* **Problem Statement**:

The company struggled with monitoring supplier performance across multiple plants, resulting in inconsistent production outputs and frequent downtime. The absence of a standardized method for tracking and validating supplier quality made it challenging to pinpoint issues and make data-driven decisions.

* **Key Insights**:

1. **Rising Defects and Downtime**: Defect quantities surged to 2.6 billion units, leading to 216,000 hours of downtime, costing approximately $2.16 million. Notably, spikes occurred in September and December, indicating significant production disruptions.  
   
2. **Financial Impact**: Downtime costs translated into substantial financial losses, shedding light on how supplier quality issues impacted profitability.  
  
3. **Underperforming Vendors**: Vendors like Avamm, Meejo, and Yombu were identified as major contributors to production issues.

* **Recommendations**:

1. **Focus on High-Risk Vendors**: Implement targeted improvement initiatives with underperforming vendors. Enforce regular performance reviews and stricter quality control measures.  
   
2. **Plant Optimization**: Conduct process evaluations in plants with high defect-related downtime to enhance operational efficiency.  
   
3. **Material Quality Control**: Introduce stricter quality checks for raw materials to minimize downtime caused by defective materials.