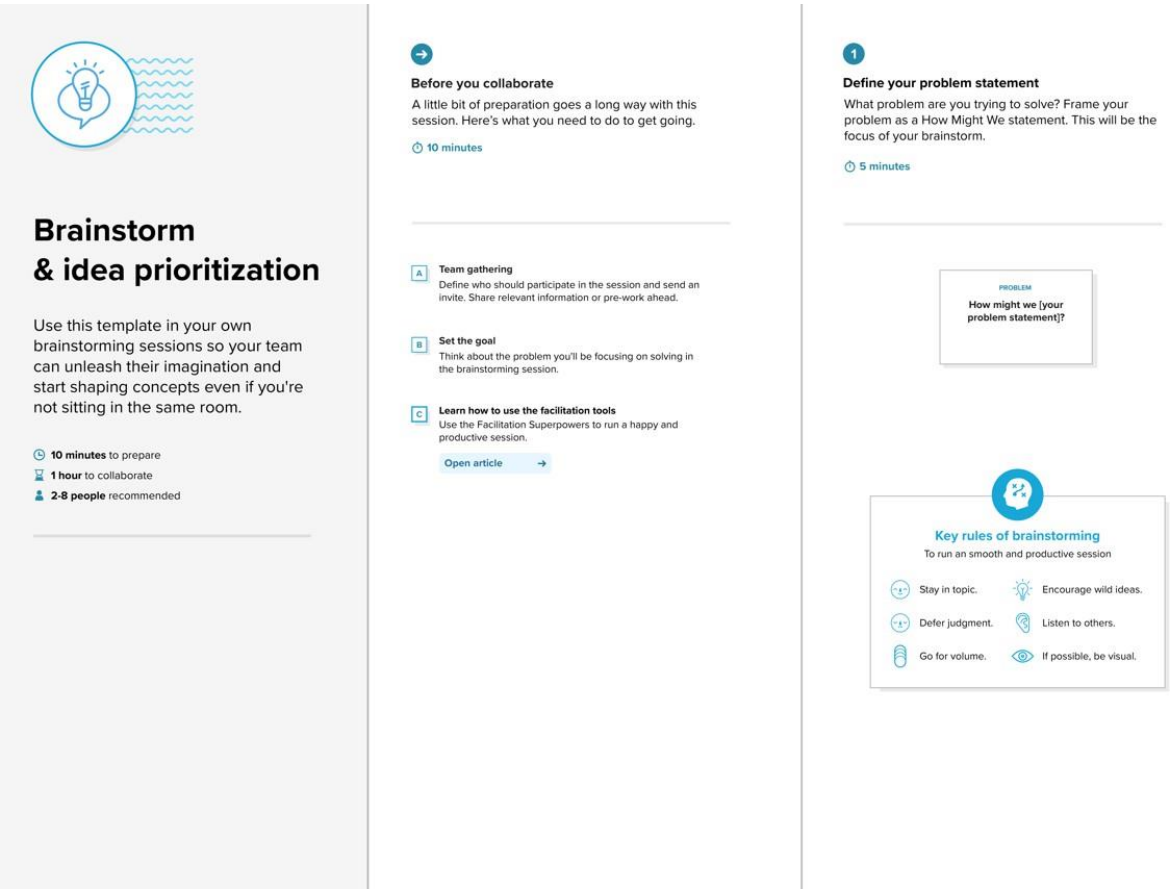
Ideation Phase
Brainstorm & Idea Prioritization Template

Date	26 March 2025
Team ID	PNT2025TMID06795
Project Name	Global Food Production Trends and Analysis: A Comprehensive Study from 1961 to 2023 Using Power BI
Maximum Marks	4 Marks

Brainstorm & Idea Prioritization Template:



Step-1: Team Gathering, Collaboration and Select the Problem Statement

Problem Statement:
There is a lack of clear insights into global food production trends, making it hard for stakeholders to make informed decisions. This project analyzes data from 1961 to 2023 using Power BI to identify key production patterns and trends. The findings will help improve agricultural planning and resource allocation.

Project Goal:
To study global food production trends, highlight key growth patterns, and provide useful insights for better decision-making in agriculture. The analysis will support stakeholders in optimizing food production and supply chains.

1. Data Collection & Preparation:

- Gather historical data on global food production from 1961 to 2023, including key agricultural commodities.
- Ensure data quality by handling missing values, inconsistencies, and standardizing units.
- Import and transform data in Power BI for better visualization and analysis.

2. Data Analysis & Key Metrics:

- Identify production trends of wheat, rice, maize, and other major crops over different periods.
- Use DAX measures to calculate key insights such as total production, year-on-year growth, and regional contributions.
- Apply data filters and slicers to explore production trends by country, region, and commodity type.

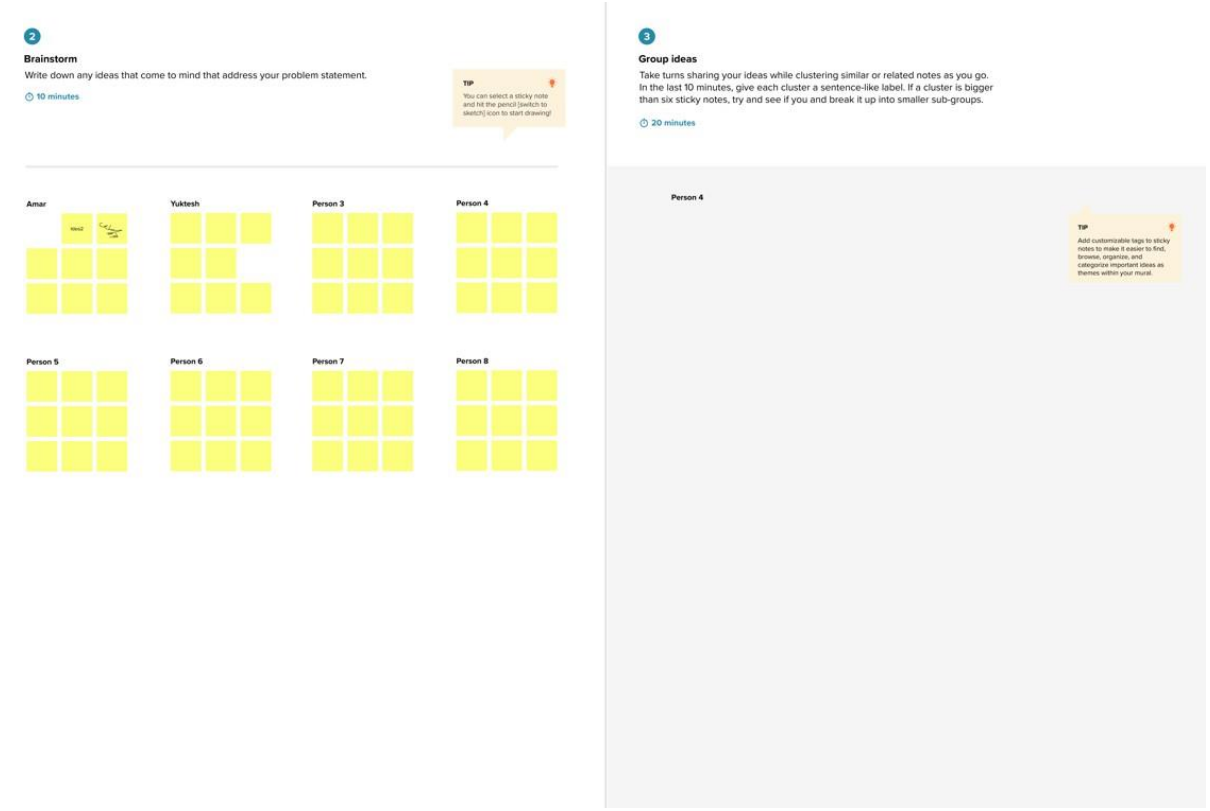
3. Visualization & Dashboard Creation:

- Stacked Bar Chart: Crop Type vs. Total Production (stacked by Region).
- Scatter Plot: Year vs. Production Volume (colored by Crop Type).
- Line Chart: Wheat, Maize, and Rice Production Trends over time.
- Pie Chart: Share of different regions in total food production.
- Card Visuals: Total Production, Fastest-Growing Crop, Leading Producer Region.

4. Predictive Insights & Business Impact:

- Use a Decomposition Tree to analyze factors driving production increases over the years.
- Provide insights into which regions and crops have shown the highest and most stable growth.
- Support agriculture policy-making and supply chain optimization by offering data-driven recommendations.

Step-2: Brainstorm, Idea Listing and Grouping



Step-3: Idea Prioritization

Idea	Priority Level (High/Medium/Low)	Reason for Priority
Data Cleaning & Transformation	High	Essential for accurate production insights
Stacked Bar Chart (Crop Type vs Production)	High	Shows key agricultural production trends
Scatter Plot (Year vs Production Volume)	High	Helps identify long-term production patterns
Line Chart (Wheat, Rice & Maize Trends)	High	Highlights major crop production growth
Pie Chart (Regional Contribution)	High	Visualizes region-wise production share
Card Visuals (Key Production Metrics)	High	Provides quick and clear insights
Decomposition Tree (Production Analysis)	High	Breaks down key factors influencing trends
Predictive Insights (Future Production Trends)	Medium	Useful for forecasting, needs refinement

Idea	Priority Level (High/Medium/Low)	Reason for Priority
Advanced AI-based Predictions	Low	Needs additional data exploration