



Autonomous customer engagement refines CX and reduces costs

Use cases for agentic AI in contact centers

September 2025

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A smarter operating model for the future of CX

Contact centers create value — they are no longer cost sinks.



NTT DATA's agentic AI delivers up to 60% containment and major cost savings, while driving measurable gains in customer satisfaction and compliance.

Customers expect products and services to work flawlessly. They only contact companies when they want to use services, need answers or run into problems. Every interaction is now a moment of truth — and contact centers are where customer expectations are met or missed.

While GenAI helps create content, automate tasks and speed up workflows, agentic AI goes further by reasoning, deciding and acting autonomously in real time. In the contact center, this means resolving claims, disputes or service requests end-to-end while empowering human agents with real-time intelligence.

NTT DATA believes agentic AI is not just an upgrade, but a turning point: reducing the cost to serve, delivering faster resolution and elevating the role of human agents. With over 600,000 contact center seats deployed globally, we're helping enterprises reimagine their contact centers as true engines of customer experience and growth.

This guide explores industry use cases and demonstrates the value we can add to your contact center.

Industries



Healthcare insurance



Insurance



Banking and financial services



Retail

Healthcare insurance contact center



User journey

A member calls to check coverage for a specialist visit. They wait on hold, repeat their member ID multiple times and get vague answers.



Challenges / friction

- Long wait times, repetitive authentication
- Agents manually interpret complex insurance plan rules
- Poor net promoter score (NPS) due to inconsistent responses



Agentic solution

Mapped to six elements:

1. **Omnichannel service** with AI-driven routing preauthenticates members and directs them to the right channel (chat/voice).
2. **Agentic AI agents** (first line of defense) instantly provide personalized benefit breakdown.
3. **"One Agent" AI-powered desktop** shows the human agent history and unified policy information, and provides AI guidance in real time.
4. **Real-time voice-mining agent assist** provides a virtual coach that suggests compliant phrasing and next-best actions.
5. **SmartCX analytics** identify recurring benefit inquiries to optimize FAQs/self-service.
6. **AI retrieval-augmented generation (RAG) continuous improvement** updates knowledge from new benefit rules.





Outcomes

30%–35%

containment of claims and EOB queries via AI self-service

20%

average handle time (AHT) reduction for claim-related calls



20%–25%

improvement in first contact resolution (FCR), reducing repeat contacts

15%–20%

increase in self-help adoption through digital-first design

50%–60%

total cost of ownership (TCO) reduction across claims-related support



AI agents



Validation agent:

Secure member authentication



Knowledge agent:

Centralized standard operating procedures (SOPs)/plan/care knowledge



Eligibility and benefits agent:

Verifies member coverage



Track-and-trace agent:

Status of claims, preauthorization, EOB



Precertification agent:

Automates prior authorization intake



Enrollment agent:

Manages onboarding/enrollment



Summary agent:

Autosummarizes and hands off to human agents



Digital assistant:

Provider look-up, appointment scheduling

Insurance contact center

Insurance providers are burdened by high call volumes for claims and policy servicing, causing delays, increasing costs and introducing compliance risks.



User journey

Policyholder contacts insurer to check motor claim status, navigating IVR and waiting for an agent to look across systems.



Challenges / friction

- No real-time updates for customers
- Agents waste time toggling between claim systems
- Delays erode trust



Agentic solution

Mapped to six elements:

1. **Omnichannel routing** proactively directs customers to SMS, WhatsApp or app for status updates.
2. **AI agents** instantly retrieve a claim status or payout date as self-service.
3. **“One Agent” desktop** prefetches the claim file for the human agent, if the call is escalated.
4. **Real-time voice-mining assist** prompts the human agents to reassure customers and suggest next steps.
5. **SmartCX analytics** predicts potential escalations (such as late repair cycles) for proactive outreach.
6. **AI RAG continuous improvement** learns from settlement cycles to refine templates for customer communications.





Outcomes

20%–25%

FCR improvement through guided resolutions

15%–20%

uplift in customer satisfaction (CSAT) from faster, more consistent interactions

30%–35%

volume containment for claims and policy queries



20%

AHT reduction with AI-driven policy servicing

50%–60%

TCO reduction via balanced shoring and automation



AI agents



Validation agent:

Customer authentication



Insurance advisor:

Policy guidance and SOP support



Document retrieval agent:

Fetches policy packages



Correspondence agent:

Automates sending policy documents



Policy admin agent:

Update/edit policyholder details



New insurance quote agent:

Assists with new quote generation



Summary agent:

Call/chat summarization and handoff



Digital assistant:

Broker/agent look-up, claims support

Banking and financial services contact center

Banks struggle with high call volumes for simple account, card and loan queries, increasing costs, slowing resolution times and introducing compliance risks.



User journey

A customer notices suspicious transactions, call the bank, explains the issue and waits for manual case logging.



Challenges / friction

- High-stress situation
- Manual case intake prolongs resolution
- Handoffs between fraud, operations and customer service



Agentic solution

Mapped to six elements:

1. **Omnichannel routing** automatically prioritizes dispute calls to fast-track queues.
2. **AI agents** instantly log the case, validate fraud rules and issue provisional credit.
3. **“One Agent” desktop** provides human agents with all transaction history and AI-driven fraud insights.
4. **Real-time voice-mining assist** prompts the human agent with compliant disclosures, reducing errors.
5. **SmartCX analytics** identify trends in dispute categories for fraud prevention.
6. **AI RAG continuous improvement** learns from resolved cases to improve fraud rules.





Outcomes

20%–25%

FCR improvement with AI-driven guidance

15%–20%

CSAT uplift via personalization and faster service



30%–35%

containment of balance, loan and servicing queries

20%

AHT reduction for transactional calls

50%–60%

TCO reduction for retail banking operations



AI agents



Validation agent:

Customer authentication



Interactive agent:

Financial SOP and knowledge support



Track-and-trace agent:

Status of applications, cards, loans



Agent for lost and stolen cards:

Report/block/reissue cards



Dispute manager:

Manage fraud/ unauthorized charges



Account maintenance agent:

Profile updates and service requests



Summary agent:

Conversation summarization and handoff



Virtual relationship manager:

Branch look-up, loan applications, advisory

Retail contact center

Retailers face high call volumes from order status, returns and product queries, driving up costs and lowering customer satisfaction.



User journey

The customer uses chat or calls to initiate a return, provides the order ID and reason for the return, then waits days for refund processing.



Challenges / friction

- High volume of repetitive “where-is-my-refund” queries
- Manual verification and processing delays
- Refund delays, cart abandonment



Agentic solution

Mapped to six elements:

1. **Omnichannel routing** enables customers to start a return using voice, app or chat.
2. **AI agents** autogenerate return labels, validate eligibility and process instant refunds.
3. **“One Agent” desktop** provides consolidated logistics and the refund workflow for exceptions to human agents.
4. **Real-time voice-mining assist** guides human agents during escalations (for example, “offer store credit to retain loyalty”).
5. **SmartCX analytics** tracks refund cycle times to reduce operational friction.
6. **AI RAG continuous improvement** keeps return/refund policies updated in the knowledge base.





Outcomes

30%–35%

containment of order/return queries

20%

AHT reduction on transactional calls



20%–25%

FCR improvement with contextualized agent assist

15%–20%

CSAT uplift from proactive updates and personalization

50%–60%

TCO reduction in retail CX operations



AI agents



Validation agent:

Secure customer authentication



Knowledge agent:

Product/service SOPs



Product manager agent:

Availability, specs, promotions



Track-and-trace agent:

Orders, deliveries, returns, refunds



Billing and payments agent:

Payment methods, disputes, complaints



Loyalty and rewards agent:

Enrollments, redemptions, disputes



Summary agent:

Autosummarization and escalation handoff



Shopping assistant:

Cancel orders, recommendations, comparisons

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