

Analyst Assessment Prompt

The purpose of this exercise is to examine the candidate's ability to assess a data set and then report analysis and insights.

Business Scenario:

██████████ main source of revenue comes from renting heavy construction assets. To start a rental operation in a new market, we first set up an equipment yard in that market, buy assets (excavators, aerial lifts, skid steers, telehandlers, etc.) to place in that yard, and then begin to rent those assets out to customers in the vicinity. Our revenue from each rental is a function of what type of asset it is and how long we rent it out for.

One important driver of rental revenue is the mix of equipment asset *classes* that we have in a yard. As a simplification, you will be presented with two classes of equipment: Aerial Equipment and Dirt Equipment. Your job is to understand what combination of Equipment Classes (e.g. 80% Aerial, 20% Dirt) corresponds to the best overall performance for a market.

The data that you will be provided with includes the following data points for each asset that we own:

- The market that it is in (please note that market locations have been changed for confidentiality. So any geographical analysis will not be helpful)
- The period over which the asset was on rent
- The rental revenue from that asset over the above time period
- The Original Equipment Cost (OEC) for that asset
- The asset purchase date

Here are some metrics that might help you break down market “performance”:

- Cash is king: The most important metric is revenue. Start by looking at what initial Equipment Class mix drives the highest revenue by market.
- A key metric in the rental industry is “financial utilization.” The financial utilization for a market is calculated by dividing its annualized rental revenue by OEC. For each market, think about what individual Equipment Classes have the highest financial utilization, and think about how they drive overall revenue growth for a market.
 - *Financial Utilization = (Annualized Revenue)/OEC*

We understand that the output is slightly vague and ambiguous, but most things on this job are: We are just looking for how you think through the data and relate it to actionable business tasks.

Task:

By analyzing the data, prepare a short presentation (8-10 minutes) to share with senior leaders focusing on the questions listed above. Be ready to share your methodology during the Q&A session following the presentation.

Technical specification:

You may use any technical tools at your disposal. Google Sheets and Google Slides should be enough, but using Python, R, or other available tools is also acceptable.

Data sets (see Metadata tab on data_source_final.xlsx sheet for field details):

asset_oec: List of assets, purchase date, market assignment, equipment class, and OEC for assets relevant to this data set.

rentals: Rental revenue by month aligning to assets and markets for study period.

market_mapping: Market list with market ID and market open date.

Please do not hesitate to reach out with any questions about the task. Happy analyzing!