MarketFlash Project

Enhancing Business Operations with Data Insights

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Introduction

We will be presenting to you the project we've been working on for MarketFlash, a growing marketing company. Our goal was to design and build a powerful database and an insightful dashboard to help MarketFlash manage their data more effectively and make informed business decisions.

Link to the video: https://drive.google.com/file/d/1ZNyPEeGi7GL4ajJ8_wHhrTLSzK9d4uXj/view?usp=drive_link

Project Objectives

Our main objectives for this project were to:

Transition Market Flash's data from spreadsheets to a more scalable and structured database.

Design a database that captures all necessary information about campaigns, clients, channels,and employees.

Create a user-friendly dashboard that provides clear visibility into business performance and key metrics.

MarketFlash initially faced several challenges:

Managing a large volume of data in spreadsheets, which was becoming inefficient and error-prone.

Lack of centralized data storage, making it difficult to retrieve and analyze information.
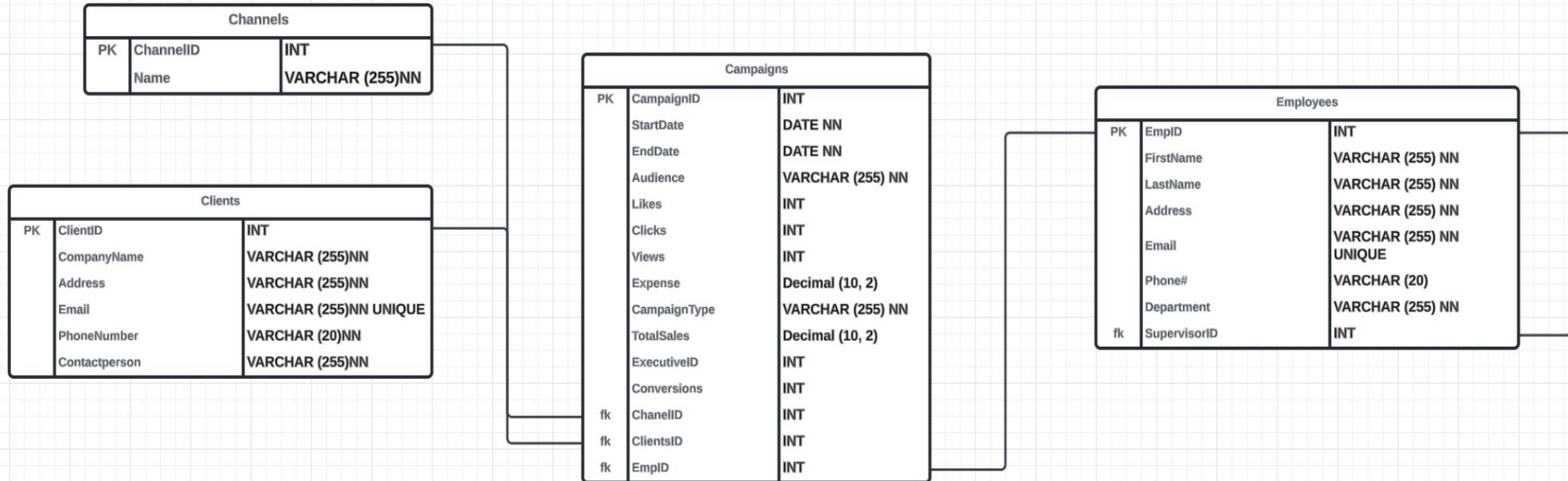
The need for a comprehensive dashboard to visualize key business metrics and trends.

To address these challenges, we followed a structured methodology:

1. Conducted interviews with Markus to understand the business requirements.
2. Analyzed the existing data to design a functional ER diagram for the database.
3. Cleaned the data to ensure accuracy and consistency

FUNCTIONAL ER Diagram

This is the ER diagram we designed for MarketFlash's database. It includes four main entities: Campaigns, Clients, Employees, and Channels, along with their relationships. Each campaign is associated with one client, one channel, and one employee managing it. This structure ensures data integrity and supports efficient querying and reporting."

Channels

PK	ChannelID	INT
	Name	VARCHAR (255)NN

Campaigns

PK	CampaignID	INT
	StartDate	DATE NN
	EndDate	DATE NN
	Audience	VARCHAR (255) NN
	Likes	INT
	Clicks	INT
	Views	INT
	Expense	Decimal (10, 2)
	CampaignType	VARCHAR (255) NN
	TotalSales	Decimal (10, 2)
	ExecutiveID	INT
	Conversions	INT
fk	ChanelID	INT
fk	ClientsID	INT
fk	EmpID	INT

Clients

PK	ClientID	INT
	CompanyName	VARCHAR (255)NN
	Address	VARCHAR (255)NN
	Email	VARCHAR (255)NN UNIQUE
	PhoneNumber	VARCHAR (20)NN
	Contactperson	VARCHAR (255)NN

Employees

PK	EmpID	INT
	FirstName	VARCHAR (255) NN
	LastName	VARCHAR (255) NN
	Address	VARCHAR (255) NN
	Email	VARCHAR (255) NN UNIQUE
	Phone#	VARCHAR (20)
	Department	VARCHAR (255) NN
fk	SupervisorID	INT

Database

We Normalized our database and removed redundancy.

We identified several data quality issues. These include: Duplicate records, missing values, Inconsistent data formats.

After cleaning the data, we achieved a significant reduction in duplicates and improved the completeness of our data. This has enhanced the reliability of our market analyses and decision-making processes.

Link to Beekeeper SQL queries:

https://docs.google.com/document/d/1iCElMeUvEEOrwoSYB77B3uzam4G-qRfgTajYBdUFy1c/edit

Dashboard overview

Let's dive into the dashboard we created for MarketFlash. This dashboard provides a comprehensive view of the key performance indicators and insights necessary for making informed marketing decisions.

1. **Top Metrics:** (**Avg.Clicks:** 2,607, **Avg.Conversions:** 510, **Avg.Likes:** 5,049, **Avg.Views:** 50,404)
2. **Conversion Rate:** (**Email:** 21.17%, **Facebook:** 19.99%, **Instagram:** 17.68%, **TikTok**: 20.25%, **YouTube**: 18.12%)
3. **Engagement by Location and Audience:** (likes, clicks, views)
4. **Channels Cost per Metric:**(**Email**: 0.28429, **Facebook**: 0.22527, **Instagram**: 0.26154, **TikTok**: 0.22622, **YouTube**: 0.25800)
5. **Clients Performance:**(Shows Performance metrics broken down by client.)
6. **Quarterly Engagement Analysis:**(Breaks down engagement metrics by quarter)
7. **Sales by Territory:**(Shows sales data broken down by territory and channel)
8. **ROI (Return on Investment):**(Shows the return on investment for each channel.)

https://public.tableau.com/app/profile/vani.prasad/viz/MarketFlash_172312589   ashboard2

MarketFlash

Clicks 2.607　**Conversions** 510　**Likes** 5.049　**Views** 50.404

Engagement by Location and Audience

Email　Facebook　Instagram　TikTok　YouTube
(Y-axis: 0K, 20K, 40K, 60K)

Time Period
- ☑ (All)
- ☑ Q1
- ☑ Q2
- ☑ Q3
- ☑ Q4

Location
- ☑ (All)
- ☑ Null
- ☑ Australia
- ☑ Canada
- ☑ Europe
- ☑ India
- ☑ Japan
- ☑ LATAM
- ☑ UK
- ☑ USA

Audience
- ☐ (All)
- ☐ Adults 18-40
- ☑ Adults 40-60
- ☐ Female 18-40
- ☐ Female 40-60
- ☐ Female 60+
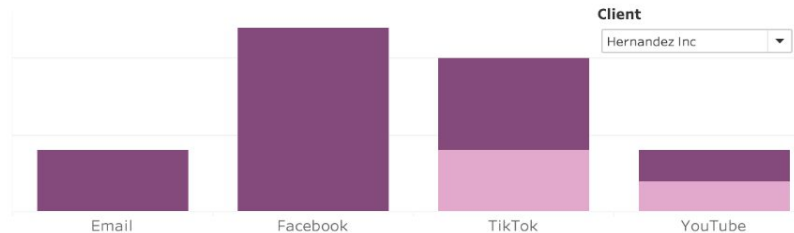- ☐ Male 18-40
- ☐ Male 40-60
- ☐ Male 60+
- ☐ Seniors 60+
- ☐ Teens 13-19
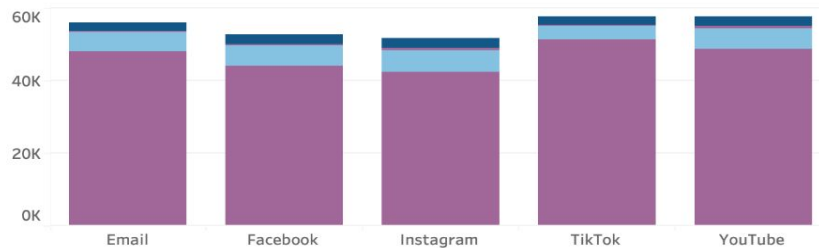
Channels Cost per Metric

Email	Facebook	Instagram	TikTok	YouTube
0.28429	0.22527	0.26514	0.22622	

Select metric: Cost per Like

Clients Performance

Client: Hernandez Inc

Email　Facebook　TikTok　YouTube

Quaterly Trends Analysis

Legend:
- Avg. Cost per click
- Avg. Cost per Conversion

Avg. Cost per Conversion (left axis): 0, 50, 100, 150
Avg. Cost per click (right axis): 0, 10, 20, 30
Month of End Date: 2, 4, 6, 8, 10, 12
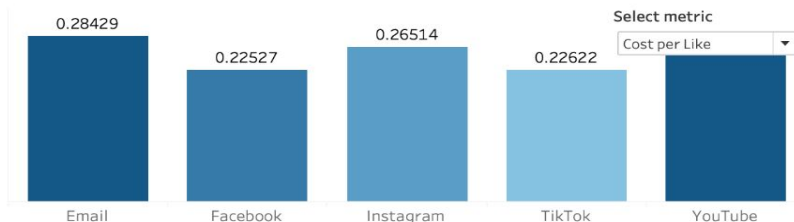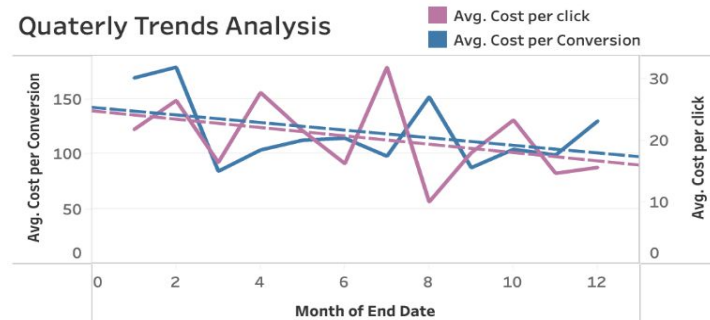
Conversion rate by Channel

Channel
- Email — 21,17% Email
- Facebook
- Instagram
- TikTok — 20,25% TikTok
- YouTube

ConversionRate: 0, 5, 10, 15, 20, 25

ROI

Client: Fox, Carter and Cunningham

Channel
- Email
- Facebook
- Instagram
- TikTok
- YouTube

ROI: -60, -50, -40, -30, -20, -10, 0, 10, 20, 30, 40
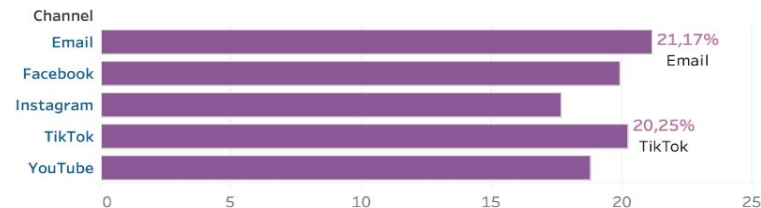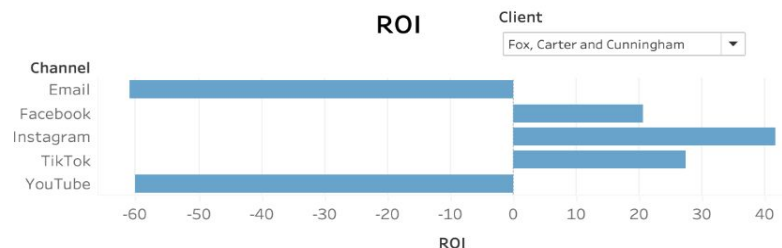
Conclusion

Our analysis provided valuable insights into campaign performance, helping MarketFlash make data-driven decision

This dashboard brings together a wealth of data to provide a holistic view of MarketFlash marketing performance. This allows a quick and easy analysis of key metrics, enabling better decision-making and more effective allocation of marketing resources.