Improving the Manufacturing Efficiency of a Multinational FMCG Company

- **A Case Study**

Client

- A global FMCG company headquartered in the United States with over 40 years of experience with a focus on the production and distribution of convenience foods, snack foods, beverages, household products, personal care products, and more.
- Manufacturing units and distribution centers are spread across North America.

Problem

Our client was facing challenges with low Overall Equipment Efficiency (OEE) such as:

- High levels of unplanned downtime due to equipment failures and maintenance issues.
- Inefficient use of resources, leading to low production output.
- Difficulty in identifying the root causes of equipment failures and maintenance issues.
- Inability to make data-driven decisions due to lack of real-time data insights.

The operations generated a vast amount of data, which was collected manually, making it time-consuming and prone to errors. The data was not leveraged to its full potential in making informed decisions.

Solution

To address the challenges faced by our client we proposed a solution that involved data engineering and business intelligence:

- We extracted all the data from various sources, cleaned it, removed redundant segments and duplicates and formatted it as per the industry standards.
- We built a centralized enterprise data warehouse to store the cleansed and structured data. The data collection process from the sources was automated via custom connectors and APIs. The centralized data warehouse made it easier to access, analyze and gain insights from the data.
- To monitor Overall Equipment Effectiveness (OEE), downtime and production output in real-time, we used Microsoft Power BI to create interactive dashboards.
- We incorporated alerts in the dashboards to ensure that the maintenance team was notified of anomalies or issues at the earliest. The alerts were triggered when certain metrics fell out of the acceptable ranges that indicated a potential issue in the manufacturing process.

Business Impact

Our solutions helped the client achieve several outcomes, including:

- OEE increased by 15% in a quarter after the implementation of our solution.
- Production output increased by 7% as the OEE improved.
- The downtime was reduced significantly by half as compared to the previous financial year.
- The Power BI dashboards enabled the stakeholders to get real-time insights into their operations, allowing them to make informed decisions, identify bottlenecks and take corrective action.