to be migrated to or from cloud applications. DBSync is building relevance in digital business by expanding its focus for deploying workloads on big data platforms (including

use of Apache Spark to manage distributed load and data movements involving Spark and Kafka).

CAUTIONS

Market coverage and versatility. Given DBSync's focused traction with SMB customers, deployments predominantly reflect targeted-scope support of departmental-level projects. They do not extensively address diverse buyer personas or integration patterns in this market.

API management. Deployments in this market increasingly seek API support, which is a relatively new focus for DBSync. The vendor is beginning to address these needs through recently added and evolving API access to provision, monitor and manage integration flows.

Guidance and support for best practices. Reference customers cited concerns with the lack of self-help references and methodologies to provide implementation guidance. DBSync is envisaging plans to offer cloudstream libraries to support the user community.

Dell Boomi

Dell Boomi, based in Berwyn, Pennsylvania, U.S., is a wholly owned subsidiary of Dell Technologies that derives from the acquisition of the iPaaS pioneer Boomi in 2010. The company provides the Dell Boomi AtomSphere iPaaS and other PaaS offerings for MDM and API management, all built on a common technology platform.

AtomSphere is available in several editions, differentiated by target market, use case, breadth of functionality and the number of supported endpoint connections. Functional add-ons and further connections are provided a la carte. Standard support is included in the AtomSphere subscription, with premium support options available separately.

STRENGTHS

Growth and market traction. Almost 1,500 new clients in 2016 took Dell Boomi's total close to 5,400, including global, large and midsize organizations worldwide. It grew revenue about 57% in 2016, almost to \$100 million, while maintaining an above-average customer satisfaction rating. This progress has been enabled by significant worldwide expansion of its employees and partner network.

Breadth and depth of functionality. AtomSphere is a well-proven, powerful and versatile platform with several advanced capabilities. It supports varied integration use cases, including B2B and IoT integration. Reference client scores were above average for ability to meet SLAs, overall ease of use and reliability/quality of service. Offerings such as MDM, API management and the new B2B integration, EDI Managed Service, diversify Dell Boomi's proposition and extend cross-selling opportunities.

Sales strategy and business model. Dell Boomi's go-to-market strategy consists of an enterprise- and midmarket-focused sales team, and a global partner network to reach SMBs. It is investing in EMEA and Asia/Pacific presence, in select vertical industries, in new cloud-managed services and in strengthening its professional service delivery capability.

Offering evolution. Dell Boomi's AtomSphere roadmap includes process management, an event management framework, a performance-improvement suggestion tool, a blockchain connector and integration with edge analytics. It also plans incremental improvements for multicloud deployments, advanced life cycle management/DevOps and partner support.

CAUTIONS

Growth pains. Managing 2016's fast growth in revenue, clients and employees affected Dell Boomi's execution, resulting in slightly declining reference client scores for overall customer satisfaction, ease of operations and reliability/quality of service compared to 2015.

Cost. Reference clients rated Dell Boomi below average for actual cost of the iPaaS relative to perceived value. Prospects mentioned expensive pricing as the primary reason for discarding AtomSphere in their iPaaS evaluation processes.

Marketing strategy. With more software megavendors entering the market, Dell Boomi's incremental marketing strategy risks being overwhelmed by the large providers' powerful marketing machines, thus reducing its visibility, especially among megavendors' loyal clients.

Focus on integration personas. AtomSphere historically appealed notably to ad hoc integrators, but Dell Boomi's roadmap addresses integration specialist and citizen integrator requirements only modestly.

Fujitsu

Founded in 1935 and based in Tokyo, Japan, Fujitsu targets digital transformation via a platform of its technology, solution and service offerings, called MetaArc. Fujitsu RunMyProcess (RMP) is an iPaaS offering positioned as a strategic component of MetaArc, and it has multiple-domain features such as integration, process orchestration and application development. RMP's integration use scenario is primarily driven by process orchestration.

RMP's integration capabilities are delivered mainly in the cloud, where customers configure, deploy and manage integration flows. RMP can form hybrid integration via the Secure Enterprise Connector (SEC) to integrate on-premises applications and data. Fujitsu RMP customers are mainly in EMEA (France and Germany) and North America.

STRENGTHS

Versatility. Fujitsu RMP is characterized by high-productivity integration and a development platform that enables quick and easy connection to processes, applications, data, people and things/mobile in the cloud. The platform is at present partially containerized with microservice architecture to support multicloud deployment, more scalability and agility.

Portfolio synergy. Central to Fujitsu's cloud platform vision, RMP will be promoted first to customers for quick and easy digital transformation. RMP incorporated in MetaArc has bigger support resources across Fujitsu globally, to reach broader industry segments and large enterprises.

Geographic coverage. Fujitsu is expanding its customer base in EMEA, helped by its RMP environment being hosted in Germany (on AWS), which satisfies regional customers' legal compliance and service performance requirements. RMP also has presence in North America (AWS), Australia (AWS) and Japan (Fujitsu K5), with further environments to come in 2017.

CAUTIONS

Mind share and awareness. Fujitsu RMP's customer base is still small against those of the leading players, and its growth rate is below the market average (although thousands of trial users keep coming every month). Since MetaArc is a relatively new proposition, it is unlikely to alone drive fast growth for RMP in 2017.

Roadmap and vision. Despite RMP's strategic role in MetaArc, Fujitsu's roadmap for RMP to leverage components in MetaArc is not clear. RMP has weak support for API life cycle management and does not address industry-specific demands or B2B standard support for the iPaaS market.

Ease of use and support. Reference clients scored Fujitsu RMP lower than average in ongoing commercial support and overall ease of use. They noted its complex pricing structure and lack of industry-specific experience or skill set availability.

IBM

Founded in 1911 and based in Armonk, New York, U.S., IBM has an iPaaS offering called Application Integration Suite on Cloud. The suite includes three components for integration specialist, ad hoc and citizen integrator personas, all of which can also be purchased individually: IBM App Connect Professional (formerly Cast Iron Live) is its high-productivity iPaaS component focused on the ad hoc and citizen integrator; IBM Integration Bus on Cloud is its high-control iPaaS component, based on IBM's established enterprise integration software and focused on the specialist integrator; and IBM API Connect provides capabilities to manage and secure the integration flows when exposed as APIs.

IBM's iPaaS offering is delivered through a dedicated private tenant or in a shared-everything, multitenant architecture – currently deployed across four data centers and operated by IBM SoftLayer, with the ability to deploy to over 30 more data centers to meet customer requirements when needed. A hybrid deployment model is also available to give greater flexibility with regards to runtime deployment.

STRENGTHS

Roadmap. 2016 was a year of platform consolidation, and 2017 looks to continue that trend. IBM is looking to make Application Integration Suite on Cloud a comprehensive iPaaS solution, leveraging innovations from across its wider portfolio.

Integration persona support. With multiple iPaaS components available individually or as part of a suite, IBM has one of the broadest sets of user experiences in the iPaaS market today. This is becoming increasingly important as iPaaS becomes a more strategic choice for clients.

Go-to-market strategy. IBM has started to understand what is required to go to market with iPaaS, and efforts late in 2016 are starting to pay dividends regarding its demand pipeline. A newly announced partnership with Salesforce is further evidence of this momentum.

Growth. IBM grew faster than the leading competitors in 2016 by almost doubling both iPaaS revenue and client base. This is to be expected from a company with such a large traditional integration software installed base to leverage.

CAUTIONS

Customer experience. Reference customers scored IBM below the market average for most categories relating to product and vendor support, with only cloudiness, pricing and functional completeness above average. This suggests that clients are yet to see the benefit of recent engineering work on the platform.

Disjointed offerings. IBM's transition to App Connect Professional, Integration Bus on Cloud and Application Integration Suite on Cloud in 2016 likely contributed to the below-average reference customer experience scores. This situation is expected to continue as IBM rolls out platform improvements during 2017.

Broader integration focus. iPaaS is just one delivery model for integration technology, and the bulk of IBM's integration revenue comes from traditional integration platform software. Focusing on multiple integration delivery models could inhibit innovation in IBM's pure iPaaS offerings. IBM's roadmap indicates that these products are converging, however, which should alleviate this concern.

Informatica

Founded in 1993 and based in Redwood City, California, U.S., Informatica is a large, privately owned company and one of the most successful players in the data management market. Informatica Cloud Integration, part of the broader Informatica Cloud proposition, is the company's iPaaS offering.

Informatica Cloud Integration is available in multiple editions differentiated by functional reach and by the number of connected endpoints. Data lake management, MDM, test data management and data security functionality, as well as additional connectors and integration templates, are available separately.

STRENGTHS

Growth and market penetration. Informatica Cloud Integration added 2,500 clients in 2016 to notably expand its client base to about 7,000, with revenue growing 40% to over \$125 million. The company also secured a significant number of new SaaS and system integration partners. Informatica improved customer satisfaction by achieving above-average reference client scores.

Rich offering. Informatica Cloud Integration provides a wealth of data, application, process, API-based and B2B integration options, as well as publish-and-subscribe data distribution (data hub) and data quality functionality. All these capabilities are compatible and integrated

with their on-premises counterparts. The offering targets a variety of users, including citizen integrators. Reference clients scored it above average for functional completeness, overall ease of use, reliability and QoS.

Business strategy. Informatica's goal is to achieve 80% of its revenue from recurring businesses (subscription and maintenance) by 2018. A continuing commitment in Informatica Cloud is key to achieving this goal, although it currently accounts for only a fraction of company turnover.

Fast technology evolution. Informatica strategically aims toward a HIP model, thus anticipating a key industry trend. Among its planned innovations are advanced AI-driven metadata management and autogenerated integration flows, workload-driven automatic choice of the best scalable execution engine, a new microservices-based architecture, distributed hybrid processing, and support for streaming data and IoT.

CAUTIONS

Service-level agreements. Informatica Cloud offers availability SLAs only on client request, not as a standard feature. Reference clients scored Informatica's ability to meet their service-level expectations below the average.

Perception of high cost. Although reference clients scored slightly above average the perceived value of Informatica Cloud Integration relative to the actual cost, a feeling that the product's cost is high is the primary reason why prospects discarded Informatica during selection.

User experience. Informatica Cloud Integration mixes internally developed and acquired technologies. Reference clients reported visible seams between these components, particularly in terms of developer and user experience.

Complex offering. The Informatica Cloud Integration roadmap is ambitious but also risks overwhelming less technically advanced organizations. This complexity will also challenge Informatica's sales and marketing organizations' ability to articulate an increasingly sophisticated value proposition.

Jitterbit

Founded in 2003, Jitterbit is a private company based in Alameda, California, U.S. Jitterbit Harmony Platform, released in 2014, provides full multitenant support for the integration of diverse cloud, interenterprise and on-premises environments, as well as API autcreation and management. Solutions for ISVs and SaaS providers, including prebuilt templates for various common cloud and on-premises integrations, enhance market channels and equip cloud platform partners to provide integration capability as a service to their customers. Jitterbit offers a free 30-day trial of its iPaaS.

STRENGTHS

Time to value and cost of ownership. Reference customers view Jitterbit's tools as attractively priced and delivering good value, relative to those of major competitors. Key factors for selecting it were speed of implementation, ease of use and the ability to integrate

with popular on-premises, SaaS and process automation applications, including Salesforce, SAP, Oracle, Microsoft, NetSuite and Autodesk.

Customer relationship and digital enablement. Jitterbit's partnering posture toward clients results in a strong customer experience and recognition of its ability to understand client business needs and deliver appropriate assistance. An evolving focus to augment API and IoT integration, enable mobile application integration and integrate big data (including MongoDB and Hadoop) positions Jitterbit to support digital business.

Traction and partner network. Awareness of Jitterbit has been growing in the past couple of years, and it now has nearly 1,000 paying customers and approximately 40,000 users of its freemium edition iPaaS. Increasing international presence and expanding market reach via implementation partners and ISVs attract organizations that seek an iPaaS to complement and modernize their integration infrastructures.

CAUTIONS

Documentation and diagnostic support. Reference customers identified diagnosis and error handling as requiring better-integrated documentation. They also want improved implementation guidance beyond the basics and best practices. Jitterbit recently released a self-service portal, crowdsourced forums and a one-hour response SLA to address these gaps.

Skills and personas coverage. Reference customers want greater worldwide availability of certified resources with deep knowledge of Jitterbit's iPaaS. Buyers generally do not associate Jitterbit with citizen integrator capability – they relate the vendor's appeal toward business analysts rather than ad hoc or citizen integrators. Jitterbit is addressing this with new Citizen Integrator Recipes.

Market positioning. Jitterbit is not often viewed by large companies as a single strategic partner for all middleware. Enterprise buyers frequently use its iPaaS to specifically address hybrid integration, cloud connectivity or API creation and management as a complementary strategy to legacy integration products.

Microsoft

Founded in 1975 and based in Redmond, Washington, U.S., Microsoft made Azure Logic Apps generally available in July 2016 as its stand-alone iPaaS offering. Microsoft Flow, a new iSaaS offering aimed at citizen integrators, is built on top of Logic Apps.

Logic Apps includes connectors to SaaS applications, such as Dynamics CRM, Salesforce and Office, as well as on-premises applications, such as SQL Database and SharePoint. It integrates with BizTalk Server 2016 and can utilize other Azure services, such as Functions and Cognitive Services. Microsoft's hybrid integration offering is based on Azure Logic Apps, API Management and Service Bus, combined with this latest addition of BizTalk Server on-premises.

STRENGTHS

Integration personas. Aimed at ad hoc integrators, Logic Apps is a strong addition for the installed base of Microsoft's BizTalk Server (used by specialist integrators in over 12,000 organizations). Microsoft Flow extends this even further to empower citizen integrators.

Global cloud. Available in most of Microsoft's 30 regions globally (and in all by the end of 2017), Logic Apps interfaces can be deployed across Microsoft's global cloud. Further integration with Azure Functions, Machine Learning and IoT Suite, along with usage of Office 365, Microsoft Dynamics and other core applications, will drive global demand for hybrid integration.

Client service. Reference clients scored Microsoft above average on overall satisfaction with the vendor, pricing, and commercial and business support, as well as on the quality and reliability of its sales and professional service teams.

CAUTIONS

Migration support. Microsoft has not yet provided detailed migration support to move integration workloads from BizTalk Server onto Azure Logic Apps. Clients will have to upgrade to BizTalk Server 2016 to take advantage of the built-in Logic Apps connectivity.

Functional depth. Reference clients scored Microsoft below average on overall functional depth and completeness of its iPaaS, which may be due to its short tenure as a generally available product. Microsoft is deploying new functionality every two weeks.

Microsoft-centric roadmap. While Microsoft's 12-month roadmap calls for expanded connectors to support SAP, Oracle E-Business Suite, Workday and ServiceNow, most enhancements will be for deeper integration with the Visual Studio tools and the Azure cloud platform.

Moskitos

Incorporated in 2012 and based in Levallois-Perret, France, Moskitos is a cloud service provider entirely focused on iPaaS. Its iPaaS, Crosscut, was launched in 2013 and provides a range of data, application and IoT integration functionality and API management. Crosscut is implemented on Microsoft Azure, but the company is working on a containerized version of the platform to support multicloud scenarios.

The company primarily operates in France and neighboring countries, and is funded by private investors and French government grants.

STRENGTHS

Adoption. Moskitos rapidly expanded its installed base to almost 2,500 clients in 2016, primarily through successful partnerships with French SaaS providers for the car dealer and pharmacy markets. The company also has several large clients, including prestigious international brands.

Customer satisfaction. Reference clients scored Moskitos well above average in overall customer satisfaction and professional services, and provided good feedback for business and technical support as well. Clients prize Crosscut's cloud characteristics, quality of service, ease of use and functionality.

Focus on ad hoc/citizen integrators. Crosscut was designed to appeal to ad hoc integrators in LOBs, departments and in midsize organizations – for example, by using machine-learning techniques. Moskitos' 12-month roadmap emphasizes self-service integration support by further leveraging machine learning and providing its own and third-party prepackaged integrations via a Moskitos marketplace.

CAUTIONS

Long-term viability. Moskitos has 20 employees, of whom 50% are in product development, and revenue that Gartner estimates in the single-digit million-euro range. Its small size raises questions about its chances to thrive as an independent entity in the increasingly crowded and competitive iPaaS market.

Sales and marketing strategy. Constrained by financial resources, Moskitos' sales and marketing strategy is quite conservative, limited to France, largely leverages key partner marketing programs (Microsoft and CA primarily), and aims to address international markets via partners. These initiatives may not be sufficient for the company to grow revenue and customer base enough to win more market share.

Functional roadmap. Moskitos understands industry trends, but the Crosscut roadmap is primarily focused on established client needs. It does not target EDI-based B2B integration, on-premises platform deployment (supported only partially), data quality or advanced data integration requirements. Organizations looking for a versatile platform may find limited appeal in Crosscut.

MuleSoft

Founded in 2006 and based in San Francisco, California, U.S., MuleSoft provides Anypoint Platform to over 1,000 enterprise customers. It combines cloud-hosted and on-premises integration as well as API management capabilities. Anypoint Platform enables SaaS and on-premises application integration, API creation and publishing, B2B integration via EDI interactions, and asynchronous cloud messaging.

Anypoint Exchange is a crowdsourced repository for connectors, templates and APIs that have been built by MuleSoft and/or its ecosystem of partners and the community; a private tenant can be created for enterprisewide collaboration and engagement. APIs and integration applications can be deployed directly into its iPaaS, which runs on AWS. They can also be deployed into MuleSoft's runtime environment, distributable as a Docker image, to support any cloud, on-premises or hybrid environment.

STRENGTHS

Customer support. MuleSoft scores were above average among reference clients for its commercial and business support, professional service and technical support, and documentation. Clients also praised the iPaaS offering's overall technical quality, reliability and quality of service

Awareness. MuleSoft enjoys broad, global market awareness based on its open-core ESB and strong API management capabilities. In both 2015 and 2016, it was the vendor most often considered by Gartner's iPaaS survey respondents.

Skills availability. Developer interest has been fueled by the community edition of MuleSoft's on-premises ESB, as well as its Docker deployment options, freemium dataloader.io product and Anypoint Exchange repository. More than 60,000 users have downloaded and installed its free or trial technology.

CAUTIONS

Client growth. With sales and marketing emphasizing Anypoint Platform as an enterprise platform for hybrid, API-led integration requirements, MuleSoft's offering may not appeal to those seeking a high-productivity iPaaS for ad hoc integrators. This may account for it adding only roughly 100 net new clients in 2016, even though its iPaaS revenue grew 89% from 2015.

Pricing. MuleSoft continued to raise the prices for Anypoint Platform and add-on components, such as advanced API Management capabilities, in 2016. It scored below average on pricing among survey respondents, and prospects cited high cost as the primary reason for not choosing it after evaluation.

Integrator personas. While MuleSoft's reference client scores for developer productivity were average, client inquiries with Gartner have suggested that the platform requires highly skilled integration specialists. The Anypoint Design Center's flow designer, slated for 2Q17, will provide a low/no-code environment for ad hoc integrators.

Oracle

Founded in 1977 and based in Redwood Shores, California, U.S., Oracle is one of a handful of providers that offer the full spectrum of technology – from the underlying infrastructure through IaaS, PaaS, SaaS and DaaS. Oracle has leveraged this set of capabilities to provide the Oracle Integrated Cloud, with many offerings at each level of cloud service.

Oracle currently has two iPaaS offerings: Oracle Integration Cloud Service (ICS) is its high-productivity iPaaS offering targeting ad hoc integrators; Oracle SOA Cloud Service is its high-control platform targeting specialist integrators. It has many other xPaaS offerings that can be combined with the iPaaS to provide greater productivity. These offerings include Oracle Self Service Automation for citizen integrators, Oracle Process Cloud Service for improved orchestration, Oracle Real-Time Integration Business Insight for business activity monitoring, Oracle API Platform Cloud Service for API management, Oracle Managed File Transfer Cloud Service for managed file transfer and Oracle IoT Cloud Service for IoT integration.

STRENGTHS

Growth. Gartner estimates that Oracle saw fivefold growth in its iPaaS client base in 2016, which included migrating some existing integration software clients to new cloud offerings. This strength looks set to continue as Oracle plans to heavily utilize its existing client base for Oracle Fusion Middleware (estimated to have over 120,000 clients), as well as its large SaaS portfolio.

Global presence. Oracle is one of the world's largest IT companies and has an established global presence in hardware, software and services, as well as a large partner network. Finding Oracle iPaaS expertise should be more straightforward than with some competing

solutions.

Roadmap. In successfully integrating its iPaaS with several of its other xPaaS offerings, Oracle has already proven interoperability between the toolsets. Gartner expects this unification of capabilities to continue, with improved workflow between user experiences being a major theme of its 2017 iPaaS releases.

CAUTIONS

Complex xPaaS portfolio. While the Oracle iPaaS offerings include a reasonable set of capabilities, to get the full set clients have to leverage other Oracle xPaaS offerings (e.g., Oracle API Platform Cloud Service, Process Cloud Service and Real-Time Integration Business Insights). This can result in complex portfolio packaging and subscriptions.

Platform administration. In the Gartner iPaaS end-user survey, clients scored Oracle iPaaS offerings below average on administration, monitoring and management. On average, it took users nine to 12 months to get their first flow into production versus the market average of six to nine months.

Pricing. While the pricing model of ICS is competitive, it came up as the top reason for prospects dismissing Oracle during the RFP process. It was also raised as an issue in the end-user survey.

SAP

Founded in 1972 and based in Walldorf, Germany, SAP's iPaaS offering is framed in its broader PaaS strategy called SAP Cloud Platform (SAP CP – formerly SAP Hana Cloud Platform). SAP CP supports multiple use cases and includes functionality for application, data, process and B2B integration; stream analytics; workflow; API management; IoT integration; batch and real-time data replication/synchronization; and data quality.

Those capabilities leverage the SAP Hana in-memory DBMS and are available in different packages, including SAP Cloud Platform Integration, SAP Cloud Platform API Management and SAP Cloud Platform for the Internet of Things.

STRENGTHS

Growth and market penetration. SAP saw fourfold growth in the number of SAP Cloud Platform Integration clients in 2016, with more than 80% of these organizations using SAP's iPaaS in production. Primarily made up of SAP on-premises and SaaS clients, this client base is spread evenly across the Americas, EMEA and Asia/Pacific.

Commitment and focus. SAP created a business unit dedicated to SAP CP in 2016, for which integration is one of its key go-to-market strategies. This increases SAP's iPaaS viability and will likely lead to more-proactive sales and marketing approaches, targeting organizations not committed to SAP applications.

Rich functionality and versatility. As planned, SAP added IoT integration, high-performance messaging, data preparation and data quality in 2016. It also added Cloud Foundry and OpenStack support, prepackaged integration content, and enhanced compatibility with SAP

Process Orchestration and SAP Solution Manager. These features increase SAP's iPaaS attractiveness and strengthen its position as the default iPaaS option for SAP clients.

Technology vision. The SAP iPaaS roadmap for integration includes rule-based autoscaling, self-healing, 99.99% availability, workflow, a machine-learning-enabled integration solution advisor, real-time API analytics, integration with the SAP Altiscale "big-data-as-a-service" platform and expansion of the platform's geographical coverage.

CAUTIONS

Perception of SAP centricity. Although SAP has improved its iPaaS openness, user organizations still perceive it as only for SAP-centric integration use cases. Because of this perception and low awareness of it (including among SAP clients), the SAP iPaaS is almost never considered by organizations looking for an "any-to-any" iPaaS.

Offering maturity. Reference clients scored the SAP iPaaS below average for cloud characteristics, functional coverage, and ease of development and operation. Despite some improvements in client ratings, it requires further time to mature and evolve.

Customer satisfaction. Reference clients scored the SAP iPaaS below average in overall customer satisfaction, ongoing commercial support, value for money, sales team reliability, professional services and support. This indicates an offering not fully internalized by SAP field organizations, which may pose clients commercial and implementation challenges.

Net-new customer acquisition. The sales and marketing strategies for the new SAP CP business unit are not yet fully baked. It will require efforts to generate sales leads beyond those coming spontaneously from traditional SAP sales and marketing activity.

Scribe Software

Founded in 1995 and based in Manchester, New Hampshire, U.S., Scribe Software is a provider of integration technology platforms.

The Scribe Online platform is a multitenant iPaaS with a number of different subscription models: Integration Service is the general-purpose iPaaS subscription; Replication Service is a data synchronization subscription to enable users to get data from their application portfolio into an analytics tool; Migration Service is a short-term service providing data migration capabilities between existing applications and their replacements, as well as a platform/OEM/distributor model.

STRENGTHS

Go-to-market strategy. Scribe Online has expanded to a three-pronged strategic approach; as well as the direct route to end-user organizations, Scribe also leverages its partner network of over 1,200 system integrators to resell Scribe Online to their clients. The third approach is via SaaS providers looking to embed integration capabilities within their platforms.

Growth. During 2016, the Scribe Online subscription base grew by more than 75%, adding more than 600 new clients to take its total to over 1,400 clients.

Platform productivity. In Gartner's end-user iPaaS survey, Scribe Online received the second highest score for developer productivity and above-average scores for every aspect of the iPaaS offering. Reference clients also reported one of the quickest times to production — typically three to six months.

CAUTIONS

Geographic reach. Scribe Online currently utilizes only U.S.-based data centers, though has the capability to be deployed easily around the world, with a European presence due in 2017. This largely reflects its primarily North America and Europe-based clients.

Market presence. While the initial go-to-market strategy worked well for Scribe and its partner network of ISVs and system integrators, it has resulted in a lack of visibility in competitive evaluations of the iPaaS market. Scribe rarely comes up during inquiry discussions with Gartner clients.

Platform versatility. While Scribe Online is good for typical cloud service integration scenarios, its lack of native API management and B2B management capabilities will likely limit broader adoption. Scribe is looking to address this by partnering with other specialist vendors — a reasonable approach for a company of its size, but one carrying implications for the platform's completeness of vision.

SnapLogic

Founded in 2006 and based in San Mateo, California, U.S., SnapLogic offers Enterprise Integration Cloud for data and application integration, and it is used by over 750 enterprise customers. SnapLogic offers a rich set of native iPaaS capabilities to support cloud service, on-premises, analytics and big data integration use cases.

SnapLogic provides an intuitive, web-based user interface for both specialist and ad hoc integrators. Users can leverage the vendor's more than 400 adapters (Snaps), develop pipelines (integration flows) and create/find/modify reusable patterns.

STRENGTHS

Market traction. SnapLogic added 300 customers in 2016 and had its third year of revenue growth in excess of 100%. It raised \$40 million in funding, appointed a new CTO and CMO, and launched its SnapLogic Partner Connect program to build a global system integrator network.

Product quality. SnapLogic supports hybrid deployments and a variety of use cases, in particular for analytics and big data integration, along with SaaS integration. Reference clients scored it above average for cloud characteristics, technical quality, ease of use and administration.

Client satisfaction. SnapLogic reference clients gave it near-perfect scores for overall vendor satisfaction, ongoing commercial and business support, and the quality and reliability of its sales team.

CAUTIONS

Versatility. SnapLogic does not enable B2B integration to support EDI interactions, or provide API management capabilities (its API management partners 3scale and Apigee were acquired by Red Hat and Google, respectively, in 2016). However, it partners with DiCentral for B2B integration to support EDI interactions.

Market awareness. SnapLogic is still less visible than some iPaaS competitors, particularly outside North America. It is rarely considered compared to the other Leaders by Gartner's iPaaS survey respondents.

Enterprise focus. Marketing, sales and its pricing model all focus on large organizations, making SnapLogic a marginal player in the growing midmarket segment. Prospects cited pricing and not viewing SnapLogic as a strategic partner as the main reasons for disregarding it during selection.

TerraSky

Founded in 2006 and based in Tokyo, Japan, TerraSky has various cloud-related offerings, including consulting, professional services, UI tools, iPaaS, cloud ERP and cloud groupware. Its iPaaS offering is SkyOnDemand, and it is based on DataSpider Servista technology from Appresso. SkyOnDemand focuses on its no-coding data integration capability, putting Salesforce in the center, and supports hybrid integration via an agent deployed on-premises. SkyOnDemand has been available since 2011 in Japan and the U.S., and has around 300 customers.

TerraSky announced in December 2016 a tight alliance with Appresso and Appresso's parent company, Saison Information Systems (SIS), to offer a new iPaaS, DataSpider Cloud, also based on DataSpider Servista. The companies are to jointly develop this new integration platform to increase its cloudiness and quickly add new features. SkyOnDemand will be retired in the near future and its customer base migrated to DataSpider Cloud.

STRENGTHS

Robust technology. TerraSky SkyOnDemand is characterized by high-performance (parallel-stream), high-productivity (no-coding visual design) and high-volume data processing, with minimum memory consumption. It offers over 100 prebuilt integration scenarios. IoT integration is achieved in combination with AWS IoT, Azure IoT Suite or adapters to MongoDB.

Portfolio synergy. TerraSky has been expanding its portfolio, leveraging its established Salesforce presence. It is facilitating application development on Salesforce by providing new UI tools and professional services around AWS as well as for cloud ERP implementation.

Enriched partner alliance. Its alliance with Appresso and SIS enhances TerraSky's consistent vision and strategic direction. Appresso will bring more R&D resources to DataSpider Cloud, with TerraSky providing integration-related features on top. SIS will bring deeper and wider reach to mission-critical assets in large and complex enterprises via HULFT, SIS's MFT offering with more than 8,000 enterprises in Japan.

CAUTIONS

Versatility. TerraSky's cloudiness does not include multitenancy or subtenancy. Its integration capability focuses on data integration, with limited support for other use cases. It needs to expand its adapter support to cover more SaaS and B2B/industry-specific standards (e.g., HIPAA, HL7 or ACORD).

Mind share. Its client base is dominated by Japan-based companies. Lack of market recognition, visibility and references in the iPaaS market outside Japan are major challenges for TerraSky, as it may not be viewed as a strategic partner by potential clients.

Viability. TerraSky's SkyOnDemand will retire in the next few years after DataSpider Cloud is established in the market. There are no clear plans for how clients will be migrated.

Youredi

Youredi is a privately funded iPaaS provider that was incorporated in Helsinki, Finland in 2010.

The Youredi platform is a multitenant iPaaS offering built on Microsoft Azure. With instances of the platform running in the U.S., Europe and Asia, Youredi has a global reach. The platform focuses primarily on global B2B commerce, but can also be used for cloud service integration and on-premises application-to-application integration.

STRENGTHS

Vertical focus. Youredi has focused heavily on logistics, supply chain and financial transaction integration. With a new analytics capability for business activity monitoring to complement its iPaaS offering, Youredi now has a platform that is particularly appealing for global logistics and supply chain organizations.

Innovation. Youredi was one of the first iPaaS vendors to add chatbot capabilities that allow clients to interact with the platform. Gartner expects equally innovative developments to continue throughout 2017.

Vendor relationship. In the Gartner end-user iPaaS survey, clients scored their relationship with Youredi as above average in most categories, including overall satisfaction with the vendor as well as the quality and reliability of its sales team and professional services — commendable given the size of the organization.

CAUTIONS

Customer platform experience. In Gartner's end-user iPaaS survey, clients rated the Youredi iPaaS offering as below average in almost every category, with developer productivity and platform administration scoring poorly. This is most likely due to the complex nature of the market Youredi focuses on.

Integration personas. Due to the complex nature of supply chains, Youredi's decision to focus on providing a platform for specialist integrators means less focus on ad hoc integrators and no focus on citizen integrators to date.

Versatility. The lack of an on-premises runtime deployment option will limit Youredi's appeal for organizations with significant on-premises integration requirements. Youredi does plan to address this in its next-generation platform, currently in development.

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

The following providers have been added because they have evolved their offerings and commercial operations during the past 12 months, as well as collected the minimum number of paid clients needed to meet the inclusion criteria:

Built.io

Fujitsu

Moskitos

Dropped

None

Inclusion and Exclusion Criteria

To be included in this research, a vendor must deliver a service with the following characteristics:

It has to be a cloud service:

Available by subscription and accessible over internet technologies

Available uniformly to all qualified subscribers

Including some sharing of physical resources between logically isolated tenants (subscribers or applications)

Including some self-service provisioning and management by subscribers

Including bidirectional scaling without interruption of activities and with some automation

Including some instrumentation for resource use tracking

It has to be a PaaS:

Encapsulating the underlying virtual or physical machines, their procurement, management and direct costs, and not requiring tenants to be aware of them (optional access is fine)

Delegating to the provider the patching, versioning and health of the platform stack

It has to provide a minimal set of iPaaS capabilities:

Support for multiple connectivity protocols and data/message delivery styles (that is, some combination of API-based, messaging and batch); data and message validation, mapping and transformation; routing; orchestration and adapters for SaaS and on-premises packaged applications, data sources and technology environments

Tools to develop, test, deploy, execute, administer, monitor and manage integration flows, as well as to manage the life cycle of the relevant artifacts (transformation maps, routing rules, orchestration flows, adapter configurations, etc.) via a web-based and/or mobile graphical user interface and/or a command line interface and/or APIs

It has to be enterprise-grade and aimed at enterprise-class projects by:

Providing some support for high availability and disaster recovery

Including some provisions for securing access to endpoints and to the platform functionality

Providing some technical support to paying subscribers

It has to be provided as a stand-alone service – that is, clients can subscribe only to the iPaaS capability to use the platform, not to some other cloud service of which the iPaaS capabilities are an "embedded" subset (e.g., a SaaS application or another form of PaaS, such as aPaaS).

It has to be generally available *as of 1 October 2016 with at least 300 paid customers* by the same date.

Evaluation Criteria

Ability to Execute

Ability to Execute criteria aim at rating providers' ability to deliver an iPaaS solution that offers the expected set of functions, ensuring that customers' integration projects succeed while growing providers' revenue and market share. In this fast-growing and rapidly evolving market, where aggressive new entrants try to win new clients as fast as possible, the most important factors to succeed are:

The platform's ability to suit prospects' functional requirements (*Product or Service criterion*)

The provider's proven track record of enabling integration projects to succeed through responsive support, adequate pricing and the ability to establish positive commercial relationships (*Customer Experience criterion*)

Other important elements for success in the enterprise iPaaS market are:

The provider's installed base and ability to build up a credible and long-term business (*Overall Viability criterion*)

The provider's ability to deliver on the sales strategy with competitive, flexible pricing models for different targeted buyers (*Sales Execution/Pricing criterion*)

A proven track record in keeping pace with evolving market requirements (*Market Responsiveness/Record criterion*)

The provider's effectiveness in generating brand awareness and stimulating prospect interest through sound marketing campaigns (*Marketing Execution criterion*)

A strong global sales and marketing structure and support/professional services, a vast partner network, and multiple, geographically distributed data centers (*Operations criterion*)

In the evaluation process, we paid particular attention to the technical capabilities of the providers' iPaaS offerings (*Product or Service criterion*). We therefore examined each provider's available services and its record in the market for:

Degree of "cloudiness" – How extensively cloud characteristics are implemented. These include tenant isolation; resource sharing; elasticity; scaling; self-service; and instrumentation for tracking, scaling and billing. (*Weighting: Medium*)

Enterprise worthiness – The depth and breadth of support for enterprise requirements, including high availability, disaster recovery, technical support and secure access. (*Weighting: High*)

Functional completeness (breadth of offering) – How effectively the provider implements the iPaaS functionality: core integration capabilities (multiprotocol support and bridging; multiple data/message delivery styles; and data/message validation, transformation and routing), adapters, data quality, development tools, administration, monitoring and management environment, support for secure communication, governance/API management, and community collaboration/crowdsourcing facilities. (*Weighting: High*)

Openness – How open, in terms of extensibility and skills portability, the offering is via support for open standards and open-source technologies; how it enables access to the iPaaS functionality via open APIs (DevOps capabilities); how it supports on-premises deployment of the platform and compatibility with on-premises integration platforms. (*Weighting: Medium*)

Integration developer's productivity – Provision for the integration developer's productivity – model-driven design, integration flow metadata discovery and repository, reusable integration templates, cloudstreams, and comprehensive, easy-to-understand documentation and examples. (*Weighting: High*)

Ease of operation – Provision for integration flow monitoring and management – web/GUI console, command line interface, web APIs, platform backward compatibility and support for seamless integration flow migration across platform releases/versions. (*Weighting: Medium*)

Citizen integrator support – How well the provider enables self-service integration by business users by providing capabilities – a library of self-service cloudstreams, "no-coding" cloudstream customization and development tools, and tools enabling integration experts to develop citizen-integrator-oriented cloudstreams. (*Weighting: Medium*)

Versatility – In addition to CSI, support for use cases such as integration across on-premises applications/data sources, B2B integration, process integration, service composition, integration of mobile apps and IoT integration. (*Weighting: Medium*)

The weightings applied to the product or service subcriterion reflect current buying patterns, which favor ease of use and enterprise characteristics (such as security, high availability, disaster recovery and technical support) over other technical considerations (such as openness, degree of cloudiness and versatility).

Most organizations haven't focused on citizen integrators as a high-priority issue to address, so support for this constituency is not a top priority in most selection processes. However, its relevance has been growing over the past 12 months as application leaders face integration productivity challenges.

Table 1. Ability to Execute Evaluation Criteria

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

Source: Gartner (March 2017)

Completeness of Vision

Completeness of Vision criteria aim to assess providers' ability to meet emerging requirements and drive enterprise iPaaS adoption (in new territories and toward a more strategic positioning), while also growing a profitable and self-sustaining business.

During the next 12 months, success in this market will, therefore, primarily depend on:

Articulating differentiating value propositions and positioning in the market (*Marketing Strategy criterion*)

Devising an effective and efficient sales strategy (*Sales Strategy criterion*)

Having a roadmap capable of addressing new functional and nonfunctional requirements (*Offering [Product] Strategy criterion*)

Formulating a geographic expansion strategy (*Geographic Strategy criterion*)

Other important factors will include:

The provider's ability to understand the evolution of the iPaaS market – for example, emerging use cases such as API management, mobile application integration (MAI), big data and IoT integration; the user organization's growing focus on citizen integrators and adaptive/bimodal approaches to integration projects; and a general market trend toward the hybrid integration platform approach to delivering integration capabilities (*Market Understanding criterion*)

Defining value propositions for selected and well-defined industry sectors or business processes (*Vertical/Industry Strategy criterion*)

Introducing technical and business innovation (*Innovation criterion*)

Addressing these challenges is important for enterprise iPaaS providers to get ahead of the competition, expand their installed base, and grow market share and revenue.

Differentiation in terms of business model is not particularly critical at this stage. As long as the business model supports fast growth and even modest profitability, it will be sufficient for enterprise iPaaS providers to survive and possibly thrive. (*Business Model criterion*)

We paid particular attention to the providers' strategies for the technical capabilities of their iPaaS offerings (*Offering [Product] Strategy criterion*). The relevant subcriteria are the same ones used to rate the product or service criterion in the Ability to Execute dimension, because we don't expect technical requirements to change significantly during the next 12 months. The weightings applied to these subcriteria are, however, different – reflecting Gartner's expectations regarding the evolution of client needs during that time frame.

The scope of iPaaS will expand to cover multiple and varied use cases, and its role will become increasingly strategic, often framed within an organization's hybrid integration platform (HIP) initiative. As this happens, user organizations will primarily focus on versatility, functional completeness, and the developer's productivity and ease of operation – assuming that cloud characteristics, support for enterprise requirements and openness are important, but not decisively differentiating factors. Citizen integrators have become a more visible phenomenon during the past 12 months, but not to the point of making strong support for this constituency a critical factor in the iPaaS selection process. That said, iPaaS providers need to treat citizen integrators as important in readiness for the inevitable need for this capability in future.

To rate a provider's offering strategy, we examined its available roadmap and credibly committed initiatives for (*Offering [Product] Strategy criterion*):

Degree of cloudiness – How extensively cloud characteristics will be improved. These include tenant isolation; resource sharing; elasticity; scaling; self-service; and instrumentation for tracking, scaling and billing. (*Weighting: Medium*)

Enterprise worthiness – How the provider will improve the depth and breadth of support for enterprise requirements, including high availability, disaster recovery, technical support and secure access. *(Weighting: Medium)*

Functional completeness (breadth of offering) – How the offering's evolution expands the iPaaS functionality: core integration capabilities (multiprotocol support and bridging; multiple data/message delivery styles; and data/message validation, transformation and routing), adapters, data quality, development tools, administration, monitoring and management environment, support for secure communication, governance/API management, and community collaboration/crowdsourcing facilities. *(Weighting: High)*

Openness – How strongly the roadmap will enhance platform openness in terms of extensibility and skills portability, via support of open standards and open-source technologies; how it will extend access to the iPaaS functionality via open APIs (DevOps support); and how it will improve support for on-premises deployment of the platform and compatibility with on-premises integration platforms. *(Weighting: Medium)*

Integration developer's productivity – How the provider is planning to enhance the platform's provision for the integration developer's productivity – model-driven design, integration flow metadata discovery and repository, reusable integration templates, and cloudstreams. *(Weighting: High)*

Ease of operation – How the provider is planning to enhance the platform's provision for integration flow monitoring and management – web/GUI console, command line interface, web APIs, platform backward compatibility and support for seamless integration flow migration across platform releases/versions. *(Weighting: Medium)*

Citizen integrator support – How extensively the offering roadmap targets self-service integration by business users by providing vice capabilities – a library of self-service cloudstreams, no-coding cloudstream customization and development tools, and tools enabling integration experts to develop citizen-integrator-oriented cloudstreams. *(Weighting: High)*

Versatility – In addition to CSI, the planned functional extensions to support other use cases such as integration between on-premises applications/data sources, B2B integration, process integration, composite applications, integration of mobile apps and IoT integration. *(Weighting: High)*

Table 2. Completeness of Vision Evaluation Criteria

Evaluation Criteria	Weighting
Market Understanding	Medium
Marketing Strategy	High
Sales Strategy	High

Offering (Product) Strategy	High
Business Model	Low
Vertical/Industry Strategy	Medium
Innovation	Medium
Geographic Strategy	High

Source: Gartner (March 2017)

Quadrant Descriptions

Leaders

Leaders in this market have paid client numbers in the thousands for their iPaaS offering, and often many thousands of indirect users via embedded versions of the platform as well as "freemium" options. They have a solid reputation, with notable market presence and a proven track record in enabling multiple integration use cases – often supported by the large global networks of their partners. Their platforms are well-proven and functionally rich, with regular releases to rapidly address this fast-evolving market.

Leader visions are typically focused on incrementally improving existing capabilities and addressing emerging requirements, while aggressively expanding market share via new channels and through industry or geographic expansion strategies. They have the financial resources to pursue their technology and market vision. Leaders understand what is required to drive the enterprise iPaaS market in terms of technology, adoption patterns, use cases and industry impact. Most of them have already demonstrated these abilities by playing a crucial role (along with other pioneers) in shaping the market into its present form, and showing an understanding of emerging requirements such as API management, citizen integrators, IoT and analytics.

Given the rapidly changing nature of this market and heavy investment from traditional integration vendors, it is likely that other players will enter the Leaders quadrant during the next 12 months. All the current Leaders have the potential to maintain their positions, but this is not guaranteed.

Leaders are not necessarily always the best option. In many cases, other providers may prove more suitable to a given user organization's needs for a variety of reasons, including:

- Geographic coverage

- Technical compatibility with the established technology environment

- Specialized focus on the required integration scenario

- Affinity with the current and/or evolving application portfolio

Levels of support and responsiveness

Already established commercial arrangements

Challengers

Challengers in enterprise iPaaS have been in the market for several years and have notable installed bases of thousands of clients, with a mature offering that is proven for multiple integration scenarios. Challengers also have the financial strength and commitment to compete aggressively in the iPaaS market; consequently, they often offer a competitive platform, at least for certain verticals and use cases.

However, Challengers have a somewhat limited perspective on how the enterprise iPaaS market will evolve, who the buyers are (and will be), what the use cases are and how user expectations will evolve. This typically results in their offerings being more narrowly focused than those of the Leaders, and being on a relatively conservative technical roadmap. Their sales and marketing strategies are somewhat constrained by their limited focus on the enterprise iPaaS market.

Only one provider is rated as a Challenger in this Magic Quadrant. Many iPaaS providers just recently entered the iPaaS arena, so well-established players with mature offerings and notable market presence are relatively few. In such a context, Challengers have the potential to make the transition into leadership positions by articulating a more aggressive and ambitious roadmap, and by putting extra sales and marketing focus on the enterprise iPaaS space. However, they will have to carefully monitor the competition, because some of the best-executing Niche Players may turn into Challengers during the next 12 months.

Visionaries

Visionaries understand the specific requirements of this market and are innovating through a combination of technology, delivery models and go-to-market strategies. In some cases, Visionaries see their iPaaS offering as a key element of a broader cloud strategy (whether SaaS-centric or PaaS-centric), or as part of a bigger HIP play – with iPaaS being one of many channels for the underlying integration capabilities.

Visionaries' Ability to Execute is lower than that of Leaders, because of:

- A smaller installed base

- A certain immaturity in their offerings – often due to a recent entry into the market

- Timid marketing

- Unaggressive and reactive sales operations, or

- A lack of strategic commitment to the market

In a couple of cases, the provider is in the midst of a transition between the first generation of its iPaaS offering and a new, more advanced strategy. Although this evolution shows a progressive approach to this market, it inevitably exposes the provider and its clients to technical and commercial discontinuities as well as migration issues, thus limiting its Ability to Execute.

Most of the providers in the Visionaries quadrant have a background in traditional on-premises integration middleware; as such, they have a good understanding of enterprise integration challenges, although they may not have the sales and marketing expertise required to sell outside of their traditional IT client base. They have entered the market through acquisition, by significantly re-engineering their on-premises products for the cloud or, in some cases, by developing a new iPaaS technology.

Some of the Visionaries are well-positioned to make the transition into the Leaders quadrant during the next 12 months if they manage to execute on their vision and gear up their sales and marketing machines.

Niche Players

Niche Players are small companies – in many cases startups most of which have entered the market during the past few years. Often, they have a relatively narrow focus in terms of the use cases they support, the geographies they serve or the sales strategy they are implementing.

However, their technology is often excellent and their customers show a high degree of satisfaction. Niche Players' offerings can therefore often be the appropriate option for user organizations that, for example, are sensitive to local presence and support, want a close relationship with a provider, or seek a platform that focuses on specific requirements. Provision of these requirements can often offset risks in other dimensions.

Providers in this quadrant are the ones facing the greatest challenges. With many new entrants into the Niche Players quadrant, and many more small entrants entering the iPaaS market targeting this space, Niche Players face the greatest competition. Niche Players are also more likely to be the target of acquisition, because they are often specialized iPaaS players focusing on a relatively narrow function or market that could easily complement an existing broader integration platform. However, a few of them have the potential to become Challengers or even Leaders.

Context

For many, the reality of cloud is here. Application portfolios are hybrid, with many organizations having to integrate between these diverse endpoints. While some organizations with existing integration skills are finding that their established on-premises integration practices can be used to integrate with SaaS applications, many more are finding that their existing approaches are just not delivering fast enough to meet these new challenges. For organizations that never established systematic integration practices on-premises, the thought of having to start now is daunting. The large costs, long delivery times and complex infrastructure builds associated with traditional on-premises approaches are just not in line with today's lean approaches and timelines.

These drivers, plus the rapidly maturing capabilities in the iPaaS, are resulting in increasing interest in this particular market. Many thousands of user organizations have adopted an iPaaS over the past 12 months. In this time frame, Gartner analysts have recorded a spectacular growth in iPaaS interested, adoption and popularity, which Gartner anticipates will continue over the next two to three years, although maybe at a slower pace.

The vendors are also reacting fast, with many having several releases a year. They are rapidly enabling innovative features at a rate that is hard to capture in a report such as this. As with all Magic Quadrants, this report is a snapshot, reflecting the state of play during the time the report was created.

Most if not all vendors have moved beyond the initial use case of data and process synchronization between packaged applications and data sources. They are now focusing on unlocking extra value via API creation and publication, MAI, the IoT, and big data analytics, often within the context of a HIP implementation (for further insight into HIPs, see "Innovation Insight for Hybrid Integration Platforms"). Many are also looking to better enable ecosystems via partner management and self-service onboarding capabilities.

A growing number of providers have developed efficient indirect and OEM channels. Therefore, a growing number of ISVs as well as SaaS and other cloud service providers bundle or resell a third-party iPaaS in their offering.

Increasingly, global, regional and local system integrators incorporate iPaaS offerings in their services and projects, and often have signed strategic agreements with one or multiple iPaaS providers

During the next 12 months, application leaders responsible for integration should look at the providers in this Magic Quadrant when it comes to:

- Supporting line of business/departmental adaptive CSI, B2B, APIs, MAI and, increasingly, IoT projects.

- Looking for rapid and low-cost resolution of simple integration requirements.

- Reducing capital investments in, and ongoing operation costs for, integration technology.

- Complementing established on-premises integration middleware with platforms targeting CSI, MAI, IoT and API requirements – to create a HIP, in the context of a bimodal integration strategy, to support both traditional systematic and adaptive integration requirements.

When evaluating enterprise iPaaS providers, application leaders will have to realize that the competitive landscape is varied and differentiated:

- Some offerings are mature and tested in hundreds, if not thousands, of real-life projects, whereas many providers have a minimal installed base and fledgling field experience.

- Certain offerings cover a wide spectrum of use cases, supported by a rich portfolio of integration content (such as adapters, templates and cloudstreams). Conversely, some players are narrowly focused on supporting a few well-defined requirements.

- Some providers have global ambitions, while others target only well-identified geographies.

- Most providers focus on iPaaS, but a certain number of players come to market with either a broader PaaS proposition or a broader hybrid integration proposition, or offering iPaaS as a companion to other cloud offerings (such as IaaS or SaaS).

- Some offerings are neutral with respect to the SaaS landscape, whereas certain platforms are biased toward a specific, narrow set of SaaS offerings.

Some offerings are cloud-native and available only as cloud services; others are enterprise-native and export established enterprise software to the cloud.

Some providers focus on systematic integration projects, while most target adaptive integration. Many are also moving toward citizen integrator support.

Some providers primarily target large and global organizations, whereas others have a singular focus on the low end of the market. Only a few try to cover the whole spectrum of potential buyers.

A common trait of the larger providers is a horizontal approach when it comes to industry sectors. Most providers' value propositions and go-to-market strategies are built around cross-industry SaaS and packaged application providers' ecosystems. Rarely are iPaaS offerings focused on serving the requirements of a specific vertical. However, some providers have been evolving their strategy in this respect, and are in the process of delivering value propositions for a few selected industry sectors (such as healthcare, insurance, manufacturing, energy and utilities, retail, logistics, higher education, media, telecom, and financial services).

To establish and grow a client base, some of the smaller vendors are choosing to differentiate themselves from the established general-purpose iPaaS vendors by focusing on verticals such as logistics and supply chain, or by focusing on specific integration scenarios such as data synchronization.

When selecting the right iPaaS vendor, application leaders should also consider factors such as:

- Short-term tactical versus long-term strategic use of the platform

- Type and number of endpoints being connected: SaaS, packaged applications, internally developed applications, mobile apps, social media, file systems, databases and so on

- Providers' familiarity with, and track record in delivering to, the organization's vertical industry

- The integration skills of the expected users of the platform

- The iPaaS offering's ability to support emerging integration requirements, such as the IoT, that their organization deems relevant for its business strategy

- The ability to federate the iPaaS with the established on-premises integration platform, whether in support of specific requirements or in the context of HIP initiatives

- SLAs and quality-of-service requirements

- Security and regulatory compliance needs

- Geographic location of the iPaaS data centers and support centers

- The ability to deploy the iPaaS platform in a hybrid mode, both across the iPaaS public cloud and within the client data center

- Availability and cost of iPaaS skills from the provider and external service providers

Cost expectations and available budget

Given the degree of differences between the various offerings in this rapidly evolving market, application leaders should start the selection process after having developed a thorough understanding of their requirements and priorities. Be pragmatic and tactical – due to the dynamic nature of the current market and the expected future consolidation, expect disruption in iPaaS technologies during the next two to three years.

Market Overview

Gartner estimates that the enterprise iPaaS market continued to expand notably during 2016, approaching \$700 million in revenue and growing around 60% in terms of providers' subscription revenue when compared to 2015. However, some providers far exceeded this and, in the case of some smaller vendors, registering triple-digit growth was not uncommon. Gartner estimates that the majority of enterprise iPaaS providers generated less than \$10 million from their offerings in 2016, while several providers generated over \$20 million and some collected around the \$100 million mark.

Other integration technology markets, such as message-oriented middleware, managed file transfer and enterprise service bus, all saw single-digit growth or less in 2016. That makes iPaaS the current jewel in the crown of integration middleware revenue growth.

The more organizations adopt cloud and SaaS applications, the more appealing vendor-managed solutions become. It is expected that the service-based approach for IT will become the preferred option over the software-based approach over time, as end-user organizations look to downsize the operation side of their IT portfolios. This would further challenge the traditional integration vendors seeing little growth in their established integration portfolios, which are nowadays often seen as expensive and complex in comparison to modern iPaaS offerings.

All of the large, traditional integration vendors have now entered the enterprise iPaaS market, for a number of reasons:

- To provide flexible development and test environments to allow greater agility for existing integration clients in their on-premises integration software.

- To provide a "lift-and-shift" option for existing integration clients to outsource the operations of a traditional integration platform to the vendor.

- To counter the penetration of enterprise iPaaS pure-play providers in large organizations, especially at the line-of-business/departmental level

- To address the SMB market, which has previously found these vendors' solutions too expensive or too complex to deploy.

- To reimagine their integration offerings, often within the context of a HIP vision. They leverage their historic knowledge and investment in the space, and combine that with modern, open-source capabilities to build "next-generation" integration platforms in ways

that could not be achieved with the traditional software delivery model used in many of their existing products.

Other powerful drivers for enterprise iPaaS adoption will be mobile app integration and API publishing and management, which will create a growing overlap of, and convergence with, API management and mobile back end as a service (MBaaS) offerings. We expect that iPaaS adoption will also be driven by IoT requirements (although at a later stage), which will determine some degree of functional overlap and create a demand for integration within emerging IoT platforms.

Increasingly, we see a number of the larger iPaaS vendors – whether by market share or size of parent company – adding more channels to the underlying iPaaS platform – for example, as an embedded capability inside SaaS offerings, white-labeling for large system integrators, or as features embedded as integration services within larger PaaS suites or HIPs. These trends are reshaping the enterprise iPaaS market, and redefining the characteristics and attributes required to compete in it.

However, adoption may be hampered by any of the following:

- The lack of standards and skills

- Incomplete offerings

- The nuisance of federating enterprise iPaaS with classic on-premises integration platforms in the context of HIP strategies

- The usual concerns about security and privacy

- The questionable viability of some providers – several players are extremely small and therefore vulnerable to short-term market shocks as well as to the initial low profitability of the subscription business model

This Magic Quadrant identifies 20 providers that met our inclusion criteria. However, we are aware of over 70 iPaaS providers active in the market, with new ones appearing on a regular basis. This level of vendor interest demonstrates the importance of iPaaS to end users, and to vendors as the next generation of integration capability becomes more visible and important. As a result, we expect this market to start to fragment into different segments. Larger players will focus on multifunctional iPaaS offerings looking to target the core capabilities of a HIP implementation; smaller vendors will focus on either targeted platform capabilities or, more likely, targeted go-to-market strategies.

Market consolidation is likely to begin over the next two or three years, as the market approaches the \$1 billion mark, growth slows down and the cost of winning new clients increases. Leadership positions will change, some players will be acquired or simply disappear from the market, and the most powerful providers will gain stable leadership positions. We recommend that end users who are not yet piloting iPaaS projects begin to do so.

Acronym Key and Glossary Terms

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API	application programming interface
AWS	Amazon Web Services
CSI	cloud service integration
HIP	hybrid integration platform
IoT	Internet of Things
iPaaS	integration platform as a service
MAI	mobile application integration

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.

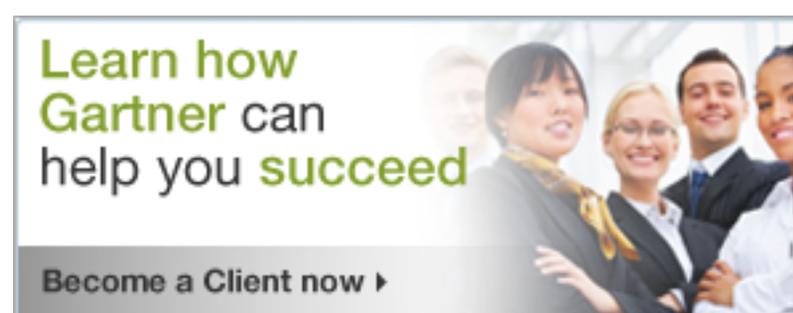
Offering (Product) Strategy: The vendor's approach to product development and delivery that emphasizes differentiation, functionality, methodology and feature sets as they map to current and future requirements.

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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