

This report looks at customer and sales data from the fictional company 'RetailXpress' for orders placed between 01/01/2011 and 31/12/2014. It focuses on Customer performance, Product performance and Shipping. As this data is more than 10 years old, the report has been presented as if the data was analysed on the 01/01/2015, to avoid the data looking very out-of-date, especially in terms of customer Retention (R-Value).

What is RFM analysis?

RFM analysis was used to group customers into segments based on their purchasing behavior. The goal of this analysis is to gain a better understanding of customer behavior and leverage these insights to improve retention, sales and overall business performance.

- The **R-value** (Retention) is calculated based on the date of the latest transaction.
- The **F-value** (Frequency) is calculated based on the number of orders placed within a certain period.
- The **M-value** (Monetary) is calculated based on the amount of money spent by the customer/segment.
- The **R, F and M** values are then scored from 1-5 and combined to give a three digit score, which then determines the Segment.

The below table lists the **11 RFM Segments** in order of best to worst performing, the RFM scores that fall within them, and a description of each segment. This table can be referred to when interpreting the 'Customer report' page.

Order	Segment	Scores	Activity
1	Champion	555, 554, 544, 545, 454, 455, 445.	Completed a recent purchase. They buy frequently and spend the most.
2	Loyal Customer	543, 444, 435, 355, 354, 345, 344, 335.	They buy frequently and spend a lot of money on the site. Sensitive to offers.
3	Potential Loyalist	553, 551, 552, 541, 542, 533, 532, 531, 452, 451, 442, 441, 431, 453, 433, 432, 423, 353, 352, 351, 342, 341, 333, 323.	They recently spent a fair amount of money on the site more than once.
4	New Customer	512, 511, 422, 421 412, 411, 311.	Completed a recent purchase, but doesn't order often.
5	Promising	525, 524, 523, 522, 521, 515, 514, 513, 425,424, 413,414,415, 315, 314, 313.	Completed a recent purchase, but didn't spend a lot.
6	Need Attention	535, 534, 443, 434, 343, 334, 325, 324.	Above average in recency, frequency and monetary value, but no recent purchases.
7	Cannot Lose Them	155, 154, 144, 214,215,115, 114, 113 .	Completed huge, frequent purchases long ago but haven't come back since then.
8	About To Sleep	331, 321, 312, 221, 213.	Below average in recency, frequency and monetary value. At risk of losing them if you don't reactivate.
9	At Risk	255, 254, 245, 244, 253, 252, 243, 242, 235, 234, 225, 224, 153, 152, 145, 143, 142, 135, 134, 133, 125, 124.	Completed big, frequent purchases long ago. You need to bring them back!
10	Hibernating	332, 322, 231, 241, 251, 233, 232, 223, 222, 132, 123, 122, 212, 211.	Their last purchase was long ago. The number of orders was small and the amounts spent low.
11	Lost	111, 112, 121, 131, 141, 151.	Lowest scores in recency, frequency and monetary value.

CUSTOMER PERFORMANCE ANALYSIS

How did our customers perform between 2011 and 2014?

RetailXpress

Between 2011 and 2014, this is the **total number of customers** that we acquired...

Total Customers


795

Consumer 409Corporate 238Home Office 148

... and how the average customer performed in terms of **Recency, Frequency, Monetary** spend and **Satisfaction**:


Average R-value

26

days since last purchase


Average F-value

32

orders placed

Average M-value

£17.9K

spent by customer

Average Satisfaction Score

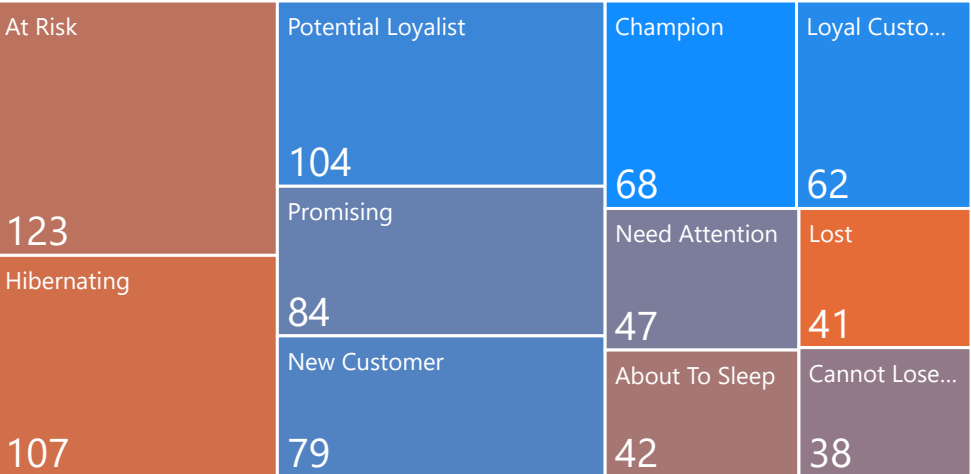
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out of 10

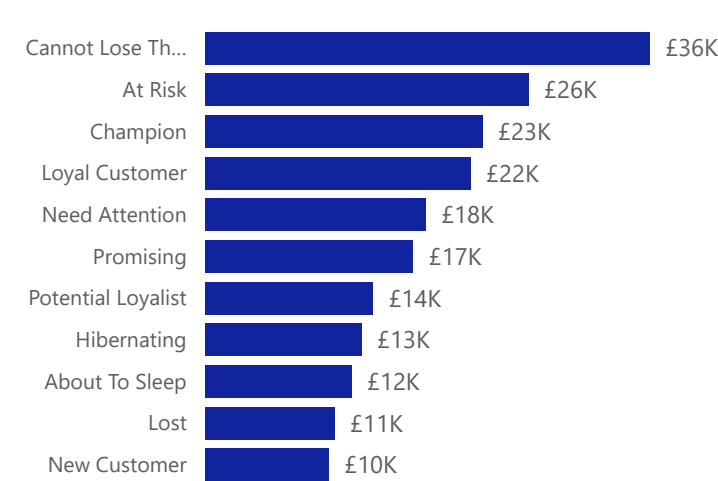
Our customers are grouped in the following **Segments**, based on their **Recency, Frequency** and **Monetary** performance:

This is how much the **average customer in each Segment spent over the 4-year period** and the average **satisfaction score** of each Segment.

Number of customers by Segment




Average spend per customer by Segment



Average satisfaction score by Segment

Segment	Average Satisfaction Score
At Risk	4.12
Potential Loyalist	4.10
Loyal Customer	4.10
Need Attention	4.10
Promising	4.08
Lost	4.06
Champion	4.06
About To Sleep	4.04
Hibernating	4.03
Cannot Lose Them	4.02
New Customer	3.97



**Key insight:** Our largest customer segment, 'At Risk', consists of those who have complete big, frequent purchases in the past, but have not made any orders recently. Despite being our second-highest spenders, these customers are at a high risk of churning. Their satisfaction score, while the highest overall, is still only 4.12 on average, indicating potential for improvement. Investing in a targeted strategy for these high-value, high-risk customers could significantly reduce churn, and lead to increased orders and higher sales. Personalized emails with special offers and valuable resources could boost engagement and foster loyalty, ultimately protecting a crucial revenue stream.

# PRODUCT PERFORMANCE ANALYSIS

Which were our best and worst performing products between 2011 and 2014?

These are the seven products that made **the most profit** for the company...

## Top 7 products by Profit

Category	Sub-Category	Total Sales	Quantity	Total Profit	Average Profit	Net Profit Margin
Technology	Phones	£1,776,754.14	21869	£316,707.01	£94.34	17.83%
Technology	Copiers	£2,102,842.27	11450	£287,538.55	£129.35	13.67%
Furniture	Bookcases	£1,466,572.24	8310	£161,924.42	£67.16	11.04%
Furniture	Chairs	£1,531,183.76	12534	£145,643.27	£42.41	9.51%
Office Supplies	Appliances	£1,011,064.30	6078	£141,680.59	£80.73	14.01%
Technology	Accessories	£749,237.02	10946	£129,626.31	£42.15	17.30%
Office Supplies	Storage	£1,127,085.86	16917	£108,461.49	£21.44	9.62%

... while these are the seven products that made **the least profit, or resulted in a loss** for the company.

## Bottom 7 products by Profit

Category	Sub-Category	Total Sales	Quantity	Total Profit	Average Profit	Net Profit Margin
Office Supplies	Art	£1,272,091.97	16301	£57,953.91	£11.87	4.56%
Furniture	Furnishings	£385,578.26	11225	£46,967.43	£14.82	12.18%
Office Supplies	Envelopes	£170,904.30	8380	£29,601.12	£12.16	17.32%
Office Supplies	Supplies	£243,074.22	8543	£22,583.26	£9.31	9.29%
Office Supplies	Labels	£73,404.03	9322	£15,010.51	£5.76	20.45%
Office Supplies	Fasteners	£83,242.32	8390	£11,525.42	£4.76	13.85%
Furniture	Tables	£757,041.92	3083	-£64,083.39	-£74.43	-8.46%



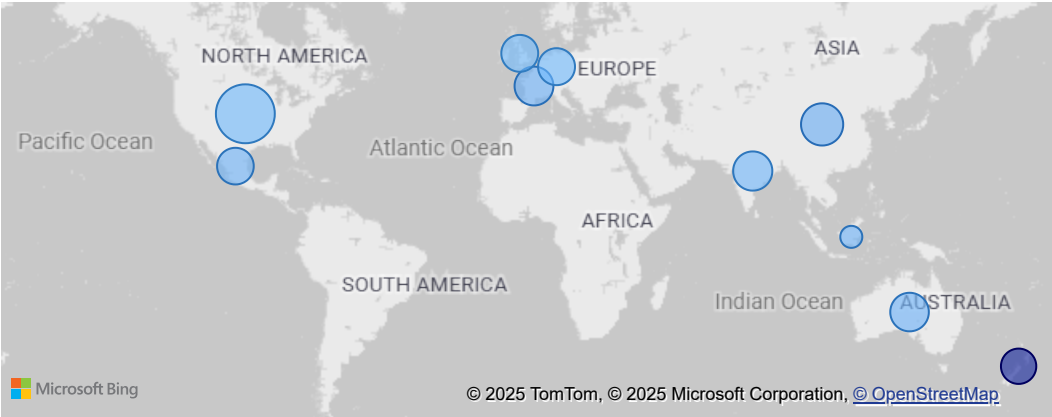
**Key insight:** Our analysis reveals clear winners and some areas for review. Phones, Copiers and Bookcases are our top performing products, driving the most profit. It would be recommended to prioritize and expand our Technology category, particularly Phones and Copiers, and continue sales of high-profit Office Supplies like Appliances and Storage, along with profitable Furniture such as Bookcases and Chairs. Conversely, low-profit Office Supplies (Fasteners, Labels, Supplies) and underperforming Furniture with low or negative profits should be reviewed for potential discontinuation. This strategic focus allows us to capitalize on our strengths in Technology, optimize our Office Supplies portfolio, and improve Furniture profitability.

These are the **top ten countries ranked by total shipping cost**, and their **shipping cost as a percentage of total sales**.

Country	Total Shipping Cost	Total Sale Value	Average Shipping Cost	Shipping Cost as % of Sales
United States	£238,173.79	£2,297,200.86	£23.83	10.37%
New Zealand	£158,833.34	£765,426.62	£252.92	20.75%
Australia	£100,359.02	£925,235.85	£35.38	10.85%
France	£95,387.81	£858,931.08	£33.74	11.11%
China	£78,957.02	£700,562.02	£42.00	11.27%
Mexico	£67,658.40	£622,590.62	£25.59	10.87%
Germany	£63,965.18	£628,840.03	£30.98	10.17%
India	£61,780.72	£589,650.10	£39.73	10.48%
United Kingdom	£53,580.27	£528,576.30	£32.81	10.14%
Indonesia	£43,948.62	£404,887.50	£31.62	10.85%

This is how the **total profit** and **profit margins** would change for each market if the **shipping costs were to be reduced by 50%** as a result of new distribution hubs being created.

Potential Profit by Country



Bubble size represents the potential profit, while the bubble colour is based on profit margin improvement.

Country	Profit Margin	Potential Profit Margin	Margin Improvement	Potential Profit	Profit Improvement
United States	12.47%	17.65%	5.18	£405,483.92	£119,086.90
New Zealand	5.95%	16.33%	10.38	£124,987.95	£79,416.67
Australia	11.23%	16.65%	5.42	£154,086.94	£50,179.51
France	12.69%	18.25%	5.55	£156,722.91	£47,693.90
China	21.51%	27.14%	5.64	£190,161.59	£39,478.51
Mexico	16.51%	21.95%	5.43	£136,647.30	£33,829.20
Germany	17.07%	22.15%	5.09	£139,305.41	£31,982.59
India	21.89%	27.13%	5.24	£159,962.19	£30,890.36
United Kingdom	21.17%	26.24%	5.07	£138,690.29	£26,790.14
Indonesia	3.86%	9.28%	5.43	£37,582.99	£21,974.31



**Key insight:** Our analysis pinpoints key locations for distribution hubs to significantly bring down shipping costs and boost profit margins. New Zealand stands out as a top priority, having the fourth-highest total sales value but also the highest average shipping cost, resulting in a low 5.95% profit margin. A combined New Zealand/Australia hub would serve two major markets and potentially improve margins by over 10 percentage points in New Zealand alone. Following this, a US hub is warranted due to the high sales value of this market. A 50% reduction in shipping costs would potentially result in a profit margin boost by more than 5 percentage points. Finally a China/Asia hub would strengthen our presence in the region, potentially boosting profit margins by 5-6 percentage points in several key Asian markets.