Abstract— At this very time, the world is desperately struggling to overcome the immense damage done to the economy by this pandemic. As the lockdown is cautiously being lifted by many countries, their focus is to get on the same economic track as before. To do so, the industries are now re-opening with new safety measures in practice. After experiencing a cold market, the demand for raw materials is again on the rise and this has fueled the transport sector to maintain the balance between supply and demand. The import and export industries handle the international transportation of such materials.

The lack of appreciation for such business fields in their contribution to the world economy inspired the authors of this report to explore this industry. Broadly based on real-life import and export industries, a hypothetical company was devised – Cornerstore Import and Export Ltd. Mock Sales data, along with Customer, Product and Region was generated which was then channelled into the Customer Relationship Management (CRM) software. The whole section of Sales of Company was studied and then visualized. The benefits from the same were reported.

Keywords—Customer Relationship Management

I. INTRODUTION TO ORGANIZATION

A. History and Background of the Organization

Cornerstore Import and Export Ltd. is a hypothetical company devised solely for the scope of this project. The company was established in 2018 having its headquarters in California, USA and deals exclusively in the transportation of industrial chemicals with high safety standards.

Cornerstore Import and Export Ltd. has shown promising growth in the transportation business of industrial chemicals by integrating the latest technology to ensure the safety of products, employees and fleet. With an annual turnover of £1.5 million, the company has managed to establish business across major countries in the European Union. Cornerstore Import and Export Ltd. has bought up a significant change in the transportation business of chemicals by adopting and implementing new technology ensuring high safety standards and has caught the attention of customers for the same.

B. Participation in Marketplace

Cornerstore Import and Export Ltd. focussed on the transportation of chemicals to balance the demand and supply in the international market and maintain the global flow of chemical resources. With careful analysis of the marketplace, Cornerstore Import and Export Ltd. has managed to become one of the major companies of the country in import and export business. This further encourages and motivates the organisation to associate with buyers from different international market sections and grow and expand further.

C. Vision

Be a globally recognized transport organisation that puts safety and service as a priority to satisfy the needs of customers, stakeholders and employees.

D. Mission

Contribute to the growth of society simultaneously with the growth of the organisation. Transport products to customers with the highest level of safety and values.

Forging partnerships and creating an economically sustainable community of stakeholders.

II. SYSTEM DESIGN

A. Process Flow Diagram

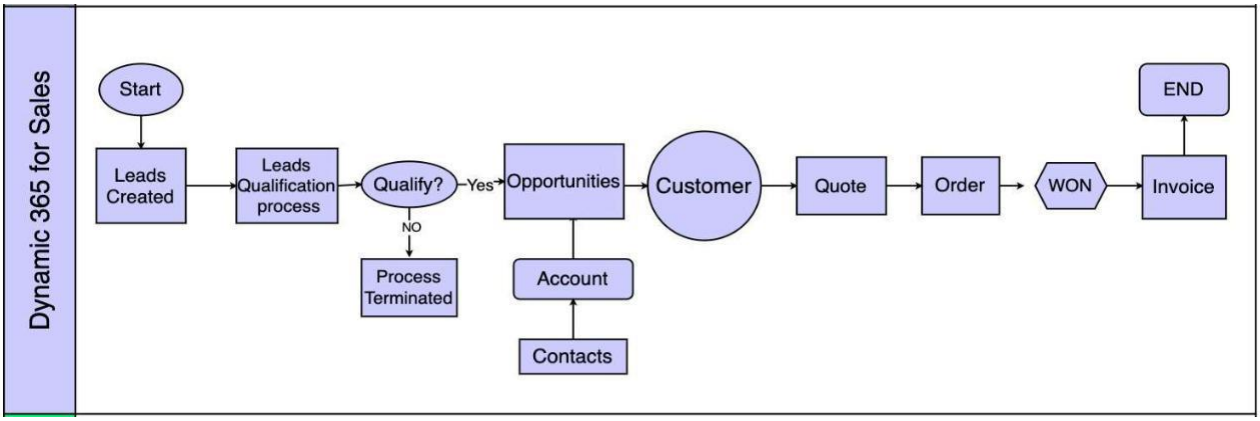

Figure 1: Process Flow Diagram representing visual flow of data collection process i.e., from a prospect customer to invoice generation.

B. Data Capture Points

DATA CAPTURE POINTS	
Capture Point	Data
Sales	Details of each customer purchase and order confirmed with the company.
Customer	Details of each customer.
Region	Details of destination where the products are transported.
Product	Details of each product that is transported.

Figure 2: Description of data collected in the data collection points

C. Analytical Requirements

The database of Cornerstore Import and Export Ltd. includes information about customers, products transported and destination country for each order confirmed with the organisation. Each part of the data link, whether it be data accumulation or deployment is kept in a congruous record which helps in the understanding of trends in our business marketplace.

Visualization of this dataset helps in understanding current progress and deciding future strategies of investments.

The analytical requirements for the solution would be:

Revenue generated through preferred products and region.

Analyse customer distribution across countries, preferred products.

Inspect the patterns and trends in the product and customers across the period of years.

D. S.W.O.T. Analysis

The strategic planning and management of any organisation cannot be done without the implementation of SWOT analysis [1]. SWOT is an abbreviation to Strengths, Weaknesses, Opportunities and Threats. The evaluation criterion of SWOT analysis is dependent on both internal and external factors. The internal factors are utilized to analyse Strengths and Weakness, while external factors are utilized to analyse and distinguish Opportunities and Threats [2].

Proper analysis of organisations strengths, weakness, opportunities and threats can aid the company with any current issue they are facing and simultaneously in developing a strong strategy for future investments. The strategy of SWOT analysis was created to help organisations in surveying their development in tolerating business changes with change in the environment of the marketplace [3].

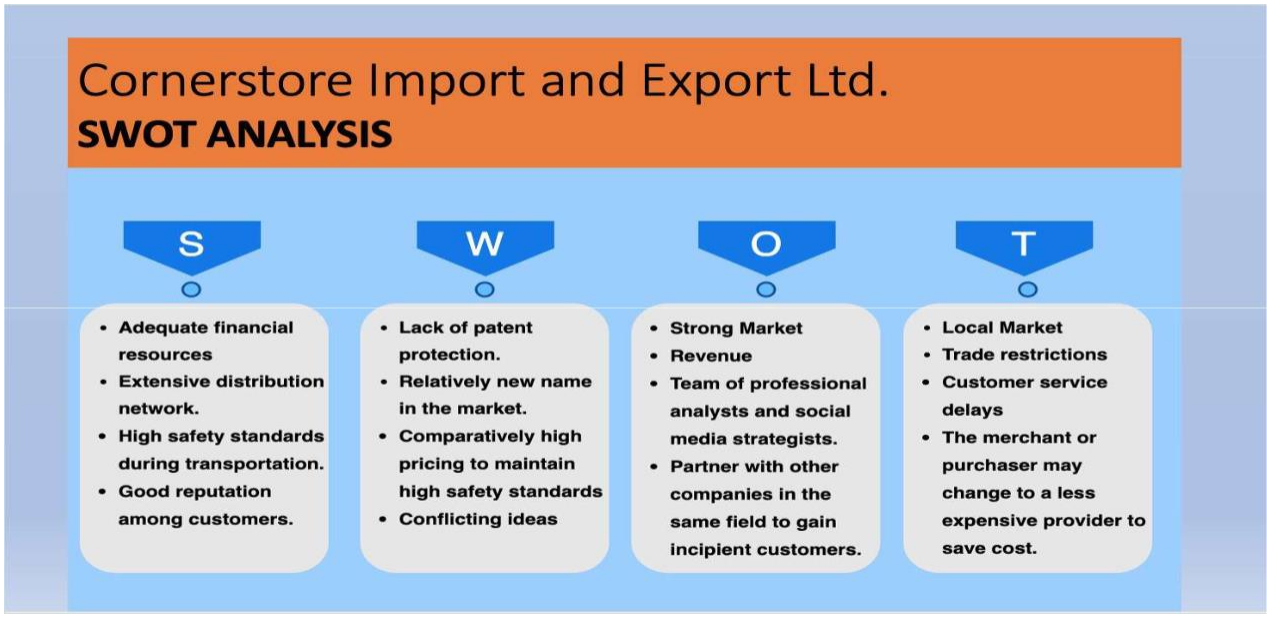

Figure 3: SWOT Analysis of the Organization

III. DATABASE DESIGN

A. Entity Relationship Diagram

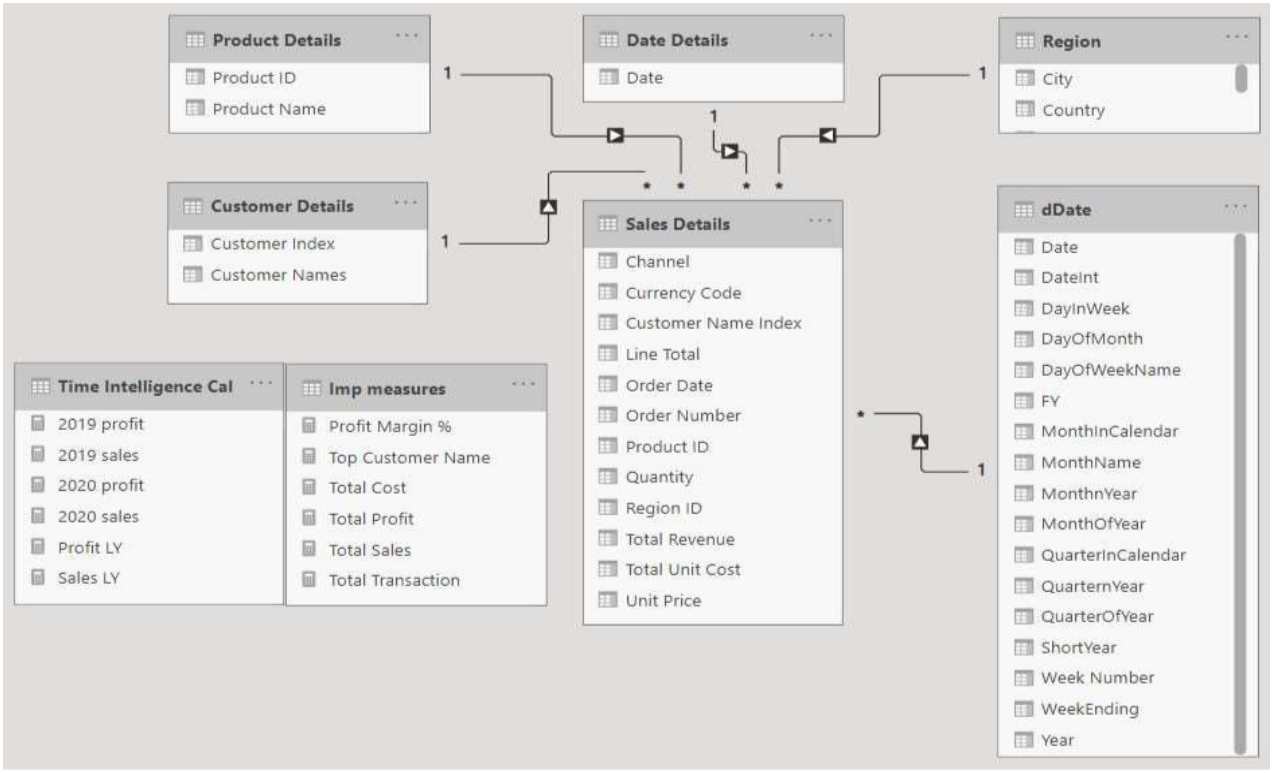

Figure 4: The Entity Relationship Diagram represents relationships between data collected.

The entries in a table are represented as an entity. Multiple tables might have either same or similar entity related through a rule. These relations between entities of multiple tables are shown as lines with symbols in an Entity Relationship Diagram. ERD of this organisation is shown in figure 4.

The entries in column “Order Number” in Sales table act as a primary key meanwhile entries under column “Customer Name Index”, “Product ID”, “Region ID” and “Order Date” act as foreign key in the dataset.

B. Data Dictionary

The dataset consists of four separate tables under the name of Sales, Customer, Product and Region. The Sales table consists of all the information about the confirmed orders with the company. The Customer table consists of information about the customers who have done business with the company. The Product table contains the details of all products that have been transported. The Region table consists of the information about the destination country and city to which the product is transported.

SALES		
Attribute	Datatype	Description
Order No	Integer	Unique ID for each order placed.
Order Date	Date	Date when the order was placed.
Customer Name Index	Integer	Unique ID for every Customer.
Channel	String	Whether the product is Imported or Exported.
Region ID	Integer	Unique ID for destination city of each product transported.
Product ID	Integer	Unique ID for each chemical/product.
Quantity	Integer	The number of products transported in each transaction.
Unit Price	Float	Cost of transportation of a product to respective destination.
Line Total	Float	Total sales amount for each order confirmed.
Total Unit Cost	Float	The total cost incurred to transport and store a particular product.

Figure 5: Data dictionary for Sales (Confirmed Orders)

Attribute	Datatype	Description
Region ID	Integer	Unique ID for the destination of a transported product.
City	String	Name of Destination City of each product transported.
Country	String	Name of Destination Country of each product transported.

Figure 6: Data dictionary for Region (Destination)

Attribute	Datatype	Description
Customer ID	Integer	Unique ID for every Customer.
Customer Name	String	Full name of the Customer.

Figure 7: Data dictionary for Customers

PRODUCT		
Attribute	Datatype	Description
Product ID	Integer	Unique ID for each chemical/product.
Product Name	String	Full name of the chemical/product.

Figure 8: Data dictionary for Products

REFERENCES

[1] E. GÜREL, "SWOT ANALYSIS: A THEORETICAL REVIEW", Journal of International Social Research,

vol. 10, no. 51, pp. 994-1006, 2017. Available: 10.17719/jisr.2017.1832 [Accessed 15 December 2020].

[2] L. Quezada, E. Reinao, P. Palominos and A. Oddershede, "Measuring Performance Using SWOT Analysis and Balanced Scorecard", Procedia Manufacturing, vol. 39, pp. 786-793, 2019. Available: 10.1016/j.promfg.2020.01.430 [Accessed 15 December 2020].

[3] [3]Z. Dobrovic and M. Furjan, "SWOT Analysis in the Strategic Planning Process - Meta-modelling Approach", 2020 IEEE 10th International Conference on Intelligent Systems (IS), 2020. Available: 10.1109/is48319.2020.9199983 [Accessed 15 December 2020].