# Ideation Phase
# Brainstorm & Idea Prioritization Template

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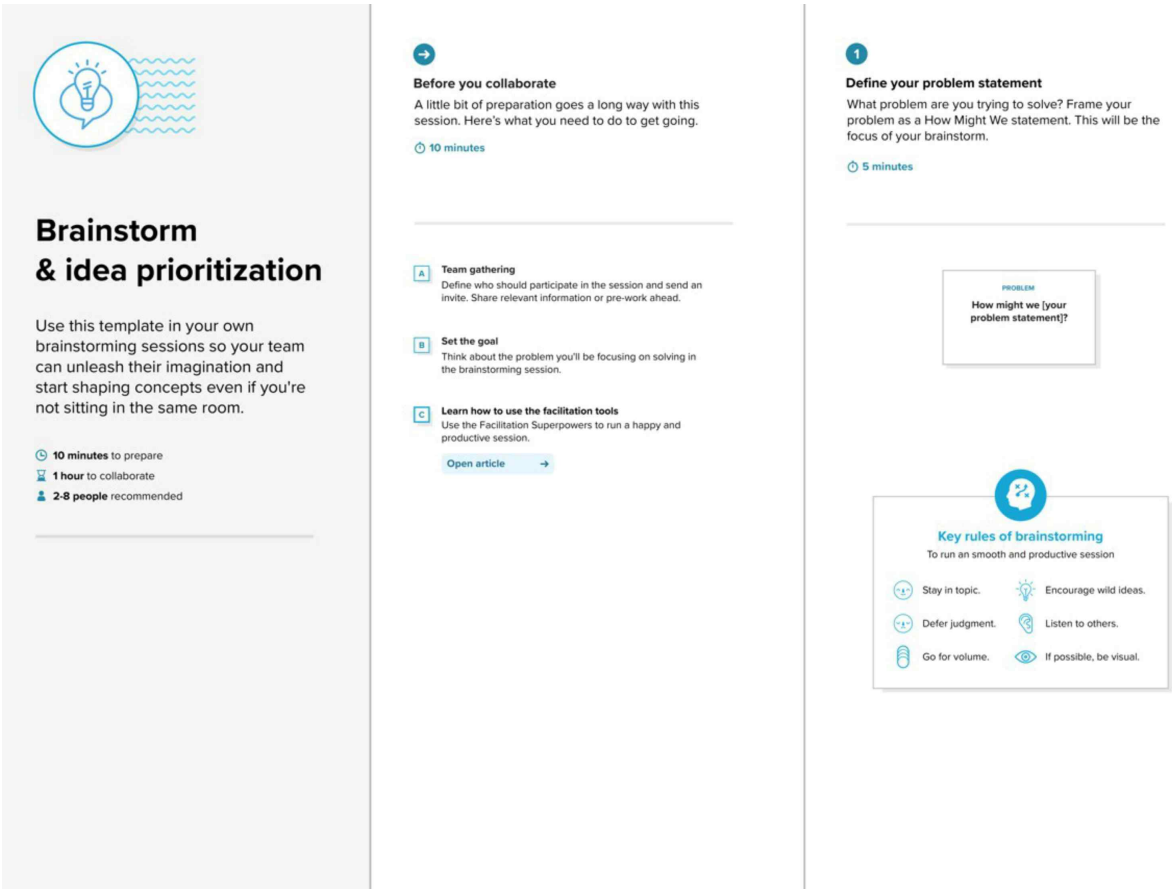
| Date | 28 March 2025 |
| Team ID | PNT2025TMID06686 |
| Project Name | Global Food Production Trends and Analysis: A Comprehensive Study from 1961 to 2023 Using Power BI |
| Maximum Marks | 4 Marks |

**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.

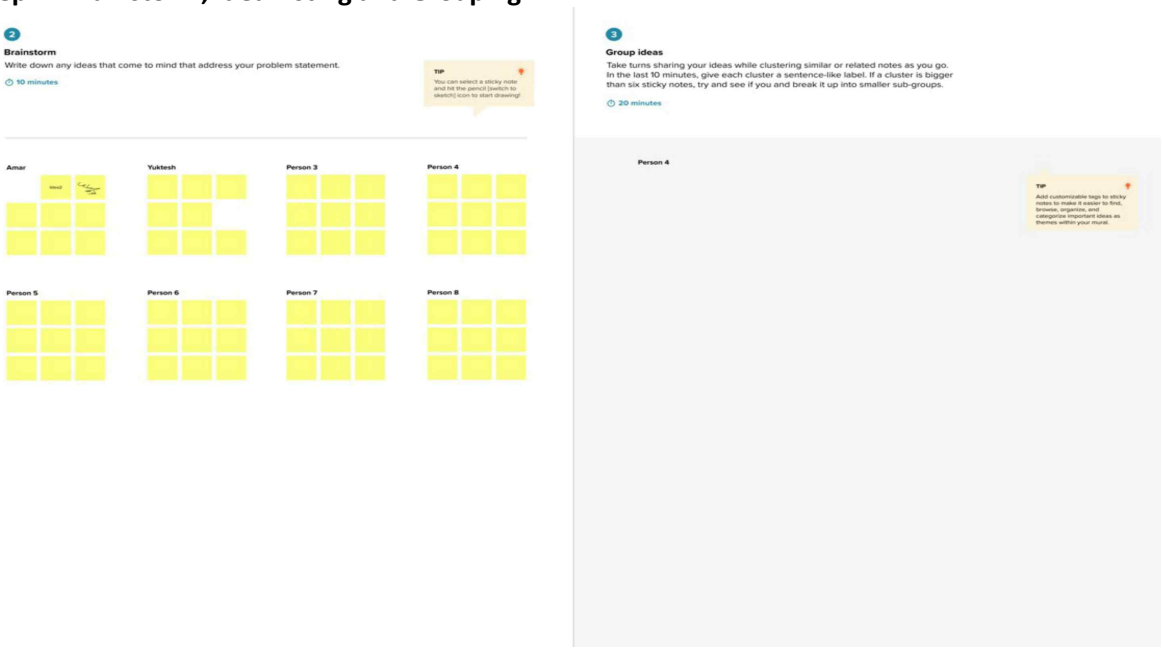
**3. Visualization & Dashboard Creation:**

- 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 |
| Advanced AI-based Predictions | Low | Needs additional data exploration |

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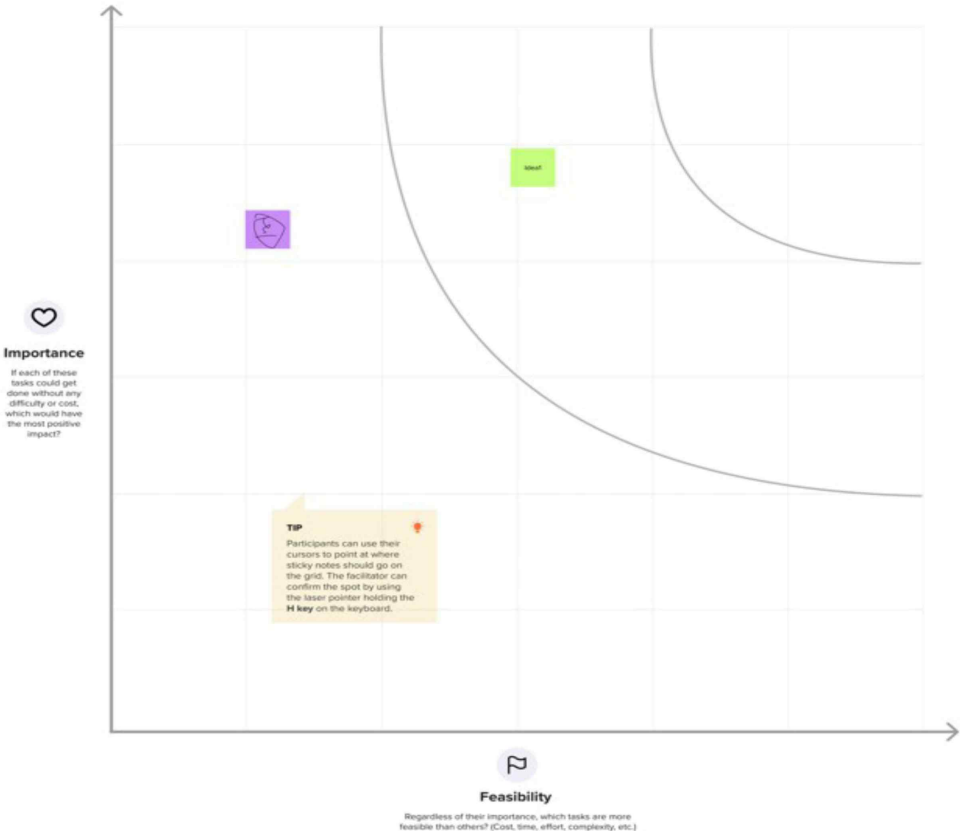
## Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

20 minutes




**Importance**

If each of these tasks could get done without any difficulty or cost, which would have the most positive impact?

**Feasibility**

Regardless of their importance, which tasks are more feasible than others? (Cost, time, effort, complexity, etc.)