AI in Customer Service: Chatbots, Intelligent Routing and Human Handover

9 – 13 August 2027
London - Central London four-star



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Technical depth: Practitioner · **Practical mode:** Lab

Introduction

Service teams are deploying chatbots and AI routing quickly, yet many customers still end up trapped in loops, repeating themselves to an agent or receiving confident but wrong answers. The cause is rarely the technology alone; it is weak use-case selection, poor conversation design and handover rules nobody owns. This course equips managers to design and govern AI in customer service, working hands on in a bot-building sandbox. Participants leave with an AI Service Automation Blueprint covering use cases, intents, routing, human handover, guardrails and performance measures.

Course Objectives

- Identify and prioritise the contact types suited to automation using contact driver and volume data
- Explain chatbot, generative AI and routing architecture and the standards that govern AI in a service operation
- Design intents, conversation flows and knowledge content in a bot-building tool
- Define routing and handover rules that pass customers to a human agent with full context
- Assess AI-specific risks and set quality and performance measures for automated service
- Produce an AI Service Automation Blueprint ready for approval and phased rollout

Target Audience

- Customer service and contact centre managers introducing automated channels
- Digital channel and self-service managers who own chatbot and virtual assistant performance
- Workforce and routing managers responsible for how contacts reach agents
- Customer experience and service design managers shaping journeys that combine bots and people
- Knowledge management managers maintaining the content that AI answers draw on
- Service quality and risk managers overseeing the conduct of automated interactions

Course Outline

Day 1: AI in the Service Operation: Landscape and Readiness

- Service Automation Spectrum: Rules-Based Bots, NLU Assistants and Generative AI Agents
- ISO/IEC 22989 AI Concepts and Terminology for Service Managers
- Contact Driver Analysis to Find Automation Candidates
- Automation Opportunity Scoring Matrix: Volume, Complexity and Risk
- AI Readiness Assessment: Data, Knowledge Base and Channel Maturity

Day 2: Frameworks, Standards and Solution Architecture

- Conversational AI Architecture: NLU, Dialogue Management and Retrieval-Augmented Generation
- Routing Models: Skills-Based, Intent-Based and Predictive Behavioural Routing
- ISO 18295-1 Contact Centre Requirements Applied to Automated Channels
- ISO/IEC 42001 AI Management System Controls for Service Deployments
- NIST AI RMF Govern, Map, Measure and Manage Functions

Day 3: Designing Bots, Routing and Handover

- Intent Taxonomy and Training Phrase Design in a Bot-Builder Sandbox
- Conversation Flow Design with Fallback, Clarification and Confirmation Patterns
- Knowledge Article Structuring for Retrieval-Augmented Answers
- Handover Trigger Rules: Confidence Thresholds, Sentiment Signals and Customer Request
- Warm Transfer Context Package and Agent Assist Screen Design

Day 4: Risk, Quality and Optimisation

- Generative AI Risk Review Using the NIST AI 600-1 Risk Categories
- AI Risk Register Aligned to ISO/IEC 23894 Guidance
- Bot Quality Assurance: Conversation Review Scorecards and Regression Test Scripts
- Containment, False Escalation and Customer Effort Score Dashboards
- Accessibility Checks Against WCAG 2.2 and Complaint Routing Under ISO 10002

Day 5: Lab Work and the AI Service Automation Blueprint

- Banking Enquiry Lab: Building and Testing a Handover-Ready Bot
- Utility Outage Surge Lab: Tuning Routing Rules for Peak Demand
- Use-Case Roadmap and Business Case Build for the Participant's Service
- AI Service Automation Blueprint Drafting
- Peer Challenge Panel and Blueprint Defence

Skills You Will Gain

- Conversation Design
- Intent Modelling
- Contact Routing Design
- Human-AI Handover Design
- AI Risk Assessment
- Bot Performance Analytics
- Knowledge Content Management
- Automation Business Case Development

Why Attend This Course

- Return to work with an AI Service Automation Blueprint for your own service, tested in a working sandbox
- Stop customers being trapped by a bot by setting clear rules for when and how people take over
- Challenge vendor claims with the right questions on accuracy, risk and measurable containment
- Compare automation experience with managers from other sectors and countries facing the same choices

Conclusion

AI improves customer service only when it resolves the right contacts and hands the rest to people without friction. This course moves from choosing automation candidates, through the architecture and standards behind chatbots and routing, to the design, risk and quality work that decides whether customers trust the result. The final day of this Core Concept course turns that practice into an AI Service Automation Blueprint that participants take back to guide a phased and governed rollout.