Gartner

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Market Guide for Conversational Platforms

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The emergent market for conversational platforms — tools to build multiple chatbots and assistants for the enterprise — is set for growth. For success in their chatbot and virtual assistant projects, application leaders must understand the dynamics of and vendors in this rapidly evolving market.

Key Findings

- With only 4% of enterprises having deployed conversational interfaces but 38% planning to or actively experimenting (according to a recent Gartner survey), this market is set for growth.
- The market for conversational platforms is both crowded and fragmented (see Note 1), with a high pace of innovation. This combination makes it confusing and unpredictable for application leaders.
- Both self-service-enabled cloud-based vendors and use-case-specific product vendors are evolving platforms for this market. Each vendor has its own strengths and weaknesses; no vendor can claim to cover all conversational needs and therefore claim the position of preferred enterprise vendor.
- In the future, the market will split into conversational platforms, built around strong proprietary natural-language processing (NLP) engines, and conversational middleware focusing on orchestration and product life cycle.

Recommendations

For application leaders responsible for development strategies and wanting to develop chatbots or virtual assistants:

- Select vendors tactically by focusing on which key performance indicators (KPIs) and capabilities are needed during the next one to two years.
- Put in place an exit strategy, making it as easy as possible to switch vendors by avoiding lock-in of training data, responses and integrations.
- Focus on the middleware functionality of analytics, scalability and orchestration, in order to ensure that you can scale from proof of concept to production and keep improving.

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Strategic Planning Assumption

By 2021, 15% of all customer service interactions will be completely handled by AI, an increase of 400% from 2017.[1]

Market Definition

This document was revised on 21 June 2018. The document you are viewing is the corrected version. For more information, see the Corrections page on gartner.com.

Conversational platforms can be used by developers to build conversational user interfaces, chatbots and virtual assistants for a variety of use cases. They offer integration into chat interfaces such as messaging platforms, social media, SMS, website chat or similar. A conversational platform has a developer API, so that third parties can extend the platform with their own customizations and additions.

Market Description

Chatbots and virtual assistants are gaining tremendous interest in the market. The ability to chat through text, or even talk using voice, with applications, services and brands is fueling a wave of innovation. Popular use cases (as illustrated in Figure 1) include:

- Virtual customer assistants (VCAs) — Automation of call-center-operated chat or even voice-based communication, commonly includes escalation mechanisms for humans to take over the chat.
- Virtual enterprise assistants (VEAs) — Conversational interfaces for employees to simplify their access and engagement with the enterprise and its systems.
- Virtual personal assistants (VPAs) — Generalist assistants for users that broker first-, second- or third-party services and knowledge, commonly deployed on consumer or dedicated devices.
- Chatbots — Narrowly focused chat agents; typically for a specific task such as scheduling, ordering food or booking. Chatbots can be for any audience.

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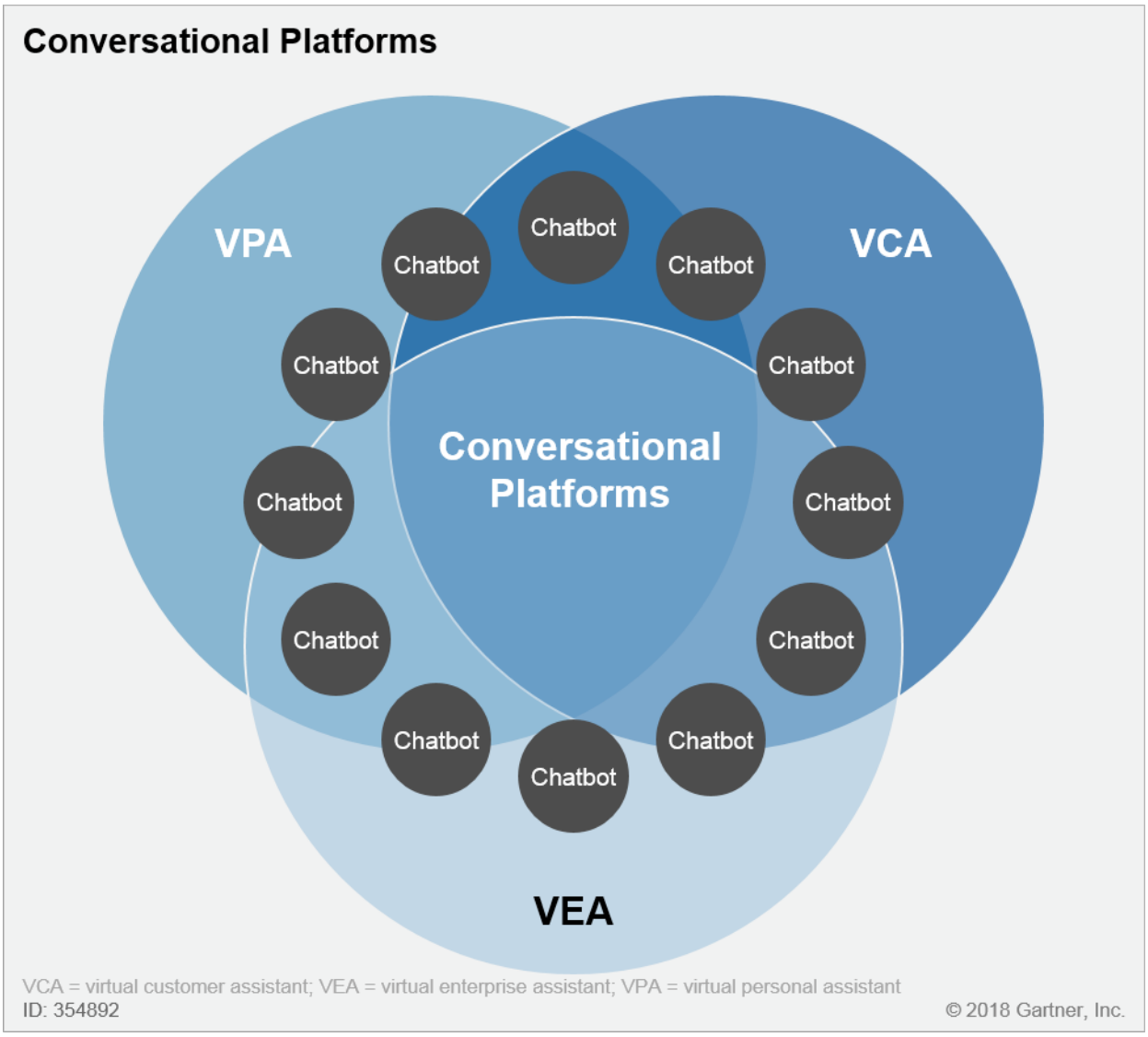
Figure 1. Conversational Platforms



Source: Gartner (June 2018)

Regardless of the use case, the logical architecture and core technological capabilities are similar (see Figure 2 and "Architecture of Conversational Platforms"). This has led to an evolution of the market where vendors have started out creating a product covering one use case, then evolved that product into a platform capable of covering multiple use cases. Vendors that started out in a particular use case often share similar characteristics and challenges (see Market Analysis section for details).

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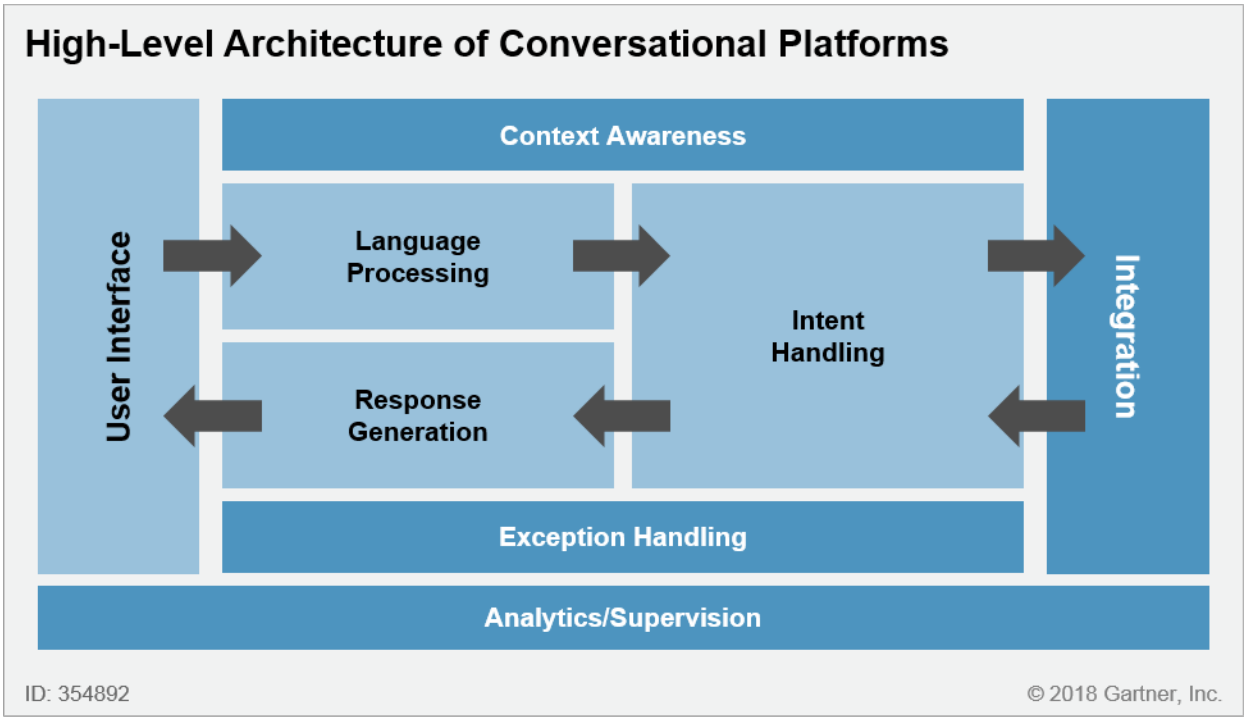
Figure 2. High-Level Architecture of Conversational Platforms



Originally used in "Architecture of Conversational Platforms"

Source: Gartner (June 2018)

Conversational platforms offer an implementation of this logical architecture with significant capabilities in each category, and the ability to — with certain limitations — replace and extend the capabilities in each. In this way, they are a tool that developers can use for a multitude of use cases.

Market Direction

The market for conversational platforms is evolving fast and several mechanisms are at work at the same time. This, combined with a large number of vendors that come from a focus on any one of four different use cases (chatbot framework, VCA, VEA and VPA), makes for a confusing market landscape.

Based on the results of the 2018 Gartner CIO Survey, only 4% of enterprises have currently deployed a conversational interface such as a chatbot or virtual assistant. Seventeen percent are actively experimenting or planning to do so in the short term, and 21% have it in their medium- or long-term planning.[2] During the next year we'll see tremendous growth as a lot of projects are scaled from the initial proof of concept (POC), while the number of enterprises experimenting is likely to stay strong as more move from planning to experimentation.

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This evolution will coincide with technologies involved entering the Trough of Disillusionment on the Hype Cycle. We are therefore likely see an increase in negative media coverage, failed projects and abandonment of the technology. This will especially hurt vendors that have oversold on the capabilities of their platforms, or have been less open about their weaknesses.

The market sees a number of evolutions occurring at once, as described in the following paragraphs.

Capability Race

A relatively low level of knowledge about conversational platforms among buyers has meant that vendors with very simple platforms could carve out a niche, especially in geographies with less-widely used languages that bigger players might not support. However, as buyers' knowledge rapidly increases, the vendors are racing to add more advanced capabilities (see "Architecture of Conversational Platforms").

These additions are not a trivial undertaking, requiring more development and stronger artificial intelligence (AI) skills, because there is less open-source software to leverage. Where open-source options are available, vendors still need to seed it with relevant training data and this sourcing often requires dedicated worldwide teams. Gartner predicts that many vendors that currently have simpler platforms will not be able to keep up with the demand for capabilities. We have already seen several acquisitions, and more are likely. The majority of these future acquisitions are likely to be by enterprise software vendors that need conversational capabilities for their existing offerings, rather than conversational platforms acquiring each other for market share or capabilities. It is highly likely that ERP, CRM, business process management (BPM) and robotic process automation (RPA) vendors in particular will look to make acquisitions during the next 12 months.

Informational Versus Transactional

An informational chatbot requires a different set of capabilities to a transactional one. Informational use cases sometimes need a large number of intents, or the ability to turn written phrases into queries to be used against knowledge repositories. The answers can come from specialist question and answer data sources, or from integration with unstructured data sources that commonly need to be indexed — like a search engine.

Transactional use cases, however, usually rely on fewer intents. The conversations can be longer and need to be more flexible, with multiple paths to the endpoint where a transaction can take place. Contextual information from user profiles or past conversations can greatly enhance transactional conversations, because these are more likely to be repeated.

In the market for conversational platforms, vendors adding capabilities for both informational and transactional processing of intents are covering most of the use cases. Increasingly, customers are looking for platforms to be the basis of multiple chatbots serving different audiences and use cases. Platforms with versatility and capabilities spanning both informational and transactional use cases are likely to be preferred.

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Starting With Self-Service

The vast majority of chatbot or virtual assistant projects starts out as a POC. While it is technically possible to get a chatbot up and running in a day, in reality it will be a pretty poorly implemented chatbot and will not deliver a good experience. Vendors offering a self-service sign-up process that focusses on friction-free onboarding of developers and business users have an advantage. With a low barrier to entry, vendors starting in this way are more likely to be picked for initial exploration, hackathons, testing or POCs. Self-service also gives an advantage for small and midsize agencies and consultancies, when new initiatives start "bottom-up" — from interest among clients and employees rather than with strategic deals.

There is a clear trend toward self-service becoming more common. Some of the vendors in this Market Guide have added this capability during just the past couple of months, while others are strongly considering or are in the process of adding it.

Evolving Toward Middleware Capabilities

Initially, conversational platforms focused on messaging connectors, NLP capabilities and dialogue management. This is changing rapidly as the platforms grow, with some now downplaying their own proprietary NLP engines and focusing on the flexibility of using any available NLP engine freely.

There is also an increased focus on the analytics, maintenance and operation of chatbots and assistants, as well as the orchestration of multiple chatbots. With some vendors we see support for one master assistant routing requests to several back-end chatbots covering different domains. In some cases, the downstream chatbots can be from different vendors. This kind of orchestration requires a middleware layer that takes over some aspects of maintaining training data and dialogue management.

Some vendors in the conversational platforms' space have particularly strong supporting functionalities, such as analytics, orchestration or maintenance of training data — and as the market matures we might see former general platforms pivot to become a strong best-of-breed product instead.

Ultimately, the move toward middleware capabilities might even split the market in two — between conversational platforms built around a core NLP engine, and conversational middleware built around orchestration and life cycle management. Some of the bigger and more ambitious vendors might try to compete in both areas.

Accelerators and Vertical Offerings

With the clients focusing on POCs as the initial entry, vendors are responding by focusing on getting up and running as fast as possible. We see an increasing focus on vertical offerings, on top of the conversational platforms offering ready-made intents or even marketplaces where intents can be traded. Banking, telecom, insurance, healthcare, retail, human resources and help desk seem to be the top domains for these intents. It is likely that this trend will continue, and that a conversational platform of the future will need to offer marketplaces and accelerators in order to remain competitive.

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Voice

Many of the vendors already have, or are adding, voice as a capability. In some cases, we see even more modalities — such as gestures, image and facial recognition, or even voice sentiment — being added. Voice support is, however, still not on par with text-based chatbots and assistants. Conversations taking place in voice tend to be different, with interruptions, confirmational cues and tone-of-voice signaling being common, and still beyond the scope of most implementations. The most common uses for voice are adding hands-free capabilities to applications and for general-purpose assistants designed to be used frequently.

The less common use of voice in customer service is also due to the quality of phone calls. In a mobile phone app, we are able to use the full array of microphones to make a high-fidelity recording and send this over IP. On a phone line, there are multiple lossy compression and decompression steps before the call can be recorded within your call center. However, some vendors are offering voice capability over phone lines using a variety of ways to attempt to solve the quality challenge.

Voice will be a necessary capability for future conversational platforms, because the potential savings from automating voice communication are greater than the potential savings from automating text-based chat. Voice provision requires not only robust speech-to-text and text-to-speech, but also specific capabilities to support the differences in voice dialogue.

Market Analysis

The market for conversational platforms is forming — understanding the market is dependent on understanding the use cases, offerings and distribution/pricing models that are coming together.

Use-Case DNA

Most of the vendors in the market did not start out creating fully fledged conversational platforms. Most had products designed to solve a specific use case, and only later evolved these into a platform capable of solving a multitude of use cases (see Table 1).

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Table 1. Common Strengths and Weaknesses Based on Historic Origin

Origin	Common Strengths	Common Weaknesses
Chatbot Framework — Made from the beginning to support easy creation of domain-specific chatbots	■ Low barrier to entry, can get started really easily with self-service sign-up ■ Versatility, easy to integrate and integrate with, which means it's easy to tailor it to specific needs and extend the functionality	■ Scaling from a few intents needed to create a narrowly focused agent, to the hundreds of intents commonly needed to automate the call center with a VCA ■ Lack of turnkey integration with common customer service platforms and the ability to seamlessly pass the conversation over to a human operative
Virtual Customer Assistant — Focused on automating requests coming into a service desk	■ Capabilities ahead of the maturity of the market ■ Experience in implementation and larger projects	■ High barrier to entry, requiring large projects and a high degree of customization that is done with professional services ■ Limited modularity, extensibility and robust developer APIs
Virtual Enterprise Assistant — Focused on increasing productivity and empowering employees in their access to enterprise software	■ More likely to support multiple modalities and functionality that might not involve conversation at all, such as surfacing relevant information based on listening or context ■ Integration to enterprise software from ERP and CRM providers	■ Lack of turnkey integration with customer service platforms and passing conversations to humans
Virtual Personal Assistant — Focused on making available a general-purpose extensible platform for consumers	■ Often built voice-first and may have a stronger performance with voice applications ■ A lot of attention in the market from presence in consumer products	■ Struggles to customize to a specific domain, having been started as general-purpose

Source: Gartner (June 2018)

Platform Versus Product

While all of the vendors in this guide offer platforms, not all started out that way. Vendors that started out with a platform enjoy the benefits of extensibility and modularity that were built in from the start — and a set of capabilities that are mostly use-case-agnostic. This often means that functionality for specific use cases has to be added; for example, handing over to a human or a robust integration platform.

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Platforms that started out mainly as a use-case-specific product tend to have more functionality supporting the initial use case; often, the platform aspects are added later, making for some odd design decisions.

It is likely that these differences will be eroded further as such platforms progress, but application leaders should be aware of the legacy of their chosen platform.

Deployment Models

The market for conversational platforms is a cloud-dominated market, but with several vendors offering the alternative of on-premises installations or hybrid cloud and on-premises installations. Privacy and security are common blockers when customers wants to move from POCs to production. Thus a cloud-only strategy can limit a vendor's ability to grow in industries such as finance, healthcare and government, where security and privacy compliance is regulated.

Gartner doesn't see open-source as a major avenue yet. Rasa and parts of Microsoft's offering are the only open-source offerings in this Market Guide. The demand from clients for open-source is there, but the lack of offerings forces most to open up the search for vendors into proprietary and SaaS offerings.

SaaS vendors must address privacy and security concerns — by supporting relevant standards, such as the General Data Protection Regulation (GDPR) in Europe, and offering SLAs and certifications — to be viable alternatives. Proper guidelines for good hybrid cloud and on-premises integration are currently lacking from most vendors.

Due to the nature of platforms — being extensible and modular — implementations can still be unsecure and break privacy regulations, even though the platform itself is both secure and privacy compliant.

Pricing Models

Many of the vendors in this Market Guide operate several different pricing models, because no one pricing model fits all users.

The most popular pricing model is simply to charge per intent resolution. This is a model that works perfectly for POCs and smaller deployments. A lack of historic data, however, makes it an unpredictable pricing model for larger deployments.

Other models include charging flat license fees, which is most common on on-premises installations. Increasingly, however, vendors attempt to find success-based pricing models. These often have a mixed reception. In part, inflated expectations mean that success-based pricing seems expensive, leading to less cost cutting than was hoped for. In other cases, IT paying for the cost and the call center pocketing the cost-savings means large companies shy away from it.

There is also some difficulty in the comparison of pricing models, because different quotations often describe vastly different scope and ambition. As the market matures, we would expect the pricing models to become more transparent and to normalize. For now, vendors offering multiple pricing

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models have the advantage. We see room for negotiation with some vendors, primarily those focused on larger deployments.

Representative Vendors

The vendors listed in this Market Guide do not imply an exhaustive list. This section is intended to provide more understanding of the market and its offerings.

Market Introduction

The larger market of chatbots and virtual assistant offerings may include more than 1,000 vendors worldwide. The cut for this Market Guide is composed of those vendors that offer an extensible platform for a variety of use cases, that have capabilities above the average, and/or that have received the most client interest in relation to Gartner inquiries.

The table below lists the vendors with the most common, high-level selection criteria highlighted.

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Table 2. Representative Vendors in Conversational Platforms

			Deployment		NLP		Input Modalities	
Vendor	**Product Name**	**Self-Service Signup**	**Cloud**	**On-Premises**	**Proprietary**	**Third-Party**	**Text**	**Voice**
Amazon Web Services (AWS)	Amazon Lex and Alexa for Business	X	X		X		X	X
Artificial Solutions	Teneo		X	X	X	X	X	X
Conversable	Conversable		X		X	X	X	X
Creative Virtual	V-Person		X	X	X	X	X	X
Eudata	Convy AI		X	X	X	X	X	X
Facebook	Messenger Platform	X	X		X[1]		X	
Google	Dialogflow	X	X		X		X	X
Gupshup	Gupshup	X	X	X	X		X	X
IBM	Watson Assistant	X	X		X		X	X[2]
iFLYEK	AIUI open platform	X	X		X		X	X
IPsoft	Amelia		X	X	X		X	X
Kore.ai	Bots Platform	X	X	X	X		X	X
Microsoft	Multiple[3]	X	X	X[4]	X	X	X	X
Nuance	Customer Engagement Platform		X	X	X	X	X	X

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			Deployment		NLP		Input Modalities	
Vendor	**Product Name**	**Self-Service Signup**	**Cloud**	**On-Premises**	**Proprietary**	**Third-Party**	**Text**	**Voice**
OneReach	Communication Studio and Live Agent	X	X		X	X	X	X
Openstream	EVA		X	X	X	X	X	X
Oracle	Oracle Conversational AI Platform[5]	X	X		X		X	X
Rasa	Rasa Stack and Rasa Platform	X[6]		X	X		X	
Salesforce	Einstein Bots	X[7]	X		X		X	
SmartBotHub	SmartBotHub	X	X	X	X	X	X	X

[1] Uses Wit.ai (owned by Facebook) to customize the built-in natural-language processing (NLP)
[2] Voice offered through IBM Watson Speech to Text service
[3] Microsoft's Conversational Platform is realized through multiple offerings: Bot Framework, BotBuilder SDK, Language Understanding Intelligent Service (LUIS), QnA Maker, etc.
[4] NLP through LUIS will still be cloud-based
[5] Part of Oracle Mobile Cloud Enterprise
[6] Rasa Stack is downloadable as open-source
[7] Limited to existing customers of the Salesforce Platform

Source: Gartner (June 2018)

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Vendor Profiles

Amazon Web Services

Headquarters: Washington, U.S.

Amazon's offerings in the conversational platform space are Amazon Lex and Alexa for Business. The conversational platform is built using the same technology that powers the Alexa VPA, while Alexa for Business manages Alexa devices and skills for enterprise use. Lex leverages Amazon Polly to create human-sounding text-to-voice, and can also be integrated with Amazon Connect to offer voice-based assistants and chatbots over the phone. Amazon's offerings are cloud-only, running on the AWS infrastructure, and use Amazon's proprietary NLP engine. Built-in integrations, to multiple messaging platforms and several back-end systems for handling service requests, are included in the offering.

Artificial Solutions

Headquarters: California, U.S.

Artificial Solutions' conversational platform, Teneo, is designed for enterprise use — offering an integrated development environment (IDE) spanning design, creation, deployment and analysis of conversational systems. Key verticals for the platform include telecom, banking, insurance, automotive and travel/leisure. The company also undertakes work in the field of gaming, the Internet of Things (IoT), smart homes and entertainment. Artificial Solutions offers both cloud and on-premises deployments. Its custom engine uses a combination of linguistic and machine learning (ML) capabilities, and can provide development of multimodal experiences using voice, text, touch and gestures. Artificial Solutions offers a direct sales and implementation approach, but also has a growing list of partners for delivery.

Conversable

Headquarters: Texas, U.S.

Conversable is a conversational intelligence platform for creating conversational experiences on any messaging or voice platform. It includes ICE for designing conversational flows, AQUA for answering questions and general user engagement via ML, Outbound for managing outreach, and Deployment Center for overall management and roll-out of automated experiences across different messaging and voice platforms. (ICE refers to Interactive Conversation Editor and AQUA to Answering Queries Using AI.) Conversable is being used within enterprises for content marketing, commerce and customer care on messaging platforms, including SMS, Facebook Messenger, Twitter and Google Assistant, as well as voice platforms such as Alexa and Google Home. Conversable is a cloud-only service that supports using its own or third-party NLP engines.

Creative Virtual

Headquarters: London, U.K.

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Creative Virtual's conversational suite is composed of virtual agent (V-Person), knowledge management (V-Portal) and business intelligence tools that are used by its customers to provide omnichannel engagement across web, mobile, social, SMS, contact center, service desk, live chat and interactive voice response (IVR). The core value proposition of the product is the V-Engine processing engine and the V-Portal knowledge management portal. V-Engine utilizes ML, semantic algorithms and proprietary NLP systems for intent matching, processing and exception-handling purposes. During the past year, Creative Virtual has made significant improvements to V-Portal and has also introduced a live chat product that is designed to work with V-Person.

Eudata

Headquarters: Milan, Italy

Eudata supports midsize to large enterprises in developing customer relationships by combining voice contact centers and CRM with its conversational platform Convy. Eudata focuses on the banking, retail, hospitality, telco, insurance and utilities verticals, but also has customers in healthcare, travel and transportation. Convy is available in the cloud as SaaS/PaaS and can also be provided on-premises. Alongside its own custom NLP engine, Eudata can act as middleware to work with other conversational AI engines, including those from Expert System, Google's Dialogflow, Microsoft's Language Understanding Intelligent Service (LUIS) and IBM's Watson. This approach allows for the incorporation of legacy bots into the platform, or for a flexible approach to building net new NLP capabilities. Implementation can be provided by Eudata or via system integrator partners.

Facebook

Headquarters: California, U.S.

Messenger is Facebook's conversational app and platform. Developers can build on top of the Messenger Platform and multiple apps can access the same conversation. It can use the NLP capabilities of the Wit.ai framework, which supports 72 languages, and customize with custom entities. Facebook Messenger can be integrated into websites using plug-ins. Facebook Messenger has 1.3 billion active users every month and there are more than 300,000 active bots on Facebook Messenger. Top verticals using Facebook Messenger include professional services, retail, media and entertainment.

Google

Headquarters: California, U.S.

Dialogflow is Google's conversational platform and is available in two versions: Standard Edition and Enterprise Edition. Dialogflow provides an interface to design, train and launch conversational experiences. Dialogflow integrates with Chatbase for analytics and Firebase for serverless functions that can be integrated into a conversational app. The platform uses Google's NLP capabilities and offers more than 30 prebuilt agents. Developers can build a chatbot and deploy it to 14 different platforms including Slack, Facebook Messenger, Twilio, Amazon Alexa and the Google Assistant.

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Multiple languages can be supported within one Dialogflow agent, with customized training for each language. Google Cloud speech integration allows the sending of audio directly into Dialogflow.

Gupshup

Headquarters: California, U.S.

Gupshup sells to enterprises and supports key use cases around marketing, sales and support. The top industries using Gupshup are banking/finance/insurance, telecom, retail, publishing and automotive. Gupshup has prebuilt templates for appointment booking. While Gupshup can provide cloud and on-premises solutions, the majority of its customers use on-premises. Gushup has its own NLP layer and can also build custom models from training sets provided by clients. A unique feature of the platform is its microbot architecture, which allows bot-to-bot communication, opening up a new approach to composing services. Gupshup does not have implementation partners, it supports all development with in-house teams.

IBM

Headquarters: New York, U.S.

IBM Watson Assistant is IBM's conversational platform, formerly known as Watson Conversation and Watson Virtual Agent. Domain-specific solutions are offered to extend Watson Assistant; for example, Assistant for Automotive and Assistant for Hospitality. Watson Assistant is cloud-based and offers three tiers of cloud hosting options at different price points — starting at free to use and increasing according to usage, features and data privacy. This platform utilizes its proprietary NLP engine exclusively. Implementation of Watson Assistant is offered through both IBM and third parties. There is also the possibility of signing up as a developer and starting development through a self-service website.

iFLYTEK

Headquarters: Heifei, China

iFLYTEK's AIUI conversational AI platform includes speech recognition, speech synthesis, semantic understanding, dialogue management and voiceprint recognition. It also supports multiple microphone array schemes, with solutions for background noise issues. AIUI supports far-field recognition, full duplex continuous interaction and context-dependent dialogue. Developers can customize dialogue understanding and multimodal interaction on the iFLYTEK AIUI Open Platform. Currently, there are 300,000 developers, 250,000 applications, and 1.3 billion end users making use of the AIUI Open Platform.

IPsoft

Headquarters: New York, U.S.

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Amelia is IPsoft's conversational platform, which is particularly known for being versatile across a variety of use cases and scalable to large installations. The Amelia platform has a large customer base spanning most industries and use cases. The platform can be run either as a cloud-based or as an on-premises installation. IPsoft uses its proprietary NLP engine. Implementation of Amelia is offered through IPsoft or its partners. Customers can train their own developers on the platform and gets access to a full API.

Kore.ai

Headquarters: Florida, U.S.

Kore.ai targets enterprise customers to support B2C and B2E use cases. The platform has 150 prebuilt bots/skills for rapid customization, and is complemented by a bot marketplace. Kore.ai has a core family of five fully featured bots designed to get organizations up and running quickly, covering banking, sales, commerce, IT help desk and service. While the platform is used in industries such as consumer packaged goods (CPG), retail and travel, Kore.ai's focus on security and regulated industry standards has seen it adopted in banking/finance, pharma, life sciences, healthcare, insurance and manufacturing. The platform can be deployed on-premises, in the cloud (AWS, Microsoft Azure), or using a hybrid approach that means customers can run their platform in the cloud and connect to on-premises applications. Kore.ai's NLP engine uses an approach that combines several techniques, including semantics and ML. In addition, Kore.ai has its own speech engine. It also has its own solutions team to support the platform and bot building for clients, and in 2016 added major system integrators to support client developments.

Microsoft

Headquarters: Washington, U.S.

Microsoft BotBuilder SDK is an open-source offering, and augmented with Azure Bot Service, Microsoft Bot Framework, LUIS and QnA Maker it makes up Microsoft's conversational platform offering. Other Microsoft Cognitive Services are easily integrated into bots created on the platform. While BotBuilder SDK can be run stand-alone, on-premises, the other services making up the platform — such as the LUIS NLP engine — are cloud-hosted and would need third-party alternatives for a full on-premises installation. The conversational platform is fully modular in order to support third-party NLP engines. Implementation using Microsoft's conversational platform is offered through Microsoft Services, third parties or as self-service sign-up. The core BotBuilder SDK is also open-source and can be downloaded free.

Nuance

Headquarters: Massachusetts, U.S.

The Nuance Customer Engagement Platform is an enterprise solution that is optimized for voice, chat or in-app messaging, as well as SMS for interactions. The Nuance platform can deploy conversational agents in Facebook Messenger, Apple Business Chat (beta), WeChat or other third-party messaging platforms via APIs. Support for connected speakers such as Amazon Alexa and Google Home is included. The platform uses Nuance's proprietary NLP engine, which is based on

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deep neural network modeling and semantic processing. The platform takes advantage of contextual information such as the pages visited on websites, time spent on-site and commerce transactions. The platform includes text-to-speech capabilities and can be deployed to handle both real-time and asynchronous interactions, The platform includes analytics capabilities.

OneReach

Headquarters: Colorado, U.S.

OneReach's conversational platform is Communication Studio. This is a cloud-based platform with multiple cloud-hosting options. It offers modularity in the choice of NLP engine and voice-to-text capabilities. A unique aspect of the offering is how it integrates with top-tier telecommunication providers in order to process audio for voice-driven interactions that bypass the public internet to increase quality and security. OneReach offers self-service sign-up, in-house implementation services for the platform, and a partner network to do implementations.

Openstream

Headquarters: New Jersey, U.S.

Openstream offers Enterprise Virtual Assistant (EVA) as its conversational platform. It supports both multiple cloud-based hosting options and on-premises installations. EVA can also operate in offline mode on-device, making it especially suitable for low- or no-bandwidth mobile use cases. The platform is modular and supports full multimodal input/output and extensibility through support for the World Wide Web Consortium's (W3C's) Multimodal Interaction (MMI) architecture. OpenStream offers implementation services, in addition to a partner network.

Oracle

Headquarters: California, U.S.

The Oracle Conversational AI Platform is part of the Oracle Mobile Cloud Enterprise offering — a multiexperience development platform. The UI capabilities of the platform include many controls such as cards, carousels and multimedia components that function separately from the channel. The NLP capabilities of the platform include semantic enhancement and allow for customization to include domain-specific and purpose-specific functionality. The platform supports more than 100 languages, and maintains states and context for the conversational flow. The platform supports deployment in several environments including Facebook Messenger, WeChat, Kik, Skype, Telegram, Microsoft Teams, and Slack. It also supports deployment in websites, mobile apps and connected speakers such as Amazon Alexa and Google Assistant devices. The Oracle Mobile Cloud Enterprise platform includes robust analytics and troubleshooting.

Rasa

Headquarters: Berlin, Germany

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Rasa is an open-source conversational AI platform designed for the enterprise. Domain-specific offerings are provided for insurance, banking, healthcare, telecom, travel and transport, but the platform has presence in most verticals. Rasa is entirely on-premises, via on-premises and private cloud options. The platform has core natural-language understanding to which clients can integrate custom models for performance and domain performance. The dialogue management from Rasa supports both multiple intent recognition and capabilities beyond decision trees. Rasa has a network of partners for implementation and system integration — from smaller agencies to large integrators such as Accenture, Capgemini and Deloitte.

Salesforce

Headquarters: California, U.S.

The Salesforce conversational platform, called Einstein Bots, operates as part of the Salesforce Platform's native chat offering, Live Agent. The UI includes components such as buttons and menus to facilitate navigation. The platform can be connected to business processes and can use contextual information from the Salesforce CRM platform. Einstein Bots uses a proprietary NLP engine, Einstein Language, which Salesforce has further evolved following the acquisition of Metamind in 2016. The NLP engine can be customized to include domain-specific capabilities. Developers can use the Salesforce native programming language, Apex, to incorporate custom logic or external services. Salesforce partners can create training packages, available on Salesforce AppExchange. The platform includes analytics and debugging capabilities.

SmartBotHub

Headquarters: Washington, U.S.

SmartBotHub is a highly scalable platform that is hosted in the cloud or deployed on-premises. It is an omnichannel platform with a sophisticated integration engine. The Bot Builder Portal is the heart of the management console where business product owners as well as technical teams can design, deploy and manage digital conversation agents. SmartBotHub has a rich feature set that includes NLP and customized AI domains; write once and deploy across multiple channels; patented security and authentication services; an enterprise integration engine for fast-track integration into the enterprise with many preconfigured connectors.

Market Recommendations

Vendor selection for conversational platforms is currently tactical. Select a vendor based on your current and immediate needs, not a prediction of your future needs. In the next one to two years we will see a race to provide capabilities, and the vendor landscape will change drastically. Be prepared for changing vendors during this period by having an exit strategy. Your intents and the training data to recognize those intents, the answers you give, and the integrations needed to carry out transaction logic are all strategic assets that should be transferrable to a new vendor with minimal effort (see "Clarify Strategy and Tactics for Artificial Intelligence by Separating Training and Machine Learning").

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Determine the capabilities you need from a conversational platform in the short term. Because of the pace of innovation, guessing what functionality you will need in the future will probably fail. Determine what you need for short term, and select based on that.

Build a product, not a project, on top of the conversational platform, and remember that initial performance is just that, initial. Focus on the middleware functionalities of analytics, scalability and orchestration to make sure you will maximize learning over time. A strong analytics and supervised learning loop is essential for improving the implementation over time; any product without it should not be considered.

Acronym Key and Glossary Terms

ML	machine learning
NLP	natural-language processing
POC	proof of concept
SDK	software development toolkit
VCA	virtual customer assistant
VEA	virtual enterprise assistant
VPA	virtual personal assistant

Gartner Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"Architecture of Conversational Platforms"

"Cool Vendors in AI for Conversational Platforms, 2017"

"Four Use Cases for Chatbots in the Enterprise Now"

"Market Guide for Virtual Customer Assistants"

"Seven Decision Points for Success With Virtual Customer Assistants"

"Market Insight: How to Collaborate and Compete in the Emerging VPA, VCA, VEA and Chatbot Ecosystems"

"Clarify Strategy and Tactics for Artificial Intelligence by Separating Training and Machine Learning"

"Maverick* Research: Machines Will Talk to Each Other in English"

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"Maverick* Research: The Emergent Machine Society — Where Machines Meet, Talk, Scheme, Fight and Marry"

"Predicts 2018: CRM Customer Service and Customer Engagement"

Evidence

[1] "Predicts 2018: CRM Customer Service and Customer Engagement"

[2] The 2018 Gartner CIO Survey was conducted online between 20 April and 26 June 2017, among Gartner Executive Program members and other CIOs. Qualified respondents were the most senior IT leader (CIO) for their overall organization or a part of their organization (for example, a business unit or region). The total sample was 3,160, with representation from all geographies and industry sectors (public and private). The survey was developed collaboratively by a team of Gartner analysts and was reviewed, tested and administered by Gartner's Research Data and Analytics team.

When asked, "What are your organization's plans in terms of conversational interfaces?" (n = 3,138), the responses were as follows:

- "Have already invested and deployed," 4%
- "In short-term planning/actively experimenting," 17%
- "In medium- or long-term planning," 21%
- "On the radar, no action planned," 36%
- "No interest," 22%

Note 1 Representative Vendor Selection

The larger market of chatbots and virtual assistant offerings may include more than 1,000 vendors worldwide. The cut for this Market Guide is composed of those vendors that offer an extensible platform for a variety of use cases, that have capabilities above the average, and/or that have received the most client interest in relation to Gartner inquiries.

Note 2 Gartner Market Coverage

This Market Guide provides Gartner's initial coverage of the market and focuses on the market definition, rationale for the market and market dynamics.

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