High level document
Analysing Amazon Sales data

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Content

Abstract

Amazon Sales Management is proactively developing innovative strategies to boost sales and profitability. To achieve this, they have asked to work on yearly and monthly sales trend reports to gain insights into market dynamics. These reports will uncover correlations between various factors that directly impact sales, informing data-driven decision-making throughout the organization.

1. Introduction

1.1 Why this High-Level Design Document?

The purpose of this High-Level Design (HLD) Document is to add the necessary detail to the current project description to represent a suitable model for coding. This document is also intended to help detect contradictions prior to coding, and can be used as a reference manual for how the modules interact at a high level.

The HLD will:

• Present all of the design aspects and define them in detail

• Describe the user interface being implemented

• Describe the hardware and software interfaces

• Describe the performance requirements

• Include design features and the architecture of the project

• List and describe the non-functional attributes like:

> ➢ Security
> ➢ Reliability
> ➢ Maintainability
> ➢ Portability
> ➢ Reusability
> ➢ Application compatibility
> ➢ utilization
> ➢ Serviceability

1.2 Scope

The HLD documentation presents the structure of the system, such as the database architecture, application architecture (layers), application flow (Navigation), and technology architecture. The HLD uses non-technical to mildly-technical terms which should be understandable to the administrators of the system.

2. General Description

2.1 Product Perspective & Problem Statement

Sales management has gained importance to meet increasing competition and the need for improved methods of distribution to reduce cost and to increase profits. Sales management today is the most important function in a commercial and business enterprise. Do ETL: Extract-Transform-Load some Amazon dataset and find for me Sales-trend -> month wise, year wise, yearly month wise.
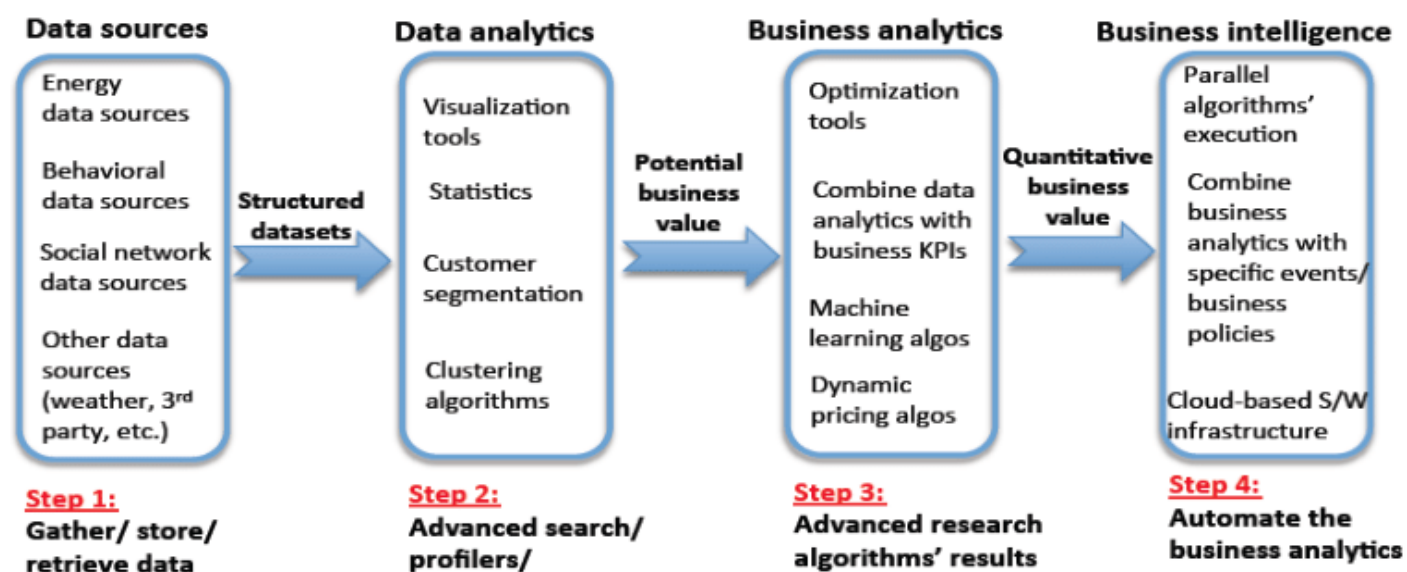
2.2 Tools used
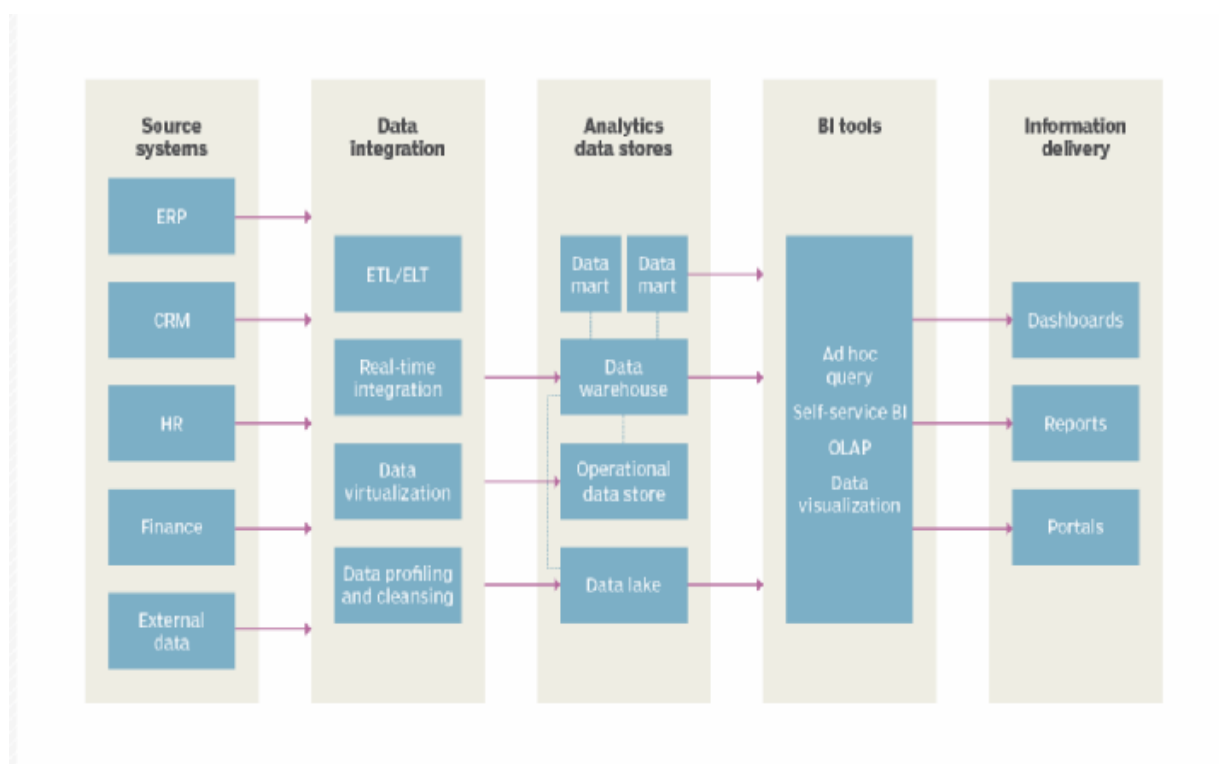
Microsoft Power BI and Excel is used for the whole project.

3. Design details

3.1 Functional architecture

How Business Intelligence works

3.2 Optimization

i. Your data strategy drives performance

• Minimize the number of fields

• Minimize the number of records

• Cleaning Data by imputing missing values or removing missing values.

• Cleaning and changing datatypes.

ii. Reduce the marks (data points) in your view

• Practice guided analytics. There's no need to fit everything you plan to show in a single view. Compile related views and connect them with action filters to travel from overview to highly granular views at the speed of thought.

• Remove unneeded dimensions from the detail shelf.

• Creating relationships between different variables.

4. KPI's

Dashboards will be used to specify certain KPI's and indicators related to food sales. The dashboards will feature charts illustrating the evolution of various indicators and factors over time.

4.1 KPIs (Key Performance Indicators)

Key Performance Indicators in the amazon food sales are listed below:

- ➢ Total Sales
- ➢ Total Profit
- ➢ Total Quantity
- ➢ Total Items
- ➢ Year on Year sales growth.

4.2 Charts

- ➢ Monthly Sales (Line chart)
- ➢ Monthly Profit (Line chart)
- ➢ Sales by year (Bar chart)
- ➢ Sales by Profit (Bar chart)
- ➢ Top 10 Products by Sales (Bar chart)
- ➢ Product sales (waterfall chart)
- ➢ High margin items (pie chart)
- ➢ Relationship between discount and profit (scatter plot)
- ➢ Relationship between sales cost and total cost (scatter plot).

5. Deployment

Data and analytics are more important than ever before. Every company, regardless of size, is already collecting data, but most are only analysing a fraction of it. To stay competitive and drive innovation, IT organizations need to focus on enabling self-service analytics by deploying and operating Power BI at scale. This means organizing and unifying data from disparate sources so that business users and experts alike can easily access and analyse it.

Amazon Food Sales data has been cleaned using MS Excel and analysed using Power Query and the data visualization platform Power BI. This will provide deeper insights into the data and tell a more informative story than the raw data alone. The Power BI report has been published to a workspace where you can interact with the data to gain the insights you need.