**Project Charter Document**



**Project Name:** Demand Forecasting and Production Optimization

**Industry:** Manufacturing

**Department:** Operations / Supply Chain Management

**Product/Process:** Time Series analysis



**Prepared By**

| **Document Owner(s)** | **Project/Organization Role** |
| --- | --- |
| Give your name | Mention that you are data analyst or data scientist |
| Kaushiv Chaudhary | Data Scientist |
|  |  |

**Project Charter Version Control**

| **Version** | **Date** | **Author** | **Change Description** |
| --- | --- | --- | --- |
| 1.0 | 04/09/2024 | Kaushiv Chaudhary | Document 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:**The existing forecasting technique for the client is not effective. The project aims to forecast demand for construction machinery variants to optimize manufacturing and distribution.
* **Business Objective:** Maximize operational efficiency and responsiveness.
* **Business Constraint:**Minimize stockouts and inventory imbalances.
* **Success Criteria:**
  + Business Success Criteria:Reduce production lead time by 15%.
  + ML success criteria: Achieve <10% MAPE in demand forecasts.
  + Economic Success Criteria:Save 100 million annually in inventory holding costs.
* Data Collection: Update this section after the research is done.
* Scope: If you are doing this for any specific department of the organization then please mention the same.
* Assumptions: E.g., Data will be provided by customer, Cloud & GPU will be provided by customer
* Risks: E.g., Required data might not be available; Server connectivity might be weak, etc.
* Costs: Project cost – You can do assumptions by putting [number of hours \* number of human resources (cadre wise) \* hourly cost]
* Timeline: High level timeline of the project. E.g., Project will be for 20 to 25 days.
* Approach: Data Analytics Project Management 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: 15/09/2021 End date: 05/10/2021)

| **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. | [04/09/2024]  -  [10/09/2024] | * 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, Model Building , Evaluation, Deployment | [12/09/2024]  -  [26/09/2024] | * Deliverable 2.1— EDA and Descriptive Analytics * Deliverable 2.2--- Insights documentation | [High] |
| * Show case and review, Final Presentation and documentation, Handover and KT. | [27/09/2024]  -  [02/10/2024] | * 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 Innodatatics 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** |
| --- | --- |
| [ |  |
|  |  |
|  |  |

# APPROVALS

**Prepared by** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project Manager

**Approved by** Bharani Kumar Depuru

Project Sponsor

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

Executive Sponsor

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

Client Sponsor

