



GUIDE

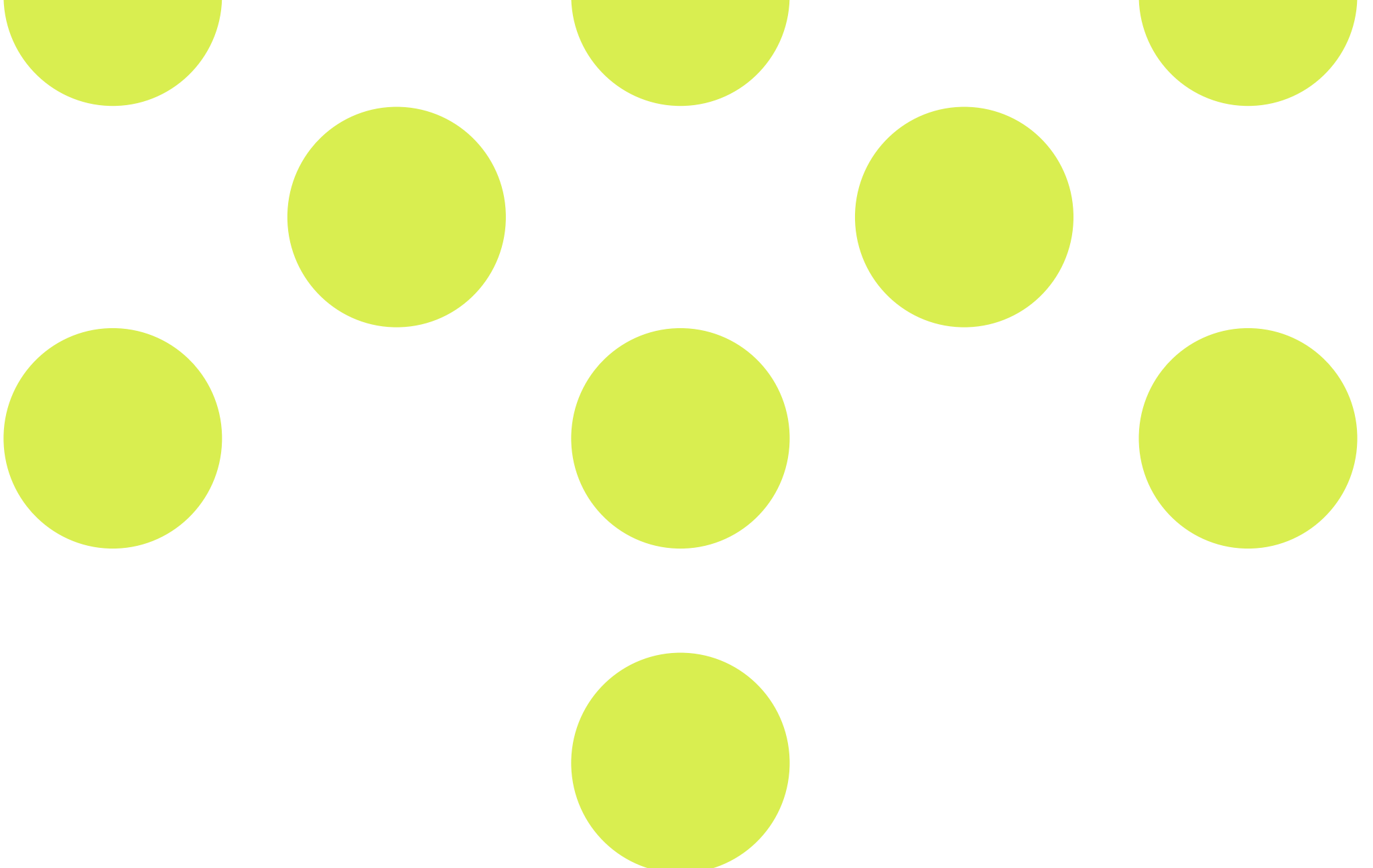
Navigating voice assistant deployments: 10 real-world lessons



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As businesses search for ways to improve customer experience, many turn to conversational AI technologies like voice assistants.

But what does it take to create a voice experience that engages your customers?

PolyAI's Dialogue Design team focuses on creating best-in-class voice experiences that gain callers' trust through qualities such as transparency, empathy, and clarity.

In this guide, the team shares the lessons and best practices that have surfaced from real deployments across various industries.





1. First impressions matter

The first thing a voice assistant says plays a huge role in how (and if) a customer will interact with the system. When building a voice assistant, we need to pay special attention to the first ‘turn’ of the conversation to earn the callers’ trust and establish the rules of engagement.

Before a customer even considers making a request, several conditions must be satisfied.

We need to convince the customer of the following:

1

The voice assistant is capable of acting on a user’s request;

2

The voice assistant will understand what the customer has asked;

3

The voice assistant is the best way to resolve the question

Providing too much information about what the assistant can do upfront can limit user engagement. Starting the conversation with an open question like, “How can I help?” encourages users to define their problems and builds trust.

Human-like voices and utterances generate confidence in the system, empowering users to express their needs freely. Such user-centred experiences improve the chances of successful resolutions without human intervention.

This should all be done before a customer can shout ‘AGENT!’.





2. Empathy is important

Emotional expression is among communication’s most complex and uniquely subjective aspects.

Word choice, intonation, volume, and even the use of silence work together to relay meaning. Expressions of empathy are one of the hardest things to get right in conversational design, as they set up an expectation of human emotional competence.

An emotionally-sensitive response must be considered genuine and appropriate to a given situation and social norms. Voice assistants should respond to information and situations with the correct type and level of emotion. Mismatched responses to certain contexts/user input will, at best, sound strange and, at worst, actively make users uncomfortable

When designing emotionally-appropriate voice assistants, we must consider the user’s reaction to certain information. Anticipate unhappiness, anger, and even loss of confidence, and prepare a response in the design to ease tensions and increase call engagement.

Considering user expectations first helps us to create voice assistants who remain within the boundaries of what is deemed appropriate to human-agent communication while providing a satisfying and meaningful interaction.



How can I help?



Hi, yes, I’ve just crashed my car into a ditch and I can’t get it out, I need you to send someone over right now!



I’m very sorry, I’ve found your account and I’ll arrange a towing service to come and get you. Do you know roughly where you are right now? It’s fine if you don’t



I’m along Route 2, between Darlington and Pleasantville. Closer to Pleasantville I think?



Got it, one moment while I get that sorted for you... Alright, a tow truck should be on its way. I’ve texted you their details, and you should be getting a call from them soon.

Can I help with anything else right now, like a hotel or rental?



No, that’s fine. Thanks

The agent switches to a softer tone to show concern given the context, and proactively works to address the goals of the user. The agent also lets the user know that there’s a fallback option in case the information is missing.

The agent makes the user feel heard, even while processing requests, and provides relevant follow-up information and suggestions



3. Silence plays an important part

Ensuring a voice assistant is robust in the face of silence is crucial.

Depending on cultural context and relationship dynamics, silence can be used to question, promise, deny, warn, threaten, insult, request, or command.

When interacting with robots, people expect behaviors similar to those of human counterparts. Voice assistants should respond to silence in ways that try to alleviate rejection, such as posing questions or making statements to encourage a response.

After signs of inactivity, the assistant will need to check that a user is still on the call and in need of help. This check needs to let the user know the assistant hasn't heard anything in a way that is appropriate for the type of user and the context of the conversation.

Conversely, if a user is trying to find an account information, like a reference number, "are you still there" can come across as impatient and rude. Assistants need to understand when silence is acceptable, and continue listening for input.

The design of a response to silence also depends on the persona that is developed for a voice assistant, which may be influenced by designer biases and is definitely influenced by the sector to which the agent will be deployed.

There is no one-size-fits-all solution. We ultimately seek to design the optimum customer-led experience by constantly adapting our responses to silence behavior to new scenarios.



4. Conversations must feel human. But not too much

Conversations with a voice assistant should feel natural to create an engaging user experience. When we interact with machines, our brains tend to apply principles of human sociality automatically. We perceive these machines as social beings with personalities, attitudes, and intentions. This phenomenon is called anthropomorphism.

Research shows that attributing human characteristics to machines leads to positive attitudes toward the technology, including perceptions of usefulness, trustworthiness, and enjoyment.

However, to manage user expectations, it's important to strike a balance and avoid making voice assistants feel too human. If a voice assistant seems too human, users might have unrealistic expectations of its capabilities. Conversely, users simply won't want to engage with a lifeless, robotic voice on loop, especially when dealing with a complex query.

Small details matter here, from pacing and intonation of the voice to the way the audio is edited together or synthesized.

The primary purpose of this attention to detail is to shift the user's focus away from the voice and to the task at hand. The less a user notices the voice quality, the more likely they are to stay focussed on what they want to do and stay on the call. If the overlying voice of that assistant is frustrating, a customer will likely request to speak to an agent or just hang up.





5. Ask open questions to give control to users

We've found that the best way to encourage users to engage with a voice assistant is to start every conversation with an open question: "How can I help?".

The 'How can I help' principle is a foundational pillar in **customer-led conversations**. We want customers to drive the conversations they want rather than being forced through a linear path that doesn't lead to a solution. Letting the user define their problem and reacting to it appropriately is key to building trust.

Replicating natural language means a user already knows how to engage with a voice assistant. They don't need to guess what keywords might trigger the path they want to go down. Instead, they can speak freely about what they want to do.

This principle bleeds into every part of the conversation. Asking open questions and responding to what a user has just said to direct the conversation in a way that is most helpful, rather than getting them to choose from multiple options, means that the user controls the conversation. As a result, users are more patient with the voice assistant and willing to listen to its solutions.



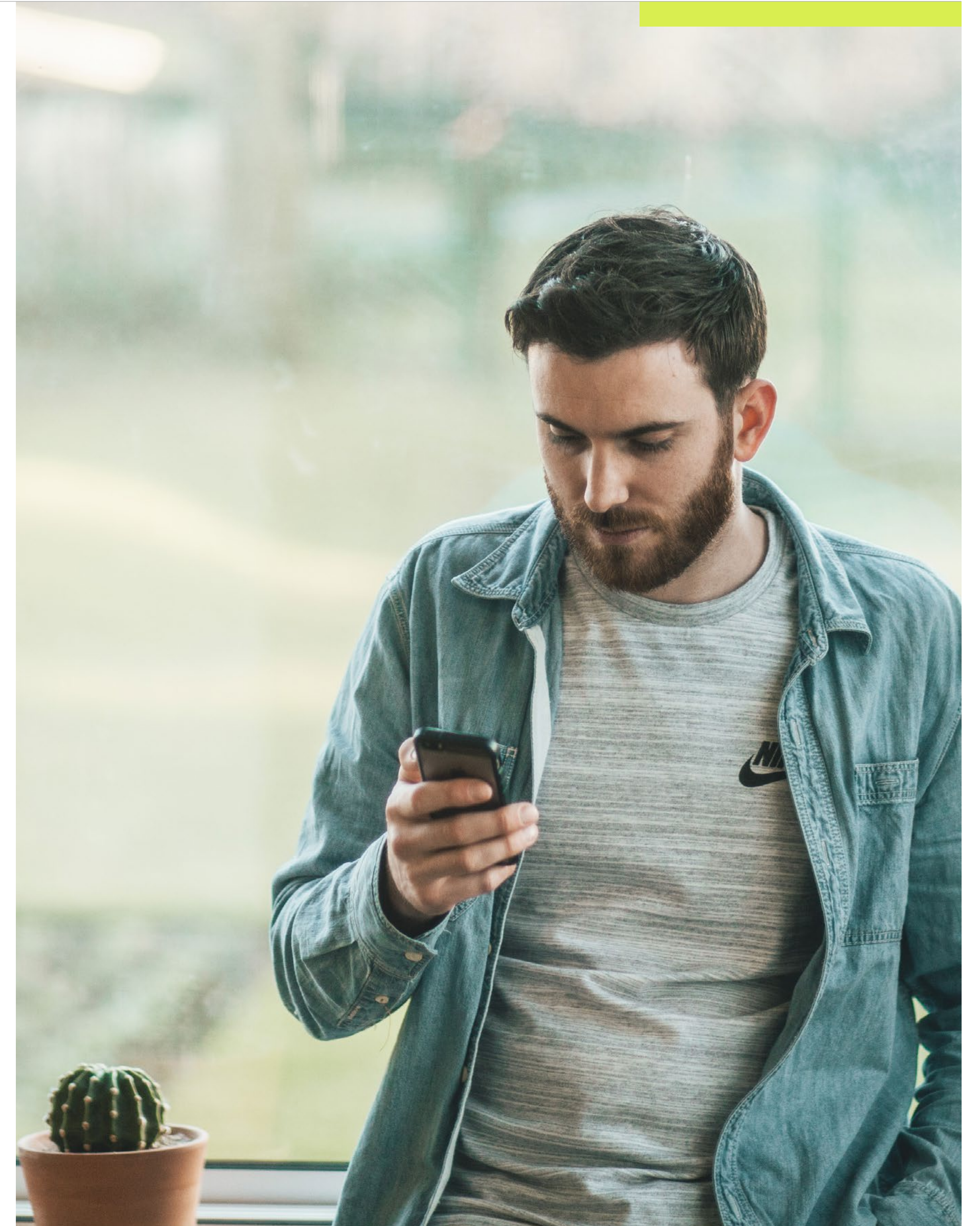
The more trust you build, the more a user will be willing to engage with your system.



6. Adjust the tone of the voice assistant to match appropriate situations and cultures

It's important to pay attention to cultural norms and politeness practices to ensure people engage with a voice assistant and don't consider them rude. For instance, "One moment" can sound like you're brushing someone off. Adding a "please" makes it sound more polite.

Changing a voice assistant's tone of voice to match the caller's social and cultural expectations is an effective way of creating the best experience for the customer. Calls of a sensitive nature require an appropriate tone of voice - an assistant shouldn't sound as happy about potential fraud as it does about opening a new account.





7. Reducing cognitive load over voice is key

Overly complex instructions from a voice assistant can make the conversation difficult to follow. Utterances that are easy to understand allow users to take control of the conversation. This requires clear voice quality with correct intonation.

Intuition tells us that information given in bite-sized, easily consumable amounts effectively guides callers and does not overwhelm them. However, real deployments tell us that being explicit is more important than being concise.

A voice assistant can ask a customer, “No problem. Have you personally requested and received a quote within the last three months?” However, explaining why the information is requested within the response removes any doubt or confusion in the customer’s mind about what is expected of them. For example, “Ok, so the first thing you need to do is get a quote. Have you personally requested and received one within the last three months?”

Small changes make a big difference.



8. Understanding the end user is essential

There is always room to improve the user's experience. Reviewing real calls is the best way to validate design and understand how a user interacts with a voice assistant - where learnings can be made from day one of deployment.

Every organization has callers from different demographics, which affects how they use technology and what they expect from it. Some users want to be handed over to an agent immediately, which can require design that convinces them to continue to engage with the voice assistant.

Callers aren't working to a script and can ask anything or make unexpected requests. Some callers will begin the conversation with a detailed explanation or ramblings that even other people would struggle to follow. Others will provide little or unclear information, and the voice assistant needs to draw out more information.





9. Preempt and design for things outside of your control

A voice assistant should be able to understand and respond appropriately to expected questions or user inputs that may not fit the usual patterns. It should make sense of different phrasings, understand variations in language, and handle situations where the user's input might be unclear or ambiguous.

By developing a network of clarifying questions, we can create a safety net of follow-up questions that can be asked in a natural way to understand exactly what action the user wants to take.

That way, we can ensure that the voice assistant can understand and respond accurately to a wide range of user inputs even if they are unusual or unexpected.

Even if the design seems flawless, underlying technological issues like a poor phone line can cause problems for automatic speech recognition (ASR) and natural language

understanding (NLU). Planning for backup behavior is as important as designing the primary flow.

To catch potential edge cases and improve the design early on, conducting design reviews and engaging in roleplaying exercises with someone unfamiliar with the design is beneficial.

These processes help to identify unexpected scenarios and issues, enabling necessary adjustments and refinements to the voice assistant's design.



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10.

Solution first, deflection second

You should always think about potential, alternative ways to solve the customer’s issue before looking at ways to discourage them from speaking to a person.

A user’s ultimate goal is simply to resolve their problems successfully or complete a task (like a booking). How the user gets to the solution (or with whose help) is a secondary issue.

Therefore, the most effective deflection is a solution or resolution. If a user asks to speak to a person, they’ve lost confidence in the voice assistant’s ability to resolve their issues. In other words, they do not believe that it can help them.

By proactively finding the right solutions and presenting them clearly, you could restore their confidence, convince them of the viability of the voice assistant, and prevent unnecessary escalation.

Conclusion



Deploying voice assistants in the real world comes with unique challenges and considerations.



Prioritizing the initial interaction, building trust, and setting clear expectations are essential.



Preparing for unexpected scenarios, adapting to silence, and striking the right balance between human-like interactions are crucial. By applying these lessons, businesses can create voice experiences that engage customers, build trust, and ultimately deliver a seamless and satisfying user experience.





11. Bonus lesson: Voice-first design means voice-first design

What may look good on paper or written down may not always sound good when spoken aloud, and vice versa.

That's why chatbots cannot simply be translated into effective voice assistants without significant customization for the specific domain.

Saying prompts out loud during the design phase can help to evaluate their effectiveness, and we can rectify any awkward agent utterances that may arise during live conversations.

A voice-first approach ensures that the voice interactions are smooth, natural-sounding, and engaging for the users.



PolyAI is the inventor of customer-led voice assistants.

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