



Aéroworld

Business requirements analysis

Introduction

Aéroworld, a French company with a strong international focus, was founded fifty years ago. Today, it is a global leader in the aerospace industry, with thousands of employees spread across many countries.

Aéroworld focuses on several key areas, such as the design, development, manufacturing, and maintenance of aircraft. The company is known for its diverse range of products, from commercial and transport aircraft to helicopters.

Context

Business Requirement #1 - Improvement of aircraft design

The company aims to leverage available data to optimize its aircraft designs. This requires efficient collection, storage, and analysis of data from flight tests, performance metrics, customer feedback, etc.

The data analyst will need to implement KPI such as...

Performance Improvement Metrics:

- **Metric:** Comparison of new designs against key performance indicators such as fuel efficiency, aerodynamics, and weight reduction.
- **Purpose:** Evaluates the effectiveness of design optimizations.

Compliance Rate with Industry Standards:

- **Metric:** Percentage of designs meeting regulatory and safety standards upon first review.
- **Purpose:** Ensures adherence to required guidelines and reduces rework.

Business Requirement #2 - Optimization of operational performance

The company seeks to enhance its operational efficiency across all departments, including production, logistics, and maintenance, to reduce costs and improve delivery times.

The data analyst will need to implement KPI such as...

1. Production KPIs:

- **First Pass Yield (FPY):**
 - **Metric:** Percentage of products manufactured correctly without the need for rework.
 - **Purpose:** Indicates process efficiency and product quality, aiming to minimize defects and rework.
- **Cycle Time:**
 - **Metric:** Average time taken to complete one production cycle from start to finish.
 - **Purpose:** Assesses the speed of the production process, with shorter cycle times contributing to increased throughput and faster deliveries.

2. Logistics KPIs:

- **On-Time Delivery Rate:**
 - **Metric:** Percentage of orders delivered on or before the scheduled delivery date.
 - **Purpose:** Measures the reliability and efficiency of the delivery process, directly impacting customer satisfaction.
- **Inventory Turnover:**
 - **Metric:** Ratio of cost of goods sold to average inventory value over a specific period.
 - **Purpose:** Evaluates inventory management efficiency, indicating how quickly inventory is sold and replaced.

3. Maintenance KPIs:

- **Machine Downtime Rate:**
 - **Metric:** Percentage of time machines are non-operational due to unplanned stoppages.

- **Purpose:** Highlights reliability issues and the effectiveness of maintenance strategies, aiming to minimize production disruptions.
- **Maintenance Cost per Unit of Production:**
 - **Metric:** Total maintenance costs divided by the number of units produced.
 - **Purpose:** Evaluates the cost-effectiveness of maintenance activities in relation to production output.

Business Requirement #3 - Enhancement of customer satisfaction

The company intends to improve customer satisfaction by providing better after-sales services and more effective communication channels.

The data analyst will need to implement KPI such as...

First Contact Resolution (FCR) Rate:

- **Metric:** Percentage of customer issues resolved during the initial interaction without the need for follow-up.
- **Purpose:** Measures the efficiency and effectiveness of support services; higher FCR indicates prompt and satisfactory issue resolution, leading to increased customer satisfaction.

Net Promoter Score (NPS):

- **Metric:** Measures customer loyalty by asking how likely they are to recommend the company to others, typically on a scale from 0 to 10.
- **Purpose:** Provides insight into overall customer satisfaction and the effectiveness of after-sales services; a higher NPS indicates more satisfied and loyal customers.

Business Requirement #4 - Integration of new technology

The company plans to integrate cutting-edge technologies, such as artificial intelligence and automation, into its processes to stay competitive in the market.

The data analyst will need to implement KPI such as...

Process Efficiency Improvement:

- **Metric:** Percentage reduction in time required to complete automated processes compared to manual methods.
- **Purpose:** Evaluates the effectiveness of AI and automation in streamlining operations and enhancing productivity

Cost Savings:

- **Metric:** Reduction in operational costs attributed to AI and automation adoption.
- **Purpose:** Measures the financial benefits and return on investment (ROI) of integrating advanced technologies.

Conclusion

By implementing targeted Key Performance Indicators (KPIs) across design, operations, customer service, and technological integration, Aéroworld can effectively monitor progress toward its strategic objectives. This data-driven approach will facilitate informed decision-making, enhance operational efficiency, and bolster customer satisfaction, thereby reinforcing Aéroworld's position as a leader in the aerospace industry.