SIERRA

How AI agents drive retention and reduce costs in telecommunications

In the fast-paced world of telecommunications, where customer expectations are high and competition among service providers is fierce, building trust and loyalty is critical. Customer retention is far more cost-effective than customer acquisition—some estimates suggest that it's five times cheaper to retain an existing customer than to attract a new one. When alternatives are just a click away, maintaining and growing customer relationships is paramount.

To achieve this, telecommunications companies must rethink their approach to customer experience, moving beyond traditional methods to something more agile, personalized, and efficient. In recent years, AI has emerged as a game-changer in this space, transforming the way companies interact with their customers and helping them foster deeper, more meaningful relationships.
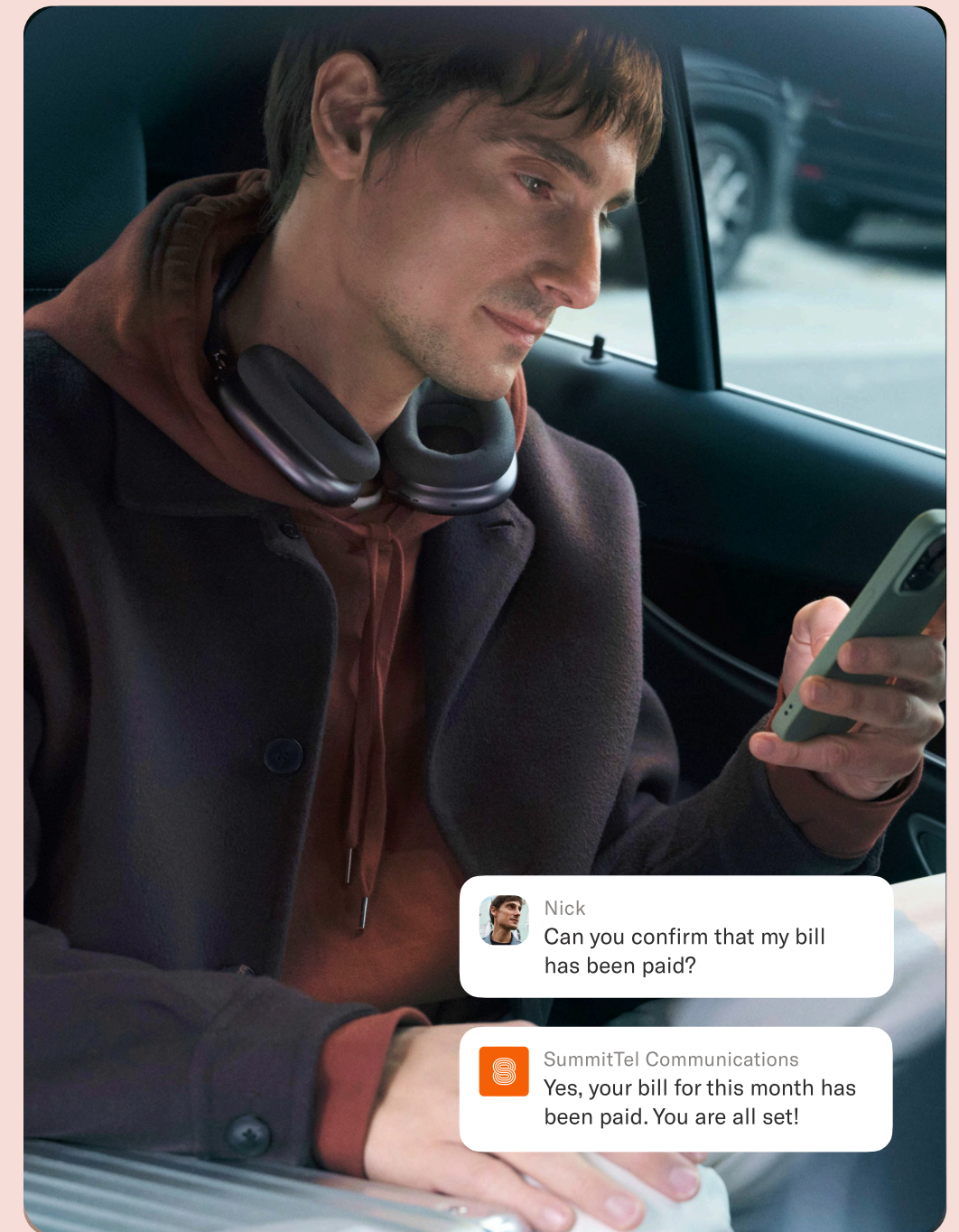
What is an AI agent?

An AI agent is a sophisticated type of software designed to simulate human interactions. Powered by large language models (LLMs) like those behind ChatGPT, AI agents can understand context, interpret intent, and respond with a nuance that once seemed unattainable.

Unlike legacy chatbots, which operated on rigid scripts, modern AI agents adapt in real-time to each interaction, offering dynamic and, well, human, responses.

In telecommunications, this means delivering personalized experiences at scale—whether it's assisting customers with troubleshooting, suggesting personalized plans, or providing fast billing support.

Nick
Can you confirm that my bill has been paid?

SummitTel Communications
Yes, your bill for this month has been paid. You are all set!

Top six use cases for AI agents in telecommunications

AI agents are changing how companies in telecommunications serve their customers. Here are six real examples of AI agents in production at leading telecommunications companies.

1

Smarter product recommendations

Choosing the right telecom plan, device, or bundle can be overwhelming. Customers often struggle through static product listings, become confused, and ultimately abandon the process.

AI agents simplify this by engaging directly with customers, understanding their specific needs, and providing tailored recommendations. They can proactively suggest products based on customer usage patterns, preferences, and past interactions, increasing conversion and even cross-sell and upsell opportunities. Advanced AI agents also allow telecom companies to test and refine different offers, continuously improving recommendation accuracy. The result is higher conversion rates, improved customer loyalty, and greater customer lifetime value.

2

Streamlined onboarding

Onboarding significantly shapes a customer's overall experience. If new customers struggle with activating their plans, connecting devices, or using services, they're more likely to become frustrated and leave.

AI agents guide customers step-by-step through onboarding processes, helping with common issues like wifi or voicemail setup. Rather than relying on static instructions, customers receive interactive, personalized support, making their first experiences seamless and setting the stage for long-term satisfaction.

3

Frictionless account management

Routine account management tasks like checking usage, resetting passwords, or updating contact details shouldn't require waiting on hold or navigating complicated menus.

AI agents can transform these tasks into effortless interactions via chat, voice, or messaging apps. Customers can simply say, "What's my current data usage?" "Update my email address," or "Show me my last bill" and get immediate help. This reduces customer frustration, lowers support costs, and improves satisfaction.

4

Faster resolution of billing and payment issues

Billing questions are common points of customer frustration. Whether it's confusion about charges, resolving disputes, or addressing missed payments, these interactions can quickly escalate.

AI agents provide immediate assistance, helping customers clarify charges, initiate disputes, or manage payments. Instead of waiting on hold or dealing with complex processes, customers get instant support, enabling telecom companies to quickly and efficiently resolve common billing issues.
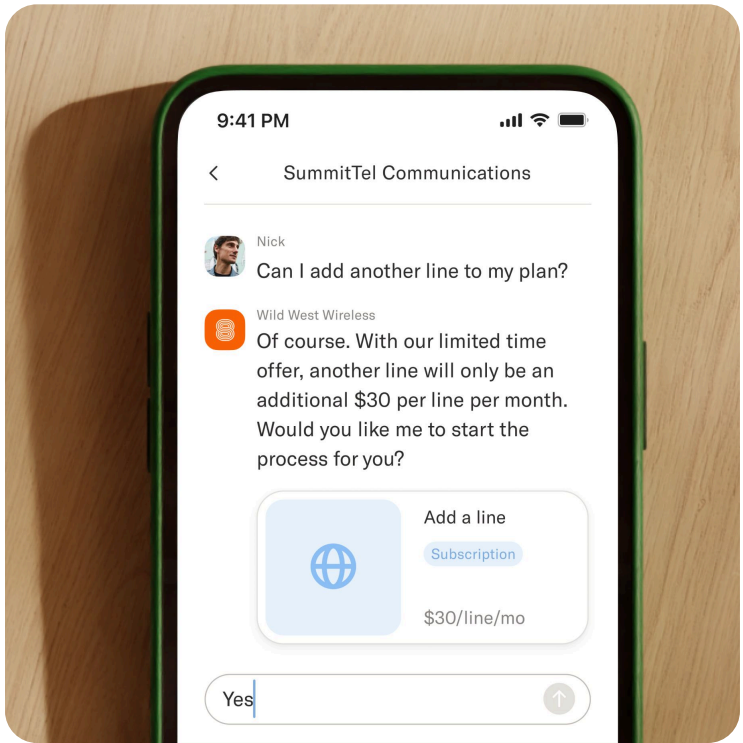
5

Proactive churn prevention

When customers call to cancel their service, it often stems from frustration or perceived lack of value—a crucial moment that determines customer retention.

AI agents recognize these critical interactions and respond proactively with personalized retention options, such as discounted plans, temporary pauses, or tailored upgrades. If a more personal interaction is required, the agent seamlessly transfers the customer to a human agent, along with detailed context.

This isn't about preventing customers from leaving; it's about presenting them with valuable alternatives they might not have considered, creating better outcomes for both customers and companies.

9:41 PM

< SummitTel Communications

Nick
Can I add another line to my plan?

Wild West Wireless
Of course. With our limited time offer, another line will only be an additional $30 per line per month. Would you like me to start the process for you?

Add a line
Subscription
$30/line/mo

Yes

Criteria for an effective AI agent

While AI agents are powerful tools, deploying them successfully requires more than just advanced technology. Effective AI agents must meet the following criteria:

Empathetic ♡

Customers don't want to feel like they're interacting with a robot. A successful AI agent needs to understand context and respond in a manner that feels genuinely helpful and human.

On-brand

AI agents must reflect the unique voice and identity of the company. Whether formal or conversational, the tone of voice must remain consistent across all interactions to reinforce trust and build brand loyalty.

Secure and compliant 🔒

Telecom companies deal with sensitive data, so security is a top priority. AI agents must adhere to the highest standards of data protection, ensuring customer privacy and compliance with industry regulations.

Predictable

A key to building trust with AI is consistency. An effective AI agent should behave predictably—avoiding off-topic tangents, inappropriate tone shifts, or even "hallucinating" false information.

Multichannel

Telecom customers expect to interact across multiple touchpoints—phone, chat, email, in-app, and more. A seamless AI experience across all of these channels ensures consistent support and strengthens the brand's presence.

Action-oriented ✓

AI agents must do more than respond to queries; they must take meaningful actions. From processing payments to adjusting account details, AI agents should be able to carry out key tasks that add value to both the customer and the business.

Optimizable and adaptable 🔧

AI agents should learn from new inputs and be easy to adjust to reflect new policies or plans. In telecom, where new services and products are constantly introduced, this flexibility is crucial.
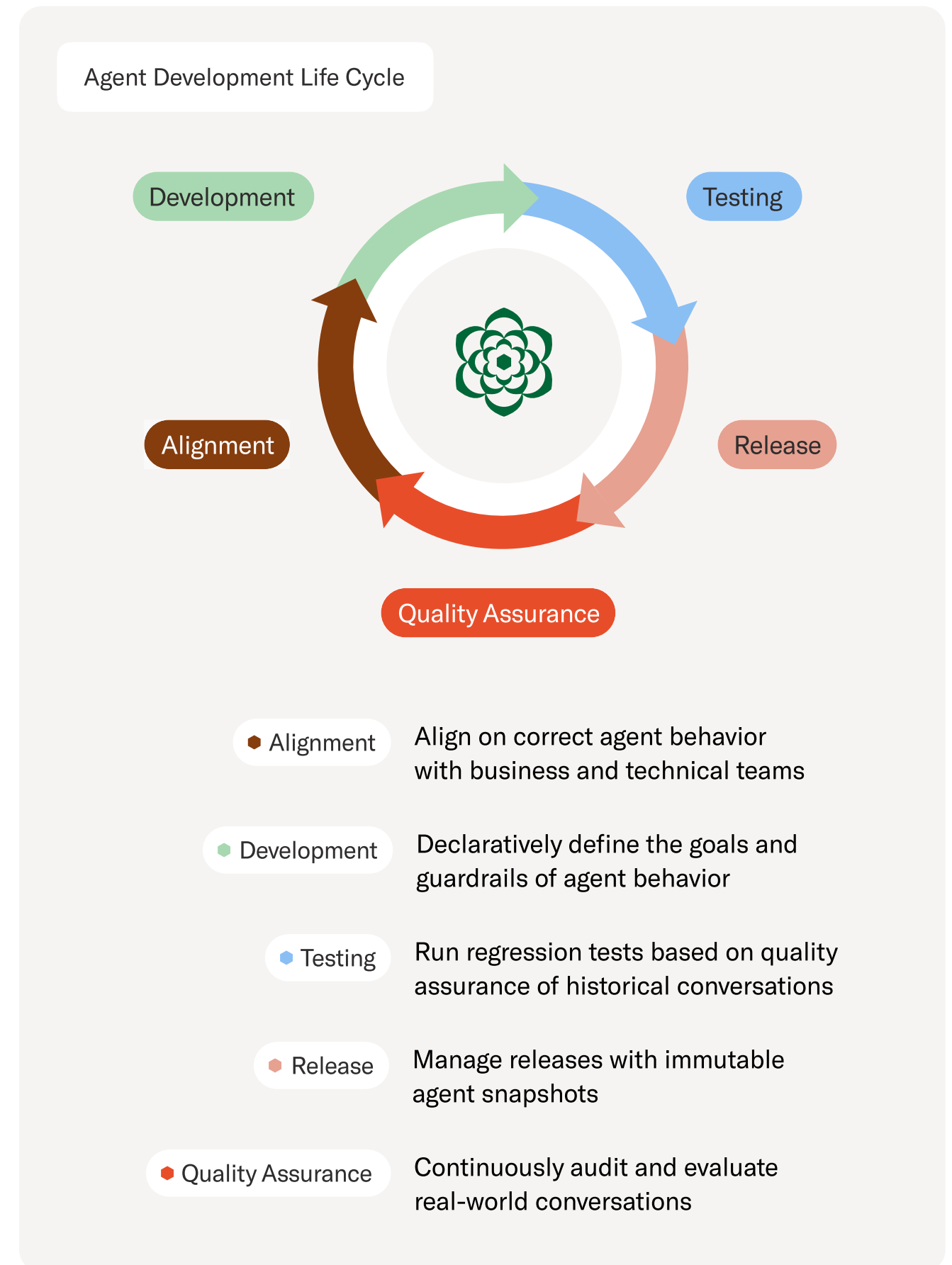
AI agents: build or buy?

Telecommunications companies face intense competition, large volumes of customer interactions, and slim profit margins. Because of these pressures, they've embraced AI early to enhance customer experiences. While many build their own AI solutions, an increasing number are turning to specialized vendors offering novel approaches. As AI advances, telcos must decide whether to continue in-house development or partner externally.

Deploying AI agents can be transformative, yet it brings its own challenges. Creating and running these systems demands specialized engineers, new development methods, and rigorous quality assurance. Trust and safety is especially important: large language models can "hallucinate" or misrepresent a brand. Orchestrating multi-step, multi-stakeholder interactions are beyond the reasoning capabilities of majority of AI agents and LLMs. Integrating with systems of record for actionability is difficult. CX teams need ways to evaluate agent performance and tune it as businesses evolve. Lastly, LLM models don't natively support auditing, inspection, safety, and PII protection.

Because of this, many telcos now consider external providers that deliver deep AI expertise, predictable costs, and pre-tested solutions. AI native vendors can future-proof AI investments and provide ongoing support, allowing telcos to stay agile and focus on their core business.

In our view, teaming up with proven vendors helps mitigate the risks of homegrown AI development, accelerates time to market, and ensures solutions align with customer demands and regulatory requirements. The decisions made today will shape how telcos harness AI for years to come.

Agent Development Life Cycle

Development
Testing
Release
Quality Assurance
Alignment

● Alignment — Align on correct agent behavior with business and technical teams

● Development — Declaratively define the goals and guardrails of agent behavior

● Testing — Run regression tests based on quality assurance of historical conversations

● Release — Manage releases with immutable agent snapshots

● Quality Assurance — Continuously audit and evaluate real-world conversations

Sierra for telecommunications

Every customer interaction shapes trust, loyalty, and overall satisfaction. Telecom leaders understand the promise of AI agents—but achieving transformative results depends on selecting the right platform. Sierra AI agents are designed for companies that are committed to delivering exceptional customer experiences.

Sierra's autonomous AI agents intuitively interpret customer intent, engage in natural conversations, and take meaningful actions that enhance both customer satisfaction and operational efficiency. They integrate effortlessly with billing systems, CRM platforms, support ticketing software, and more—delivering seamless customer service across every channel, including voice, chat, and in-app.

Powered by a robust network of advanced AI models, Sierra's agents provide outstanding performance and reliability, adhering strictly to industry-leading standards for trust, security, and compliance—including robust encryption and protection of customer data. They continually learn and improve, supported by integrated quality assurance, auditing, performance analytics, and comprehensive reporting.

Sierra isn't merely a technological upgrade—it's how telecom companies elevate customer experiences and ensure retention. Discover how Sierra can transform customer service in telecommunications at sierra.ai/industries/telecommunications.

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