# **Project 1** (Due 26 October)

# Overview

*EcoPower Logistics* comprehensive logistics solutions tackle the complexities of acquiring, storing, and transporting resources and goods globally, requiring meticulous coordination. Through our logistics management system, *EcoPower Logistics* receive and process orders, while the warehouse serves as a secure storage facility. The data stored can be shared in different ways. One of which is through visualisations built into a report or dashboard. These reports or dashboards can be shared with different stakeholders, potentially with different levels of access applied. The COI have been advised that a good way to monitor the orders and products sales would be through a report.

The report will be built in Power BI, as the organisation already has all applicable licensing agreements in place with Microsoft, and the report is expected to allow all stakeholders to see the same information pertaining to the status of customers and their orders. As a member of the COI development team, you are expected to acquire and practise the necessary skills to create such a report.

# Prerequisites

Before executing on this project, you will need to take the following into account and action the items appropriately:

* Ensure you have downloaded and installed [Power BI Desktop](https://aka.ms/pbidesktopstore)
* Ensure that you have access to the online [Power BI Service](https://app.powerbi.com/) where you will be publishing your reports to a workspace
* Ensure that you have retrieved the Excel file to be used as the data source (log in using your MS fed account)

# Requirements

Functional requirements refer to the functionality that a system must have and how the functions should be performed. Non-functional requirements refer to the aspects of a solution that have an impact on the quality attributes of a system (or platform). These non-functional requirements are deemed as supportive requirements to ensure that the functional requirements are implemented appropriately and according to good software practices.

***Please note:*** *it will be important for you to keep the Overview Repository Readme file updated throughout the semester as you will be evaluated on the content of the Readme file as part of your Portfolio of Evidence (POE).*

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| --- | --- | --- | --- |
| **Feature** | **Stories** | **Tasks (to be broken down further)** | **Priority** |
| GitHub Administration | Create and Configure GitHub Repository | Create a repository named ‘CMPG 323 Project 5 - <add your student number>’ | 1 |
|  |  | Create a ReadME.md file that will be used to describe your project and how stakeholders are to use the report that you have developed | 1 |
|  | Project Progress | Ensure that the report has been committed and pushed to source control throughout the project | 1 |
|  |  | Ensure that the GitHub project has been updated iteratively throughout the project to demonstrate how progress was made | 1 |
| Project Setup | Create the Reporting Project | Clone your GitHub repository | 2 |
|  |  | Install Power BI Desktop | 1 |
|  |  | Create a new Power BI Report named ‘EcoPower Logistics – Order Monitoring’ | 1 |
|  | Configure the Report | Create a page named ‘High-Level Metrics’ | 2 |
|  |  | Create a page named ‘Order Monitoring’ | 2 |
|  |  | Create a page named ‘Product Monitoring’ | 2 |
|  |  | Create a page named ‘Customer Monitoring’ | 2 |
| Data Connection | Configure the Connection to Data Sources | Create a live connection to the data sources that will be used as part of the visualisations to be created | 1 |
|  |  | Ensure that the data connection is secure | 2 |
|  |  | Ensure that the data sources are appropriately mapped, where necessary | 2 |
|  | Implement Data Manipulation | Ensure that the datasets are cleaned and all duplicates are removed | 3 |
|  |  | Ensure that all imported data fields are associated to the correct data types | 3 |
|  |  | Create at least one calculated column to enhance the quality of your dataset | 2 |
|  |  | Create at least one key measure that will enhance the quality of your visualisations | 2 |
| Report Development | High-Level Metrics | Add a summary view that shows business stakeholders a high-level view of the ‘important’ data.  This generally would refer to counts of data points based on information that could impact decision making. | 1 |
|  | Order Monitoring | Create a visual that allows the user to monitor orders per product | 2 |
|  |  | Create a visual that allows the user to monitor orders per client | 2 |
|  |  | Create a visual that allows the user to monitor orders over time | 2 |
|  | Product Monitoring | Create a visual that allows the user to see how many products exist. Analytically decide on 3 metrics to display valuable insights about the product offerings. | 2 |
|  |  | Create a visual that allows the user to see how many products exist. Analytically decide on 3 metrics to display valuable insights about the organisation's customers. | 2 |
|  | Filtering | Make use of filters that can be applied across pages and visuals | 4 |
|  |  | Add a filter for users to filter the report based on product category | 4 |
|  |  | Add a filter for users to filter the report based on customer | 4 |
|  |  | Add a filter for users to filter the report based on order number | 4 |
| Project Close-out | Project Documentation | Ensure that the ReadMe.md file in the GitHub repository explains how the user would use the report | 1 |
|  |  | Create a reference list document that contains all sites visited and used to complete the project | 1 |

Reading Materials

There are multiple aspects of the abovementioned scope that may be covered by

* Introduction to Power BI: <https://docs.microsoft.com/en-us/learn/modules/introduction-power-bi/>
* Model Data in Power BI: <https://docs.microsoft.com/en-us/learn/paths/model-power-bi/>
* Power BI Best Practises: <https://spreadsheeto.com/power-bi-best-practices/#:~:text=1%20Put%20first%20things%20first.%20This%20one%20is,with%20numeric%20data%2C%20use%20integers%20instead%20of%20strings>.
* Storytelling in Power BI: <https://powerbi.microsoft.com/en-us/data-storytelling/>

# Community Engagement

There are many different communities available for you to engage with if you are experiencing any challenges or if you would like to learn more about the technology and possibilities of Power BI:

* LinkedIn Groups
* Stack Overflow
* Power BI Community User Groups
* YouTube Power BI Influencers

# Certification

If this project has caught your interest and you are keen on obtaining a Microsoft certification on Power BI development, take a look at the training ([Power BI on Microsoft Learn | Microsoft Docs](https://docs.microsoft.com/en-us/learn/powerplatform/power-bi)) and the [Exam PL-300: Microsoft Power BI Data Analyst - Learn | Microsoft Docs](https://docs.microsoft.com/en-us/certifications/exams/pl-300) that you need to write and pass before becoming certified.

# Submission Details

The scope of this project has been issued as an **individual** assignment. Please note that you will need to use GitHub for this project.

**Please Note:** Ensure that your repository has been shared with the users **autoruby, JacquiM** and **marijkec** so that your project can be marked**.**

**Submission**: Submit your CMPG 323 Project 5 by providing the relevant information through the form to be provided.

**Deadline**: 17h00 on 26 October 2023 (please note there are no alternative or late submission dates – if you miss this deadline you will forfeit the opportunity)

**What to submit**:

1. Provide the URL to your GitHub Repository
2. Credentials to connect to your data source(s)
3. Provide the URL to your report (if hosted online)
4. Provide your reference list file

# Marking Considerations

Please take note of the following considerations that will form part of the marking and moderation process:

* A rubric will be provided separately
* Failure to upload any of the requirements for submission will result in 0
* Failure to complete this as an individual assignment will result in 0
* Failure to use Power BI will result in 0.