Feature Adoption & Engagement Impact Analysis

A Product Analytics Report

1. Executive Summary

This report evaluates the performance and behavioural impact of a newly launched product feature using event-based user data. The analysis assesses adoption penetration, adoption velocity, revenue contribution, segmentation differences, and short-term retention impact.

Key findings include:

- **Adoption Rate:** 41.4% (414 of 1000 users)
- **Total Revenue:** £101,859.37 across 1,666 purchases
- **Highest Adoption Segment:** Android users (44.8% adoption rate)
- **7-Day Retention Lift:** +7.2 percentage points among adopters

The results suggest steady feature discovery, strong segment-level differences, and a meaningful positive association between adoption and user retention.

2. Business Context

Following the launch of a new product feature on 15 March 2025, the product team sought to evaluate:

- Adoption penetration within the user base
- Adoption velocity over time
- Segment-level behavioural differences
- Revenue implications
- Engagement impact (retention lift)

These metrics are critical in determining whether the feature warrants additional visibility, optimisation, or expansion.

3. Dataset Overview

Metric	Value
Total Users	1000
Total Events	5368
Total Purchases	1666
Paying Users	830
Total Revenue	£101,859.37
ARPU	£101,859.37
ARPU	£101.86

The dataset consists of synthetic event-based user activity logs including:

- login
- browse
- purchase
- feature_used

Revenue is captured via the “order value” field.

4. Methodology

4.1 Adoption Definition

A user was classified as an adopter if they generated at least one feature used event.

$$Adoption\ Rate\ = \frac{Adopters}{Total\ Users}$$

4.2 Adoption Over Time

The first occurrence of feature used per user was extracted to:

- Measure daily new adopters
- Construct cumulative adoption growth

4.3 Time-to-Adoption

Measured as:

First Feature use - Launch Date

4.4 Revenue Analysis

Revenue was analysed across:

- Total revenue
- Average order value
- Purchase frequency
- Adopters vs non-adopters

4.5 Retention Definition

7-day retention was defined as:

A user generating any event ≥ 7 days after signup.

5. Results

5.1 Adoption Rate

Adopters: 414
Adoption Rate: 41.4%

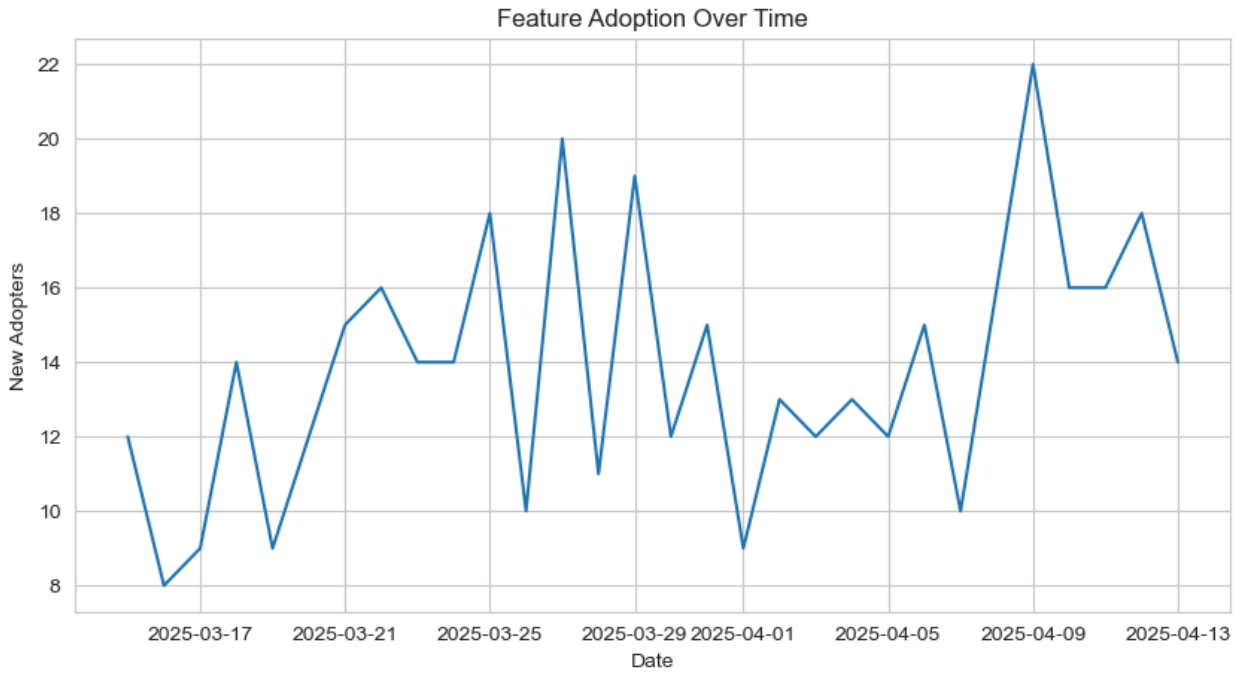
This indicates moderate feature penetration across the user base.

5.2 Feature Adoption Over Time

The daily adoption chart shows:

- Natural fluctuation between 8–22 new adopters per day
- No extreme post-launch spike
- Multiple moderate peaks across late March and early April

Figure 1: Feature Adoption Over Time



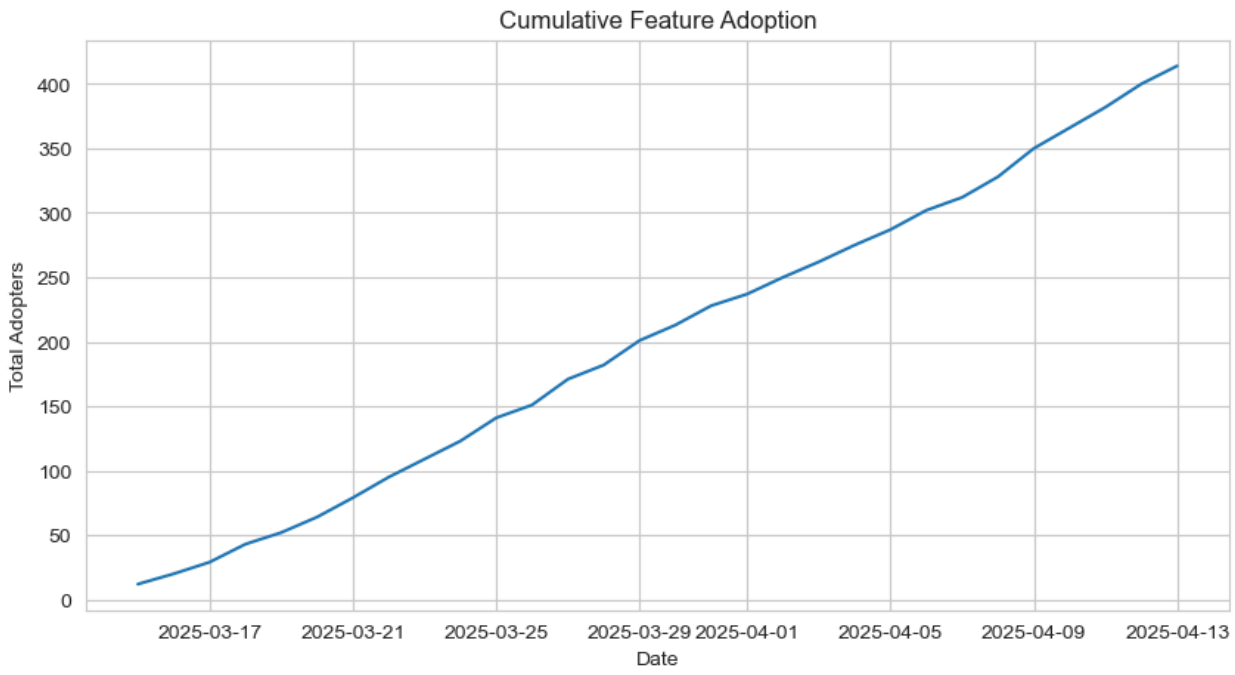
Adoption occurred steadily rather than virally. This suggests gradual feature discovery rather than immediate widespread exposure.

5.3 Cumulative Feature Adoption

The cumulative curve demonstrates:

- Continuous upward growth
- No plateau observed within the analysis window
- Final cumulative adoption reaching 414 users

Figure 2: Cumulative Feature Adoption



The feature continues to gain traction over time, indicating sustained discovery rather than short-term novelty effects.

5.4 Adoption by Device

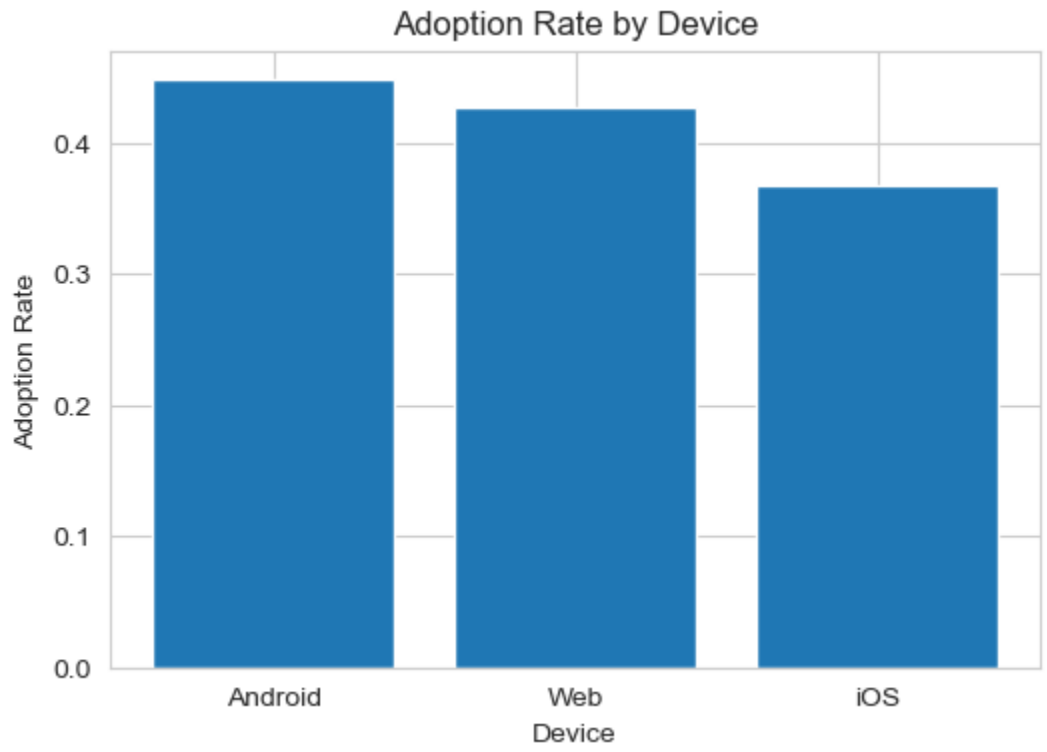
Table 1 – Adoption Count by Device

Device	Adopters
Android	150
Web	141
iOS``	123

Table 2 – Adoption Rate by Device

Device	Total Users	Adopters	Adoption Rate
Android	335	150	44.8%
Web	330	141	42.7%
iOS	335	123	36.7%

Figure 3: Adoption rate by Device



Android users exhibit the highest adoption rate (44.8%), followed by Web (42.7%), with iOS trailing at 36.7%.

The ~8 percentage point gap between Android and iOS suggests potential UX, discoverability, or behavioural differences across platforms.

5.5 Revenue Analysis

Overall Revenue Metrics

- Total Revenue: £101,859.37
- ARPU: £101.86
- ARPPU: £122.72

Table 3 - Revenue by Adoption Group

Group	Total Revenue	Avg Order Value	Purchases
Non-adopters	**£58,894.58**	**£60.84**	**968**
Adopters	**£42,964.79**	**£61.55**	**698**

- ***Non-adopters generated higher total revenue.***
- ***Average order value is nearly identical between groups (~£61).***
- ***Revenue differences are driven primarily by purchase volume rather than order value.***

  This suggests adoption does not immediately correlate with higher monetisation.

5.6 Retention Impact

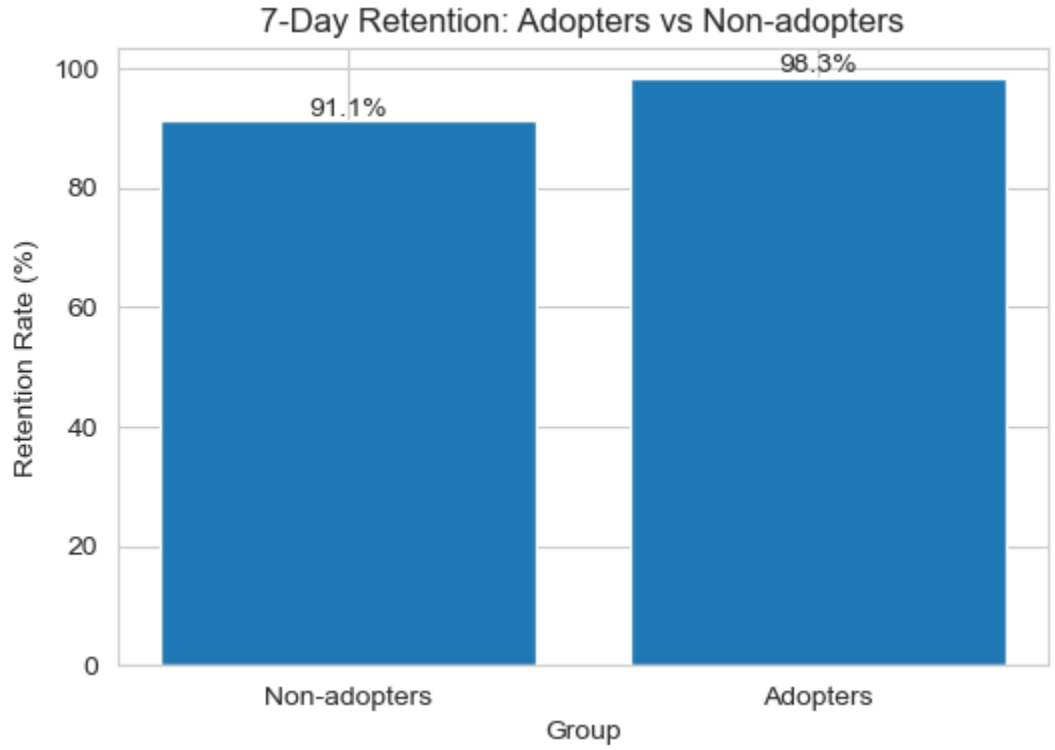
Table 4 - 7 Day Retention

Group	Retention Rate
Non-Adopter	**91.1%**
Adopters	**98.3%**

Absolute Difference: +7.2 percentage points

Relative Lift: ~8%

Figure 4 – 7-Day Retention: Adopters vs Non-adopters



Adopters exhibit significantly higher short-term retention. A 7.2 percentage point lift is substantial in retention analysis, where even 2–3 points are considered meaningful.

Important caveat: this reflects correlation, not confirmed causation.

6. Key Insights

1. The feature achieved moderate penetration (41.4%).
2. Adoption grew steadily without a viral spike.
3. Android users adopt significantly more than iOS users.
4. Revenue is not immediately driven by adoption.
5. Adopters demonstrate materially higher retention.
6. Adoption may signal higher intrinsic engagement propensity.

7. Business Implications

- Increase feature visibility in onboarding flows.
- Investigate iOS UX improvements to close the adoption gap.
- Conduct controlled A/B experiments to test causal retention lift.
- Monitor long-term (30-day+) retention impact.
- Explore monetisation alignment with feature usage.

Conclusion

The feature reached a 41.4% adoption rate (414/1000 users) with sustained cumulative growth and no observable early plateau. Adoption varied across devices (Android: 44.8%, Web: 42.7%, iOS: 36.7%), indicating meaningful segment-level differences (~8 percentage point spread).

Adopters exhibited a 98.3% 7-day retention rate versus 91.1% for non-adopters, representing a +7.2pp absolute lift (~8% relative increase). Given the typically high sensitivity of retention metrics, this effect size suggests a strong positive association between feature usage and short-term engagement, though causality is not established.

Revenue impact appears neutral in the short term, with comparable average order values (~£61) across groups and no clear monetisation uplift observed.

Overall, the feature demonstrates statistically meaningful engagement signals, warranting further experimental validation.