

Who we are

For more than 30 years, dunnhumby has been helping **retailers** and **brands** grow by making **better decisions** – decisions that **are powered by data**, **enhanced through science**, and always **customer-first**. Today, through a combination of **AI-powered software** and **expert consultancy**, we help our clients **turn complexity into action**. Across **loyalty**, **media**, **pricing**, and more, we connect the entire **retail ecosystem** – empowering **deeper collaboration**, **better customer experiences**, and **value** that lasts.

Proven globally, trusted locally



Our Business

1,000+
clients

2.5k
employees

35
years

30
countries

Every week:



500mn+
records processed



\$1.24tn+
sales analysed



1.3bn+
customer insights

Sentiment Analysis Suite

Turning customer voice into action at scale

Powered by LLMs

May 2026

The Story

1 The problem we are solving

2 Why is it important?

3 What we built and why is it different?

4 How it creates impact





Objective

Enable data-driven decisions by providing real-time, actionable insights into customer sentiment across digital channels

Build an always-on capability to listen to customer voice across channels and convert unstructured feedback into actionable, decision-ready insights.

- Multi-source sentiment at scale
- Nuanced understanding (tone, sarcasm, themes)
- Clear summaries and trends for fast decisions

The Opportunity

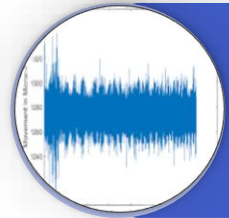
Unlocking the power of customer voice at scale



Customers generate massive volumes of feedback across channels



Most of this data remains unstructured and underused



Signals get buried in noise



Opportunity

Understand sentiment in real time

Identify emerging trends early

Drive faster, data backed decisions



Why this matters?

Customer sentiment directly impacts

- Sales & Conversion
- Brand perception shifts
- Product success / failure
- Campaign performance
- Retention & Loyalty

Today

- Insights are delayed or manual
- Hard to connect feedback to action

Opportunity to institutionalize customer listening

Our Solution: Sentiment Analysis Suite

An end to end platform to decode customer sentiment across data sources

Ingest multi-sourced data from reviews, posts, blogs, news etc.



Converts unstructured text into structured insights to provide:

- Sentiment Classification
- Theme / Topic extraction
- Trends tracking

Deliver insights that are scalable, timely & actionable



- From Reactive firefighting to Proactive action
- From gut feel to data driven decisions
- From fragmented insights to unified intelligence





What makes it powerful?



Where Does this create value?



Product Improvement

- Identify recurring complaints
- Prioritize fixes based on impacts

Campaign Effectiveness

- Track sentiment before & after campaigns
- Understand customer reaction instantly

Competitive Benchmarking

- Compare sentiments vs competitors
- Identify white space opportunity

Trends Analysis

- Track sentiments over a period of time
- Early signal detection

Scientific and Technical Innovations: Then vs Now

Data Type

Methodology

Multi theme detection

Narrative understanding

Insight generation

Report writing

Explainability

LLMs 5 years ago

Short texts (tweets, reviews)

Rule based or classical ML

Very limited

Not possible

Raw scores & basic charts

Manual analyst effort

Feature weights / coefficients

LLMs today

Social posts, news, mixed formats

Context aware LLM inference

Multiple sentiments from one post

Summarization + narrative synthesis

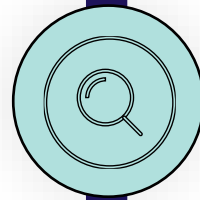
Understanding “Why” behind sentiment

Generative explanatory insights

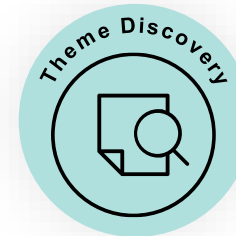
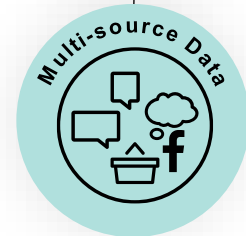
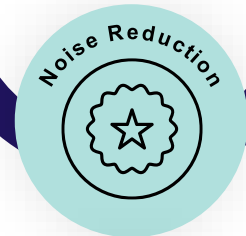
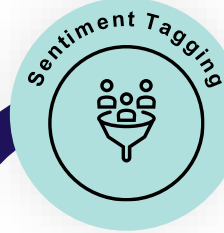
Stakeholder friendly explanations

End-End Workflow Overview

- 1 Submit Requirement
- 2 Pull relevant posts, blogs, reviews and news articles
- 3 Preprocessing & noise reduction
- 4 Sentiment tagging (LLM)
- 5 Theme discovery & insight generation
- 6 Trend analysis across themes
- 7 Combine signals from all sources into unified narrative
- 8 Final report stitching
- 9 Web app + AI assistant for exploration



Submit Requirement – Area of interest like CPG, Brand, Retailer or any specific product



Data Acquisition, Preprocessing and Cleaning

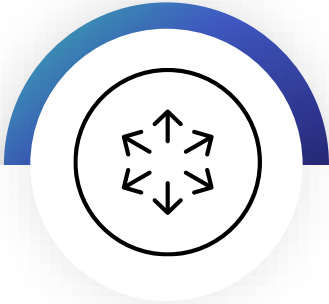


Data Sources



Query Optimisation

- Avoid false positives (e.g., Red Bull drink vs Red Bull F1 team or extreme sports)
- Build optimized Boolean queries to filter noise
- Country-level or brand-level constraints



Cleaning Pipelines

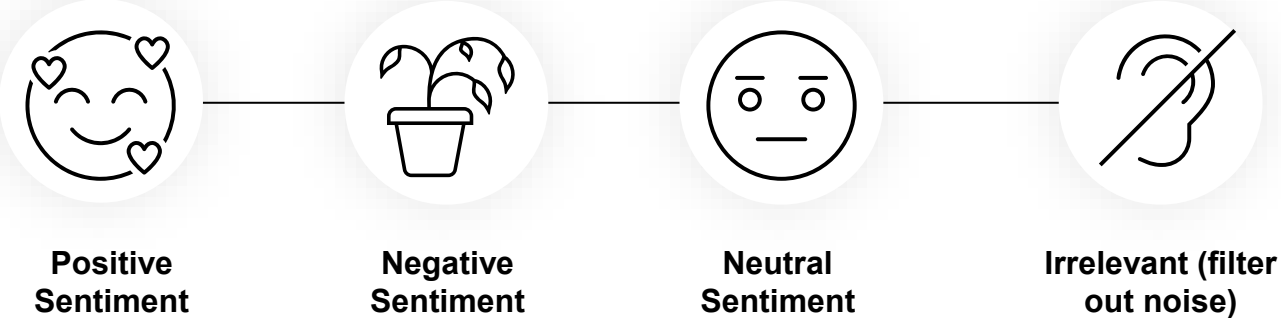
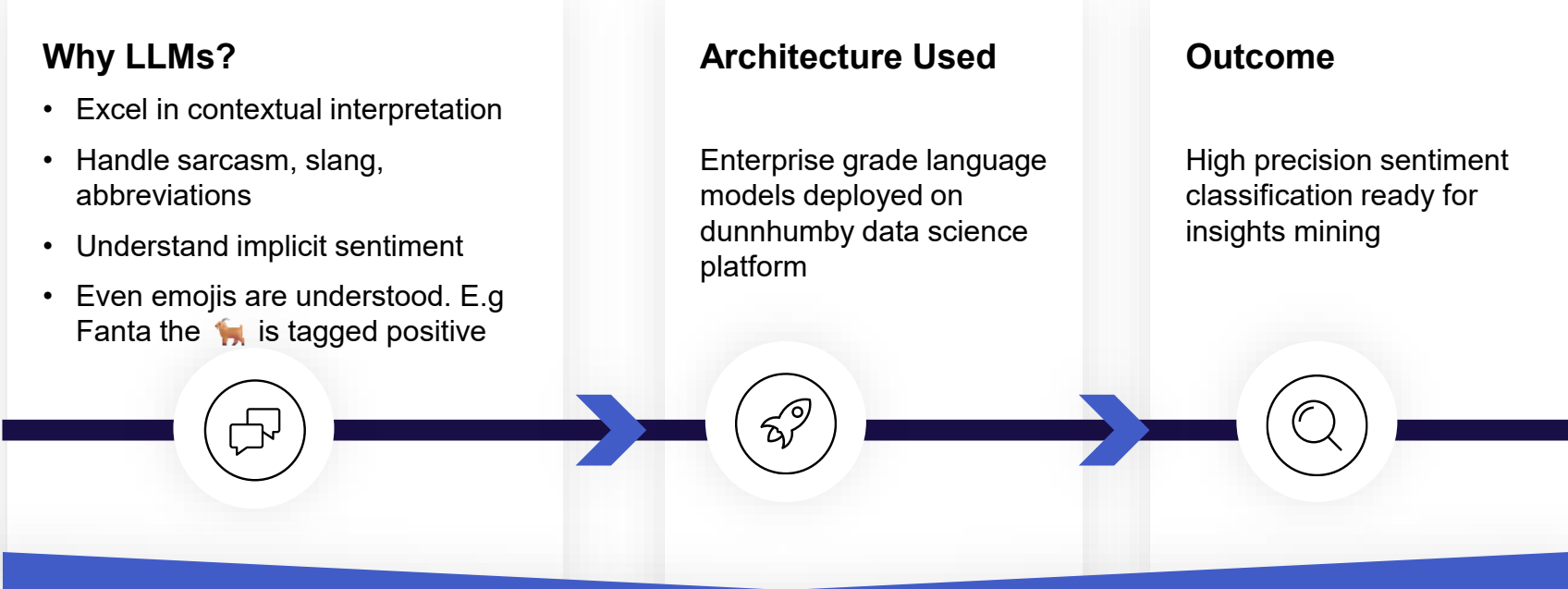
- Normalize casing, remove emojis/symbols
- URL, hashtag, and handle removal
- Remove duplicates & spam



Outcome

- High relevance corpus for next steps
- Clean data → higher LLM accuracy → stronger downstream insights.

LLM Based sentiment tagging



Technical Approach to Insight generation

Prompt chained LLM generation

Schema guided output (JSON enforcement)

Few shot + chain of thought prompting

Token optimization & context management

Hallucination mitigation & safety layers

Topic clustering & signal detection

LLM generated report section

Exec Summary

Macro sentiment + major narratives

Sentiment Themes

Clusters of recurring topics

Emerging signals

Weak signals, early warnings

Top gainers

Positive drivers

Key pain points

Negative drivers



Web Application + AI Assistant = Client Value

Transforms a static sentiment report into a self-serve, conversational insight experience for faster and more confident decision-making.

Current prototype features

- Interactive Web App
- Embedded RAG-Based AI Assistant
- Interactive Sentiment Diagnostics

dh Prompt

Context: You are a **Senior Retail Brand Strategist and Customer Experience Analyst**.

Task: Analyze the following posts/reviews about the xyz brand which are tagged as negative sentiment. Identify recurring themes and generate a complete, detailed sentiment report focused on shopper perception of the brand.

Requirements:

- Give evidence in support of your conclusion (example posts).
- Do NOT invent data.
- Output JSON only (no extra text).
- Write a comprehensive report in multiple relevant sections and paragraphs.
- Use bullet points.

Section Required:

- Sentiment Overview
- Underperforming areas/pain points
- Key Themes driving negative sentiments
- Role of Price, Convenience, and Store Operations:

Insight Generation: Technical Approach



Sentiment Analysis Dashboard

Overall Sentiment



Example Review

“ I’m not a fan of the new packaging design. It’s difficult to open, and the material feels cheaper compared to before.

Sentiment by Theme



Key Drivers of Negative Sentiment



AI Assistant

What are the key drivers behind the overall positive and negative sentiment for this brand?



What are the key drivers behind the overall positive and negative sentiment for this brand?

Evaluation and Checks



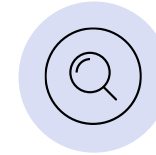
Data Quality

- Relevance Precision
- Noise Reduction
- Coverage Completeness



Sentiment Tagging

- Human-LLM agreement Rate
- Confusion Matrix Analysis
- Edge Case Accuracy



Theme Quality

- Semantic Coherence
- Theme Uniqueness
- Stability Over Time



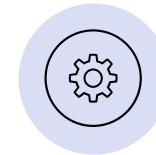
Report Quality

- Insight Accuracy Check
- Deduplication Effectiveness
- Narrative Coherence



Trend Evaluation

- Spike validity Check
- Theme Importance Ranking



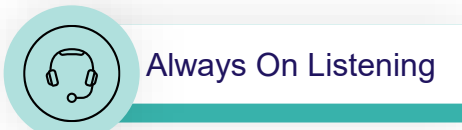
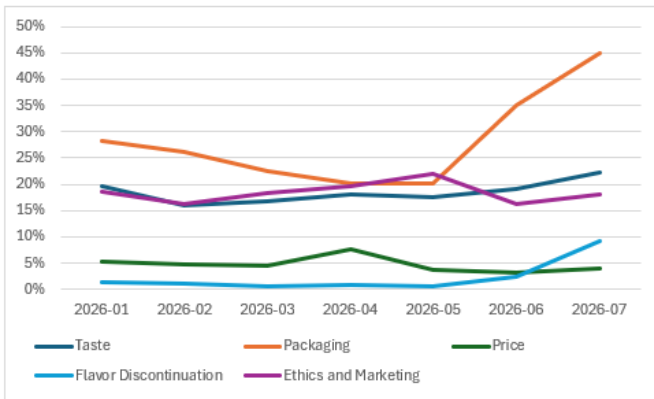
Responsible AI & Compliance

- Approved data sources
- Enforcing strict access controls
- Adherence to enterprise security and governance standards.

From customer signal to business action

How combining customer voice with sales data creates sharper decisions

Signal



Customer Sentiments have shifted

Category: Energy Drinks
Market: UK
Time Frame: 6 weeks

Negative sentiment increased sharply over the last few days

Spike is not campaign driven

Most of the negative sentiments are concentrated around packaging

Insights

- Can dents easily
- Packaging feels flimsy
- Posts and blogs show frustration (not sarcasm or humour)
- Mentions linked to on-the-go consumption moments



The problem still exists

- Does this impact sales?
- Is the impact everywhere or just specific stores?
- Which products affected most?
- Is this a temporary decline or a real demand change?



From customer signal to business action

Joining up the Insights



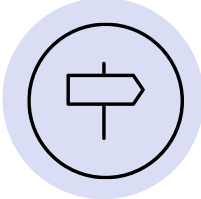
- Negative sentiment spike in North London convenience stores
- 8% drop in sales for 250 ml SKU
- Root cause isolated to a supplier change in a specific region

Action Taken



- Issue flagged to product and packaging teams
- Packaging fix prioritized over lower impact issues
- Messaging updated to re-assure customers

What was the impact



- Negative sentiment declined within weeks
- Complaints around packaging dropped
- Product sentiment back to baseline
- Sales recovered in 6 weeks
- Avoided unnecessary nation-wide campaign



When you listen to your customers ... They tell you exactly how to win





Thank you.

dunnhumby