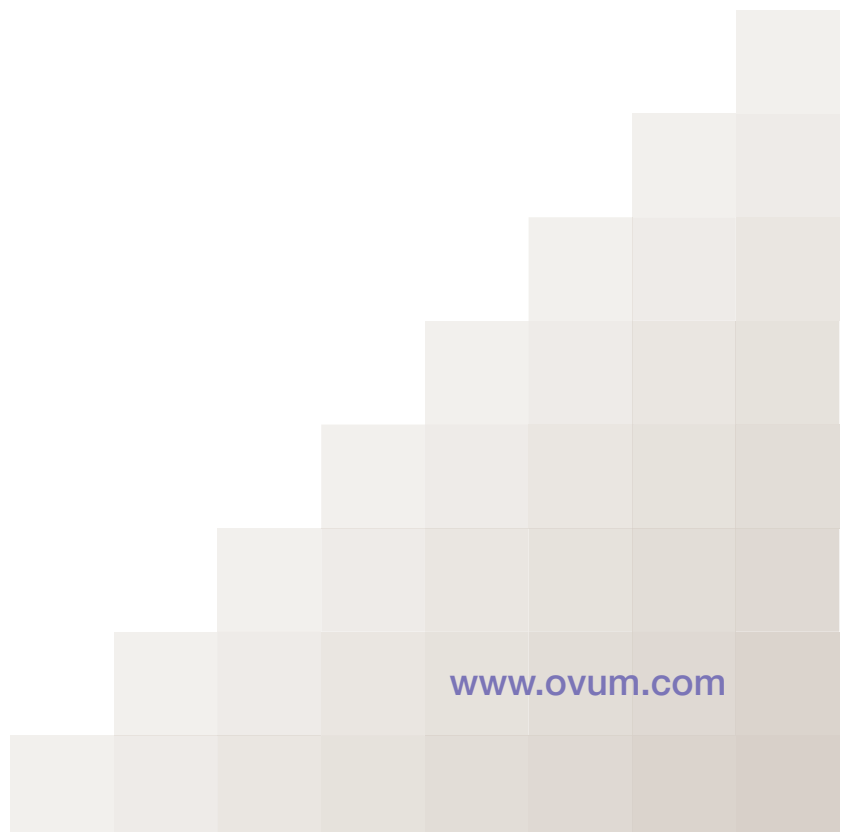




# The market for contact center queuing solutions

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# The market for contact center queuing solutions

## Executive summary

### In a nutshell

***By its broadest definition, virtual queuing allows callers waiting on hold for an agent to hang up without losing their place in the queue. Though not a new solution, virtual queuing is not common, despite the way in which it allows enterprises to differentiate via customer service. Despite all of the recent investments in self-service automation and solutions that optimize agent productivity, virtual queuing solutions seem to be a neglected area. When properly deployed, they can offer genuine business benefits, improve customer satisfaction levels, and reduce contact center staffing costs.***

### Ovum view

The inherent value in queuing solutions should make them an attractive proposition to enterprises. However, virtual queuing addresses an area that's often ignored by businesses, as their direct benefit is to the nebulous region between self-service automation and agent-assisted service. As CTI and SIP become more commonplace in contact centers, integrating virtual queuing solutions also becomes cheaper to deploy. The rise of the hosted deployment model and the fact that vendors have begun to add virtual queuing features in their platforms mean that enterprise awareness and willingness to invest will also grow.

### Key messages

- The key feature in virtual queuing is the ability to offer callbacks. Callbacks come in two different flavors: scheduled callbacks and first in, first out (FIFO) callbacks. Two different solutions usually handle these disparate capabilities. Of the two solutions, scheduled callback is more complex as it generally has a richer feature set, giving customers more options and more granular management controls for the contact center.
- Enterprises optimizing customer service often overlook queue times. In cases when enterprises want a solution that helps them improve their queues, they'll often forego more fully featured solutions and try to save costs with a bolt-on module.
- The advent of the SIP protocol and the increased popularity and viability of the hosted deployment model should drive enterprise investment in a more feature-rich solution. These developments make integration and management



of the solution easier and reduce the overall cost, which, depending on the complexity of the solution, can be a primary pain point.

- Enterprises will invest in virtual queuing to reduce agent costs while increasing customer satisfaction and retention. Virtual queuing reduces call holding and handling times as well as caller abandonment.
- Enterprises are still hesitant to invest because they fear the virtual queuing solution will interfere with contact center practices. Cost is also an inhibitor and some enterprises lack the technological foundation to deploy a solution in a cost-effective manner.

## Market developments

### Introduction

#### Defining virtual queuing solutions

A virtual queuing solution bridges the gap between automated customer service and agent-assisted service. In most calls that require transfer to an agent, a customer call is placed in a queue in the Automatic Call Distributor (ACD). The caller must either wait for an agent to become available or abandon the call by hanging up.

Virtual queuing solutions give the caller the Estimated Wait Time (EWT) before an agent's availability. The system allows the caller to hang up without relinquishing his place in the queue. When an agent becomes available, the caller receives a callback.

There are two types of callback:

- **first in, first out (FIFO) callback.** The customer gets a callback once an agent becomes free. The first caller in the queue gets the next available agent.
- **Scheduled callback.** The customer schedules a time for an agent callback at a later date/time.

#### Differentiation between FIFO and scheduled callbacks

Solutions that offer FIFO callbacks and those that offer scheduled callbacks are usually packaged separately. Each method has advantages and disadvantages and caters to specific contact center needs.

Scheduled callbacks have been around for nearly a decade. Because customers schedule the callback (and, depending on the complexity of the solution, they can also schedule on which device or phone number they want to be contacted), this solution offers greater consumer empowerment and flexibility. In other words, a scheduled callback solution is to an intelligent application what a FIFO callback solution is to a static application.



Enterprises can create and use business rules with a scheduled callback solution so that the application changes based on what's happening in realtime. For instance, Virtual Hold (a vendor) offers end-of-day management. This feature coordinates the number of scheduled callbacks with the time remaining until the end of the business day. This is designed to keep scheduled callbacks at a manageable level.

The problem with scheduled callback, however, is that its complexity might require more professional services spend or oversight from contact center managers. Consequently, complex solutions bear a higher price point. There is also the risk of disrupting existing contact center practices and business processes. Shift or staff changes can also hinder the efficiency of scheduled callback. Fluctuations in the number of available staff due to shift changes, for instance, can create more scheduled callbacks than the contact center can handle. Additionally, the close of business creates a deadline by which scheduled callbacks must be met. Some vendors offer solutions with algorithms that predict agent availability, without disrupting business processes.

FIFO callback is more straightforward: a caller hangs up without leaving the queue and at the time the call would normally reach an agent, he gets a callback. It's a simpler, less disruptive solution that can be placed more seamlessly into the contact center, with less professional services overlay. However, FIFO is less flexible than scheduled callback; callers can hang up, but they still have to alter their schedules in anticipation of a returned call. Agents making unanswered phone calls can decrease productivity.

### **Varying degrees of complexity**

Despite the functional similarity of the solution across multiple providers, scheduled callback solutions vary highly from one vendor to the next. And while each vendor's message of cost savings and improved customer satisfaction is similar, the ways in which vendors deliver their solutions to customers differ.

Most vendors bundle virtual queuing with ACD or IVR platform sales. The solution is a tougher sell as a point solution, in part because of the way in which it must be integrated into a greater routing strategy. Providers such as Virtual Hold specializing in virtual queuing solutions sell direct to enterprise and also partner with large contact center technology providers and systems integrators (SIs). Incumbent providers of contact center platform technologies such as Avaya, Cisco, Interactive Intelligence, and Genesys (Alcatel-Lucent) have developed their own in-house virtual queuing solutions and offer these as a value-add, either as a free component or for a nominal licensing fee. These vendors emphasize that their solution is more than a queuing solution and offer the ability of integrating queuing with dynamic and intelligent self-service. Using an integrated solution, in-queue callers can either hang up, triggering the scheduled callback module, or remain on the call, at which point they'll be presented with prompts designed to glean information that improves routing accuracy. The ability to offer this type of functionality is contingent on the vendor having extensive self-service application development capabilities.



By contrast, vendors such as Virtual Hold place their value in the business intelligence and logic built into the actual queuing solution. These rules, customizable and overseen by contact center managers, determine the virtual queuing experience in realtime based on realtime contact center conditions. For instance, in order to avoid return calls stranded in the system at the close of business, Virtual Hold's platform ensures callbacks are cleaned out by comparing callback times to the remaining time until the end-of-day. If the former exceeds the latter, the solution can automatically offer a scheduled return call rather than a FIFO callback.

Additionally, extensive reporting and analytics offer insight into queue management, customer behavior, and agent resource efficiency.

### **Technological developments create investment opportunities**

The advent of new deployment models and protocols has made virtual queuing solutions more attractive to enterprises. We list below a selection of developments that we believe are important.

#### **SIP drives investment**

The advent of Session Initiation Protocol (SIP) has driven enterprise investment in virtual queuing solutions. Virtual queuing nominally requires investments in Computer Telephony Integration (CTI) to track calls, predict agent availability, and ensure the agent knows the purpose of the call. CTI investments can be cost-prohibitive. But because the SIP protocol is separate from the transport layer, queuing logic and applications can essentially be abstracted from the underlying network using one of a number of open communication protocols compatible with SIP. In short, there is a decreased burden from costly professional services investments and time-consuming integration.

#### **New demand for a hosted solution**

Enterprise demand for contact center solutions offered as a hosted service or as software-as-a-service (SaaS) extends to virtual queuing as well. Increasingly, enterprises interested in scheduled callback solutions want them provided as a service by either a managed service provider or an outsourcer. Hosted or SaaS models are beneficial to enterprises that need flexibility from their enterprise technologies. Ovum identifies the following benefits in the hosted model with regard to virtual queuing solutions:

- enterprises with seasonal call spikes can avoid year-round investment
- straightforward delivery of applications via the Web, especially useful for work-at-home agents
- rapid scalability
- easier access to information for distributed agents and managers



- faster access to software updates and new solution features/functions
- shifting spending from capex to opex
- less allocation of in-house IT resources to manage solution.

## Customer impact

### The missing link

Virtual queuing is the missing piece in a holistic customer service solution. Enterprises often think of customer service in terms of self-service automation or live agent optimization. Virtual queuing is the link between those two areas. It's understandably difficult for enterprises to be mindful of queuing as an area that needs to be improved from a customer satisfaction standpoint. Other than abandonment rates, there really aren't any metrics to determine how customers are responding to hold times.

Consequently, enterprises overlook queuing's inherent complexity and the opportunities for improvement. Enterprises have queues corresponding to different departments, servicing different customer needs, which each have a different "character." Some have long talk times, others short talk times, and other queues suffer from sudden call spikes. The nature of each queue affects the permissible EWT, which in turn affects customer satisfaction.

From an ROI standpoint, besides the obvious customer satisfaction and retention benefits, virtual queuing affects management of contact center staff by allowing management to do more with less. Contact centers might be financially unable to staff as fully as they need, but this does not keep customers from calling. Virtual queuing allows contact centers to handle this overflow efficiently; it reduces caller abandonment rates, hold times, and call volumes (as customers no longer have to continuously hang up and redial). It essentially brings order to what can feel like a mob of customers swarming the enterprise for service-related issues.

### Key drivers for investment are reducing agent costs while boosting customer satisfaction

The gap between self-service and agent-assisted service is often overlooked by enterprises; this is unfortunate because a great deal can happen between the hold times in which a caller is waiting for an agent. Providers of virtual queuing solutions emphasize the importance of managing and routing their queues. Some of the key reasons enterprises are likely to adopt a virtual queuing solution are:

- **Reducing agent staffing costs.** Despite improvements in self-service automation, some tasks are sufficiently complex to absolutely require agent-assisted service, and enterprises need a strategy to efficiently deal with these surges, whether they are understaffed or not. Virtual queuing solutions have a double benefit: enterprises can effectively deal with large call volumes while improving overall customer satisfaction.



- **Reducing inbound costs by decreasing hold times.** Despite the proliferation of contact center virtualization, skills-based routing, self-service, and workforce management technologies, long hold time consistently remains a top customer complaint. Through virtual queuing, customers speak to specialists instead of reserve agents that do not have the correct skill set to offer first contact resolution. A significant and tangible benefit of virtual queuing solutions is the reduction of inbound costs by significantly decreasing hold times. Further reduction comes because with virtual queuing solutions, callers no longer hang up and re-enter the queue at a later time.
- **Reducing call handling times.** When customers have to wait in a queue, they often complain or are in a bad mood once they finally reach an agent. Initial complaints increase call handling time: agents first have to listen to the complaint before attempting to assist, and they also have to log the complaint into their workstation. Irritated customers can stress agents and strain the interaction such that it's more difficult for agents to help customers reach their goals, prolonging the interaction. Furthermore, a constant stream of unsatisfied or angry callers can reduce agent morale, reducing their operational efficiency and increasing attrition.
- **Reduce abandonment (increase retention).** While caller hang-ups end hold times and free up lines, they certainly don't improve customer satisfaction. Enterprises prioritize customer retention (to avoid the costly expense of finding new customers in a down economy) by investing in solutions that raise customer satisfaction. Reducing the call abandonment rate increases both customer satisfaction and retention.
- **Seasonal need.** Even enterprises that efficiently staff their contact centers occasionally experience overflows. In such cases, virtual queuing solutions can act as a safety net during times of seasonal need: these might include open enrollment periods, holidays, or weather conditions that suddenly exceed the agent resources a contact center would otherwise be able to meet.

## Barriers to adoption

Virtual queuing – with either FIFO callback or scheduled callback – is a solution that brings genuine value to the enterprise in that it optimizes queue times and generates genuine customer satisfaction. It's also a proven solution that has been around for years. Yet it hasn't proliferated as much as, say, speech applications for automated self-service. Some of the biggest barriers to adoption are:

- **Invisibility.** As mentioned previously, virtual queuing solutions fall into the limbo between automated customer service and agent-assisted customer service. When enterprises devote resources to improving customer satisfaction, it's either by investing in automation or in technologies that can optimize agent resources. In other words, enterprises are primarily concerned with times in which they are actively interacting with a customer. Consequently, queue optimization, which operates during a stage of the process in which customers seem largely invisible, is often ignored.



- **Cost.** The cost of more complex solutions that offer granular controls and flexibility can deter enterprise investment. Coupled with the above-mentioned problem of invisibility, it's no wonder that enterprises might be reluctant to invest for a solution to a problem they might not realize exists. To be fair, integrating the solution into platforms or ACDs, which is happening currently, will ease this particular issue. Additionally, many virtual queuing solutions are no longer add-ons that need to be managed separately.
- **Disruption to business processes.** There remains an enterprise perception that scheduled callbacks have the potential to interfere with contact center procedures. After all, it places an onus on the contact center to reach out to the customer. A shift change can lead to a sudden staff shortage, resulting in a backlog of callbacks owed. Providers of scheduled callbacks are aware of this and have created solutions around this pain point. However, it's fair for enterprises to question exactly how introducing scheduled callbacks into their contact center will affect agent performance, and whether any additional training will be necessary.
- **Lack of technological foundation.** Virtual queuing requires a CTI connection. If CTI is not present in the contact center, then the additional cost might deter enterprises from investing. SIP, as mentioned previously, eases this restriction. However, not all contact centers have deployed CTI or SIP, which precludes a virtual queuing solution.
- **Cost of outbound.** Depending on carrier contracts, enterprises might be unwilling to shoulder the cost of paying for both inbound and outbound, which could inhibit proliferation.

### Uptake in the marketplace

Demand for simple virtual queuing solutions is steady; as platform providers integrate virtual queuing into their platform updates, the solution will be more readily available to a wider base of enterprise customers. More fully featured solutions that offer granular controls of EWTs and multiple queue management are a harder sell because they're often perceived by enterprises as a point solution. And the admittedly greater cost of a fully featured virtual queuing solution can be difficult to justify to enterprise stakeholders looking to optimize other areas of customer service, with investments in automation and workforce management.

Fully featured virtual queuing solutions have the greatest potential to take hold with enterprises most susceptible to external and unpredictable factors. Consequently, travel & transportation and communications are early adopters and prime areas for continued penetration. Call spikes in airlines, for instance, often occur due to conditions beyond anyone's control, such as weather or terrorist alerts. In communications, unpredictable network outages or the advent of a popular device can greatly influence EWTs within queues. Call volumes for utilities companies are also influenced by weather changes and outage patterns.



## Competitive landscape

### Solutions of varying complexity

Providers of ACDs have virtual queuing solutions of varying complexity. At the least, these solutions give the EWT to callers. More advanced solutions have business rules that regulate callback options and schedules. Over the course of interviews, the three providers whose names were most frequently mentioned in the virtual queuing space were Avaya, Cisco, and Alcatel-Lucent, ostensibly because these vendors are incumbents and have considerable brand recognition and market share in contact center routing (among other contact center technologies).

#### Avaya

Avaya's virtual queuing module is a core component of its Intelligent Customer Routing (ICR) solution. ICR is an evolutionary solution, designed to move enterprises to a SIP-based communications platform without the need to replace existing technology investments. During hold times, the module integrates application logic into the wait and combines it with operational data and business rules to make a decision about the caller. For instance, the enterprise could offer the opportunity for a scheduled callback. Using this logic, the enterprise can also initiate what Avaya calls advanced or dynamic wait treatment – that is, turning hold time into productive time by integrating intelligent self-service into the queue, depending on the status of the customer and their relationship with the enterprise.

A second solution Avaya offers that enables enhanced callback functions is Callback Assist. Enterprises using Callback Assist can offer customers the option of an immediate callback, depending on their queue position; or they can offer a scheduled callback. Customers requesting a callback state their name and reason for contacting the enterprise, as well as their phone number. Callback Assist pings the contact center agent and plays the message; the agent can make an outbound call when they are ready.

Avaya differentiates itself based on its advanced algorithms with regard to judging, predicting, and handling caller wait times. With ICR, Avaya also offers extremely flexible deployment models that consistently give agents insight into callers, whether those agents are on-premise, at home, or working for outsourcers. The vendor also cites its low price points as a competitive differentiator.

#### Cisco

Cisco offers two core queue management products. The first and more traditional solution is Scheduled Callback, a component of Cisco Unified Contact Center Enterprise. It is an optional, SIP-based feature and allows callers to schedule a callback from an agent.



The second product, Courtesy Callback, is a recently released feature baked into the recently updated Cisco Unified Customer Voice Portal (CVP) 8.0. Courtesy Callback determines whether there is an excessive EWT for callers to connect with an agent; if there is, the module offers a callback. The caller disconnects the call but remains in the queue. Once the EWT decreases sufficiently, the caller receives an outbound call in which an automated prompt informs them that an agent will soon be available. Following this, the system connects the caller to an agent. Agents are unaware that the caller ever disconnected; from their perspective, the caller never left the queue.

Perhaps the biggest differentiator of Courtesy Callback is that it's a standard component in CVP 8.0 and carries no additional licensing cost. Cisco also cites as another competitive advantage its powerful queuing and methodology and architecture, which allows calls to be queued and transferred anywhere over the IP network. Calls enter a distributed site and hold until an agent becomes available. Essentially this underpins Cisco's overall mission of "routing at the edge of the network."

### **Alcatel-Lucent**

Alcatel-Lucent tightly integrates Virtual Hold's solution into Genesys Voice Platform (GVP) as an application; the vendor also integrates the solution with its Intelligent Customer Front Door (iCFD) solution through its Conversation Manager platform. While iCFD is branded like a product, it's actually a bundled solution of products and services that enable an enterprise to provide a heavily personalized customer service experience. The concept of iCFD originated as a marriage between two Genesys products: its Genesys Voice Platform (GVP) and its Customer Interaction Management (CIM) Platform, which centralizes the creation and management of customer interaction processes. Conversation Manager streamlines and facilitates the transfer of customer data through an organization and across different communication channels. This ability gives Alcatel-Lucent's Virtual Hold-powered queuing solution even more value and intelligence.

Alcatel-Lucent's focus is on the end-to-end customer experience. The vendor has significant technological expertise and drives the user interface based on customer behavior, past interactions regardless of channel, transaction history, and back-end data available to the system. This intelligence makes its queuing solution more than just a module that enables scheduled or FIFO callbacks. Alcatel-Lucent also emphasizes its ability to deliver swift RoI to enterprise customers that have purchased its queuing solution.

### **Interactive Intelligence**

Interactive Intelligence's virtual queuing feature is a core part of its Customer Interaction Center (CIC) solution, an all-in-one IP communications software suite. CIC offers baked-in features such as IVR and ACD that run on a single platform in order to minimize integration requirements. The queuing component within CIC, which the vendor refers to as Universal Queue, offers multi-channel queuing for



virtual contact centers. It supports queues through email, fax, web chat, and voice channels and offers callbacks per customer request. Interactive Intelligence sells CIC both directly and through channel partners, and in both on-premise configurations and hosted configurations (what Interactive Intelligence refers to as communications-as-a-service or CaaS).

Interactive Intelligence differentiates CIC based on its all-in-one, open, single-platform software architecture. Additionally, CIC and its routing and queuing capabilities are easy for clients to set up and manage. This is largely due to the way features and functions are integrated into the core product.

### Virtual Hold

Virtual Hold's premium platform-based solution calculates and announces expected wait time, giving callers the option to hang up while keeping their place in line. The solution consists of two components: Concierge, which is the core component that enables intelligent queue management; and Rendezvous, which enables callers to schedule callbacks at their own convenience. Virtual Hold also offers WebConnect, a module that can be embedded in websites for click-to-callback abilities as well as on agent-facing desktop applications that need to transfer customers to particular skill groups. Contact center managers monitor virtual queuing activity through realtime dashboards, and a web portal empowers managers to customize the queuing logic based on agent or employee skills. Additionally, Virtual Hold provides more than 15 different reports on queuing statistics, system performance, and contact center efficiency.

Virtual Hold is positioned uniquely in the marketplace. It is both a competitor to and a partner with vendors such as Avaya and Cisco. It partners extensively with Genesys. Virtual Hold's technology is compatible with multiple CTI solutions, ACDs, and routing platforms. The solution is completely automated and requires no agent intervention or additional training. But Virtual Hold's biggest asset is the intelligence of its solutions. The vendor incorporates extensive business rules that allow dynamic changes, as contact center conditions warrant, throughout the business day. This intelligence is supplemented by reporting and analytics contained within the platform that offer insight into customer behavior and agent resource optimization. Finally, Virtual Hold has taken pains to offer a solution that's easy to integrate, operate, and is not invasive to contact center operating procedures.

### Recommendations for enterprises

The following represent Ovum's recommendations for enterprises interested in deploying virtual queuing solutions:

- **Determine your goals and establish a plan.** Enterprises need to first decide exactly what type of problem they want to solve and to what extent (if any) a callback solution might disrupt their contact center practices. If increasing customer satisfaction, for instance, is a top priority, then enterprises might



want to look into a premium, highly flexible solution that offers numerous scheduled callback options. If, on the other hand, the cost of the solution is a concern, and enterprises want to deploy quickly without any potential of disrupting contact center operations from the agent side, then a simple callback solution might be preferable. Furthermore, enterprises should be aware of their existing infrastructure investments. In many cases, virtual queuing solutions are baked into core platforms or ACDs and only require purchase of a license.

- **Don't skimp on analytics and reporting.** Analytics and reporting are the best way to assess the efficacy of the virtual queuing solution. Though queuing might be straightforward, there are numerous questions that enterprises should ask, the answers to which determine customer satisfaction levels. For instance, what are the average wait times? What happens during that wait time? How many attempts does it take before agents can call back customers? How much has the average cost per call decreased? To what extent has call occupancy within the contact center improved? These are all questions that should be answered by the analytics and reporting associated with the queuing solution.
- **Think big picture.** Consider how this solution fits into the overall customer service strategy. For instance, how can an enterprise's self-service automation be improved by virtual queuing? Certainly not every task should be automated; at the same time, there might not be enough agents to immediately service every caller. Are there specific nodes in the automation solution that experience more hang-ups and higher levels of frustration? If so, it might benefit the enterprise to implement an intelligent virtual queuing solution.

## Recommendations for vendors

The following represent Ovum's recommendations for vendors interested in pushing their virtual queuing solutions:

- **Improve interoperability.** Enterprises want their queuing solution to be no-hassle and easy to integrate. Platform providers typically offer solutions baked into their core platforms and ACDs. They should consider positioning virtual queuing as a parallel with proactive communications – an area that has seen remarkable growth in recent years. For providers of point virtual queuing solutions, platform interoperability is extremely important, especially since their business is with enterprises actively searching for a point virtual queuing solution.
- **Incorporate automation.** While callbacks improve customer satisfaction, what if a customer decides to remain on hold? Turning hold time into productive time, in which the system tries to glean more information to better route the caller or prepare the agent, can shorten the call handling time. If callers haven't already gone through automated self-service, consider offering the option (i.e. "if you'd prefer to hold, you might find it faster to try automated self-service".) Integrating these various service solutions turns



downtime into productive time and creates, for the enterprise's benefit, customer usage statistics that can be leveraged for future improvements.

- **Offer as a hosted service.** Enterprises are increasingly investing in hosted solutions, which are more competitively priced than premise-based solutions and can relieve management responsibilities for IT or contact center staff. Virtual queuing solutions have traditionally been affected by issues of cost and complexity; today, these pain points are felt less keenly, but they still exist. Offering the versatility of a hosted model could eliminate them altogether.
- **Integrate cross-channel interoperability.** This is more than offering web queuing. The multi-channel capabilities of mobile phones create new opportunities for virtual queuing; for instance, how can SMS improve scheduled callback? Mobile users could view callback options via text message or they could bypass the voice channel completely and request a callback directly by text. When callers have options, they feel that they are in control of the interaction, and that the enterprise is actively responding to them. This goes beyond improving customer satisfaction; this type of service creates strong brand loyalty.

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