



BUSINESS INTELLIGENCE AND BUSINESS ANALYSIS
PROJECT SPECIFICATION
MSC IN DATA ANALYTICS, JAN 2021

TEAM MEMBERS:

Bharti Mehatari
x20175825@student.ncirl.ie

Neha Suryawanshi
x20169531@student.ncirl.ie

Laiba Rehman
x20144032@student.ncirl.ie

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BUSINESS NAME: DStore

1. ABSTRACT

Our project is based on a supermarket store in India that distributes all kinds of products related to furniture, office supplies and electronic appliances. The business has its branches in different cities of India. We will be performing various exploratory and statistical analyses of the nature of business and identify the factors that can help them in the key areas of improvement with the help of BI tools. The BI methods will provide a business model that can be useful for the supermarket to improve its sales across the under-performing states. We will also discuss about implementing a Supply chain and CRM environment

2. BACKGROUND AND MARKETPLACE

Dstore is a retail company that operates a chain of supermarkets in India. Each store stocks mainly three categories of goods like furniture, technological appliances and office utility products. These categories include various kinds of products like chairs, phones, copiers, tables, binders, supplies, appliances, machines, bookcases, storage, furnishings, art, paper and more- available at competitive prices. The company's core objective is to offer customers good products at great value. DStore was started by Mr. Sunil Tripathi and his family to address the growing needs of the people as well as companies. From the launch of its first store in Maharashtra, DStore has its presence across states like Maharashtra, Gujarat, Andhra Pradesh, Madhya Pradesh, Karnataka, Telangana, Chhattisgarh, Assam, Tamil Nadu, Punjab and Rajasthan.

Since the company deals with heavy goods like tables and chairs, they procure these items from various suppliers. All these suppliers belong to various regions in India. So, it becomes easy to procure and ship the goods as per proximity. They have a large number of customers varying from regular consumers to corporate offices as well as home offices.

Dstore believes in meeting the expectations of consumers by providing them good quality products and better services than the competitors.

3. FEEDBACK ANALYSIS

In order to propose the idea of implementing a BI system into their business, we performed an initial analysis to find out the current behaviour of the business. Therefore, we conducted the feedback analysis for a 30-day period to get input from customers on various aspects as mentioned below:

3.1 FEEDBACK ON THE BASIS OF VIP CARDS:

The reviews given by the customers in the form of feedback is crucially important in a workplace as it helps in improving productivity, changing behaviors and evaluating services performance. The Employees come to know about the fields in which they are doing well and areas in which they need to change to do better. Thus, the feedback plays a major role in the success of any business. By keeping these factors in our minds, we decided to have a feeding process on two levels. One immediately after the purchase of a product and the second few days later whey they have utilized the product.

Giving VIP cards to the customers can greatly benefit in achieving the loyalty of the customers which in directly help you in increasing the revenue generated by that customer. As per studies it is shown that a person who is your regular customer tends to shop 67% more money than the person who comes at your shop for the first time. It might seem odd at first that you are creating a program that is reducing your margins and providing discounts to the customers on the services and products. However, as per the research done it is considered to be a smart decision to have a VIP card facility because it is shown that VIP card members generate approx. 12 to 18 percent more revenue than the customers who are not members of the VIP program.

The below system was implemented to analyse customers' interest in VIP cards and find out how many of them would like to have the benefits if they were introduced in the future. This could help the business get an idea if the marketing strategy regarding VIP cards would have positive outcomes. On analysing the feedback, we can decide if we want to implement the VIP card process.

Following is the link and screenshot of the feedback form which was implemented -
<https://form.jotform.com/211215416430340>

The screenshot shows a feedback form titled "Interested in being VIP?". The form includes fields for Name (First Name and Last Name), Gender (dropdown menu with "Please Select"), and E-mail (text input with placeholder "ex: myname@example.com"). Below these fields is a section titled "Benefits of VIP card" with a bulleted list of perks: "Free shipping for orders worth Rs.4000 or more", "Reward points on each purchase", "10% discount on selected products", "30 day money back policy on damaged products", and "Exclusive offers during seasonal period". A note at the bottom states "* 1 Reward point = Rs.1". There is a question "Would you like to opt for VIP card?" with three radio button options: "Yes", "Maybe", and "No". At the bottom is a green "Submit Feedback" button.

Interested in being VIP?

We would love to hear your thoughts, suggestions, concerns or problems with anything so we can improve!

Name *

First Name

Last Name

Gender

E-mail *

Please Select

ex: myname@example.com

example@example.com

Benefits of VIP card

- Free shipping for orders worth Rs.4000 or more
- Reward points on each purchase
- 10% discount on selected products
- 30 day money back policy on damaged products
- Exclusive offers during seasonal period

* 1 Reward point = Rs.1

Would you like to opt for VIP card

Yes Maybe No

Submit Feedback

Fig 1. Feedback form 1 for VIP Cards

The diagram below illustrates the workflow of how the feedback analysis is carried out. Firstly, the material is manufactured and created by the supplier. He/she then sells it to the retail which is our business organisation in this instance. Then the business tries to display or sell these products to the customers. After the consumer has analysed and makes a choice, we ask them if they are interested in opting for a VIP card. Based on the responses received by the customer for the same, further analysis is performed and a decision will be made whether to implement this strategy or not.

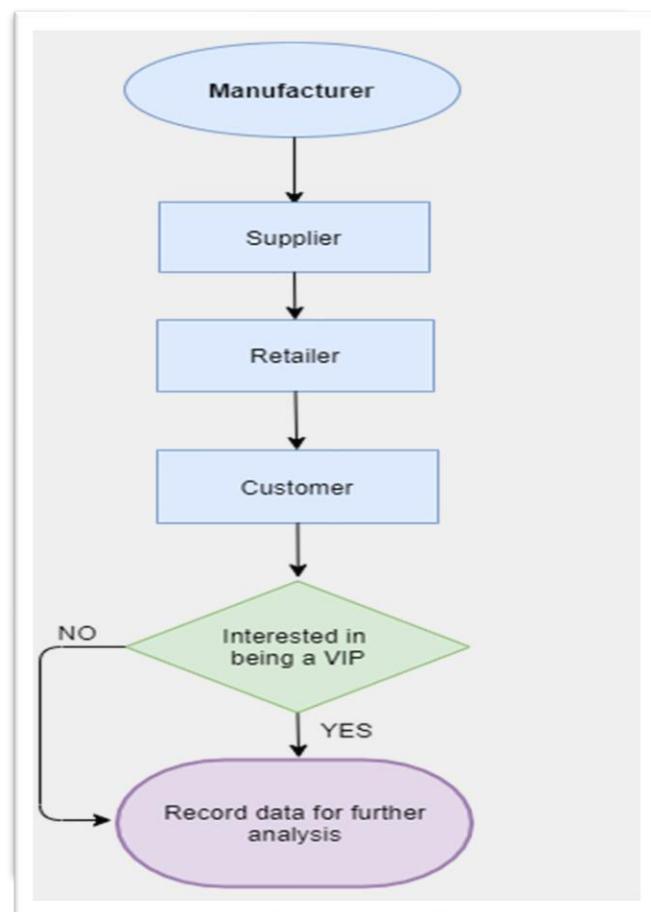


Fig 2. Flow chart for feedback form 1

3.2 FEEDBACK ON THE BASIS OF QUALITATIVE MEASURES:

With the help of Customer Satisfaction Surveys, Employees can determine how their regular customers feel about their organisation. They also help to find out the areas in the business that need improvement. Specially, in case of small size enterprises the benefits from these surveys are invaluable. Our feedback form is conducted to know the customer satisfaction level about the products and services we provide. This will eventually help the business not only in exposing the issue we weren't aware of but also will help in remedy them.

This form was implemented to study the behaviour of the services provided by the business from customers as they are the key stakeholders of a business in every aspect. This also helped to understand the areas which lacked performance and which could be improved using BI tools. The form can be found at <https://form.jotform.com/211215999007356> and the following is the screen shot for the same.

Customer Satisfaction Survey

Name

<input type="text"/>	<input type="text"/>
First Name	Last Name

Email

<input type="text"/>
example@example.com

How would you rate the quality of the following:

	1	2	3	4	5
Product	<input type="radio"/>				
Service	<input type="radio"/>				
Packaging	<input type="radio"/>				
Shipping	<input type="radio"/>				
On-time Delivery	<input type="radio"/>				

Would you like to shop again with us?

- Yes
- No
- Maybe

Fig 3. Feedback form 2 for quality

The flowchart below depicts how the feedback is received from the customer and interpreted by the business team to find risk factors in the existing processes that may be costing the business. The product procurement and distribution follow the regular SCM process. After the customers go through the wide range of products and buys them, they will be provided with the feedback form to rate the following qualitative measures such as the product quality, service, packaging quality, shipping and if the product delivery was on time on a scale of 1 to 5 (1 being the least). These responses will be collected and further analysed based on each measure to identify which one did better and which aspects require attention. Accordingly, action is taken for the same. It also covers another question of asking for the likelihood of

shopping by the customer for the next time. Responses for these are also taken into consideration and helps in getting an idea of the customer's buying mind.

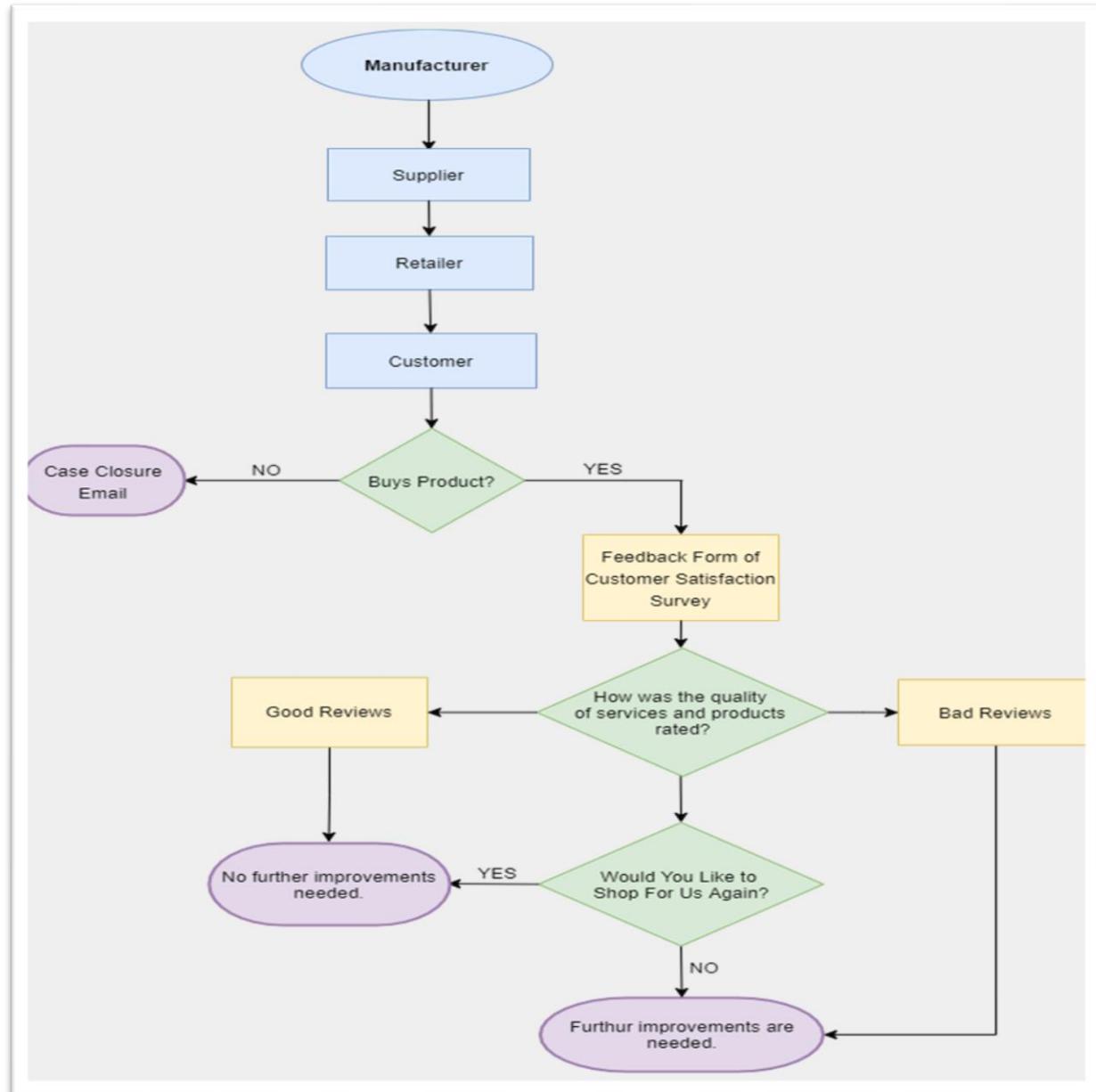


Fig 4. Flow chart for feedback form 2

3.3 CREATION OF A CENTRALISED HUB FOR SUPPLIERS DATA

The supplier's information was not provided in a table format so we created supplier table data on mockaroo by providing appropriate values. Supplier table was linked to the product table on the basis of the productID. Post integration of the supplier table with the business data we tried to visualize the gaps in the business using PowerBI. Following is the screenshot of the creation of the Supplier table using Mockaroo.

The screenshot shows the Mockaroo web application interface. At the top, there's a green header bar with the Mockaroo logo, navigation links for SCHEMAS, DATASETS, MOCK APIs, SCENARIOS, and PROJECTS, and user authentication links for SIGN IN and UPGRADE NOW. Below the header, a message encourages users to download data or sign in to create their own Mock APIs. Another message promotes Docker deployment.

The main area is a data configuration table with columns for Field Name, Type, Options, and various settings like sequential, blank percentage, and summary operators (Σ, X). The data rows represent fields for SupplierID, SupplierName, SupplierState, EmailID, and ProductID.

Field Name	Type	Options
SupplierID	Custom List	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20
SupplierName	Custom List	Block ,Schimmel ,Schneider ,Koch ,Maggio ,Kozey ,Nitzsche ,Osinsk
SupplierState	Custom List	Haryana ,Madhya Pradesh ,West Bengal ,Uttar Pradesh ,Tamil Nadu
EmailID	Email Address	blank: 0 % Σ X
ProductID	Custom List	TEC-PH-10001433 ,TEC-PH-10001457 ,TEC-PH-10001478 ,TEC-PH-

ADD ANOTHER FIELD

Fig 5. Supplier data created using Mockaroo

4. DATABASE DESIGN

In order to analyse and build a functional business analysis system for DStore, the data is segregated into new tables that explain each aspect of the business. This transformation is done on the basis of relatable and identifiable columns as explained below:

- Order Details:** This dataset contains the details of timelines and priorities of each order placed by the customer and also has a unique Id so that there are no discrepancies during the shipment of such products. Other attributes include Shipping Date and Shipping Mode which are necessary as the business has its branches in various states within the country. This data can be used to identify any issues with a specific order or check if the orders with High priority have been shipped to its destination.
- Customer Details:** This section is of utmost importance as it contains the names of people who have purchased products from the business and an additional ‘Segment’ attribute to distinguish between the type of buyer viz. Consumer, Corporate office and Home Office.
- Location Details:** This dataset contains all the various regions within the country where the business has its presence. The creation of this table as a separate entity proves to be useful for tracking the demographic aspect of the sales of particular goods.
- Product Details:** This table consists of each item bought by a customer or a corporate office. The items are differentiated by categories and subcategories to store the product information using a unique Product ID for future tracking purposes.
- Sales Details:** This dataset contains information about the revenue generated by the organisation, it acts as a one-stop for storing data related to all the financial matters. These attributes are the sales of each product, the number of quantities bought by the customer, the profit gained on each product, discount information on applicable goods and the shipping cost as well since they deal in

various regions of the country. This data can be operated to visualise and observe increase/decrease in the sales and profit margins filtered by any category or timeline and generate reports as well.

6. **Supplier Details:** This dataset comprises the vendors associated with the organisation that procures and sends the goods. It has 3 columns, namely Product Group, Company Name, and Country. This data can be visualised to observe the countries which supply most of the parts or which company leads the supplier market.

The Entity-Relationship diagram below is a concise representation of the relationship between all the tables and how they are linked together with each other. This diagram helps us to identify the associations within the various aspects of the business at a glance.

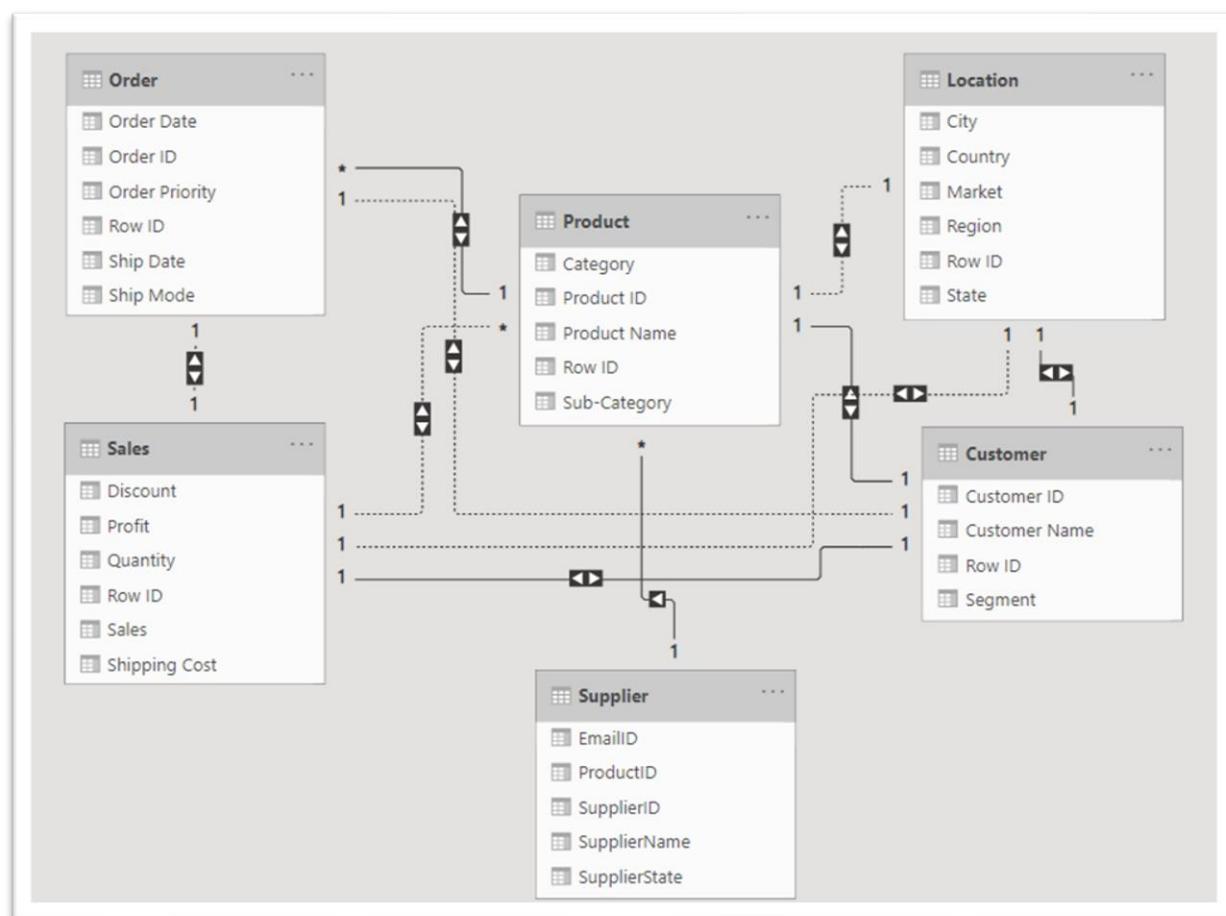


Fig 6. ERD for Data Tables

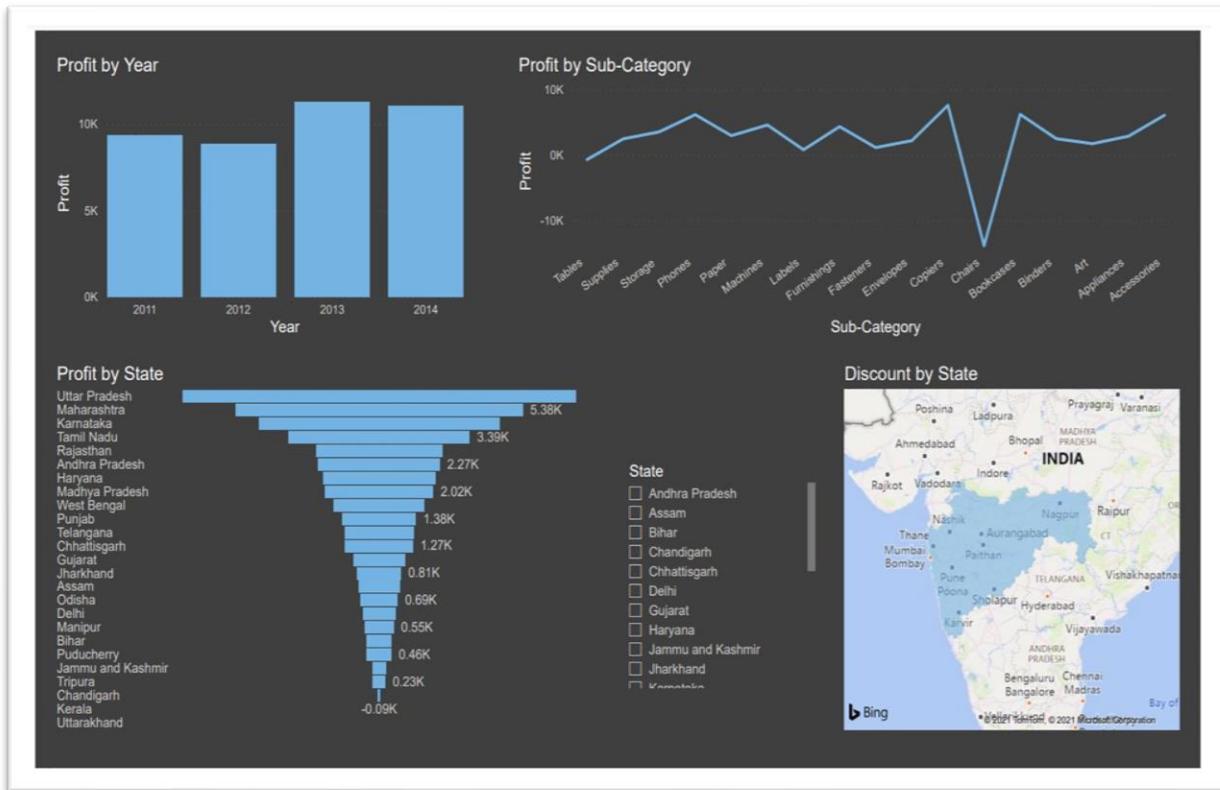
5. SCOPE OF PROCESS AND IMPROVEMENT

On the basis of previous years' data as well as the 30-day period feedback analysis conducted recently, we have identified the potential challenges and threats in the existing system and will propose the implementation of BI applications in their business.

BI is a broad concept which has gained popularity over the last few decades. It's business intelligence software that retrieves, analyses, and transforms data into actionable information that helps business

owners make better decisions and solve problems. Before the digital age, companies relied on annual reports and intuition to analyse this data and move forward. Instant data analysis can make or break the company, beat the competition, and avoid bankruptcy-inducing risks. Considering the advantages of data-driven decision-making, ignoring BI tools is no longer a viable option for companies that wish to stay in business.

Dashboard 1: Analysis of the profits by various factors



The above dashboard mainly displays graphs related to the profits of DSore with respect to time of business, the states and cities where business is carried out

Graph 1: Profit by Year

From this bar graph we can see that the profit of DStore is fluctuating over the years. In the year 2012 the profit dropped down but next year it was again covered up. But we can see in the year 2014 the profit is less than the previous year. This leads us to analyze the data furthermore to find out the gaps which are causing the fluctuation in profits over the year.

Graph 2: Profit by Sub-category of Products

The line chart shows the list of products and the loss or profit associated with their sale. We can see that for products tables and chairs DStore has a tremendous loss. The profit for other products is rather well. This suggests that DStore needs to check the issues with sale of tables and chairs. One of the potential issues could be the gap between selling price and cost price as well as the suppliers' quotation for tables and chairs.

Graph 3: Profit by States

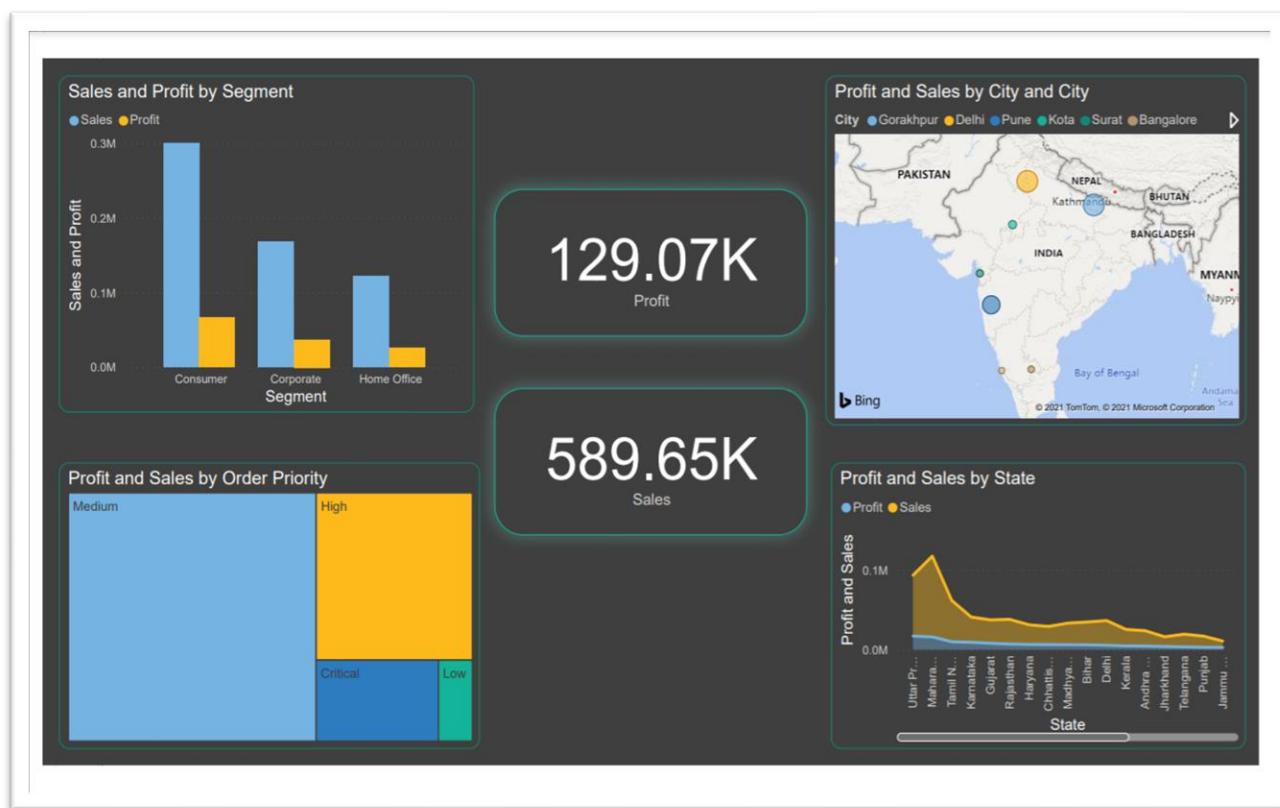
The funnel for profit by states shows maximum profit for the state of Uttar Pradesh and Maharashtra. From the state Rajasthan and below the profits are considerably low. DStore needs to increase their profitability in these states as well by introducing some marketing strategies.

Graph 4: Discounts by States

The map displays that the state of Maharashtra has been given a discount. This could be one of the reasons why the profitability in Maharashtra state is high. DStore can consider giving discounts in other states as well to increase their profits.

A slicer is added to the dashboard to check the distribution of the profits by states.

Dashboard 2: Analysis of Sales and Profits by various factors



This dashboard compares the sales and profits of Dstore with respect to various factors like customer segment, order priority, state and city. Looking at the overall picture we can conclude that Dstore is making a profit of 22%. This can be increased by the filling in the gaps

Graph 1: Sales and Profit by Customer Segment

The maximum sale is for the segment - regular individual consumers. The number of individuals is always more than that of the businesses or corporate offices which explains the high sales and profit.

Graph 2: Sales and Profit by City

DStore has their business set up throughout India in various cities. In this graph we can see that the maximum sale and profit is in the city of Gorakhpur, Delhi, Pune, Kota and Bangalore. DStore can devise marketing strategies to increase the sale and profit in other cities as well.

Graph 3: Sales and Profit by Priority

The tree map displays the type of priority of order and the sale and profit associated with it. We can see maximum sales and profit is made with the medium priority orders followed by the high priority orders. This can also be due to the variant proportion in the type of order. Thus, we can conclude that DStore has most of the medium priority orders. The low priority orders have least sales and profit.

Graph 4: Sales and Profit by State

The margin of sales and profit is higher in very few states while low in most of the states. DStore can implement new strategies to increase their sales and profit margins in the other states as well which will affect the overall profitability of the company in a positive manner.

Dashboard 3: Analysis of Order Priority by various factors



The above dashboard mainly displays the information related to Order Priority based on various attributes of the orders placed.

Graph 1: Sales by Segment and Order Priority

This bar graph depicts the priority of orders as per different types of customers associated with DStore. As it is seen, there seems to be a significant demand for orders placed by Home Offices with high priority. This can be due to the fast digitalisation in India, with businesses opting for working in comfortable conditions thus resulting in an increased demand for products like tables, chairs, appliances and gadgets, etc sold by our business.

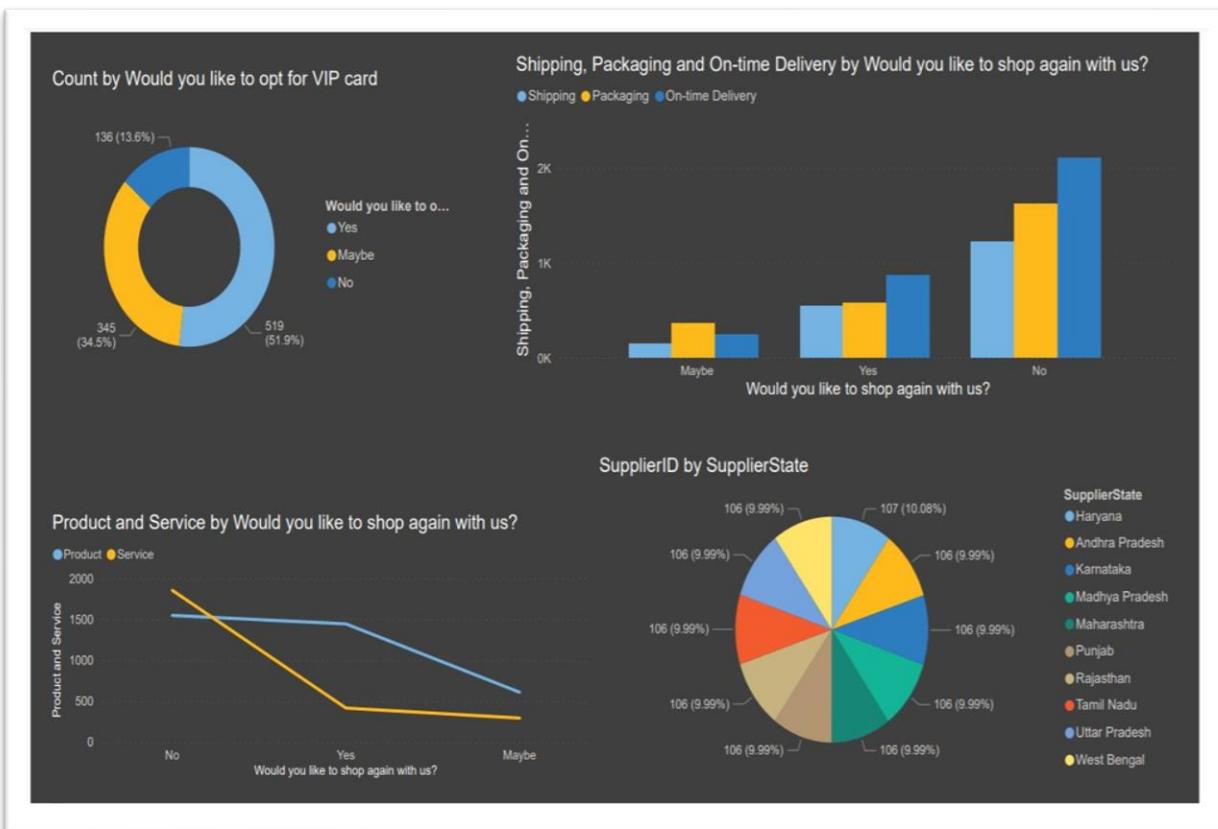
Graph 2: Shipping Cost by City and Order Priority

This stacked bar graph visualises priority of orders on the basis of shipping cost. The orders which have a high or critical priority tend to have an increased rate of shipping cost involved because of the urgency of the product by the customer. This information can be used to track the shipping costs coming from various locations which contribute to higher revenue of the business in addition to sales.

Graph 3: Precise Overview of Order Priority based on Category, Sub-category, Sales and State

This decomposition tree is a concise visualisation of the sales generated based on the order priorities and accounts various other factors that helped in the orders being successful. This map can be used to identify the geographic areas where the demand of products is high or critical and how the sale can be made with ease. It also helps to understand the trending products with respect to sale and have a huge demand in the market. This information can be used to procure more items of this sort, beforehand.

Dashboard 4: Analysis of Feedback forms



To identify the gaps in business as well as ensure the marketing strategies that can be implemented to increase revenue, we introduced two feedback forms as mentioned earlier. The information received as feedback was further analysed to identify potential improvements and good marketing strategies.

Graph 1: Responses of customers who would like to opt for VIP card

As the profit of the DStore was not making high margins so we came up with a new strategy to implement VIP cards in which exclusive offers and discounts will be given to the customers. To be sure if this strategy would work, a survey was conducted and the customers were asked if they would like to opt for the VIP cards. As shown in the graph majority of the people wanted to have access to the VIP cards so we can suggest to the DStore to implement the marketing strategy of distributing the VIP cards to the interested

customers. This would help the business increase their profit margins and sales would increase with the introduction of the benefits of VIP cards.

Graph 2: Shipping, Packaging and On-time Delivery by would you like to shop with us?

A survey was conducted on the Customer Satisfaction to know if the customers were satisfied with our services in which ratings were taken on the services like Shipping, Packaging and On-time delivery. This graph demonstrates that based on these factors DStore was not doing very well as the majority of customers did not want to shop with us. So, we can suggest the DStore needs to improve the quality of Shipping and Packaging of products and make sure that the product is delivered to the customer on time.

Graph 3: Product and Service by Would you like to shop again with us?

From our second survey aforementioned, the ratings on products and services are also asked from the customers. As depicted by the graph the insights taken were that the quality of the product was good but the services provided along with the product like product not being delivered on time, no return policy or maybe that the employees were not treating the customers well when they visited the store. Thus, we can suggest the DStore managers to keep a head check on the employees and see that these issues are well taken care of.

Graph 4: Count of Suppliers by State

In the graph 3 of Dashboard 1 it was seen that there were top 10 states in which the profit was marginally way higher than the others. So, we took only those 10 states and made a graph here in order to count the number of suppliers. We can conclude that the states who have a large number of suppliers are making high profit margins. Therefore, we can suggest DStore to increase their suppliers in other states as well in order to increase its overall sales and revenue.

Studying all the above dashboards, we reach to the conclusion such that:

- Profitability of this organisation has been fluctuating over the years.
- Discount option is only available for Maharashtra state
- There has been a substantial downfall in the sales margin of tables and chairs leading to a loss to the business
- The profitability is low in the states where business has no supplier contact.
- Customers would like to opt for VIP cards
- The Quality of products is good but quality of services is not up-to mark
- Depending on the rating given by the consumer on shipping, delivery and packaging they don't prefer to buy from us again.

IMPLEMENTATION

6. PORTER'S FIVE FORCE MODEL

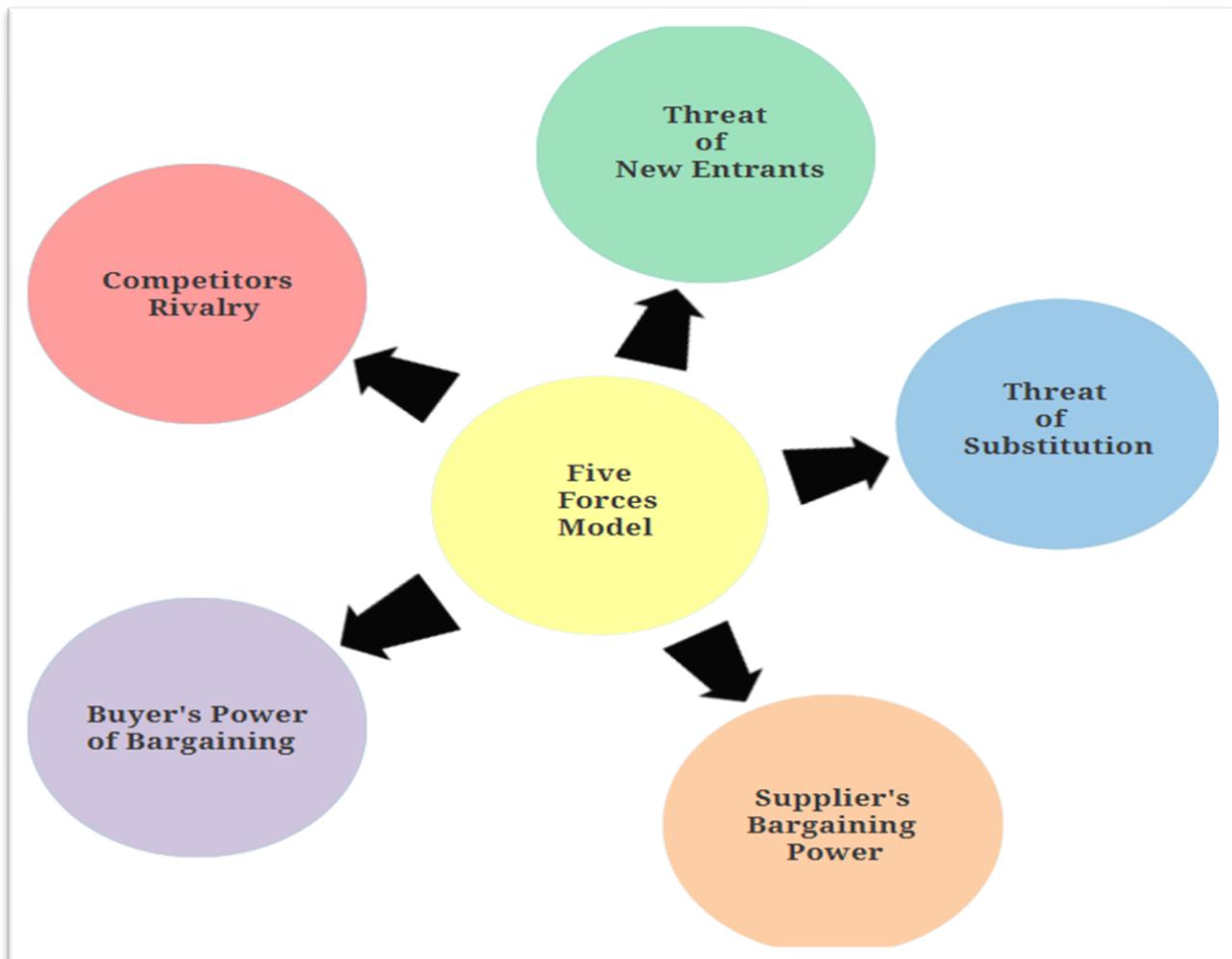


Fig 7. Porter's Five Force Model

In 1979 Michael Porter, one of the founding fathers of business strategy published an article called "How Competitive Forces Shape Strategy". In this article he argued that we often view competition way too narrowly and as a solution came up with 5 basic forces that together shape the industry structure and determine the competitive intensity of an industry. In the end these forces affect the long-term profit potential in an industry and therefore its attractiveness. These Five Forces models can be considered as the External Analysis Framework.

The main purpose of this model is to evaluate the root causes of profitability in an industry through the competitive forces. It draws a connection between competition on one hand and profitability on the other hand. If competitive forces in the industry are high or intense, the profit potential of a firm in that specific industry will decrease.

1. Rivalry among existing competitors: This force examines how intense the current competition is in the marketplace. This is determined by the number of competitors, size of competitors, industry growth rate, product differentiation between rivals and exit barriers.

For few states in which the sales are low for DMART, it is considered that the rivalry is high there as there are other competitors who provide products at cheaper rates as their transportation of goods supply process is better than the DMART. In small states the industry growth is slow, businesses are similar in power and there is not much differentiation among the products and services so customers buy their product from the shops they get products at cheaper rates.

2. Threat of new entrants: New entrants in the industry bring new capacity and the desire to gain market share that put pressure on prices, costs and the rate of investments necessary to compete. The seriousness of this threat depends on the barriers to entry in a certain industry. The higher these barriers the smaller is the chance the more players will enter the playing field and smaller the threat for the existing rivals.

In the example of DStore, the threat of a new entrant can be considered on a medium to low level as DMART exists on a big level with a lot of years of experience, thus even if new enterprise come with any new product, DStore will be able to overcome that hurdle either by making a product better than available one or by telling their suppliers to transport them the same product if its demand in the market increases.

3. Threat of substitutes: a substitute product performs the same or a similar function as an industry product by a different means they essentially fulfil the same underlying need even though they may not look identical on the surface they are therefore easy to overlook.

In the example of DStore, this can be a big threat as this enterprise sells products which are considered as daily use products like chairs, tables, kitchen appliances or electronic gadgets so the customers might switch to another company if they feel that the price for the same but substitute product is better in those companies.

Solution opt for this is that the DStore can stay more attractive and prevent its product from getting replaced or obsolete.

4. Bargaining power of Suppliers: This force analyses how much power and control a company supplier has over the potential to raise its prices or to reduce the quality of purchased goods or services which in turn would lower an industry's profitability potential.

This is a big threat for DMART, as we have mentioned before that the sales of some of the states have been low because of the continuous problems with the suppliers, this has greatly affected the sales in some states of DMART. In order to solve this problem, the head employees are thinking of increasing the number of suppliers and changing some of their suppliers as well.

5. Bargaining power of Buyers: This force analyses to what extent customers are able to put the company under pressure by demanding better quality thereby driving up cost or exert control over price. Customers hold a lot of power when they have a lot of alternatives to buy from so it becomes easy for them to switch from one company to another.

DStore does not possess this threat on a big level, as it tries to sell the product which is different and unique from the products that its competitors sell. It also has a variety of products so the customers can choose as

per their choice and even if, after that customer wishes to bargain, DMART is providing a facility of VIP card in which if a customer has it, he/she is given extra privileges with exclusive offers on the products.

7. BALANCED SCORECARD

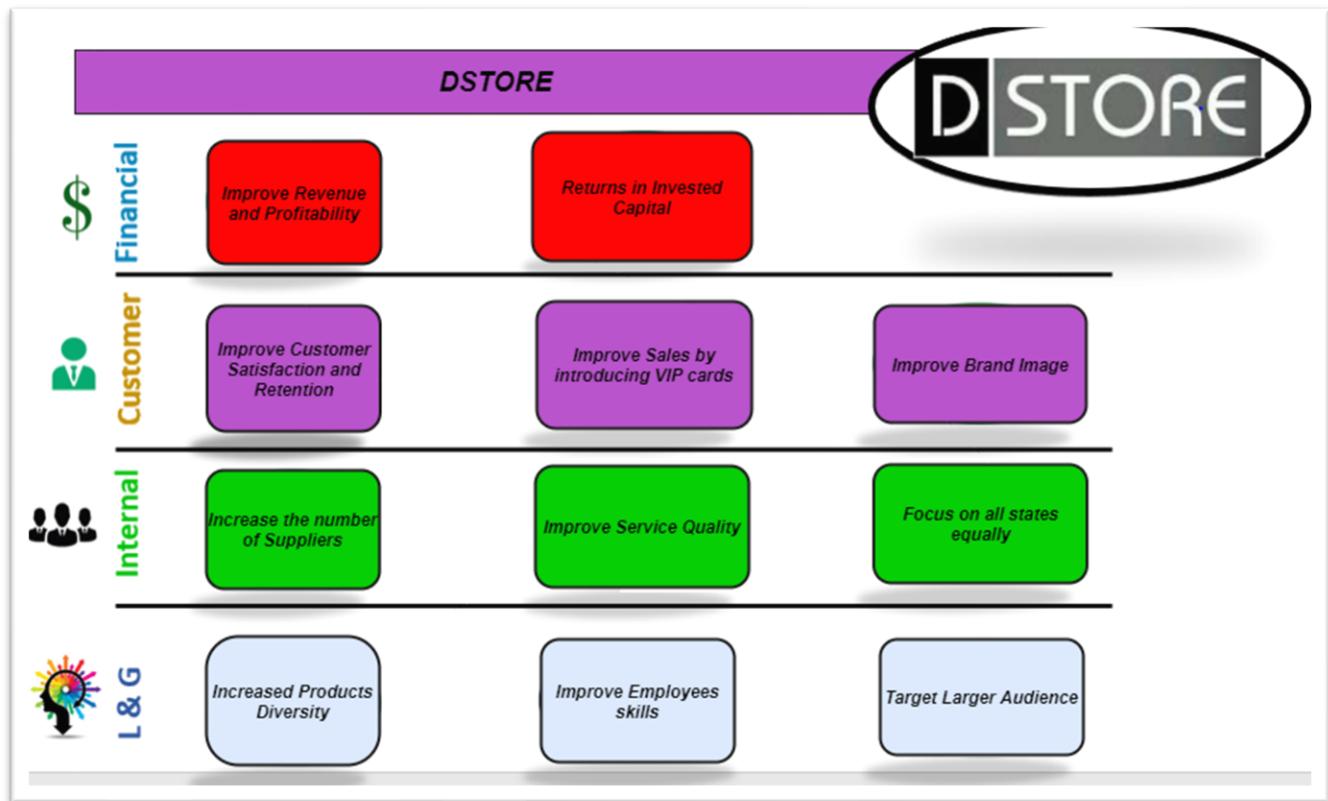


Fig 8. Balanced Score Card

A Balanced Scorecard is basically a strategic performance management system. It helps balance out financial measures with non-financial ones in order to improve the performance of any business for long-term success. Balanced Scorecard has three components in it:

- i. It helps company to set their strategic goals
- ii. It helps company define their action plans
- iii. It helps company develop KPIs (Key Performance Indicators) and Metrics

It was voted by Howard business review as one of the most influential business ideas that have even been presented.

A balanced scorecard starts off with four perspectives:

1. Financial

Goals

- Increase Net Income
- Maximize Profit Margin
- Grow revenue
- Grow Sales
- Returns on invested capital

Measures

- Manage our investments
- VIP cards
- Growth in profit 30%
- Growth in sales 35%

2. Customers

Goals:

- Customer Satisfaction
- Customer retention
- Market Penetration
- Huge variety of products to choose from
- Improve brand awareness in small states of India
- Build strong relationships with Top Customers

Measures:

- Customer returns and complaints.
- Quick delivery
- Economical and unique products
- Additional reward points
- Surveys for customer satisfaction

3. Internal Processes

Goals:

- Reduce Number of defects
- Innovate and Integrate our products
- number of returns.
- Gather Market Intelligence

Measures:

- Managing the inventory
- Controlling the services quality
- Development and Research
- Training to employees

4. Learning and Growth perspective: These are the enablers of your business

Goals:

- Increase Number of new economical products.
- Improvement in Employee skills
- Employee turnover, number of complaints.
- Employee satisfaction and retention.
- Targeting a large number of audiences
- Risk takers

Measures:

- Increase Number of training hours.
- Company sharing long-term vision with Employees
- Implement IT Suite
- Employee Welfare
- Improve our Internal Communication

Summary:

The Balanced Scorecard will benefit DStore to increase the awareness of DStore brand products amidst the small states in India, after introducing the VIP cards, the sales and revenue are expected to grow. The company sharing long-term vision with the employees will give them a sense of responsibility towards the growth of the organization and help them understand how monitoring and developing KPIs will support critical strategic issues. The employees are expected to become more skilled, efficient and productive. Introducing the IT suite will give an edge to the DStore in small states over the competitors where the sales of products is comparatively low as of now. Thus, eventually it will help us to have the results we are seeking for in order to achieve our financial goals.

8. PDCA

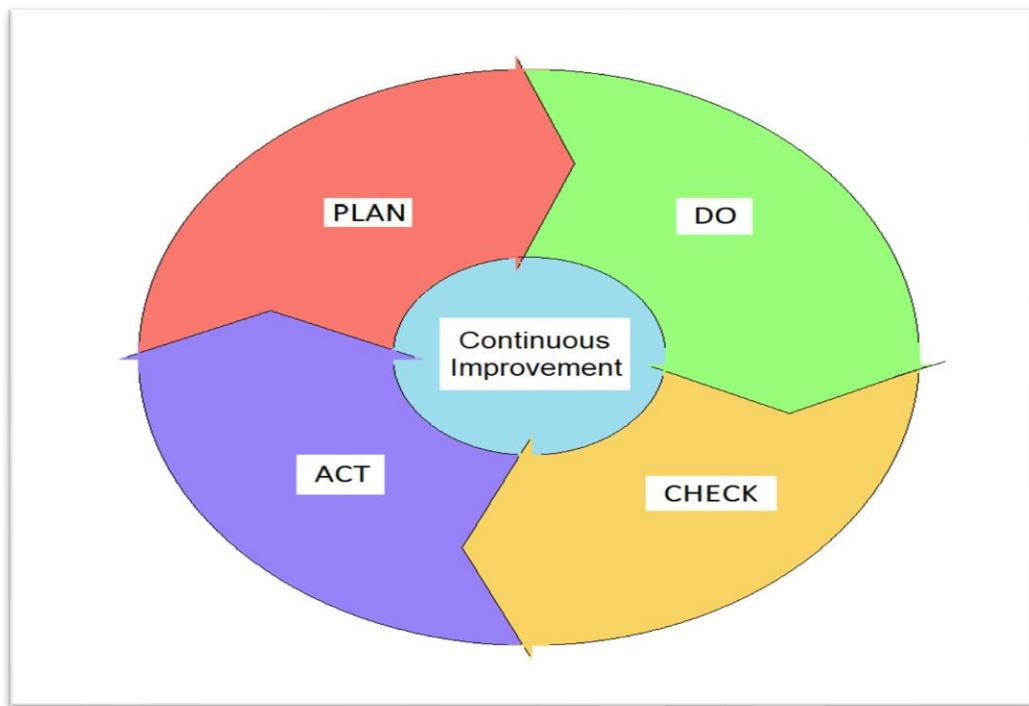


Fig 9. PDCA cycle

The Plan-do-check-act (PDCA) Cycle is considered one of the fundamental pillars of any production system. Based on this, organizations should make assumptions, observe phenomena, perform experiments

and learn from failure by receiving hypotheses. PDCA cycle is a four-stage model to carry out change. The process of PDCA should be repeated again and again in order to see a continuous improvement. [1]

It provides a simple and effective approach in order to manage the changes and solve the problems. For the measurement of improved testing, this model is used on a small scale before updating working practices and procedures. [2]

Following are the two use-cases of PDCA:

Problem-Solving – If an organization fails or breaks down, The PDCA cycle helps us to know the issues behind the downfall of the company and it can even provide solutions in order to solve the issues.

Process Improvement – If a model is not working efficiently as if it was expected from it then PDA is used to improve it.

Plan:

Before implementing a new model, it is necessary to look at the existing model and find out the issues in our current model and because of what factors it is lagging behind. Also discuss what we can do to improve the model.

The reasons for the downfall of sales:

- There is a shortage in the number of suppliers. Due to this the uniqueness or level of differentiation in the product or service the supplier is delivering gets reduced. Because when the number of suppliers is few, the more power they have.
- The profit margins of tables and chairs in the furniture category of products is bearing a heavy loss because the quality of these products is not good.
- Only the top 10 profit making states have the good facility of suppliers and the rest of them do not have suppliers so that is affecting our profitability.
- The discount is given only in the states of Maharashtra, this shows that the attractive policies have not been implemented enough to catch customers attention.

These mentioned points are the major reasons for the fallback of our sales and profits.

In order to tackle these issues, we decided to come up with following improvement plans:

- We will ask the customers in the form of a feedback if they want VIP cards from us in which they will be given exclusive offers, reward points will also be given for each purchase.
- If in the feedback they choose to not want to have VIP cards then we will try to pursue them by sending emails and giving promotional offers.
- We will need to find suppliers who can give good quality products for the furniture related issue mentioned above.
- Discounts will be given in all the states in the form of VIP cards.
- We will provide suppliers to the states where there is a shortage supplier so as to reduce the cost of transportation and shipping of goods. Businesses are in a better position when there are a multitude of suppliers.

- We will provide regular check-ups from our customers by taking customer satisfaction surveys to find out any issues in our products and services. After gathering enough information, we will implement processes to reduce these issues.
- We will provide a suggestion to set up the store online as well to increase profitability and to provide the customers facility of online transactions. After the process of online transaction of customers, we will process a trigger to mail those customers after 30-35 days of buying in order to check how they find the quality of our product.
- The second feedback will be given immediately after the shopping to the customers to know about their shopping experience.

Do:

After the discussion we decided to go with the plans made earlier. These plans will be implemented on a small scale because implementing it on global scale can be extremely risky as we are not sure whether our plans will work beneficially or not. We will give VIP cards and apply these strategies to our least profitable making states in order to check if these plans are working or not.

The feedback given to the customers to know about their shopping experience is saved in the database and a ticket is issued for that customer. The case generated will then go to the sales team, they will check if the case generated is rational, if it is, then they will forward it to the management team. If the case does not seem correct to the sales team, they will close the case and the customer will be informed as well. After the management team also agrees with the case rationality then they will forward it to the supplier, if not the case will be closed. Supplier will look at the case and have a consent with the manufacturer and then after making the required changes they will update the information to the support team.

Check:

In this process, after 30-40 days of implementing our plan, we will compare the sales with the previous sales. We will check if our new plan has helped us in increasing our growth in revenue, if our plan worked successfully then we will implement this plan in all states of the country.

Act:

In this phase, after we have standardized the goals achieved, we have to think about more improvements as a continuous movement from a standard to a better standard. We can then train our employees to make them skilled enough to continue with the new improved plan. This continuous cycle is triggered by another iteration of the PDCA cycle.

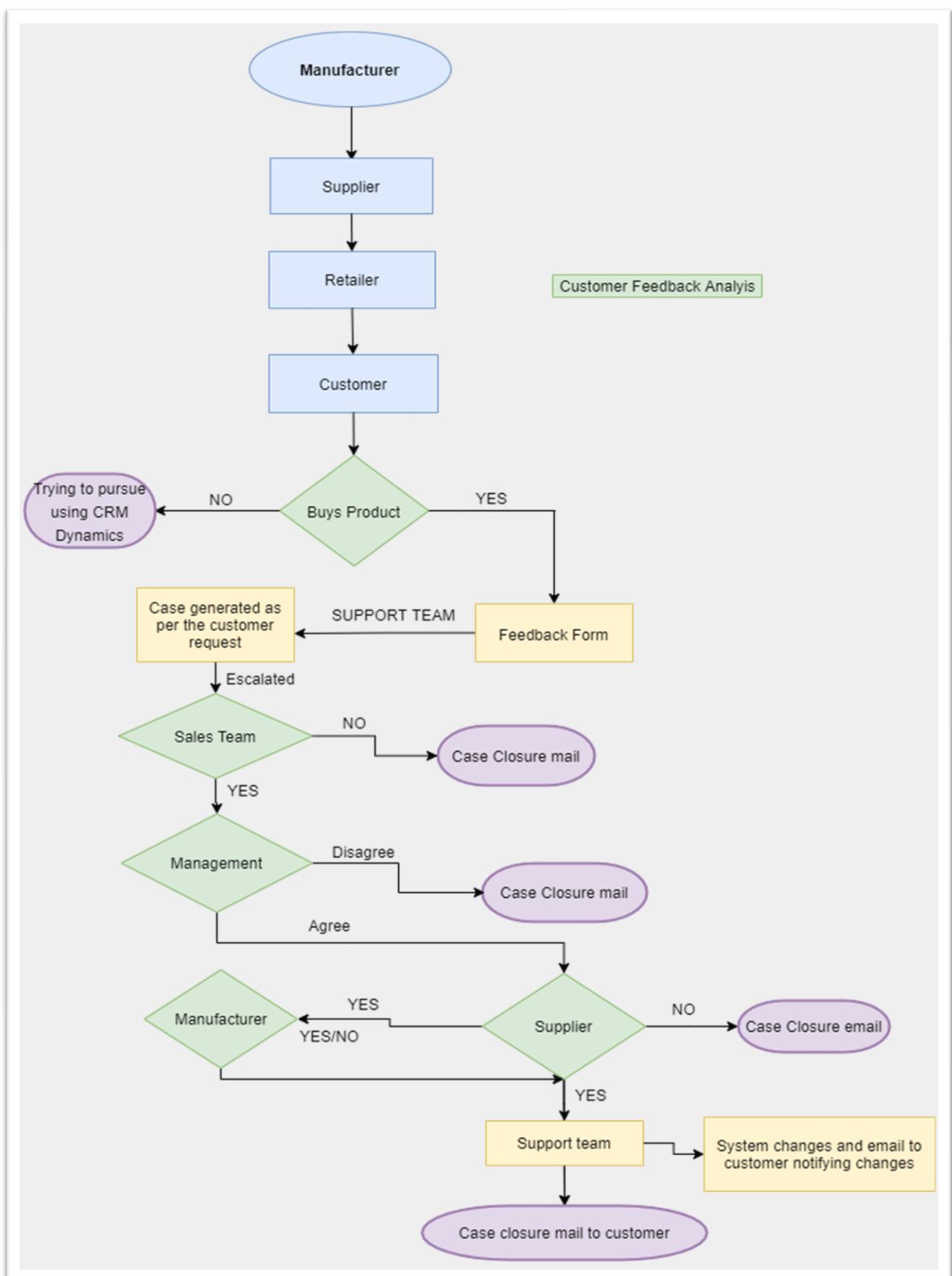


Fig 10. Flow Chart of feedback forms

9. SUPPLY CHAIN MANAGEMENT (SCM)

A supply chain is a global network used to deliver products and services from raw materials to end customers through an engineered flow of information, physical distribution and cash.

SCM benefits in making the supply of goods and their transportation economically and cost efficiently feasible. In our case the Supply Chain Management was established but in few states which were amid the top 10 most profitable states. Thus, the lack of suppliers in the other states resulted in poor profits in those states as the shipping cost and transportation cost were a load on the profit margins. The goods were supplied from profit making states to the other non-profit making states due to which the transportation and shipping costs increased and profit margin decreased. Eventually, in order to overcome this issue, we went ahead and suggested having suppliers in all the states so as to ease the supply chain management process.



Fig 11. Supply Chain Management

10. LEADS AND OPPORTUNITY PIPELINE MANAGEMENT

The opportunity pipeline is where the leads are converted into potential customers, on the basis of various stages involved. This process is of utmost importance as this is where the organisation's revenue comes from. This pipeline refers to the stages that our sales rep goes through to convert a lead into a customer. A thorough examination of this pipeline can reveal areas in your sales and marketing that need to improve. It is typically made up of the following stages:

- Lead Qualification and Nurturing
- Turning into Opportunities
- Contact Procedure
- Proposals Pitched
- Deal closing as Won or Lost

We created a few sample leads based on the customers table from our database and qualified them by developing each person's case and turned them into opportunities accordingly. This is proposed to the DSore business in order to explain and pursue them to adopt the CRM system. Further, contact is made via email, phone call or scheduled visits to pitch the proposal of the item and finally the deal is made. The nature of the deal can either be won or lost depending upon the attempts made in previous stages. The aim is to acquire as many leads converting into customers with winning cases thus resulting in the income, profit and expansion of our business.

Below diagram is the representation of all the stages involved in this pipeline along with the statistics.

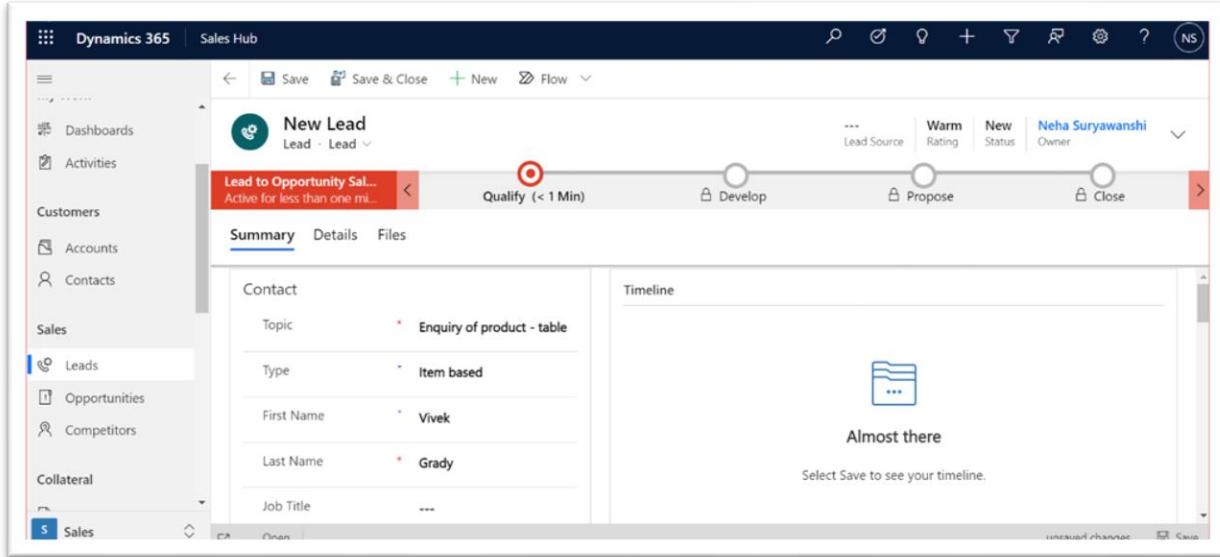


Fig 12. Leads & Opportunity Funnel

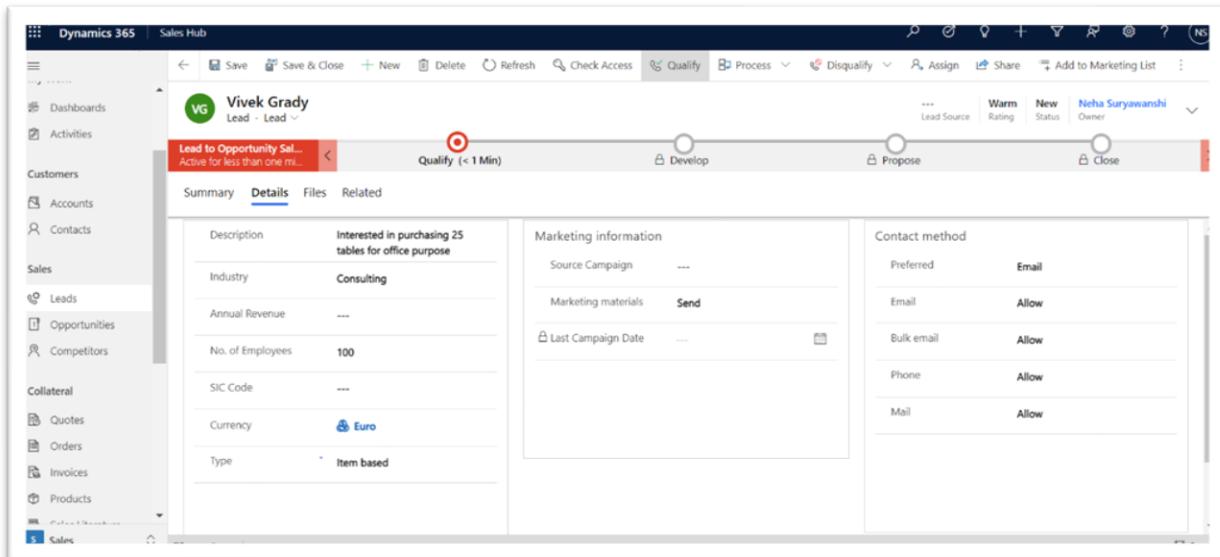
11. CRM DYNAMICS IMPLEMENTATION PROPOSAL

We are proposing DStore to implement CRM Dynamics into its business so as to reach as many customers and help in the expansion of their business.

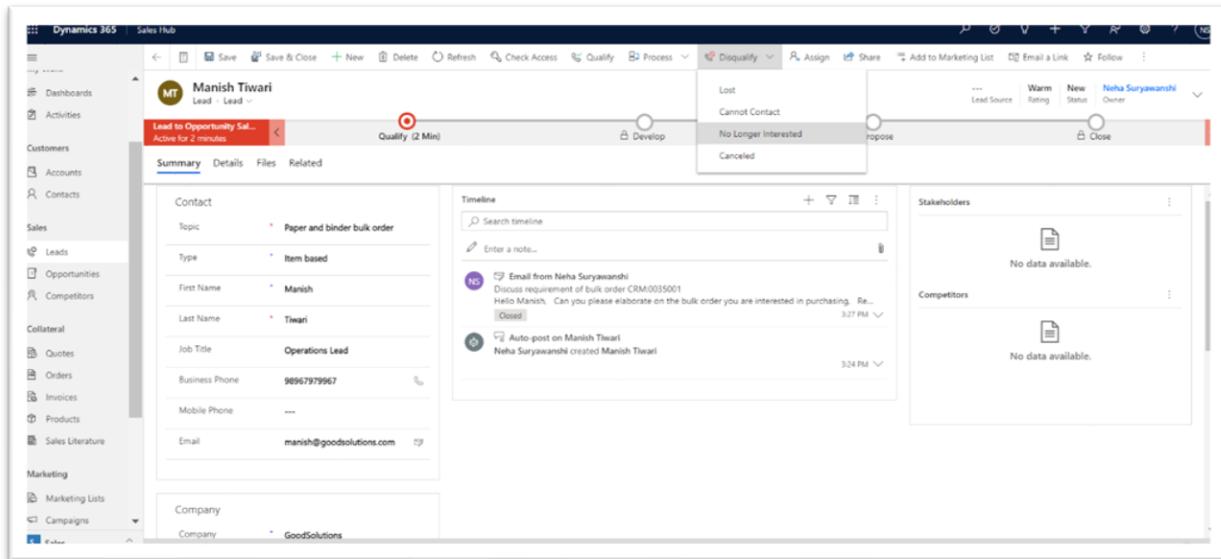
Lead Creation: In Dynamics 365 Sales Professional, **leads** are potential sales. In other words, a **lead** is a potential customer who must be qualified or disqualified as a sales opportunity. When a **lead** is qualified, it can be converted to an opportunity, account, or contact. You can collect **leads** from many different sources or create a lead as shown below



Qualify lead: If a potential customer wants to take it forward then we can qualify the lead, and it becomes opportunity, which means customer might be interested in purchasing the products or services.

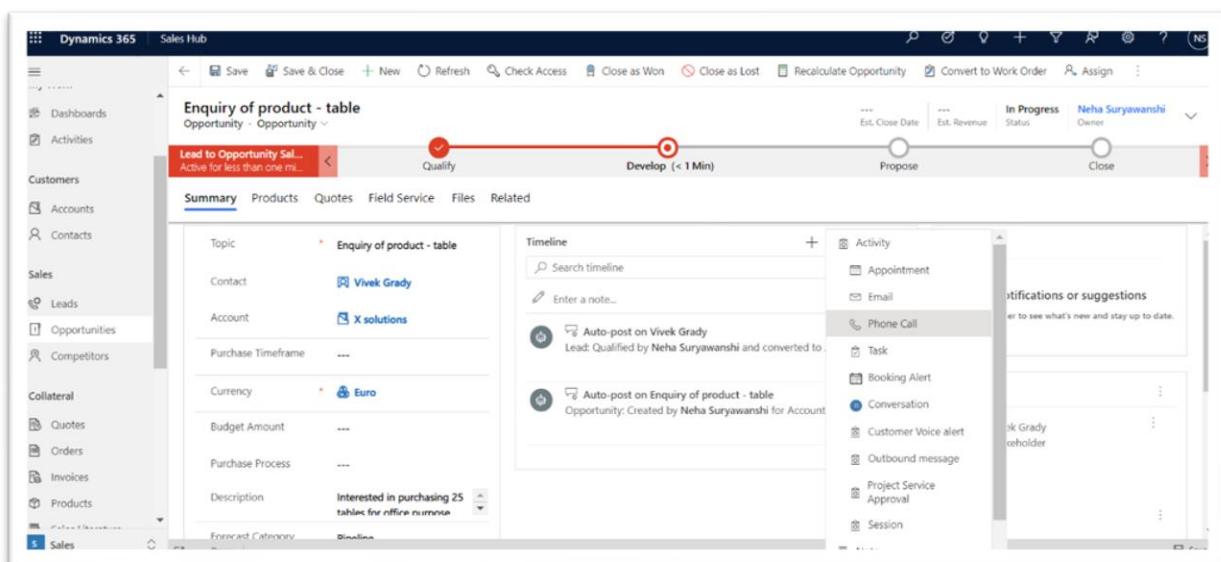


One can even disqualify the lead if no potential progress is observed for any of the following reasons:

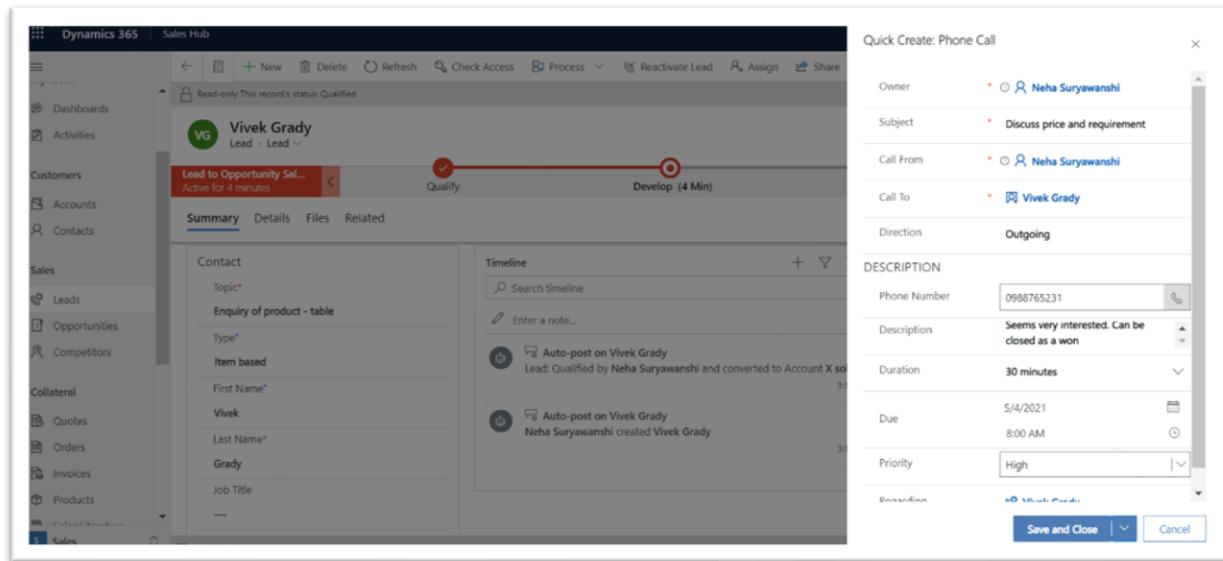


Contact customer: To discuss the details of the requirement you can schedule the following:

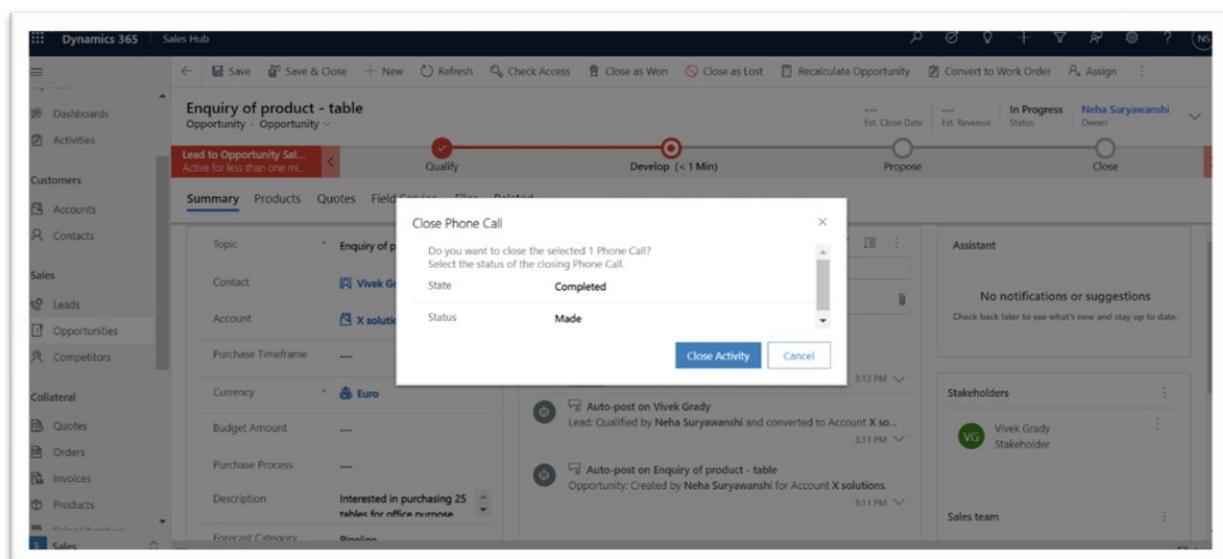
1. Phone call



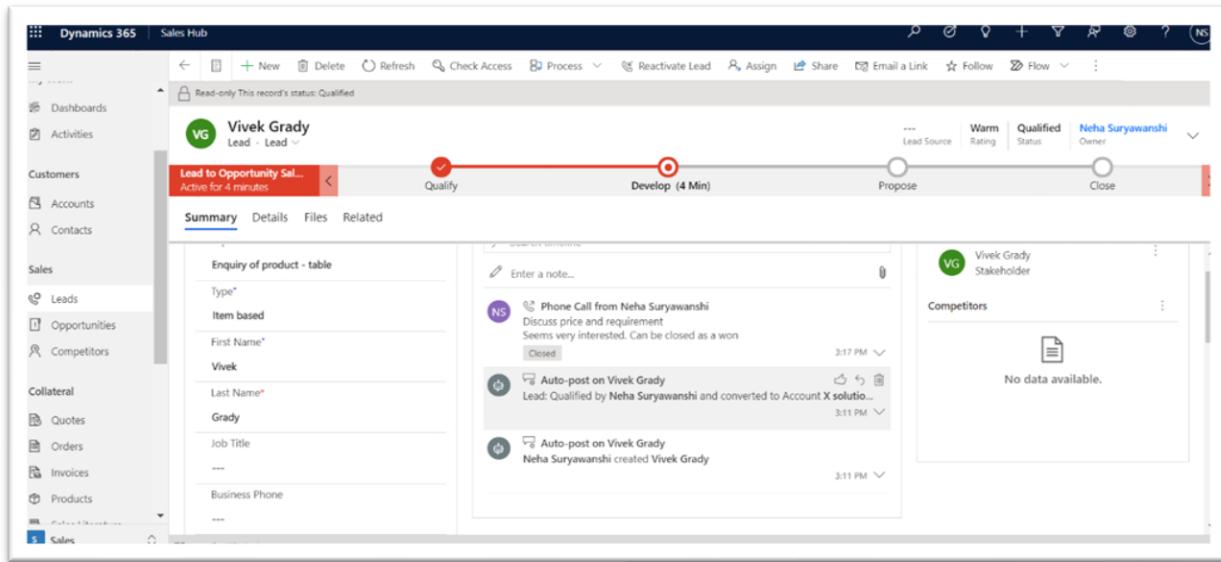
You can mention the details such as time of call, duration of call and the purpose of the call and create an event for the same



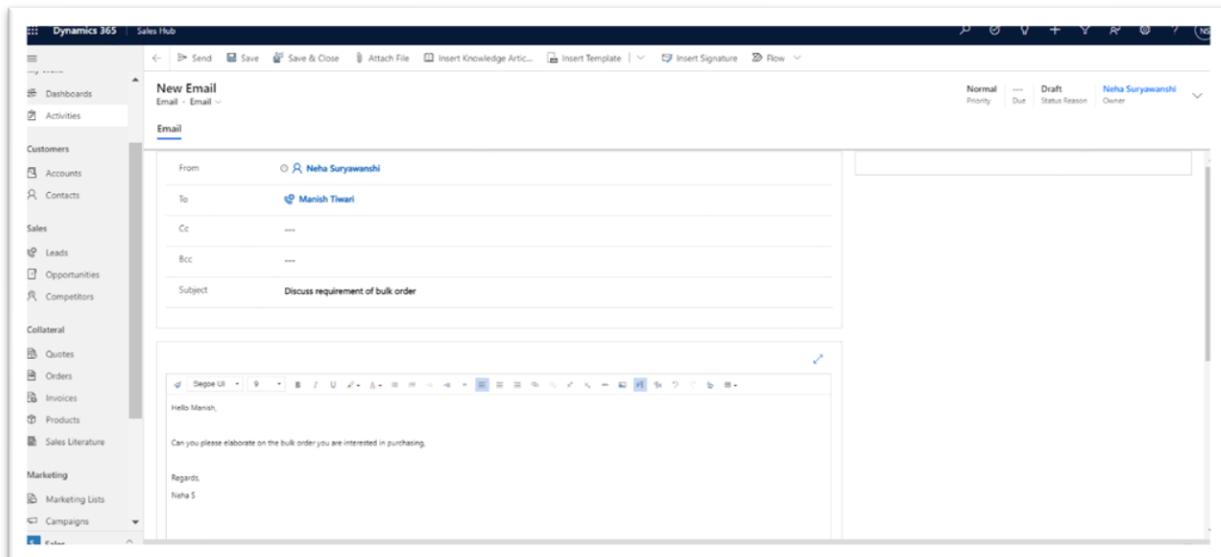
After the phone call this activity can be marked as closed as shown below



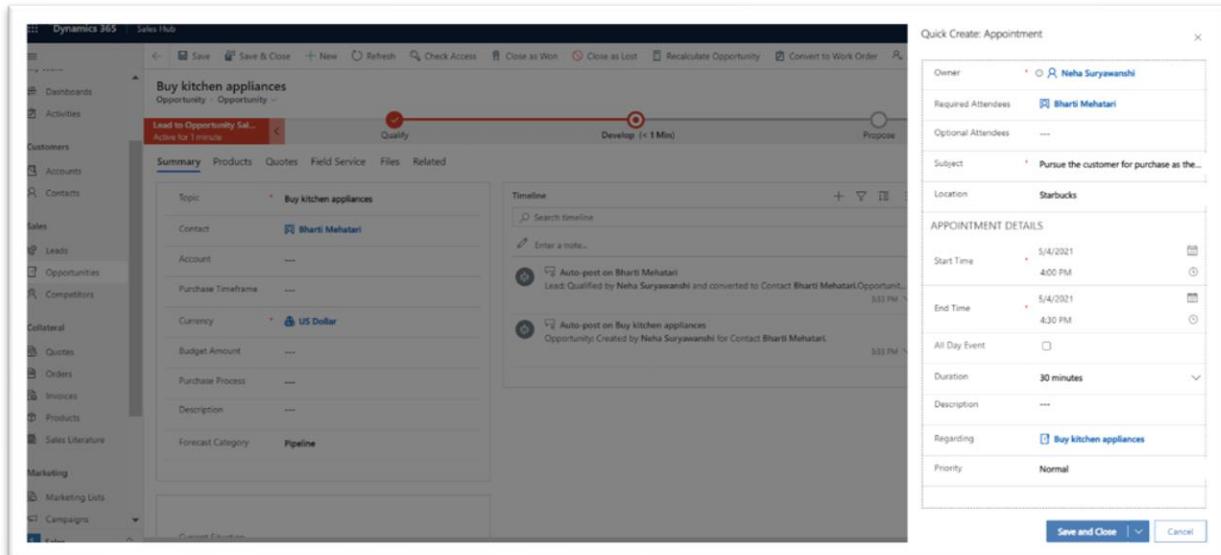
A history is maintained for every event or activity



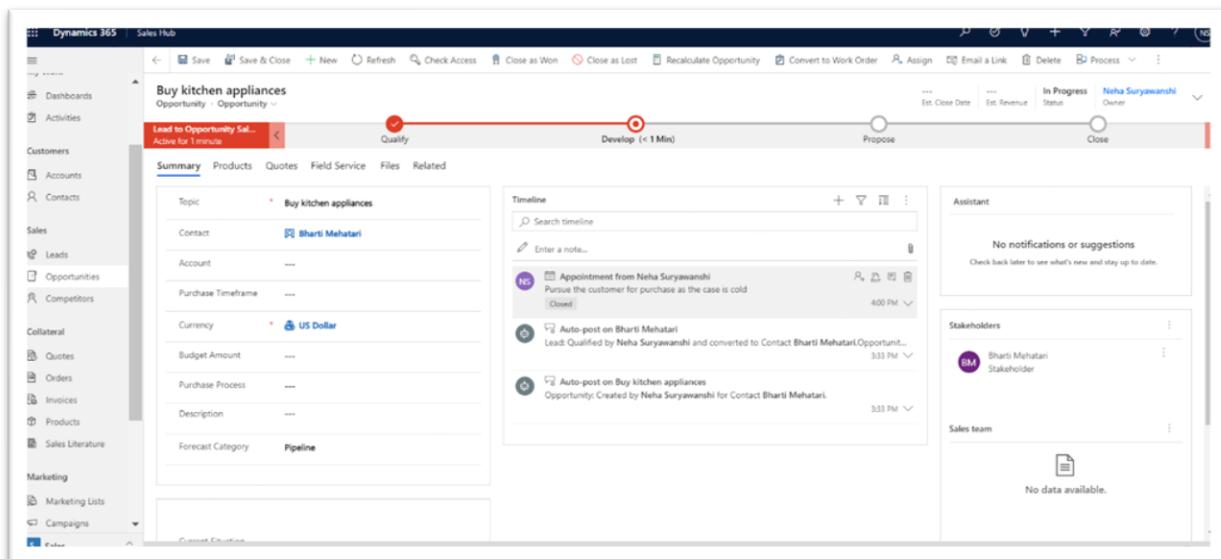
2. Email



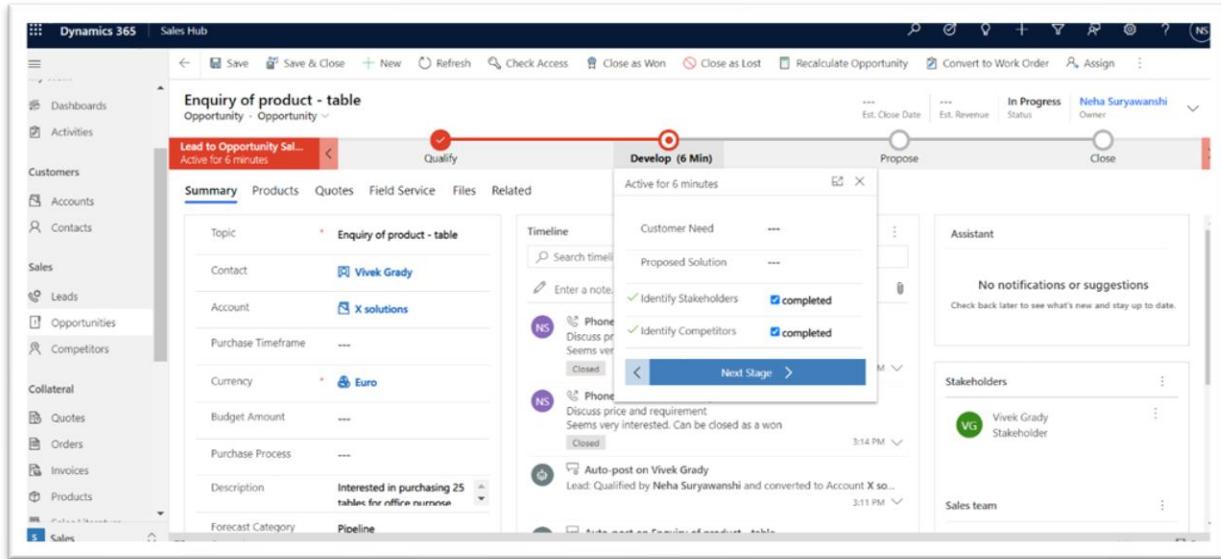
3. Appointment



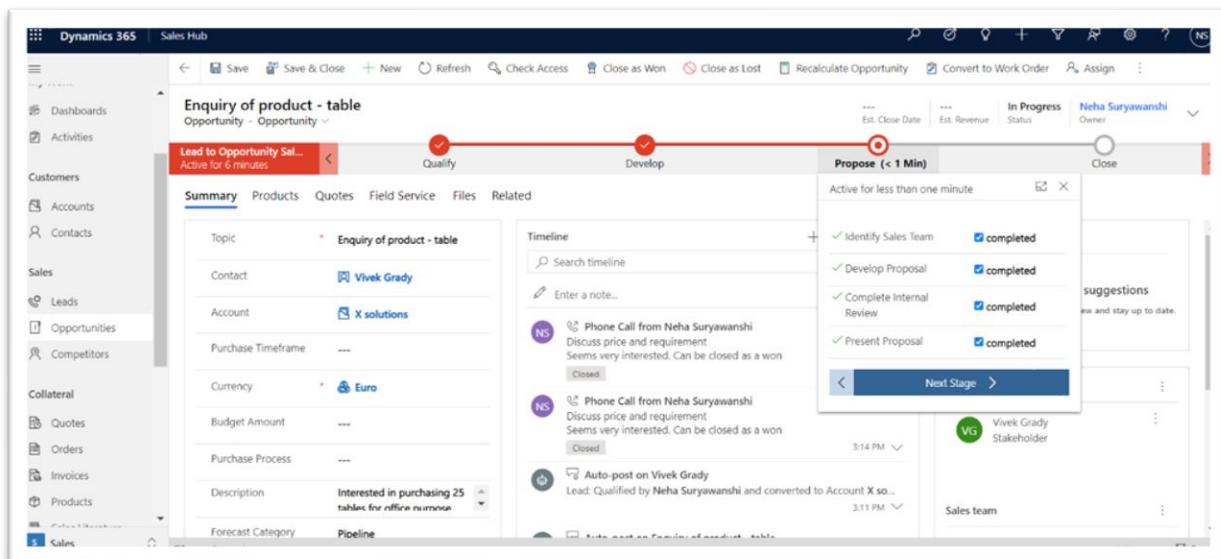
Below is the image showing the history of the event - Appointment



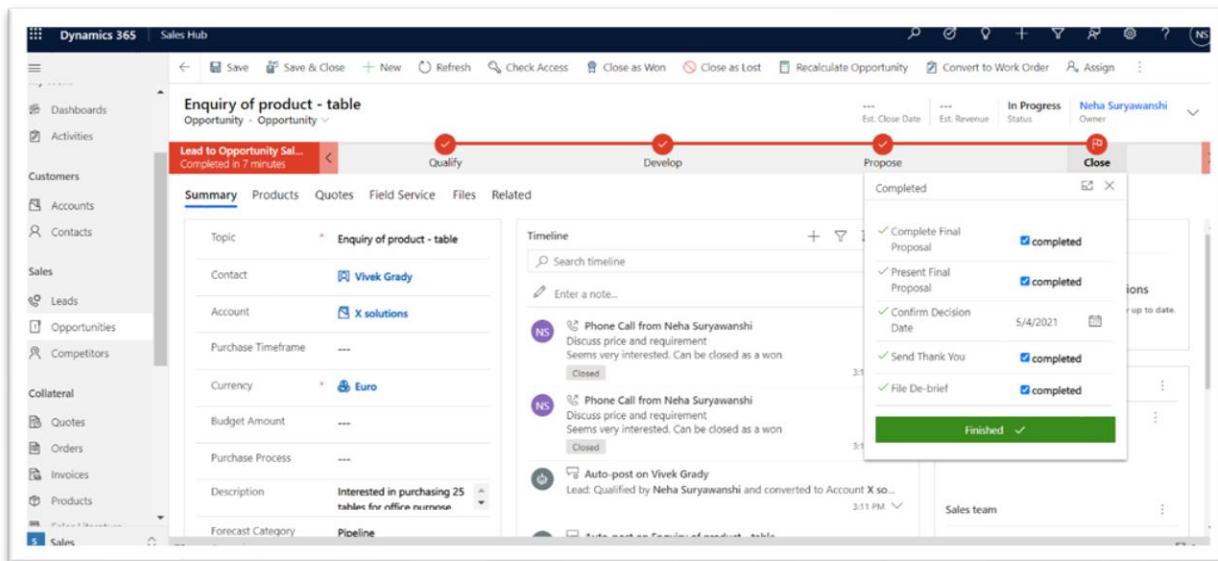
Develop: In this phase you can mark the completion of the stages in which you identify the stakeholders and verify the competitors. One can even describe the customer requirements and solutions if needed in the case.



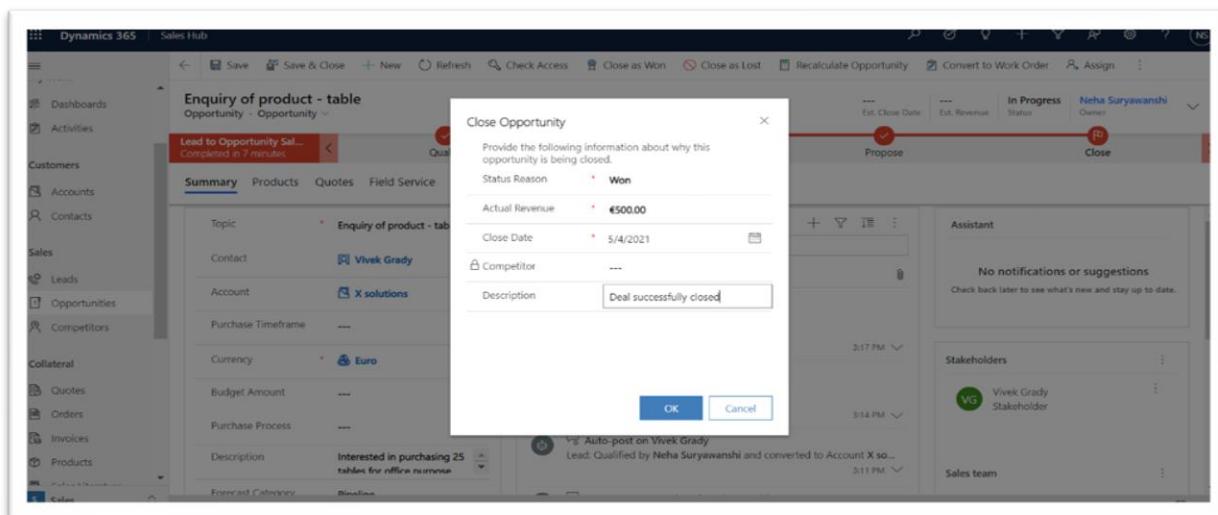
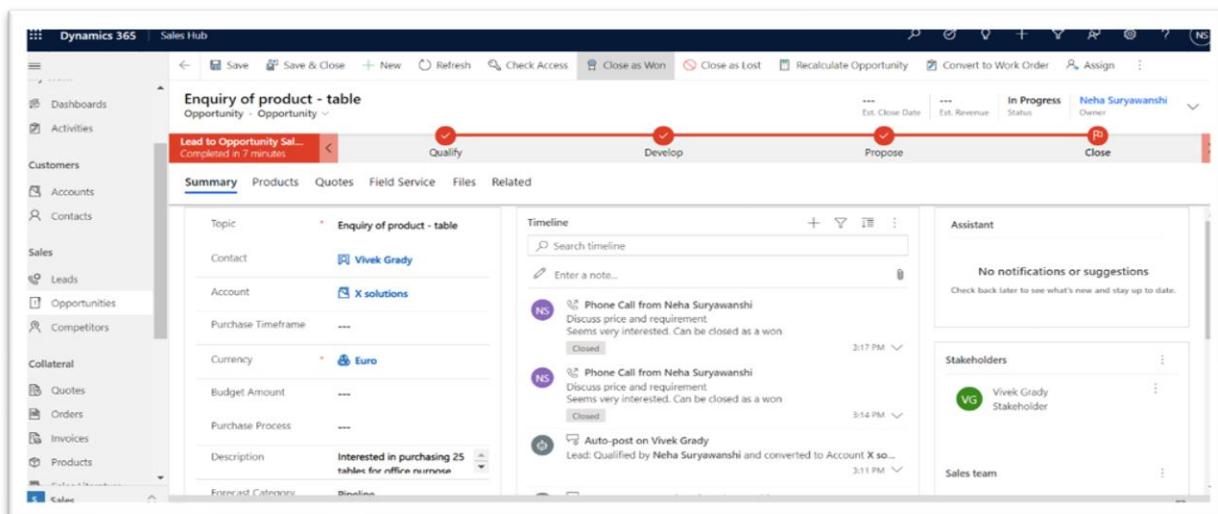
Propose: After customer requirements are gathered and analysed the company can fill the details related to the proposal made to customer as shown below



Close: The case can be successfully closed in the close stage.



Close as Won: After the successful sale the case can be marked as **Won**



Finally, the page will look like below after lead is converted to Won

The screenshot shows the Dynamics 365 Sales Hub interface. A navigation bar at the top includes options like Refresh, Check Access, Reopen Opportunity, Assign, Email a Link, Delete, Process, Share, Follow, Flow, Word Templates, and Help. On the left, a sidebar lists categories such as Dashboards, Activities, Customers, Accounts, Contacts, Sales (Leads, Opportunities, Competitors), Collateral (Quotes, Orders, Invoices, Products), and Marketing (Campaigns). The main content area displays an opportunity record for "Enquiry of product - table". The status bar at the top right indicates "Won" status and "Neha Suryawanshi" as the owner. A timeline at the top shows stages: Lead to Opportunity, Qualify, Develop, Propose, and Close. The "Qualify" stage is highlighted with a red circle and a checkmark. The "Timeline" section shows activity history, including an auto-post from "Neha Suryawanshi" won the opportunity for account "X solutions" and a phone call from "Neha Suryawanshi" discussing price and requirements. The "Assistant" panel on the right shows "No notifications or suggestions" and a "Stakeholders" list for "Vivek Grady". The "Summary" tab is selected, showing details like Topic, Contact (Vivek Grady), Account (X solutions), Purchase Timeframe, Currency (Euro), Budget Amount, Purchase Process, and Description (Interested in purchasing 25 tables for office rooms).

A case can be marked as lost in case the sale is not successful.

The screenshot shows the Dynamics 365 Sales Hub interface. The main content area displays an opportunity record for "Buy kitchen appliances". The status bar at the top right indicates "In Progress" status and "Neha Suryawanshi" as the owner. A "Close Opportunity" dialog box is open in the center. It prompts for information about why the opportunity is being closed, with "Status Reason" set to "Canceled". Other fields include "Actual Revenue" (\$0.00), "Close Date" (5/4/2021), "Competitor" (Reliance), and "Description" (Customer preferred other comp.). The "OK" button is visible at the bottom of the dialog. The "Timeline" section shows activity history, including a contact note from "Bharti Mehtaari" and a phone call from "Bharti Mehtaari" at 4:00 PM. The "Assistant" panel on the right shows "No notifications or suggestions" and a "Stakeholders" list for "Bharti Mehtaari". The "Summary" tab is selected, showing details like Topic, Contact (Bharti Mehtaari), Account, Purchase Timeframe, Currency (US Dollar), Budget Amount, Purchase Process, Description, Forecast Category (Pipeline), and Current Situation.

Post-closing the sale as lost we can see the status and history of the case as shown below

The screenshot shows the Dynamics 365 Sales Hub interface. A specific opportunity record for "Buy kitchen appliances" is displayed. The status is set to "Lost". The timeline at the top shows stages: "Qualify", "Develop (3 Min)", "Propose", and "Close". The "Propose" stage is highlighted in red. The "Close" button is visible. On the left, the navigation bar includes sections for Customers, Sales (Leads, Opportunities, Competitors), Collateral, Marketing, and more. The main content area shows the opportunity details and a timeline of recent activities:

- Auto-post on Buy kitchen appliances: Nisha Suryawanshi Lost Opportunity for Contact Bharti Mehatari.
- Opportunity Completed by Nisha Suryawanshi: \$0.00
- Appointment from Nisha Suryawanshi: Pursue the customer for purchase as the case is cold.
- Auto-post on Bharti Mehatari: Lead Qualified by Nisha Suryawanshi and converted to Contact Bharti Mehatari. Opportunity: Created by Nisha Suryawanshi for Contact Bharti Mehatari.

On the right, there are sections for Stakeholders (Bharti Mehatari) and Sales team (No data available).

Sales Activity Dashboard: The Sales Activity Dashboard displays metrics around sales activity performed using these tools and can provide you with valuable insight into how your sales enablement efforts are performing.

The screenshot shows the Sales Activity Dashboard in Dynamics 365. The dashboard features several key visualizations:

- Open Opportunities:** A funnel chart showing the opportunity pipeline by sales stage. The total value is €103,814.00.
- All Opportunities:** A pie chart showing the distribution of opportunities by status: Open (45%), Won (32%), and Lost (12%).
- Won Opportunities:** A chart showing the number of won opportunities.
- Sales Leaderboard:** A table listing sales leads with their names, topics, and notes.
- Open Leads:** A table listing open leads with their names, topics, and notes.
- Open Opportunities:** A table listing open opportunities with their topics, accounts, and owners.

The left sidebar provides navigation links for Home, Recent, Pinned, My Work, and various Sales and Marketing modules.

TEAMWORK

Our team comprises of 3 members. Each one of us have collectively searched for the dataset of the DStore company in order to build this project. Since there are various sections in this project, we have distributed the sections and equally contributed towards completion of the project. The main focus areas are as follows:

- Data Gathering and Creation
- Data Cleaning
- Preparation and Analysis of Feedback forms
- Database Design
- Entity Relationship
- Porter's Five Force model
- Balanced Scorecard Design
- Leads/Opportunities Pipeline Design
- Implementation of Dynamic CRM and Supply Chain Management
- Creation of Dashboards using Power BI
- Report writing and Presentation

Since there are multiple concepts to be implemented in the project, we arrange daily team meetings and calls, where we work together and share all the progress updates and changes made intermediately. The final report is written with combined efforts by all the team members via Google Docs. This was useful to make any changes on the spot and saved us time with multiple report copies.

References:

- [1] - <https://asq.org/quality-resources/pdca-cycle>
- [2] - https://www.mindtools.com/pages/article/newPPM_89.htm