AI is calling: Is your contact center ready to answer?

What leaders need to know about risks, rewards, and readiness in the age of autonomous agents

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Executive summary

Artificial intelligence is no longer just answering calls; it's making them. From negotiating debts to booking appointments, AI agents are operating independently, sometimes without anyone realizing they aren't human.

This shift brings enormous opportunities: operational efficiency, improved accessibility, and enhanced customer experiences. But it also introduces new risks: deepfake attacks, account takeovers, social engineering, and potential reputational damage.

This white paper provides leaders with:

A clear view of today's AI voice landscape

Real-world examples of both risks and rewards

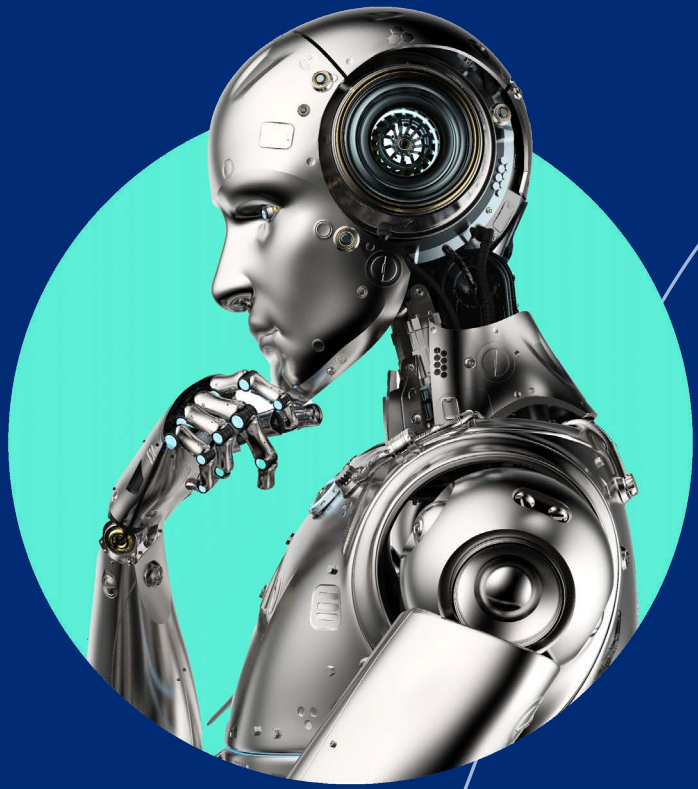
Practical strategies to secure and optimize contact center operations

Insights into the future of AI-driven interactions

Executive summary

The new reality: AI agents are making the calls

Voice assistants have been around for more than a decade, but AI agents capable of making calls, negotiating, navigating tasks, and acting autonomously are new. The shift began when models gained real-time reasoning, memory, and the ability to coordinate actions across multiple systems.



The new reality

The evolution of consumer autonomous AI voice agents

1984

Bell Labs speech recognition research

Early work on continuous speech recognition laid the groundwork for automated voice systems.

1997

Dragon Naturally Speaking

The first consumer-grade continuous speech recognition software enabled dictation and voice commands.

2011

Siri launch (iPhone 4S)

The first mainstream personal voice assistant brought conversational AI to mobile consumers.

2014

Amazon Alexa / Echo launch

Popularized voice-controlled smart home devices and cloud-based voice AI services.

2016

Google Assistant launch

Introduced advanced conversational AI capable of multi-step tasks across devices.

AI voice agents

2017–2018

Google Duplex

Announced in 2017 and demoed in 2018, Duplex marked a breakthrough in autonomous calling by successfully completing real-world tasks, like booking appointments, with human-like speech.

2020

OpenAI GPT-3 release

Large language models enabled adaptive reasoning and multi-turn conversational capabilities.

2021

Full-duplex, low-latency engines

Technologies from AssemblyAI, Google, and Microsoft enabled real-time, fluid conversations, removing key barriers to human-like dialogue.

2021–2022

Voice cloning advances

Tools like ElevenLabs demonstrated highly realistic AI voice synthesis, raising concerns about deepfake misuse and security.

2025

Major platform deployment

AI agents like OpenAI Operator are reaching critical mass, autonomously managing complex transactions such as bookings and navigation, making fully autonomous calling a current reality.

AI voice agents

The evolution continues

Whether you're looking for the best deal on a car or trying to book a dog groomer, AI can now call multiple businesses, determine availability, compare prices, and report back all without you ever picking up the phone. These AI agents are also continuously learning from these interactions to optimize negotiations and improve future performance.

Looking ahead, these agents are set to reshape entire business processes and customer experiences, from start to finish. As they become more autonomous and integrated across systems, AI will move from assisting with initiatives to leading them.

AI agents

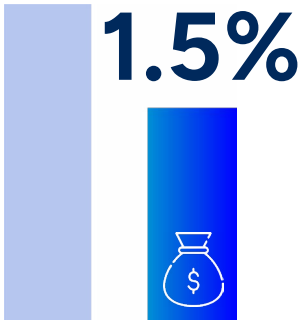
AI negotiates, AI persuades

AI is changing how negotiations happen, and the results are already showing up on the balance sheet.

Walmart partnered with Pactum AI to automate procurement deals.

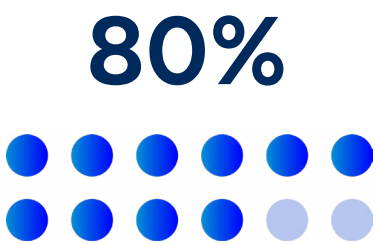
Here are their results:

64% of suppliers reached agreements within just 11 days



Walmart **saved 1.5%** compared to traditional negotiations

Debt negotiation bots like Kikoff are **saving users 30%** on average



Closing deals nearly **80%** of the time

These bots aren't just following scripts. They're learning, adapting, and delivering results that often beat human averages.

Who's calling? Good actors, bad actors, and everything in between

Not all AI agents are equal. Leaders need to understand the landscape:

TYPE	ACTOR	PURPOSE	IMPACT
Agentic assistants	Good	Navigate IVRs, wait in lines, complete tasks	Improves efficiency, accessibility
Accessibility bots	Good	Enable inclusion, ensure compliance	Expands service access in health care, public sector
Conspirator bots	Bad	Map IVR, probe vulnerabilities	Prepares phishing, smishing, fraud attacks
Deepfake voice agents	Bad	Mimic real customers to manipulate accounts	Threatens security, trust, and reputation

Deepfake attacks increased 3,000% in two years, highlighting the urgent need for proactive strategies. *- Onfido, 2024*

Who's calling?

The risk: Security, trust, and unpreparedness

If you're not ready, you're exposed.
A lack of preparation leaves organizations vulnerable on multiple fronts:

01 **Blocking good actors** can frustrate real customers and fail accessibility requirements.

02 **Letting bad actors through** can lead to account takeovers, social engineering, and loss of trust.

03 **Overcomplicating verification** creates longer call times and angry customers.

Bots are calling interactive voice response (IVR) systems just to learn the prompts and paths, then using that info to trick real customers. Deepfake voices are getting so good, voice biometrics can't reliably tell the difference.

In fact, researchers at the University of Waterloo found that machine learning-enabled deepfake software can generate convincing copies of a victim's voice using as little as five minutes of recorded audio. Their method can evade spoofing countermeasures and fool most voice authentication systems within six attempts. Tests against Amazon Connect's voice authentication achieved a 10% success rate in four seconds, rising to over 40% in less than 30 seconds. Less sophisticated systems reached 99% success after six tries.

In line with these findings, AWS recently announced it will retire Voice ID, reflecting a broader industry shift: single-factor voice biometrics are no longer enough on their own to reliably detect deepfakes.

Voice is under active attack

Fraud in contact centers now occurs in 1 out of every 599 calls — a 26% increase year-over-year, and twice the rate seen in 2021. Synthetic and replayed voice calls surged nearly 7x in 2024, reaching almost 1% of all inbound volume.
- Pindrop, 2025

The opportunity: Accessibility, autonomy, and efficiency

AI isn't and shouldn't be all doom and gloom. It's a strategic advantage when deployed thoughtfully. Consider the measurable benefits:

01 **Accessibility:** Bots help users with speech impediments, social anxiety, or language barriers access services more easily.

02 **Autonomy:** Agents can delegate repetitive tasks, like basic inquiries, appointment scheduling, and routine negotiations, to AI, freeing humans for high-value interactions.

03 **Efficiency:** AI navigates IVRs faster than humans, synthesizes information, and delivers concise summaries.

Importantly, this doesn't mean abandoning voice biometrics, it means evolving them. Modern authentication layers synthetic speech detection, device intelligence, and behavioral signals on top of traditional voiceprints to verify identity without increasing friction.

Machine-to-machine authentication and permission frameworks allow users to authorize AI for calls, chats, and emails securely. This creates a safe, efficient ecosystem that optimizes CX while reducing operational costs.

The impacts are tangible

Early AI-to-AI call pilots have demonstrated up to 80% reductions in handle time, without sacrificing task accuracy — allowing human agents to focus on higher-value, higher-context interactions.
- ElevenLabs, 2025

AI in action

AI isn't just a concept anymore. Across industries, autonomous voice agents are handling complex tasks that once required humans, delivering efficiency, accuracy, and convenience. These examples show how AI is reshaping contact centers and empowering both businesses and consumers.

Banking: Debt negotiation by AI

A major U.S. bank received a call from an AI agent using Kikoff to settle a customer's debt. The AI agent:

1. Delivered concise summaries
2. Verified authentication
3. Negotiated a reduced amount
4. Scheduled payments

The customer avoided negotiation stress, and the bank reduced operational risk while maintaining compliance.

Insurance: Rate comparison by AI

A homeowner looking for a new insurance quote provided their information to an AI agent. The AI agent:

1. Called multiple insurers
2. Negotiated quotes
3. Delivered a concise report with the best options

Consumers saved time and money, while the business streamlined repetitive inquiries, improving overall efficiency.

Practical strategies for proactive defense & optimization

Leaders must implement strategies that address both risks and opportunities:

STRATEGY	ACTION	BENEFIT
Agent guides & policies	Train staff on AI detection & handling	Identify good vs. malicious AI calls
Telecom risk scoring	Analyze metadata & call patterns	Flag suspicious activity before escalation
Synthetic voice detection	Advanced audio analysis & fingerprinting	Prevent deepfake attacks
Permissions & designated voice paths	Define AI agent capabilities and authorized actions; continuously verify caller identity	Control risk, streamline workflows, maintain trust
Machine-to-machine (M2M) authentication	Separate paths for autonomous agents vs. voice assist software; allow users to customize AI delegate permissions	Secure autonomous interactions and protect customer data
Digital channel expansion	Enable AI-assisted interactions across web chat, messaging, and voice	Optimize service delivery & CX, improve accessibility
Optimized AI workflows	Reduce average handle time, highlight key info, and prioritize actionable results	Enhance operational efficiency and customer experience

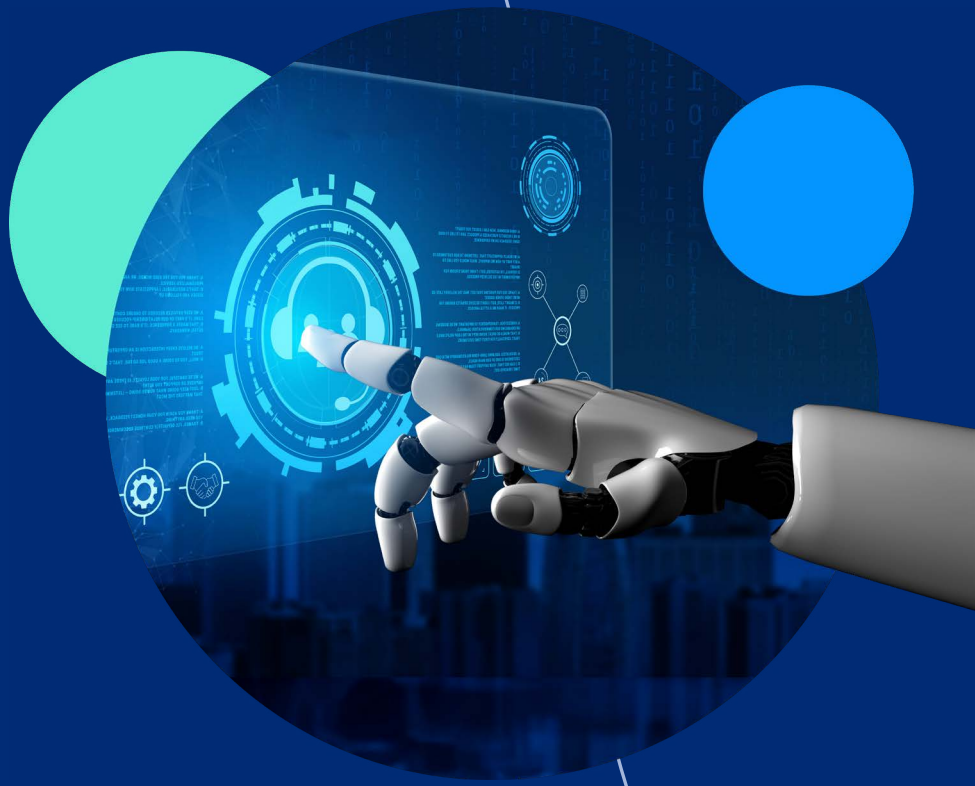
But here's the catch: you can't just block synthetic voices. Some are good actors, like accessibility bots and agentic assistants. You need to go deeper, checking permissions and intent, not just the tech.

The future: AI talking to AI

Here's where it gets wild. Imagine an AI agent calling a hotel for a wedding, only to be answered by another AI agent. They switch to "GibberLink mode" for efficient communication. The conversation is lightning fast, all info exchanged instantly. This isn't science fiction. It's already being demoed at hackathons. The voice channel is evolving, and soon, AI-to-AI conversations will be the norm for self-service and agent transfers.

For this future to work, we need new authentication protocols and permission standards. You wouldn't give your kid full access to your bank account — same goes for AI agents. Distributed permissions and delegated authority are essential. Businesses must define what AI agents are allowed to do, and consumers should be able to set those limits.

Designated voice paths for AI can streamline operations, highlight key info, and minimize friction. The goal is to optimize for both human and AI interactions, making every call count.



AI talking to AI

01

What you need to know

If you take nothing else from this white paper, remember this:

01.

AI is already reshaping customer interactions. Both the risks and the opportunities are real, and leaders can't treat it as a "future problem."

02.

Maintaining customer trust while maximizing efficiency will define success in the age of autonomous voice agents.

03.

Early investment in AI governance, permissions, and training will set your contact center apart competitively.

04.

Preparing for AI-to-AI interactions today ensures you're ready for the next wave of autonomous, high-speed self-service.

Bottom line:

Understanding how callers are using AI to interact with businesses is a leadership imperative. Those who act now will turn risk into advantage.

What you need to know

02

What you need to do

If you take nothing else from this whitepaper, remember this:

High priority:

- Audit IVR and authentication protocols
- Train agents to recognize AI-driven calls
- Define permissions and designated AI paths
- Provide agent guides and tips for handling AI calls
- Establish real-time alerts for synthetic voices

Medium priority

- Implement telecom risk scoring and synthetic voice detection
- Expand digital channels and optimize workflows for AI interactions
- Deploy specialized next-best-action workflows for AI conversations
- Adjust verbiage/scripts to reflect brand guidelines while minimizing confusion

Ongoing

- Monitor, adapt, and refine strategies as AI evolves
- Continuously verify “voice” against claims and re-authenticate if needed
- Audit and update M2M authentication paths for autonomous agents

What you need to do

AI is calling.
Will you pick up?

Partner with TTEC Digital to secure, optimize, and future-proof your contact center for the age of autonomous voice AI. Start turning risk into opportunity today.

Contact us to get started

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