n8n Workflow Report: Order Automation

1. Objective

This workflow automates the reception and processing of orders from Telegram, using AI to summarize customer information and then record the data in Google Sheets.

It enables capturing name, address, and order in a structured way, automating responses to customers, and automatically logging orders into a spreadsheet.

Telegram was used as the test channel, but this logic can be applied to any platform — the trigger fires as soon as a customer message arrives.

2. Node Description

Telegram Trigger

Function: Detects new messages from customers in Telegram. Output: Sends the message content to the next node (AI Agent).

API Connection: A bot is created in Telegram using BotFather, which generates a unique token. This token is entered in n8n to authenticate the Telegram Trigger node. The node uses the Telegram API to listen for incoming messages.

AI Agent

Function: Processes the customer's text using AI (via a predefined prompt) to generate a structured order summary.

Requires an OpenAI API Key. The node sends the text to OpenAI, which returns the AI response.

Why pay: Avoids errors, provides token control, enables advanced models like GPT-4.1-mini, and ensures workflow stability.

Cost example: 500 interactions/day $\rightarrow$ ~9M tokens/month $\rightarrow$ ~$13.50/month.

Memory

In testing, a simple memory store suffices. In production, a database (e.g., PostgreSQL) is recommended for robust, persistent, and scalable context management.

Prompt Configuration

A fixed prompt defines how the AI structures the information, ensuring consistent output for Google Sheets integration.

Send a Text Message

Sends the AI Agent's response back to the customer in real time, using dynamic Chat IDs from Telegram Trigger.

Simple Memory

Maintains conversation context. Supports multi-step interactions. Buffer configuration allows remembering the last N messages (e.g., 5).

OpenAI Chat Model

Provides natural language understanding and generation using GPT-4.1-mini. Core intelligence of the workflow.

Function – JSON Cleaning

Uses regex to extract Name, Address, and Order from AI's response, returning clean JSON for Sheets.

Append Row in Sheet

Logs structured data into Google Sheets automatically. Maps JSON fields to sheet columns.

3. Workflow Connections

1. Telegram Trigger → AI Agent

2. AI Agent → Send Message (customer response)

3. AI Agent → Function → Append Row in Sheet (data storage)

4. OpenAI Chat Model + Simple Memory → AI Agent

4. Key Notes

The AI Agent's prompt guarantees consistent structured summaries. The Function node is critical for converting text into structured JSON. Scalable to other platforms by replacing the trigger.

5. Cost Breakdown

n8n Cloud: ~$20–$30/month. Self-Hosted: ~$5/month for a VPS.

OpenAI GPT-4.1-mini: ~$13.50/month for ~9M tokens.

Google Sheets: Free (or $6–$12 with Workspace).

Telegram Bot: Free.

Total: ~$18 (Self-Hosted) or ~$35–$45 (Cloud).

Final Reflection

For less than $50/month, this workflow fully automates customer support and order logging.

It processes messages in seconds, eliminates human errors, and scales to hundreds of simultaneous conversations.

Compared to hiring employees, this provides a professional, structured, and efficient customer experience at a fraction of the cost.