Customer Engagement Meets the Internet of Things (IoT)

Connected devices paired with strong analytics will force the shift to proactive customer engagement
Summary

Catalyst

Although customer engagement has evolved a great deal over the past decade as voice-only call centers have given way to the more popular and better-suited omnichannel contact centers, customer interactions are not receiving high grades from the newer generation of users, which now include more millennials and Generation X members. The long-despised interactive voice response (IVR) system and the inability to quickly and efficiently reach a live customer service representative are still the top two issues cited by customers complaining about substandard service. The much-anticipated Internet of Things (IoT), supported by an estimated 30 billion to 50 billion connected global endpoints by the year 2020, has the potential to fill many of the voids in customer service while making customer engagement a much more proactive process than ever before. In addition, IoT has the potential to change current reactive customer care systems into much more proactive systems, a change that industry participants have seen as necessary, but have been unable to implement effectively, for many years. These potential benefits of IoT, coupled with the effective use of big data and improved analytics, are a very promising aspect of future customer engagement solutions.

Ovum view

Ovum believes that customer engagement management has a long way to go in meeting the needs of a growing base of very demanding customers. This newer generation of customers are technology-savvy, have high expectations, and in many cases would rather do it themselves than wait in a queue with little hope of issue resolution on the initial interaction. Therefore, the longstanding mantra of "do more for customers" may quickly evolve to "enable the customers to do more for themselves." We believe IoT has the potential to correct many of today's issues in providing customer service and pave the way for a more user-friendly, proactive, self-service-based customer engagement philosophy than ever previously imagined. In addition, IoT's ability to further expand the realm of customer engagement beyond the contact center and into other parts of the enterprise, including the back office, field service operations, and beyond, gives much hope to industry participants who desire to fully capture the long-sought 360-degree view of the customer and track the end-to-end customer service journey process.

Key messages

- Current customer experience interactions are not meeting the demands of the new generation of customers who are shaping marketplace activity.
- Self-service has lost its stigma of providing less service and is becoming an accepted, as well as often preferred, solution in customer engagement circles.
- IoT is capable of filling many of the voids in current customer service processes and will add some new tools to enhance the customer's overall experience in the areas of real-time analysis and proactivity.
- The merger of customer engagement and IoT will result in enhanced customer service and will likely drive a host of acquisitions and new vendor partnerships/relationships.
Recommendations

Recommendations for enterprises

In planning for customer experience IoT-related applications, enterprises should start with a well-defined map of their customer journey experience and identify areas in which IoT and connected devices would add value to the process. Enterprises should avoid thinking that IoT is the solution to all things. At the same time, it is important to keep a balance between how combined customer experience/IoT solutions can and will benefit the end-user customer and the enterprise. Implementing IoT solutions that simplify and expedite the customer journey while ensuring that the customer avoids the pitfalls that are causing customer problems – such as poor IVR implementations, long wait times, and difficulty getting to a live agent – should be a priority. In many cases, this will not only improve customer satisfaction and loyalty, but also eliminate high-expense areas for the enterprise, such as lengthy live agent interactions and unnecessary service truck rolls.

An emphasis should be put on increasing the level of proactivity to reach out and solve customer problems and issues before the customer is even aware a problem exists. IoT has already had positive effects in industries such as healthcare, automobile monitoring and repair, and home systems management. While IoT is in its embryonic stages in customer engagement solutions, and a relatively short list of use-case examples exists, these other industry models can add insight into the influence IoT may have in customer service environments. In addition, enterprises should think outside the contact center when considering IoT solutions and include peripheral customer service/customer engagement areas such as the back office and field service operations, which have a significant effect on the customer journey and the image it projects on a company's brand. Ovum believes customer engagement management is a leading candidate to be a major competitive differentiator in the future, and the combination of customer engagement processes with IoT capabilities will be an important way to achieve exemplary levels of service and brand differentiation in the marketplace.

Recommendations for vendors

As the customer engagement market evolves and melds with well-planned IoT platforms, information and the analysis of that information will become an increasingly important factor for enterprises and the contact centers that are responsible for developing and maintaining the long-sought 360-degree view of the customer. Unlike in the past, this view will tend to be an omnichannel one that enables enterprises to cater to the requirements and preferences of their customers. Enterprise executives and their customer service/contact center managers are admitting that they are already overwhelmed with the increased flows of data coming from CRM systems, the recent increase in the use of digital channels, and embryonic IoT platforms. While enterprises are prepared to invest in solutions to solve the big data issue that will be exacerbated by the introduction of IoT data streams, they are seeking the help of their customer engagement partners to support them in this endeavor. Vendors must make plans to ensure that their products and services offer real business-centered solutions that focus on this issue and that they position themselves as strategic business partners to their customers to attain and maintain a level of competitive differentiation in the marketplace.

As the scope of customer care expands beyond the contact center and into the back office and field service areas and beyond, vendors should make plans to develop partnerships across market segments. This expansion means that a vendor in an adjacent segment might well be acquired or
connected to or embedded in a competing suite. Going forward, the stronger a vendor's business ecosystem, the more prepared it will be to expand into new but related technology areas. Some obvious areas of partnerships have existed for some time, including call routing, CRM, workforce optimization/workforce management, and marketing automation products. However, newer areas for potential business and product information include big data, IoT, field service, channel digitization, self-service, and analytics, which will provide many paths for business and revenue expansion for vendors participating in the customer engagement marketplace. Because of the broadening scope of the marketplace, the entry of additional vendors, and the potential size of this growing market, it will be difficult to succeed as a standalone entity, at least in the early stages of IoT market development. Therefore, strong strategic partnerships will be a key to success.

**Current customer engagement solutions are underperforming**

**Customers and their demands are evolving**

As the Greatest Generation and baby boomers age and move aside to allow room for Generation X and millennials, the customer engagement marketplace will have to shift gears and cater to the younger customers and their unique set of needs and preferences. These newer generations, born after 1965, are now the focal point of marketers looking to capture their business in the coming years. We are aware of several distinct differences between these younger groups and their predecessors. The first difference is their tech-savvy nature. Having grown up with computers, they are much more comfortable with the Internet and online services than their older counterparts. They are also less patient and less likely to wait in a customer service queue, and many have a distinct preference to help themselves through self-service technologies when given a choice. A recent Ovum survey confirmed the current customer base is also very likely to do online research prior to seeking customer service help and/or even be on a company's website during a call for service to a live agent, as shown in Figure 1. There is little doubt that enterprises are dealing with a much better educated and prepared customer base than ever before, which is driving a requirement for better trained and better prepared agents to answer their calls.

**Figure 1: Website support before and during calls is increasing**

<table>
<thead>
<tr>
<th>Do you look for information on the web or mobile app/site before reaching out to a live service representative?</th>
<th>Do you use a company website/mobile app to search for relevant information while on a call with an agent?</th>
</tr>
</thead>
<tbody>
<tr>
<td>No 28%</td>
<td>No 31%</td>
</tr>
<tr>
<td>Yes 72%</td>
<td>Yes 69%</td>
</tr>
</tbody>
</table>

Source: Ovum global customer survey, May 2016; N = 400
Another major change in customer preferences is the shift from a desire to have a voice call with a live agent to other no-voice digital and often self-service channels to get issue resolution. As reflected in Figure 2, with only a few exceptions, today's customers seeking a quick resolution for a general support customer service issue are more likely to prefer the use of a nonvoice channel. The exceptions to this tendency are for interactions dealing with technical issues, a service outage, or questions dealing with billing or fraud. However, for interactions dealing with making a purchase, general support questions, service cancellation, changing a reservation, or account modifications, customers prefer to use email, Short Message Service, a company website, a mobile application, or live chat. On average, our survey indicated that 78% of customers prefer a nonvoice channel when given the choice.

Figure 2: Which channel would you prefer to use if you knew you could get a resolution on the first attempt?

<table>
<thead>
<tr>
<th>Category</th>
<th>Phone call</th>
<th>Email</th>
<th>SMS</th>
<th>Mail</th>
<th>Website</th>
<th>Mobile app</th>
<th>Live chat</th>
<th>Communities</th>
<th>Social media</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical issue with product or device</td>
<td>51%</td>
<td>22%</td>
<td>6%</td>
<td>4%</td>
<td>6%</td>
<td>4%</td>
<td>7%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>When purchasing items on the web</td>
<td>16%</td>
<td>27%</td>
<td>4%</td>
<td>4%</td>
<td>22%</td>
<td>13%</td>
<td>9%</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>Service outage &amp; restoration</td>
<td>26%</td>
<td>19%</td>
<td>7%</td>
<td>8%</td>
<td>14%</td>
<td>9%</td>
<td>8%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Billing question</td>
<td>38%</td>
<td>18%</td>
<td>8%</td>
<td>6%</td>
<td>8%</td>
<td>5%</td>
<td>13%</td>
<td>1%</td>
<td>4%</td>
</tr>
<tr>
<td>Suspected fraud</td>
<td>26%</td>
<td>19%</td>
<td>5%</td>
<td>14%</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
<td>9%</td>
<td>4%</td>
</tr>
<tr>
<td>Cancellation</td>
<td>14%</td>
<td>27%</td>
<td>20%</td>
<td>15%</td>
<td>10%</td>
<td>6%</td>
<td>3%</td>
<td>2%</td>
<td>5%</td>
</tr>
<tr>
<td>Change a reservation</td>
<td>12%</td>
<td>21%</td>
<td>17%</td>
<td>9%</td>
<td>8%</td>
<td>16%</td>
<td>11%</td>
<td>1%</td>
<td>7%</td>
</tr>
<tr>
<td>Make account modifications</td>
<td>8%</td>
<td>24%</td>
<td>6%</td>
<td>18%</td>
<td>18%</td>
<td>12%</td>
<td>6%</td>
<td>0%</td>
<td>9%</td>
</tr>
<tr>
<td>General support questions</td>
<td>6%</td>
<td>8%</td>
<td>1%</td>
<td>0%</td>
<td>19%</td>
<td>22%</td>
<td>33%</td>
<td>4%</td>
<td>8%</td>
</tr>
</tbody>
</table>

Source: Ovum global customer survey, May 2016; N = 400

Another interesting finding in Ovum's surveys conducted earlier this year is that there is a rather large customer engagement perception gap when comparing the views of customer service/contact center managers and the customers themselves. When we asked the managers how many attempts their customers made to reach customer service before a resolution was achieved, they said one to two attempts on average. When we asked customers how many attempts it takes to achieve issue resolution, 62% said more than five attempts. An additional 26% said three to four attempts. Therefore, 88% said it takes them three or more attempts to solve their problem, while managers believe their customers are satisfied they have a resolution after the first or second interaction. While much of this perception gap may be explained by insufficient methods of tracking the interactions across multiple channels of access to customer service, the one thing we know for sure is that managers believe they are doing better than they are in serving their customers.

Self-service is outpacing other solutions

Ovum research indicates that unassisted self-service capabilities are a growing expectation with today's customers as they seek out companies with which to do business. Self-service is becoming a more acceptable form of customer engagement, and customers are indicating which are their preferred forms of self-service, as indicated in Figure 3. A vast majority of customers expect frequently asked questions sites, followed by customer forum sites and video tutorials. These leading choices of
customer self-service are followed by social media posts, blog posts, and available webinar recordings for on-demand viewing.

**Figure 3: Self-support expectations are expanding**

<table>
<thead>
<tr>
<th>When selecting a company, which self-support options do you expect?</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAQs</td>
</tr>
<tr>
<td>Customer forums</td>
</tr>
<tr>
<td>Video tutorials</td>
</tr>
<tr>
<td>Social media posts</td>
</tr>
<tr>
<td>Blog posts</td>
</tr>
<tr>
<td>Webinar recordings</td>
</tr>
</tbody>
</table>

Source: Ovum Lifetime Value Study, July 2016; N = 7,000

Ovum believes we are at a turning point in the customer engagement marketplace when enabling your customers to help themselves is on par with doing more to help your customers and that offering the best and most effective self-help solutions will be the competitive differentiator of the future. This is driven by a new generation of customers who are better educated, make ready use of all available information and assistance prior to seeking help, and are more impatient and willing to help themselves when and how they want, rather than wait on line for assistance. While most customer service/contact center suppliers and their enterprise customers are seeking higher levels of performance in the area of first contact resolution, customers are moving toward a zero contact resolution frame of mind.

The marketplace has created the perfect storm for IoT

**IoT is gaining momentum and raising expectations**

As we witness the arrival of IoT in the marketplace and see many forecasts of Internet-connected IoT endpoints exceeding 30 billion globally by the year 2020, it is natural to speculate how the adoption and expansion of IoT can and will affect the customer engagement industry. When examining the state of the customer engagement industry in 2016 and the seemingly growing frustration customers have with the industry’s current infrastructure, including the continuing frustration with IVRs, the inability to reach a live agent when required, and the weakening of the dominance of the voice channel, Ovum believes the coming of IoT could not be better. A new generation of tech-savvy
customers is fueling the growth of digital access channels to customer service, speed to service continues to be a major issue, self-service is gaining respect among customers and enterprises alike, and a serious service perception gap continues to exist among industry players. It does truly appear that the marketplace has created the perfect storm for the advent of the IoT revolution in the customer engagement arena.

Customer expectations align with the promise of IoT

As the customer generational mix continues to evolve, stronger and more ubiquitous self-service comes to be the norm, proactivity becomes an essential replacement for reactive solutions, and self-support gains customer appeal, it does appear that IoT and its built-in ability to service customers proactively and before they even realize they have an issue will deliver a win-win scenario to the customer engagement marketplace. IoT is a fast-growing network of physical endpoints with an IP address to facilitate Internet connectivity and communication. The communication that occurs between these objects and other Internet-enabled devices and customer service systems will enable a new wave of customer engagement that will have the ability to bypass the problematic IVR as well as customer service agents themselves. IoT will not only speed up the proactive servicing of customers but also reduce the effort and therefore a significant portion of the expense of enterprises serving their customers.

For these reasons, enterprises are making customer engagement investments in IoT a top priority, as shown in Figure 4, putting IoT planned investments on par with those going to predictive analytics and integrated e-commerce as priorities. A full 84.7% of enterprises told Ovum they are putting customer engagement dollars into strategic, minor (upgrades/pilot projects), and existing investments because they see IoT as a major opportunity for their company in the not-too-distant future.

Figure 4: Customer engagement investment priorities

Source: Ovum ICT Enterprise Insights 2016
IoT will lift customer engagement to the next level

IoT thrusts customer engagement to new stages of functionality

Once merged with an IoT platform and its connected endpoints, the customer engagement function will take on a new aura of functionality never before achievable in a more customary contact center environment. One obvious change will be the ability of the connected endpoints to detect a problem before a customer is even aware that the problem exists and proactively seek and implement a fix where possible, often without the customer ever becoming aware an issue has arisen. This will introduce a new level of proactivity never before available in single-channel, voice-centric customer service environments. In addition, a new emphasis on tracking the entire customer journey is introduced, as enterprises are required to capture customer interactions in real time, from the prospecting and marketing stages of customer involvement through the service and maintenance and upgrade cycles. IoT could provide the collection points and communication channels to facilitate this real-time activity tracking. This will enable the enterprise to optimize customer satisfaction and customer long-term value to the enterprise, as well as provide company product and service differentiation to its customers.

With the advent of IoT, the scope of customer service and retention can be re-engineered to gather and analyze information as it occurs across the enterprise and perhaps beyond. While this has been the promise of the much-discussed "360-degree view" of the customer, and more recently the addition of big data initiatives, it has not resulted in any substantial change or improvement in customer service activities to date. However, we believe the addition of an IoT platform infrastructure and enhanced partnerships – and perhaps some further industry consolidation via mergers and acquisitions – among big data companies, contact center software providers, and data analytics companies and their broadened capabilities will bring this to fruition in the not-too-distant future. Indeed, we are already seeing indications in the marketplace that this will be the case.

The customer engagement experience will expand beyond the contact center

For most of its history, customer service and, more specifically, customer engagement have been centered on interactions occurring in the contact center itself. This would include live two-way customer/agent interactions as well as agent-assisted and unassisted self-service interactions initiated by customers across all access channels. However, this is beginning to change as customers and businesses demand a much broader scope to the overall customer engagement experience. Likewise, in reaction to customer demand for a broader scope of coverage, leading customer service-oriented business organizations have realized that effective customer engagement requires a much broader scope of activity that expands beyond the contact center. The fact is, as stated earlier, that the customer experience should be closely tracked from the marketing and selling period through the service and support cycle for the entire lifetime of the customer/business relationship in order to ensure long-term value and to sustain customer loyalty and revenue growth through the customer relationship. IoT enables a broader scope of customer service activities. Customer engagement activities, with the added functionality and capabilities of IoT, will also enable links into the back office and into field service activities to coordinate customer journey activities with the contact center with the added help of the IoT platform.
The broadening of the customer engagement journey is in the early stages of incorporating the field service organization into the overall service delivery process. Not surprisingly, some of the major CRM vendors, including Oracle and Salesforce, have rolled out and are implementing field service solutions to improve the linkages between more customary contact center customer service and the back office and/or field services (see Figure 5). The intent is to provide strong vendor differentiation while stimulating organic growth and improving customer retention throughout the customer lifecycle. Ovum expects these efforts will reap large service and support benefits for customers and enterprises alike.

As more and more contact centers move to the cloud, the linkages to such cloud-based field service solutions will likely make for interesting business relationships, partnerships, and perhaps some acquisitions focused on tracking the customer experience journey across all the interactions customers have with their suppliers.

![Figure 5: Customer engagement expands beyond the contact center](source: Ovum)

### Appendix

#### Methodology

The information and conclusions in this report are based on surveys of end users and contact center/customer experience decision-makers, conducted by Ovum; data taken from existing Ovum forecasts and databases; as well as opinions gathered during interviews, discussions, and live workshops with Ovum customers and other interested parties during 2016.

#### Further reading

*Best Practices in Consumer IoT*, TE0004-001105 (October 2016)

"Using IoT to create competitive differentiation," TE0019-000020 (October 2016)

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