IDC MarketScape: Worldwide General-Purpose Conversational AI Platforms 2021 Vendor Assessment
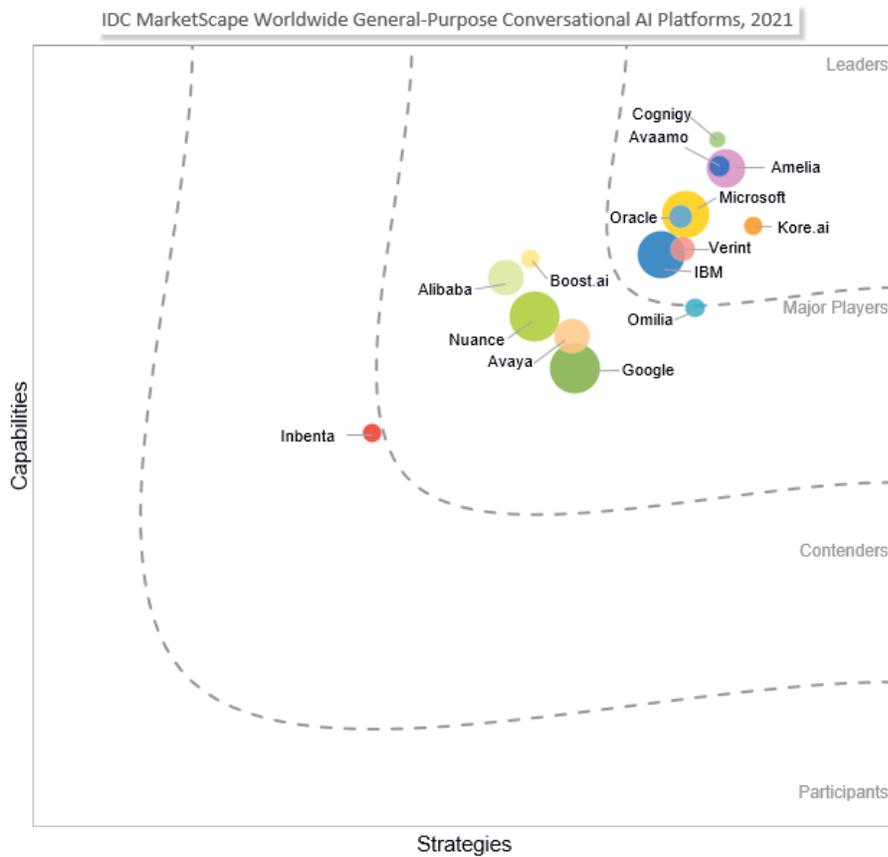
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THIS IDC MARKETSCAPE EXCERPT FEATURES IBM

IDC MARKETSCAPE FIGURE

FIGURE 1

IDC MarketScape Worldwide General-Purpose Conversational AI Platforms Vendor Assessment

Source: IDC, 2021

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

IN THIS EXCERPT

The content for this excerpt was taken directly from IDC MarketScape: Worldwide General-Purpose Conversational AI Platforms 2021 Vendor Assessment (Doc # US47354421). All or parts of the following sections are included in this excerpt: IDC Opinion, IDC MarketScape Vendor Inclusion Criteria, Essential Guidance, Vendor Summary Profile, Appendix and Learn More. Also included is Figure 1 and 2.

IDC OPINION

Conversation is a part of daily life. Humans use conversation to answer questions, solve problems, and interact with other human beings. In today's enterprises, people use conversation to find out how to fix their laptops, how to find out about the new job opening, or to find out why a package hasn't been delivered. Conversation is a key component for the IT help desk, human resources, sales department, and the customer service department and has been an increasingly costly part of the enterprise. For years, organizations have wished for "virtual" or "digital" assistants that could carry some of this conversational load. The good news is that recent breakthroughs and improvements in speech recognition, natural language processing/natural language understanding (NLU), and conversational artificial intelligence are making that wish come true for an ever increasing number of organizations.

Over the past three to five years, due to advances in deep and machine learning, conversational artificial intelligence (AI) applications can understand and respond to conversation in all its various forms, including telephony, voice, text messaging, web messaging, WhatsApp, and Facebook Messenger. The conversational AI software platforms that IDC has evaluated as part of this IDC MarketScape have shown that organizations can develop and deploy sophisticated AI-based conversational agents that can interact with employees, customers, consumers, and the public at large to answer their questions, help them conduct transactions, and provide a wide range of self-service that wasn't possible only a few years ago.

As part of this evaluation, IDC spoke with dozens of organizations using these conversational AI software platforms to develop and deploy applications that are providing great customer and employee service and generating significant return on investment. Among the technology buyers IDC spoke with, we noted a range of maturity in implementations of conversational AI, from point solutions to enterprisewide deployments. If your organization is not using or evaluating conversational AI applications, it should be.

The technologies behind these conversational AI software platforms are good and getting better by the day, but that shouldn't stop organizations from evaluating and implementing these solutions as soon as they can. Conversational AI tools and technologies are rapidly evolving, and new vendors, products, technical innovations, and acquisitions are a frequent occurrence. General-purpose conversational AI platforms can be used for a broad set of use cases, and these platforms can vary greatly in terms of prepackaged offerings and templates, low-code/no-code tools for business analysts and line-of-business (LOB) subject matter experts, and customizability/developer tools. For example, some organizations will benefit from vendors that offer low-code/no-code tools and other features that can eliminate the need for one or more of the initial three steps in the conversational AI-build process (see Figure 2). Other organizations will need the ability to work directly with one or more of these areas to customize aspects such as language, conversation flows, and workflows.

FIGURE 2

Conversational AI-Build Process Steps
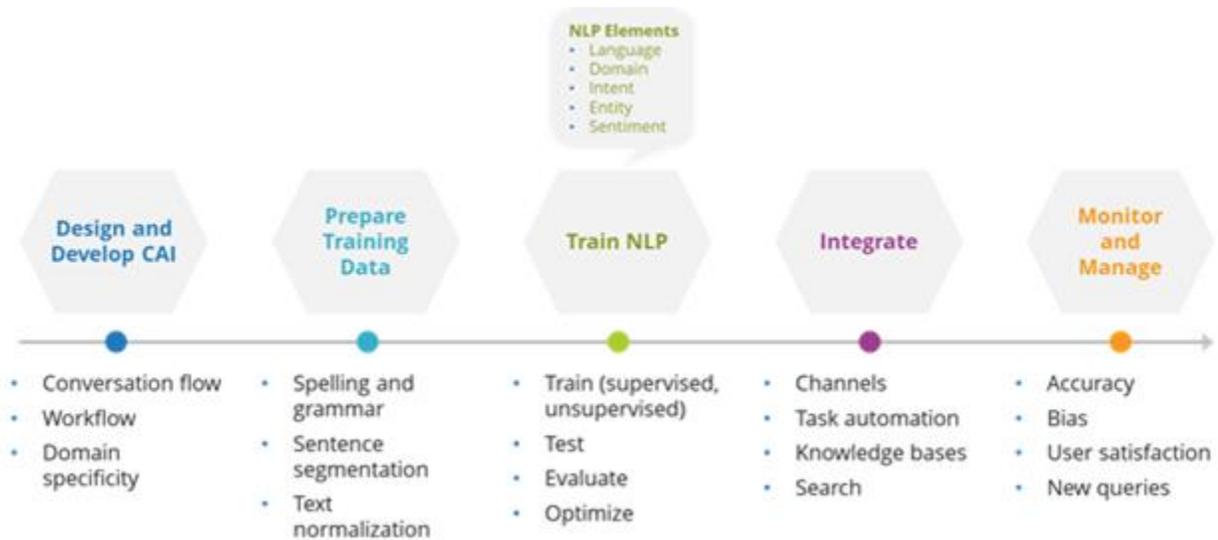
Source: IDC, 2021

IDC MARKETSCAPE VENDOR INCLUSION CRITERIA

The criteria used for the selection of IT suppliers that were evaluated are the following:

- The offering should be commercially available for use as a single product family or a suite of services and purchased by customers for at least one year. IDC will also consider and include new product features and capabilities introduced through the calendar year 2021 as part of vendor strategy evaluation. In addition, IDC will consider these features as part of its capabilities evaluation if there is sufficient customer adoption and use for IDC to properly evaluate them.

- It must have the ability to develop conversational AI services that organizations can deploy and/or also can include in their enterprise applications.

- The product must have at least 50 customers that have used this solution/service in production in calendar year 2020.

- The product must be offered and available on a worldwide basis.

- The offering must include capabilities and APIs for creating, developing, and deploying conversational artificial intelligence solutions.

- The ideal offering should include the following capabilities:
  - Support multiple channels.
  - Offer multilingual support.
  - Offer customized language/dialog support.
  - Integrate with enterprise applications.

▪ It must have achieved at least $10 million in software revenue from the product/service in calendar year 2020.

ADVICE FOR TECHNOLOGY BUYERS

IDC offers the following advice to technology buyers considering conversational AI:

▪ **Assess your starting point.** If your organization is new to conversational AI or embarking on a new use case or channel, decide up front how you will train and develop the system, educate users, and measure success. Consider the following questions:

▪ Does the organization already have a knowledge base and/or archive of past conversations that can be used for training? If not, will the vendor or public sources provide adequate training data?

▪ To what extent will you want to use in-house resources for training and development versus having the vendor manage this for you? Depending on your organization, you may want to consider working with the vendor to train internal resources.

▪ How important is customizability (i.e., the ability for in-house developers to tinker directly with code to make changes wherever they see fit) versus low code/no code (i.e., tools that often include a GUI and are aimed at enabling business analysts and LOB experts to develop with little to no coding expertise)? While some platforms offer both, there are also a number that focus on one of these over the other. Buyers should also be aware that so-called "low code/no code" tools may vary in terms of user-friendliness for those with no developer experience or expertise. Many vendors will offer training on these tools where/as needed.

▪ **Develop requirements.** Regardless of whether you are focused on voice- or text-based channels, consider the type of knowledge, interactions, question answering, and task completion that the conversational AI application will need to handle. Important questions to ask include:

▪ What languages will the platform need to support? How flexible will it need to be in moving between languages?

▪ What channels of interaction are most important for users?

▪ How domain specific will the application need to be? How accurate will it need to be on domain-specific terms?

▪ What other back-end systems will the application need to connect with to answer questions and complete tasks?

▪ **Decide what reporting capabilities you want.** Consider whether and what reporting capabilities you will need to both monitor conversational AI performance and build on the capabilities of the conversational AI. Some of the buyers IDC spoke with wished they had spent more time up front ensuring they could use reporting and analytics to capitalize on the rich conversational data generated by user interactions with conversational AI.

▪ **Test conversational AI in one area, then embrace across the enterprise.** General-purpose conversational AI systems can provide value across a variety of internal-facing and external-facing use cases. These systems can be costly and time consuming to develop, so it is worth considering early how you will build on initial use cases and adjust business processes to expand the reach of your conversational AI investment.

VENDOR SUMMARY PROFILES

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

IBM

After a thorough evaluation of IBM's strategies and capabilities, IDC has positioned the company in the Leaders category in this 2021 IDC MarketScape for worldwide conversational artificial intelligence software platforms for general-purpose use cases.

IBM is a global provider of AI solutions and services, including conversational AI. Watson Assistant is IBM's Enterprise Conversational AI offering. It enables businesses to provide a trusted, personalized assistant that scales across the entire customer life cycle (sales, marketing, service). It is preconfigured to deliver conversational experiences with minimal customization, allowing businesses to deploy in days and not months. The product connects to digital/voice channels, back-end systems, content sources, and customer care platforms. IBM is headquartered in Armonk, New York, with 131 office locations across 96 countries and is publicly held.

Quick facts about IBM include:

- **Year founded:** 1911
- **Total number of employees:** 300,000+
- **Total number of clients:** 1,000+
- **Globalization:** Supports sales and deployments globally with 131 offices in 96 countries and 13 languages natively; a universal language model that allows users to train Watson Assistant in any language
- **Industry focus:** Manufacturing, retail, professional services, transportation, utilities, telecommunications, wholesale, software, healthcare (including payer, provider, and pharmaceutical), and financial services (including banking, insurance, and investment)
- **Deployment options:** Conversational AI applications deployed via IBM's multitenant public cloud offering, IBM Cloud, as well as on premises (For other options, Watson Assistant on Cloud Pak for Data can be deployed on Amazon Web Services [AWS], Azure, or Google. For hybrid deployments, Watson Assistant can be deployed on premises and in one of the public cloud options.)
- **Pricing model:** Typically, consumption based, usually based on number of transactions; discounting available for large or multiyear engagements; annual or multiyear contracts and subscriptions available as well as month to month or pay as you go; outcome-based pricing also available through IBM Global Business Services
- **Partner ecosystem:** 400+ partners including organizations such as Accenture, DXC, Softbank, Sirius Computer Solutions, and Converge

Strengths

- **Strong language capabilities:** IBM has been at the forefront of speech to text and natural language processing and understanding for decades through its work at IBM Research. IBM holds many of the most significant patents in these areas and that research is shown in the very capable speech and language handling in Watson Assistant. This ability results in more accurate and responsive language models when using Watson Assistant applications.

- **Industry and partner expertise:** IBM's channels and industry capabilities are extremely broad and extensive. Through its Global Business Services and its wide array of partners, IBM can bring solid industry and use case expertise to its customers. Customers that IDC spoke with appreciated the level of understanding and capabilities that IBM offered to help develop and deploy conversational AI applications quickly and easily.

Challenges

- **Development timelines:** IBM was one of the earliest vendors in the market to offer a conversational AI platform and has spent significant time and effort building out a comprehensive offering. However, a top challenge cited by survey respondents was the time required to develop conversational AI applications. While IBM is coming out with more tools to enable development by line-of-business users, it needs to do more to promote low-code/no-code and other tools and provide them out of the box to help customers be faster and more self-sufficient in development.

- **Competitive innovation landscape:** The conversational AI tools and technologies market is quickly evolving. IBM boasts a strong research and development arm, including a partnership with MIT, that results in a regular stream of AI innovations. However, to remain competitive, the company needs to ensure it is bringing customers along on this journey and helping them understand IBM's vision of future capabilities and conversational AI innovation, particularly as it compares with other offerings on the market.

Consider IBM When

Consider IBM if you are looking for a strong and knowledgeable product and partner for developing conversational AI applications. As the incumbent software vendor for many organizations, IBM offers a wide range of conversational AI capabilities that can be deployed worldwide in a variety of ways, including on premises and both public and hybrid cloud. These abilities make this an especially attractive option for regulated or secure industries where public cloud may not be an option.

APPENDIX

Reading an IDC MarketScape Graph

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

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

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

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

IDC MarketScape Methodology

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

Market Definition

Conversational artificial intelligence (AI) refers to product/services that are used to develop conversational solutions, like chatbots or voice assistants, which users can talk to via a text- and/or voice-based interface. They use large volumes of data, machine learning, and natural language processing to help imitate human interactions, recognizing speech and/or text inputs and translating their meanings across various languages. Conversational AI products/services are used by organizations to create solutions that can communicate like a human by recognizing speech and/or text, understanding intent, deciphering different languages, and responding in a way that mimics human conversation. This evaluation is focused on those conversational AI platforms that can create conversational AI applications for a wide variety of use cases.

LEARN MORE

Related Research

- *Worldwide Conversational AI Tools and Technologies Forecast, 2021-2025* (IDC #US48051121, July 2021)
- *Worldwide Conversational AI Tools and Technologies Market Shares, 2020: Conversational AI Ramps Up* (IDC #US47993321, June 2021)
- *Creating and Deploying Conversational Artificial Intelligence Interfaces* (IDC #US47571221, April 2021)
- *IDC Market Glance: Conversational Artificial Intelligence Technologies, 1Q21* (IDC #US47540221, March 2021)
- *IDC PlanScape: Conversational Artificial Intelligence* (IDC #US47354821, March 2021)
- *How Important Are Voice-Based Interfaces for Contactless Experiences in the Era of COVID-19?* (IDC #US46855320, September 2020)
- *Conversational AI in the Era of COVID-19* (IDC #US46212119, April 2020)
- *Smart Assistants: Moving Digital Assistance and Worker Augmentation from the Consumer to the Enterprise* (IDC #US45674319, December 2019)

Synopsis

This IDC study represents a vendor assessment of the conversational artificial intelligence (AI) software platforms market for general purpose use cases through the IDC MarketScape model. This assessment discusses both quantitative and qualitative characteristics that provide guidance about conversational artificial intelligence software platform vendors and their offerings. This IDC

MarketScape covers a variety of vendors participating in the conversational artificial intelligence software platforms market and focused on providing platforms that can create conversational AI applications for a wide variety of use cases. The evaluation is based on a comprehensive and rigorous framework that assesses vendors relative to the criteria and to one another and highlights the factors expected to be the most influential for success in the market in both the short term and the long term.

"AI adoption, especially conversational AI, is past the tipping point. The rapid rise of contactless interactions and the need to reduce costs while improving overall service has pushed conversational to the top of the corporate agenda," said Dave Schubmehl, research vice president, Conversational AI and Intelligent Knowledge Discovery. "Organizations are rapidly developing and deploying conversational AI applications in all facets of their business. This evaluation will assist enterprises looking to adopt conversational AI in the near future."

"As organizations progress in conversational AI, many are expanding the use of this technology across a variety of internal and external use cases," said Hayley Sutherland, senior research analyst, Conversational AI and Intelligent Knowledge Discovery. "From helping distributed workforces to self-service knowledge to relieving the IT help desk of menial ticketing and response tasks to deflecting customer calls about frequently asked questions, organizations are realizing that conversational AI can bring value to many areas of the business."

About IDC

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

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