

Project Design Phase-II

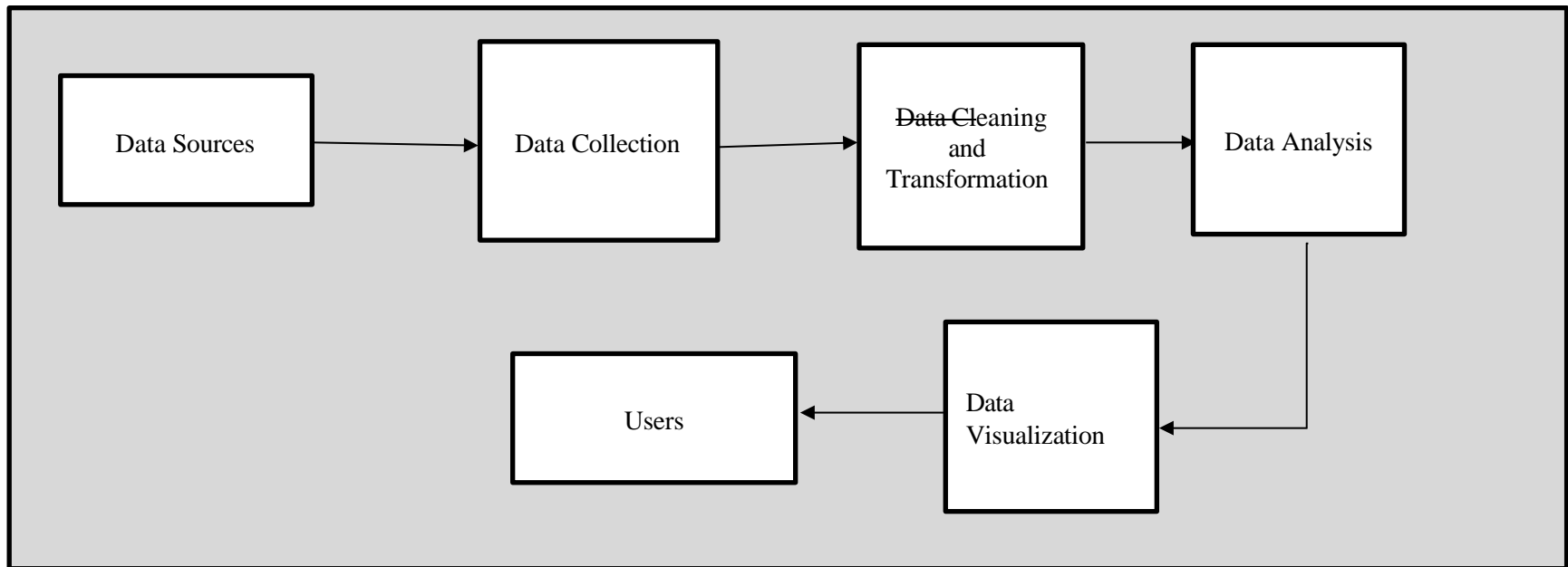
Data Flow Diagram & User Stories

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| Date | 12 March 2025 |
| Team ID | PNT2025TMID02739 |
| Project Name | Global Food Production Trend and Analysis a comprehensive study from 1961 to 2023 using power BI |
| Maximum Marks | 4 |

Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.

Data Flow Diagram





User Stories

| <u>User Type</u> | <u>Functional Requirement (Epic)</u> | <u>User Story Number</u> | <u>User Story / Task</u> | <u>Acceptance criteria</u> | <u>Priority</u> | <u>Release</u> |
|------------------|---|--------------------------|--|--|-----------------|----------------|
| Data Analyst | Global Food Production Analysis in Power BI | USN-1 | As a Data Analyst, I want to import and clean food production datasets from 1961 to 2023 in Power BI so that I can ensure data consistency and accuracy. | <ul style="list-style-type: none">The dataset should be successfully imported into Power BI.Data should be cleaned to remove inconsistencies, missing values, and | High | Sprint-1 |

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| | | | | <p>duplicates.</p> <ul style="list-style-type: none"> ■ Data transformation steps should be documented for reproducibility. | | |
| Business Intelligence Developer | Collaboration with Stakeholders | USN-2 | As a BI Developer, I want to design an interactive Power BI dashboard to visualize global food production trends from 1961 to 2023 so that users can easily identify patterns and insights. | <ul style="list-style-type: none"> ■ Dashboard should include key visualizations such as line charts, bar charts, and maps. ■ Users should be able to filter by year, region, and food type. ■ Performance should be optimized for fast loading. | Medium | Sprint-2 |
| Researcher | Evidence-Based Policy Development | USN-3 | As a researcher, I want to analyze the impact of climate change on food production trends over time so that I can identify correlations and potential risks. | <ul style="list-style-type: none"> ■ The dashboard should provide insights into climate factors affecting production. ■ Historical trends should be comparable across different time periods. ■ Statistical summaries should be available for key findings. | High | Sprint-1 |

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| Policy Maker | Stakeholder Engagement | USN-4 | As a Policy Maker, I want to engage with stakeholders, including farmers and NGOs, so that I can gather diverse perspectives and create inclusive policies. | <ul style="list-style-type: none"> Stakeholder meetings are scheduled and documented. Feedback from stakeholders is incorporated into policy drafts. | High | Sprint-2 |
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| NGO Representative | Community Needs Assessment | USN-5 | As an NGO Representative, I want to conduct community needs assessments so that I can advocate for policies that truly reflect the needs of marginalized communities. | <ul style="list-style-type: none"> Assessment tools (surveys, interviews) are developed. Results are compiled and shared with policymakers. | High | Sprint-2 |
| | Access to Data on Food Security Issues | USN-6 | As an NGO Representative, I want to access data on food security issues so that I can effectively communicate the challenges faced by communities to policymakers. | <ul style="list-style-type: none"> Data on food security is available and up-to-date Reports can be generated for advocacy purposes. | Medium | Sprint-2 |
| Agricultural Producer | Practical Recommendations | USN-7 | As an Agricultural Producer, I want to receive practical recommendations based on research findings so that I can implement sustainable practices that improve my crop yields. | <ul style="list-style-type: none"> Recommendations are tailored to specific crops and regions. Producers can provide feedback on the recommendations. | High | Sprint-3 |

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| | Workshops and Training Sessions | USN-8 | As an Agricultural Producer, I want to participate in workshops and training sessions so that I can learn about new technologies and practices that can enhance my farming operations. |  Workshops are scheduled and advertised.  Attendance and feedback are collected after each session. | Medium | Sprint-3 |
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