Lifecycle Data Monitoring Dashboard

Tools: Microsoft Excel, VBA, Power Query

Overview: Developed an Excel-based dashboard to monitor and analyze key maintenance performance indicators, including MTTR, MTBF, and uptime.

Objectives

• Automate KPI computation from maintenance logs.
• Visualize performance trends for decision support.
• Provide interactive filtering by asset, location, or period.

Technical Approach

• Used Power Query to import and clean CSV log data.
• Created VBA macros for automated data refresh.
• Built Pivot Tables and charts to display trends and downtime contributors.
• Designed KPI summary cards for quick insights.

Challenges & Solutions

Challenge: Inconsistent data formats in logs
Solution: Applied Power Query transformation steps and error-handling functions.

Challenge: Slow dashboard refresh
Solution: Optimized formula dependencies and disabled volatile functions.

Results

80% reduction in manual KPI computation time and improved data-driven maintenance planning.

Future Enhancements

Integrate with Power BI or SQL Server for real-time updates.