# Data Analysis Project Charter

Title: **Shift Reports & Performance Dashboard**

Date: **April 12, 2023**

Analyst: **Jooyeun Moon**

Audience: **Maintenance and Operations Team Leaders, Plant Manager**

Preferred Method of Communication: **Power BI Dashboard**

Problem Statement: **Shift Summaries of daily activities, Weekly summary of KPIs**

Main Business Metric: **Maintenance – Machine downtime, Operations – Daily checks (safety, inventory, environment, etc.), Plant Manager (Safety, Environment, Production, Machine Downtime)**

Time horizon: One time report

Ongoing - Frequency: Daily Weekly Monthly Annually Other:

Data Sources

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| **SBMSResourceDownTime.xls** |
| **Warehouse Shift Log.xls** |
| **Steel Coil Waterhouse Sample Data.xls** |
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Assumptions

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| Assumption | Validation |
| **Shifts start at 6 am and end at 6 pm** | **Confirmed by supervision** |
| **Safety Target = 0 injuries/month** | **Per Business Plan** |
| **Environment Target = 1 incident/month** | **Per Business Plan** |
| **Production Targets = 250 tons/day, 600 pcs/day** | **Per Business Plan** |
| **Machine Downtime Target = 5%** | **Per Business Plan** |

Note: not all orders are the same in both sources

Conclusions:

1. Bay 3 Staging Crane has the most repair downtime. Bay 2 Production Crane and Bay 3 Production Crane also needed a lot of repair downtime and couldn’t fulfill KPI.
2. Transfer Car had the most machine downtime. From January 6th to January 9th Transfer Car was down according to the updated Shift Report. Two housekeeping check and one stock inventory check weren’t completed during that period and didn’t meet those KPIs.

Recommendations:

1. Investigate why only Bay 2 Staging Crane met weekly machine downtime KPI and other machines had problem in meeting the KPIs. See if certain machines have operational issues and you need to take actions. Find out if longer machine downtime is temporarily necessary. Find out what actions you need to take to meet the KPIs for better business practice.
2. Investigate why Transfer Car needs the most downtime and see if any actions to be done to reduce Planned Shutdown and Planned Maintenance time since longer downtime affected housekeeping check and stock inventory check. Check with the machine operators if the machine downtime KPI is realistic and up to date.