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CONTACTBABEL

2024 Contact Center Decision Makers' Guide

Audio Improvement & Noise Reduction

Discover the links between audio quality, agent productivity, and customer satisfaction

Voice is the foundation of effective call center communication. In today's rapidly evolving call center landscape, exceptional audio quality and comprehension can make or break customer interactions. A contact center's ability to deliver a positive customer experience starts with the quality of its digital voice interactions, which makes enhancing audio quality to support those interactions a critical necessity.

This report dives deep into the transformative impact of improved audio on customer experience, call center effectiveness, and efficiency. Drawing from comprehensive research and real-world examples, ContactBabel reveals how a staggering 60% of customers frequently face challenges in understanding agents due to poor audio quality—a problem that intensifies in shared working environments.

Conventional solutions like headsets and physical noise suppression partitions mitigate noise complaints but cannot fully eliminate them.

This guide highlights innovative solutions, like Voice AI technology, that bi-directionally eliminate background noise, echoes, and voices, while significantly boosting call efficiency, reducing escalations and handle times, leading to agents handling an average of 10% more calls per day.

This guide contains fresh research, actionable insights, and guidance to help you navigate the future of voice communication in the call center industry where clarity, comprehension, and connection redefine customer interactions.

"The 2024 US Contact Center Decision-Makers' Guide (16th edition)"

Audio Improvement & Noise Reduction

The effect of Audio Improvement on productivity and Customer Experience

In a ContactBabel survey of 1,000 customers, 29% of over-65s reported that they “very often” had problems hearing or understanding the agent, or that the agent asked them to repeat something. This is not just an issue for older customers, as 60% of the youngest cohort reported experiencing this either “very often” or “fairly often”.

Some businesses will experience higher levels of audio interference due to their contact center environment, use of remote working, and type of customer (e.g. older customers experience this the most). Those taking calls from customers on mobile phones are more likely to have higher rates of repetition.

Lack of audio clarity is not just a problem for the contact center’s side of the conversation. With more people than ever using mobile telephony to speak with organizations, both agents and customers have to concentrate very hard on the conversation, with the attendant stress and frustration that this can cause, particularly for the agent who may handle 80-100 calls each day.

In businesses that use offshore contact centers, there is often an issue with the comprehension of call center agent accents and dialects. AI-enabled accent localization can alleviate these problems and is explored in more detail in the “Agent Engagement and Empowerment” installation of this report.

There are real-life examples of how improving audio and speech quality can positively impact call handling time and overall contact center performance. A Spanish contact center gave some sets of headsets with digital audio processors to employees, while others used the more traditional headset. The first group’s technology had the effect of ‘cleaning up’ unwanted noise at either end of the line, allowing the customer and employee to communicate more effectively. Calls were handled more quickly, fewer mistakes were made with data collection (with the attendant knock-on effect that fewer repeat calls were required), and overall, employees handled an average of 10% more calls per day compared to the control group.

AI-enabled voice isolation can intelligently remove background noise from both sides of the conversation, both in real-time to assist the smooth and accurate flow of the conversation, and also in recordings to improve post-call analytics and voice-to-text transcription. This also means that businesses spend significantly less on upgrading and replacing top-of-the-line headsets.

As shown on the following page, reducing the number of times an agent or customer has to repeat themselves can make a huge impact on call center costs by reducing call times (and thus queue lengths) while also improving the overall customer experience.

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The $1.34B annual cost of call center repetition

What is the hidden cost of call repetition in contact centers per year?

27.1B

Inbound calls per year handled by agents

= 5.7B

Calls requiring sentence repetition

X 21%

Average number of calls requiring sentence repetition

X 15 seconds

Portion of call duration that is repetition

7m 22s

Average call duration

= 3.4%

Percentage of repetition in calls

$6.91

Mean average cost per inbound call

= $1.34B

Aggregate industry-wide cost of repetition per year

X 23.5¢

Cost of time spent on repetition

[1] ContactBabel, “US Contact Centers 2023-2027: The State of the Industry”

[2] Estimate based on assumptions: i.e. % of customers saying they experienced repetition “Very often” = experience this on 60% of calls; “Fairly often” = 20% of calls; “Infrequently” = 5% of calls; “Never” = 0% of calls. Calculates to 21% of all calls.

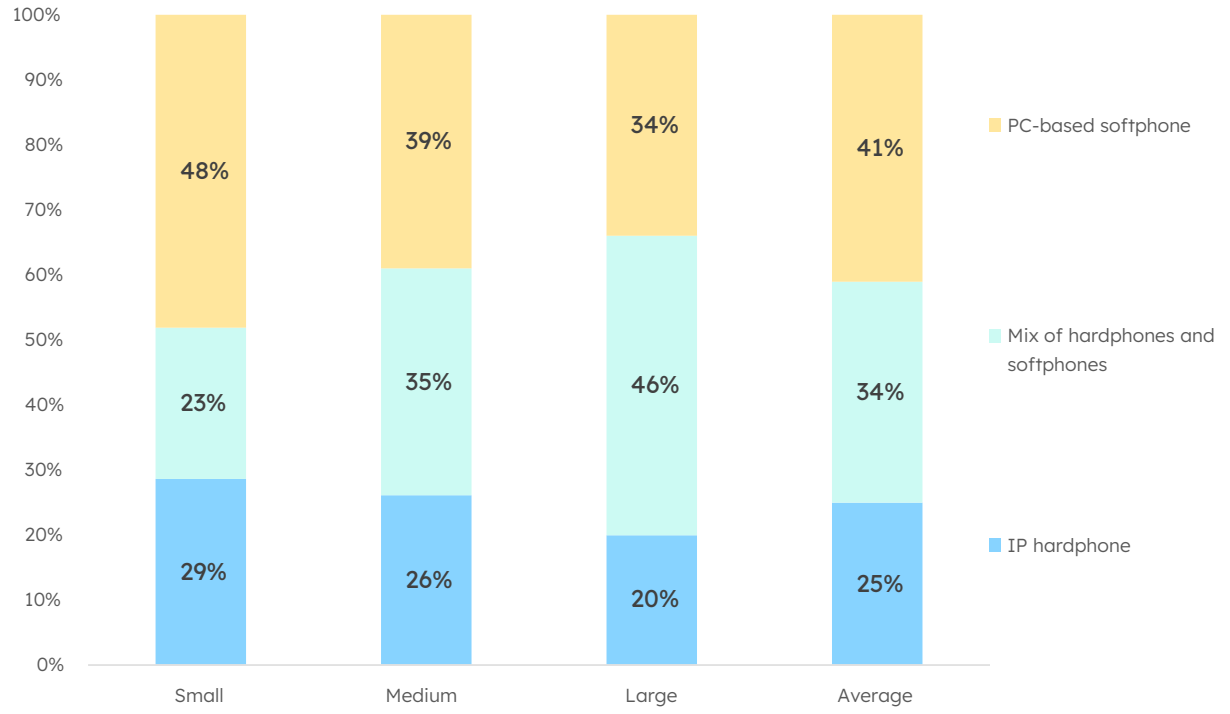
Hardphones vs. softphones

In contact centers, the choice between an IP hardphone and a PC-based softphone hinges on balancing traditional functionality and modern flexibility. Hardphones provide a familiar experience but have limited software integration support and are unable to support remote agents, while also increasing physical clutter. Softphones, while reducing desk space usage and offering software adaptability, depend heavily on computer performance and headset compatibility, possibly demanding higher IT resources.

Many large centers blend both to navigate these trade-offs, aiming for optimal operational efficiency and communication quality.

Solving for these limitations, advanced AI-powered noise cancellation technologies have come to market in recent years that work across any hard or soft phone device, as well as CCaaS, CPaaS, and other software applications. This alternative allows call centers of all sizes to optimize operational efficiency and communication quality while scaling operations.

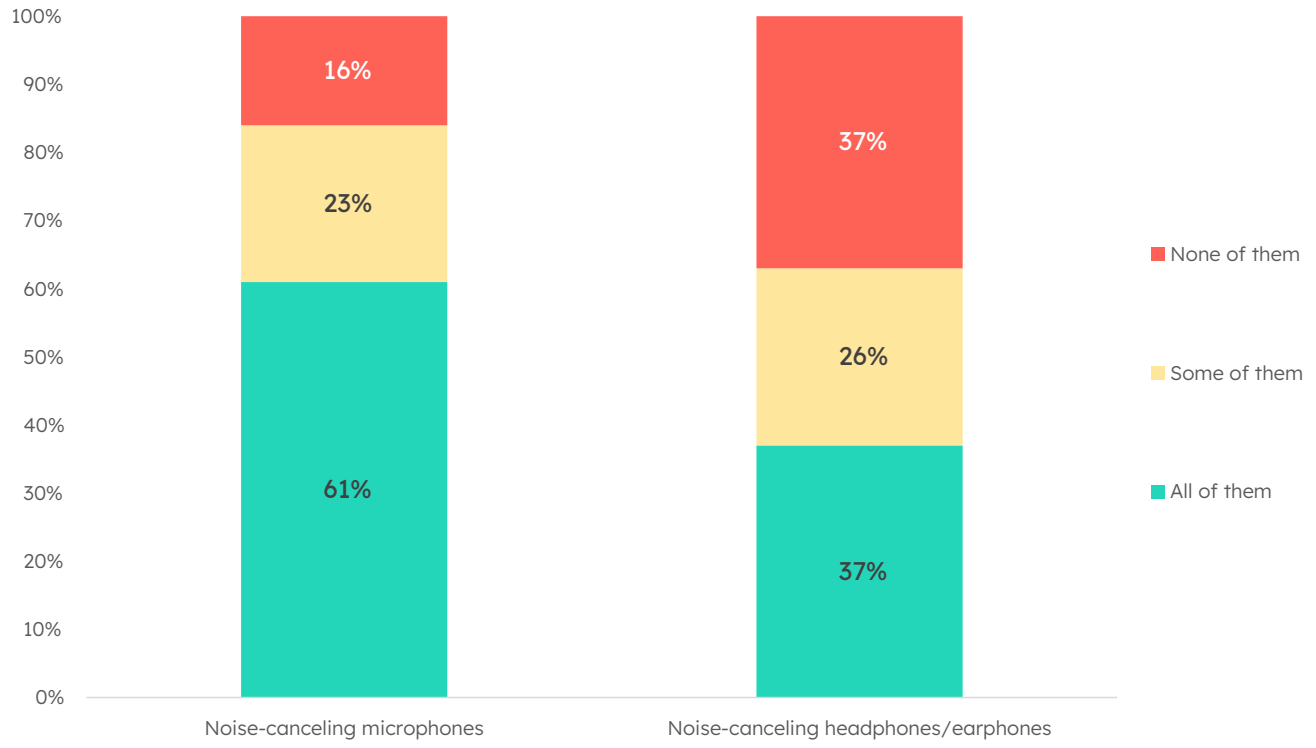
Figure 1: Use of IP hardphones and desktop softphones, by contact center size



Noise Canceling Headsets and Technology

61% of surveyed individuals indicate their headsets are equipped with noise-canceling microphones to reduce background noise, enhancing call clarity for the caller and reducing the need for repetition. However, only 37% have noise-canceling headphones for all headsets, leaving a significant number of agents exposed to noisy environments. And these headsets don't address inbound noise coming from the customer's environment. The implication is reduced focus, accuracy, and overall performance, potentially prolonging calls.

Figure 2: Use of noise-canceling microphones and headphones/earphones



Alternatively, noise-canceling software offers a more accessible and scalable solution compared to traditional noise-canceling headsets. Because this technology works directly on agent devices and can be centrally managed, implementation and adoption are easy and streamlined for call centers of all sizes. Unlike headsets that require individual distribution and maintenance and hardware refresh, AI-powered noise cancellation technology can be updated and improved from one central point, ensuring the on-device technology is always up-to-date and active, making high-quality audio more achievable and consistent, leading to happier customers and more efficient agents.

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Improving call center audio quality and eliminating noise with Voice AI

Recent AI-powered voice technology is revolutionizing the way call centers manage voice interactions and quality. By filtering out background noise, echoes, and other human voices, Voice AI ensures that the primary message is heard, understood, and improves the overall customer experience and satisfaction.

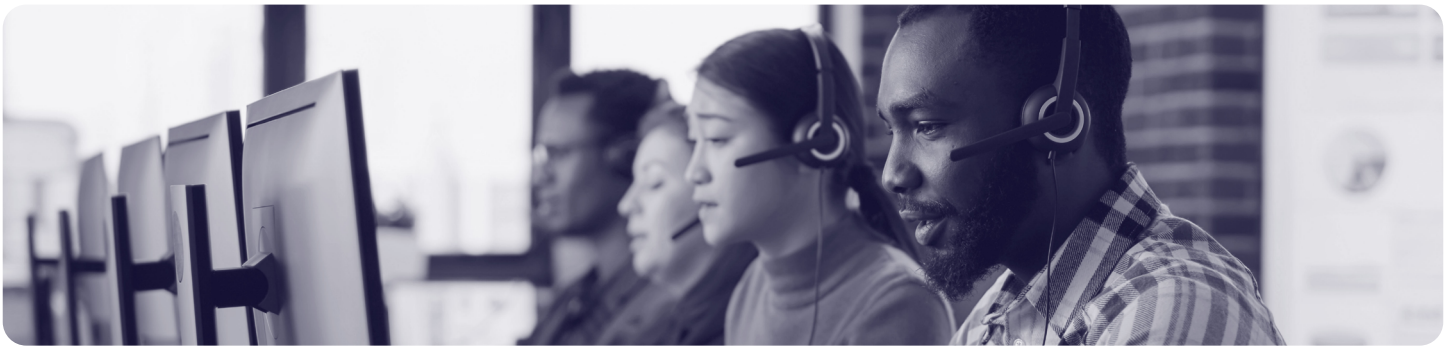
Imagine a customer calling in from a noisy airport or a busy home. Traditional systems might struggle to isolate the customer's voice from background voices and their physical environment, leading to frustrating repetition and miscommunication.

Voice AI technology cleanses both inbound and outbound audio streams, ensuring clear, concise communication. This breakthrough not only improves the quality of each call but also boosts the efficiency and effectiveness of call center operations, which has massive impact at scale—reducing the $1.34B cost of poor audio quality for contact centers, industry wide.

Call clarity directly translates to improved first call resolution rates. When agents can hear and be heard clearly, issues are resolved faster, and the need for callbacks or escalations are significantly reduced. This efficiency is a win-win: customers experience improved satisfaction, and contact centers benefit from reduced operational costs and experience 10% increases in agent productivity, as seen in by the control group referenced earlier.

The reduction in noise complaints speaks volumes—literally. With up to a 78% decrease in noise-related issues, it's evident that Voice AI is improving call productivity, while eliminating agent stress and customer frustration. This improvement in the call environment doesn't just improve customer satisfaction; it makes the workplace more enjoyable and less taxing for call center agents, leading to a 25% increase in agent satisfaction, and significant reductions in short-term disability claims and agent attrition.

By effectively eliminating background noise and improving audio quality, AI Noise Cancellation reduces the need for expensive headsets and physical modifications like soundproof partitions or white noise machines. This shift lowers initial investment costs while decreasing ongoing maintenance expenses and providing scalability without compromising quality or incurring additional overhead. As a result, contact centers can allocate their resources more efficiently, investing in areas that directly contribute to growth, customer satisfaction, and scaling their operations.



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Replacing traditional, expensive, noise cancellation solutions

Traditional noise cancellation solutions come with inherent challenges: installation requirements, limited scalability, high maintenance demands, and significant cost-inefficiencies driven by hardware refresh cycles and overhead costs.

Soundproofing: Focused on reducing sound transmission between spaces, office soundproofing lacks the active noise cancellation and background voice cancellation found in software solutions. While physical solutions like acoustic panels, partition walls, and soft flooring can muffle environmental noise, they fall short of complete noise cancellation.

Sound masking: Still prevalent in call center environments, white noise machines aim to mask or drown out background noise to create a more focused acoustic environment for employees. However, it's crucial to recognize their limitations—they don't actively cancel out background noise or voices. Instead, they operate on the principle of sound masking, concealing noises to make them less noticeable.

In contrast, Krisp can be effortlessly deployed and managed for thousands of agents through a single, secure dashboard. This offers a dynamic alternative to traditional solutions, addressing their limitations with a modern, efficient, and user-friendly approach.

About Krisp

Krisp's Voice AI technology processes more than 75 billion minutes of conversations per month, improving the productivity and efficiency of call centers everywhere with:

- AI Accent Localization
- PII-redacted Call Center Transcriptions
- AI Noise and Echo Cancellation
- AI Background Voice Cancellation
- Central Deployment and management
- Insights and analytics

Krisp customers experience:

8% increase in **CSAT scores**	**30%** reduction in **cost**	**25%** increase in **agent CSAT**	**10%** reduction in **AHT**
78% decrease in **noise complaints**	**25%** increase in **first call resolution rate**	**16%** increase in **sales conversions**	**20%** decrease in **call abandonment rate**

> Krisp's technology supports our vision of leveraging AI to deliver better experiences for our clients' customers. Our group is committed to driving grounded innovation through partnerships that empower CX improvement, and Krisp is a valued partner on this roadmap.

Olivier Camino
Global COO at Foundever

foundever

Learn more

ABOUT THE US CONTACT CENTER DECISION-MAKERS' GUIDE

The "US Contact Centre Decision-Makers' Guide (2024 – 16th edition)" is the major annual report studying the performance, operations, technology, and HR aspects of US contact center operations.

Taking a random sample of the industry, a detailed structured questionnaire was answered by 189 contact center managers and directors in October and November 2023. Analysis of the results was carried out in November & December 2023. The result is the 16th edition of the largest and most comprehensive study of all aspects of the US contact center industry.

This whitepaper is taken from the "AUDIO IMPROVEMENT & NOISE REDUCTION" chapter of the report, sponsored by Krisp.

ABOUT CONTACTBABEL

ContactBabel is the contact center industry expert. If you have a question about how the industry works, or where it's heading, the chances are we have the answer.

We help US and UK contact centers compare themselves to their closest competitors so they can understand what they are doing well, what needs to improve and how they can do this. The coverage provided by our massive and ongoing primary research projects is matched by our experience analyzing the contact center industry. We understand how technology, people, and process best fit together, and how they will work collectively in the future.

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