



# How Artificial Empathy Can Enhance Customer Experience & ROI



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# How Artificial Empathy Can Enhance Customer Experience & ROI

Empathy is a key growth area for CX – explore three key benefits of implementing artificial empathy in the contact center

## A Growing Need for Empathy in Customer Service

For many customers, the COVID-19 pandemic exacerbated feelings of stress, difficulty, and powerlessness. As a result, customer expectations rapidly changed and have continued to evolve. A recent Forrester Consulting study, commissioned by CallMiner, revealed that voice calling has **become the new empathy channel**, in which agents are dealing with more complex customer requests and emotionally charged customers than ever before.

And there is no indication these difficult conversations are going to decrease even as many countries move into a post-pandemic reality. The need for empathy within customer service has never been greater, yet many service agents struggle with how to respond appropriately to these interactions.

In an effort to manage the uptick in complex conversations, many companies turned to **artificial intelligence (AI) solutions**. These AI-powered solutions have the potential deliver the empathy customers require and needed to help enhance the customer experience, but how?

Enter, 'artificial empathy' – the idea that AI systems can detect and effectively respond to human emotions. For example, if a customer is engaging with a chatbot about a billing error and is displaying frustration, the chatbot is able to appropriately express remorse for the situation the customer is experiencing.

Similarly, artificial empathy can help human agents better engage with customers. For example, if an organization leverages a conversation analytics solution that includes artificial empathy, that tool can help alert agents to customer situations that might require an empathic response in real time.

The **CallMiner Research Lab** conducted extensive research on artificial empathy, including how artificial empathy combined with better agent/customer interactions, can drive contact centers efficiency, improved customer experiences and more. Specifically, organizations can realize three key benefits:

- 1. Identify and share best practices for being empathetic** – Understand how agents are currently showing empathy, and leverage artificial empathy solutions that offer real-time conversation monitoring to deliver in-the-moment guidance and performance feedback.
- 2. Gain insights into improving empathy** – By analyzing every interaction, it's possible to identify words, phrases and tone of voice that are received as empathetic by customers. This insight can help drive incremental improvement across the agent base.
- 3. Identify and support vulnerable customers** – Many contact center agents are likely to encounter vulnerable customers who have a greater need for empathy. Conversation analytics can identify words, phrases and acoustic qualities that demonstrate vulnerability, and then use artificial empathy to support agents through their conversations.

Read on for our research findings and details for how we define and view effective artificial empathy, as well as tips on how you can leverage artificial empathy to drive better customer experiences.

## What is Empathy?

Empathy is defined as the action of understanding, being sensitive and vicariously experiencing the feelings and experiences of another. In the context of customer service, this means putting yourself in your customer's shoes and trying to address their concerns with a helpful understanding of what they're going through.

From a scientific perspective, there has been significant research to determine how empathy is processed in the human brain. Some view empathy as the observer **taking on the emotions of the target**. Others view empathy as the **observer feeling any emotion** in response to the target. And a third perspective focuses on the **observer processing and reacting to the emotion** of the target without feeling that emotion.

***As the CallMiner Research Lab sought to emulate empathy through AI, we chose to work with the third perspective, which leaves out the emotional state of the observer.***

For example, when the observer sees someone else drop their ice cream cone, the observer understands the target is probably sad. They may react by showing pity or even trying to fix the situation by purchasing another ice cream cone. From our perspective, this form of empathy is more pertinent in customer service and can be emulated by software-based systems.

### Benefits of Empathy in Customer Service

Showing empathy could mean the difference between a negative customer interaction and a positive one. Recently, PWC found that **1 in 3 customers will leave a brand** they love after just one bad customer experience, and 92% of customers will completely abandon a company after two or three negative interactions.

Further, according to the **CallMiner Churn Index 2020**, U.S. companies lose nearly \$140 billion per year due to avoidable customer switching.

Companies that focus on delivering empathy in customer service, even when it is a simple interaction with an agent, however, can make the entire customer experience more impactful and memorable. It reflects positively on the company when:

- Customers feel they are being heard
- Customers feel like their concerns are being taken seriously
- It appears the company is doing everything it can to help them

It's obvious there is a significant benefit to adopting an empathetic approach to customer service, but it's not just that agents aren't always prepared to respond appropriately, sometimes agents aren't the ones handling the conversations. This is where artificial empathy comes into play.



## How Artificial Empathy Works

As we know from customer experiences, not every conversation between a customer and a brand is going to involve a human. More customers are turning to self-service options, such as through interactive voice response (IVR) systems, chatbot and others. And it's critical that organizations not only use AI to better support agents in human-to-human interactions, but that their self-service systems (i.e. AI systems) are also communicating empathy.

That said, despite what science fiction tells us, robots and computers are incapable of feeling any emotion. As a result, CallMiner defines artificial empathy in three steps: detecting, responding and acting. This approach allows customers to feel as if the AI system they're engaging with is being empathetic, despite AI's incapacity for emotion, resulting in the positive customer experience organizations are looking to deliver.

## Here's how we train AI systems to display artificial empathy:

### Step 1

Detect the emotion of the target (i.e. customer). This can be done using a variety of inputs, such as facial recognition, voice (acoustic) analysis and natural language processing (NLP) of written or spoken language.

### Step 2

Display an appropriate emotional response. For visual AI systems, this could be a change in facial expression. A chatbot, on the other hand, may present a predetermined response, like "I'm sorry to hear you're experiencing that."

### Step 3

Take actions that attempt to mitigate or intensify the customer's emotion, depending on the scenario.

Because CallMiner focuses on action-based empathy, the final step is the most critical. For positive customer emotions, the AI system might find ways to amplify brand-positive emotions.

For example, if a person is expressing joy from an e-commerce purchase, the AI system may suggest a similar purchase or send out a survey. For negative emotions, the AI tries to solve the problem. For example, if someone calls with a technical error, the AI system may troubleshoot the problem, or if someone calls about a defective product, provide a refund or exchange.

Of course, self-service options and AI systems aren't going to be able to handle every customer request. Many customers will eventually get to human agent. Having a two-pronged approach – where AI systems continue to support agents in being able to better identify emotions and convey empathy – is critical.



## Four Key Principles from Studies of Artificial Empathy

Developing artificial empathy from the ground up required an intense review of previous empathy studies. This gave us valuable insights into genuine empathy and the consequence of getting empathy wrong. Our review demonstrated the following four key principles that we applied to our creation of artificial empathy.

### 1 People want to believe that they are understood and empathy is genuine.

In 1964, Joseph Weizenbaum conducted one of the earliest artificial empathy studies. Weizenbaum created a complex, rules-based software program named Eliza. The Eliza system could detect speech patterns and offer appropriate, believable reactions similar to how a psychotherapist might respond, as illustrated below.

I feel **frustrated**

I feel \_\_\_\_

How long have you felt \_\_\_\_ ?

How long have you felt **frustrated**?

Eliza emulated human-like responses to certain phrases

Though Weizenbaum's goal was to demonstrate that communication between man and machine was superficial, he actually demonstrated that people respond to empathy with belief.

In fact, the study's subjects believed Eliza was evolving into a real, thinking being despite Weizenbaum's transparency that Eliza was an AI system. They felt **Eliza genuinely understood and empathized with their emotions.**

**Summary:** This study proved artificial empathy would have a positive impact on customer satisfaction, regardless of whether it comes from a chatbot or a human agent.

**This innate human desire to believe empathy plays a crucial role in how contact center agents interact with vulnerable customers. Showing appropriate empathy, regardless of how superficial, is perceived as genuine and helpful.**

(Source: CallMiner Churn Index 2020)

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## Empathy has a positive impact on mood and increases the likelihood for satisfaction.

**In a 2020 experiment**, participants were subjected to exclusion on social media. Each participant then connected with one of two chatbots. The first chatbot was programmed to acknowledge the situation with messages like, "Thank you for letting me know." The second chatbot was programmed to empathize with the situation, replying with statements like, "I'm sorry that happened to you."

Researchers evaluated the participants' moods before and after the chatbot conversations and discovered that participants who received empathy

had a drastic **elevation in mood over participants who were merely acknowledged.**

**Summary:** This supports what many within contact centers already believe – it is important to express empathy before acting on the perceived emotion. Solutions are obviously very important, but if the end goal is to leave a customer satisfied and in good spirits, expressing empathy will start the recovery trajectory in the right direction before the agent even begins solving the problem.

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## Empathy affects perceived trust and intelligence.

**A study published in 2010** explored the difference between empathy and acknowledgment, examining the effect of inaccurately expressed empathy. In this experiment, researchers asked participants to play a partner-based game with a robot. In half of the games, the players were placed in a situation where they were destined to lose, while the other half of the players were destined to succeed.

Additionally, the players were assigned one of three robot partners who displayed empathy differently.

- **Robot One** accurately displayed artificial empathy – if the player was succeeding, it was empathetic to the success; and when the player was failing, it was empathetic to the failure. Customers feel like their concerns are being taken seriously
- **Robot Two** was neutral, simply acknowledging the win or loss.
- **Robot Three** inaccurately displayed empathy – if the player was succeeding, it reacted as if they were failing; but if the player was failing, the robot reacted as if the player was succeeding.

Each of the robots also offered tips to help the human subjects play the game. Each of the robots provided equally accurate and helpful gaming tips.

After the game, the players were asked to rate their robot partners on both trustworthiness and knowledgeability. To no surprise, players found Robot One, the accurate empathy robot, to be most trustworthy; Robot Two, the neutral empathy robot, was rated the second most trustworthy; and Robot Three, the inaccurate empathy robot, was rated the least trustworthy.

Surprisingly, however, this same ranking pattern held true for each robot's knowledgeability, as well – the accurate empathy robot was ranked most knowledgeable, followed by the neutral robot, then the inaccurate empathy robot. This finding is significant because all three robots were equally knowledgeable about playing the game. However, by not reacting appropriately to the emotions of the player, the player didn't trust the robot's knowledge about game-related tasks.

At CallMiner, our platform often detects this principle tangibly reflected in contact center interactions. By not addressing the customer's emotional response first, the agent loses the trust of the customer. Additionally, the customer loses confidence in the agent's knowledge of the situation, which often has a negative impact on the outcome of the customer engagement.

**Summary:** From the perspective of creating artificial empathy, our Research Lab realized showing inaccurate empathy would negatively affect customer trust and confidence in the solutions offered.

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## Empathy is more valued and has greater consequences in negative situations.

In the same robot-partnered gaming study mentioned above, researchers observed how players in the losing game rated their robot partners in comparison to how players in the winning game rated theirs.

The accurate empathy robot (Robot One) received similar ratings from both winning and losing players. However, players in the losing game rated Robot Two (neutral) and Robot Three (inaccurate) significantly lower than did the players in the winning game.

Summary: This study demonstrates the importance of empathy when responding to negative situations in contact centers. If the agent shows appropriate empathy to a customer’s negative experience, it will have little effect on their overall opinion of the agent. However, if the agent shows inaccurate empathy to the same situation, it will negatively impact the customer’s perception of the agent, product and company. Basically, inaccurate empathy can make a bad situation worse.

**As each of these studies have shown, artificial empathy has the potential to deliver value and satisfaction to customers when done correctly.**

But reacting inappropriately to customer feelings would have lasting consequences.



### Analyzing Interactions with AI to Inform Artificial Empathy

To accurately develop effective artificial empathy and improve how it is delivered to customers, the CallMiner Research Lab applies AI to analyze data from both spoken and written customer interactions from contact centers around the world.

CallMiner uses three techniques to help organizations identify empathy within customer conversations and support agents during those interactions.

#### 1. Creating custom language processing models for empathy

NLP is not only about uncovering what is said, but also how it’s said. One agent may express empathy by saying, “I’m sorry that...” while another may say, “I imagine it feels terrible when...”

To get a full picture of empathy, it’s important to capture as many of the ways things are said as possible. CallMiner uses AI and machine learning to train customer-specific models for the context in which words and phrases are said.

This allows us to define greater language variations for expressing the same idea. Tagging all these variations as a single feature enables us to accurately flag instances of empathy in every interaction.

## 2. Advanced empathy searching

After training NLP to identify empathy, advanced searching can parse interactions by important metadata, such as who expressed empathy and how empathy arose in the interaction. We can specifically search for what agents are saying after they express empathy and summarize the results.

This provides a clear list of what agents are empathizing about, which could range from wait times to misunderstandings to faulty products to, personal events or even shipping delays. Each of these reasons can be tagged individually and monitored over time to uncover trends or spikes in apologies.

We also use advanced searching to uncover what the customer is saying before or after an agent empathizes. For example, some customers acknowledge the empathy ("thanks" and "no worries") while others do not ("the main problem is..." and "good bye").

This reaction data allows us to measure the effectiveness of the interaction to determine how empathy impacted the situation.

## 3. Topic detection in conversational data.

Topics also provide important features when looking for anomalous calls—for example, an empathy related topic may never appear in a help desk call. Upon further inspection, it may be that the call was mislabeled.

**Using topics to map the contents of an interaction can help determine which interactions need more review.**

## Insights into "I'm Sorry" Empathy

Saying "I'm sorry" is one of the leading expressions of empathy in contact centers. As the CallMiner Research Lab analyzed empathy, we found some interesting data about this expression.

### Agents Say "Sorry" More Than Customers

Agents say they are sorry nearly twice as often as customers.

**Ratio for Agent to Customer Sorry Use:**

**1.75 to 1**

### Common Instances of "Sorry"

The most common uses of "sorry" in call centers, during human-to-human interactions are around empathy for failures in service or product. This often presents as using "sorry" in front of the issue, such as:

- "I'm sorry."
- "Oh, sorry."
- "I'm sorry to hear that."
- "I'm so sorry."

The next most common "sorry" instance is trouble hearing or understanding. This is usually identified with phrases like, "I'm sorry, what was that?" and "Sorry, say that again."

Worth noting, apologizing for a service or product failure is about 10X more frequent than apologizing for having trouble hearing or understanding.

Machines, such as interactive voice responses (IVRs) rank a distant number three in frequency, with automated messages offering the phrase: "I'm sorry, the person you're trying to reach is unavailable at this time."

## Improving Agent Performance with Artificial Empathy

Using the research techniques outlined above, organizations can more effectively train their AI systems to display artificial empathy, such as via chatbots that can identify emotional cues in customer chats and then appropriately respond with empathy. Additionally, organizations can also leverage artificial empathy to empower contact center agents to respond effectively to customer emotions and deliver richer, more meaningful experiences.

By analyzing every human-to-human interaction, including chat, email and voice channels, organizations can use AI to push artificial empathy suggestions to agents when those systems detect specific emotional phrases or voice acoustics. Through AI that can display artificial empathy, these interactions can be flagged in real-time and next-best-response suggestions can be delivered directly to agents during intense situations.

The analysis and real-time recommendation capabilities of artificial empathy turn your company's front line – your contact center agents – into more effective and emotionally resonant super agents.

### 1 Identify and share best practice ways to be empathetic.

Every call center has high-performing agents, the agents who seem to show the most empathy when handling difficult interactions.

By analyzing every interaction, it is possible to identify exactly how these agents turn a difficult conversation into a good customer outcome. You can further leverage those insights to provide coaching and training to raise the game of the whole team.

Moreover, with artificial empathy solutions that offer real-time call monitoring, performance feedback can be delivered to agents during the call. For example, if the analysis identifies that more empathy needs to be shown, a message can be sent to the agent to make them aware of stronger responses needed for the customer's situation.

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### Give agents the insight they need to raise their own empathy game.

It's always good to provide empathy skills training, such as how to be an active listener, but your agents need to know if they are implementing the new skills effectively and how to continue to improve them.

By analyzing every interaction, it's possible to identify words, phrases and tone of voice that are received as empathetic by customers. If this analysis is captured in an agent's personal scorecard, you can create a score for empathy and provide every agent insight into their own performance after each shift.

As a result, agents can set their own improvement goals for the next shift and know exactly what they need to do to increase their empathy score. They can also ask for targeted training and coaching to help them raise their empathy game.

3

### Help agents identify and support vulnerable customers.

Many contact center agents are likely to encounter **vulnerable customers** who have a greater need for empathy. Conversation analytics can identify words, phrases and acoustic qualities that demonstrate vulnerability, and help deliver artificial empathy guidance to agents.

It can also identify when certain words and phrases increase stress levels with the customer or agent (or both). This means it's possible to identify emotions that both the customer and the agent may be feeling on the call. It's also possible to understand customer preferences and identify which types of customers react best to different types of solutions.

Most importantly, it means agents can be guided through their calls with prompts and alerts, so they feel supported and empowered to always follow the best course of action.

## Conclusion

Deliver the Empathy Your Customers Need. It's no secret that customer expectations have changed – and so has the technology landscape that supports those needs.



Empathy is one of the key growth areas for customer experience so it's time organizations adopt the right strategies and solutions to transform customer experiences, uncover key insights and leverage these across the enterprise.

CallMiner's AI capabilities, including artificial empathy, rely on the analysis of a wealth of real data and proven principles, enabling any business to meet the new empathy challenge across every channel. By improving self-service tools with artificial empathy, as well as empowering contact center agents with data-driven training and just-in-time support, organizations can improve customer experience while gaining a deeper understanding of customer needs and wants to make better decisions enterprise-wide.

Armed with effective artificial empathy, your organization can drive real ROI and bottom-line improvements in the contact center and beyond.

To learn more about how AI can help support humans be more empathetic, read our recent whitepaper:

["Leveraging AI to Make Humans More Humane: Balancing Man + Machine in the Age of the Customer"](#)



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## About CallMiner

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CallMiner is the global leader in conversation analytics to drive business performance improvement. Powered by artificial intelligence and machine learning, CallMiner delivers the industry's most comprehensive platform to analyze omnichannel customer interactions at scale, allowing organizations to interpret sentiment and identify patterns to reveal deep understanding from every conversation. By connecting the dots between insights and action, CallMiner enables companies to identify areas of opportunity to drive business improvement, growth and transformational change more effectively than ever before. CallMiner is trusted by the world's leading organizations across retail, financial services, healthcare and insurance, travel and hospitality, and more.



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