

**BUSINESS INTELLIGENCE  
&  
BUSINESS ANALYTICS**

**PROJECT IMPLEMENTATION  
REPORT**

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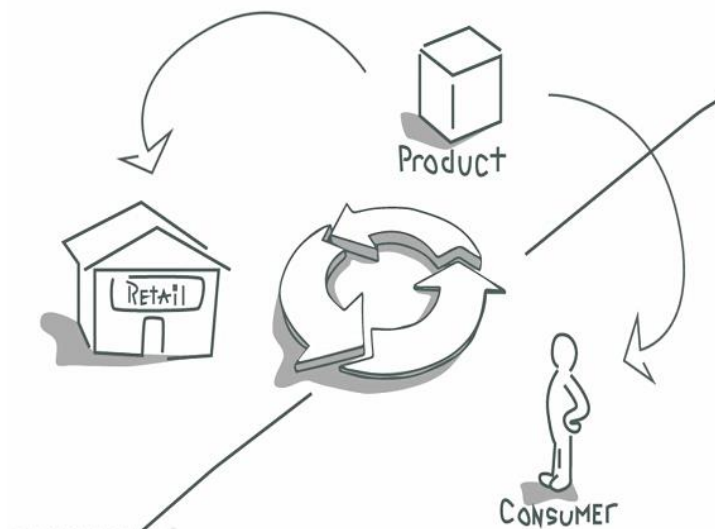
# Company name: Carrefour SA

## INTRODUCTION:

In recent times, retail firms have shown tremendous growth around the globe. So, Carrefour SA which is a well-established multinational retail corporation, has been trying to adopt new ways to increase the customer inflow into their retail stores and maintain & increase the overall sales for the firm. So, as mentioned in the specification report, we will be focusing on two major aspects ,Customer categorisation and Product analysis to increase the customer inflow, which has been done by targeting potential customers, reduce product wastage by association rules analysis and subsequent product management thereby increasing the overall sales of the Business.

## BUSINESS MODEL: B2C Business Model:

Carrefour SA follows the B2C (Business-to-Consumer) business model, which refers to the process of providing products and services directly between the business organization and the consumers, who act as end users in the model as shown in Fig.1. Majority of the retail and online firms comes under this category. As this type of business is primarily focused on Customers, every firm has the main responsibility to main good relation between the customers as they are primary elements of the core model.



**Fig.1 B2C business model**

The main challenge of this model is maintaining steady sales to keep the business viable, because if the market gets tougher or if the consumer purchase pattern changes, the B2C firms are the first one to get affected as its completely dependent on the customers. Considering this as the main reason, this project model is focusing on customers, as well as product category to meet the challenges in the business.

## Analysis of Challenges:

There are two main challenges that are focused in the project, they are

- Maintaining the customer flow and retain the customers over the period.
- The customer and product promotions that are applied should have a direct impact on the actions, if backfired may affect the reputation of the firm to a large extent.

## SWOT ANALYSIS FOR RETAIL SECTOR:

In order to take a good stand or to achieve good position in the market, many strategies are followed by the organisations. One of such analysis is SWOT analysis, which is widely used by most of the organisations, usually before launching any product in the market, most companies prefer to do SWOT analysis. They are divided into internal and external factors, where Strength and Weakness will come under internal factor as they are decided by organisation itself. Opportunities and Threats come under external factors as it depends on the market. The below Fig.2 shows the SWOT analysis of Carrefour SA retail firm.

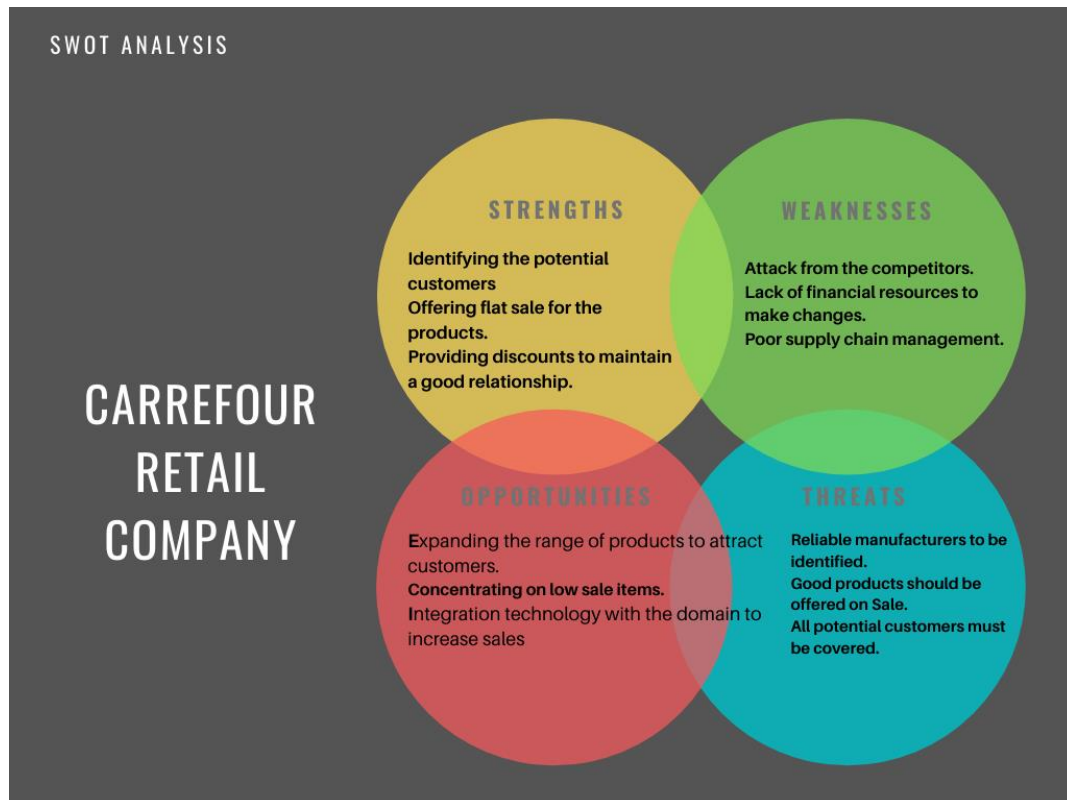


Fig. 2 SWOT analysis of Carrefour SA

### STRENGTHS:

- Examining the customers behaviour and nature to identify the potential customers.
- Providing discounts to the identified potential customers in-order to endeavour high return of the organisation.
- Offering flat sales on the products which are not sold and to the products which are in the next least prioritized sales list.
- Maintaining good relationships with customers will sustain customers in the market.
- Maintaining good relationship with suppliers and employees.
- Advertising about the flat sales or discounts on the products and to the potential customers to improve company's brand value which will eventually turn as a strength.
- Having unique or low-cost resources.

## **WEAKNESS:**

- Failure of proper advertising about the products, offers and other discounts can lead the retail firms to suffer a lag in business than its competitors.
- Absence of strong financial resources.
- Lack of experienced employees or staff within an organisation.
- Lacking knowledge about the products to be put on sale.
- Poor supply chain management and infrastructure.

## **OPPORTUNITIES:**

- Expanding range of products periodically which might increase the customer's interest to seek or purchase of more new products.
- Concentrating on less selling goods so that it can sold to the customers. This would grab more customers attention.
- Integration technology with the domain to increase sales and to focus on lagging areas in terms of sales and performance.
- Proving proper training to the working staff so that growth and knowledge can be enhanced in the business.

## **THREATS:**

- Maintaining reliable manufacturers.
- Requirement of adaptation for changing technology.
- Maintaining Quality standards and specifications.
- Having proper human capital and land.
- Price competition with other companies.

## **IMPLEMENTATION IN DYNAMIC 365 CRM:**

Customer Relationship Management is a set of activities and strategies that companies use to manage the customers and potential customers in the organization. CRM helps organizations to build and develop good customer relationship, increase sales and profits, improve customer service and thereby increasing the overall business efficiency.

Here in this project, we have used Microsoft Dynamic 365 CRM tool for handling and implementing our business process. There are several groups in the Dynamic 365, we use Dynamic 365 for sales as the Project deals with Product and customer management predominantly.

The basic Terminologies of a dynamic 365 sales are,

- **Lead:** Lead is a person or organization who has done any business with the company yet and knows about your product or service offered by your firm. Every company has leads and they have the potential, with whom you might deal business in the future.
- **Opportunity:** An Opportunity is a potential space, where the business process can take place. It usually happens after lead gets qualified. A company applying for different projects, each one is an opportunity for the firm.
- **Account:** An account is customer or firm, based on the business you do with. It usually happens after the opportunity gets converted and Business process starts taking place.
- **Contact:** Contact is usually a customer but an individual person, whose is associated with an Account. A contact is usually associated with maximum of one account.

As the project deals predominantly with Product and customer Categories, we have implemented the following steps in Dynamic 365 for the appropriate categories.

### Association of Products – Dynamic 365 sales:

In this stage, the low selling products are combined with similar or other high selling products and sold as single products, so that the product movement increases, wastage decreases and thereby sales and profit increases. The Implementation Steps are mentioned below,

**Step 1)** The individual sample products like cheese, cookies and Bottle of water are created as sample products in the system as shown in Fig.3, Fig.4 & Fig.5.

**Product: Cheese**  
Product - Product

Active Status

**PRODUCT DETAILS** Product Properties Additional Details NOTES FIELD SERVICE Related

|             |           |
|-------------|-----------|
| Name        | * Cheese  |
| Product ID  | * CHE0123 |
| Parent      | ---       |
| Valid From  | ---       |
| Valid To    | ---       |
| Description | ---       |

|                    |                |
|--------------------|----------------|
| Unit Group         | * Default Unit |
| Default Unit       | * Primary unit |
| Default Price List | * Retail       |
| Decimals Supported | * 2            |
| Subject            | ---            |

Fig.3

**Product: Cookies**  
Product - Product

Active Status

**PRODUCT DETAILS** Product Properties Additional Details NOTES FIELD SERVICE Related

|             |           |
|-------------|-----------|
| Name        | * Cookies |
| Product ID  | * COOK123 |
| Parent      | ---       |
| Valid From  | ---       |
| Valid To    | ---       |
| Description | ---       |

|                    |                |
|--------------------|----------------|
| Unit Group         | * Default Unit |
| Default Unit       | * Primary unit |
| Default Price List | * Retail       |
| Decimals Supported | * 2            |
| Subject            | ---            |

Fig.4

**Product: Bottle of Water**  
Product - Product

Active Status

**PRODUCT DETAILS** Product Properties Additional Details NOTES FIELD SERVICE Related

|             |                   |
|-------------|-------------------|
| Name        | * Bottle of Water |
| Product ID  | * BOOT123         |
| Parent      | ---               |
| Valid From  | ---               |
| Valid To    | ---               |
| Description | ---               |

|                    |                |
|--------------------|----------------|
| Unit Group         | * Default Unit |
| Default Unit       | * Primary unit |
| Default Price List | * Retail       |
| Decimals Supported | * 2            |
| Subject            | ---            |

Fig.5

**Step 2)** Now, the above three products are combined into a single product family, called Family Gift Basket as shown in Fig.6, along with properties like Number of Place settings and Size of the Basket, as shown in Fig.7.

**Product Family: Family Gift Basket**  
Product · Product

Active Status

**PRODUCT DETAILS** Product Properties NOTES FIELD SERVICE Related

|             |                      |
|-------------|----------------------|
| Name        | * Family Gift Basket |
| Product ID  | * GBFAM123           |
| Parent      | ---                  |
| Valid From  | ---                  |
| Valid To    | ---                  |
| Description | ---                  |

|                    |     |
|--------------------|-----|
| Unit Group         | --- |
| Default Unit       | --- |
| Default Price List | --- |
| Decimals Supported | --- |
| Subject            | --- |

**Fig.6**

**Product Family: Family Gift Basket**  
Product · Product

Active Status

**PRODUCT DETAILS** **Product Properties** NOTES FIELD SERVICE Related

| ✓ | Name                     | ↑ | Base Property | Data Type    | Read-Only | Required | Hidden |
|---|--------------------------|---|---------------|--------------|-----------|----------|--------|
|   | Number of Place Settings |   | ---           | Whole Number | No        | No       | No     |
|   | Size of the Basket       |   | ---           | Option Set   | No        | Yes      | No     |

**Fig.7**

**Step 3)** Now, the New product Bundle which contains the combination of three products are combined and has a product family of Family Gift basket is created as, shown in Fig.8, Fig.9 & Fig.10, and sold as one unique product called Summertime Gift Basket to the customers.

**Bundle: Summertime Gift Basket**  
Product · Product

Active Status

**PRODUCT DETAILS** Bundle Products Product Properties Additional Details NOTES FIELD SERVICE Related

|             |                          |
|-------------|--------------------------|
| Name        | * Summertime Gift Basket |
| Product ID  | * GB3456                 |
| Parent      | Family Gift Basket       |
| Valid From  | ---                      |
| Valid To    | ---                      |
| Description | ---                      |

|                    |                |
|--------------------|----------------|
| Unit Group         | * Default Unit |
| Default Unit       | * Primary unit |
| Default Price List | * Retail       |
| Decimals Supported | * 2            |
| Subject            | ---            |

**Fig.8**

SG

Bundle: Summertime Gift Basket

Product · Product

Active Status

PRODUCT DETAILS

Bundle Products

Product Properties

Additional Details

NOTES

FIELD SERVICE

Related

|   |                    |          |              |          |
|---|--------------------|----------|--------------|----------|
| ✓ | Associated Product | Quantity | Unit         | Required |
|   | Cheese             | 3.00000  | Primary unit | Required |
|   | Cookies            | 4.00000  | Primary unit | Required |
|   | Bottle of Water    | 4.00000  | Primary unit | Required |

Fig.9

SG

Bundle: Summertime Gift Basket

Product · Product

Active Status

PRODUCT DETAILS

Bundle Products

Product Properties

Additional Details

NOTES

FIELD SERVICE

Related

|   |                          |               |              |           |          |        |
|---|--------------------------|---------------|--------------|-----------|----------|--------|
| ✓ | Name                     | Base Property | Data Type    | Read-Only | Required | Hidden |
|   | Number of Place Settings | ---           | Whole Number | No        | No       | No     |
|   | Size of the Basket       | ---           | Option Set   | No        | Yes      | No     |

Fig.10

**Step 4)** Now the product Bundle Summertime Gift Basket is sold as a single product, is now Created as an opportunity to Account Adventure works, and it is found that Adventure works seems to be interested in it, as displayed in the below Fig.11.

10 Summertime Gift Baskets

Opportunity · Opportunity

Est. Close Date

Est. Revenue

In Progress Status

sudesh kumar Owner

Opportunity Sales Process

Active for 18 hours

Qualify (18 Hrs)

Develop

Propose

Close

Summary

Products

Quotes

Field Service

Files

Related

|                    |                          |
|--------------------|--------------------------|
| Topic              | 10 Summertime Gift Ba... |
| Contact            | ---                      |
| Account            | Adventure Works          |
| Purchase Timeframe | ---                      |
| Currency           | Euro                     |
| Budget Amount      | ---                      |
| Purchase Process   | ---                      |
| Description        | ---                      |

Timeline

Enter a note...

Auto-post on 10 Summertime Gift Bask... 11/04/2020

Opportunity: Created by sudesh kumar for Account Adventur...

Relationship Assistant

There are currently no insights.

Stakeholders

No data available.

Sales team

Fig.11

**Step 5)** Now, the opportunity gets qualified, and Contact, Purchase amount and Budget are identified and moves to the Develop stage, where Stakeholders and competitors are identified and moves to the Propose stage where sales team, proposal, internal review and proposal are presented. And once this



done, then the opportunity reaches the final stage final proposal, Decision date and Thanks note are sent awaiting decision to be done.

| 10 Summertime Gift Baskets |                          |
|----------------------------|--------------------------|
| Topic                      | 10 Summertime Gift Ba... |
| Contact                    | ---                      |
| Account                    | Adventure Works          |
| Purchase Timeframe         | ---                      |
| Currency                   | Euro                     |
| Budget Amount              | €100.00                  |
| Purchase Process           | ---                      |
| Description                | ---                      |

**Timeline**

- Auto-post on 10 Summertime Gift Bask... 11/04/2020  
Opportunity: Created by sudesh kumar for Account Adventur...

**Relationship Assistant**

There are currently no insights.

**Stakeholders**

No data available.

**Sales team**

Fig.12

**Step 6)** At the last stage, if the proposal is accepted, the opportunity is won and account for adventures works has been successfully completed, which can be confirmed from the timeline shown in Fig.13.

| 10 Summertime Gift Baskets |                          |
|----------------------------|--------------------------|
| Topic                      | 10 Summertime Gift Ba... |
| Contact                    | ---                      |
| Account                    | Adventure Works          |
| Purchase Timeframe         | ---                      |
| Currency                   | Euro                     |
| Budget Amount              | €100.00                  |
| Purchase Process           | ---                      |
| Description                | ---                      |

**Timeline**

- Auto-post on 10 Summertime Gift Baskets  
sudesh kumar won Opportunity for Account Adventure Works: €100.00. Congratulations! 14:41
- Opportunity Completed by sudesh kumar  
€100.00  
10 Summertime Gift Baskets 14:41
- Auto-post on 10 Summertime Gift Baskets  
Opportunity: Created by sudesh kumar for Account Adventure Works. 11/04/2020

**Relationship Assistant**

There are currently no insights.

**Stakeholders**

No data available.

**Sales team**

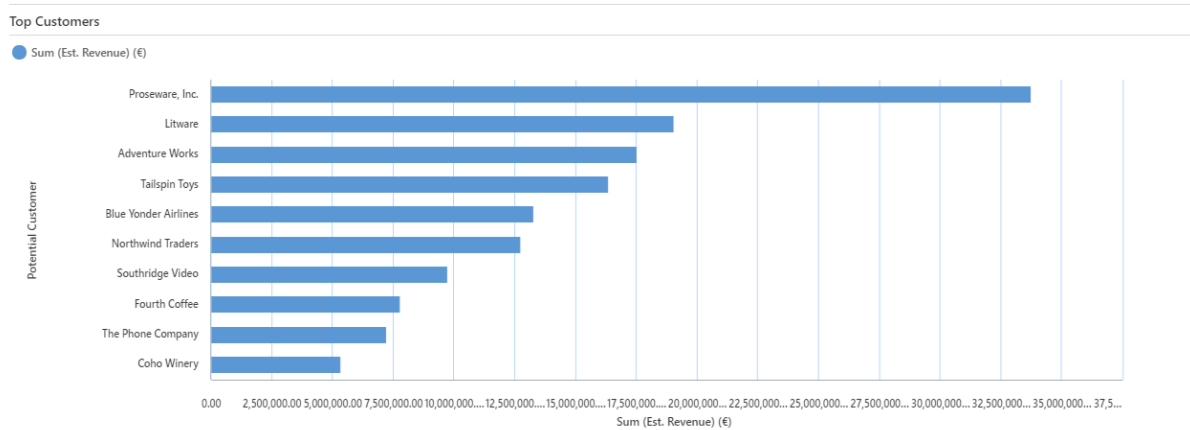
Fig.13

Thus, the entire process of Association of low selling products is explained by using the Dynamic CRM Module.

### Potential Customer Categorization – Dynamic 365:

In Customer categorization, the potential customers are identified (i.e. top selling and top profitable customers) and they are sent promotional messages and offers, so that they can be given preferential services and retained over the upcoming years thereby the overall sales & profits increases. The Following steps for the implementation in CRM are mentioned below,

**Step 1)** In the first stage, the Top customers are identified across the firm level. We have identified Prosware, Inc., Litware and Adventure Works as the potential customers for our Project, as shown in Fig.14.



**Fig.14**

**Step 2)** In this stage, we have created leads for three potential targets namely Proseware, Inc., Litware and adventure Works and then promotional messages are sent for each of the potential customers, as shown in Fig.15, Fig.16 & Fig.17.

+ New Delete Refresh Qualify Process Disqualify Assign Share Add to Marketing List Email a Link ...

**KH Kit Harrington**  
 Lead · Lead ▾

Lead Source: Warm Rating: New Status: sudesh kumar Owner: ▾

Lead to Opportunity Sale... Active for less than one mi...  
 Quality (< 1 Min) Develop Propose Close

Summary Details Files Related

**Contact**

Topic: Promotional Offer for Proseware, Inc.

Type: Item based

First Name: Kit

Last Name: Harrington

Job Title:

**Timeline**

Enter a note...

Auto-post on Kit Harrington  
sudesh kumar created Kit Harrington 15:20

**Stakeholders**

No data available.

**Competitors**

No data available.

**Fig.15**

+ New Delete Refresh Qualify Process Disqualify Assign Share Add to Marketing List Email a Link ...

**WW Walter White**  
 Lead · Lead ▾

Lead Source: Warm Rating: New Status: sudesh kumar Owner: ▾

Lead to Opportunity Sale... Active for less than one mi...  
 Quality (< 1 Min) Develop Propose Close

Summary Details Files Related

**Contact**

Topic: Promotional Offer for Adventure Works

Type: Item based

First Name: Walter

Last Name: White

Job Title:

**Timeline**

Enter a note...

Auto-post on Walter White  
sudesh kumar created Walter White 15:23

**Stakeholders**

No data available.

**Competitors**

No data available.

**Fig.16**

| My Open Leads  |   |                                       |               |                  | Search for records |
|----------------|---|---------------------------------------|---------------|------------------|--------------------|
| ✓ Name         | ↑ | Topic                                 | Status Reason | Created On       |                    |
| John Scully    |   | Promotional Offer for Litware         | New           | 16/04/2020 15:22 |                    |
| Kit Harrington |   | Promotional Offer for Proseware, Inc. | New           | 16/04/2020 15:20 |                    |
| Walter White   |   | Promotional Offer for Adventure Works | New           | 16/04/2020 15:23 |                    |

Fig.17

**Step 3)** From three leads, only two leads are converted into opportunity, which is for Proseware, Inc. and adventure works which is explained in the Fig.18., whereas for Litware, the leads failed to convert into an opportunity.

| Search Results                        |   |                    |              |                 | promotional |
|---------------------------------------|---|--------------------|--------------|-----------------|-------------|
| ✓ Topic                               | ↑ | Potential Customer | Est. Revenue | Est. Close Date |             |
| Promotional Offer for Adventure Works |   | Adventure Works    | ---          | ---             |             |
| Promotional Offer for Proseware, Inc. |   | Proseware, Inc.    | ---          | ---             |             |

Fig.18

In Proseware Inc., the opportunity created by lead Kit Harrington moves across various stages, where the contact, purchase amount and Budget are identified and moves to the Develop stage, where Stakeholders and competitors are identified and moves to the Propose stage where sales team, proposal, internal review and proposal are presented. And once this done, then the opportunity reaches the final stage final proposal, Decision date and Thanks note are sent awaiting decision to be done.

And once the opportunity is accepted the order is done and the opportunity becomes successful, which is confirmed from message in the timeline in Fig.19.

Promotional Offer for Proseware, Inc.  
Opportunity · Opportunity

---  
Est. Close Date

---  
Est. Revenue

Won  
Status

sudesh kumar  
Owner

Lead to Opportunity Sale...  
Completed in 6 minutes

Qualify

Develop

Propose

Close

Summary

Products

Quotes

Field Service

Files

Related

Topic
Promotional Offer for Proseware, Inc.

Contact
Kit Harrington

Account
Proseware, Inc.

Purchase Timeframe
---

Currency
Euro

Budget Amount
---

Purchase Process
---

Description
---

Timeline

Enter a note...

Auto-post on Promotional Offer for Proseware, Inc.  
sudesh kumar won Opportunity for Account Proseware, Inc.: €500.00.  
Congratulations!

Opportunity Completed by sudesh kumar  
€500.00  
Promotional Offer for Proseware, Inc.

Auto-post on Kit Harrington  
Lead: Qualified by sudesh kumar and converted to Opportunity  
Promotional Offer for Proseware, Inc.

Auto-post on Promotional Offer for Proseware, Inc.  
Opportunity: Created by sudesh kumar for Account Proseware, Inc.

Relationship Assistant

There are currently no insights.

Stakeholders

Kit Harrington  
Stakeholder

Sales team

Fig.19

In the Adventure Works, the lead was converted into an opportunity and the opportunity was qualified and where the estimated Budget, decision makers are identified and developed where stakeholders and competitors are identified and then the proposal is sent, where sales team, Internal review and sales team for the project was identified and then its closed with sending thank you note, final proposal and date for making the final decision.

But in this case of Adventure Works, the opportunity was considered lost, so its closed and considered as a lost opportunity which was mentioned in the Timeline message in Fig.20.

Thus, from three leads that were created only two leads were converted into opportunity and out of which one opportunity was considered as won and thus the entire process of Potential customer targeting was explained using the Dynamic CRM.

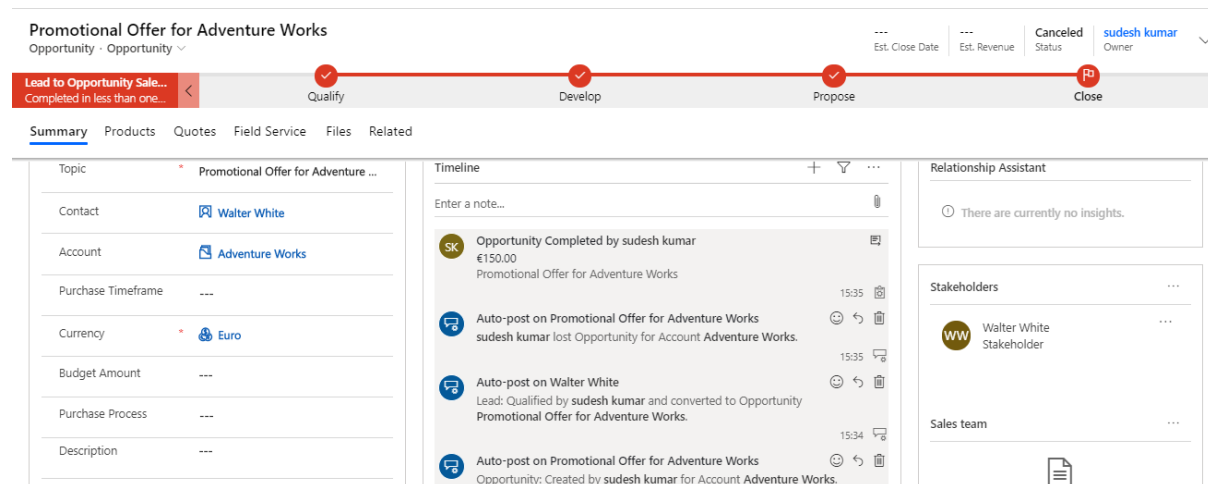


Fig.20

## BUSINESS ADVANTAGES OF IMPLEMENTATION:

- The Main advantage of the implementation of this business solution is retain the top performing customer (i.e. Top Revenue yielding and Most Profitable customers) over the time period, so that the sales and profit are not affected much.
- By targeting customer on each individual category and providing with offers and promo codes naturally increases the customer inflow into the retail stores.
- By combining low selling products and selling them as a combined one, increases the product sales, reduces the product wastage and thereby increasing the overall sales as well.
- Lowering the price of the products that do not have frequent movement attracts specific target customer group thereby contributing to the customer inflow along with reduction in product wastage as well.

## IMPLEMENTATION IN POWER BI:

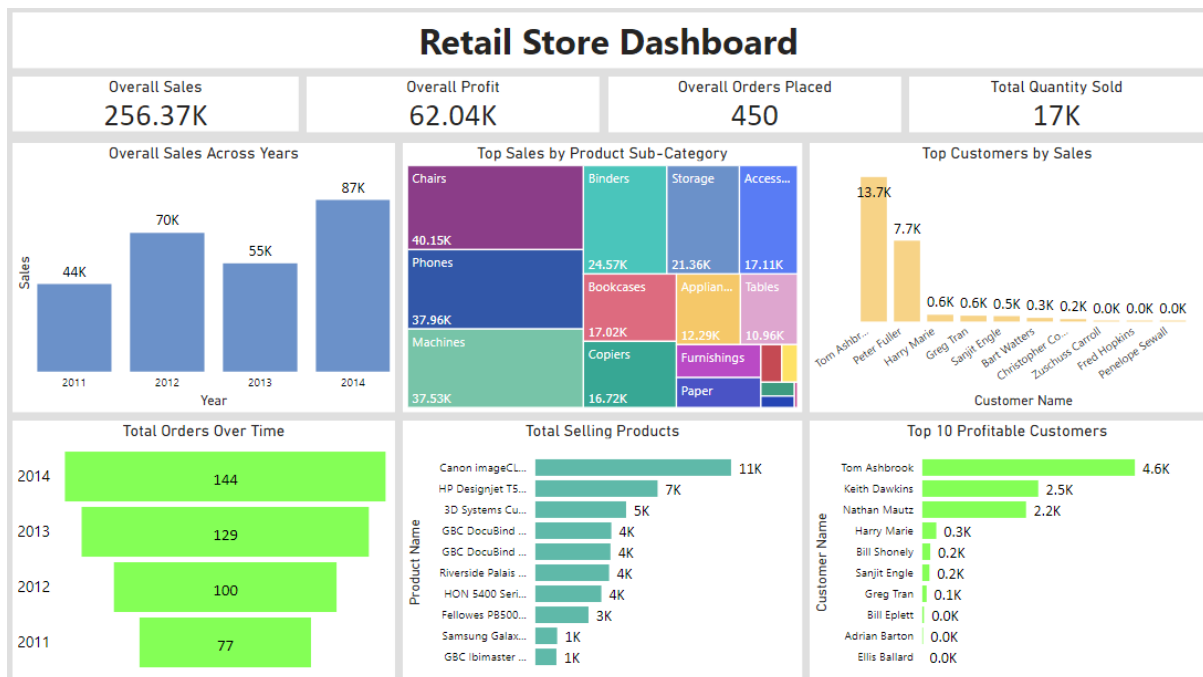
The beauty of the data can be analysed with its hidden insights, when its being visualized in appropriate form. In this project, we use the Microsoft PowerBI for visualizing the entire data for the company across various management levels and parameters. As the company grows larger in size, the levels of hierarchy increases, and the problem & performances are analysed at various levels in the management for finding and implementing the optimum solution for each problem.

Here we have analysed and visualized the data across categories like **Customer** and **Product category** and across 3 levels of business aspects, as given below.

- Retail store Dashboard
- Manager Dashboard.
- Executive Dashboard.

## Retail Store Dashboard:

The Retail Store Dashboard contains details about parameters and aspects in a retail store in Aix-en-Provence in France (EU). It provides details in an overview like overall sales, profits, orders placed, and total quantity sold in entire store along with other individual aspects as well.



**Fig.21 Retail Store Level dashboard**

The Retail Store Dashboard has four indicators which denotes the **Overall sales** (overall sale amount), **Overall Profit** (profits generated from the store), **Overall orders Placed**(i.e. Total orders that was placed) and **Total quantity sold**(i.e. total sold products). The other aspects addressed by the charts includes:

- **Overall Sales Across Years:** This chart represents the total sales from the retail store for period of 4 years from 2011 to 2014.
- **Top Sales by Product Sub-category:** This chart denotes the sales generated across each of the product sub-categories.
- **Top Customers by Sales:** This visual denotes the top customers who has contributed to the sales of the store.
- **Total orders Over Time:** This chart denotes the total orders that was generated from the store during the 4-year period.
- **Top Selling Products:** This visual denotes the top selling products at the store.
- **Top 10 Profitable Customers:** This chart denotes the top 10 profitable customers, over the 4-year period in the store.

## Business insights:

- We have found that the Overall sales were higher in the year 2014. And sales in 2013 faced a dip, when compared to the previous year, whereas when you compare the total order count, the orders were increasing YOY, which denotes that in the year 2013, a lot of orders with low value were placed when compared with other years.
- Chairs, Phones and Machines contributed to the maximum sales in the product Sub-category level.
- Tom Ashbrook was the most profitable and most revenue yielding customer, comparing to other customers in the retail store.

## Manager Dashboard:

Manager Dashboard is the second level of hierarchy, which is above the retail store level dashboard and it deals with various filters and charts in an in-depth manner across the entire firm. They have lot of customization on it, for analysing the values at various dimensions.

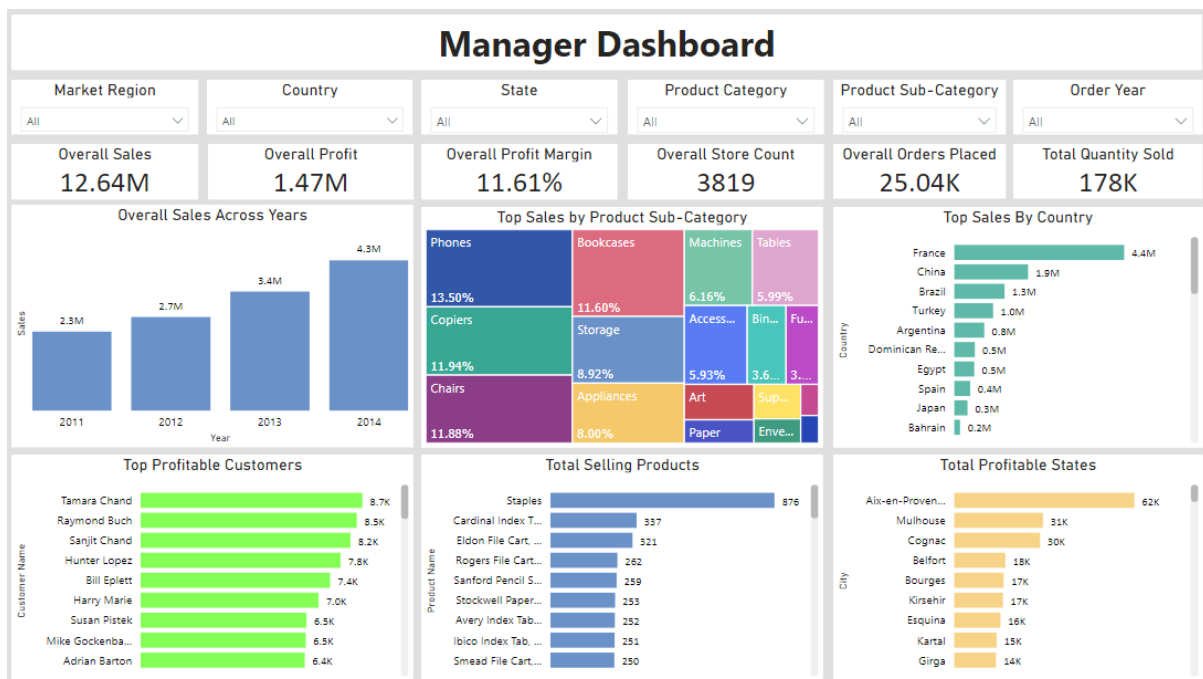


Fig.22 Manager Dashboard

As mentioned above, the dashboard contains various filters like Market region, Country, State, Product category, Product Sub-category and Order Year, which also provides values in overview manner for Overall sales, Overall profit, Overall Profit Margin, Overall Store Count, Overall orders placed and Total quantity sold. The other individual aspects mentioned in the dashboards are,

- **Overall Sales Across Years:** This chart depicts the sales happened across the firm in the entire time frame.
- **Top sales by product Sub-Category:** This chart represents the percentage contribution of each product sub-categories.
- **Top sales by Country:** It Denotes the sales across each country, where the retail store is established.
- **Top Profitable Customers:** This denotes the profitable customers for firm in a overall company level.

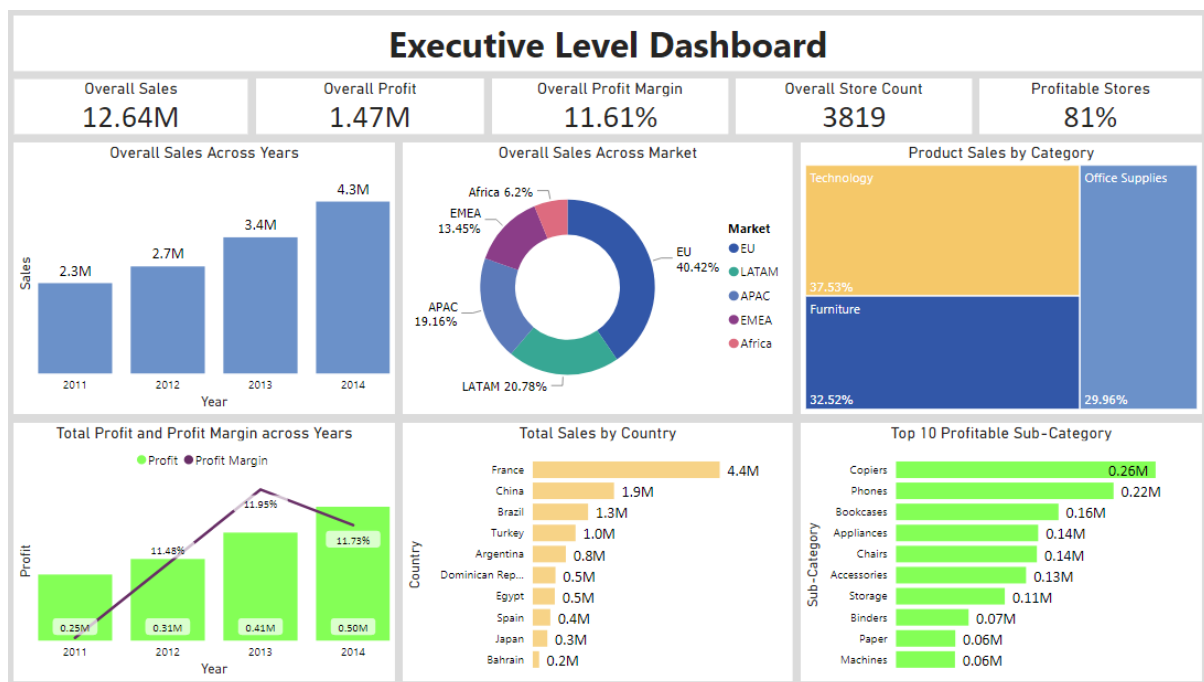
- **Top Selling Products:** This chart represents the most selling products across the firm based on the quantity sold.
- **Total Profitable states:** This chart represents the states which has contributed the most profit to the company in the entire 4-year period.

### Business insights:

- The Overall Sales were increasing on a YOY Pattern, which depicts steady Growth
- Phones, Copiers, Chairs and Bookcases were the top selling Product Sub-categories
- Top sales occur at France, which leads the second placed China by more than double. And the top performing state Aix-en-Provence also seems to be in France.

### Executive Dashboard:

Executive Dashboard is for people dealing at a very high level in firm, which usually includes Key Stakeholders, CEO, CFO, Director, and other Board members in the firm. This dashboard depicts and provides insight to Executives, about the entire organization level.



**Fig.23 Executive Dashboard**

This Executive Dashboard contains details about overall values like Overall sales, Overall profit, Overall profit Margin, Overall Store Count and Profitable Store(percentage). The other individual aspects in the dashboard are mentioned below,

- **Overall Sales Across Years:** This chart denotes the overall sales for the company over the years.
- **Overall Sales Across Market:** This chart denotes the overall sales contribution across various Market regions in the world.

- **Product sales by category:** This chart represents product sales percentage across categories.
- **Total profit and Profit Margin Across years:** This graph denotes the overall profit for the firm along with the Profit margin on each individual year.
- **Total Sales by country:** This chart mentions the sales across each country in highest ranking order.
- **Top 10 Profitable Sub-Category:** This chart visualizes the top profitable product sub-categories over the entire time frame.

### Business Insights:

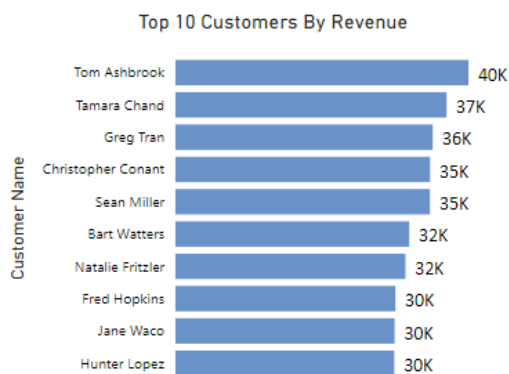
- The European Union (EU) Market contributed the maximum sales for the store followed by LATAM and APAC
- In case of Product Category, the technology was sold predominantly in the stores.
- We have around 81% profitable stores and the Copiers and Phones are highest selling product Sub-categories.
- The profit margin was around 11% in the entire time frame, with 11.95% being the highest in 2013.

### Product and Customer category:

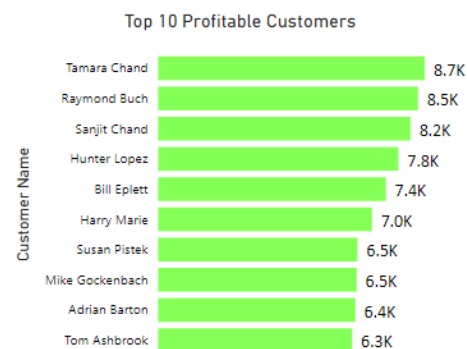
The product and customer category charts are visualized in holistic manner to get a deeper insight of the individual categories. In case of customer categories, we concentrate on top performing customers as they acts a potential leads for the Business process, and in case of Product category, we concentrate on low selling products predominantly as they have to be cleared and sales has to be improved on them.

### Customer category:

In case of customer category, the charts for the top performing customers are visualized below,



**Fig.24 Top Customers by Revenue**



**Fig.25 Top Customers by Profit**

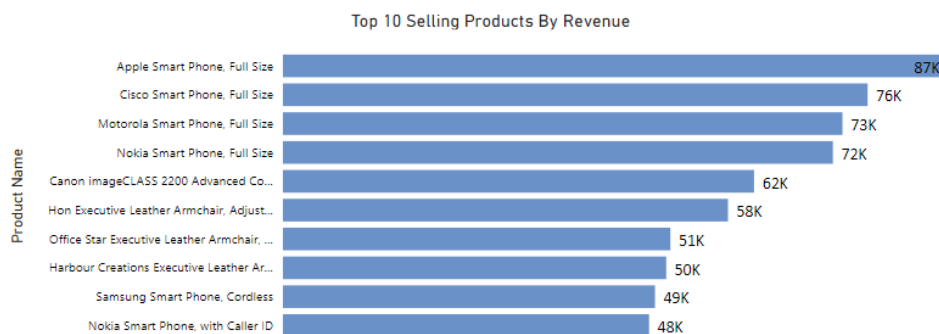
In the above charts in Fig.24 & Fig.25, we can visualize the top customers by revenue and profit. From the above Graph we can conclude the top revenue producing customer are not the top profitable customers, which can be confirmed by the charts that except 3 of the top revenue yielding customers (Tom Ashbrook, Tamara Chand and Hunter Lopez) other were not present in the top profitable customers list.

### Product category:

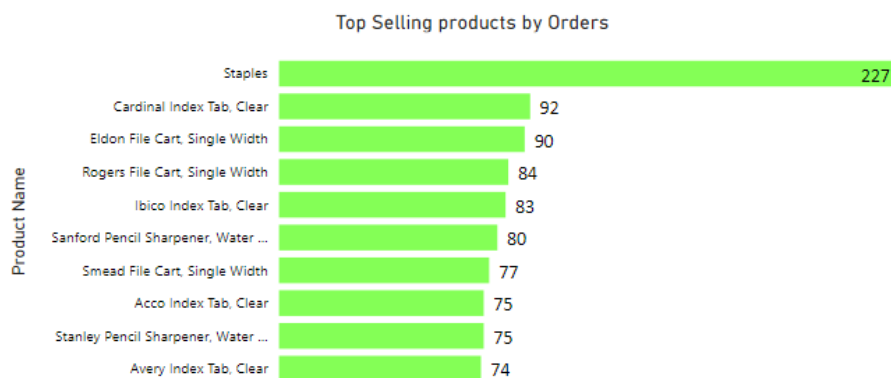
The visualization charts for the top selling products are presented below in Fig.26 & Fig.27, from which we have found that high selling products mostly were under technology category and individual product



values were high, whereas top ordered products were staples, and mostly other stationary office products, where the individual values were low when compared with overall Average Price value.

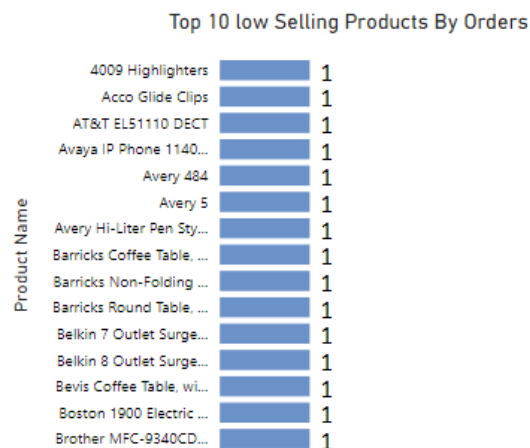


**Fig.26 Top selling products by Revenue**



**Fig.27 Top selling products by Orders**

And further analysing the products which are low selling, as per Revenue. From the chart below in Fig.28, we have found that below mentioned products were the low selling products and were also found that, their price values seem to be a bit less. So, they can be combined with other products of the same category by the association rules and can be sold, which increases the product sales and the revenue as well.



**Fig.28 Top Low selling products by Orders.**

## **FUTURE IMPROVISATION WITH SUPPLY CHAIN:**

Supply chain has been growing at massive rate and has become a significant part of retail industry. As we are targeting on customer inflow into our retail stores, the growth of online retails like Amazon, eBay has been significant. Thus, it has become a mandate for the retail stores to compete with these online Giants. In order to tackle these conditions Carrefour SA could adopt some Modification in their Business process in the upcoming years like,

- Placing an order online in the Company's retail Application and collect it directly from the Retails store across the city, so that the product delivery is done at a significantly faster rate.
- Company could adopt a Free Home delivery strategy, so that the products above a threshold value can be delivered at a free of cost.
- Create a product inventory system, so the product which are high selling can be refilled by the Respective company brands in-charges, so that the refilling problem is avoided, and products shortage is addressed completely.

## **CONCLUSION:**

Carrefour SA have analysed and adopted several strategies to increase the Customer inflow into their retail store, reduce product wastage and increase overall sales and profits, and were also proved to be very efficient in various aspects. We have also suggested the target customer groups that has to be concentrated for achieving better results & in product categorisation, we suggested the use of Association rule mining so that similar low selling products can be sold as combined one, so that dual benefits of avoiding product wastage and increase sales can be achieved simultaneously. We have also analysed the future potential of the retail business and concluded several steps that can be adopted in surviving the growing competition from other retails giants in the upcoming years.