



# Intelligent interactions

**AI powered. Human enabled.**



[kpmg.com/us/intelligent-interactions](https://kpmg.com/us/intelligent-interactions)

**In a perfect world, getting customer service right wouldn't be difficult.**

**We would demonstrate empathy. Respond promptly, courteously, and efficiently. Every business would go the extra mile.**

**The challenge is doing all of this consistently—and under a wide variety of circumstances. It's especially difficult in a world where even small companies can cater to a global customer base that expects and sometimes demands 24/7, personalized service. Many businesses will never have the budget to staff to that standard, at least under traditional customer service models.**

This is where technology and a new approach to customer service that it enables can help. With recent advances in data analytics, artificial intelligence, and robotic process automation, companies can supercharge their customer service capabilities, making customer service faster, more responsive and personal, and more broadly available. They also can automate substantial parts of the process, freeing human agents to spend more time on the highest value activities.

Done right, both customers and employees can enjoy a better experience.



**Nearly three-quarters of consumers say the most important way companies can provide them with good service is by valuing their time. Yet consumers simply trying to get companies on the telephone spend up to 20 minutes on hold each week.<sup>1</sup>**

1. "The Contact Center is Having its Model T Moment," Abinash Tripathy, Forbes, December 17, 2017.

# Customer expectations are growing—but they aren't unreasonable

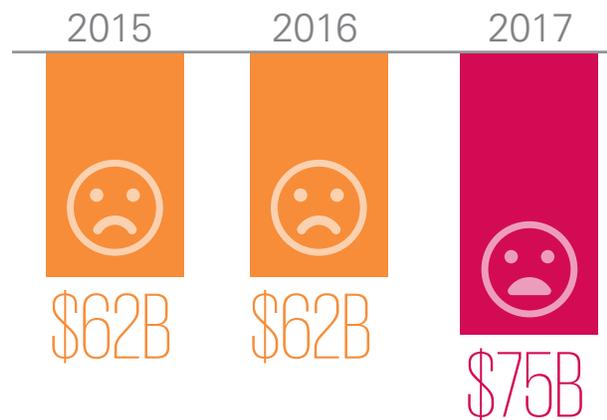
Put yourself in a consumer's shoes. You see a fee on your mobile phone bill for massively exceeding your monthly data limit. Surprised—you don't remember receiving any alerts from your longtime service provider. You go online to check your account and see no data limit alerts and start a chat session with your provider. You explain the situation, ask if there's a way to be alerted if you approach your data limit in the future, and request the fee be waived. The agent isn't able to see what digital communications you received. They decline to waive the fee and suggest you either use less data or sign up for a more expensive plan. You end the chat and start shopping for a new mobile service provider.

**This simple example illustrates three critical service expectations that customers demand for companies to not only meet, but also exceed.<sup>2</sup>**

- 1. Customers expect companies to be proactive in helping them, and show integrity and empathy in doing so.** They want companies to contact them about problems or potential problems before they happen. This shows companies understand customers' circumstances and can help build trust and loyalty.
- 2. Customers expect personalized and enabled help.** They want to interact with agents who have access to their latest transactions and have the power to resolve their issue, which creates a smooth process and minimizes their time and effort.
- 3. Customers expect seamless integration** between self-service and live-service channels. With integration, agents know what customers have been doing, whether in digital or live-assisted channels, and have access to all of their records. This speeds up and simplifies the process to resolve inquiries and can turn poor experiences into great ones.

Many companies have been racing to meet these escalating customer expectations. But many have struggled, sometimes believing they can get where they need to be simply by implementing new call center software. Reports show that companies lost \$75 billion in sales in the United States in 2017 due to poor customer service.<sup>3</sup>

## Company sales losses attributed to poor customer service, 2015-2017<sup>3</sup>



At KPMG, we believe the challenges of understanding which actions to take to improve customer service capabilities and where and how to begin are holding back many companies. And they are faced with so many complex new options. At the same time, we see and advise companies that lead the way in customer service by using data analytics and a smart mix of digital and human capabilities to create intelligent, personalized customer experiences. Improving customer experiences can be worth the investment. Our research shows customer-centric organizations are 38 percent more likely to report greater profitability than their competitors.<sup>4</sup>

2. These customer service expectations summarize KPMG's six pillars of customer experience. Download our report, [Tomorrow's experience, today](#), to learn about these components of every great customer experience.

3. "The Three Customer Service Megatrends In 2019: As AI Eats Jobs, Agents Are More Valued," Forrester Research, January 17, 2019; "2018, Customer Service Trends: How Operations Become Faster, Cheaper — And Yet, More Human," Forrester Research, January 24, 2018; and "Elevate Your Customer Service Experience With End-To-End Customer Service," Forrester Research, January 17, 2017.

4. "Harvey Nash, KPMG CIO Survey 2018," Harvey Nash and KPMG, 2018.

Based on our experience, we believe organizations that wish to lead in customer service can do so using a three-step process that incorporates these components:

1 Add intelligence to improve customer experiences

2 Deliver a consistent experience across all channels

3 Keep human agents in the loop.

## STEP One Add intelligence to improve customer experiences

**The first step to exceeding customer expectations is to anticipate them. The easiest way to do that is by leveraging big data and data analytics, powered by technologies like cloud computing, intelligent automation, machine learning, and other artificial intelligence techniques. These technologies help provide intelligence to help companies better understand customers and also make interactions with them more predictable, precise, and personal.**

A recent study reports companies that enhance their customer service using data analytics and intelligent automation can reduce response times by 50 percent to 80 percent, while decreasing their costs per service transaction as much as 15 to 200 times.<sup>5</sup>

These technologies make it possible for organizations to deflect a high percentage of customer inquiries to virtual agents. When enabled by artificial intelligence, these virtual agents can anticipate customer sentiment and intent. They can also deliver answers and even the actions customers seek. When inquiries require interaction with a live person, these same technologies can provide human agents with immediate access to similar insights, and suggest the best way to resolve the inquiries. (Figure 1)

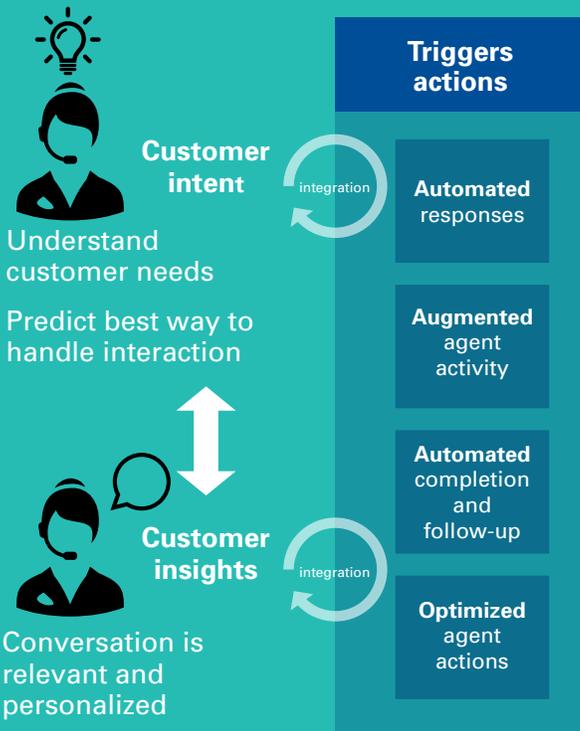
Think back to the earlier scenario in which you were the unhappy mobile phone service customer. If the provider had used intelligent interactions technologies to proactively identify your likelihood of exceeding the data limit and notified you about it in advance—even texting you with options for managing the situation—you might have avoided the overage charge. Or, had the customer service agent been better informed and enabled, he might have taken a more conciliatory approach to your call and offered a solution that convinced you to remain a loyal customer.

Additional intelligence can take the customer experience a step further. When it's time to purchase a new phone, the mobile provider would know you prefer a black phone and always need assistance transferring your contacts and setting up email connectivity. With the intelligence to anticipate customer needs, the provider can take care of these before the phone is delivered, saving the need for a customer service inquiry.

In short, using technology to create more intelligent customer interactions allows companies to anticipate customer needs and leads to better, more consistent customer experiences.

5. "2018 Customer Service Trends: How Operations Become Faster, Cheaper — And Yet, More Human" Forrester, January 2018.

Figure 1



Integrated transactions and data enable technology to gather customer intent and sentiment. This insight triggers actions that can smoothly fulfill customers' inquiries consistently on any channel.

## Electric utility enhances customer experience by anticipating call volume and understanding responses

What if companies could anticipate customer call volumes during storms or outages and predict when certain types of customers would have inquiries?



A regional electric utility now has these capabilities with KPMG-developed predictive analytics. The company came to us for help enhancing the customer experience while

lowering call volumes. We used speech-to-text to convert historical calls to natural text. Then we extracted call volume, reason, and demographics data from multiple sources and analyzed the combined data. We used time series models, natural language processing, a deep learning neural network, and predictive analytics to understand how events in correlation with demographics impact call volume over time.

Now that the utility understands customer behavior and its impact on customer support processes, they are increasing self-service use, reducing call volume and costs while enhancing the customer experience. They can also plan for event-triggered demand.

## Automating address changes, a quick first step

### Using technology to lower costs and improve the customer experience

Automating manual address changes can quickly improve costs, customer experience, and compliance across products. This can be done by augmenting a customer service agent's actions following a customer phone inquiry. After the call, a bot empowered by robotic process automation can immediately load the customer's correct address to all systems. It updates the address according to each platform's data-entry requirements, including street, city, and state sequence, and character limitations.

#### ADDRESS CHANGE JOURNEY





STEP  
**two** Deliver a consistent  
experience across  
all channels



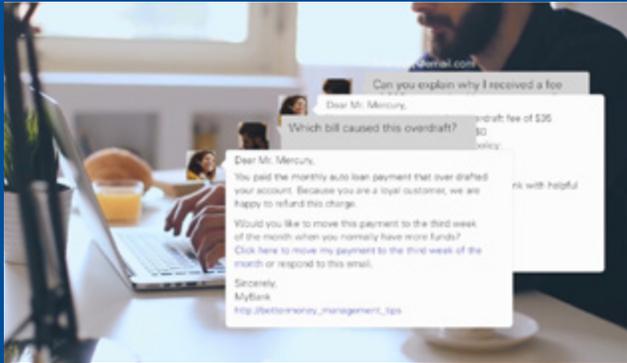
**A recent survey reports more than two thirds of marketing leaders surveyed say their companies compete mostly or completely on the basis of customer experience, and 81 percent said they would in two years.<sup>6</sup> Meanwhile, another study recently reported that 69 percent of U.S. adults do more shopping online with retailers that offer consistent customer service both online and offline.<sup>7</sup>**

These studies show that customers today expect the same experience whether they are interacting with an organization by telephone, mobile device, computer, virtual assistant, or in-person. That means companies need to deliver a consistent customer experience across all channels, including email, voice, storefronts, chat, virtual assistant, and search.

A critical first step in repairing uneven service experiences is integrating customer data, including transaction data, across all channels. This way, customer representatives are

6. "Customer Experience in Marketing Survey 2017," Augie Ray, Gartner, March 2018.

7. "2018 Customer Service Trends: How Operations Become Faster, Cheaper — And Yet, More Human," Forrester Research, January 24, 2018.



## Large bank automates email responses

A top-five bank asked KPMG to develop a minimally viable product within the email channel. The bank's goal was to use a customer intent engine to automate customer inquiry identification. The bank also wanted to automate the development of standard templates used to respond to customers' emails.

KPMG collaborated with a leading cloud company and leveraged open source technology to develop, within 12 weeks, an integrated, automated solution to predict customer intent and suggest response templates a customer service agent could review and accept. Prediction accuracy was greater than 90 percent, creating an opportunity for the bank to automate responses to 20 percent of its email inquiries and significantly reduce handling time for the remainder.

CHAT



VIRTUAL ASSISTANTS



SEARCH



equipped with as much or more information about customer inquiries than customers. Companies can then combine data and analytics with intelligent automation capabilities and process optimization to enable a better, more consistent customer experience across all channels.

To illustrate, consider another hypothetical example. A frustrated customer calls a manufacturer about a router that got wet and stopped working. The manufacturer's call-center agent struggles to interpret what the customer is saying. At the same time, the agent frantically tries to locate details about both the customer and the product, and figure out how to defuse the situation. Since the customer purchased the router in a store, the agent has trouble

identifying the make and model. The longer the agent fumbles about, the more frustrated the customer becomes.

If transaction and customer data had been integrated across channels, this interaction would have been entirely different. The customer's purchase history, warranty information, contact information, and company policies would have been at the agent's fingertips. If the company had also used natural language processing and machine learning to supplement what the agent heard, its customer service systems could have immediately analyzed the customer's intent and sentiment to suggest a response. The entire experience would have been the same whether the customer initiated the interaction by telephone, email, or chat.



Intelligent automation technologies can augment human agents by quickly synthesizing all the relevant data and suggesting a personalized resolution.





## STEP three **Keep human agents in the loop**

**Technology is the great enabler of superior customer experiences. It performs this role by relieving human agents of duties that intelligent systems can now handle. Technology also enables agents to respond in a more thorough and personalized fashion in complex or sensitive instances.**

Keeping human agents involved is critical even as companies move to self-service for simpler transactions. Customers will continue to demand conversations with humans to resolve more complex issues. When customers make contact in those instances, companies will need to quickly identify the issues and respond based on each customer's intent and sentiment. Machine learning and natural language processing can augment human agents by quickly synthesizing all the relevant data and suggesting a personalized resolution. Once the issue has been resolved, the system can learn from the experience to enhance its ability to serve future customers.

This approach has applications for all types of stakeholder interactions, not just external customers. Employees, for example, might use email or chat search to quickly and consistently seek answers from an HR virtual assistant to a wide range of human resources questions—from the dollar amount on their last pay stub to details about healthcare benefits or how much paid time off they have. For topics best covered personally, such as reporting illegal activity or sexual harassment, systems can be trained to connect the employee with a human HR contact. Deploying conversational agents internally is in many ways easier than in the consumer world—using them as a testing ground before rolling them out to customers.<sup>8</sup>

The human and virtual agent is a symbiotic cycle, not a replacement action. Human agents improve with help from artificial intelligence, and artificial intelligence agents get better with training from human agents. Provided with the right tools to better serve their customers, external or internal, agents are less likely to become frustrated by their work and more likely to remain engaged.

8. "How may A.I. assist you? Conversational AI agents can boost employee performance, productivity and outcomes," KPMG LLP, 2018.

# Where to begin

KPMG believes new technologies offer companies an opportunity to create a proactive and personalized customer service model that goes beyond the call center. Depending on where companies are in their strategy to create a personalized customer service model, we recommend one of these two approaches. We also advocate business lines and technology teams collaborate with a third party with customer experience and intelligent automation knowledge to guide the process.



**For companies unsure of where to begin incorporating intelligent automation into customer service operations or unclear of the business impact, we recommend creating a strategy and roadmap to start.**

**Map data analytics** against selected interaction channel(s).

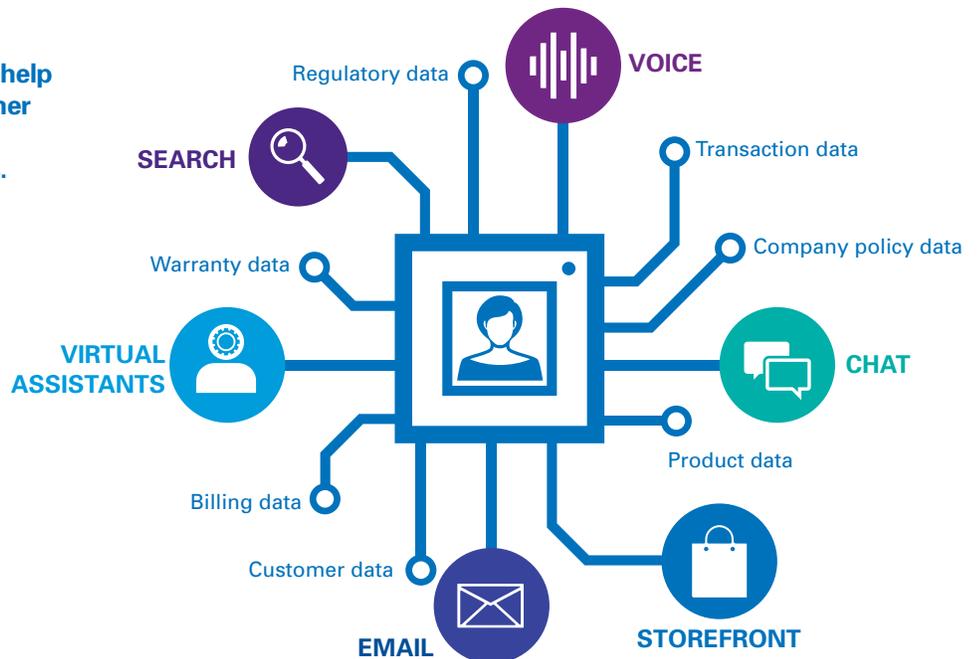
**Develop your interaction strategy** such as automation, augmentation, or self-service.

**Define and document** business requirements.

**Assess technology and** design your high-level future architecture.

**Develop your interaction vision,** roadmap, and business case.

**The optimal interaction process employs intelligent automation to help connect relevant data to all customer contact channels, helping facilitate efficient and thorough interactions.**





Many companies already have selected a customer interaction such as chatbots or voice interactions with which to start. For these organizations, we recommend developing a proof of concept for the selected channel. The proof of concepts will create a foundation for the full customer service transformation.

**Develop a proof of concept-level data** analytics model for a defined but representative scope of customer communications in the chosen channel.

**Define architecture** for required data analytics and integration components needed for production.

**Define benefits**, from the customer and company perspective, to confirm focus is on the right channel.

**Create interaction treatment strategy**, such as automation, augmentation, or self-service, for scope of communications in the proof of concept.



Many capabilities are feasible today, but countless more are possible. KPMG is already building a prototype for a virtual, super-charged FAQ where professionals can get consistent responses to complex legal or technical questions from a trained chatbot rather than spending hours searching through volumes of data. Another client is proving the power of machine learning and analytics by integrating intelligence into customer interactions. This intelligence automates the process of determining customer intent. It also uses approved templates to automate the response or recommend next best action for the customer service agent, to name a few.

We believe artificial intelligence-enabled virtual assistants can be used in new and innovative ways—not to simply meet customer needs, but to anticipate them. Businesses can use a transparent blend of human and system support to interact with customers in a way that improves the entire experience and will keep customers coming back.

# KPMG: Deep industry, customer, and transformation experience

We combine decades of business and technology experience with customer experience improvement know-how across a range of industries to develop KPMG Intelligent Interactions. KPMG Intelligent Interactions, which addresses email, voice, storefronts, chat, virtual assistants, and search, helps customers use intelligent automation, data and analytics, natural language processing, and machine learning to quickly identify and resolve customer, employee, and any third-party inquiries to improve customer service effectiveness.

Our artificial intelligence and intelligent automation solutions and services are designed to help companies transform. We help clients improve customer satisfaction as a competitive advantage, reduce costs, and increase revenues.

Transformations of this magnitude require a thorough understanding of new technologies as well as business-

critical processes and work flows. Our team brings experience in machine learning, data and analytics, intelligent automation, customer experience, and user experience design to help align strategy with outcomes. KPMG employs more than 365 digital enablement professionals with in-depth skills in cloud technologies, social media, big data, and robotic process automation across industries. The team also includes more than 1,700 data scientists and data engineers globally.

Both Forrester and another major firm have rated KPMG's Data and Analytics practice at the top of the industry, both for delivering business value and for deeply integrating industry knowledge into our data and analytics capabilities. Forrester Research gives KPMG a Leader ranking among Insights Services Providers in the Forrester Wave Q3 2018 report.

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