

Fall 2024 Project List

MGMT 661 ELI Operations Management

A: Last Mile Delivery Network Design

Industry: Logistics and Transportation

Client connects customers to last-mile delivery capacity through a software-as-a-service (SaaS) model. The student team will investigate the last mile and scaling models in Mexico City. What is the best logistical model as the operation grows? How should the client operate with 25K shipments/day, 35K, and 100K?

B: Emissions Estimation and Modeling

Industry: Manufacturing (metal fabrication)

The client needs clearer emissions estimation and modeling for internal use and reporting to partners. Purdue team will:

- Define the scope 1, scope 2, and scope 3 emissions for the client.
- Set up a quantitative model or framework for calculating these scopes, and define the model's input, restriction, and output.
- Create a dashboard for visualizing the output of the framework.
- Identify the areas for improvement or action plan regarding these respective scopes.
- Identify online sources for publishing carbon targets and CRS.

C: Consultant Selection Process

Industry: Manufacturing (home goods)

The client is seeking a consulting partner for the ERP system they are currently using. They need outside expertise to understand how to best utilize the software and its functionalities to drive business value. The Purdue student team will work on the consulting partner selection process.

Final deliverables will be:

- A short list of potential consulting partners.
- A request for proposal (RFP) ready to be sent to companies on the shortlist.
- A scoring criteria matrix for scoring returned proposals.

D: Freight Price Prediction Model

Industry: Manufacturing (textiles)

The student team will create a predictive model to help the client assess potential changes in inbound freight costs. The team will provide recommendations on how to determine when the client should lock in short-term rates compared to utilizing spot market rates. The team will research macroeconomic factors affecting freight rates and define historical patterns to build the predictive model.