

Artificial Intelligence for Voice: Selecting the Right Approach for your Contact Centre

With the rapid evolution of AI, a key focus area is how it can be applied to voice channels and help to modernise commonly-used technologies, including Interactive Voice Response and Automated Speech Recognition.

Despite over two decades of development, traditional Interactive Voice Response (IVR) systems can be a key point of frustration in customer journeys. Many still rely on Dual-Tone Multi-Frequency (DTMF) technology – a method of navigating phone systems using keypad inputs that has been widely used for over 20 years. A downfall of IVRs is that they can create friction and cognitive burden for customers who are often forced to recall long lists of options, under pressure.

Some organisations have attempted to modernise these systems using Automated Speech Recognition (ASR). However, ASR can come with a high cost of entry, long training cycles and on occasion, with errors. The results can be poor customer experience leading to a lower customer trust, as well as offering limited personalisation for organisations and their customers.

What the Data Tells Us

UK contact centres are already starting to pivot towards AI in voice, as the data highlights¹:

- **45%** of UK contact centres currently use or plan to implement AI voice bots in the next two years.
- **71%** say customers abandon self-service because it doesn't meet their needs.
- **55%** using ASR report negative customer sentiment due to lack of accuracy.
- **76%** believe their customers do not trust existing IVR systems.

What Makes AI in Voice Different?

AI-led voice automation, particularly when powered by large language models (LLMs), can provide additional potential benefits to the customer experience that IVR and ASR is mostly unable to deliver on:

- **Conversational Experience** – The rigidity of menu-based actions is removed for customers, who can speak naturally.
- **Contextual Personalisation** – AI can adapt in real-time using data on customer intent, preferences and history.
- **24/7 Availability** – A genuine opportunity to deliver an always-on service without, theoretically, requiring human intervention.

- **Understanding Intent** – The AI can recognise multiple intents in a single call and dynamically routes or resolves queries.
- **Higher Containment** – Customers can complete more tasks within a single automated interaction.

Unlike traditional technologies, AI-driven systems can enable more fluid, multi-topic conversations. Customers can, for example, report a lost or stolen card, check for fraud and order a new card in a single conversation – a process that might previously have required multiple restarts with IVR and ASR.

What Are the Options for Implementing AI in Voice?

Implementing AI in voice is not one-size-fits-all. There are several approaches, and selecting the right one depends on an organisation's maturity, goals and compliance needs.

Deterministic Flows

These are rule-based, structured paths based on the logic specific to the organisation – which will include calling Application Programming Interfaces (APIs) and data stores to ensure adherence and automation aligned to the business needs.

Full Agentic AI

This is AI without preset rules or flows. Agentic AI agents are given goals and know how to achieve them autonomously, reasoning across systems, contexts and conversations. These agents are ideal for managing end-to-end journeys – but they require robust guardrails and remain largely unproven. Currently implemented using prompt engineering with the risk large elements of business logic is written in plain English in long and verbose documents. Additionally every utterance will invoke an LLM – so the cost has to be carefully considered.

Blended Approach

Combining deterministic and Agentic AI, the blended option offers natural dialogue with a structured, safe approach. This can help ensure compliance and brand alignment while enabling meaningful



¹ ContactBabel (2025), UK Contact Centre Decision-Makers' Guide 2025, www.contactbabel.com/the-uk-contact-centre-decision-makers-guide

automation. You leverage a variety of technologies – including DTMF (if mandatory for compliance), natural language understanding based AI or Generative AI – at any part of the customer interaction journey. Where appropriate autonomous agentic agents can be executed from within this structure and over time you can migrate to a full agentic as the technology matures and the ROI makes sense.

Misconceptions to Avoid

Organisations often fall into the trap of viewing voice AI through the wrong lens. Here are four common myths:

- **“It’s like ChatGPT – just plug it in”** – Enterprise voice AI requires integration, training and control.
- **“It learns on its own”** – Most systems need curated data, continual training and human oversight.
- **“It will replace all agents”** – AI augments teams, but it doesn’t replace them.

- **“Only big enterprises can use it”** – Modular, scalable solutions mean businesses and contact centres of all sizes can potentially benefit too.

The Risk of Rushing

Many contact centres are eager to “do something with AI,” but deploying it for voice without a plan is a recipe for failure. Without a clear use case or goal, AI projects become tech exercises instead of customer experience solutions.

The risks include:

- **Poor outcomes** – Misalignment between AI behaviour and customer needs.
- **Increased complaints** – Frustration caused by poor automation can lead to more escalations.
- **Brand and compliance risks** – Without guardrails, AI can “hallucinate” or provide off-message responses.
- **One-size-fits-all doesn’t work** – Voice bots must reflect brand tone, escalation policies and customer expectations.

Seven Steps to Successful Implementation

To maximise success and minimise risk, organisations should consider following a structured rollout approach:

1. Define the Right Use Case

Start with high-volume, repeatable calls (e.g. identity and verification, order status). These are easier to automate, easier to measure, and demonstrate quick return on investment. These can be built with immediacy using your data and APIs, while supporting your business rules and your existing tech stack.

2. Engage Stakeholders from Day One

IT, operations, compliance and CX must be involved early. Cross-functional buy-in ensures alignment, smoother implementation and effective governance.

3. Curate Your Data

Any AI strategy must reflect the context, the data and the organisational goals. Simply uploading an existing FAQ to a large language model won’t yield good results. To achieve high containment and trust, it’s vital to curate data, structure knowledge in a way that provides context and build journeys that are intuitive for customers.

4. Consider a Blended, Structured Approach

Avoid jumping straight into agentic AI. Start with structured, deterministic flows and layer in LLMs where they add real value – all with appropriate guardrails.

5. Stage a Controlled Rollout

Deploy initially to a small group or low-risk use case. A pilot phase enables feedback, learning and rapid adjustment before scaling up.

6. Measure, Optimise and Expand

Track key metrics like containment rate, CSAT, and AHT. Use this data to tune the experience and build a roadmap for scaling AI across more calls and use cases.

7. Build Customer and Colleague Trust

Clear messaging, fallback options and ongoing training will ensure both customers and colleagues feel supported in the new AI-enhanced environment.