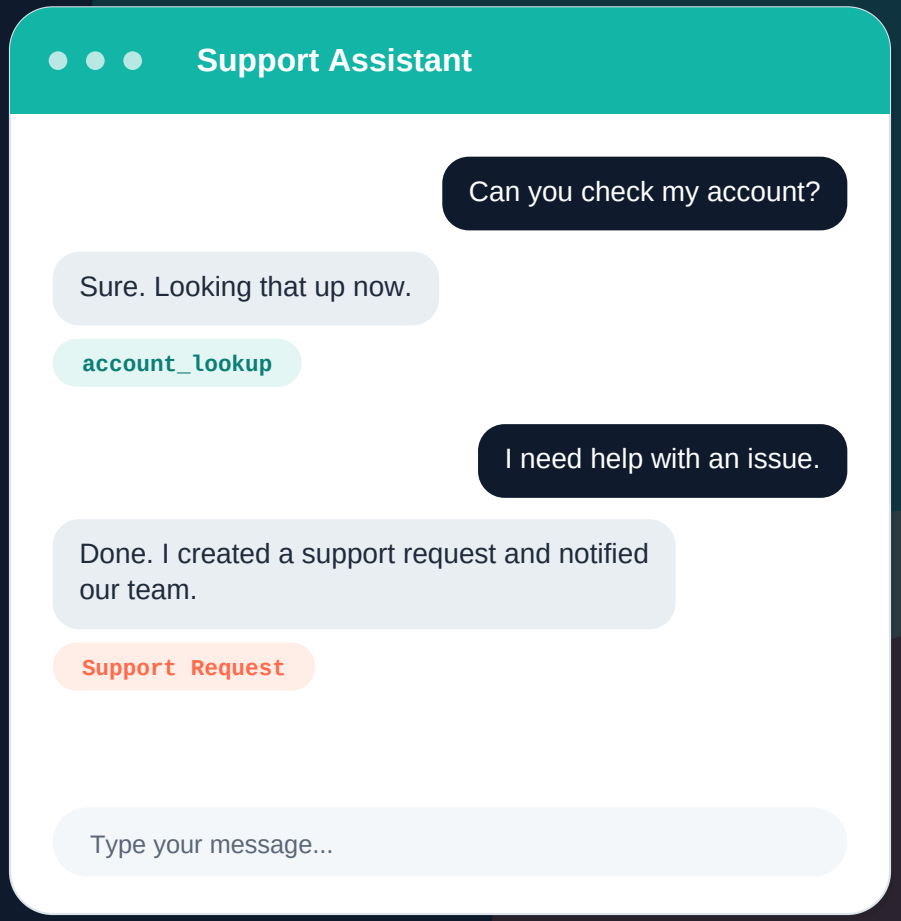
PORTFOLIO CASE STUDY | AI AUTOMATION

AI Agent Customer Support & Business Assistant

An AI-powered customer support system that answers questions, looks up business information and account details, and creates support requests through automated workflows.

n8n | Claude AI | Google Sheets | Outlook | Slack



Workflow built in n8n | Powered by an Anthropic Claude chat model

01 Project Overview

What the automation is, what it is for, and who it helps

PROJECT NAME

AI Agent Customer Support & Business Assistant

An AI-powered customer support system designed to handle customer inquiries, retrieve business information, answer frequently asked questions, look up account details, and create support requests through automated workflows.

MAIN OBJECTIVE

Reduce repetitive manual support tasks, give customers faster answers, and help businesses manage customer inquiries more efficiently.

WHO IT HELPS

- **eCommerce businesses**
  Product, shipping, and return questions
- **Coaching and consulting businesses**
  Program and coach questions
- **Online education platforms**
  Course and account questions
- **Service-based businesses**
  Service details, policies, and requests
- **SaaS companies**
  Plan, account, and help questions

6 data tools the agent can use

1 AI agent that decides what to do

2 team alert channels: Outlook and Slack

100% of chats saved to a log

02 The Business Pain

The problems businesses face without support automation

Slow customer responses

Staff spend too much time answering repetitive questions, so customers have to wait.

High support workload

Support teams answer the same questions again and again instead of solving harder issues.

Scattered information

Product catalogs, FAQs, policies, and customer records are kept in different places.

Unresolved customer concerns

Complaints and requests can be overlooked when nothing tracks them.

Hard to scale support

More customers can mean more staff, higher costs, and more workload.

Sound familiar?

When the same questions pile up, replies slow down and issues slip through. A support agent that works from your own data can take on that repeat work.

03 The Proposed Solution

An AI agent chatbot connected to your business data

CUSTOMER SAYS	AGENT DOES	RESULT
What products do you offer?	**Searches the product catalog** `products_catalog`	Shares matching products and details
What is your refund policy?	**Looks up business policies** `policy_lookup`	Gives the policy in plain words
Can you tell me about your coaching programs?	**Searches the coaches database** `coaches_lookup`	Describes coaches and programs
Can you check my account?	**Retrieves account information** `account_lookup`	Shows the customer their account info
I need help with an issue.	**Creates a support request** `Support Request`	Logs the issue and confirms it
I want to speak to someone.	**Creates a request and alerts the team** `Support Request + Outlook + Slack`	Your team gets an email and a Slack message

03 Basic Chatbot vs. AI Agent

Why an agentic chatbot can do more than a scripted one

Basic chatbot

- ✕ Follows a fixed script
- ✕ Only answers questions it was set up for
- ✕ Gets stuck when the wording changes
- ✕ Cannot read live business data
- ✕ Can only reply with text
- ✕ Sends most requests straight to staff

VS

AI agent chatbot

- ✓ Understands plain language
- ✓ Chooses the right tool for each question
- ✓ Reads live data from your sheets
- ✓ Remembers what was said in the chat
- ✓ Takes action: logs requests, alerts the team
- ✓ Saves every chat for review

IN ONE LINE

A tool-calling AI support agent with memory and human escalation.

Agentic means the bot decides what to do next, then does it.

04 Key Features & Capabilities

What the system can actually do

Product answers

Looks up the product catalog and shares names, details, and options.

Policy answers

Pulls refund, shipping, and service rules from your policy sheet.

Coach and program info

Matches questions to the coaches and programs in your database.

FAQ answers

Answers common questions from your approved FAQ list.

Account lookup

Retrieves account details so customers get personal answers.

Support requests

Creates a new request row when a customer needs help.

Human handoff alerts

New requests alert your team by email (Outlook) and Slack.

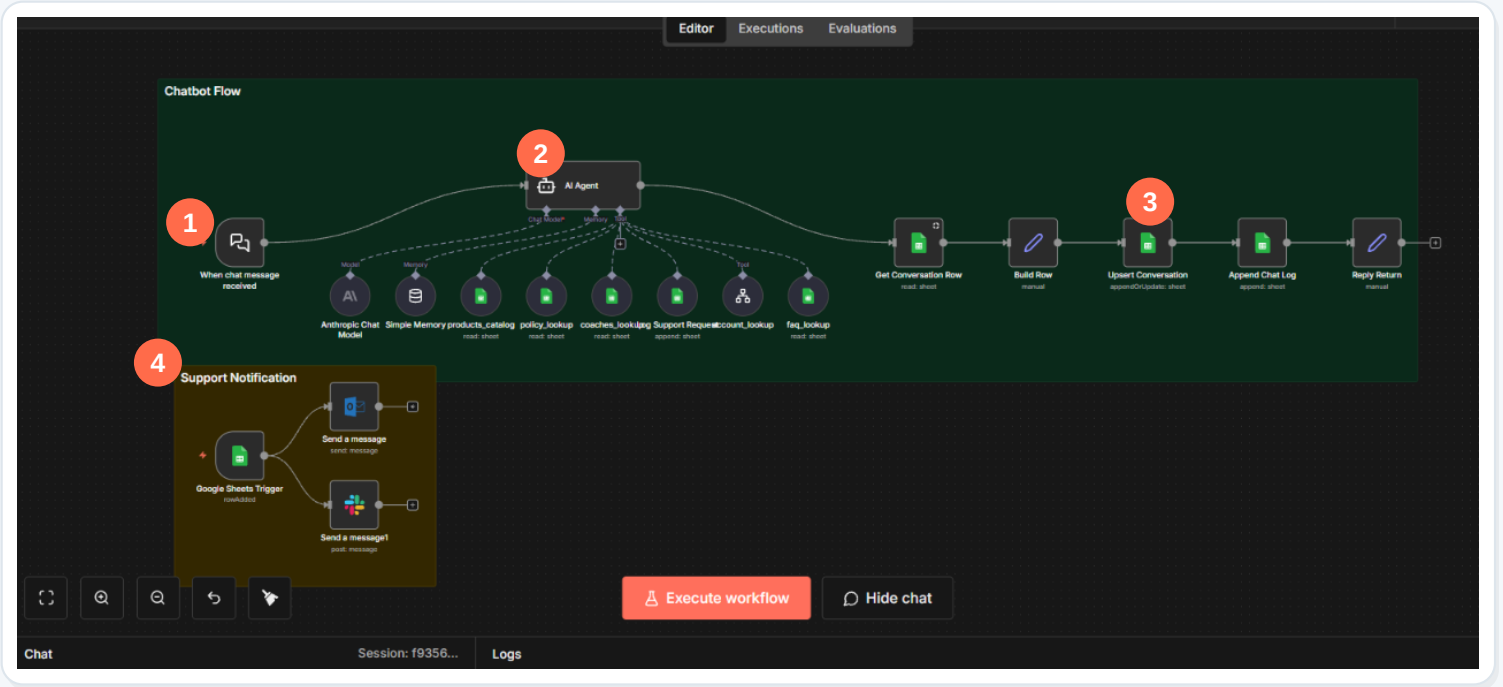
Memory and chat log

Remembers the chat and saves every conversation for review.

Every answer comes from your own data, so the agent stays on topic and on brand.

05 Workflow Architecture

The real n8n workflow and how its parts connect



Real workflow in n8n. Green group: Chatbot Flow. Yellow group: Support Notification.

SIMPLE VIEW

Customer message → **Chat** trigger → **AI Agent** model + tools → **Reply +** chat log → **Team** alert

1 Chat trigger

A customer sends a message and the workflow starts.

2 AI Agent

The Anthropic chat model thinks, Simple Memory recalls the chat, and six Google Sheets tools look things up or log a request.

3 Save and reply

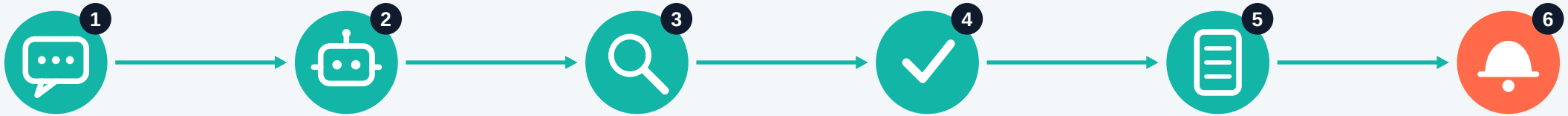
Get Conversation Row, Build Row, Upsert Conversation, and Append Chat Log save the chat. Reply Return sends the answer.

4 Support notification

A Google Sheets trigger fires when a new request row is added. It sends an Outlook email and a Slack message.

06 Customer Journey

How it works, from first question to resolution



Customer asks
Types a question in the chat window.

Agent reads it
Works out what the customer needs.

Picks a tool
Chooses the right sheet to check, or opens a request.

Replies
Writes a clear answer in plain words.

Saves the chat
Updates the conversation row and chat log.

Team steps in
If needed, Outlook and Slack alerts go out.

Example conversation

Hi, I want a refund for my last order.

I'm sorry to hear that. I checked our refund policy and can walk you through it. Want me to open a support request so our team can review your order?

Yes, please.

Done. Your request is logged and our team has been notified. They will follow up by email.

BEHIND THE SCENES

1. `policy_lookup` reads the refund policy from Google Sheets.
2. `Support Request` adds a new row with the customer's issue.
3. The Google Sheets trigger sees the new row and fires.
4. Outlook sends an email and Slack posts a message to the team.
5. The full chat is saved to the conversation log.

07 Business Benefits & Expected Outcomes

The value, the time saved, and the operational gains

Faster replies

Customers get an answer in seconds, any time the workflow is running.

Less repeat work

Staff stop typing the same answers and focus on harder cases.

Fewer missed requests

Every issue becomes a logged request with a team alert.

Consistent answers

Replies come from approved policies, FAQs, and catalogs.

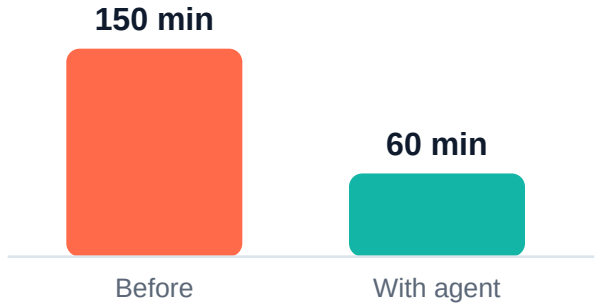
Easier to grow

Handle more chats without adding staff at the same pace.

Clear records

Every conversation is saved, so you can review it and improve the agent.

Example time savings



50 repeat questions a day x 3 minutes = 150 minutes. If the agent handles 60% of them, 60 minutes remain. That frees about **90 minutes a day**, or 7.5 hours a week.

Example only. Real results depend on your chat volume and the types of questions your customers ask.

08 Technology Stack & Implementation

The tools, what you need, and how it can be customized

TECHNOLOGY STACK

n8n	Workflow engine that connects every step
Anthropic Claude	Chat model that reads and writes the replies
Simple Memory	Keeps the context of the current chat
Google Sheets	Data source for tools, plus conversation and request logs
Outlook	Sends an email alert when a request is created
Slack	Posts an alert to your team channel

WHAT YOU NEED

- n8n account (cloud or self-hosted)
- Anthropic API key
- Google account with your sheets
- Outlook and Slack access for alerts
- Business data: products, policies, FAQs, coaches, accounts

CUSTOMIZATION IDEAS

- Swap Google Sheets for Airtable, a CRM, or a store platform
- Use Gmail or Teams instead of Outlook
- Add website, WhatsApp, or Messenger channels
- Match your brand voice and rules
- Add booking, payments, or more languages

How it gets built

1 Discover

Map your top questions, policies, and data sources.

2 Prepare data

Set up clean sheets for products, FAQs, and accounts.

3 Build and test

Connect the tools and test real chat scenarios.

4 Launch and tune

Go live, read the chat logs, and improve answers.

Ready to answer customers faster?

Start with your most common questions, connect the data you already have, and let an AI agent handle the repeat work while your team handles the rest.

Find your top questions

Connect your data

Test, launch, improve

Built with n8n, Anthropic Claude, Google Sheets, Outlook, and Slack.