

THE AEROSPACE COMPANY

Customer Service Agent

USER TRAINING GUIDE

Version 1.0 | November 2025

1. INTRODUCTION

Welcome to The Aerospace Company Customer Service Agent, an advanced multi-agent AI system designed to assist internal customer service representatives in efficiently handling customer inquiries.

This system uses specialized AI agents to route queries to the appropriate knowledge domain: Billing, Technical Support, or Policy & Compliance.

2. SYSTEM ARCHITECTURE

The system employs a supervisor-worker pattern with four core agents:

2.1 Supervisor Agent

- Powered by AWS Bedrock Claude 3 Haiku
- Analyzes queries and routes to appropriate worker agents
- Detects emergency situations and escalates
- Synthesizes responses from multiple agents

2.2 Policy & Compliance Agent

- Handles FAA/EASA regulations and company policies
- Uses Pure CAG (Cached Augmented Generation)
- Fast, consistent responses from static policy documents

2.3 Technical Support Agent

- Handles technical documentation and bug reports
- Uses Pure RAG (Retrieval Augmented Generation)
- Dynamic knowledge base retrieval

2.4 Billing Support Agent

- Handles invoices, pricing, and contracts
- Uses Hybrid RAG/CAG strategy
- Combines dynamic billing data with cached policy info

3. GETTING STARTED

The application has two main pages accessible via the top navigation:

3.1 Chat Page (Main Interface)

- Type customer queries in the input box at the bottom
- Press Enter to send (Shift+Enter for new line)
- AI responds in real-time with streaming
- View conversation history in the main area
- See which agents contributed to each response

3.2 Upload Documents Page

- Upload PDF, TXT, Markdown, or JSON files
- Maximum file size: 20 MB per file
- Choose target knowledge base or use Auto-Map
- Track upload progress in real-time

4. USING THE CHAT INTERFACE

4.1 Sending Messages

1. Type your query in the text box at the bottom
2. Press Enter to send (or click the Send button)
3. AI will process and respond in real-time
4. Character count displays below the input box

4.2 Understanding Responses

Each AI response includes:

- Main answer content
- Contributing Agent Calls: Which worker agents were invoked

- Contributing Model Calls: Which AI models processed the query
- Source citations: References to knowledge base documents

4.3 Token Count and Cost Tracking

The system tracks token usage and calculates costs in real-time for each chat session:

- Token count for this chat: Cumulative total of input and output tokens
- Breakdown shows input tokens (in:) and output tokens (out:)
- Total cost for this chat: Calculated cost in dollars
- Cost breakdown shows input cost and output cost separately
- Pricing based on Claude 3 Haiku (AWS Bedrock):
 - Input: \$0.00025 per 1,000 tokens
 - Output: \$0.00125 per 1,000 tokens
- Hover over the info icon (?) to see detailed breakdown
- Token count and cost reset to 0 when starting a new chat

4.4 Starting New Conversations

- Click the "New Chat" button (icon with lines and arrow)
- Conversation history persists across page navigation
- Token count and cost reset to 0 for new chat

4.5 Providing Feedback

After each AI response:

1. Rate with thumbs up or thumbs down
2. Optionally add detailed feedback comments
3. Click Submit to record your feedback

5. QUERY EXAMPLES

The system can handle single or multi-part queries:

5.1 Billing Queries

- "What is the highest valued invoice amount?"
- "Show me the billing policy for aerospace contracts"
- "What are the payment terms for enterprise customers?"

5.2 Technical Support Queries

- "How many high priority bugs were resolved this year?"
- "What is the troubleshooting guide for system failures?"
- "Show me the technical specifications for component X"

5.3 Policy & Compliance Queries

- "What is the SLA for high priority issues?"
- "What are the FAA regulations for aerospace components?"
- "What is the data archival policy?"

5.4 Multi-Domain Queries

The system can handle queries spanning multiple domains:

- "How many bugs were resolved and what is the SLA policy?"
- "How many critical priority bugs were resolved this year and what percentage were compliant to SLA levels per our technical support policy?"

The supervisor will call multiple agents and synthesize responses.

6. UPLOADING DOCUMENTS

6.1 Supported File Types

- PDF documents (.pdf)
- Text files (.txt)
- Markdown files (.md)
- JSON files (.json)

6.2 Upload Process

1. Navigate to "Upload Documents" page
2. Select knowledge base:
 - Billing Knowledge Base
 - Technical Knowledge Base
 - Policy Knowledge Base
 - Auto-Map (system determines best fit)
3. Drag and drop files or click to browse
4. Review file list and remove any unwanted files
5. Click "Upload" to begin processing
6. Monitor progress in real-time

7. BEST PRACTICES

7.1 Writing Effective Queries

- Be specific and clear in your questions
- Include relevant context (dates, IDs, categories)
- Break complex questions into parts if needed
- The system can handle multi-part queries automatically

7.2 Document Organization

- Upload documents to the correct knowledge base
- Use Auto-Map when unsure of classification
- Keep file names descriptive
- Ensure documents are up-to-date

7.3 Interpreting Results

- Check Contributing Agent Calls to understand response sources
- Review source citations for verification
- Multiple agents indicate multi-domain queries
- AI models shown help understand processing approach
- Monitor token count and cost to track usage

8. EMERGENCY ESCALATION

The system automatically detects safety-critical queries containing:

- Emergency keywords (emergency, critical, urgent, hazard)
- Safety concerns (accident, incident, failure)
- Aircraft issues (grounded, system failure, malfunction)

When detected, the system:

1. Immediately flags the query as high priority
2. Provides escalation contact information
3. Routes to emergency response team

9. TROUBLESHOOTING

Common Issues:

- Response taking too long: Check internet connection
- Upload failed: Verify file size (max 20 MB)
- Chat history lost: Clear browser cache and reload
- No response received: Refresh page and try again
- Token count not updating: Check that responses are completing
- Cost calculation incorrect: Verify pricing constants are current

10. SUPPORT & CONTACT

For technical support or questions:

Emergency Escalation: ski@aerospace-co.com

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