# The Gartner Customer Service Technology Vendor Guide, 2019

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Customer service software segments are converging as organizations invest in digital strategy. Application leaders can use this guide to understand the solutions and vendors supporting customer service, and prioritize areas of investment while balancing customer, employee and organizational needs.

## Key Findings

- Customer experience (CX) and CRM posted the highest growth among all application software markets, and remained the largest enterprise software market in 2018 with more than $48.2 billion in sales. Customer service is the largest subsegment with more than $17.2 billion in sales for 2018.
- Within the next three to five years, application leaders will have to deal with a customer service technology stack of disparate, overlapping systems. As a result, they'll be at risk of creating a disjointed CX unless supported by solid employee engagement and adaptable processes.
- Many organizations intend to utilize artificial intelligence (AI) to assist with customer service, moving from reactive to proactive and predictive processes. According to the 2019 Gartner CIO Survey, 50% of organizations intend to employ AI by 2020, up from 14% in 2018.

## Recommendations

For application leaders responsible for customer service and support (CSS) technology:

- Incorporate key trends into your customer service technology roadmap by exploring vendors that support top CX initiatives such as customer analytics, voice of the customer (VoC) and multichannel interactions. Innovation pace matters!
- Future-proof your technology investments by refining your vision, strategy and critical business scenarios with inspiration from key customer service technology markets and Cool Vendors offering virtual customer assistants (VCAs), consumer messaging apps and speech technologies.

- Choose your best-fit vendors by adopting an “automation first” mindset. Prioritize vendors with native AI and real-time automation capabilities. Accelerate time to value with complementary technology areas such as hybrid integration platforms (HIPs), master data management (MDM) and business process management (BPM).

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## Strategic Planning Assumptions

By 2022, more than 10% of customer engagement hub architectures will include real-time event streaming or streaming analytics.

Before 2022, GDPR noncompliance, caused by poor privacy management in CRM procedures, will have led to regulatory sanctions of the maximum degree.

By 2022, at least 65% of large and global organizations will have implemented a hybrid integration platform.

By 2023, customers will prefer to use speech interfaces to initiate 70% of self-service customer interactions, rising from 40% today.

By 2025, customer service organizations that embed AI in their multichannel customer engagement platform will elevate operational efficiency by 25%.

## Analysis

### What You Need to Know

#### Customer Service Technologies in the Context of Digital Transformation

In the 2019 Gartner CEO and Senior Business Executive Survey,[1] the majority of CEOs say they have a digital transformation initiative underway to make their respective organizations more digital (82% in the 2019 survey, up from 62% in 2018 survey).

While the range of projects related to customer experience (CX) is wide, customer service technologies should be seen as the foundation of CX management and at the heart of digital transformation. In fact, Gartner's 2019 Customer Experience Innovation Survey[2] has found that the top five CX priorities supported by customer service technologies are:

- Customer analytics
- Voice of the customer (VoC)
- Multichannel customer service
- Employee learning and training tools

- Knowledge management tools

See Figure 1 below for full survey results in this area.

Figure 1. Customer Experience Priorities in 2019

**Technologies on Which Respondents Expect to Increase Investment for CX Improvement Projects in 2019**

Percentage of Respondents. Multiple Responses Allowed.

| | Maturity Level (1+2) | Maturity Level (3+4+5) |
|---|---|---|
| | n = 57 | n = 185 |
| Customer analytics | 47% | 54% |
| Voice of the customer | 33% | 49% |
| Multichannel customer service | 35% | 42% |
| Employee learning and training tools | 12% | 42% |
| Knowledge management tools | 18% | 38% |
| Web content management | 40% | 29% |
| Master data management | 28% | 33% |
| UX design tools and platform | 30% | 31% |
| Business process management | 28% | 32% |
| Sales force automation | 21% | 32% |
| Campaign management | 21% | 22% |
| Don't expect any investment increase in 2019 | 4% | - |
| Other | - | 1% |

Statistically significant difference at 95% confidence level

n = 242, excluding "unsure"

Source: Gartner (April 2019)

Question: "Which, if any, of these technologies do you expect your organization to increase monetary investment in for 2019 (compared with 2018) for its customer experience (CX) improvement projects?"

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With customer service application being the largest subsegment of CRM with more than $17.2 billion in sales for 2018,[3] application leaders supporting customer service initiatives are in a unique position to help bridge organizational gaps and orchestrate multiple systems to ensure a consistent, effortless, intelligent and personalized CX. They should use this vendor guide to explore the

customer service technology landscape and refer to Gartner Magic Quadrants, Critical Capabilities and Market Guides for further vendor evaluation and developing shortlists.

## Innovation Pace Matters — Incorporate Key Trends Into Your Customer Service Roadmap

Gartner key trends and initiatives provide a holistic and connected overview to help customer service and support (CSS) organizations reach their goals. These include the following:

- **The customer engagement hub vision becomes mainstream —** The customer engagement hub is an architecture framework designed to connect and synchronize processes across multiple departments, including customer service, thus enabling the transfer of data among disparate applications and SaaS services. For more information, see "2019 Strategic Roadmap for Customer Service and Support Technologies."
- **Self-service becomes the norm —** After years of digitalization and the rise of bots, organizations are starting to take a self-service and automation-first approach. This paradigm shift is referred to as extreme self-service. In addition, be prepared for your customers to leverage AI as individuals or as groups of customers (such as "people like me" communities). For more information, see "The Future of Customer Self-Service: The Digital Future Will Stall Without Customer-Led Automation."
- **Challenge your current omnichannel strategy —** Forcing customers to "channel swap" or not supporting preferred channels will become antiquated and considered to be rude. A channel-less mindset supported by channel-agnostic design, seamless integration and CX innovations will set new standards for customer service. For more information, see "The Future of the Customer Engagement Center."
- **"We working" and the rise of employee engagement for superior CX —** There's a growing emphasis on engagement driven by purpose and passion, enabled through having the right tools available to engage with peers and the opportunity to influence policy. Embracing what is known as a "we working" philosophy, autonomous and high-performing teams will fulfill crucial outcomes. For more information, see "The Future of Customer Service Workforce Engagement Management."
- **The contact center becomes fluid —** Contact center operations of the future will foster greater collaboration between employees with digital workspaces. Activity- and team-based working capabilities in contact center software and services will ensure better support of customer service ambitions as part of the broader CX strategy. For more information, see "The Future of the Contact Center."
- **Speech is the new voice —** Virtual personal assistants (VPAs) such as Siri and Alexa are starting to be used to provide voice-based self-service. Gartner expects speech interfaces to initiate a majority of self-service interactions by 2023. For more information, see "Predicts 2019: CRM Customer Service and Support."
- **Customer data "privacy first" design principle —** Interacting with customers requires new ways to mitigate security and privacy risks, especially for organizations that need to comply

with the EU's General Data Protection Regulation (GDPR). For more information, see "The State of Privacy and Personal Data Protection, 2019-2020."

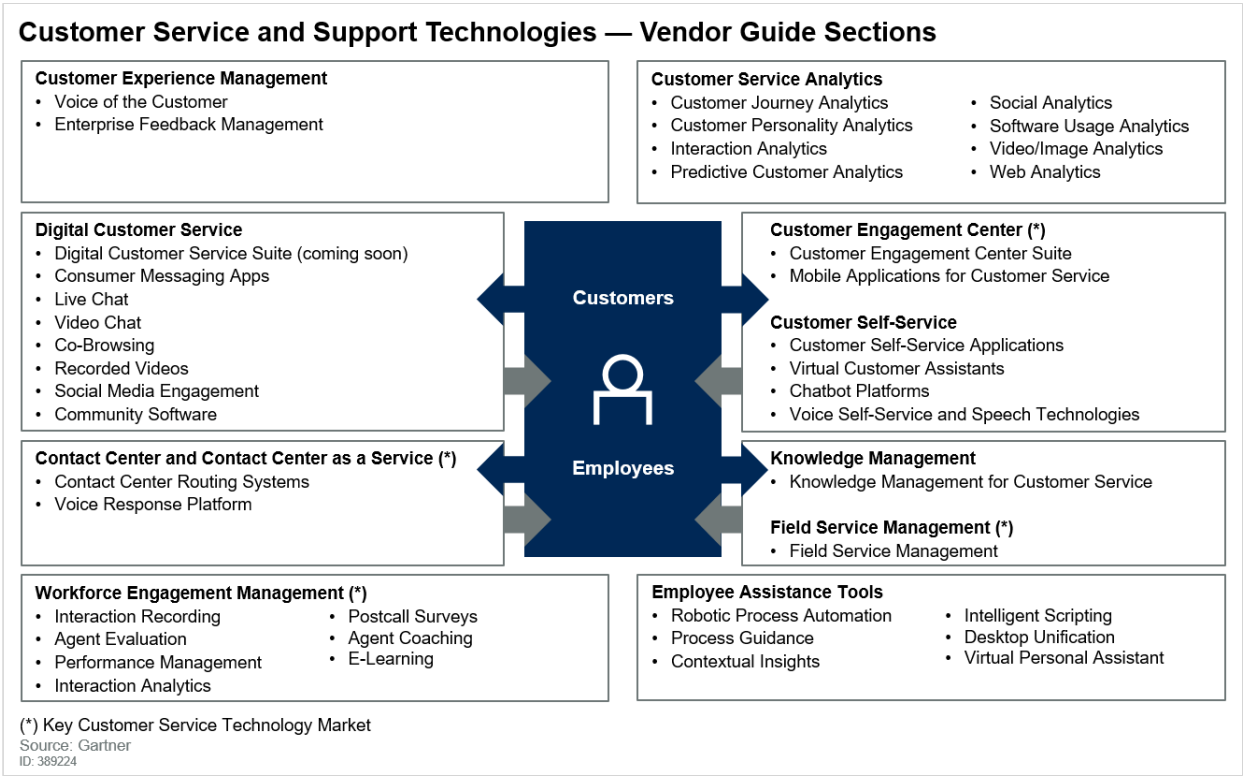
## Future-Proof Your Technology Investments by Understanding the Customer Service Technology Landscape

Engaging well with your customers is a mission-critical requirement. The CSS technology landscape includes myriad and often confusing vendors and offerings. The customer engagement center (CEC), contact center applications, workforce engagement management (WEM) and field service management (FSM) are key markets in CSS (see Figure 2 for more details).

While a unified CSS suite spanning these domains does not yet exist, the market is gradually shifting in this direction. In the meantime, organizations will be challenged to adapt to an increasingly overlapping application landscape that continues to grow in complexity.

This vendor guide is arranged by market and the type of technology offered today by CSS vendors. Application leaders can use this research to help create an integrated customer service architecture with a single view of the customer in mind, as they plan their technology roadmaps for the next year and three and five years down the line.

Figure 2. Customer Service Technology Landscape



## Key Customer Service Technology Market Description

### Customer Engagement Center

Gartner defines a customer engagement center (CEC) as a logical set of technologies and business applications that are engineered to provide customer service and support, regardless of the interaction (or engagement) channel. The goal of the CEC is not only to provide service to customers as they move among communications channels while retaining the customers' context, but also to deliver the appropriate business rule to determine the next best action, information or process with which to engage the customers.

The CEC market enables customer service and support agents to engage customers through their preferred communication channel. It covers a wide range of customer service applications for organizations with CECs, ranging from very small (fewer than 20 agents) through average size (50 agents) to very large, and distributed centers (over 10,000 agents). For more information, see "Magic Quadrant for the CRM Customer Engagement Center."

### Contact Center and Contact Center as a Service

Contact center as a service (CCaaS) is a cloud-based application service platform that enables customer service organizations to manage multichannel customer interactions holistically (using self-service and assisted-service) from a customer experience and an employee engagement perspective. For more information, see "Magic Quadrant for Contact Center as a Service, North America," "Magic Quadrant for Contact Center as a Service, Western Europe," and "Critical Capabilities for Contact Center as a Service."

CCaaS solutions are used by customer service and telemarketing centers, employee service and support centers, help desk service centers, and other types of structured communications operations. For a broader understanding of the different cloud platforms in the market, see "Adopt a Pace-Layering Application Approach to Evaluate Your Cloud Contact Center Options."

### Workforce Engagement Management

The connection between employee engagement and operational performance/CX has been proven through numerous studies, but this is not the only reason for focusing more on engagement. After several decades of focusing primarily on workforce optimization, contact center management is beginning to appreciate the critical importance of employee engagement. Note that native workforce engagement management (WEM) features can also be found in both CEC and CCaaS solutions. In most use cases, these provide broader engagement capabilities than best-of-breed WEM vendors.

The WEM landscape is defined by functionality that includes support for:

- Recruitment and onboarding
- Evaluation and improvement

- Time management, assistance and task management
- Metrics and recognition
- Voice of the employee (VoE)

For more information, see “Magic Quadrant for Workforce Engagement Management.”

**Field Service Management**

Field service management (FSM) includes the detection of a field service need (through remote monitoring or other means, inspection or a customer detecting a fault), field technician scheduling and optimization, dispatching, parts information delivery to the field, and process support of field technician interactions.

FSM applications provide key capabilities to:

- Manage demand
- Plan work
- Inform and enable technicians
- Debrief work orders
- Perform analysis and integration

For more information, see “Magic Quadrant for Field Service Management.”

**Customer Service Analytics**

The growth of digital business and increased customer expectations are elevating the importance of real-time, contextualized customer experiences for competitive advantage. The variety of data and the advances in analytics techniques continue to expand, but the increased focus on data privacy requires a balancing act between relevancy and clear, transparent and ethical uses of data.

Customer service analytics deliver contextualized insights from customer service data to improve relevancy for customers. Customer service analytics play a key part in the overall CX analytics to help resolve challenges such as reducing complexity of channels (channel-less mindset) and preventing the fragmentation of a customer’s experience across multiple processes and departments. For more information, see “Hype Cycle for Customer Experience Analytics, 2018.”

**Customer Experience Management**

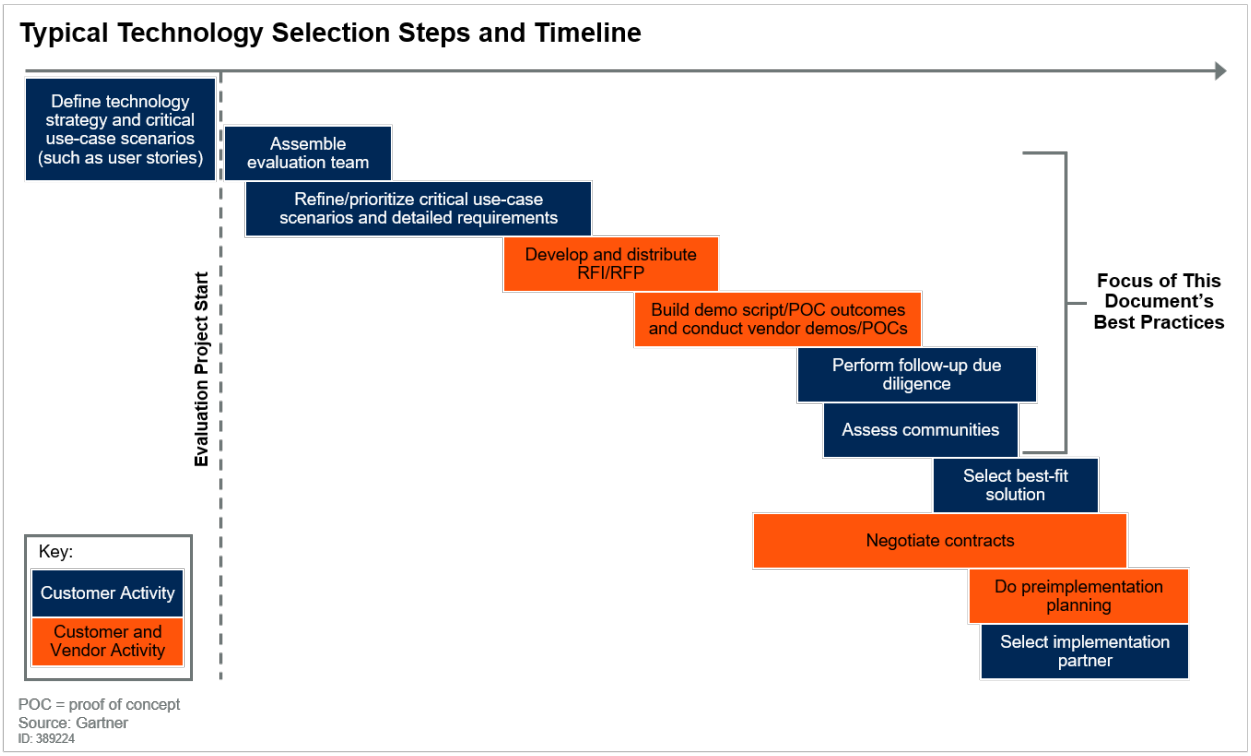
Customer experience (CX) initiatives are not the same as customer relationship management (CRM). But both are among the most important initiatives for organizations because they directly contribute to the CEO’s top business priorities. CX is an immature business discipline that has only significantly evolved in the last decade. Increasingly, however, there is now a head of CX in place in organizations. The CX leader aims to represent the customer and make improvements to the CX as the primary goal, rather than as a side effect of achieving the company goal. CX leaders must

balance the requirements of individual departments, including customer service, to hit key performance indicators (KPIs) with the wider goal of improving the CX.

Choose your best-fit vendors. Adopt an “automation first” mindset by prioritizing vendors with native AI and real-time automation capabilities.

Selecting any strategic technology investment can be daunting due to the large amount of money, time and resources dedicated to finding and implementing the best-fit solution for your organization. A selection process that includes input from across the organization helps achieve a better fit for your requirements. Seek early participation and representatives drawn from functions, regions, roles, downstream systems, as well as security and data privacy. This supports better implementation planning and budgeting, which lowers risks associated with implementation (see Figure 3).

Figure 3. Typical Technology Selection Steps and Timeline

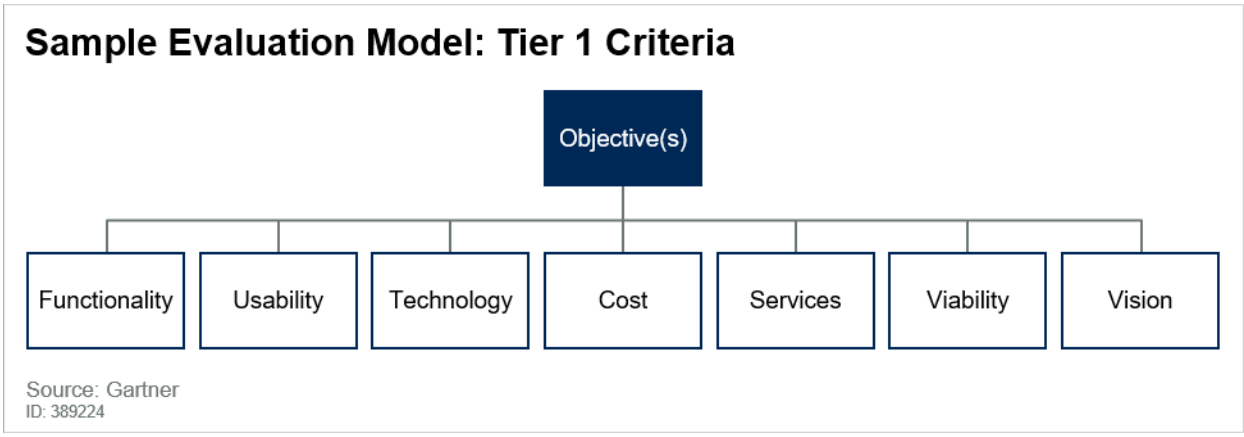



Customer service technologies must be evaluated through the lens of the broader digital strategy, particularly in terms of how the application will align with organizational and CX objectives and drive business outcomes.

In addition, careful identification and use of mandatory requirements can limit the list of prospective vendors. This can also help the project team manage its time and effort by avoiding the initiation of an RFI or RFP process with dozens of vendors. Gartner recommends basing CRM vendor and

software evaluations on seven Tier 1 criteria: functionality, usability, technology, cost, services (required and provided), vendor viability, and vendor vision (see Figure 4).

Figure 4. Sample Evaluation Model: Tier 1 Criteria




The bottom-tier set of Tiers 4 and 5 of the full hierarchy model should represent your organization's mandatory requirements (see "Select the Best-Suited CRM Solution With Gartner's Evaluation Model").

Leverage Gartner research to further extrapolate this hierarchy model, as follows:

- Eight building blocks and maturity models (preparation)
- Strategic Roadmaps (preselection)
- Gartner evaluation models (Tier 1)
- Vendor guides (Tier 2)
- Magic Quadrants and Market Guides (Tier 3)
- Critical Capabilities and best practices (Tier 4)
- RFI and RFP Toolkits (Tier 5)

This sample hierarchy is not exhaustive. Tiers of criteria can be added if needed, or removed if not applicable. Ultimately, this hierarchical model becomes so granular that no logical further segregation is appropriate, as the mandatory requirements have been identified at this stage. At this point, specific questions are crafted for each bottom-tier criterion in the hierarchy, as discussed above.

## Vendor Lists

This guide presents a list of sample vendors and providers for each technology section. We also note recent vendor acquisitions and a few additional data points for Cool Vendors. We use the following formats:

- Vendor
- Vendor (“acquired vendor name”; merger of “vendor names”; “previous name”)
- Cool Vendor (acquired by “vendor name” or previously “previous name” or defunct)

## Cool Vendors

Our research is structured so that users can quickly determine what is cool about the vendor, what its challenges are and who in the buyer organization will benefit from the vendor’s offering. See our latest Cool Vendors report at “Cool Vendors in CRM Customer Service and Support.”

Gartner’s definition of a Cool Vendor is a small company offering a technology or product that is:

- **Innovative —** It enables users to do things they couldn’t do before the technology emerged.
- **Impactful —** It has (or will have) a business impact; it’s not just technology for the sake of technology.
- **Intriguing —** It has caught Gartner analysts’ and clients’ interest or curiosity during the past six months.

Table 1. Cool Vendors 2012-2019

| Year | Cool Vendor | Year | Cool Vendor |
|---|---|---|---|
| 2019 | ■ Chatbox<br>■ Gladly<br>■ msg.ai<br>■ UJET | 2015 | ■ Altocloud (acquired by Genesys)<br>■ AnswerDash<br>■ Cyara<br>■ Flamingo<br>■ ResponseTap |
| 2018 | ■ Agent IQ<br>■ MapAnything (since acquired by Salesforce)<br>■ Slaask<br>■ TechSee<br>■ ZineOne | 2014 | ■ Buttle Information Systems<br>■ Eudata<br>■ FacilityLive<br>■ KMS Lighthouse<br>■ Personetics |
| 2017 | ■ Helpshift<br>■ Quiq<br>■ Relay<br>■ Servicefriend<br>■ SmartAction | 2013 | ■ Conversocial<br>■ Rapide<br>■ SundaySky<br>■ WalkMe<br>■ Xiaoi |
| 2016 | ■ CallVU<br>■ iAdvize<br>■ Idomoo<br>■ Tenacity<br>■ Wise.io (since acquired by GE Digital) | 2012 | ■ Engage121<br>■ GeoFluent<br>■ Interactions<br>■ KomBea<br>■ Qlika (since acquired by Priceline) |

Source: Gartner (June 2019)

## Customer Engagement Center

### CEC Suite

Gartner defines the CRM customer engagement center in terms of a set of software applications used to support CSS. It allows CSS to intelligently engage with customers — both reactively and proactively — as they answer questions, solve problems and provide advice.

The orchestration of intelligent customer processes through a CEC application is built around a case management record and process. This may include advisory services, problem diagnostics

and resolution, account management, insurance claims, servicing of banking interactions, provisioning and/or returns management. To orchestrate the processing of customer engagements for the best outcome in an effortless, effective and timely way, workflow is an important component. For some organizations, there is also a need for intelligent business process management (BPM) capabilities.

Next to case and workflow management, the use of knowledge management to enrich and personalize the customer engagements will be crucial for the customer service functions. For the positioning of key vendors, see “Magic Quadrant for the CRM Customer Engagement Center.”

Vendors with core customer service applications for the CEC include:

- Appian
- Aptean
- Akio
- Astute (Wilke Global)
- bpm’online
- Coheris
- CRMNEXT
- Dassault Systèmes (EXALEAD)
- eGain
- Eptica
- Eudata
- Freshworks
- IFS
- Khoros (merger of Spredfast and Lithium)
- Microsoft
- NexJ Systems
- NICE
- Oracle
- Pegasystems
- Salesforce
- SAP

- ServiceNow
- SugarCRM
- TeamSupport
- Verint Systems
- Vertical Solutions
- Zendesk
- Zoho

**Mobile Applications for Customer Service**

Mobile customer service applications provide mobile applications that reside in, or are accessible from, smartphones or tablets, and are supported by the enterprise. This can take the form of contextual searches, contextual delivery of knowledge, location-based services, or multimodal customer support (meaning that the customer can be engaged in a self-service process, but can request or be given live-agent support via chat, messaging, voice or co-browsing). For more information, see “Why You Need to Rethink Your Mobile Customer Engagement Strategy.”

Mobile customer service generally takes one, or a combination, of the following three approaches:

- **Mobile web —** Making web-based content accessible by using a mobile device’s built-in web browser is the least-expensive investment an organization can make when starting to deploy customer interactions.
- **Mobile messaging —** Customer supporting techniques are used such as text messaging, push notifications (device native, in-app and from websites), consumer messaging apps (such as Facebook Messenger, WeChat, WhatsApp, LINE), or web or in-app chat with chatbots, VCAs or human agents.
- **Mobile application —** Mobile apps that are downloaded from app stores and installed on the device offer greater engagement with the customer. The mobile app offers a richer, mobile-first user experience that integrates with more of the device OS and hardware features, as well as with other apps on the device

Vendors include:

- [24]7.ai
- Creative Virtual
- Conversocial
- EasyAsk (Quiri)
- eGain
- Eptica

- Genesys
- Helpshift
- IFS
- IMImobile
- Infobip
- Intercom
- LivePerson
- Moxie
- Nuance
- OpenMarket
- Oracle
- Pegasystems
- Quiq
- Relay
- Salesforce
- SAP
- Sparkcentral
- Airship
- Verint Systems
- Zendesk

## Contact Center

### Contact Center Routing Systems

The contact center infrastructure (CCI) market has been consolidating for several years with a reduced focus by clients on new investment — see "Cloud-Based Unified Communications and Contact Center Momentum Is Refocusing Our Magic Quadrant Research for 2019."

For new investments in contact center platforms, there is an increased focus on cloud-based solutions. While some best-of-breed point products remain relevant, customers have shifted to broader solutions that provide a portfolio of applications spanning a broad set of functionality. These include:

1. Automatic call distribution (ACD)
2. Multimedia/omnichannel routing
3. Interactive voice response (IVR) and VCAs/bots
4. Automated outbound calling
5. Application Integration
6. WEM

Many small and midsize contact centers (those with up to 300 agents in North America and 150 agents in most other regions) are evaluating and deploying CCaaS solutions. Many CCaaS offerings can scale much larger than 300 agents. These barriers are typically based on perceptions about security, customization support, service reliability and total cost of ownership.

Enterprises have historically recognized potential synergies between customer-facing contact center software solutions and their current investments in internal-facing unified communications (UC) platforms. In many cases, the providers have been the same. However, as the contact center becomes a more significant investment in customer service strategy, there are benefits to separating the decisions.

UC is a less strategic initiative and challenged with disruptive competition from cloud office providers (see “How to Decide How Much Cloud Office UC to Use in the Digital Workplace”). As a result, the strategies for UC and contact center are very likely to be different. Planners should therefore favor contact center providers that can offer services independent of UC infrastructure.

For an overview of the leading cloud contact center providers by geographic region, see the following magic Quadrants:

- “Magic Quadrant for Contact Center Infrastructure, Worldwide”
- “Magic Quadrant for Contact Center as a Service, North America”
- “Magic Quadrant for Contact Center as a Service, Western Europe”

The following is a sample list of cloud-based SaaS vendors (excluding hosting providers):

- 8x8
- Aspect Software
- Cisco Customer Journey Platform
- Odigo
- Clarity Connect
- ComputerTalk
- Content Guru

- Five9
- Genesys
- Gladly
- IFS
- NICE (inContact)
- Puzzel
- SAP
- Serenova
- Vocalcom
- VoltDelta
- Vonage (NewVoiceMedia)
- West
- Telia ACE
- TalkDesk

Customer premises equipment (CPE) vendors (both on-premises and private cloud) include:

- Alcatel-Lucent Enterprise
- Altitude Software
- Aspect Software
- Atos (Unify)
- Avaya
- Cisco
- Clarity Connect
- Collab
- ComputerTalk
- C-Zentrix
- Drishti-soft Solutions
- Enghouse Interactive
- Genesys

- Huawei
- Luware
- Mitel (ShoreTel)
- NEC
- Noble Systems
- NODA
- SAP
- Vocalcom
- Workstreampeople/Anywhere365

**Voice Response Platforms**

Voice response platforms provide voice access to information and applications, and can perform complex call routing based on information provided by the caller. These supported IVRs are based on a web-style architecture that separates the web applications from the voice portal platform. In effect, there are two layers: the web application layer and the voice portal platform layer.

Flexible cloud deployments use a three-layer approach that is common to cloud architectures — infrastructure as a service (IaaS), platform as a service (PaaS) and software as a service (SaaS). The communication PaaS layer (cPaaS) functionality includes messaging (SMS, MMS, chat, notify), voice, speech recognition, two-factor authentication and video. To do this, the cPaaS layer has unique characteristics to enable real-time communications such as voice, telephony and video (see “Market Guide for Communications Platform as a Service”).

The cPaaS approach currently offers significant scaling and startup cost advantages. It also helps address the omnichannel requirements of applications and users because it can be easily extended to accommodate emerging technology options, and can easily allow self-service functions to be integrated with business applications.

cPaaS vendors include:

- Amazon Connect
- Avaya Zang
- Bandwidth
- IMImobile
- Infobip
- Plivo
- TeleSign

- Twilio
- Vonage (Nexmo)
- Zenvia

Omnichannel SaaS self-service solutions built on cPaaS platforms are now beginning to appear on the market. Vendors include:

- OneReach.ai

Some vendors sell their IVR platforms as stand-alone solutions. Many additional vendors sell IVR applications primarily as part of a broader contact center solution.

IVR vendors include:

- [24]/7.ai
- Aspect Software
- Avaya
- Cisco
- Concentrix (Convergys)
- Enghouse Interactive
- Genesys
- Gladly
- Nuance
- Plum Voice
- Sharpen
- SmartAction
- Verascape
- West

## Knowledge Management for Customer Service

Knowledge management (KM) emphasizes an integrated approach to managing an enterprise's knowledge assets, which are made up of the information available to an enterprise about its "best practices," critical business processes and operating environment.

Business cases must focus on integrating the knowledge base with multiple channels and devices (including home appliances and wearables). For example, a web chat to reduce chat duration, an

email response management system to return emails with accurate answers, a virtual assistant to enhance information delivery, and self-service search on the website.

KM is composed of a back-end knowledge base, search technology and a user interface (UI). It is used widely:

- For internal employees
- For customer self-service (on mobile and the web, kiosks, high-tech equipment/appliances and wearables)
- For social media efforts (communities)
- By partners
- In other applications, such as for point of sale (POS), ATMs and ticket machines

It is not possible for any one software supplier to address all combinations of KM requirements for CRM customer service. Knowledge artifacts can be found through search tools via enterprise portals or through content management tools. KM for CSS consists of six categories of knowledge: agent, corporate, social, partner, search and hosted community. For more information, see "Delivering Relevant Content and Knowledge to Customers Is Key to Great Customer Service."

Vendors include:

- Agent IQ
- Almawave (Iride CRM)
- Aptean (Knova)
- AnswerDash
- Astute
- ComAround
- Coveo
- Dezide
- eGain
- Eptica
- FacilityLive
- Guru
- Verint Systems
- KMS Lighthouse
- KnowledgeBroker

- MindTouch
- Moxie
- noHold
- Oracle Knowledge
- Panviva
- Upland Software (RightAnswers)
- Safeharbor (owned by Enghouse Interactive)
- ServiceNow
- PTC (Servigistics)
- Transversal

## Customer Self-Service Applications

**Customer Self-Service Suite**

In 2017, customer self-service surpassed human-assisted customer service for the first time. Propelling this increasingly pervasive trend are improvements in AI and superior search algorithms, which together increase the likelihood that a chatbot, VCA, search or proactive outbound message will solve the customer's issue.

Many customer service organizations invest in customer web self-service tools to expose the knowledge to customers who visit their corporate site, and to customer communities as a vehicle for peer-to-peer support. However, they don't initially consider how customers will land on these sites, and they underestimate the impact of the common customer behavior of "Googling it" when looking for answers.

Cost savings are no longer the only expected ROI on implementing self-service applications. Instead, organizations expect improved operations and increased customer satisfaction. For more information, see "Four Best Practices for Implementing Extreme Customer Self-Service."

Vendors include:

- [24]7.ai
- Avaya
- Diabolocom
- eGain
- Eptica

- IFS
- Genesys
- Moxie
- Oracle
- Salesforce
- SAP
- SmartAction
- Nuance
- Verint Systems
- Zendesk

**Virtual Customer Assistants**

A virtual customer assistant (VCA) is a business application that simulates a conversation in order to deliver information and, if advanced, takes action on behalf of the customer to perform transactions.

Engagement with a VCA is possible via the web, SMS, consumer messaging apps, mobile apps, peer-to-peer communities, kiosks and other web-based or mobile interfaces. The engagement is primarily text-based, but VCAs can support speech-based engagement in situations where voice processing is enabled.

The VCA relies on knowledge repositories and natural language processing (NLP) technologies. In some service scenarios, the combination of speech technology and VCA provides a strong customer service proposition. For more information, see “Market Guide for Virtual Customer Assistants.”

Vendors include:

- [24]7.ai
- Aivo
- Artificial Solutions
- boost.ai
- Creative Virtual
- CX Company
- DigitalGenius
- dydu (Do You Dream Up)
- eGain

- Go Moment
- IBM Watson Virtual Agent
- i-Command
- idAvatars (CodeBaby)
- iNAGO
- Inbenta
- Interactions
- Interactive Media
- IPsoft
- Kore.ai
- Kasisto
- LogMeIn (Nanorep)
- Microsoft (Dynamics 365 Virtual Agent)
- noHold
- Nuance
- OWI
- Pegasystems (In the Chat)
- Servicefriend
- SmartAction
- Stanusch Technologies
- Sundown AI
- PAT Group
- Verint Systems (Next IT)
- Xiaoi

**Chatbot Platforms**

A chatbot is a narrowly focused conversational agent serving users, customers or employees. It often uses, but is not limited to, text chat. Typically, it addresses a specific use case, such as managing appointments or keeping track of time sheets.

When designing a conversation model for a chatbot it is crucial to focus on making tasks easier and quicker than the alternative. The “personality” of a chatbot must suit the audience and the brand. The best way to introduce chatbots is by focusing on a single conversational channel where a business has users that could engage with it. Some organizations have user audiences spread across multiple channels. A modular architecture for a chatbot allows support for multiple conversational channels with minimal overhead. For more information, see “Market Guide for Conversational Platforms.”

Vendors include:

- Ada
- Amazon Web Services (AWS)
- Artificial Solutions
- Conversable
- Creative Virtual
- Eudata
- Facebook(Messenger Platform)
- Google (Dialogflow)
- Gupshup
- IBM (Watson Assistant)
- iFLYTEK
- IPsoft
- Kore.ai
- Microsoft
- Nuance
- OneReach.ai
- Openstream
- Oracle (Oracle Conversational AI Platform)
- Rasa
- Salesforce (Einstein Bots)
- Smartsheet (Converse.AI)
- SmartBotHub
- SourceForge (ChatScript)

- Wit.ai

**Voice Self-Service and Speech Technologies**

Speech technologies allow speech-enabled applications to identify spoken words or phrases. These technologies are increasingly part of a broader set of language technology services that includes speech recognition, NLP and natural language understanding (NLU).

Common customer service tasks that are performed well using these language technologies include:

- **Complex data entry —** Automatic speech recognition (ASR) allows callers to speak the date and time or the name of the city and state, for example. The system identifies the answer. Data entry via touch-tone phone, such as date and time, the names of cities and states, or the names of airports, is extremely difficult to accomplish via a telephone keypad.
- **Open menu applications —** Complex menus are difficult to navigate via touch-tone and result in low call-completion rates. For instance, applications that offer callers a broad range of possible problem-solving options or many service options are not easily accomplished via touch-tone. An open menu can simply ask, "How may I help you?" and then use speech recognition to identify the caller's needs.
- **Hands-free operation —** This is a third area where ASR is particularly helpful. It is useful when the caller must make the requests without using their hands — for instance, the caller may be operating a vehicle or some type of machinery when seeking help.
- **Conversational user experiences and VCAs —** NLP machine learning models are driving new levels of capability with speech-oriented self-service. More complex topics can be handled via voice- and text-based customer self-service (see VCA section above). Speech technologies free up agent time that can then be dedicated to more involved customer service interactions.

Speech recognition IVR applications are more expensive than standard dual-tone multifrequency (DTMF) touch-tone applications. To properly evaluate the options, you must understand how much incremental improvement the use of speech recognition technology will offer over the less-expensive DTMF interface. One cost-effective approach used by enterprises is to use an open speech recognition menu that simply states: "Hello, welcome to XYZ Company. In a few words, please tell us how we can help you today." This approach uses speech recognition to identify the caller's needs, and then uses existing IVR solutions to accomplish the specific task required.

Vendors offering contact-center-focused language solutions include:

- Interactions (acquired AT&T Watson technology)
- Microsoft
- Nuance

Vendors offering general-language/API solutions, not specific to the contact center, include:

- Amazon Web Services (Amazon Lex)
- Google (API.ai)
- IBM (Watson Assistant)
- Microsoft (LUIS)

Open-source language options include:

- CMUSphinx (developed at Carnegie Mellon University, Pittsburgh, U.S.)
- Julius (developed at Nagoya Institute of Technology, Japan)
- VoxForge (part of SourceForge)

Several speech-related technologies can enhance application performance and the user experience under specific conditions: speaker verification, human-assisted IVR and speech functionality. Speaker verification, also known as voice recognition and voice biometrics, identifies the person who is speaking by the characteristics of his or her voice. The most common applications are password reset and the prequalification of callers into a sensitive IVR application, such as those used by the banking or healthcare industries.

Vendors include:

- NICE
- Nuance (Agnitio)
- Pindrop
- Sestek
- Speech Technology Center
- Twilio
- ValidSoft
- Voice Biometrics Group
- VoiceTrust (now part of the LumenVox Solution Suite)
- VoiceVault

Human-assisted IVR integrates speech recognition functions with a live human agent. This integration can significantly increase speech recognition rates while also leveraging ASR tools. One approach is to record spoken utterances that are not recognized by the ASR engine and pass them to a pool of waiting agents who identify what is being said. This happens quickly and without the awareness of the caller.

Vendors include:

- Avaya (Spoken Communications)

- Interactions
- Nuance

## Digital Customer Service

Video chat, live (text) chat, VCAs, conversational interfaces and co-browsing are the digital engagement channels most often deployed in customer service and support. Consistency and seamless integration between these channels is crucial to avoid breaking the customer experience.

### Digital Customer Service Suite

Missing from Gartner's "Magic Quadrant for the CRM Customer Engagement Center" are many software companies that we are watching closely but that do not meet all the minimum criteria. Gartner sees the emergence of a new area of customer care referred to as "digital customer service."

In this area is a set of vendors that focus on digital engagement through chat, chatbots, messaging, outbound alert (or push notifications) and social media engagement. While they do not have full CEC capability, with only limited or alternative case management, they do manage the customer dialogue and communication for an increasingly large percentage of customer interaction types. Future research will explore this rapidly evolving market space. For more information, see "Market Guide for Digital Customer Service" (forthcoming).

### Consumer Messaging Apps

Consumer messaging apps, sometimes referred to as "social messengers" or "mobile messengers," are free messaging apps that typically use a smartphone's data plan or Wi-Fi to provide their services. Application providers are emerging to support apps such as WeChat, Facebook Messenger and Kik. For more information, see "Top Use Cases and Benefits of Consumer Messaging Apps for CRM."

Vendors include:

- [24]7.ai
- Conversocial
- eGain
- Freshworks
- Gladly
- Glia
- Helpshift
- IMImobile

- Layer
- LivePerson
- MessengerPeople
- Pegasystems (In The Chat)
- Quiq
- Salesforce
- Sparkcentral
- Twilio (Flex)
- Zendesk (Smooch.io)

**Live Chat**

Live chat is an agent-based interaction or discussion via text chat. A chat session involves interactive, internet-browser-based, live text or video interactions among customer service representatives (CSRs), live chat agents and customers. During a chat session, complementary internet-based interactions (such as collaborative browsing, screen or application sharing, or assisted forms completion) may take place.

A chat session could also be initiated through other self-service applications, such as a virtual customer assistant, then passed on to a live agent. Live chat is primarily an externally focused collaboration tool, as opposed to IM, which is an internally focused collaboration tool. For more information, see “How to Select Live Chat Applications for Customer Engagement.”

Vendors include:

- [24]7.ai
- CafeX
- eGain
- Eudata
- Freshworks
- Genesys
- Gladly
- Glia
- Helpshift
- Intercom
- LiveChat

- LivePerson
- LogMeIn (Bold360)
- Moxie
- Nuance (TouchCommerce)
- Olark
- Oracle
- ORLO
- Pegasystems
- Quiq
- Salesforce
- Sparkcentral
- Velaro
- Unblu
- Zendesk

**Video Chat**

Video chat for customer service involves one- or two-way live video streaming between a customer and an agent to deliver customer service and support. Video chat with customer service and support agents is broadly available over mobile devices, on websites and at kiosks to assist with a wide range of capabilities. Initially focused on putting a face back in front of the customer, the video chat can stream one way (from the agent to the customer), or it can stream both ways when customers enable cameras.

Vendors include:

- Avaya
- Cisco
- Eudata
- Glance Networks
- CRiF (Inventia)
- Microsoft
- Salesforce
- Surfly

- Recursive Labs
- Vidyo
- Vivocha
- VeriShow
- Unblu

**Co-Browsing**

Co-browsing — or collaborative browsing — technology enables a customer service agent to interact with a customer by using that customer's web browser to share a webpage, document or mobile app. With co-browsing, the agent and customer can simultaneously browse a website, for example, by means of URL distribution. Co-browsing is distinct from screen sharing or application sharing in that it does not involve viewing or controlling a presenter's screen that contains other open web browser tabs or applications.

Many vendors provide co-browsing features. Below is a list of the most common co-browsing vendors offering the technology in CRM suites, customer engagement suites and point solutions. There are also vendors offering co-browsing technology in the fields of: contact center infrastructure, CCaaS, IT service and support management and BPM. For more information, see "How Co-browsing Can Differentiate Your Customer Service."

Vendors include:

- eGain
- Glance Networks
- Glia (previously SaleMove)
- VeriShow
- Moxie
- Oracle
- Pegasystems
- Recursive Labs
- Salesforce
- Surfly
- Unblu
- Verint Systems
- VeriShow

- Whisbi

**Recorded Video**

The technology for recorded video customer service has evolved in the last couple of years. It has gone from prerecorded video clips to imparting “how to” instructions for customer service, or providing product or service training, to personalized video engagements where the message can be personalized to customers’ needs. Newer to personalized video is the possibility of interactive personalized video, whereby the viewer controls the personalized experience for optimal customer experience.

Whether it is by using a how-to video to change a battery on a vehicle or a laptop, or as a demonstration tool, organizations can deflect interactions from the customer engagement center. These video clips can form part of an organization’s video knowledge repository, or can be indexed from social networks such as YouTube and accessed using a search tool for internal knowledge bases. Combining video with AI may be the next innovation wave. Based on the interaction with a VCA to answer customer questions instantly, a personalized video can be made and shared with the customer.

Vendors include:

- eGain
- Idomoo
- Moxie
- Oracle
- Pitney Bowes
- Recursive Labs
- SundaySky
- Verint Systems
- Vidyo

**Social Media Engagement**

Social media engagement applications for customer service enable organizations to monitor social media and respond to customers. These applications handle inquiries and complaints raised on popular social networks, forums and blogs in a linear, case-by-case manner.

Vendors include:

- Brand Embassy
- Conversocial

- Hootsuite
- Khoros (merger of Spredfast and Lithium)
- Salesforce
- SOCi
- Socialbakers
- Sparkcentral
- Sprinklr
- Sprout Social

**Internal Community Software**

Internal community software enables internal collaboration between customer service agents when supporting customers and interacting with other departments. Internal community software capabilities should, ideally, be embedded within a broader customer service application.

Vendors include:

- Jive Software (an Aurea company)
- Freshworks
- Microsoft
- Oracle
- Salesforce
- SAP
- Sociabble
- Socialbakers
- SugarCRM
- Zoho
- Zendesk

**External Community Software**

External community software enables customers and partners to blog and post about, as well as rate, products/services, and construct cases. It also enables peer interaction and knowledge management.

Vendors include:

- CMNTY
- Dimelo (now a RingCentral company)
- Higher Logic
- inSided
- Khoros (merger of Spredfast and Lithium)
- Salesforce
- Verint Systems
- Vanilla
- Voycer
- Zendesk

## Workforce Engagement and Optimization

**Workforce Engagement Management Suite**

Workforce engagement management (WEM) solutions expand on the already mature workforce optimization (WFO) market by accommodating technologies that help drive employee engagement. WFO's emphasis over the past decade has primarily been on helping improve the operational performance of the contact center.

Key functional domains within a WEM solution facilitate the recording and assessment of employee performance, which are combined with the ability to forecast and schedule staffing levels to ensure that operational service-level targets are met. WEM's core value proposition arises from the tight integration and workflow across these various functional domains. This need to be operationally "well-run" is still an important consideration and is at the heart of a WEM solution, but various key market shifts have occurred since WFO's inception, requiring more emphasis to be placed on the employee.

Vendors include:

- Aspect Software
- Calabrio
- Collab
- DVSAnalytics
- EvaluAgent
- Genesys

- Globitel
- Monet Software
- Netcall
- NICE
- Noble Systems
- OnviSource
- OpenText
- Verint Systems

**Workforce Management**

At its core, contact center workforce management software is intended to maximize the use of agent labor. It does this by projecting incoming and outgoing call volumes or other communication methods (such as email or chat), and scheduling staff to meet these needs by a designated time (for example, at a particular time of day, or on a particular day of the week or week within a month).

Vendors include:

- Aspect Software
- Calabrio
- Collab
- DVSAnalytics
- Genesys (Interactive Intelligence)
- Globitel
- Holy-Dis
- injixo
- InVision
- ISC Workforce Management
- Monet Software
- Netcall
- NICE
- Noble Systems
- OnviSource

- Oracle
- Pipkins
- Portage Communications
- ScheduleSource
- Serenova
- Teleopti
- WorkForce Management Software Group
- Verint Systems

**Interaction Recording**

The quality management software market encompasses applications for on-demand, selective and full-time recording of customer audio interactions, as well as screen capture of agent desktop activity. The vendors in this market also provide call evaluation tools, online monitoring tools for joining live calls, and speech analytics for audio insight. These tools are traditionally used for compliance and quality purposes.

Vendors include:

- Alcatel-Lucent Enterprise
- Altitude Software
- ASC
- Aspect Software
- Avaya
- OpenText
- Cacti
- Calabrio
- Cisco
- Cloud Worldwide Services
- Collab
- Cognia
- Coordinated Systems Inc. (CSI)
- DVSAnalytics

- Enghouse Interactive
- Envision
- Genesys
- Globitel
- HigherGround
- Huawei
- Mattersight (now a NICE company)
- Mitel
- Monet Software
- Netcall
- NICE
- Noble Systems
- OnviSource
- Red Box Recorders
- Serenova
- TantaComm
- TTec
- Verint Systems (Verba Technologies)
- VirtualLogger
- Vocalcom
- VoiceCyber
- West
- Zoom

**Agent Evaluation**

Agent evaluation traditionally relies on the playback of captured call recordings and an assessment of each agent's performance by a supervisor or dedicated quality assurance team. Calls are selected randomly or by using basic operational criteria, such as call length or routing logic. Most interaction recording vendors supply this software, but with varying degrees of sophistication. The emergence of speech analytics adds a degree of intelligence to this process and introduces evaluation vendors that may own the interaction recording.

For the list of vendors, see:

- The Interaction Recording section
- Customer Service Interaction Analytics section

### Performance Management

In the contact center, performance management systems integrate the enterprise's in-place contact center technologies, CRM systems and other data sources to provide a transparent picture of performance across sites, functions, levels and agents, while aligning targets with business objectives. These solutions are combined with data analytics tools to filter, drill, graph and analyze KPIs to determine the root cause of a good or bad performance and make adjustments — even in real time, if needed.

Vendors include:

- Aceyus
- AnswerOn
- IBM Cognos Analytics
- eGain (Exony)
- Empirix
- iQor (HardMetrics)
- Mattersight
- NICE
- Pegasystems (OpenSpan)
- QPC
- Servion
- Verint Systems

### Customer Service Interaction Analytics

Interaction analytics combine and analyze the multiple, disparate data sources involved in a customer-agent interaction to identify trends and insights. The data can be structured, such as operational data and call-flow dynamics, or unstructured, such as audio and text (voice, email, IM or chat). Deployment of interaction analytics in a contact center can potentially uncover insights to improve the performance of the contact center and its agents. It can also provide customer and departmental insights (such as customers' perceptions of a marketing campaign or a new product pricing strategy).

Vendors include:

- Almawave
- Avaya (Spoken Communications)
- CallMiner
- Genesys
- Mattersight
- NICE inContact
- Nexidia
- NICE
- Nuance
- OpenText
- Phonexia
- Raytheon BBN Technologies
- Uniphore
- Verint Systems
- Voci
- Yactraq
- Zoom
- Zen3
- Tethr

**Postcall Surveys**

Postcall surveying captures the customer's perspective of the interaction they've just had with an agent. It can be a key factor in evaluating customer satisfaction and agent performance. Traditional IVR-based survey tools are making way for more cross-channel solutions that enable contact centers to collect feedback via email, SMS and other channels. Operational integration triggers the customer invitation automatically and personalizes it so that the name of the agent and the topic of conversation are highlighted. The questions are related to the interaction that occurred. Leading enterprise feedback management vendors or agent evaluation vendors typically offer this feature.

For the list of vendors, see:

- The Enterprise Feedback Management section

- The Agent Evaluation section

### Agent Coaching

A further subset of e-learning is the specific coaching/training requirements of CSRs, which are linked to quality evaluations from recorded calls. These solutions help optimize agent performance through the delivery of appropriate feedback and lightweight coaching materials, such as best-practice audio clips, documents and specific notes from the supervisor.

For the list of vendors, see:

- The Interaction Recording section
- The Agent Evaluation section

### E-Learning

Gartner defines e-learning as the electronically enabled transfer of skills and knowledge. It is a multimodal style of distributed learning that includes online learning, computer-based learning, mobile learning, virtual classrooms and collaboration. Courses are delivered via a variety of mechanisms, including an internal learning portal, the internet, audiocasts, videocasts and mobile devices.

The call center e-learning marketplace is a subset of the broader e-learning market. A growing number of organizations are complementing their instructor-led training with e-learning and more real-time support. However, in many organizations, the call center remains a siloed environment, because CSRs who are linked to quality evaluations from recorded calls require specific coaching and training.

E-learning solutions help optimize agent performance through the delivery of appropriate learning programs, from basic skills training to complex-scenario courses and assessments. The vendors listed here provide off-the-shelf course content for training call center employees. Courseware content can also be developed using courseware authoring tools or by leveraging content development firms.

Vendors include:

- BenchmarkPortal
- International Customer Management Institute (ICMI)
- Miller Heiman Group
- ProEdge Skills
- Skillsoft
- SQLearn

- The Call Center School

## Field Service

### Field Service Management

Field service management (FSM) applications automate an organization's operations that provide services — typically installation, repair or maintenance — to equipment or systems that operate at the customer's location. The equipment or systems may be actively managed, maintained and monitored under a predefined service or maintenance contract.

The depth of integration to ERP, CRM, GIS, enterprise asset management (EAM), telematics, wearables and IoT systems varies. In addition to the core scheduling component and mobile support mentioned above, an end-to-end FSM solution may also contain functionality such as mobile applications, warranty and claims management, social enablement, case management, knowledge management, material/parts management, device and fleet management. For more information, see "Magic Quadrant for Field Service Management."

Vendors include:

- Accruent (Verisae)
- Astea International
- ClickSoftware
- Cognito iQ
- Cognizant
- Comarch
- Ducont
- Fast Lean Smart (FLS)
- Fieldpoint Service Applications
- FieldAware
- GEOCONCEPT Group
- Gomocha
- GMS Development
- IFS (WorkWave)
- Infor
- KEY2ACT
- Microsoft

- MSI Data
- Oneserve
- Oracle
- OverIT
- Pegasystems
- Retriever Communications
- Salesforce
- SAP (Coresystems)
- GE Digital (ServiceMax)
- ServiceNow
- ServicePower
- simPRO
- Praxedo
- Trimble
- Uptake

## Other Employee Assistance Tools for Customer Service

Numerous small, innovative solutions have emerged to help provide consistent, quality customer engagements. There are different approaches that can be considered, but they all make the job of the customer service employee easier, while enabling them to deliver a better customer experience. These agent assistance tools can complement existing investments rather than replace them, but add complexity to the overall IT infrastructure.

There are seven main categories of technology that can be considered to help improve operational performance and employee engagement: intelligent scripting, process guidance, process automation, desktop unification, VPAs, task assignment, and internal collaboration. For more information, see “These Overlooked Assistance Tools for Your Customer Service Agents Can Boost Productivity.”

### Robotic Process Automation

Robotic process automation (RPA) tools cut costs, eliminate keying errors, speed up processes and link applications. RPA tools perform “if, then, else” statements on structured data, typically using a combination of UI interactions, or by connecting to APIs to drive client servers, mainframes or HTML code. An RPA tool operates by mapping a process in the RPA tool language for the software “robot” to follow, with runtime allocated to execute the script by a control dashboard.

AI functionality is being incorporated into certain software product suites, as RPA providers add or integrate machine learning and AI technology to deliver more types of automation. RPA tool vendors will either partner for AI functionality, or they will continue to invest in developing AI-style capabilities, either charged as extras or integrated to work with the basic tool. The RPA vendor partnering or building of these tools could become the primary means by which AI tools are consumed in an organization. For more information, see “Market Guide for Robotic Process Automation Software.”

Vendors include:

- AntWorks
- AutomationEdge
- Automation Anywhere
- Blue Prism
- EnableSoft
- Epiance
- HelpSystems
- Infosys (EdgeVerve Systems)
- Jacada
- Kofax
- Kryon
- NICE
- OpenConnect (UiPath)
- Pegasystems
- Perpetuuiti
- SAP (Contextor)
- Softomotive
- SpiceCSM
- Verint Systems
- WorkFusion
- Xerox

**Intelligent Scripting**

There are two main use cases for intelligent scripting:

1. Environments in which there are inexperienced agents due to high churn or seasonal fluctuations. Intelligence scripting tools reduce time required for training and help with accuracy when there is a large product/service portfolio to support.
2. Environments in which compliance is a key factor. Intelligent scripting tools are not ideally suited for companies that rely on the personalized touch and a differentiated customer experience in their engagement center.

Vendors include:

- NICE
- Verint Systems
- Cicero Group
- Pegasystems
- eg Solutions (a Verint company)
- Sapience
- Morphis
- Genesys

**Desktop Unification**

Suited to environments where multiple applications must be used for a single process, such as booking an engineer visit. The engagement center needs to be stable in terms of its application portfolio, as any changes (e.g., mergers and acquisitions) will require expensive recoding of the unification software.

Vendors include:

- Cincom
- Altitude
- Jacada
- Microsoft
- TIBCO Software (Nimbus Partners)
- RiverStar
- SpiceCSM

### Process Guidance

Process guidance is great for environments with complex processes such as authorizations and discount models, as well as numerous systems that need to be navigated. It is also ideal for rapid growth environments where agent onboarding is a challenge, as these tools can dramatically reduce the associated time for this task.

Vendors include:

- Almawave
- edorasware
- Genesys
- Oracle (Iridize)
- Salesforce (BeyondCore)
- SpiceCSM
- WalkMe

### Contextual Insights

The digital and physical worlds generate massive amounts of situational data, presenting unique opportunities to develop context-enriched customer service. Event-driven and real-time digital business is poised to become a priority for mainstream business. Yet event processing is confined to niche areas of most IT organizations, with limited exposure to the CRM application team (see “Use an Event-Driven Approach to Deliver Superior Customer Experience”).

Vendors include:

- beBit
- EVAM
- Thunderhead
- Unscrambl
- Usermind
- ZineOne

### Virtual Personal Assistants

VPAs are suitable for environments where there are onerous administrative tasks, which the VPAs can observe and then perform, factoring in employee habits and behavior. VPAs can also build and maintain data models (drawing inferences about people, content and contexts), predict employees’ needs, and act autonomously on employees’ behalf.

Vendors include:

- Apple
- Amazon
- Aspect Software
- Google
- Microsoft
- Samsung Electronics

## Analytics for Customer Service

### Customer Journey Analytics

Customer journey analytics is the process of tracking and analyzing the way customers and prospects use a combination of available channels to interact with an organization over time. It covers all channels the customer has used, including those with human interaction (such as a call center), those that are fully automated (a website), those that provide assisted help to the customer (live chat and co-browsing), those that are operated in physical locations (a retail store) and those with a limited two-way interaction (display advertising). For more information, see “Market Guide for Customer Journey Analytics.”

Vendors include:

- [24]7.ai
- Adobe
- APT
- CallMiner
- Cerebri AI
- Cisco
- ClickFox
- Conversity
- ENGAGEcx
- Genesys
- Genpact (TandemSeven)
- Glassbox

- IBM
- inQuba
- Interana
- Kitewheel
- LiveRamp
- Mavim
- NICE
- Pointillist
- QPC
- SAP
- sandsiv+
- Teradata
- Thunderhead
- Usermind
- UserReplay
- Verint Systems
- Woopra

**Customer Personality Analytics**

Customer personality analytics (or customer psychographics) is the process of evaluating customers according to their attitudes, communication or decision-making style, rather than according to their specific actions, requirements, value or level of satisfaction. In general, customers are matched to a limited number of predefined styles based on either directly captured data (such as word usage from call recordings or subjects they have chosen to comment on in social media) or data derived from analysis of behaviors (such as purchasing products with a consistent set of attributes).

Vendors include:

- HireVue
- IBM
- NICE (Mattersight)
- Mattr
- Receptiviti

- Afiniti
- Optimove

### Customer Engagement Center Interaction Analytics

*(See the Customer Service Interaction Analytics subsection under Workforce Engagement and Optimization.)*

CEC interaction analytics solutions provide a holistic view of customer-agent interactions through the analysis of multiple data streams associated with the contact center interaction. The data analyzed includes the dialogue (that is, the audio or text, such as email or web chat), call flow dynamics (speaking at the same time, pauses in conversation), emotion (customer and agent), operations (call length, transfers, web chat durations), agent desktop activity and customer feedback (via survey data).

Vendors include:

- CallMiner
- Genesys
- NICE (Mattersight)
- OpenText
- Verint Systems

### Predictive Customer Analytics

Predictive analytics describes an aspect of data science that emphasizes prediction (rather than other data science use cases such as classification or clustering). Customer predictive analysis involves estimating or modeling the potential aspects of a relationship. Predictive analytics solutions come in the widest variety of any CRM application solution. User organizations need to consider the level of expertise each user will have with each solution, from data science workbenches to industry-specific black-box applications.

Vendors include:

- Altair Knowledge Works
- Alteryx
- Dell
- FICO
- IBM
- Microsoft

- Oracle
- Pegasystems
- Pitney Bowes
- SAP
- SAS
- TIBCO Software (Alpine Data)

**Social Analytics**

Social analytics applications assist organizations in collecting, measuring, analyzing and interpreting the results of interactions and associations among people, topics, ideas and other content types on social media. Many organizations only use social analytics to listen to what people are saying about their business, their marketing campaigns or their competitors. While this data is interesting, organizations must do more with the information if they hope to drive business results.

The results of social analytics (such as discovered patterns and connections) can be made available, often in real time. This provides vast opportunities for marketing, sales, customer service, HR, security, supply chain and other departments to take real-time information and turn it into immediate action.

Vendors include:

- Brandwatch (merged with Crimson Hexagon)
- Cision
- Clarabridge
- Converseon
- Digimind
- Ipsos (Synthesio)
- Khoros (merger of Spredfast and Lithium)
- Linkfluence
- Meltwater
- NetBase
- Nuvi (formerly Brickfish)
- Onalytica
- Oracle
- Quantifind

- Salesforce
- Shareablee
- Simplify360
- Social Touch
- Sprinklr
- Sprout Social (Simply Measured)
- Talkwalker
- TrendKite
- Unmetric
- Zignal Labs

**Software Usage Analytics**

Software usage analytics is the detailed tracking and analysis of users' interactions within a software application. It is used to understand both the behavior of individual users and of users in aggregate. It provides insights that are used to improve user experience, prioritize feature enhancement, track compliance and provide real-time user help.

Software usage analytics is related to, but distinct from, application monitoring, customer journey analytics, web analytics and A/B testing tools. As these technologies mature and evolve, the lines may increasingly blur between these categories.

Vendors include:

- Adobe
- Google
- Heap
- Intercom
- Kissmetrics
- Mixpanel
- Revulytics
- Pendo

### Video/Image Analytics for Customer Experience

Video/image analytics for CX is the application of data science methods to identify automatically significant information contained in images, image streams or pixels. It is used to generate insight and actions that contextually improve the customer experience, such as in-store behavior analysis, content classification and recommendation, vehicle damage analysis, and image matching and web image search. For more information, see “Innovation Insight for Video/Image Analytics.”

Vendors include:

- Amazon Web Services
- Clarifai
- Cortexica
- Google Cloud (AutoML Vision)
- iOmniscient
- RetailNext
- Syte
- TwentyBN
- ViSenze

### Web Analytics

Web analytics is a market of specialized analytics applications used to understand and improve the user experience and visitor acquisition, and the actions taken across web and mobile channels. It also aids optimization efforts in digital marketing with externally facing sites and internally facing intranets. Products offer reporting and segmentation capabilities, analytical and performance management, and integration with other data sources and analytic tools. These tools are used by marketing, advertising and digital commerce professionals, content developers, customer service and support, and the website operations team.

Vendors include:

- Adobe
- AT Internet
- Google
- IBM
- Matomo (previously InnoCraft)
- Kissmetrics
- Mixpanel

### Conversational Engagement Analytics

Conversational engagement analytics tools monitor and measure user interactions across multiple conversational channels, involving text or voice, with a view to increasing engagement and retention. They are used to understand user behavior, much like web and mobile app analytics, but are distinguished by their specialization in analyzing messages, utterances, intents, sentiments and other interactions conducted in natural language.

Vendors include

- Botanalytics
- Dashbot
- DialogTech

## Customer Experience Management

### Enterprise Feedback Management

Enterprise feedback management is a fragmented market with no leaders and more than 300 offerings (as identified by Gartner). We group these into three types of vendor:

- Vendors that provide simple tools for collecting surveys in a single communication channel (such as via the web or IVR).
- Vendors that specialize in processes such as customer satisfaction surveying, employee satisfaction, new product development feedback or complaints management.
- A smaller group of vendors, listed below, each of which provides enterprise feedback management applications that work across multiple channels and can be used for multiple processes. Gartner hears the most about these vendors from end-user clients, partners and vendor clients.

We expect consolidation to occur in the enterprise feedback management market during the next few years and will continue to update the sample vendor list accordingly.

Vendors include:

- Aptean
- Business & Decision (part of Orange Business Services)
- Clarabridge
- CloudCherry
- Confirmit
- myK

- Customerville
- Eloquant
- Equiniti Charter
- ForeSee
- GetFeedback
- InMoment
- Insight Now
- InTouch Insight
- Inworks
- iperceptions
- iSKY
- MaritzCX
- Maru/Syngro
- Medallia
- MediaTech Solutions
- NICE Satmetrix
- PeriscopeIQ
- Potentiate
- Qualtrics
- Questback
- Quick Search
- ResponseTek
- sandsiv+
- SAP (CallidusCloud)
- SAS
- Smoke Customer Intelligence
- SurveyGizmo
- Surveypal
- SurveyMonkey

- Thirty by Thirty
- Vision Critical
- Verint Systems (includes OpinionLab)
- WorldAPP (Key Survey)

**Voice of the Customer**

Voice of the customer (VoC) solutions combine multiple, traditionally siloed technologies associated with the capture, storage and analysis of direct, indirect and inferred customer feedback. Technologies such as social media monitoring, enterprise feedback management, speech analytics, text mining and web analytics are integrated to provide a holistic view of the customer's voice.

Astute CRM specialists capitalize on the customer insights by disseminating relevant information to the right person, at the right time and on the right channel. The landscape is still taking shape; the leading vendors come from a variety of backgrounds with different core strengths.

Vendors include:

- Clarabridge
- CloudCherry
- Confirmit
- CustomerGauge
- InMoment
- iSKY
- J.D. Power
- MaritzCX
- Medallia
- MediaTech Solutions
- NICE (Satmetrix)
- OpenText
- Qualtrics
- Questback
- Rant & Rave
- ResponseTek

- sandsiv+
- SAP (CallidusCloud)
- SMG (Service Management Group)
- Verint Systems (ForeSee)

## Vendor Considerations for Small Businesses and Midsize Enterprises

Many vendors serve small businesses and midsize enterprises that have an average of fewer than 50 seats. These organizations should consider CRM vendors to support their customer service needs, and beyond, with the following guidelines and considerations. For more information, see "How Midsize Enterprises Can Optimize SaaS CRM Vendor Selection."

- Select a vendor that offers the closest fit to the essential elements of your customer journey. Be prepared to select multiple vendors for complex use cases and/or additional industry capabilities.
- Keep the number of vendors to a manageable level for your organization. Don't underestimate the amount of oversight needed for each vendor. At a minimum, implement basic operational management such as usage, service levels and releases.
- For mission-critical solutions and/or to mitigate the risk of lock-in, maintain lists of alternative vendors and develop a contingency plan (see "Develop Contingency Plans for Your Critical Suppliers, or Risk Business Disruption").

Below is a list of the most common CRM suite vendors supporting customer service use cases that Gartner encounters:

- Agile CRM
- Apptivo
- Averiware
- Batchbook
- Bitrix24
- bpm'online
- CAS Software
- CRMVillage
- Commence
- Epicor Software
- FreeCRM
- Freshworks

- Gold-Vision
- Ivanti-GoldMine (HEAT Software)
- HubSpot
- icomplete.com
- Infor
- Keap
- Nextiva
- Norada (Solve CRM)
- Oracle (NetSuite)
- Really Simple Systems CRM
- Sage CRM
- Salesboom
- Salesforce
- SalesNOW
- SugarCRM
- SuperOffice
- Trivaeo
- Vtiger
- webCRM
- Workbooks
- X2Engine (X2CRM)
- Zendesk
- Zoho

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### Acronym Key and Glossary Terms

| | |
|---|---|
| **Digital Transformation** | Digital business transformation is a type of digital journey that has the ambition of pursuing net new revenue streams, product/services and business models. It is favored by enterprises that must adapt to an industry in disruption, or ones that want to disrupt their industries. |
| **Digital Optimization** | Digital business optimization is a type of digital journey that has the ambition of significantly improving existing business models through improved productivity, greater revenue generation of existing streams and improved customer experience. |

## Gartner Recommended Reading

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

"Customer Service and Support Technology Primer for 2019"

"Four Best Practices for Implementing Extreme Customer Self-Service"

"Knowledge Management Is Key to Your Customer Self-Service Strategy"

"Select the Best Approach for Connected Customer Service Experiences"

"Ten Steps for Planning Your Customer Engagement Hub"

"What Is Gartner's Pace-Layered Application Strategy and Why Should You Use It?"

"Hype Cycle for CRM Customer Service and Customer Engagement, 2018"

"Hype Cycle for Contact Center Infrastructure, 2018"

"Hype Cycle for Customer Experience Analytics, 2018"

### Evidence

This research is based on insights from Gartner customer service leaders' interviews with clients and customer service providers, client inquiries and information obtained from secondary sources.

[1] "2019 CEO Survey: The Year of Challenged Growth"

[2] "Survey Analysis: Customer Experience Maturity and Investment Priorities, 2019"

[3] "Market Share: All Software Markets, Worldwide, 2018"

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