

Key Insights

1. Ticket Sales Analysis

- **Online Sales:**
 - Transactions: **18,521**
 - Revenue: **£382,754**
 - Avg. Ticket Price: **£20.67**
- **Station Sales:**
 - Transactions: **13,132**
 - Revenue: **£359,167**
 - Avg. Ticket Price: **£27.35**

Insight: Online sales dominate in volume (58.5%) but generate lower revenue per ticket compared to station sales.

- **Top-Selling Ticket Types:**
 - **Advance Standard: 10,494 tickets sold, Avg. Price: £18.06**
 - **Anytime Standard: 3,075 tickets sold, Avg. Price: £43.07**

Insight: Advance tickets are popular for budget travelers, while Anytime tickets generate higher revenue due to flexibility.

2. Delay & Refund Analysis

- **Top Delay Reasons:**
 - **Weather:** Most frequent (758 delays, avg. 46.8 minutes).
 - **Signal Failure:** Longest delays (avg. 71.7 minutes).
- **Revenue Loss from Refunds:**
 - Total: **£146,017**
 - **Technical Issues:** Largest contributor (£132,227).
- **Refund Rates:**
 - Cancelled Journeys: **30.43%** (highest).

- Delayed Journeys: **23.82%**.

Insight: Addressing technical issues and signal failures can reduce refund losses significantly.

3. Station Popularity

- **Top Departure Station: Manchester Piccadilly (5,650 departures).**
- **Top Arrival Station: Birmingham New Street (7,742 arrivals).**

Insight: Manchester Piccadilly and Birmingham New Street are the busiest stations, requiring focused capacity management.

4. Peak Times

- **Ticket Purchases:** Peak at **5 PM** (2,740 purchases).
- **Train Departures:** Peak at **6 AM and 6 PM** (3,113 journeys each).

Insight: Evening hours dominate ticket purchases, while both early and late hours are key for departures.

Key Metrics Summary

- **Total Transactions: 31,653**
- **Total Revenue: £741,921**
- **Refund Loss: £146,017**

Recommendations

1. **Boost Online Revenue:** Offer discounts on Anytime or Off-Peak tickets for online purchases.
2. **Address Technical Delays:** Prioritize fixes for signal failures to reduce delays and refund losses.
3. **Targeted Rail card Promotions:** Focus on senior and disabled rail cards to increase sales.
4. **Peak-Time Optimization:** Use dynamic pricing for peak hours to maximize revenue.