



CUSTOMER SEGMENTATION USING RFM ANALYTICS

Automobile Parts Manufacturing



AGENDA



- ❑ **EXPLORATORY ANALYSIS AND INFERENCES**
- ❑ **CUSTOMER SEGMENTATION USING RFM ANALYSIS**
- ❑ **INFERENCES FROM RFM ANALYSIS AND IDENTIFIED SEGMENTS**

EXECUTIVE SUMMARY



- **Problem Statement** - Sales trends and RFM customer analysis for the Automobile manufacturing parts company over the period of 3 years.

Records
2747

Duration
3 Years

Sales
9.7 M

Customers
89

Quantity
96K

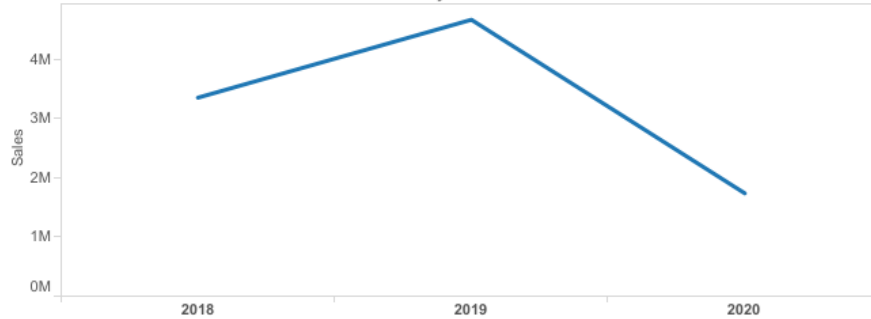
Features
20



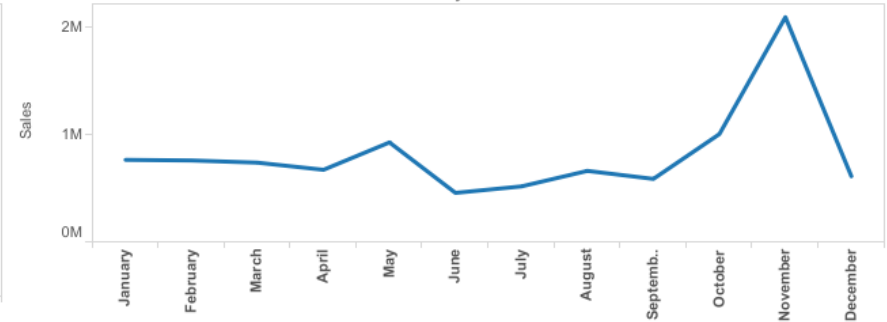
SALES TREND - TIME



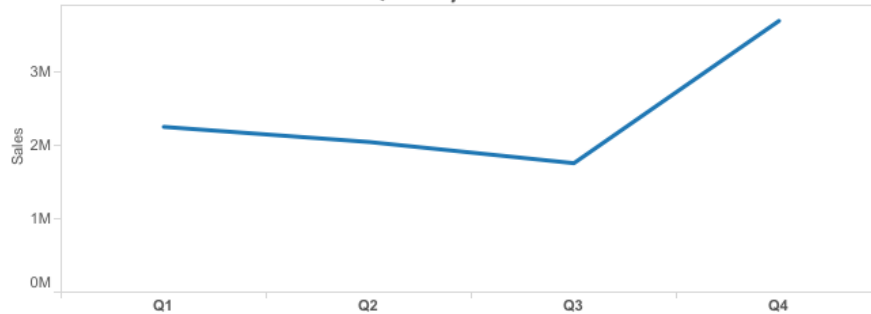
Yearly Sales



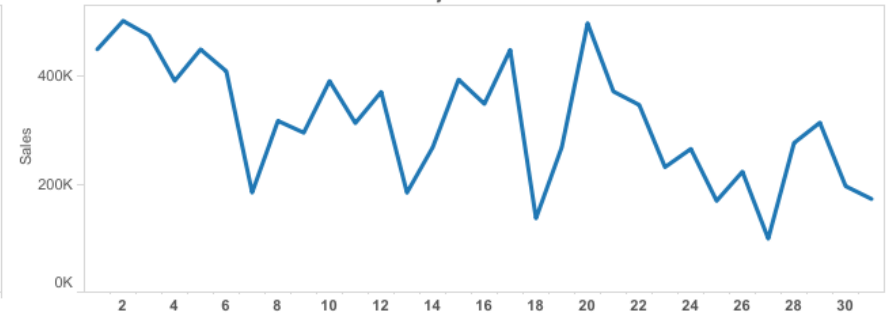
Monthly Sales



Quarterly Sales



Daily Sales



Highest Sales : Year (2019) , Quarter (Q4) , Month (November) , Date – 3rd

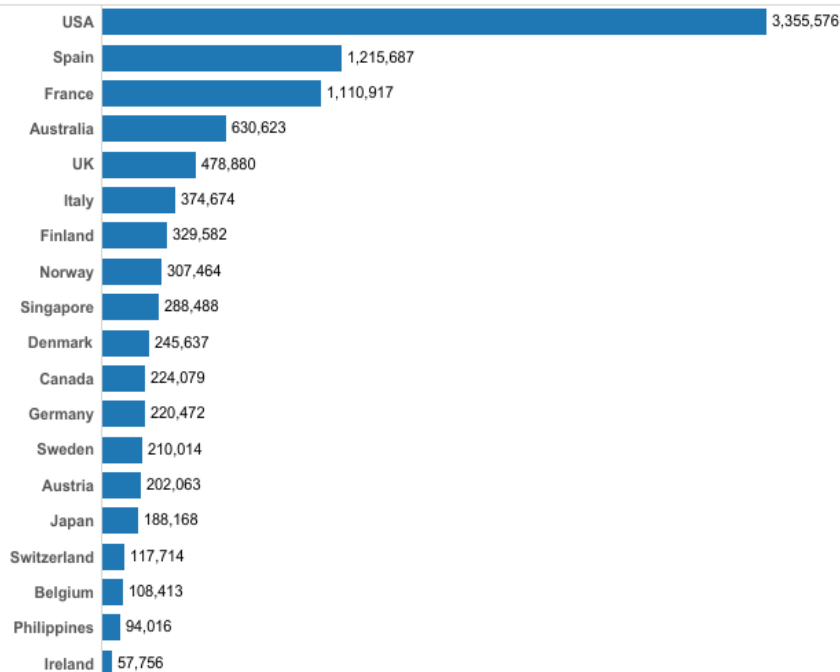
Lowest Sales : Year (2020) , Quarter (Q3) , Month (June) , Date - 27th



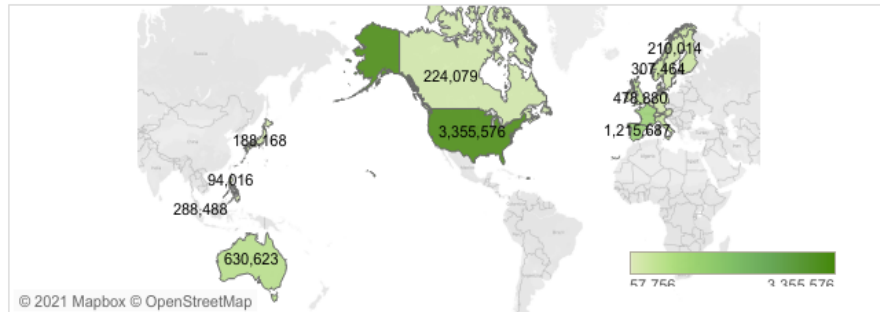
SALES TREND- GEOGRAPHY



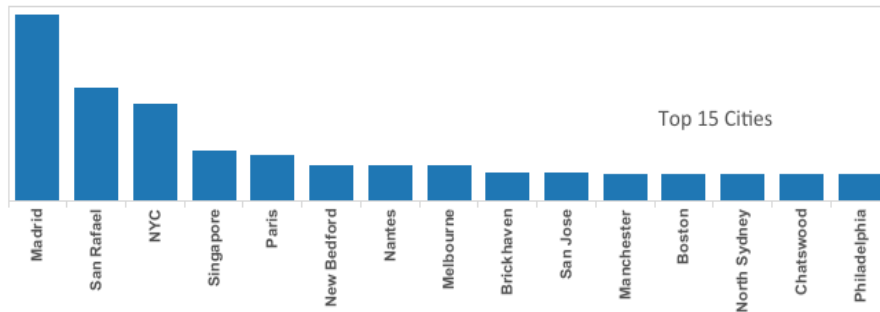
Country Sales



Geographical Sales



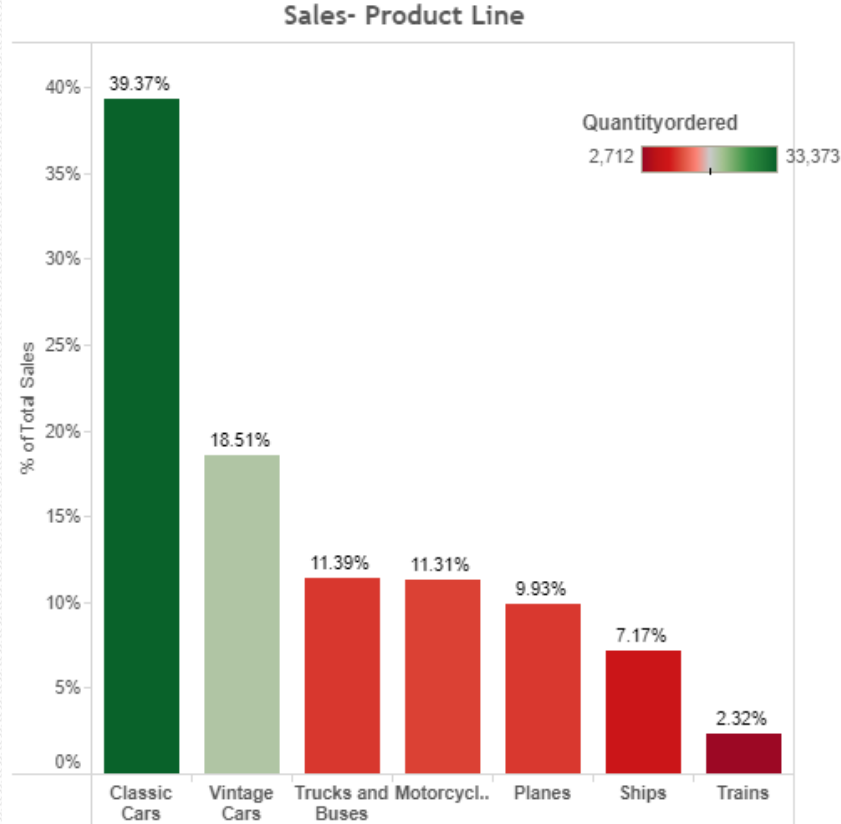
City Sales



USA contributes 34.38 % of total Sales and Madrid city contributes 11% of total Sales



SALES TREND - PRODUCT LINE



- **Classic Cars** contributes to massive **~40%** of the total Sales and **Trains** contribute a meager **2.3%**
- Quantity ordered is maximum by **Classic Cars**, i.e. total of **33,373** and least by **Trains**, i.e. a total of **2712** only.

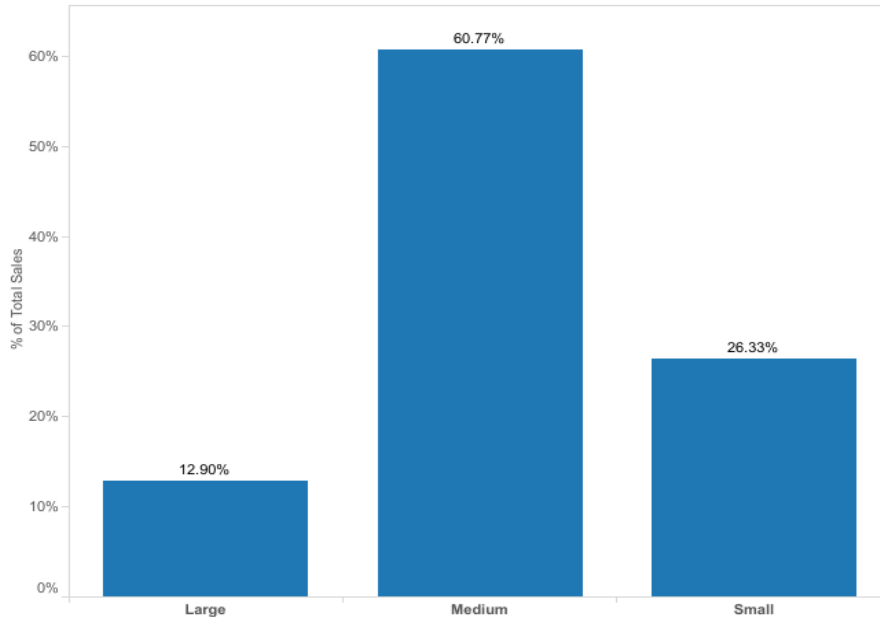


SALES TREND – DEAL SIZE



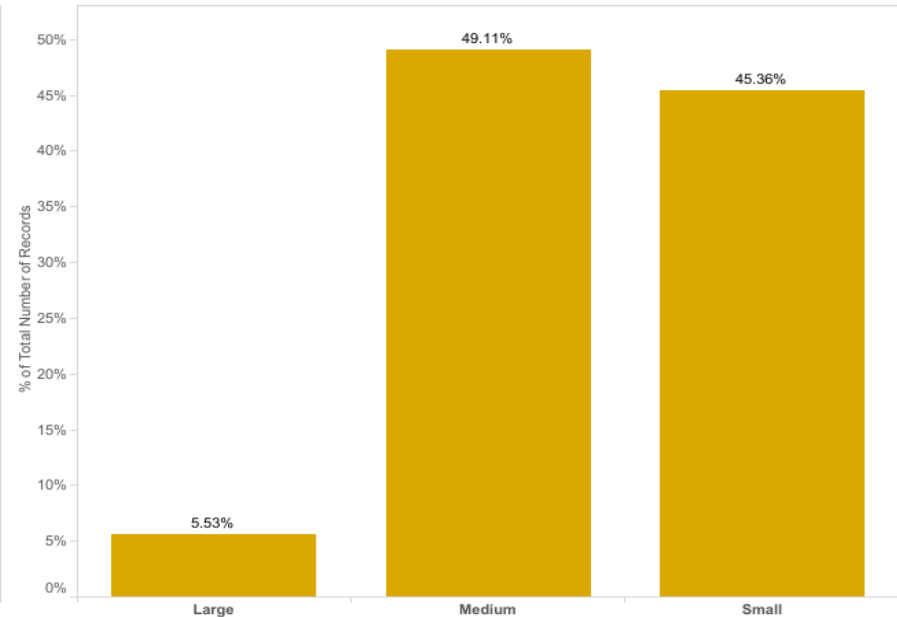
Deal Size -Total Sales

DealSize



Deal Size- Total # of Records

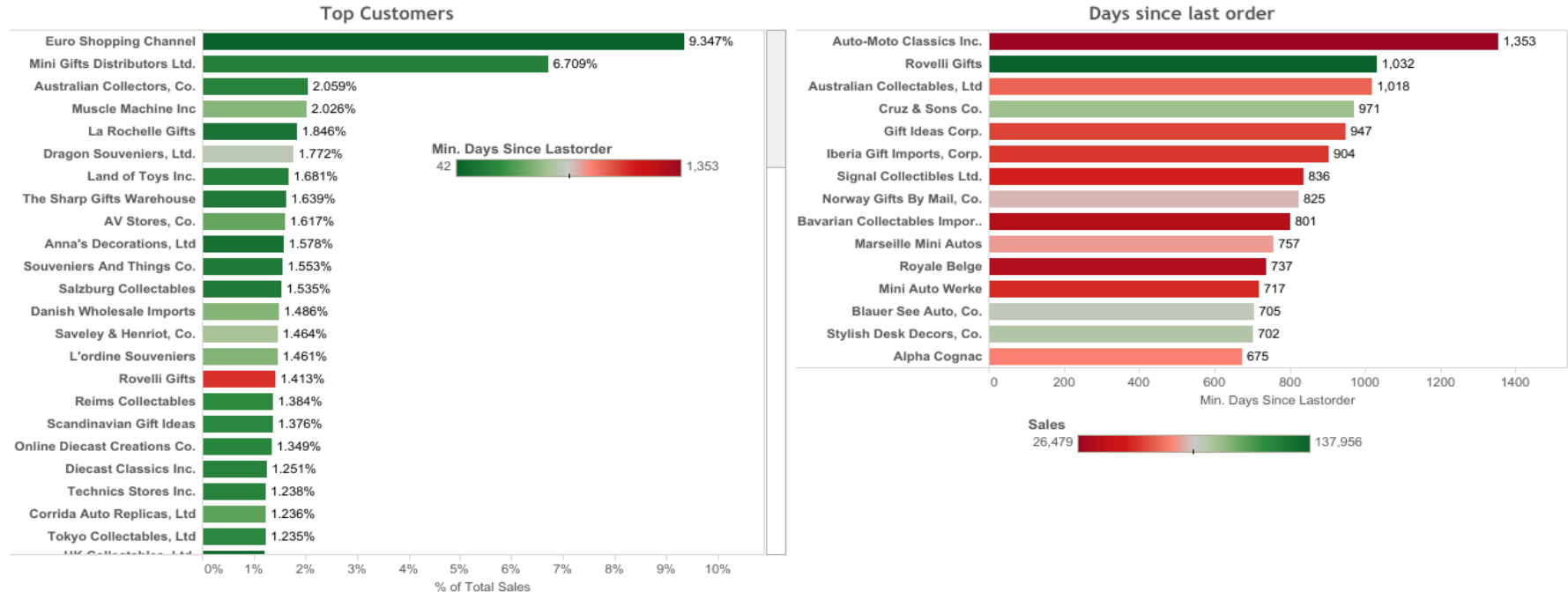
DealSize



- **Medium Deal size contributed to 60.77 % of total sales**
- **Even though the total number of orders for medium and small deal size did not have much difference , small deals had a significantly lower contribution to total Sales.**



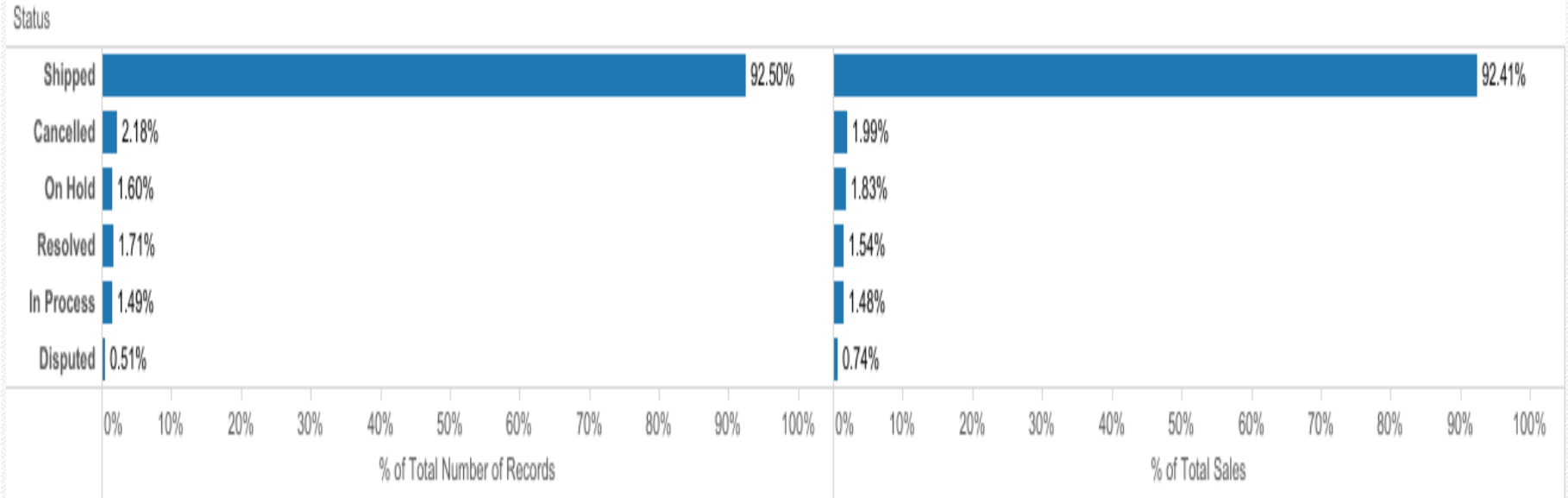
CUSTOMER TRENDS



Euro Shopping Channel and Mini Gifts Distributors contribute maximum to the total Sales. The right chart gives the customers who have not ordered since quite some time. Also the color suggests their relative contribution to sales.



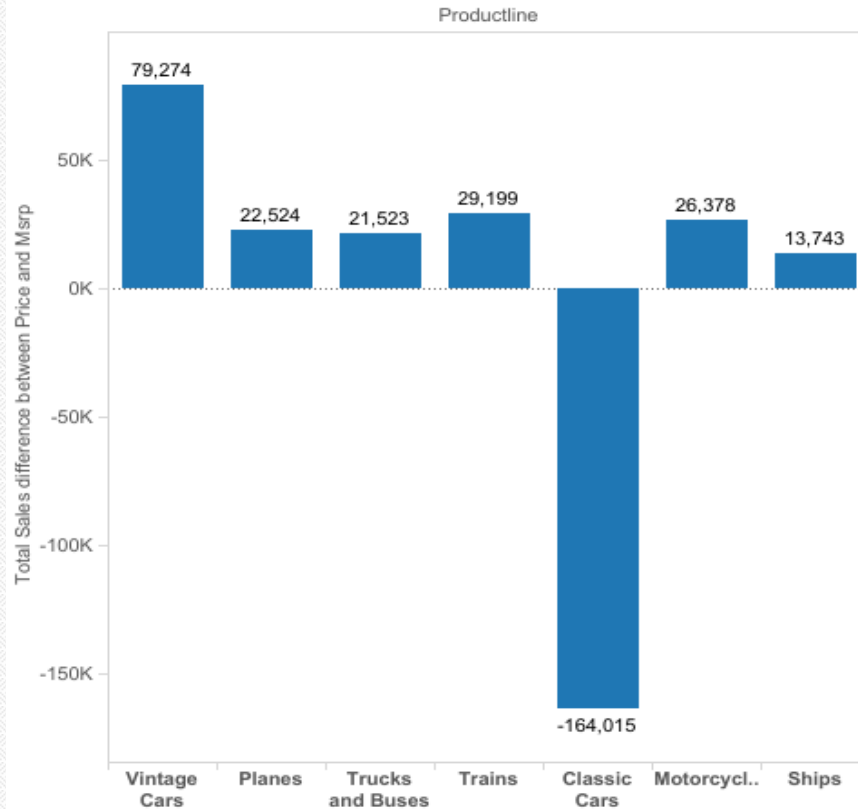
SALES- SHIPPING STATUS



Only 92.5% of total orders have been shipped. The remaining 7.5 % of the orders have not been shipped yet, contributing to a **sales loss of 740k.**



SALES DIFFERENCE-PRICE VS MSRP



- The plot shows the product line wise difference between Manufactures suggested retail price(MSRP) and price offered to the customer.
- With **classic cars** product line, the price offered to the customer was less than the MSRP and the total sales difference amounted to **164k**.
- However with **Vintage Cars**, the price offered to customers was higher than retail price suggested by the manufacturer, resulting to an increased sale of **79k**
- Classic Cars is the highest contributor to Sales , followed by Vintage Cars.

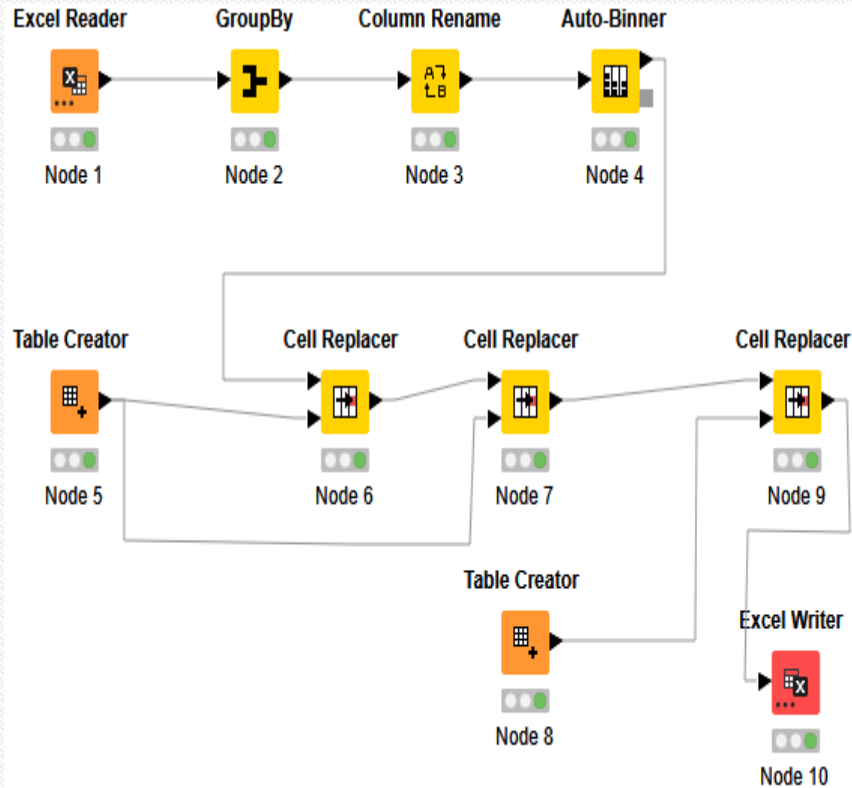
INFERENCES



1. **Star Product Line- Classic Cars**
 2. **Growth Product Line- Vintage Cars**
 3. **Country Dominance- USA**
 4. **City Dominance – Madrid**
 5. **Star Customer- Euro Shopping Channel**
 6. **Star Month – November**
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1. **Dangerous decline of Sales in 2020**
 2. **740k worth of Sales revenue stuck due to order shipment status- Low hanging fruit if process optimized.**
 3. **Classic Car price lower than manufacturer's proposed price**
 4. **Star Customer but requires engagement – Rovelli Gifts**



RFM WORKFLOW



- Customer Segmentation by Recency, Frequency and Monetary using **Knime**.
- Grouped by Customer Name and considered the following parameters-
 - ☐ **Recency - Min (Days since last order)**
 - ☐ **Frequency - Count(Records)**
 - ☐ **Monetary - Sum(Sales)**
- Divided the customers in 4 bins based on quantiles. 0-25, 25-50, 50-75, 75-100.
- Segmented the customers in 4 categories, **L- Low, M- Medium, H- High, O- Outstanding**
- The best customers having RFM score **OOO** and the lowest contributors having RFM score of **LLL**



RFM SCORE- CUSTOMER SEGMENTATION



CUSTOMERNAME	Recency	Frequency	Monetary	RFM Score
Alpha Cognac	L	L	L	LLL
Amica Models & Co.	H	M	H	HMH
Anna's Decorations, Ltd	O	O	O	OOO
Atelier graphique	H	L	L	HLL
Australian Collectables, Ltd	L	M	L	LML
Australian Collectors, Co.	O	O	O	OOO
Australian Gift Network, Co	O	L	L	OLL
Auto Assoc. & Cie.	H	L	L	HLL
Auto Canal Petit	O	H	H	OHH
Auto-Moto Classics Inc.	L	L	L	LLL

The output table gives the individual RFM binned values and the combined RFM Score



BEST CUSTOMERS



CUSTOMER NAME	Recency	Frequency	Monetary	RFM Score
Anna's Decorations, Ltd	O	O	O	000
Australian Collectors, Co.	O	O	O	000
Euro Shopping Channel	O	O	O	000
La Rochelle Gifts	O	O	O	000
Land of Toys Inc.	O	O	O	000
Mini Gifts Distributors Ltd.	O	O	O	000
Online Diecast Creations Co.	O	O	O	000
Salzburg Collectables	O	O	O	000
Souvenirs And Things Co.	O	O	O	000
Technics Stores Inc.	O	O	O	000
The Sharp Gifts Warehouse	O	O	O	000

Top 11 customers with the highest RFM score of 000(Alphabetical Order), i.e. they are in the **top 25 percentile** in terms of Recency, Frequency and Monetary.



LOYAL CUSTOMERS



CUSTOMER NAME	Frequency
Euro Shopping Channel	259
Mini Gifts Distributors Ltd.	180
Australian Collectors, Co.	55
La Rochelle Gifts	53
AV Stores, Co.	51

The top **5 loyal** customers, based on how often they purchase from the company, i.e. with the highest frequency.



LOST CUSTOMERS



CUSTOMERNAME	Recency	Frequency	Monetary	RFM Score
Alpha Cognac	L	L	L	LLL
Auto-Moto Classics Inc.	L	L	L	LLL
Bavarian Collectables Imports, Co.	L	L	L	LLL
Clover Collections, Co.	L	L	L	LLL
Double Decker Gift Stores, Ltd	L	L	L	LLL
Gift Ideas Corp.	L	L	L	LLL
Iberia Gift Imports, Corp.	L	L	L	LLL
Mini Auto Werke	L	L	L	LLL
Royale Belge	L	L	L	LLL
Signal Collectibles Ltd.	L	L	L	LLL

These **10 customers** have RFM score LLL, i.e. they are **the lowest 25 percentile** in Recency, Frequency and Monetary contribution in the last 3 years.



POTENTIAL CHURNERS



CUSTOMERNAME	Recency	RFM Score
Auto-Moto Classics Inc.	1353	LLL
Rovelli Gifts	1032	LOO
Australian Collectables, Ltd	1018	LML
Cruz & Sons Co.	971	LMH
Gift Ideas Corp.	947	LLL
Iberia Gift Imports, Corp.	904	LLL
Signal Collectibles Ltd.	836	LLL
Norway Gifts By Mail, Co.	825	LMM
Bavarian Collectables Imports, Co.	801	LLL
Marseille Mini Autos	757	LMM

10 Customers who have not contributed to the sales since a long time , i.e. whose Recency is high and are at more risk of churning.