**Projects Charter Document**



**Project Name:** Machine Downtime

**Industry:** Manufacturing

**Department:** Manufacturing

**Product/Process/Project:** Data Analysis



**Prepared By**

|  |  |
| --- | --- |
| **Document Owner(s)** | **Project/Organization Role** |
| M. Raja | Data Analyst |

**Project Charter Version Control**

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Date** | **Author** | **Change Description** |
| 1.0 | 04/04/2025 | Raja. M | Charter document created |
| 1.1 | 07/04/2025 | Raja. M | Data Analytics Check list created |
| 1.2 | 08/04/2025 | Raja. M | Research Tracker created |
| 1.3 | 14/04/2025 | Raja. M | Project architecture created |
| 1.4 | 16/04/2025 | Raja. M | Machine downtime analysis with python, sql |
| 1.5 | 18/04/2025 | Raja. M | Final presentation created |

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# PROJECT CHARTER PURPOSE

The project charter defines the scope, objectives, and overall approach for the work to be completed. It is a critical element for initiating, planning, executing, controlling, and assessing the project. It should be the single point of reference on the project for project goals and objectives, scope, organization, estimates, work plan, and budget. In addition, it serves as a contract between the Project Team and the Project Sponsors, stating what will be delivered according to the budget, time constraints, risks, resources, and standards agreed upon for the project.



# PROJECT EXECUTIVE SUMMARY

* Business Problem – Machines which manufacture the pumps. Unplanned machine downtime which is leading to loss of productivity
* Business Objective – Minimize unplanned machine downtime
* Business Constraint – Minimize maintenance cost
* Success Criteria:
  + Business Success Criteria - Reduce the unplanned downtime by at least 10%
  + Economic Success Criteria – Achieve a cost saving of at least $1M
* Data Collection: Data given by client (Secondary data) are collected.
* Scope: Project is developed for technical resolution department
* Assumptions: New data will be provided by customer
* Risks: Storage device to develop a model might not enough
* Costs: Project cost – 63,000 (total no of hours spend to develop project \* no of human resource \* hourly cost 90\*1\*700)
* Timeline: Project will be developed for 15 days.
* Approach: Data analysis project methodology.



# PROJECT OVERVIEW



# PROJECT SCOPE

## Project Deliverables

|  |  |
| --- | --- |
| **Milestone** | **Deliverable** |
| * Identifying Constraints and design the project architecture, explore various public forums to collect relevant data, Data Preparation. | * Deliverable 1.1—Identifying Constraints and design the project architecture. * Deliverable 1.2—Explore various public forums to collect relevant data. * Deliverable 1.3— Data Preparation |
| * EDA and Descriptive Analytics | * Deliverable 2.1— EDA and Descriptive Analytics * Deliverable 2.2— Insights documentation |
| * Show case and review, Final Presentation and documentation, Handover and KT. | * Deliverable3.1 – show case and review. * Deliverable3.2 – Final Presentation and documentation * Deliverable3.3 – Handover and KT |

## Deliverables Out of Scope

* Web Application
* Mobile App
* Cloud based deployment

## Project Duration (start date: 04/04/2025 End date: 18/04/2025)

|  |  |  |  |
| --- | --- | --- | --- |
| **Project Milestone** | **Date Estimate** | **Deliverable(s) Included** | **Confidence Level** |
| * Identifying Constraints and design the project architecture, explore various public forums to collect relevant data, Data Preparation. | [07/04/2025]  -  [09/04/2025] | * Deliverable 1.1—Identifying Constraints and design the project architecture. * Deliverable 1.2—Explore various public forums to collect relevant data. * Deliverable 1.3— Data Preparation | [High] |
| * EDA and Descriptive Analytics | [10/04/2025]  -  [15/04/2025] | * Deliverable 2.1— EDA and Descriptive Analytics * Deliverable 2.2--- Insights documentation | [High] |
| * Show case and review, Final Presentation and documentation, Handover and KT. | [16/04/2025]  -  [18/04/2025] | * Deliverable3.1 – show case and review * Deliverable3.2 – Final Presentation and documentation * Deliverable3.3 – Handover and KT | [Medium] |



# PROJECT CONDITIONS

## Project Assumptions

* Data will be extracted from public sources and then client provided data is mapped and finally one master data will be shared by Aispry for further analysis.
* Dashboards and insights are mandatory.

## Project Issues *– Fill it as and how project progresses.*

**Priority Criteria**

1 − High-priority/critical-path issue; requires immediate follow-up and resolution.

2 − Medium-priority issue; requires follow-up before completion of next project milestone.

3 − Low-priority issue; to be resolved prior to project completion.

4 − Closed issue.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Date** | **Priority** | **Owner** | **Description** | **Status & Resolution** |
| 1 |  | High |  |  |  |
| 2 |  | High |  |  |  |

## Project Risks – *Identify if there are any risks that you foresee.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **#** | **Risk Area** | **Likelihood** | **Risk Owner** | **Project Impact-Mitigation Plan** |
| 1 | [Project Risk] | [High/Medium/Low] |  |  |
| 2 | [Project Risk] | [High/Medium/Low] |  |  |



# PROJECT REFERENCES – Any previous projects you have referred. If yes, please share the details.

|  |  |
| --- | --- |
| **Project** | **Description** |
| [ [shashi117/Optimization-of-machine-downtime: 1.The primary business objective is to minimise unplanned machine downtime, aligning with the success criterion of achieving at least a 10% reduction in downtime.](https://github.com/shashi117/Optimization-of-machine-downtime?utm_source=chatgpt.com) | The primary business objective is to minimise unplanned machine downtime, aligning with the success criterion of achieving at least a 10% reduction in downtime. |
| [aayanmaity/Predicting-the-downtime-duration-of-a-factory: Identifying factories that are most prone to downtime by predicting downtime duration of various factories](https://github.com/aayanmaity/Predicting-the-downtime-duration-of-a-factory?utm_source=chatgpt.com) | Identifying factories that are most prone to downtime by predicting downtime duration of various factories |
|  |  |

# APPROVALS

**Prepared by** \_M.Raja\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project Manager

**Approved by** Praveen K Burra\_And Bharani Kumar\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project Sponsor

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Executive Sponsor

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Client Sponsor

