High Level Design Document (HLD)

Crop Production Analysis- India

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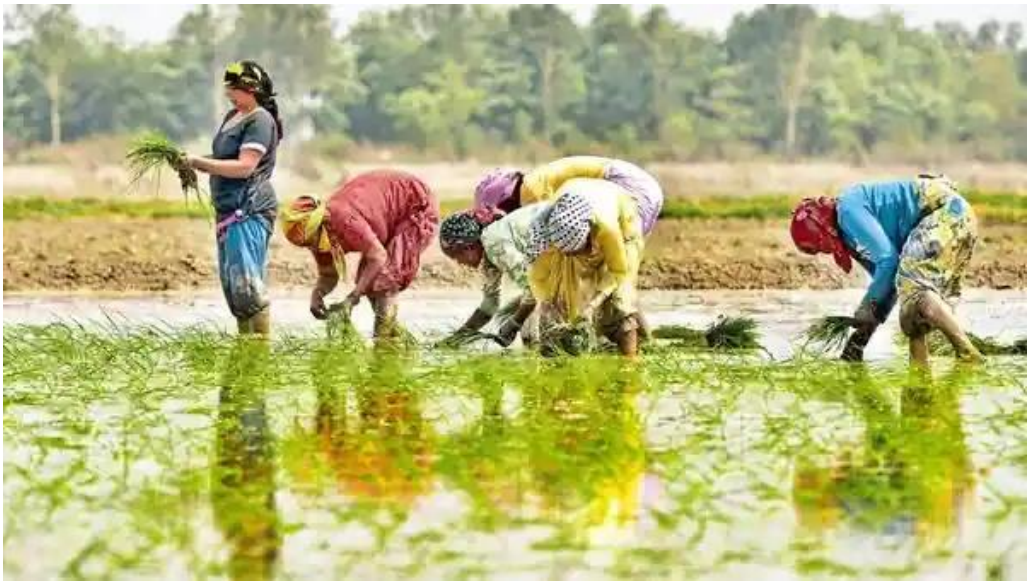
Contents:

Abstract

Crop production is one of the fundamental branches of agriculture. Crop production is the basis for providing the livestock industry with feed, and the population with food. Also, crop products are used in many industries as raw materials of plant origin, such as food, textile, pharmaceutical, fuel and others.

Crop production is a branch of agriculture, which includes the cultivation of crops in field cultivation, vegetable growing, fruit growing, etc. This industry gives necessary food. Consumer goods manufacturing and food industries gets raw materials. Livestock industry, in turn, uses by-products such as straw, silage, and food industry waste.

Agricultural enterprises have a powerful production potential, despite the difficult conditions of production, caused by high prices for production resources, low attractiveness of rural areas, and difficulties in obtaining loans.



This is mainly explained by the fact that domestic producers produce environmentally friendly products, while the production of products uses a minimum amount of preservatives. These circumstances create a demand for agricultural products. Moreover, now the demand for farm agricultural products, as products produced in natural conditions, is growing.

In modern rapidly changing socio-political and economic conditions, the economy faces the task of ensuring not only self-survival, but also the expansion of production.

Thus, the transition to sustainable economic growth and further improvement of the organization of crop production is impossible without promoting the use of science, technology and innovations. For an individual choice of the necessary implementations, an in-depth study of the actual processes of production of the product, its nature, orientation and dynamics, is necessary.

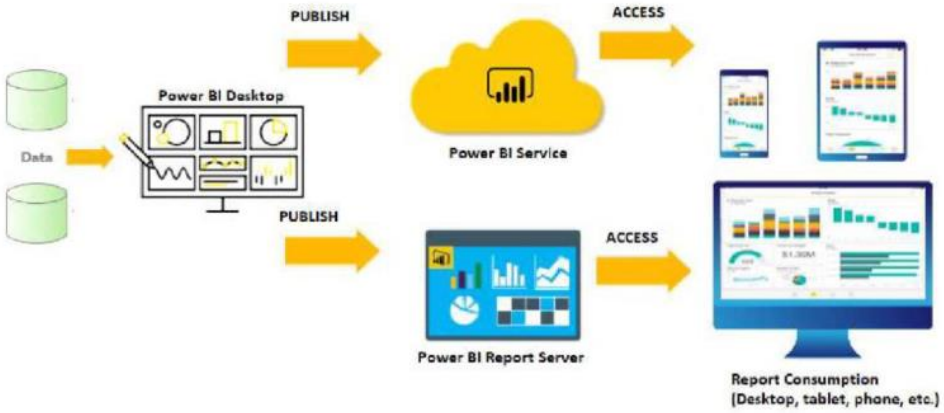
Scope

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

Problem Statement

- This dataset provides a huge amount of information on crop production in India ranging from several years. Based on the Information the ultimate goal would be to predict crop production and find important insights highlighting key indicators and metrics that influence the crop production.
- Make views and dashboards first.
- Make a story out of it.

Architecture



Tools Used

- I have used Business Intelligence tools like MS Excel and Power BI.
- MS Excel is used for data.
- Power Bi is used for creating dashboard, reports, charts according to selected data and make dashboard using charts.

KPIs (Key Performance Indicators)

- Dashboard will be implemented to display and indicate certain KPIs and relevant indicators.
- As and when, the system starts to capture the historical/periodic data for the user, the dashboard will be included to display charts over time with progress on various indicators or factors.

---------- Thank You ----------