



IIT Madras

Business Data Management

(Helping Offline Retail Stores through E-Commerce)

Project Proposal Report

Submitted in partial fulfillment for the award of the degree of

Bachelor of Science (B.S)

In

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DECLARATION

I hereby declare that the proposal for “*Business Data Management*” Project titled “*Helping Offline Retail Stores through E-Commerce*” is my own work and the idea proposed is completely a result of my thought process and ideas.

I further declare that to the best of my knowledge this proposal report does not contain any part of work that has been submitted for the award of any degree either in this university or in other university / Deemed University without proper citation.

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Title of Project: Helping Offline Retail Stores through E-Commerce

Executive Summary

With the rapid rise of E-commerce websites and delivery services, a large number of businesses like consumer electronics that have offline stores/outlets have been affected significantly. The pandemic that struck back in 2019 enabled a large amount of people to stay at home and get services and goods delivered at their doorstep with the tap of a button on an app and through a simple transaction via multiple digital payment platforms that play a significant role in the growth of Digital India. The notion of a Digital India seems to be great, however there is still a significant part of the population who prefer to physically visit a store in their neighbourhood and choose a product of their choice. The same significant population is however shrinking because of the increased competition offered by online giants and this has resulted in a lot of stores being forced to shut down and affecting all the employees of that particular store. This project proposes methods that can tackle competition from these online giants and at the same time what measures can be taken to avoid losses through other miscellaneous means. This report also contains the Problem Statement, it's background and various measures to tackle the problem along with the tools intended to be used.

Organization Background

Name of the Organization: Q.R.S (Quilon Radio Services)

Company Logo:



Fig 0.1: Logo of the Organization

Location: Multiple Branches Across Kerala, (Thiruvananthapuram Branch chosen for this project)

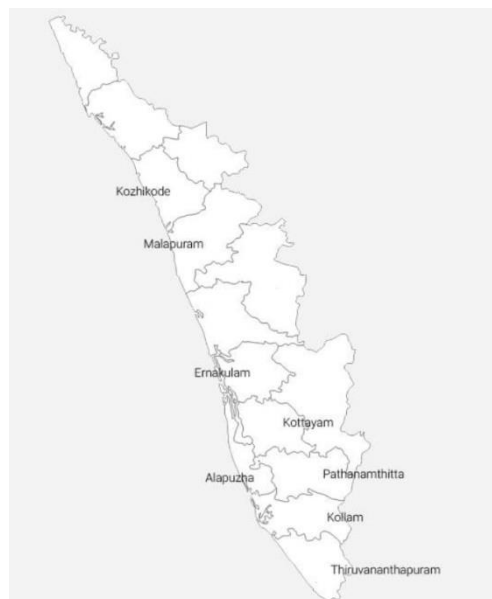


Fig 0.2: Map of Outlets Across Kerala

Description of the Organization:

QRS is basically a **B2C (Business to Consumer)** organization dealing primarily with consumer electronics such as Television, Refrigerator, etc. Today, the outlets of QRS have a stock of a wide range of world class brands like: Philips, Samsung, LG, Sony, Onida, Panasonic, IFB, Whirlpool, Siemens, Voltas, Haier, Nokia, Casio, Eureka Forbes, Venus,

Godrej, Preethi, Butterfly, Glen, Elgi, Bajaj, Kenstar, V-Guard and Honda among others. Apart from being a multi brand store QRS also has specialty brand stores like Sony, Philips Lights and Honda power products. They have also diversified by getting into the distribution of consumer durables: QRS Marketing (P) Ltd. deals with the distribution of: Casio Watches and Calculators, Philips audio, lighting and domestic appliances.

History of the Organization: Quilon Radio Service was established during in 1947, selling Philips radios and radiograms. QRS has grown quickly over the years to become Kerala's leading electronic retailer. It is now the largest consumer durable group in Kerala and a household name. Their vision is to provide the best retail experience possible for all their customers by providing quality products, dependable brands, and excellent service.

The company was founded by two brothers from Tuticorin's A.R.A.S.D family, Sri D Arunachalam and Sri D Thilagarajan. Their brothers Sri D Shenbhagamurthi, Sri D Ganesan, and Sri D Shunmugam assisted them. The history behind the name is that they first opened their doors in Quilon (Present Day Kollam, Kerala) and they focused on repairing radios which were popular back then. The core group has remained family members over the years, striving to bring QRS to the forefront of this industry. It now has three generations working together to uphold its name.

Organization website: <https://www.qrs.in/pages/index>

Organization Photo:



Fig 0.3: Outside View of the Store

1. INTRODUCTION

Consumer electronics refer to the basic type of electronics such as laptops, televisions, Refrigerators, etc. that are used by people on a daily basis for multiple needs. This project proposal explores the problems faced by Q.R.S, primarily a consumer electronics outlet and how they can be tackled by various methods.



Fig 1.1: Some of the Consumer Electronics

2. PROBLEM STATEMENT

As a part of the Problem Statement, the following objectives have been identified:

- Dealing with excess inventory at the store
 - Many offline retail stores, especially the consumer electronics stores face losses due to excess inventory.
 - In these growing years of Silicon age, old models of consumer electronics tend to lose value because of the growing technology.
- Keeping up with competition from E-commerce and other stores
 - A generalized issue faced by most consumer electronics stores.
- Tackling the issue of dwindling reach in stores locality
 - Promote better advertising and reach among people in the city.

3. BACKGROUND OF THE PROBLEM

After the attack of the pandemic back in 2019, a large number of businesses including that of consumer electronics were forced to shut down because of the losses they faced because of factors like increased cost of rent. The pandemic also forced people to stay at home and a

significant part of the population preferred to order goods through multiple e-commerce platforms. While this is clearly a boon to the growth of Digital India, this led to decreased revenues for a number of offline retail stores dealing with various businesses. The Inventory they had, especially the Consumer Electronics Industry seemed to have been losing their value over time as people wanted to stick to the latest trends in technology owing to various reasons. People always want a latest version of their iPhone or maybe that big 57 Inch Television which they might have seen at their friends' or colleague's place. Even 3 years post the pandemic, people still prefer buying goods online and there is fear among the employees of the offline retail store that their business might shut down. Coming specifically to the Organization (Q.R.S) chosen for this project, this report intends to propose ways by which the same organization can promote their goods through their own independent E-commerce platform while at the same time having a good business revenue at their offline stores. After a meeting with the Owner and other closely related stakeholders of Q.R.S, I have understood that the problem of Excess Inventory is not a one time problem, instead it is a recurring problem and existed much before the pandemic. The pandemic only played its role in the amplification of the same. Other key problems that I have noted and identified is the limited advertising and promotion that this particular store of Q.R.S is facing.

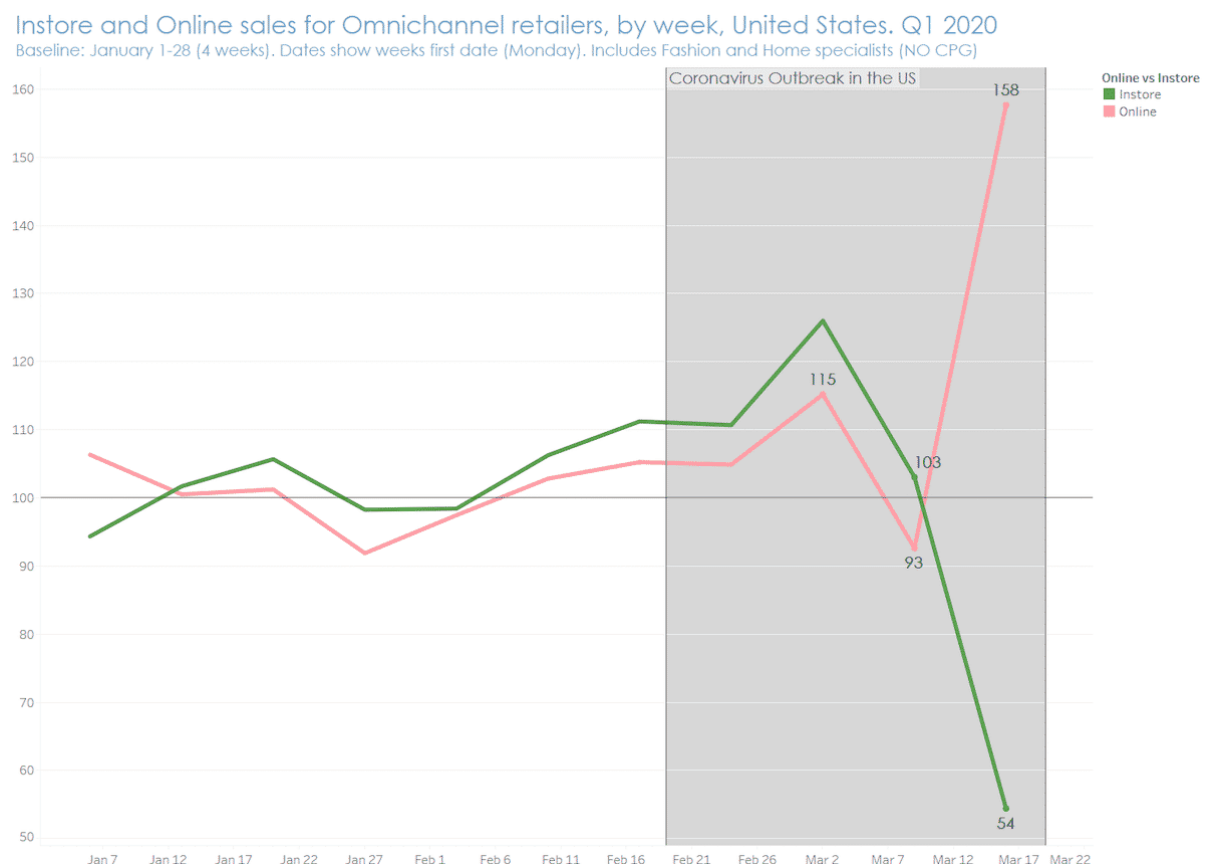


Fig 3.1 : Trend showing the instore and Online sales statistics for consumer electronics.
(Image is for another retailer in the United States, similar trends even for Indian retailers)

Source: <https://www.criteo.com/blog/coronavirus-consumer-trends/>

4. PROBLEM SOLVING APPROACH

4.1 METHODS INTENDED TO SOLVE THE PROBLEM(S)

As for the methods that are intended to solve the objectives mentioned in the Problem Statement, these are few proposed ones:

- Suggest a ratio between the amount of goods to be sold between the independent e-commerce platform and the offline retail stores so that a significant part of the inventory can be used for sales with a good amount of revenue. It is to be noted that this ratio is not fixed and shall keep varying depending on the month. It is also important to note that the method used should make sure the revenue is significant in the offline outlet as the store should be able to afford rent costs and employee costs like salary.
- Suggest ways for better outreach and advertising, in this case the city of Thiruvananthapuram alone will be considered as the organization's outlet chosen for this project is based in this city. This will have to be done at a bigger scale during festival seasons. This is usually the time when people intend to do more shopping and they expect discounts.
- Find ways to balance stock inventory with other outlets of the same organization within the state or city. (This is already being implemented, but a more optimized way is to be suggested after analyzing the sales data).
- Overall the intention is to not exactly reduce the size of the inventory, but instead to make sure a significant part of that inventory is sold for good revenue.
- Replace the items in the inventory as early as possible by examining the lives of the consumer electronics goods and also making sure the replacement cost is minimal. There are also few companies which even offer to replace the items from the inventory for free of cost if done within a stipulated time.
- For dealing with competition from other online e-commerce giants and fellow offline retail stores, a good way can be by issuing better discounts and extended warranty compared to competitors. Another suggested way can be by offering a free delivery of the goods to their doorstep.

4.2 HOW THE SALES DATA IS INTENDED TO BE COLLECTED

During my last visit to the store on 13th January 2023, I was able to meet the Managing Director and Sales Manager to discuss about my interest in collecting their data for the project and for understanding the type of problems which they are facing. The same is mentioned in the Problem Statement. During the course of the meeting, I was able to get rough ballpark figures of the sales of Television. They promised to give me the sales data for Television and Refrigerator for the previous year for the Business Data Management project. I intend to collect the Data over a Phone call/Google meet because of the inability to visit the outlet physically again because of the offline University classes at Bhopal, Madhya Pradesh. I was even able to get the business card for my reference or future queries.



Fig 4.1: Business card of the Sales Manager of the Organization

4.3 TOOLS INTENDED TO BE USED.

Some of the Tools/Technologies intended to be used for the project are:

- Google sheets/ Microsoft Excel
- Tableau
- Machine Learning (Optional – depends on type of data that will be collected, can be used for prediction purposes if data obtained is sufficient and appropriate)

5. EXPECTED TIMELINE

The timeline for working on the project is shown as follows:

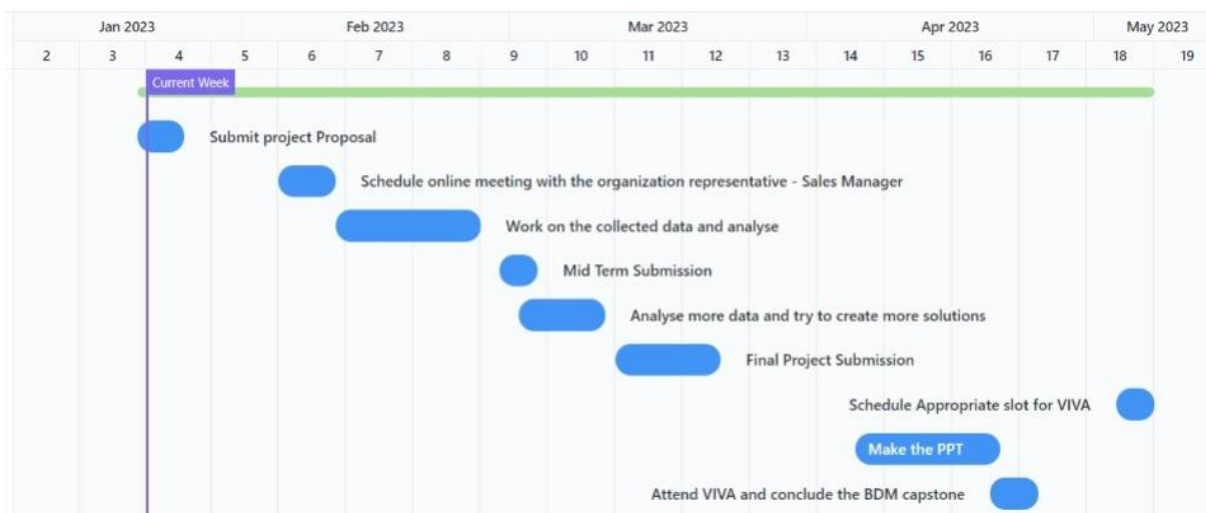


Fig 5.1: Gantt Chart for Project timeline

6. EXPECTED OUTCOME

The following outcomes are expected at the end of the Project:

- Increase revenue of the business through E-commerce without affecting the performance in offline stores revenue generation.
- Try to create a better social media reach in order to promote the business for better revenues.
- Introduce notions such as extended warranty and discount which can attract a number of customers.
- Solve the Problem Statements as mentioned in this report.
- Perform analysis on the data and try to identify areas where the company can work on in order to avoid losses.