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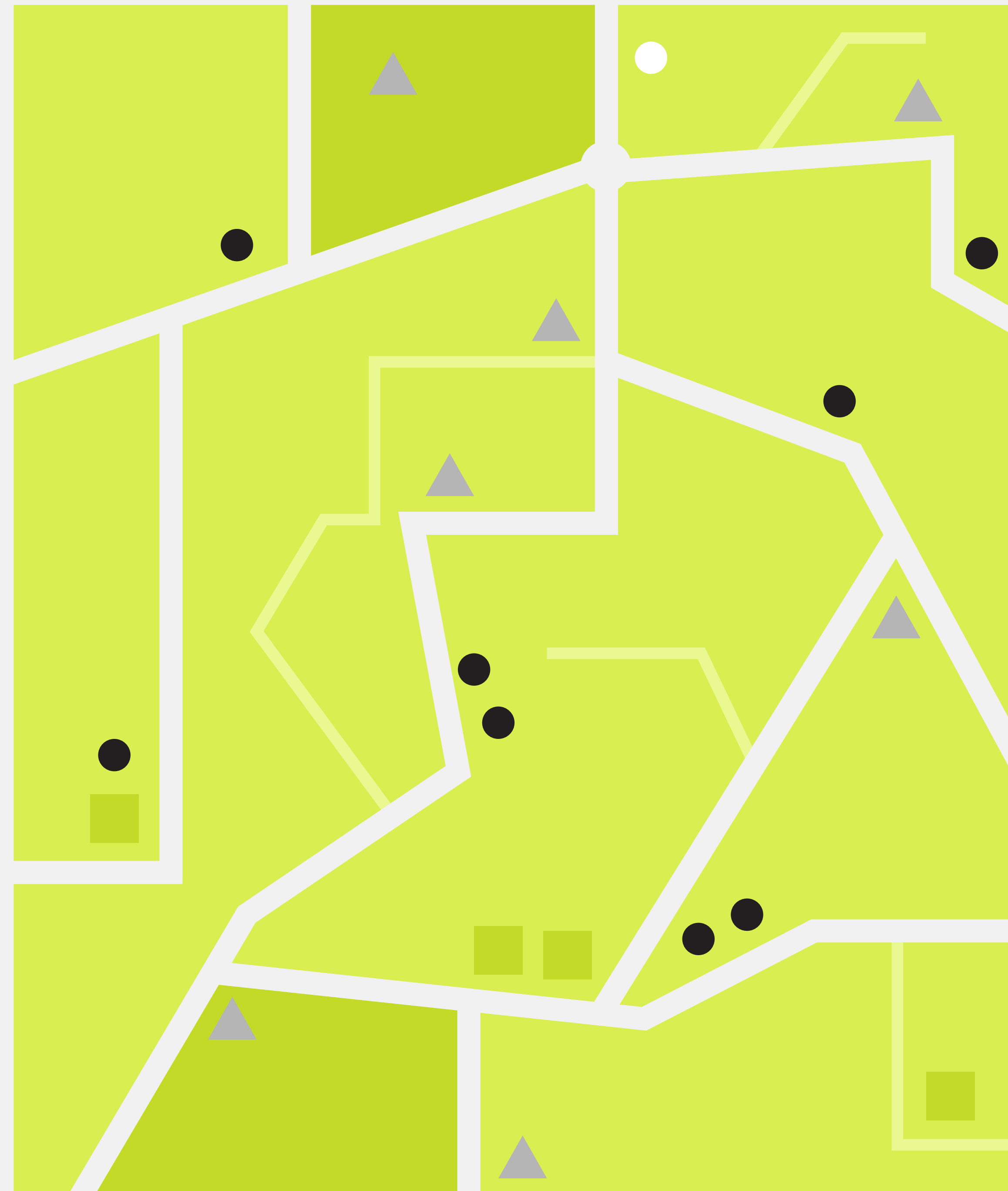
AI agents for utilities: Your roadmap to better customer experience.

INTRODUCTION

AI agents offer a roadmap to better CX

With changing regulations, service reliability demands, rising costs, and union considerations, adopting new technology often falls low on the utilities industry's list of priorities.

The result is that many organizations continue to rely on legacy systems that don't provide the best outcomes. This is especially true for customer experience, which all too often still forces customers to hunt for answers through confusing and inefficient IVRs and chatbots.

At the same time, customers expect reliable, personalized, and always-on support, just as they enjoy in other parts of their lives. For a sector built on decades-old systems, it's not always obvious which technology initiatives will deliver real value for both customers and the organization.

AI agents offer a roadmap to better CX. They stand out from antiquated phone trees and bots by providing natural, human-like conversations in the moments customers need support the most. This guide focuses on practical ways AI agents improve customer interactions, helping utilities serve faster, reduce pressure on teams, and deliver experiences customers want to shout about, for all the right reasons.

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The need for transformation in utilities

For many utilities organizations, the customer experience hasn't kept pace with expectations.

Long wait times, IVRs that misunderstand customers, and unresolved issues frustrate customers and cost your organization money. Even as digital channels grow, the phone remains a preferred way for customers to reach support, especially when reporting outages or urgent service issues. That's true across generations.

Many contact centers still rely on systems built decades ago. These systems weren't designed for the speed, flexibility, or personalization customers expect today. In a sector where core services are standardized and regulated, customer experience is one of the few ways utilities can truly differentiate.

That's why many are exploring AI voice agents. The technology has matured to the point where it can handle complex, critical issues securely and reliably. This gives utilities a safe way to modernize their phone channel and improve service delivery while maintaining compliance, accuracy, and trust.

86%

Research shows that for 86% of Gen Z, phone support is still the preferred channel for urgent issues.

75%

CX leaders report that 75% of customers now expect immediate responses and knowledgeable guidance from support teams.

AI agents deliver efficient, human-like support

The best CX solutions enable people to get things done on their own time and on their own terms, all while treating them as human beings. AI agents are now sophisticated enough to pick up on tone, urgency, and context, allowing callers to speak naturally and still be understood.

This means that they can provide intelligent, empathetic conversations for customers managing their utility accounts, including reporting outages, paying bills, or requesting service.

AI agents can also handle industry-specific language — such as outage reports, meter readings, and billing inquiries — as well as distinguish between similar-sounding requests based on context. When human expertise is needed, they seamlessly hand off to agents best suited for the job.

On top of all of this, AI agents must also ensure compliance. They have to be accurate, transparent, and auditable. Capabilities like secure authentication and consistent outage messaging, delivered to customers through AI agents, can help utilities meet strict oversight requirements without slowing down customer support.

74%

of Energy & Utility companies have implemented or are exploring using AI in their operations.

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CASE STUDY

How Pacific Gas and Electric saved 35,000 labor hours with PolyAI

PG&E, California's largest utility company, needed a better way to handle 16 million calls a year, especially during outages, wildfires, and extreme weather.

Their outdated IVR solution left customers frustrated, with some waiting over an hour to speak to someone.

PG&E partnered with PolyAI to build an AI agent named "Peggy" that could initially work in conjunction with their existing IVR, with the aim of sunsetting their legacy IVR by the end of the year.

Peggy provides accurate and helpful information about outages, including an estimate of when the issue will be resolved.

Peggy also answers billing inquiries and FAQs in both English and Spanish, and can text customers a link to specific online resources where they can self-serve without speaking to an agent, further reducing the volume of calls that go to the contact center.

67%	35,000	22%	25%
containment	labor hours saved	increase in CSAT	reduction in customer effort

10 utilities call flows to automate with voice AI

The impact at PG&E shows how much time and effort a single AI agent can save. But Peggy does more than handle outages; she resolves common inquiries across the board. To help you see where an AI agent can drive the biggest impact in your own organization, here are 10 utility call flows to automate.

1. Appointment scheduling

Callers can interact with an AI agent to schedule, edit, and cancel services, negotiate dates and time slots, and ask questions to help them select the best options.

Customer benefit
Manage appointments faster and easier.

2. After-hours inquiries

Customer queries don't always fall into regular office hours, and when it comes to issues with heating or electricity, immediate support is a necessity.

Customer benefit
Access support anytime.

3. Call prioritization and routing

Every customer call is important, but some calls require more immediate attention.

Customer benefit
Faster resolution for urgent issues.

4. Authentication

Agents can spend anywhere between 20 seconds to one minute authenticating callers. Free up their time by using an AI agent to engage in natural conversation, making authentication more intuitive and user-friendly.

Customer benefit
Faster authentication and peace of mind.

5. Multilingual support

Implementing multilingual support positions your company as accommodating and accessible. A multilingual AI agent allows you to create a personalized experience for customers regardless of language and contribute to the growth of your business.

Customer benefit
Get help in their preferred language.

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6. FAQs

Your agent's time is best spent helping customers with complex queries or emergencies.

Customer benefit
Immediate answers and time saved.

7. Outbound calls

Customers expect the basics of clear communication. Your AI agent can proactively reach out to customers to provide service reminders and technician arrival times or remind customers about scheduled follow-up services.

Customer benefit
Stay informed without having to call in.

8. Billing and payments

Assist customers in checking and paying bills, providing information on outstanding balances, and processing payments securely.

Customer benefit
Easier, faster, and more secure payments.

9. Account management

Even when digital self-service options are available, many customers still prefer the familiarity and ease of using the phone.

Customer benefit
Make quick account updates by phone.

10. Call routing

Many contact centers continue to use touch-tone IVR systems that often misunderstand customers, resulting in misrouted calls, increased wait times, and frustrating customer experiences.

Customer benefit
Reach the right dept the first time.

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Your roadmap for deploying voice AI in utilities

Successful AI adoption requires strategic planning, strong leadership, and an understanding of internal operations. While internal teams can develop an AI agent, it's often more efficient to work with conversational AI experts who guide the process from design to deployment.

Pre-build

Assemble your implementation team and map out your current IVR system to pinpoint where your agent will have the most impact. Next, define change management strategies to secure stakeholder buy-in, gather baseline data on key metrics, and set clear objectives. Finally, conduct a technology audit to understand your technical architecture and determine the best way to integrate your AI agent.

Design

Select an AI voice that matches your brand. Then, design for automation, which means creating engaging and user-friendly conversations that make a positive first impression, adapt to the customer's tone, and simplify complex information. Finally, create a handoff protocol that smoothly transitions to a human agent when necessary, considering urgency, sensitivity, and revenue impact.

Build

It's time to build your AI agent. Focus on the ability to listen, reason, and speak effectively. This involves using automatic speech recognition, spoken language understanding, fine-tuned large language models, dialogue management, and safety guardrails. The goal is to create an AI agent that understands callers, responds appropriately, and speaks naturally.

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Test and launch

Before going live, you'll want to run several tests, including quality assurance, load tests, and team demos. Once you determine everything is operational, it's time to launch! You can either do a rolling launch or dive in fully. It's important to monitor early calls, make sure things are running well, and make any adjustments needed.

Post-launch

Every customer call is different, and it isn't until you've launched your AI agent that you'll get to see how callers react.

Criticism can be hard to take, but the most successful teams view this stage as an opportunity for growth. By closely monitoring early calls and making adjustments as needed, you can rapidly improve the customer experience.

Continuous improvement

Continuous improvement starts with effective quality assurance. Reviewing support interactions has always been a challenge. Manual checks rarely capture a representative sample, and humans can disagree on evaluations. Standard metrics like CSAT, NPS, and handle time only tell part of the story, so persistent issues can go unnoticed until they affect satisfaction or revenue.

Now that AI agents are handling vast numbers of customer conversations, purpose-built AI agents can QA each and every call thoroughly with consistent evaluations that align with business goals, at scale. And for the first time, CX leaders can explore millions of automated conversations using a prompt-based interface, uncovering insights and strategic opportunities in seconds, not days.

Scaling AI through early wins and continuous feedback

Successfully scaling starts with low-risk, high-impact use cases that can quickly demonstrate value. Your contact center is a natural entry point because of its high volume of repetitive interactions. It also offers clear, measurable opportunities for improvement without overhauling the entire business model.

Use these wins to develop standardized playbooks that can be applied to new use cases. Document everything: what worked, what didn't, and what needs to be adjusted for broader implementation.

As you scale, turn your conversational data into a feedback engine. PolyAI's analyst agent helps CX leaders explore millions of automated conversations using a simple prompt-based interface—so you can identify patterns, uncover opportunities, and refine your strategy in real time. These insights become essential for refining and expanding your strategy.

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Making your roadmap sustainable

AI transformation in utilities is a marathon, not a sprint. To build a sustainable roadmap, focus on achieving short and medium-term wins while laying the foundation for long-term success. The key is to stay agile: start small, test, learn, and scale.

Each initiative should be:

- Tied to a clear business objective.

- Supported by ROI modeling to prioritize actions.

- Measured by the impact it has, not by ambition.

Avoid the temptation to overreach too early. Start by establishing your technical baseline, validating outcomes, and then building from there. This step-by-step approach minimizes risk while maintaining momentum and confidence.

Real transformation isn't just about solving problems; it's about making change feel inevitable. This mindset shift is critical for AI leaders.

To lead effectively:

- Understand where your business currently delivers unique value.

- Position AI as a tool to enhance that value, not replace it.

- Align AI initiatives with your company's top priorities, whether that's improving efficiency, boosting customer loyalty, or gaining a competitive edge.

AI isn't the strategy, it's the lever that moves the business forward. Your job is to show how it can make that progress a reality.

Enterprises that have employed these strategies have seen the following results:

72%

reduction in average handle time for routine requests

187%

ROI on labor cost savings

250k

generated from out-of-hours bookings

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Start with real problems, scale with intention

AI can transform your customer experience, but only when it's applied strategically. Use it where it actually makes a difference.

The most successful utilities organizations take an iterative approach: start with real customer problems, build internal momentum, and scale intentionally. With the right mix of vision, planning, and flexibility, your team can turn AI into a long-term driver of business and customer value. The key is to stay grounded in what matters: your people, your processes, and your customers.

Ready to start your digital transformation?

Request a demo to find out more about how PolyAI can help you resolve up to 90% of calls, access first-party customer data, optimize phone support in an instant, and deliver effortless CX at scale.

Request a demo