

Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	2 March 3035
Team ID	PNT2025TMID04288
Project Name	Global Food Production Trends and Analysis
Maximum Marks	4 Marks

Technical Architecture:

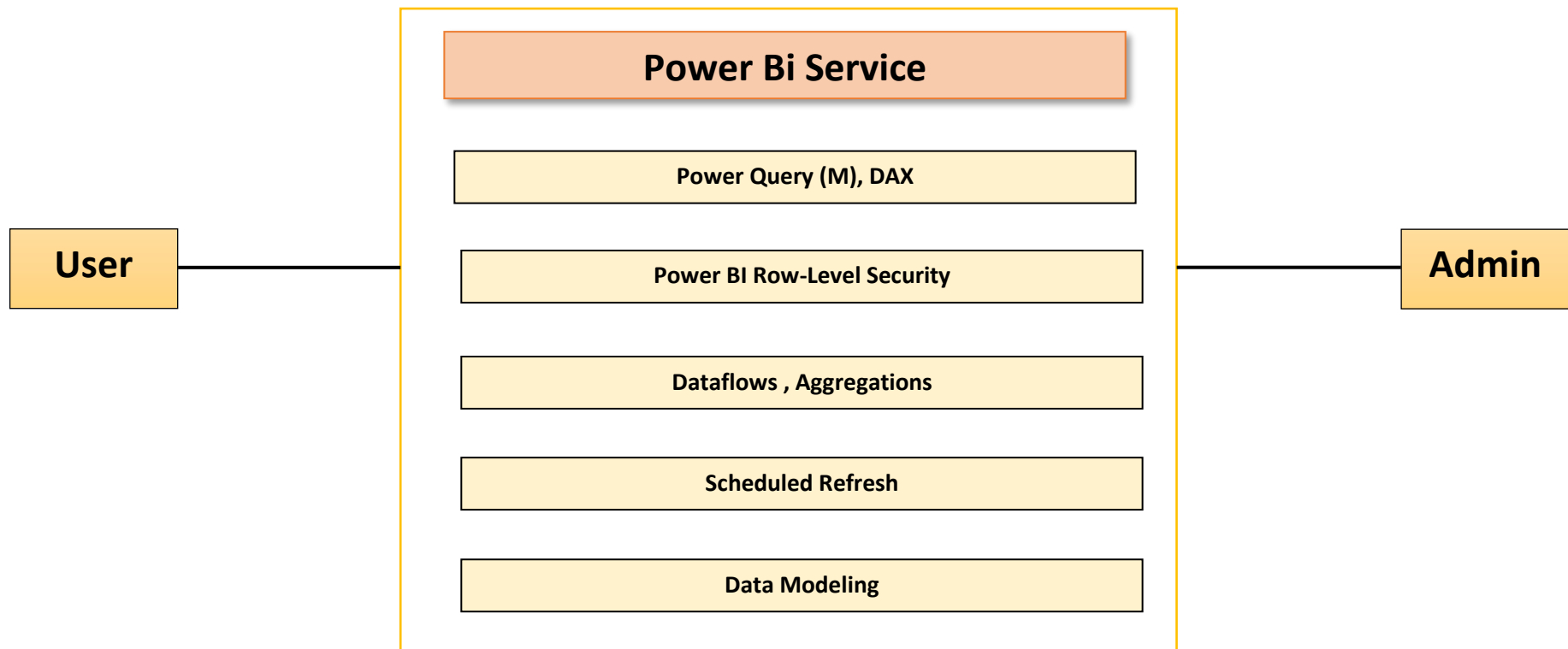


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Interactive dashboards for visualizing data	Power Bi
2.	Application Logic-1	Data modeling and transformation	Power Query (M language)
3.	Application Logic-2	Data calculations and measures	DAX (Data Analysis Expressions)
4.	Database	Storing source data and managing it	Excel/CSV
5.	Cloud Database	Hosting dashboards for access	Power BI Service
6.	File Storage	Storing raw data prior to import	OneDrive / Local Storage
7.	Infrastructure (Server / Cloud)	Hosting and sharing reports	Power BI Service

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Power BI functionalities used	Power Query (M), DAX
2.	Security Implementations	Ensuring data security and access control	Power BI Row-Level Security (RLS), Data Encryption
3.	Scalable Architecture	Handling large datasets efficiently	Power BI Dataflows, Aggregations
4.	Availability	Ensuring high availability of reports	Power BI Service with Scheduled Refresh
5.	Performance	Optimizing report performance	Data modeling best practices, Query folding