**D605 Task One Scenario 1**

**Scenario**

ABC Logistics is a company specializing in transportation services for various industries. They operate a fleet of trucks to deliver goods to customers across different regions. Recently, the company has been facing challenges in maintaining their profit margin while ensuring customer satisfaction. You have been hired as a consultant to address these challenges.

**Key Company Strengths**

ABC Logistics operates a fleet of trucks of different sizes and capacities and has multiple delivery points spread across different regions, each with specific delivery requirements and time windows. The costs incurred are associated with fuel, maintenance, and driver salaries, which vary based on the distance traveled and the type of truck used.

ABC Logistics wants to focus on minimizing costs, maximizing profits, optimizing delivery times, and ensuring efficient use of truck capacities. It is essential to ABC’s mission that they are able to ensure customer satisfaction while maximizing profit. Additionally, ABC Logistics is committed to reducing its carbon footprint and is focused on environmental impacts as they analyze and alter their business practices. As a result, greater focus has been on data analysis to optimize the organization's running.

**Project Information**

The company has made the following information available to you for your work:

Fleet Information

* number of trucks
* capacity of each truck
* fixed and variable costs (fuel, maintenance, driver salaries)
* CO2-equivalent emissions per mile for each type of delivery vehicle in the fleet

Delivery Points

* locations (coordinates or addresses)
* average delivery requirements (volume, weight) per week
* time windows for delivery

Distance Matrix

* distance between each pair of delivery points and the depot (warehouse)

Competitor Information

* types of delivery vehicles used by competitors
* delivery points that also use competitors to meet part of their delivery demand