

High Level Design (HLD)

Food Environment Atlas Analysis

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Devendra Kandpal

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During the pandemic the supply chain of food is very disturbed. From this alone people gets to know the importance of food and supply chain management. This analysis helps to make us understand that overall performance of the country in terms of population increased, people left their job, affect of disease and so on during last 7-8 years	6
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Abstract

Food is the one of the essential quantity along with air and water for human beings. People generally move form one place to another when other place have good facility and easy to access and also in such an environment population rises rapidly, also there is a high chance that people start their business and earn money for themmselves and their families.

Government keeps an eye on such a place where the employment is high people are moving more rapidly and in short the life is simpler. And thus government impose high taxex on that places and earn high money as compared to other places/cities.

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
 - Resource 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

In this project we'll get to know how the population, job, income and restaurant gets affected when the supply affected. As people moves out from one place when they find good opportunity from else where.

The objective of the project is to perform data visualization techniques to understand the insight of the data. This project aims apply various Business Intelligence tools such as Tableau or Power BI to get a visual understanding of the data.

2.2 Tools used

Business Intelligence tools and libraries works such as Excel and Power BI are used to build the whole framework.



3 Design Details

3.1 Functional Architecture

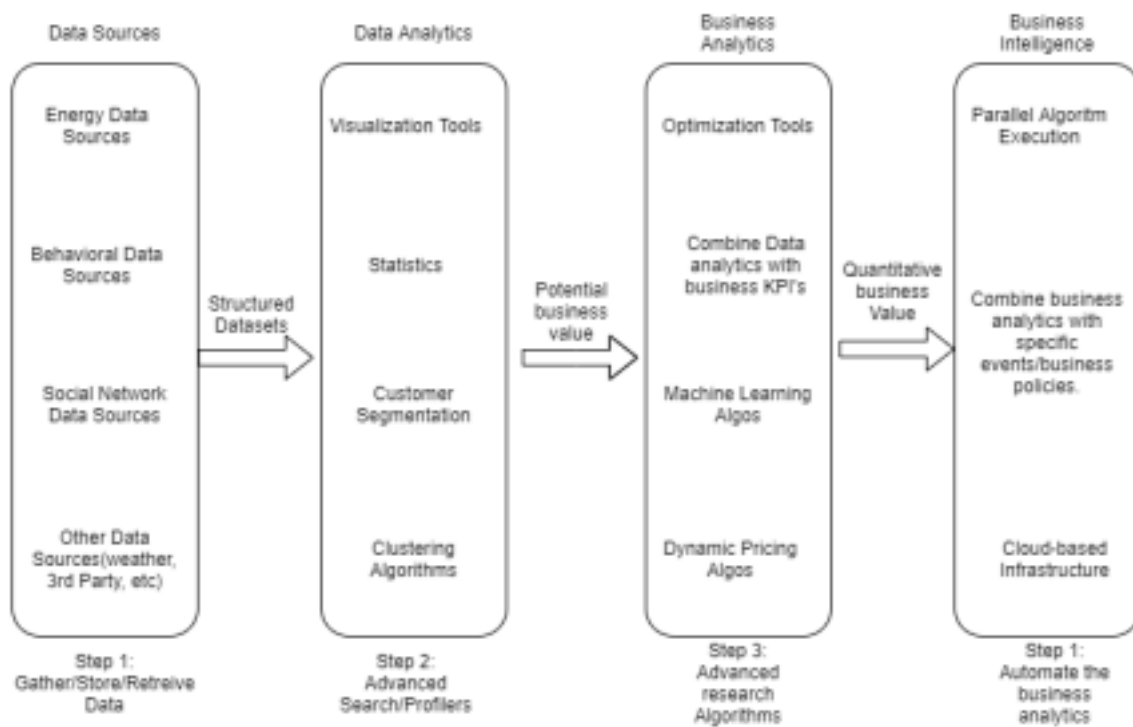


Figure 1: Functional Architecture of Business Intelligence

How BI Really Works



3.2 Optimization

Your data strategy drives performance

- Minimize the number of fields
- Minimize the number of records
- Optimize extracts to speed up future queries by materializing calculations, removing columns and the use of accelerated views

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.
- Explore. Try displaying your data in different types of views.

Limit your filters by number and type

- Reduce the number of filters in use. Excessive filters on a view will create a more complex query, which takes longer to return results. Double-check your filters and remove any that aren't necessary.
- Use an include filter. Exclude filters load the entire domain of a dimension, while include filters do not. An include filter runs much faster than an exclude filter, especially for dimensions with many members.
- [Use a continuous date filter](#). Continuous date filters (relative and range-of-date filters) can take advantage of the indexing properties in your database and are faster than discrete date filters.
- [Use Boolean or numeric filters](#). Computers process integers and Booleans (t/f) much faster than strings.
- Use [parameters](#) and [action filters](#). These reduce the query load (and work across data sources).

4 KPIs

Dashboards will be implemented to display and indicate certain KPIs and relevant indicators for the disease.



As and when, the system starts to capture the historical/periodic data for a user, the dashboards will be included to display charts over time with progress on various indicators or factors

4.1 KPIs (Key Performance Indicators)

Key indicators displaying a summary of the Housing Price and its relationship with different metrics

1. The % change in the number of restaurants.
2. % change in the population of the country.
3. % Tax collected on the different items
4. Health condition change during the period
5. % of population access to store.
6. % of people left the program
7. Population distribution.
8. Farm market change.
9. % which payment is mostly used by the people in which country
10. Number of facilities.
11. Types of goods sold.
12. Number of farm.

5 Deployment

Prioritizing data and analytics couldn't come at a better time. Your company, no matter what size, is already collecting data and most likely analyzing just a portion of it to solve business problems, gain competitive advantages, and drive enterprise transformation. With the explosive growth of enterprise data, database technologies, and the high demand for analytical skills, today's most effective IT organizations have shifted their focus to enabling self-service by deploying and operating Power BI at scale, as well as organizing, orchestrating, and unifying disparate sources of data for business users and experts alike to author and

consume content.

Power BI prioritizes choice in flexibility to fit, rather than dictate, your enterprise architecture. Power BI and Power BI cloud leverage your existing technology investments and integrate into your IT infrastructure to provide a self-service, modern analytics platform for your users. With on-premises, cloud, and hosted options, there is a version of Power BI to match your requirements.

