**Product Requirement Document: Monzo User Sentiment & Feature Insights Dashboard**

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**1. Executive Summary**

In the dynamic UK challenger banking market, Monzo's success hinges on its ability to deeply understand and respond to customer needs. Transaction data reveals user behavior, but app store reviews—spanning a decade of trust, frustration, and expectations—offer an unfiltered lens into customer sentiment, including critical user experience (UX) insights. This document outlines the creation of a User Sentiment & Feature Insights Dashboard in Power BI, transforming approximately 33,500 app store reviews (2015–2025) into a strategic asset.

The dashboard will empower multiple audiences: Product & Engineering teams, by providing data-driven insights for roadmap prioritization and release quality assurance; HR & Leadership, by aligning training and cultural initiatives with customer expectations; and UX researchers, by delivering actionable UX insights to optimize usability, navigation, performance, and accessibility. Far from a mere data exercise, this project embeds customer-centricity into Monzo’s operational core, ensuring the bank remains a leader in user experience against competitors like Revolut and Starling.<grok:render card\_id="a5bd94" card\_type="citation\_card" type="render\_inline\_citation"> 0</grok:render><grok:render card\_id="cd91ec" card\_type="citation\_card" type="render\_inline\_citation"> 6</grok:render>

**2. Project Vision & Strategic Motivation**

Monzo’s competitive edge lies in delivering exceptional customer experiences. Public app store reviews capture a longitudinal narrative of user perception, spanning technical reliability (e.g., bugs, performance), feature adoption (e.g., Pots, Flex), human interactions (e.g., support quality), and UX factors like usability and emotional satisfaction. By systematically analyzing this feedback, Monzo can maintain its differentiation in a crowded market.

The User Sentiment & Feature Insights Dashboard will act as a unified lens for this narrative, delivering value across the organization. For Product & Engineering, it transforms subjective feedback into actionable metrics. For HR & People Operations, it highlights service and empathy gaps. For UX researchers, it provides a dedicated interface to uncover design friction points, validate interface improvements, and prioritize user-centric enhancements, ensuring Monzo’s app remains intuitive and delightful.<grok:render card\_id="47faf7" card\_type="citation\_card" type="render\_inline\_citation"> 9</grok:render>

**3. Project Objectives**

The project is designed to deliver a robust, actionable, and intuitive insight engine through the following objectives:

1. **Create a Unified Data Foundation**: Integrate and standardize 33,500+ app store reviews from Apple App Store (9,600 reviews) and Google Play Store (23,900 reviews) into a single, reliable dataset, enriched with platform, app version, and UX-specific metadata.
2. **Analyze Customer Sentiment and Themes**: Apply Natural Language Processing (NLP) to score review sentiment (Positive, Neutral, Negative) and tag feedback with Monzo-specific themes (e.g., Pots, Flex, Onboarding, Support) and UX categories (e.g., Usability, Navigation, Accessibility).
3. **Develop an Interactive Dashboard**: Build a five-page Power BI dashboard that enables stakeholders to explore trends, compare platforms, dive into thematic and UX insights, and derive actionable recommendations.
4. **Provide Strategic Recommendations**: Synthesize findings into a concise, one-page executive report with clear, data-driven business recommendations, including UX-specific actions.<grok:render card\_id="3f7bbd" card\_type="citation\_card" type="render\_inline\_citation"> 23</grok:render><grok:render card\_id="dce0cd" card\_type="citation\_card" type="render\_inline\_citation"> 27</grok:render>

**4. Scope & Boundaries**

**In Scope**

* Historical analysis of approximately 33,500 app store reviews (2015–2025).
* Data cleaning, standardization, and enrichment with sentiment, thematic, and UX-specific tags.
* Development of a five-page interactive Power BI dashboard, including a dedicated UX-focused page.
* Delivery of a one-page executive insights report with strategic recommendations, including UX priorities.
* Integration with Google BigQuery for scalable data storage and querying.

**Out of Scope (Future Enhancements)**

* Predictive analytics, such as churn prediction models.
* Real-time review streaming or integration with internal systems like Jira or CRM.
* Direct linkage to individual customer records.

**5. User Journey: From Raw Data to Actionable Insights**

The project follows a structured workflow to transform raw reviews into a strategic tool:

**Phase 1: Data Acquisition and Unification**  
Reviews will be sourced from AppFollow exports, merging iOS and Android schemas into a single dataset, Monzo\_Reviews\_Master.csv. A platform column will be added to enable comparative analysis between iOS and Android.

**Phase 2: Data Refinement and Enrichment**  
Using Python and Pandas, the dataset will be cleansed to standardize date formats (UTC), ensure ratings align on a 1–5 scale, and extract new features like review length (in words). App version numbers will be normalized to a major.minor format for consistent trend analysis. New UX-specific metrics, such as UX sentiment scores and pain point frequency, will be derived. The processed dataset will be converted to Parquet format and uploaded to Google BigQuery for centralized storage.<grok:render card\_id="aa80fc" card\_type="citation\_card" type="render\_inline\_citation"> 10</grok:render><grok:render card\_id="e5f10f" card\_type="citation\_card" type="render\_inline\_citation"> 12</grok:render>

**Phase 3: Semantic Analysis and Theme Identification**  
NLP techniques will be applied to enrich the dataset:

* **Sentiment Scoring**: Using VADER, reviews will be classified as Positive, Neutral, or Negative, with cross-validation against AppFollow’s proprietary sentiment scores to ensure accuracy.
* **Theme Tagging**: A combination of keyword extraction (YAKE/KeyBERT) and a predefined Monzo-specific taxonomy will tag reviews with feature-related topics (e.g., Pots, Flex, Support) and UX categories (e.g., Usability, Navigation, Performance, Accessibility, Emotional Response). A multi-label tagging system will allow reviews to carry both feature and UX tags for intersectional analysis.

**Phase 4: Data Modeling for BI**  
The refined dataset will be structured as a fact table in BigQuery, optimized for Power BI, incorporating raw fields and new analytical dimensions like sentiment labels, feature themes, and UX categories. Additional fields for UX metrics (e.g., usability sentiment score, pain point frequency) will be included. BigQuery views will be created for pre-aggregated queries (e.g., average UX sentiment by version) to enhance performance.<grok:render card\_id="8fff3e" card\_type="citation\_card" type="render\_inline\_citation"> 18</grok:render>

**Phase 5: Dashboard Development in Power BI**  
Power BI will connect to BigQuery via the native connector in Import Mode for optimal performance. The dashboard will guide users from high-level insights to granular details across five pages:

* **Page 1: Executive Overview** – A snapshot of overall sentiment trends, key performance indicators, top user praises or complaints, and a UX Health Score summarizing sentiment across UX categories.
* **Page 2: Platform & Version Analysis** – A comparison of iOS and Android performance, with sentiment trends tied to specific app releases, including UX-specific filters (e.g., navigation issues by platform).
* **Page 3: Thematic Deep Dive** – An exploration of feature-specific feedback, highlighting which themes dominate and how sentiment varies, with cross-referencing to UX tags.
* **Page 4: HR & Customer Experience Lens** – A curated view of service-related feedback, identifying opportunities for empathy training and cultural alignment, augmented with UX emotional response insights.
* **Page 5: UX Research Dashboard** – A dedicated page for UX researchers, featuring:
  + **UX Health Metrics**: Visualizations of sentiment scores for usability, navigation, performance, accessibility, and emotional response, with trend lines over time.
  + **Pain Point Analysis**: A heatmap or bar chart showing the frequency and severity of UX issues (e.g., percentage of reviews citing "confusing layout" with 1-2 star ratings).
  + **Keyword Clusters**: Word clouds or ranked lists of UX-related terms (e.g., "intuitive," "slow," "clunky") to highlight dominant feedback.
  + **Actionable Insights Panel**: A prioritized list of UX friction points (e.g., "20% of 2025 reviews mention navigation issues in Onboarding") with suggested design experiments (e.g., A/B test simplified menus).
  + **Intersectional Filters**: Slicers to combine UX categories with features, platforms, or versions (e.g., "Usability issues for Pots on Android v4.2").
  + **NPS Proxy**: A breakdown of Promoters, Passives, and Detractors based on UX sentiment to estimate loyalty impact.<grok:render card\_id="37c98c" card\_type="citation\_card" type="render\_inline\_citation"> 1</grok:render><grok:render card\_id="89cca9" card\_type="citation\_card" type="render\_inline\_citation"> 5</grok:render>

**Phase 6: Strategic Synthesis**  
The project culminates in a one-page executive report distilling 3–5 critical insights, including at least one UX-specific finding (e.g., "Usability complaints spiked 15% after the 2024 Q3 UI overhaul, recommending targeted A/B testing"). Recommendations will span product (e.g., prioritize navigation fixes), engineering (e.g., optimize app performance), HR (e.g., empathy training for UX pain points), and UX research (e.g., prototype new onboarding flows).<grok:render card\_id="e9d4c2" card\_type="citation\_card" type="render\_inline\_citation"> 25</grok:render>

**6. Key Deliverables**

* **Monzo\_Reviews\_Master.parquet**: A unified, analysis-ready dataset stored in BigQuery.
* **Monzo Insights Dashboard (.pbix)**: A five-page interactive Power BI report.
* **Executive Insight Report (PDF)**: A one-page summary of key findings and recommendations, with UX-specific actions.
* **Technical Documentation**: Detailed documentation of data cleaning scripts, schema mappings, theme taxonomy, UX tagging configuration, and BigQuery setup.
* **Code Repository**: A GitHub repository containing Python scripts for data processing and NLP analysis, suitable for portfolio showcasing.<grok:render card\_id="477d75" card\_type="citation\_card" type="render\_inline\_citation"> 20</grok:render><grok:render card\_id="90521e" card\_type="citation\_card" type="render\_inline\_citation"> 27</grok:render>

**7. Success Measures**

* **Usability**: Stakeholders, including UX researchers, can access key insights within three clicks.
* **Coverage**: The dashboard incorporates 100% of available historical review data.
* **Actionability**: At least three distinct, actionable recommendations are delivered, including one UX-specific action.
* **Data Quality**: The dataset achieves >90% completeness for critical fields, including UX metrics.
* **Performance**: Dashboard filters and views, including the UX page, respond in under five seconds.
* **Scalability**: The BigQuery integration supports potential dataset growth without performance degradation.<grok:render card\_id="522dc4" card\_type="citation\_card" type="render\_inline\_citation"> 13</grok:render>

**8. Technical Architecture & Timeline**

**Tech Stack**

* **Data Processing**: Python (Pandas, NLTK, VADER, YAKE/KeyBERT).
* **Storage and Querying**: Google BigQuery (for scalable data warehousing and SQL-based aggregations).
* **Visualization**: Power BI Desktop (using DAX for measures, including UX-specific calculations; connected via native BigQuery connector).
* **Storage Formats**: Parquet for efficient compression and querying.
* **Data Source**: AppFollow review exports (iOS and Android).
* **Version Control**: GitHub for code and documentation.<grok:render card\_id="2e1dee" card\_type="citation\_card" type="render\_inline\_citation"> 11</grok:render><grok:render card\_id="017181" card\_type="citation\_card" type="render\_inline\_citation"> 17</grok:render>

**Project Timeline**

The project is structured for iterative development over 2-4 weeks, allowing for thorough testing and refinement:

* **Week 1**: Data acquisition, unification, refinement, and BigQuery upload (Phases 1-2).
* **Week 2**: Semantic analysis, theme/UX tagging, and data modeling in BigQuery (Phases 3-4).
* **Weeks 3-4**: Dashboard development in Power BI, strategic synthesis, and documentation (Phases 5-6), including stakeholder feedback iterations.

**9. Risks & Mitigations**

* **Schema Mismatches (iOS vs. Android)**: Define clear mapping rules during the unification phase to ensure consistency.
* **Sentiment Model Bias for UX**: Validate VADER results against AppFollow’s semantic sentiment scores, with manual review of 500 UX-tagged reviews for accuracy.
* **Power BI Performance with 33,500 Rows and UX Metrics**: Use Parquet file format, BigQuery views, and optimized DAX measures to ensure responsiveness.
* **Inconsistent Version Numbering**: Normalize versions to a major.minor format, treating patch versions as optional.
* **UX Tagging Overfitting**: Iteratively refine the UX taxonomy with a sample dataset to achieve 80-90% tagging accuracy.
* **BigQuery Integration Issues**: Pre-test the native connector and use Import Mode initially; fallback to local Parquet if needed.<grok:render card\_id="fd8eac" card\_type="citation\_card" type="render\_inline\_citation"> 14</grok:render><grok:render card\_id="2e8e7d" card\_type="citation\_card" type="render\_inline\_citation"> 19</grok:render>

**10. Anticipated Business Impact**

This dashboard will elevate Monzo’s ability to act on customer feedback, delivering:

* **Informed Product Strategy**: Roadmaps prioritized based on user demand, including UX-driven enhancements.
* **Enhanced Release Quality**: Proactive sentiment analysis to assess the stability and UX impact of app releases.
* **Customer-Aligned Culture**: Training programs tailored to address service and UX empathy gaps identified in reviews.
* **UX Research Empowerment**: Actionable insights for UX researchers to reduce friction, improve accessibility, and enhance user delight, potentially boosting app ratings and retention.
* **Strategic Foresight**: A decade-long view of brand perception, including UX trends, enabling leadership to track customer trust and measure the impact of strategic initiatives.<grok:render card\_id="0cb9b0" card\_type="citation\_card" type="render\_inline\_citation"> 2</grok:render><grok:render card\_id="ddd0b4" card\_type="citation\_card" type="render\_inline\_citation"> 4</grok:render>

By transforming raw feedback into a dynamic, actionable tool with a dedicated UX lens and scalable architecture, this project reinforces Monzo’s position as a customer-first digital bank, ensuring it continues to lead in a competitive market. For portfolio purposes, this PRD demonstrates end-to-end data analysis skills, from ETL and NLP to BI visualization and strategic insight generation.<grok:render card\_id="0f16aa" card\_type="citation\_card" type="render\_inline\_citation"> 24</grok:render>