

The Aragon Research Globe™ for Intelligent Contact Center, 2019

Putting AI to Work

30 May 2019 | Research Note 2019-23

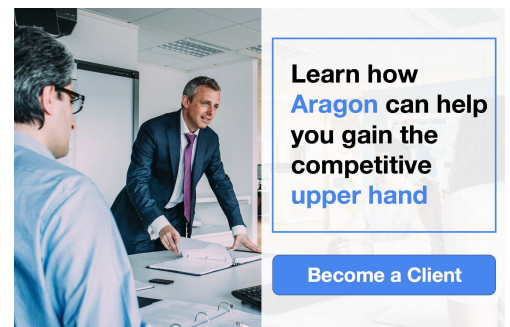
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Topic: Intelligent Contact Center

Issue: Who are the intelligent contact center providers and how will they evolve?

Summary

Aragon Research releases its first Aragon Research Globe™ for Intelligent Contact Center. It examines 13 major providers in a market that is in the midst of a transition from traditional offerings to AI-based ones. This shift will signify the beginning of the rise of digital labor.



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TABLE OF CONTENTS

- Introduction 3
 - The Current State of Intelligent Contact Centers.....3
 - Omnichannel Communication is Now Standard.....3
 - Analytics for the Era of Customer Journey.....3
- Key Trends Driving Digital Transformation 4
 - Cloud Computing..... 4
 - Artificial Intelligence 5
 - Chatbots and Conversational AI..... 5
 - The Rise of Digital Labor 6
 - Cloud Demand is Growing..... 6
 - Contact Center Feature Wars 6
 - The Shift to the Intelligent Contact Center 7
 - Natural Language Processing.....8
 - Google Contact Center AI 9
 - Machine Learning.....9
 - Why AI Now 9
 - The Business Case for Intelligent Content Analytics: Successful Journeys.....10
 - Four Important AI Augmentation Opportunities.....11
- Aragon Research Globe Overview 14
 - Dimensions of Analysis..... 14
 - The Four Sectors of the Globe 15
 - Inclusion Criteria 15
 - Exclusions..... 16
- The Aragon Research Globe™ for Intelligent Contact Center, 2019 17
 - Leaders 18
 - Contenders 23
 - Innovators 27
 - Specialists..... 30
- Getting Started With ICC.....31
- Aragon Advisory 31
- Bottom Line..... 31

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Introduction

The contact center market is evolving to address changes in customer expectations and more stringent enterprise requirements by leveraging emerging AI technologies. This research note identifies the new elements of an intelligent contact center and how enterprises can plan for the shift to a seamless customer experience, and evaluates thirteen major providers in the market.

The communications market will continue to shift over time to standardize multi-modal interactions and seamless integration with business applications. Communications and collaboration are driving this change and will shape the future of contact center. Newer technologies, like mobile messaging, are already carving out places for themselves within the structure of contact center, just as it has gained a large presence in enterprise communications.

The demand for better customer experiences has given rise to the convergence of communications modalities, which allows for communication flexibility for individualized customer service experiences. Since incoming customer service requests will widely vary in context and technology used (laptop, smartphone, etc.), contact centers must have a sufficient communications framework in place to support variations in customer experiences.

The Current State of the Contact Center

Today, the race to contact centers includes being able to offer choice to buyers about whether it is on-premise or in the cloud. This report covers both sets of providers, most of which are in the process of augmenting their offering to offer more choice.

Omnichannel Communications is Now Standard

When it comes to omnichannel communications, there are many business use cases. Different users want—or require—different forms of communication based on roles, mobility, and convenience. For example, sales representatives must coordinate with the busy lives of today's customers; this means navigating the challenges of coordinating multiple moving parts and mobile schedules. Relying on returning emails or missed phone calls is probably not the most efficient method of communication today because these methods are often not as instantaneous or mobile-friendly as messaging, for example.

Optimally, outreach efforts must be omnichannel and acknowledge the technology that customers increasingly want to use, such as messaging and video. While still valuable, phone calling and emailing are only a part of the communications landscape. A digital communications platform equips businesses with multiple forms of outreach capabilities to successfully compete in the digital world and optimize efforts.

Analytics for the Era of Customer Journeys

Content analytics refers to the use of analytics to derive insights from content where the text, voice, or video—or a higher-level abstraction of meaning, called a concept—has been organized in a model that can be mechanically processed. Analytics, when applied to communications,

enhances customer journeys through appropriate communication suggestions in real time, providing insights for the call's events. Aragon expects that the demand for voice analytics for contact center and sales will grow dramatically. In the instance of a sales call, voice analytics can offer valuable real-time insight for the sales representative who can then adjust their approach to maintain the satisfaction and engagement level of the prospect.

For contact center, voice analytics means optimization. Sentiment analysis—the ability to detect emotion from voice input—is key for customer service requests where a rep must effectively address a customer's needs and, ideally, maintain that customer's loyalty. Sentiment analysis can offer call reps insights into the consumer's experience, which can then be used to tailor the remaining interaction to enhance or correct anything undesired. Higher quality analytics can ensure that proper adjustments are made in real time. The “real-time” element of analytics is invaluable because interactions must be optimized in a (usually) very short window of time. This length of time can either make or break a customer for life.

Key Trends Driving Digital Transformation

From a consumer or enterprise user's perspective, digital transformation represents an enterprise's efforts to provide visibility and connectivity throughout their personal customer journey. Two technology trends—the adoption of cloud computing and the maturation of artificial intelligence technologies—are responsible for creating, and to some extent fulfilling, these expectations.

Cloud Computing

The rapid embrace of cloud computing, specifically the Software as a Service (SaaS) model, has created challenges and opportunities for enterprise application providers, including contact center solution vendors. Customers expect their applications and data to be available via any channel whenever and wherever there is an Internet connection.

For a modern consumer or enterprise user with an app-centric view of the world, obtaining product information or solving a problem with a product requires contact with the enterprise and they expect to be:

- Recognized—Authenticated.
- Remembered—An intelligent contact center (ICC) customer profile should include historical data about their account and any previous ICC interactions.
- Understood—The ICC agent(s) should identify the issue, articulate it to the customer, and get confirmation to ensure understanding.
- Satisfied—An ICC should ensure that the issue has been resolved by requesting confirmation after presenting the results, findings, or recommendations to the customer.

The opportunity comes in the form of options to differentiate by providing more personalized services and more automated, yet engaging, customer journeys. These app-savvy customers are digital-ready: they have used consumer and enterprise apps in the cloud and expect to consume functionality in manageable units, and to mix and match functions from different vendors when necessary. They want integration without becoming integrators.

Artificial Intelligence

With any sufficiently complex technology or system, early adopters generally require specialized knowledge. From early automobile drivers who had to understand fundamental machine principles, to early telephone users who relied on trained operators to make long distance connections, to early personal computer users who had to deal with arcane operating system instructions, new technology is generally accompanied by pain. As the technology matures, levels of abstraction emerge, and the benefits of the technology are gradually democratized.

From hand cranks to electric starters, balky gearboxes to continuously variable automatic transmissions, and now from learning the rules of the road to learning how to relax as an autonomous vehicle transports you to your destination, people have been conditioned to expect that, eventually, the machines and systems will perform the low-level tasks and adapt to the people rather than vice versa.

Intelligence: Chatbots and Conversational AI

Software applications are making their way into mobile messaging conversations and contact centers in the form of a chatbot, embedded with natural language processing (NLP) capabilities.

Chatbots define the customer or user experience (CX/UX) and are often used as the first touchstone in customer service communications, especially requests initiated online. Artificial intelligence (AI) chatbots, or what we refer to as conversational AI, can be retrofitted to an existing application to improve its performance and extend its life without requiring a complete re-write. Adding conversational AI is simpler, quicker, and more economical than creating a new natural language interface for an application.

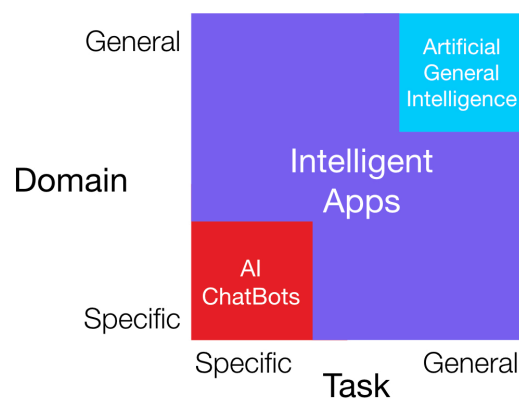


Figure 1: AI chatbots—the more specific, the better.

Conversational AI must be able to perform syntactic and semantic analysis of the input to determine the intent of the user—natural language understanding—and then identify and initiate an appropriate response. Responses may be in many forms, from pre-programmed outputs mapped from an input, to complex, data-generated narratives (natural language generation). While conversational AI is part of the solution, it is not *the* solution; AI chatbots can enable

conversation with customers, partners, and employees, but usually must be integrated with applications that offer functionality indicated by the user.

Figure 1 on page 5 depicts the sweet spot for conversational AI: acting as the conversational interface for an application that has a specific domain, such as a customer service request, and a well-defined set of potential actions, such as “provide a refund,” or “initiate a service/repair request.”

The Rise of Digital Labor

One of the big aspects of the rise of AI is understanding the shift to digital labor (see Note 1). Bots, or fully-featured digital assistants, can be looked at as a digital labor element. Today, nearly all contact centers are staffed by humans, but bots are rising as they get better at handling specific repeatable use cases.

While deploying a bot may be cheaper than a human, the key issue of digital labor is understanding the different levels that may be delivered by technology providers and being able to plan for their deployment—including the allocation of costs. Technology providers may not charge that much for basic Q&A bots today, but that is expected to change.

Prediction: *By YE 2021, digital labor will become a key feature of intelligent contact center offerings. This will force enterprises to do planning for the ratio of human labor to digital labor.*

Cloud Demand Is Growing

While cloud ICC providers are growing faster than their on-premise counterparts, nearly every large ICC provider now supports cloud. Given certain sets of issues in contact center, we don't expect all large enterprises to be making a move to cloud anytime soon. That said, some want parts of their operation to be cloud based and providers are stepping up to meet these needs.

Contact Center Feature Wars

The feature wars in contact center are around use cases, such as inbound and outbound, omnichannel communications channels, and integrations with CRM. Additionally, having either native workforce management capabilities or offering a best of

Note 1: Digital Labor Defined

Digital labor is a term that applies to the automation of tasks that are performed by computer applications. These tasks were formerly performed by humans.

Digital labor can be used for data entry, for warehouse operations by a robot, or in call centers to solve the problems that humans are having with a particular product or service.

One thing is clear: digital labor is here to stay.

breed capability has not been as large of a discussion point from a support perspective.

Voice quality and global availability continue to be critical issues, no matter what the size of the enterprise. While some of the largest ICC providers offer their own global voice network, many actually use another provider's infrastructure. It is important to understand whose voice platform is actually being used to have a true understanding of the quality being delivered.

While all of this is important, the next big wave for the contact center is adding intelligence to applications so that customer journeys can be sped up. This is where artificial intelligence comes into play and paves the way for the shift to what Aragon calls the intelligent contact center.

The Shift to The Intelligent Contact Center

Enterprise buyers are growing accustomed to the cloud model of application delivery with frequent updates. As their business-critical applications—including contact centers—move from on-premise solutions to cloud-based solutions with distributed resources (like remote human agents), they expect an ongoing innovation stream and interoperability with market-leading products in adjacent or complementary spaces to add functionality or data.

As the people-centric model of collaboration spreads in large enterprises, business as usual for software vendors is not a long-term option. Contact center providers will need to focus on the new way of working and justify further investments by meeting specific requirements:

- Faster first call resolution—Improves customer satisfaction, saves the cost of rework.
- Lower customer effort/time—Improves customer satisfaction, reduces contact center resource requirements.
- Reduced customer churn—A result of meeting the first two requirements.
- Lower costs for every function—Call handling, escalations, etc.
- Improved agent experience—A result of reduced stress and frustration through prescriptive insight.

From a business viewpoint, this implies a need for product innovation and partnerships. From a technology viewpoint, it demands systems that can improve over time—learning from experience—to help customers extract value from their own data rather than relying on the vendor for constant insights. That requires practical applications of AI.

Prediction: *By YE 2022, AI-based contact centers will be able to identify the real issue a customer is facing 50% faster than traditional approaches.*

The shift to intelligent contact centers will be gradual, but not without bumps along the way. The use of AI is not without problems and not all providers will be successful in the transition.

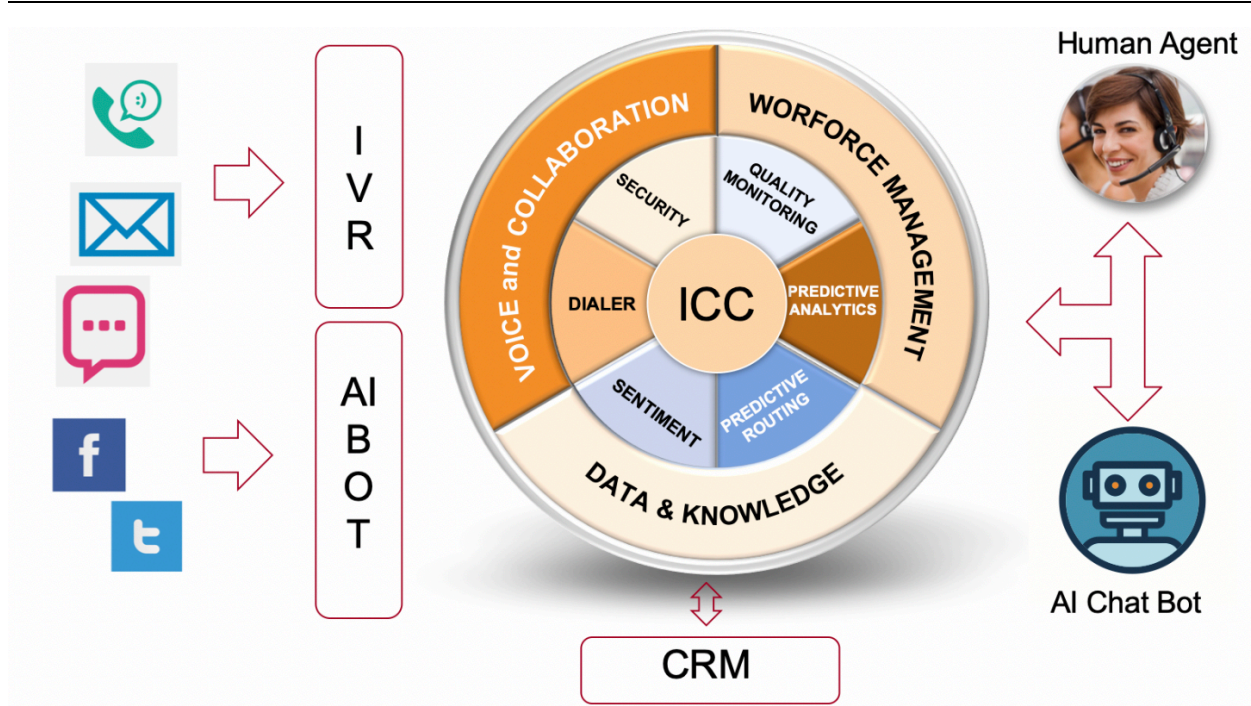


Figure 2: The intelligent contact center will require balancing human and digital labor.

Natural Language Processing

While most application users will not recognize or care about the underlying details, the proliferation of artificial intelligence technologies in consumer products and enterprise applications has created the expectation that human-computer interfaces (HCI) will evolve to place more of the burden of understanding on the system than on the user. Natural language processing (NLP)—or at least some level of NLP—is becoming an expected feature for interfaces in virtually every domain.

Google Contact Center AI

To date, many providers, while offering omnichannel capabilities, have focused on basic chat and have looked to Google, among others, for help with AI. Google Cloud's Contact Center AI solution has been in beta since 2018 and should be generally available later in 2019. Google Cloud's Contact Center AI solution is one to watch, given its strategy to integrate its conversational AI technology within its growing network of partner-led solutions (see Note 2).

Machine Learning

Machine learning (ML) refers to algorithms and applications that can improve their performance with experience (exposure to data) rather than re-programming. Deep learning (DL) is a biologically-inspired subset of ML that can perform complex learning and identification tasks by successive refinement from concrete digital representations to abstract concepts. For example, facial recognition algorithms may start with digital images at the pixel-level and identify edges, then shapes, then objects, and finally specific facial features.

Prediction: *By YE 2021, 40% of ICC providers will leverage multiple deep learning algorithms for faster problem resolution.*

ML has been successfully applied to problems ranging from speech recognition to recommendation engines to diagnostic assistants. The perception today is that "machines" should be able to identify customers as individuals, remember relevant information about previous interactions with them (contextual, historical data), and choose an appropriate next action when supplied with sufficient data. With modern ML, that is a reasonable expectation.

Why AI Now

1. Customer Expectations are Evolving Faster Than Enterprises Can Respond

The need to resolve problems faster and streamline customer journeys is one of the reasons enterprises are looking for ways to automate contact center processes to resolve customer issues with faster rates of productivity and resolution.

Artificial intelligence can provide an edge to the enterprise because software applications can be taught to recognize and

Note 2: Google Contact Center AI Partners

Google has a growing set of partners that are planning to leverage the forthcoming Google Contact Center AI offering. These include:

- 8x8
- Accenture
- Avaya
- Cisco
- Deloitte
- Five9
- Genesys
- KPMG
- Mitel
- Salesforce
- Talkdesk
- Twilio
- Vonage

react to a business problem faster and often to get to the heart of a problem and offer a resolution.

2. Consumers Expect Personalized and Consistent Experiences

Consumers have very high expectations today. They expect fast customer service, regardless of their age. AI is one of the main enablers for being able to deliver faster outcomes in customer service.

This growing set of expectations is what will fuel the race to the intelligent contact center. It will drive acquisition of AI firms by contact center providers and overall consolidation in the market.

We see no signs that consumers will change their expectations. Traditional IVR approaches will give way to AI-based conversations, powered by natural language processing.

3. NLP Means Understanding Sentiment and Predicting the Reason for Customer Engagement

Due to technologies such as natural language processing (NLP), software applications can now participate in mobile messaging conversations in the form of a chatbot.

For practical purposes, chatbots define the customer or user experience (CX/UX). This partitioning of functionality makes it possible to retro-fit an artificial intelligence (AI) chatbot to an existing application, which can improve its performance and extend its life without requiring a complete re-write. Adding an AI chatbot is much easier, faster, and less expensive than creating a new natural language interface for an application.

An AI chatbot must be able to perform syntactic and semantic analysis of the input to determine the intent of the user—natural language understanding—and then identify and initiate an appropriate response. The response may be a simple utterance that was pre-programmed to map to the intent of the input, or it may be a more complex narrative generated from the data, or natural language generation. It is important to remember that AI chatbots are part of a solution but are not the solution itself. They can enable conversation with customers, partners, and employees, but they must typically be integrated with applications that provide the functionality indicated by the user's intent.

In an ICC, the customer may be routed to an AI chatbot if it appears that the issue can be resolved automatically based on historical data and the initial input from the customer. The ICC should monitor progress towards problem resolution and seamlessly hand off the session to a human agent if the AI chatbot isn't making progress towards the goal or if the customer exhibits signs of frustration or other negative emotions.

The Business Case for Intelligent Content Analytics: Successful Journeys

As previously mentioned, content analytics is the ability to derive insights and understanding from voice, video, images, and documents. The intelligence—a higher-level abstraction of meaning, called a concept—has been organized in a model that can be mechanically processed.

Analytics for communications can help streamline a customer journey by suggesting the right form of communications at the right time and by providing insights into what happened during a call. Aragon expects that the demand for voice analytics in both the contact center and in sales will grow in a dramatic fashion.

Prediction: *By YE 2021, 50% of enterprises will deploy content analytics for a specific business use case.*

It is crucial that a communications journey map captures emotions and feelings from all participants, whether it is two people on a call or a group video conference. Capturing the attention, attitude, goals, and mood of each participant is important.

The end result of deploying content analytics means that the ICA will be able to:

- Predict Behavior
- Prescribe Solutions
- Intelligently Route

Four Important AI Augmentation Opportunities

Modern AI technologies excel at natural language understanding (NLU) and classification problems (see Note 3). Almost any contact center customer interaction will benefit from advanced NLU to capture more contextual data, and most processes can be improved by leveraging historical data and machine learning to identify better outcomes. With so many opportunities to leverage AI, no ICC solution, new or enhanced, is likely to realize its full potential for some time. Buyers should evaluate AI claims carefully. As they begin to evaluate ICC solutions, at least four AI-infused processes should be on the buyers' checklist and vendor roadmap.

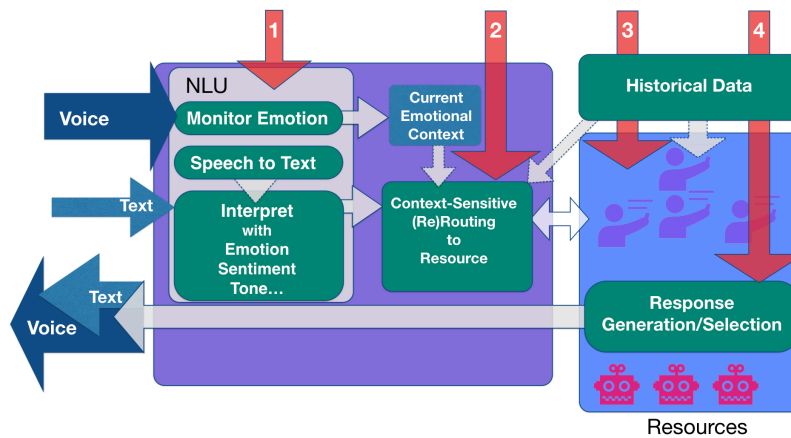


Figure 3: Intelligent augmentation scenarios.

These use cases include:

1. **Issue Identification:** The first step in the ICC process is to identify/authenticate the user and “understand” their issue or intent. There are few things more annoying than calling into a contact center and being restricted to a few menu options, none of which appear to be related to the problem at hand. Using a combination of natural language understanding and emotion/sentiment/tone analysis, an ICC can more accurately represent or classify the current request in context. AI can improve the likelihood that the customer’s intent is recognized at the outset, and if it changes during the conversation/interaction, the system should recognize and address that, too.

Prediction: *By YE 2022, intelligent contact centers will be able to identify the real issue a customer is facing 50% faster than traditional approaches.*

2. **Intelligent Routing:** When the ICC has classified the inquiry into a known category or a general “unknown,” it must route the request to the appropriate human or bot for resolution. In the past, the process of matching a request to a resource has ranged from first-come, first-served to routing customers with complex questions to more experienced human agents and simple questions to bots. An ICC can capture more context about the customer, the question, and the available agents to make a better match.

Note 3: Defining Modern AI

The scope of *artificial intelligence* (AI) as a computer science discipline was circumscribed in the problem statement of the 1956 Dartmouth Summer Research Project on Artificial Intelligence as “... *how to make machines use language, form abstractions and concepts, solve kinds of problems now reserved for humans, and improve themselves.*”

The predominant approach to early AI research was to codify and capture human expertise as formal rules that could be processed using symbolic logic. In this classic approach, the knowledge embodied in the system was the basis for learning, which typically involved changing rules or an explicit model.

We use *modern AI* to describe today’s primary approach, which leverages advances in deep learning, a biologically-inspired approach to machine learning that is enabled by recent advances in hardware (e.g. GPUs, TPUs, etc.) and software (e.g. Apache Hadoop, Spark, etc.). The focus has shifted from capturing and embodying relevant knowledge to a model that learns from experience with data. It is largely based on statistical analysis rather than symbolic logic.

Using historical data from outcomes involving the customer and derived data about their current emotional state (based on voice analysis and/or tone analysis of their words) allows a more precise understanding—classification—of the issue. In some cases, it may be best to have the person speak to the same agent they have worked with in the past, or someone of similar age or background, etc. In other cases, it may be purely a matter of specific expertise. An ICC can learn from experience what works for specific classes of Individual/Issue combinations.

3. **Guided Agents:** Once the appropriate agent, human or bot, has been matched with the customer, the ICC can continue to provide value by guiding the agent towards a successful outcome based on experience with similar inquiries. It all comes down to expertise and empathy – the ability to provide an appropriate response with the right tone for the situation. All interactions will be monitored to provide updates to the historical database at the end of each session to help the ICC learn from experience.

- Human agents: The ICC can use emotion-detection AI—examining what is said and how it is said—to provide ongoing insights about the current context to the agent and guide them to an appropriate response. If the agent says something that triggers an adverse reaction for the client, this feedback can help the agent re-set their approach.
- Bots: At the simplest level, the system can guide the bot to select the appropriate response from a finite set of options while monitoring the customer response to watch for and react to any changes in emotion or behavior. More advanced solutions could use natural language generation (NLG) technologies that parameterize “tone” attributes to ensure that the bot is generating context-appropriate narratives for the customer.

4. Next Best Action:

- General: Beyond guiding the agents as they answer inquiries from clients, there are opportunities to leverage predictive analytics and ML to offer additional options, products, and services (upselling) appropriate to the current context, or to trigger events in the system that will follow up at a later date.

Aragon Research Globe Overview

The Aragon Research Globe graphically represents our analysis of a specific market and its component vendors. We do a rigorous analysis of each vendor, using three dimensions that enable comparative evaluation of the participants in a given market.

The Aragon Research Globe looks beyond size and market share, which often dominate this type of analysis, and instead uses those as comparative factors in evaluating providers' product-oriented capabilities. Positioning in the Globe will reflect how complete a provider's future strategy is, relative to their performance in fulfilling that strategy in the market.

A further differentiating factor is the global market reach of each vendor. This allows all vendors with similar strategy and performance to be compared regardless of their size and market share. It will improve recognition of providers with a comprehensive strategy and strong performance, but limited or targeted global penetration, which will be compared more directly to others with similar perspectives.

Dimensions of Analysis

The following parameters are tracked in this analysis:

Strategy reflects the degree to which a vendor has the market understanding and strategic intent that are at the forefront of market direction. That includes providing the capabilities that customers want in the current offering and recognizing where the market is headed. The strategy evaluation includes:

- Product
- Product strategy
- Market understanding and how well product roadmaps reflect that understanding
- Marketing
- Management team, including time in the job and understanding of the market

Performance represents a vendor's effectiveness in executing its defined strategy. This includes selling and supporting the defined product offering or service. The performance evaluation includes:

- **Awareness:** Market awareness of the firm and its product.
- **Customer experience:** Feedback on the product, installs, upgrades and overall satisfaction.
- **Viability:** Financial viability of the provider as measured by financial statements.
- **Pricing and Packaging:** Is the offering priced and packaged competitively?
- **Product:** The mix of features tied to the frequency and quality of releases and updates.
- **R&D:** Investment in research and development as evidenced by overall architecture.

Reach is a measure of the global capability that a vendor can deliver. Reach can have one of three

values: *national*, *international* or *global*. Being able to offer products and services in one of the following three regions is the third dimension of the Globe analysis:

- **Americas** (North America and Latin America)
- **EMEA** (Europe, Middle East and Africa)
- **APAC** (Asia Pacific: including but not limited to Australia, China, India, Japan, Korea, Russia, Singapore, etc.)

The market reach evaluation includes:

- Sales and support offices worldwide
- Time zone and location of support centers
- Support for languages
- References in respective hemispheres
- Data center locations

The Four Sectors of the Globe

The Globe is segmented into four sectors, representing high and low in both the strategy and performance dimensions. When the analysis is complete, each vendor will be in one of four groups: *leaders*, *contenders*, *innovators* or *specialists*. We define these as follows:

- **Leaders** have comprehensive strategies that align with industry direction and market demand, and effectively perform against those strategies.
- **Contenders** have strong performance, but more limited or less complete strategies. Their performance positions them well to challenge for leadership by expanding their strategic focus.
- **Innovators** have strong strategic understanding and objectives but have yet to perform effectively across all elements of that strategy.
- **Specialists** fulfill their strategy well, but have a narrower or more targeted emphasis with regard to overall industry and user expectations. Specialists may excel in a certain market or vertical application.

Inclusion Criteria

The inclusion criteria for this Aragon Research Globe is

- a minimum of \$6 million in primary revenue for contact center or a minimum of \$8 million in revenue in a related market (voice, video conferencing, collaboration and team collaboration/messaging).
- **Shipping product.** Product must be announced and available.
- **Customer References.** Vendor must produce customer references in each hemisphere that the vendor participates in.

Aragon Research evaluates markets and the major technology providers that participate in those markets. Aragon makes the determination about including vendors in our Aragon Research Globes with or without their participation in the Aragon Research Globe process. This determination was not applied to this report as all vendors participated in the Globe process.

Noteworthy vendors not included in this report:

The following vendors were not included in the report but are notable:

- **Amazon**
 - Amazon offers its Amazon Connect Contact Center which focuses on enabling enterprises to build their own applications using Amazon AWS Services.
- **Fuze**
 - Fuze is a leading provider of unified communications and collaboration. It has a portfolio of contact center products for global enterprise organizations, including its own voice-only solution and offer solutions from Five9 and NICE inContact.
- **Google**
 - Google is a leading provider of unified communications and collaboration. It has its contact center AI offering which is leveraged by a number of ICC providers in this report.
- **Nextiva**
 - Nextiva is an innovator in unified communications and collaboration and resells Cisco's contact center offering that works with its own native CRM.
- **RingCentral**
 - RingCentral resells the NICE inContact contact center offering.
- **Serenova**
 - Serenova has a cloud contact center offering.
- **Twilio**
 - Twilio launched Twilio Flex Contact Center in October 2018. It is currently focused on acquiring customers.

The Aragon Research Globe™ for Intelligent Contact Center, 2019
(As of 5/30/19)

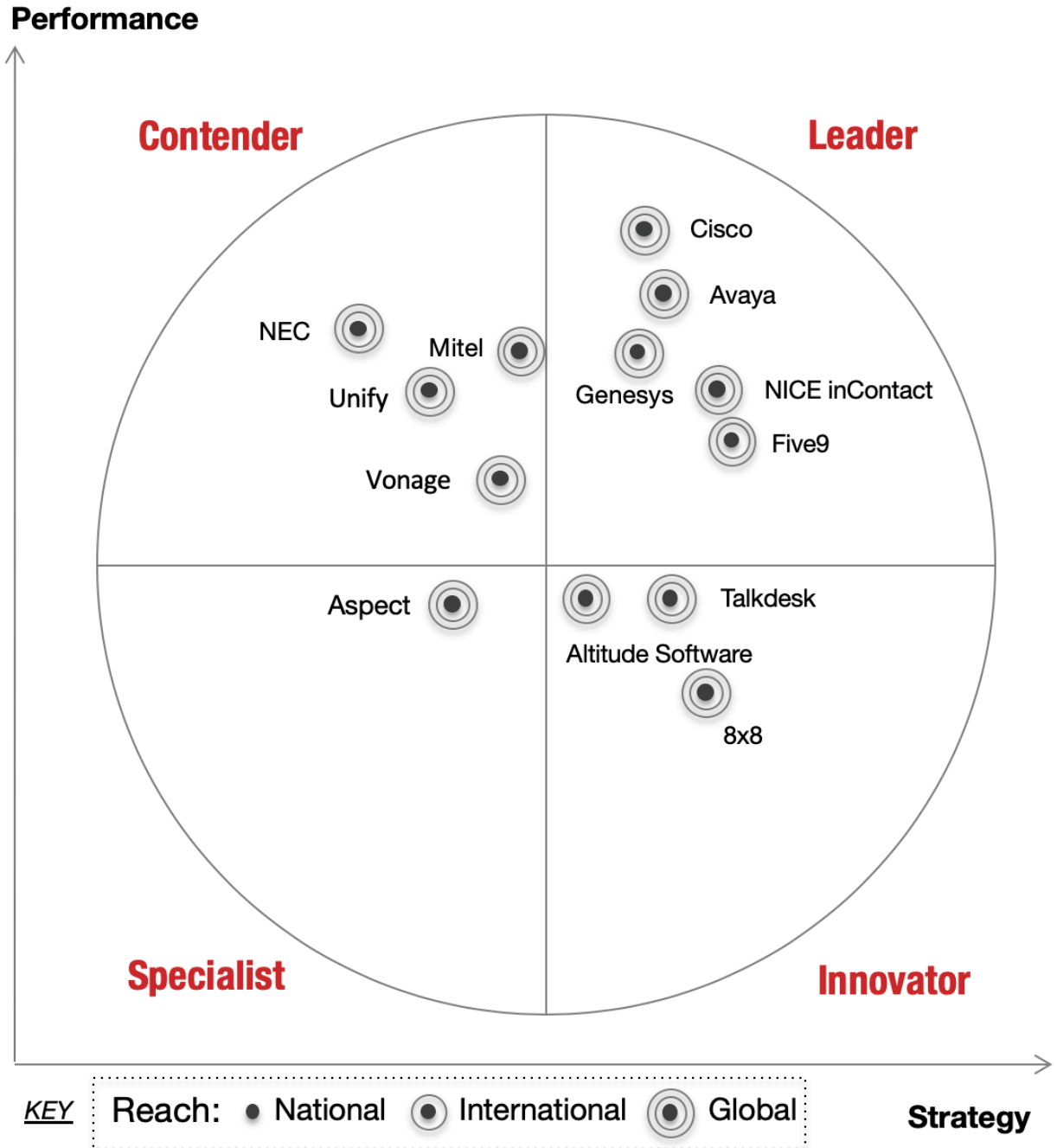


Figure 4: The Aragon Research Globe for Intelligent Contact Center, 2019.

Leaders

Avaya

Avaya, under the leadership of CEO Jim Chirico, has delivered consistent revenue performance that is powered by its product family including its rebranded Avaya IX Contact Center. In February 2018, Avaya acquired cloud contact center provider Spoken Communication, whose offering has been absorbed as part of the Avaya OneCloud Public solution. Avaya has one of the largest install bases of contact center deployments, offering private, public, and hybrid cloud and it has continued to push the envelope. In April 2019, Avaya deepened its AI relationship with Google to add to its existing strengths in AI.

Avaya has its own R&D center for AI, which brought Avaya Mobile Experience to market and has been rolling out its predictive routing capabilities as well as touting its growing set of AI partners. Its A.I. Connect ecosystem of partners enables customers integrate new capabilities with leading vendors in the speech technology and AI-enabled customer engagement market. While Avaya has a large on-premise install base, it has made a significant commitment to the cloud, which positions it well for the future. Avaya also has a robust portfolio of cloud and private cloud offerings that leverage its API-based UCC platform, which is now branded as Avaya IX Workplace. Avaya IX Workplace is available as both a cloud and a UCC private cloud offering, which will give customers more choice. The ability to offer both CC and UCC solutions, and delivering these solutions via partners that have an industry focus, is helping Avaya to win more deals.

Strengths

- Contact center platform
- Large deployment expertise
- Install base
- Native AI expertise
- AI partner network
- Partner network and ecosystem

Challenges

- Balancing its on-premise and emerging cloud offerings

Cisco

Cisco is a leader in UCC and in 2018 added a new SVP, Amy Chang, who oversees the overall UCC and CC portfolio. Contact center veteran Vasili Triant joined Cisco in 2018 as well to run the contact center business. He brings significant cloud experience as a former CEO of a cloud contact center provider. Cisco has complimented its large install base of on-premise contact center enterprise with its BroadSoft cloud contact center offering that was rebranded in 2018 as the Customer Journey Platform. On March 21, Cisco announced its Cognitive Contact Center, which will be powered by the advanced people analytics that was part of the Cisco Accompany acquisition. Combined with its extensive partner network, Cisco has broad global coverage to meet the needs of large enterprises.

Cisco is making a big push on Cognitive Collaboration and the profile information that is part of its offering will allow for advanced understanding of customers who are either new or returning. This should help it significantly once it is generally available for contact center. Cisco is also partnering with Google for its Contact Center AI program, which will result in a branded solution known as Cisco Answers. Cisco has continued to invest in its premises products for its current customers, and offers them a path to the cloud which includes its Collaboration Flex licensing program and Advanced Cloud services that can be consumed by premises customers. Cisco's challenge will be to keep the BroadSoft channel intact and to keep the channel focused on offering the cloud-based Customer Journey Contact Center Platform that is now AI-enabled.

Strengths

- Cisco brand
- Contact center install base
- Focus on AI
- Flexible cloud, premises, and hybrid deployment options
- End-to-end encryption
- Overall UCC capabilities

Challenges

- Balancing multiple CC offerings

Five9

Five9, which is led by CEO and industry veteran Rowan Trollope, has been on a growth trajectory as demand for cloud-based contact centers continues to grow. Mr. Trollope has enhanced the executive staff, including the addition of CTO Jonathan Rosenberg who will lead Five9's efforts in AI. Due to its focus on cloud, Five9 has been innovating, which has also helped it to be one of the fastest growing contact center providers. Five9 supports both inbound and outbound use cases and has global call support and routing. Five9 is focusing on AI as one of its innovation strategies and it is partnering with Google for some of its Contact Center AI capabilities.

Five9 continues to focus on its partner network and in March 2019, Five9 announced enhanced integrations with CRM providers Microsoft, Oracle, Salesforce, and ServiceNow. Five9 has been growing due to its robust focus on sales and support. The sales team at Five9 is one of the reasons for its continued growth and the support/services team, which goes onsite for deployments, is one of the reasons for ongoing renewals. The demand for cloud contact centers shows no size of slowing down and this will benefit Five9 as it expands its international footprint.

Strengths

- Cloud offering
- Inbound and outbound focus
- Omnichannel features
- Salesforce integration
- Customer support
- Growing focus on AI

Challenges

- Awareness outside of North America

Genesys

Genesys is based in Daly City, CA and led by newly announced CEO Tony Bates. Former CEO Paul Segre will become Chairman at the company. Genesys delivers omnichannel customer experience and contact center solutions to meet the needs of any buyer. It has three different offerings. Genesys® PureCloud® is a natively-built all-in-one cloud solution. Genesys® PureConnect® is ideal for midsize to large buyers with on-premises and hosted deployment options. Genesys® PureEngage® is targeted at the large enterprise, also with on-premises and cloud options. Additionally, Genesys has been a pioneer in AI, having focused on intelligent automation earlier than others.

In AI, Genesys has an early adopter program that features the Google Contact Center capabilities, which feature predictive routing as just one of the enhanced capabilities. Besides partnering with Google, Genesys acquired Altocloud in 2018, giving it more automated omnichannel capabilities and a growing AI R&D center in Galway, Ireland.

Strengths

- Broad ICC platform capabilities
- Install base
- Large enterprise deployments
- Growing AI expertise

Challenges

- Maintaining and enhancing three offerings

NICE inContact

Since it acquired inContact in 2016, NICE has been on a growth trajectory, powered by its offering and its growing partner network. There is growing awareness of its brand CXone, which is its flagship ICC offering. NICE inContact also offers its own native workflow management, workforce optimization, and analytics which are part of a complete, unified, and intelligent cloud customer experience platform. Built on an open cloud foundation, CXone integrates with other ICC providers. In April 2019, NICE inContact announced end-to-end AI capabilities with advanced chat for CXone as well as an AI-based predictive behavioral routing, AI-powered WFM forecasting, and AI-driven interaction analytics.

One of the strengths of CXone is its integration capabilities with providers such as Salesforce and other leading CRMs and UCaaS providers. In March 2019, NICE announced its CXone package for Salesforce that includes all of the capabilities including voice and voice analytics to increase understanding of sales and service calls and cases. This, along with its growing partner network, gives it a growing distribution engine.

Strengths

- Cloud offering
- Integrations
- Partner network
- Endpoints
- Global partner ecosystem

Challenges

- Balancing between direct and third-party partners for implementation

Contenders

Mitel

Mitel went private in 2018 after it was acquired by Searchlight Capital Partners for just over \$2 billion. Rich McBee remains the Mitel CEO. Mitel offers a full contact center offering that compliments its complete UCC portfolio with a focus on its voice offerings applications and endpoints delivered on-premise or via the cloud (hybrid, private, and UCaaS). In 2018, Mitel announced a partnership with Google that leverages Google AI to enhance Mitel's contact center offering.

Additionally, in 2019, Mitel announced that it was partnering with Talkdesk to add a Contact Center-as-a-Service (CCaaS) offering to its CC portfolio. Mitel continues to lead with voice and UCC as its primary solution story, but now the Talkdesk deal and its Google partnership add a new level of focus to its contact center portfolio. These solutions, which are part of the Mitel marketplace, are powered by Mitel's CloudLink technology, which enables on-site enterprises to access cloud-based APIs and applications and is a key catalyst for enterprises that want to leverage hybrid cloud deployments.

Strengths

- Cloud and on-premise support
- Global cloud infrastructure
- Hybrid cloud API marketplace accessible to on-site customers
- Mid-market expertise
- Global partner ecosystem

Challenges

- Balancing two distinct contact center offerings

NEC

NEC, which has a large global presence, offers a family of contact center offerings that give enterprises choice for an on-premise deployment. Its contact center offerings include its Business Connect, UNIVERGE SV8100, SV9000 series, and UNIVERGE Cloud Services Contact Center. NEC segments its offerings for small (five agents) and medium/large (up to 2000 agents).

NEC partners with dvsAnalytics for workforce optimization (WFO). Its WFO includes forecasting, scheduling, recording, speech analytics, and live monitoring. NEC also offers a full set of capabilities including cloud communications (UCaaS), messaging, meetings, and contact center. With historical strengths in voice, NEC now offers a full voice and video set that supports the needs of small and large enterprises. More importantly, NEC is a full IT Infrastructure provider for cloud data centers (Salesforce recently partnered with NEC). This level of investment and experience will serve NEC well as more enterprises look to leverage UCC offerings via interconnected clouds.

Strengths

- Cloud and on-premise voice support
- Global cloud infrastructure
- Analytics
- Global presence

Challenges

- Balancing a long list of contact center offerings

Unify

Unify, the Atos brand for communications software and services, offers its OpenScape Contact Center Platform for both cloud and on-premise use cases. OpenScape CC capabilities work in conjunction with its portfolio of UCC solutions, led by the OpenScape Cloud and the Atos CPaaS Orchestration platform, as well as Circuit, Unify's Mobile Collaboration platform. Circuit also supports messaging, voice, screen sharing and video, and integration with OpenScape. Unify offers two editions of OpenScape Contact Center: OpenScape Agile focused on agent populations of under 100 agents, and OpenScape Contact Center Enterprise for single or multiple sites with up to 1500 concurrent agents per system, 7500 agents per cluster. OpenScape Contact Center Enterprise offers multi-channel skills-based routing including inbound and outbound voice, callbacks, IVR, email, web chat, voicemail, fax, social media, and any business process routing based on an open media framework. Unify provides both pre-packaged and custom social media and CRM integrations with choice of Windows or REST based SDKs.

Virtual agents (chat bots) in OpenScape Contact Center Enterprise provide self-service options to customers with enhancements that enable integration with Google's Contact Center AI solution, as well as any other 3rd party AI provider. Unify offers WFM via partners including Verint and ASC, as well as OpenScape Contact Center Life of Call Analytics. Unify has also doubled down in cloud with the OpenScape Contact Center Cloud solution built on the OpenScape Contact Center Enterprise and OpenScape Cloud.

Strengths

- Contact center capabilities
- On-premise and cloud support
- Vertical industry solutions
- PaaS platform with Circuit
- Cloud deployment options

Challenges

- AI capabilities for contact center

Vonage

Vonage, led by Google Veteran and CEO Alan Masarek, has leveraged its growth through UCaaS and CPaaS technology, and key acquisitions which include NewVoiceMedia (NVM), in November 2018. NVM was founded in the UK, but operates globally and has a growing footprint in the US. Its focus has been and continues to be on integration with Salesforce Sales and Service Clouds. Vonage is also leveraging its strengths in connectivity via its Nexmo API Platform. NVM offers an integrated speech analytics technology, Conversation Analyzer, which uses speech-to-text to transcribe calls and deliver content categorization for insight into common themes. Now integrated with Salesforce Einstein Analytics and with built-in Einstein dashboards, businesses can refine how to boost their successes and manage challenges more efficiently. NVM also launched its omnichannel capability last year and businesses can route voice and interactions through email, chat, chatbots, SMS, video and social channels, including Salesforce digital channels. The NVM solution can also identify a "stuck" chatbot and route it to the best available agent in the voice or chat channel.

In March 2019, Vonage launched Vonage CX Cloud Express, a CRM-integrated contact center solution for small to medium call centers. CX Cloud Express was designed as an expansion of the company's flagship cloud-native unified communications as a service platform, Vonage Business Cloud, to provide customers with a single, integrated offering—from carrier to contact center applications. Combining NVM with Vonage Business Cloud (VBC) also provides customized unified communications capabilities including voice, collaboration, mobility, and video.

Strengths

- Contact center offering
- Focus on Salesforce
- Vonage brand recognition
- Integrations
- CPaaS API flexibility

Challenges

- Awareness in contact center outside of Europe

Innovators

8x8

8x8 launched its new platform called 8x8 X Series Communications in 2018 which included updates to its contact center offering. X Series integrates all of its capabilities for voice, video, and team collaboration into one platform. 8x8 has its own native contact center and it focuses on the mid-market. In 2018, 8x8 announced that it was part of the initial partnership with Google for Contact Center AI.

8x8 X Series Contact Center integrates with Microsoft Dynamics, NetSuite, Salesforce, and Zendesk. Its growing global cloud footprint includes data centers in North America, the UK, Amsterdam, APAC, and Brazil.

Strengths

- Cloud-based PBX
- Contact center
- Brand awareness
- Partner integrations
- CRM integration

Challenges

- Customers report issues with voice quality

Altitude Software

Altitude Software, based in Lisbon, Portugal and led by CEO Alfredo Redondo, offers a full cloud-based contact center along with a growing set of partners. Altitude Xperience Contact Center offers a modular approach allowing buyers to select a variety of modules that together enable a complete solution.

In February 2019, Altitude Software announced its Experience Hub, which leverages its growing set of partners. Partner integrations include Productivity, Analytics, CRM (Salesforce and Dynamics), and Security. Some of its partners for AI and Analytics include eGain, Nuance, and Speech IQ. Altitude Software focuses on a variety of industries including financial services, government, healthcare, manufacturing, telecom, and utilities. Its new focus on partner offerings will help it to differentiate versus others.

Strengths

- Cloud-based contact center
- Industry focus
- Modularity
- Platform and APIs

Challenges

- Brand awareness outside of EMEA

Talkdesk

Talkdesk, based in San Francisco and led by CEO Tiago Paiva, offers a cloud-native enterprise contact center platform that features a growing set of partner integrations to support contact center needs for industries including ecommerce, high tech, CPG, financial services, and more. Talkdesk offers its own AI capabilities via its Talkdesk IQ Platform. Talkdesk Callbar is a freestanding app that allows agents to make and receive phone calls anywhere on the desktop. Some of the capabilities that Talkdesk offers for sales include local presence, voicemail drop, power dialing, Salesforce Sales Cloud integration, and more.

In March 2019, the company introduced Talkdesk Workforce Management, a cloud-native, microservices architecture fully unified with its CCaaS platform, available in the second half of this year. In April 2019, Talkdesk and Mitel also announced a strategic partnership, launching Mitel's MiCloud Connect CX, a new, all-in-one cloud contact center powered by Talkdesk. Talkdesk makes deployments easier through built-in integrations with 40+ help desk and CRM applications that are powered by its APIs. The focus on customer support has helped Talkdesk continue to win deals.

Strengths

- Call center
- APIs
- Partner ecosystem
- Analytics

Challenges

- Brand awareness outside of the US

Specialists

Aspect

Aspect, based in Phoenix and led by CEO Patrick Dennis, was acquired for an undisclosed amount in January 2019 by Vector Capital. Aspect has a large install base and provides a full contact center solution as well as workforce optimization solutions. Its Aspect via contact center offering supports omnichannel capabilities with support for chat, including social media chat, such as Facebook.

Aspect has its own WFM capabilities, including the core WFM management features as well as performance management, quality monitoring, and voice analytics, which allows it to be a complete one-stop shop. Aspect also has strong expertise in vertical markets including financial services, healthcare, hospitality, utilities, transportation, education, and government.

Strengths

- Full CC platform
- Install base
- WFM
- Partner network

Challenges

- Focus on AI

Getting Started With ICC

Enterprises need to realize that the contact center market is undergoing a transformational change and the focus on advanced automation and predictive routing powered by AI will only be some of the changes that are coming. Enterprises need to balance the need for reliable core capabilities and uptime against the challenge of the coming wave of AI.

In most cases, leading providers of ICC have a roadmap for leveraging artificial intelligence and adding it to their platform. For those that do not, exit strategies should be developed.

In an era where seconds count on response times, enterprises need to carefully monitor their contact center performance and look for ways to engage more seamlessly via omnichannel interactions. Those that do will win more customers for a longer period of time.

Finally, the era of digital labor is here. Making the right AI and chatbot decisions are critical to success with digital labor. Enterprises should start now with chatbots and transition to more fully featured digital assistants. In many cases, basic task specific bots will do better in the short term and have a higher ROI.

Aragon Advisory

- Enterprises need to start to evaluate contact center providers for their current and future AI capabilities.
- Enterprises should set clear goals and objectives on buyer journeys and overall customer experience before beginning an ICC selection process.
- Enterprises need to embark on their own educational path to ensure that their business and IT staffs understand how AI works so that they can make better evaluations of providers.
- Digital labor is here. Enterprises should start now with planning assumptions for the next five years and adjust them on a yearly basis.

Bottom Line

The contact center market is shifting and becoming a key way to automate and resolve customer issues quicker with AI. The need to focus on customer experience trumps everything and we expect that more digital assistants will come online to assist with internal and external use cases. The race to innovate and deliver AI capabilities represents a shift in the contact center market. Enterprises need to carefully evaluate their current and future providers and ask for detailed roadmaps on how they will offer a more intelligent, AI-based solution.