

REIMAGINING CUSTOMER SERVICE WITH AGENTIC AI INNOVATIONS



Abstract

Agentic Al is transforming customer service by providing intelligent, autonomous bots that assist customer service agents, empower supervisors, and help resolve customer issues faster. Through microagent orchestration and role-based design, these systems enhance productivity, optimize operations, and deliver proactive, context-aware support—ushering in a new era of scalable, efficient, and responsive service delivery. One needs to have a good understanding of how and why to transform with agentic Al.



Agentic Al systems are redefining customer service centers, gaining popularity across various organizations. While traditional rule-based chatbots provided basic 24/7 support, and NLP-based chatbots enhanced human-like

interactions, Al surpasses both in terms of accuracy and problem-solving. In terms of accuracy, rule-based chatbots are limited to programmed responses, causing inaccuracies when queries fall outside of predefined rules. In contrast,

agentic AI excels in tracking conversation history, understanding dialogue flow, and ensuring the responses remain contextually appropriate; this significantly boosts customer engagement.

Our approach towards AI transformation





Understand business and agentic AI goals



Map the transformation journey



Build agentic AI framework (Technical, Functional)



Build responsible Al framework

1. Understanding business and agentic Al goals

The scope of agentic AI is huge and can be overwhelming. Broadly speaking, agentic AI systems can be developed based on

the role of the user and the business requirements. A business requirement can be anything from cost optimization or customer experience to compliance adherence. The following is a summarized view.

Business Requirement

Compliance

Efficiency

mprove CX

- Incident summarization,
- Resolution summarization of similar tickets,
- User self-service adoption,
- Ticket resolution with or without agent-in-loop
- · Volume forecasting,
- Workforce/schedule optimization
- Prompt driven dashboard/ report generation
- Autonomous issue identification and resolution

- Quality audit & feedback,
- Personalized training tracking
- Proactive day planning
- Auto create action plan basis survey feedback
- Knowledge article refinement
- Predictive risk assessment
- Anomaly detection (spam call, fraud detection etc.)

- · Accent neutralization,
- Predictive user engagement
- · Digital nuggets for upsell
- Sentiment analysis
- Proactive agent feedback
- Personalized training for agents
- Self-service virtual agent
- Image to text ticket resolution
- Conversational catalogs

Agent Facing

Supervisor Facing

Customer Facing

Al Rol

Agentic Al use cases in customer service

1.1. Agent-facing agentic AI – assister

Agentic Al can help reduce agent workload and improve efficiency by acting as a personalized co-pilot, which can help in real-time accent/language neutralization, knowledge article summarization, predicting/scoring user behavior, and highlighting issues that

need attention. It can also generate incident and resolution summaries, resolution codes, etc. It can also develop training plans based on customer interactions.

For example, if a customer reports a Citrix application issue, the agent can trigger

an agentic Al prompt to connect with the server, analyze the data logs, and identify a potential resolution. With the agent's approval, the Al can then resolve the issue and update the ticket.

1.2. Supervisors facing agentic AI – evaluator

Agentic AI can help supervisors score interactions with full coverage, ensuring higher accuracy than random sampling. A key use case is predicting volume trends and planning optimal rosters, enabling operations to run with the right resource

size for better margins.

Imagine monitoring interaction inflow and assigning the right agent every time based on customer intent. Powered by LLMs, agentic Al can assign agents using historical data and quality scores. It also

refines knowledge articles with new steps or variations, analyzes thousands of feedback forms to uncover missed opportunities, and quickly generates ad hoc reports and dashboards.

1.3. Customer facing agentic AI – decision maker

Today, customers expect virtual agents to resolve issues, not just provide generic knowledge base responses. Al agents powered by LLMs can understand the full problem and deliver resolutions rather than simple troubleshooting.

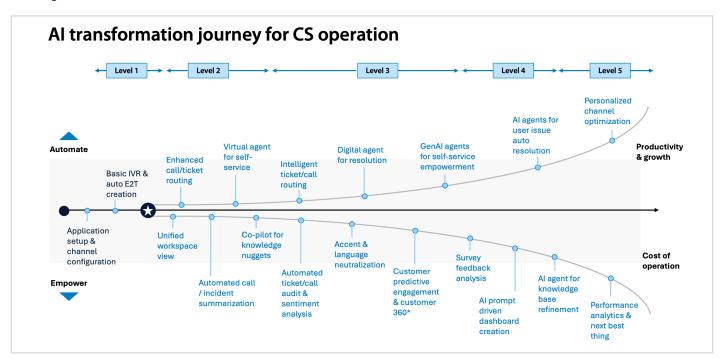
For instance, if a user reports an MS Teams

issue, the AI agent can fetch application details, analyze logs, and recommend fixes, triggering the self-heal tool on the user's device. Agentic AI thus understands context and integrates with third-party systems to execute resolutions, handling complex queries with accountability. As

another example, if a storm grounds a flight, a passenger asking about baggage allowance could receive not only an answer but also suggestions for rebooking, with the Al considering the broader situation.

2. Mapping a transformation journey

Once we have a good understanding of why we want to go with agentic AI, we can lay out the transformation roadmap with the help of the following.



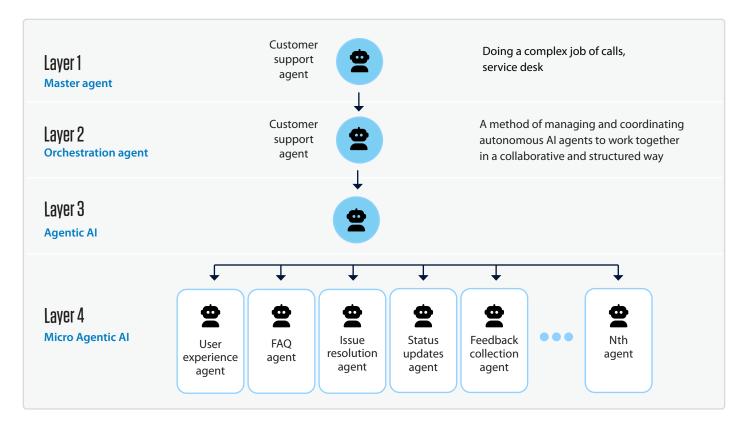
3. Building an agentic Al framework



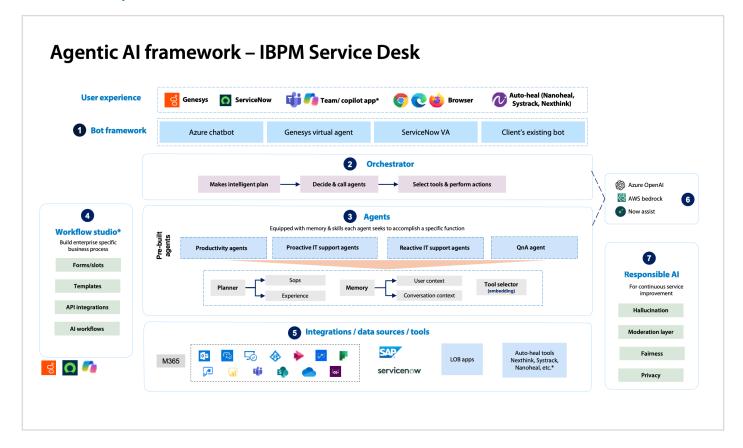
Once business goals are understood, we can define the technological framework. While automated self-service conversations are a common agentic Al use case, they aren't the only way it enhances customer service. Agentic Al leverages micro-agents—specialized

components built for specific tasks—which can work independently or be combined for more complex resolutions. Agentic Al implementation follows a layered model: Agentic Al bots may operate alone or in coordination with others through an orchestrator. A

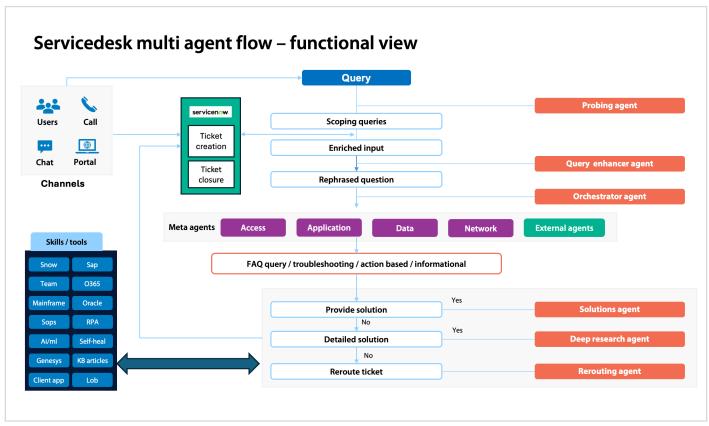
master agent can manage one or more orchestration agents, each invoking multiple Al bots. These bots, in turn, can call on several micro-bots to complete tasks. Here is a representation of the approach.



3.1. Technical representation



3.2. Functional Representation



4. Build a responsible AI framework

Responsible AI is another linchpin for successful Al implementation. It is key for continuous improvement, avoiding hallucination, ensuring fairness and privacy, and commitment in its approach. To execute AI responsibly, every

organization should have an AI policy or a responsible AI framework. Responsible Al is the practice of developing and deploying artificial intelligence systems in a way that is safe, ethical, trustworthy, and adherent to human values.

This policy should cover all ethical and regulatory considerations (ethical design, fairness, accountability, transparency, privacy, security, IP infringement, etc.) into Al systems throughout their lifecycle.

Conclusion

The promise of agentic AI is immense but implementing it requires a thoughtful approach. One needs to understand Business requirements, Business goals, technical framework and technical implementation for a successful transformation.

About the author



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Laxmi heads digital transformation for the customer service practice at Infosys BPM. With over 29 years of experience in the industry, she is responsible for transforming business with digital levers. She was awarded NASSCOM Women in Technology for her pivotal role in technology. A firm believer in advocating and maintaining a high quotient of both head and heart at work, Laxmi navigates her career with empathy and intelligence. Laxmi holds a master's in engineering from IIT Madras and bachelor's from JNTU Hyderabad.

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