Migrating to Amazon Connect Customer:

A Blueprint for Agentic Customer Experience



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The case for agentic AI customer experience

Today, businesses are turning to AI to transform their customer experience (CX) with augmented agility, scalability, and cost efficiency.

However, businesses approaching CX transformation without agentic AI architectures and strategies face a myriad of challenges:

95% of enterprise GenAI pilots fail to show measurable ROI.[1]

$16.1 million over three years: Average cost for enterprises to license, run, and maintain legacy contact center infrastructure.[2]

Organizations relying on non-agentic AI CX systems can lose **$51.7 million over three years** in uncaptured containment value.[3]

Moving to Connect Customer transforms these challenges into opportunities. With a cloud-based contact center, you can:

- Scale dynamically to meet fluctuating demand without paying for idle infrastructure.
- Reduce time-to-market with quick setups compared to traditional on-premises solutions.
- Quickly adapt to market changes, new customer demands, and emerging technologies.
- Personalize customer interactions with data-driven insights.

Discover how Connect Customer, the agentic AI customer experience solution from Amazon Web Services (AWS), enables businesses of all sizes to seize new opportunities and enhance CX at scale. This whitepaper presents a proven blueprint designed to help you seamlessly transition your contact center to the cloud with AWS and Amazon Connect. By following these best practices, you can accelerate implementation and minimize delays.

[1] MIT/NANDA 2025 study

[2, 3] The Total Economic Impact of Amazon Connect, Forrester 2026.

Upgrading from Basic AI to Agentic CX

Everyone wants to use AI to upgrade customer experience, but a generic, bolted-on solution may not be enough. You need capabilities designed specifically for Agentic CX.

Existing Connect Customer Basic users experience zero interruption to core service. New agentic capabilities — including AI agents, Live Sync, and Agentic CX Designer — land seamlessly in Connect Customer. A clear transition path allows organizations to adopt agentic customer experience capabilities at their own pace without rebuilding existing routing architecture.

Basic AI	Agentic CX
Generates text, answers questions, and surfaces information.	Reasons through workflows, executes tasks, and resolves complex issues securely.

52% of consumers stop buying from a brand after a single bad service experience.[4]

80% of common service issues will reach autonomous resolution through agentic AI by 2029.[5]

3.5x faster AI adoption in customer experience than in any other enterprise department.[6]



[4] 2025 Customer Experience Survey, PwC 2025.

[5] Gartner Predicts Agentic AI Will Autonomously Resolve 80% of Common Customer Service Issues Without Human Intervention by 2029, Gartner 2025.

[6] Rewiring Customer Experience for the Agentic Era, McKinsey 2026.

Amazon Connect Customer:
AI-native, autonomous resolutions

Connect Customer makes it easy to deliver superior customer experience at lower cost, stay ahead of customer expectations, and outpace the competition. Here's how:

- Omnichannel support: Seamlessly engage customers across voice, chat, email, SMS, Apple Messages for Business, WhatsApp Business messaging, and more.
- Pay for what you use: Eliminate contracts, licenses, and commitments.
- Effortless scalability: Automatically adjust to handle peaks without paying for idle capacity.
- Continuous innovation: Benefit from frequent feature updates with no upgrades required, driven by customer feedback.
- AI-native agentic capabilities: Resolve customer needs on first contact with AI agents that reason, decide, and act across agentic voice, agentic chat, and all messaging channels – no code required.

Connect Customer delivers proven results

COST SAVINGS

342% return on investment.

EFFICIENT CALL HANDLING

60-second reduction in average handle time.

ENHANCED VISIBILITY

Supervisors can manage 20% more agents.

IMPROVED CONVERSION RATES

20% increase in conversion rates.

IMPROVED CX

Increase call containment rate by 10% per year.

SCALABLE AGILITY

Reliable and adaptable performance for businesses of all sizes.

Source: The Total Economic Impact of Amazon Connect, Forrester 2026.

Amazon Connect Customer Feature Overview

What You Need	Feature and Functionality
24/7 automated support	**Agentic voice and chat:** Autonomous resolution across voice, chat, and messaging channels.
Smart AI task automation	**AI agents and designer:** Multi-step reasoning and execution via natural language orchestration.
Easy visual builder	**Agentic CX designer:** No-code visual canvas for conversation design and testing.
Voice and screen co-browsing	**Live sync:** Real-time sync of simultaneous voice, visual, and transactional actions.
Quality and sentiment tracking	**Conversational analytics and performance evaluations:** Automated scoring, transcription, and sentiment analysis.
Real-time agent help	**AI-powered assist:** Real-time agent suggestions, call summaries, and coaching insights.
All customer records in one place	**Cases and customer profiles:** Consolidated customer context, profiles, and case tracking.

The blueprint for a successful cloud migration

Moving to Connect Customer is more than deploying a new tool—it's an opportunity to align impactful technology with business outcomes. This requires aligning priorities and addressing critical considerations early. Successful agentic AI transformation happens when business objectives lead the way, supported by IT expertise.

Business leaders today want AI that acts and is part of a holistic AI deployment, not disparate solutions bolted on to outdated technologies. Whether you're migrating from a legacy system or consolidating fragmented customer experience (CX) tools, the journey can feel overwhelming. Challenges like telephony porting, data migration, and stakeholder alignment can create roadblocks if not addressed upfront. Based on our extensive agentic AI CX transformation experience, we've identified common concerns and the solutions that lead to success. Whether you're in the early planning stages or preparing for go-live, you'll find detailed checklists and practical guidance tailored to business stakeholders, IT leaders, and developers in this whitepaper.

Success starts with alignment

The first step in a successful transformation is a shared vision between business and IT; both must work together to define and clarify roles and responsibilities in order to lay a strong foundation for subsequent phases of the project.

Key steps include:

Business Leaders

- Define agentic use cases and AI outcomes (first-interaction resolution, deflection rate, AI agent autonomy targets)
- Align stakeholders early on vision and strategy to build organizational consensus
- Plan for change management to ensure adoption
- Evaluate cost projections and expected ROI

IT Leaders and Developers

- Validate telephony porting requirements and ensure data readiness
- Test network bandwidth, latency, and security configurations
- Identify integration points with backend and third-party systems to ensure seamless connectivity and efficient data flow
- Upskill and empower your team with training
- Evaluate agentic governance requirements (guardrails, citation-backed answers, audit trail)

AI/CX Owners

- Chief Customer Officer
- Chief Experience Officer
- Chief AI Officer

A phased approach to migration

A smooth transition to Connect Customer follows a structured process based on proven best practices, divided into key phases and milestones. The process starts with the **Agent-to-Agent** phase where existing AI agents are brought into Connect Customer. Then follows the **Design** phase, during which business and IT leaders collaborate to create a future-driven architecture tailored to business needs. Next, the **Pre-Go-Live** phase focuses on thorough preparation and planning, including testing, training, and documentation. On **Go-Live** day, the cutover happens, with rigorous verification to maintain stability. Finally, the **Post-Go-Live** phase focuses on monitoring and optimizing performance to support long-term success through continuous improvement. Each phase plays a critical role in achieving a seamless migration.

AGENT-TO-AGENT

Bring existing enterprise AI agents into Connect Customer over the open A2A standard

DESIGN

Create a robust, scalable architecture that seamlessly integrates business objectives with IT requirements

PRE-GO-LIVE

Finalize configurations, conduct thorough testing, and prepare users for the new platform through end-user training and documentation

GO-LIVE

Implement the cutover plan, monitor system performance, and document any initial concerns

POST-GO-LIVE

Monitor systems performance through key metrics and user feedback, address issues as an ongoing continuous improvement

Go live in weeks, not quarters

Deploying agentic CX does not require a year-long waterfall implementation. With pre-built AI agent templates and the no-code visual canvas, organizations can follow a POC-first approach to reach initial business value in 4 to 8 weeks. Rapidly validate high-impact self-service use cases in a targeted Proof of Concept before scaling across production channels.



Build a future-driven architecture

Once business and IT are fully aligned, the design phase can begin. This phase focuses on developing a robust, scalable architecture that seamlessly integrates business objectives with IT requirements, ensuring adaptability and long-term efficiency.

During the design phase, business and IT leaders work together to:

- **Define objectives and success metrics:** Clearly articulate business goals, performance expectations, and desired outcomes to align the design with overarching strategic priorities.
- **Select core features and functionalities:** Decide on essential features (e.g., agentic voice, agentic self-service, contact flows) and configure Connect Customer to meet specific business objectives.
- **Determine integration requirements:** Plan integrations with existing systems (CRM, ERP, databases, APIs, etc.) and verify compatibility with current workflows and tools.
- **Place governance guardrails:** Add governed, rule-based steps to see exactly where the AI decides and where policy is enforced.
- **Establish security and compliance protocols:** Set clear guidelines for data protection, privacy, and compliance with industry regulations, ensuring the design addresses all security concerns.
- **Design user experience and interface:** Collaborate on designing an intuitive user interface for both agents and customers to enhance ease of use and overall satisfaction. Consider the no-code visual canvas for designing conversation experiences and a natural language AI agent designer for orchestration.
- **Define reporting and analytics needs:** Determine the KPIs, metrics, and reports that will provide insights into conversational analytics and performance evaluations.
- **Plan for scalability and flexibility:** Design the system to scale with growth, whether that's handling more agents, increasing call volumes, or adding new features.
- **Set governance and change management strategies:** Decide on roles, responsibilities, and processes for ongoing governance and system updates, including how to manage change throughout the lifecycle.
- **Determine budget and resource allocations:** Allocate resources for the design and implementation phases, making decisions on budgeting, timelines, and team involvement.
- **Evaluate telephony coverage:** Assess the telephony capabilities offered by Connect Customer and align them to your business requirements.

Governance and trust

- **Auditable and explainable AI:** Every AI agent decision, reasoning chain, and output includes turn-level policy enforcement and citation-backed grounding to prevent hallucinations.
- **Immutable versioning and one-click rollback:** Full change tracking and instant version rollback capabilities maintain operational stability and zero downtime during updates.
- **Single AWS trust boundary:** Compliance coverage built directly on AWS infrastructure, supporting Federal Risk and Authorization Management Program (FedRAMP Moderate in commercial regions / FedRAMP High in GovCloud), Health Insurance Portability and Accountability Act (HIPAA), Payment Card Industry Data Security Standard (PCI DSS), and General Data Protection Regulation (GDPR).

Training is critical

While a well-designed architecture is essential, it is only one aspect of a successful migration. Equally important is training, which promotes a smooth transition. Connect Customer provides structured resources and training paths to equip the project team with the necessary skills throughout the migration journey.

Begin with AWS

Getting Started with AWS: AWS website for those ready to learn the fundamentals of AWS and start building.

Start your Connect Customer journey

Getting Started with Amazon Connect: AWS website designed to help you

Assess your migration readiness

Evaluate your cost savings

Learn about migration best practices

Start your migration journey

Explore Connect Customer features and concepts

Amazon Connect Enablement YouTube channel, featuring short videos to help you use the features of Connect Customer effectively.

Connect Customer Hands-on Workshops: Hands-on events suitable for various roles and designed to teach or introduce practical skills, techniques, and concepts.

Discover skills and training resources

Connect Customer Developer Learning & Badge Plan: A collection of learning resources created specifically for learners who have the role of Connect Customer Developer in their organization.

Connect Customer Communications Specialist Learning & Badge Plan: A collection of learning resources created specifically for learners who have the role of Connect Customer Communications Specialist in their organization.

Connect Customer Developer Assessment: This assessment validates your knowledge of the critical jobs role topics covered in the Connect Customer Developer learning plan.

Connect Customer Fundamentals: Collection of learning resources created specifically for learners who desire to understand the foundational components of Connect Customer.

Connect Customer Forecasting, Capacity Planning, and Scheduling – Knowledge Badge Readiness Path: Resources for learners who desire the ability to configure and operate the AI-powered workforce management capabilities.



Design phase checklist

Use this checklist as a step-by-step guide to completing critical tasks during the design phase. While these tasks are proven to help support a successful migration, there may be additional required tasks specific to your use case or organization. Be sure to verify and validate this list with your internal teams.

- Train your staff so they are fully equipped with the knowledge and skills to effectively manage and use Customer Connect.
- Gain a comprehensive understanding of which phone numbers are eligible for porting, the expected timeline, and any associated fees
- Learn the necessary steps for successfully porting your phone numbers to Amazon Connect
- Familiarize yourself with regional requirements for ordering and porting phone numbers
- Review the telecommunications coverage available in Connect Customer
- Understand the process for setting up and testing your network
- Develop a plan for identity management within Connect Customer
- Identify agentic self-service use cases and design conversation flows
- Define AI agent guardrails and escalation rules
- Plan governance model (versioning rollback, audit trail)



Prepare and plan

The pre-go-live phase is critical for ensuring a smooth migration to Amazon Connect. During this stage, teams finalize configurations, conduct thorough testing, and prepare users for the new platform through end-user training and documentation. Clear planning and proactive issue resolution are key to minimizing disruptions and achieving a successful launch.

Follow this checklist as a structured guide to completing key tasks in the pre-go-live phase. While these steps are essential for a successful migration, your specific use case or organization may require additional actions. Confirm and validate this list with your internal teams.

Infrastructure and security

Confirm that technical, security, and user configurations are correctly set up, from network settings and identity management to data encryption and agent workstation requirements.

- [ ] Confirm that your identity management setup is correctly configured and functional for all users
- [ ] Ensure that access to the Connect Customer instance URL works as expected
- [ ] Test network connectivity from all agent locations
- [ ] Verify that the firewall is correctly configured to allow Amazon Connect traffic
- [ ] Confirm that all service quotas support expected usage
- [ ] Test headset compatibility and audio quality
- [ ] Confirm that security profiles are created with appropriate combinations of permissions
- [ ] Add and configure all users, including agents, supervisors, and administrators
- [ ] Verify that data encryption is enabled for both data at rest and data in transit
- [ ] Set up call recordings in Amazon S3 with appropriate retention policies and access controls.
- [ ] Check compliance (PII, HIPAA, GDPR, etc.) handling procedures
- [ ] Confirm that agent workstations meet the minimum system requirements
- [ ] Validate the functionality of the agent desktop across all supported browsers
- [ ] Test AI agent responses against guardrails and escalation rules.
- [ ] Validate agentic self-service end-to-end (voice + chat channels).
- [ ] Test performance evaluations for AI agent interactions.
- [ ] Verify citation-backed answers and hallucination controls.

Agent and supervisor experience

Validate that agent and supervisor capabilities are functioning properly, including call controls, monitoring features, communications channels, and reporting tools.

- Verify call control features, including mute, hold, transfer, and conferencing
- Test agent statuses to confirm they function as expected (Available, Busy, Offline, etc.)
- Confirm After Contact Work (ACW) timer configurations are correctly set
- Confirm supervisors can monitor and barge-in on live calls
- Check agent whisper announcements for accuracy
- Test hold music and on-hold messages
- Test outbound calling
- Test any custom agent desktop functionality
- Test agent scheduling, adherence, and reporting
- Test supervisor alerts and reporting
- Test agent evaluation process
- Verify agent experience across all in-scope channels (email, chat, voice, etc.)

Customer experience and agentic self-service

Verify that contact flow components and routing logic are working as designed, from agentic voice flows and self-service interactions to queue management and error handling.

- Test all primary and alternate paths in each contact flow
- Verify proper error handling and timeout configurations
- Validate dynamic attributes and contact flow variables
- Design agentic self-service use cases, select AI agent capabilities
- Check agentic voice languages and persona align to brand
- Test queue transfer logic and callback functionality

Reporting and analytics

Configure reporting, analytics, and data management features to produce reliable data.

- Verify real-time metrics accuracy
- Test historical reporting functionality
- Verify that automated report scheduling is configured
- Check metric refresh rates and dashboard performance
- Test data export capabilities
- Track each interaction by generating complete contact trace records (CTRs) with all required data fields.
- Ensure that conversational analytics accurately transcribes customer interactions, properly redacts sensitive information, and performs sentiment analysis
- If using data streaming, verify proper configuration and data delivery to your analytics platform

Integration testing

Verify that all integrations and data exchanges are functioning as expected.

- Test integrations with backend or third-party systems
- Test screen pops, call logging, and data synchronization
- Test custom API integrations
- Validate data passing between systems
- Verify customer lookup functionality
- Validate that monitoring and alerting is working

Telephony and audio quality testing

Test all phone number configurations, capacity settings, and call routing assignments for both inbound and outbound communications.

- Ensure that the correct Direct Inward Dialing (DID) and toll-free numbers (TFN) are claimed or ported and accurately associated with the appropriate contact flows
- Test inbound and outbound calls, including calls to international locations if applicable
- Test automated outbound campaigns if applicable
- Verify caller id for each queue and phone number used
- Review and validate concurrent call capacity service quota

User training and communication

Ensure that agents are fully trained and stakeholders are aligned on deployment strategy, escalation procedures, and go-live readiness.

- Conduct end-user training sessions for agents and supervisors
- Provide quick reference guides for agents and supervisors
- Document all custom configurations and processes
- Perform a full end-to-end dry run of your cutover plan
- Evaluate and document all test outcomes
- Conduct AWS Well-Architected Review of contact center workload
- Complete Amazon Connect Operational Workshop to learn how to operate Amazon Connect workloads in production
- Secure approval from stakeholders for go-live readiness
- Communicate the migration plan to all key stakeholders
- Define escalation procedures
- Conduct a final go/no-go meeting with all key stakeholders to confirm go-live readiness



Cutover and verify

Go-live day marks the transition to Connect Customer, where the system goes live and starts handling production traffic. This phase focuses on carrying out the cutover plan, monitoring system performance, and documenting any initial concerns. Quick issue resolution and clear communication will help ensure a seamless launch experience.

Use this go-live day checklist to execute launch activities and maintain control during the transition. While each step represents a proven deployment practice, your specific implementation may require additional actions. Work closely with stakeholders to refine and validate the sequence.

- Execute your cutover plan
- Make sure that all agents and supervisors are online and ready to take calls or chats
- Verify AI agents are active and handling self-service interactions as designed.
- Monitor system performance metrics
- Track call volume patterns
- Check agent adherence and schedule compliance
- Review first batch of call recordings
- Monitor integration performance
- Check all automated reports generation
- Review any system alerts or warnings
- Document any immediate issues or concerns
- Monitor AI agent resolution rates and escalation patterns
- Review first batch of AI agent interactions for quality
- Verify agentic self-service containment rates



Monitor and optimize

The post-go-live phase focuses on ensuring the long-term success of Amazon Connect by continuing to monitor system performance through key metrics and user feedback. Teams address any emerging issues and fine-tune configurations based on real-world usage. Continuous improvement is key to maximizing the ability of Connect Customer to elevate CX.

Follow this checklist as a guide through the post-go-live phase. While each step is based on proven best practices for stabilizing and optimizing your new environment, there may be additional required tasks specific to your use case or organization. Be sure to verify and validate this list with your internal teams.

- Closely monitor system performance and key metrics after go-live
  - CSAT, NPS, FCR, and AHT
  - System uptime, error rates, and call routing efficiency
  - Latency benchmarks and real-time voice/data synchronization
  - First-interaction resolution rate
  - AI agent containment/deflection rate
  - Agentic self-service success rate
  - Performance evaluation scores for AI + human agents
- Collect feedback from agents and customers to identify any areas for improvement
- Conduct a post-implementation review to assess the success of the migration and identify lessons learned
- Complete any pending phone number ports and optimize the portfolio on TFNs and DID numbers
- Develop and implement a continuous improvement plan based on insights gained during the post-go-live period
- Review emerging contact themes and take action to enhance the customer experience



Optimize performance post-migration by asking the right questions

Both business and IT play an important role in your organization's ability to refine and enhance Amazon Connect performance over the long term. Routinely ask these critical questions to drive continuous improvement and enhanced customer satisfaction.

Business leaders

- Are CSAT and NPS improving?
- Are projected ROI and cost-saving targets being met?
- Are employees adopting the new system, and what additional support might they need?
- Does the solution support long-term scalability and strategic business goals?

IT leaders and developers

- Are key performance metrics like uptime, latency, and call quality within expected thresholds?
- Are compliance measures such as HIPAA and GDPR being met and documented?
- Are monitoring tools detecting issues proactively and escalating them appropriately?
- Are integrations with CRMs, AI agents, and other tools operating seamlessly under real-world conditions?

Together

- Are business and IT teams aligned on monitoring goals and priorities?
- Is there a plan for continuous optimization based on monitoring insights?
- Does the system allow for scalability and new feature adoption to future-proof operations?

Governance and optimization for AI

- Are AI agent guardrails and escalation thresholds calibrated based on real-world interactions?
- Are performance evaluations scoring 100% of AI + human interactions?
- Is the agentic CX designer being used to iterate on conversation designs based on analytics?



Ready to transform your customer experience?

Join the tens of thousands of organizations across industries that use Amazon Connect Customer to support 23 million customer interactions every day, with AI optimizing 12B+ minutes of interactions per year. Here are just a few of the companies using Amazon Connect Customer to deliver exceptional customer experiences, reduce costs, and drive first-interaction resolution with AI agents.

DOORDASH

DoorDash: Handles hundreds of thousands of daily calls using generative AI, boosting first-contact resolution by 12% and reducing transfers by 43% across consumers, merchants, and dashers.

Learn more →

Saks

Saks: Leverages conversational analytics for automated call summarization, saving 15 seconds per interaction on after-call work and condensing 20-minute calls into brief, actionable summaries.

Learn more →

NatWest

NatWest: With AI-powered self-service, launches 30 new customer journeys in just three weeks to streamline interactions, accelerate issue resolution, and improve customer sentiment scores by up to 22%.

Learn more →

NEOVANCE™

Neovance: Resolves 10,000+ clinical support interactions with zero Severity-1 incidents, scaling agentic self-service containment from 14% to over 30%.

Learn more →

one.nz

OneNZ: Reduces average call handling time by 15% and streamlines customer verification using AI-powered speech analytics and automated self-service routing across millions of mobile interactions.

Learn more →

Orange County UNITED WAY

Orange County United Way: Accelerates community support by automating call routing and donor verification, reducing wait times by 40% and connecting residents to vital human services faster.

Learn more →

[3] Amazon Connect Puts Generative AI to Work Improving End-to-End Customer Experiences, Amazon press release, December 1, 2024.