TRUCKload of Gasoline

Your client is a trucking company deciding between adopting an electric fleet or a gasoline fleet. As a consultant, determine the optimal choice.

CASE TYPE
Profitability

COMPANY NAME
LEK Capability Network

DIFFICULTY LEVEL
★ ☆ ☆

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Is EV only environmentally friendly or do I make money too?

Case Type	Company Name	Round	Difficulty Level
Profitability Case	LEK Capability Network	Partner	▬ ▬ ▭ ▭ ▭

Problem Statement

Your client is a trucking company deciding between adopting an electric fleet or a gasoline fleet. As a consultant, determine the optimal choice.

I would like to ask some preliminary questions.

Yes Sure.

What kind of service does the company provide? Is it B2C or B2B?

Why do you ask this question?

As B2B would transport heavy goods from business to business and B2C would have smaller packages.

It is a mixed scenario and you shouldn't be concerned with whether it was B2B or B2C.

Where is the client located?

The company is based pan-US.

Is there a possibility of partial fleet adoption? Or does it have to be only electric or a gasoline fleet?

It is up to you on the basis of the cost and financial calculations that you do

What are the primary objectives for adopting the fleet? Is it profitability or is the company willing to minimise its profit for some greater cause, like to minimise the carbon emissions?

It is purely profitable.

Is the volume/capacity of each electric truck and gasoline truck the same?

You may ignore any such factors.

Is it safe to assume that revenue won't be affected by fleet choice, and concentrate on the costs?

Right. You may go ahead.

I would initiate a break-even analysis focusing on fixed & variable costs.
For the fleet, the fixed cost would be the no. of trucks x the cost per truck. Variable costs would include gas/electricity cost, insurance, and driver-related expenses.

You may focus only on gas/electricity costs for the variable cost.
To go ahead with the calculations, here are some numbers:

Parameter	Electric Truck	Gasoline Truck
Initial Cost	$50,000	$41,000
Fuel Efficiency	300 miles	25 miles/ gallon
Fuel Cost (per unit)	$24	$3/ gallon
Annual Distance travelled	45,000 miles	45,000 miles

Alright, I have identified an incremental fixed cost cash outflow for the electric fleet, that is, $9,000 per truck ($50,000 - $41,000). By comparing the fuel costs, I calculate that the gasoline truck incurred $5,400 annually (25/45000 * 3), while the electric truck only took $3,600 (24/300* 45000).

The incremental fixed cost for the electric fleet would be covered in 5 years, with continuous savings of $1,800 each year, making the electric fleet more profitable in the long run.

Are there any problems that might arise from the electric fleet?

There could be potential supply problems for the electric fleet.
For the supply side it could be either raw material (that is electricity supply) or the truck itself. It could also include electricity costs, lithium shortages, and the transition for drivers. I don't think that there would be any demand side problem because of the electric fleet.

Okay. What would your final recommendation be?

I would suggest the client to adopt an electric fleet. To mitigate the main risk of ensuring continuous electricity supply, I would suggest setting up proprietary electric stations for the fleet to recharge itself

Thank you, we can close the case here.

HERE'S A TIP!

The cost of educating the drivers and helping them through the transitioning period could have been factored in. Management of fleet and lack of adequate infrastructure could have been considered too.

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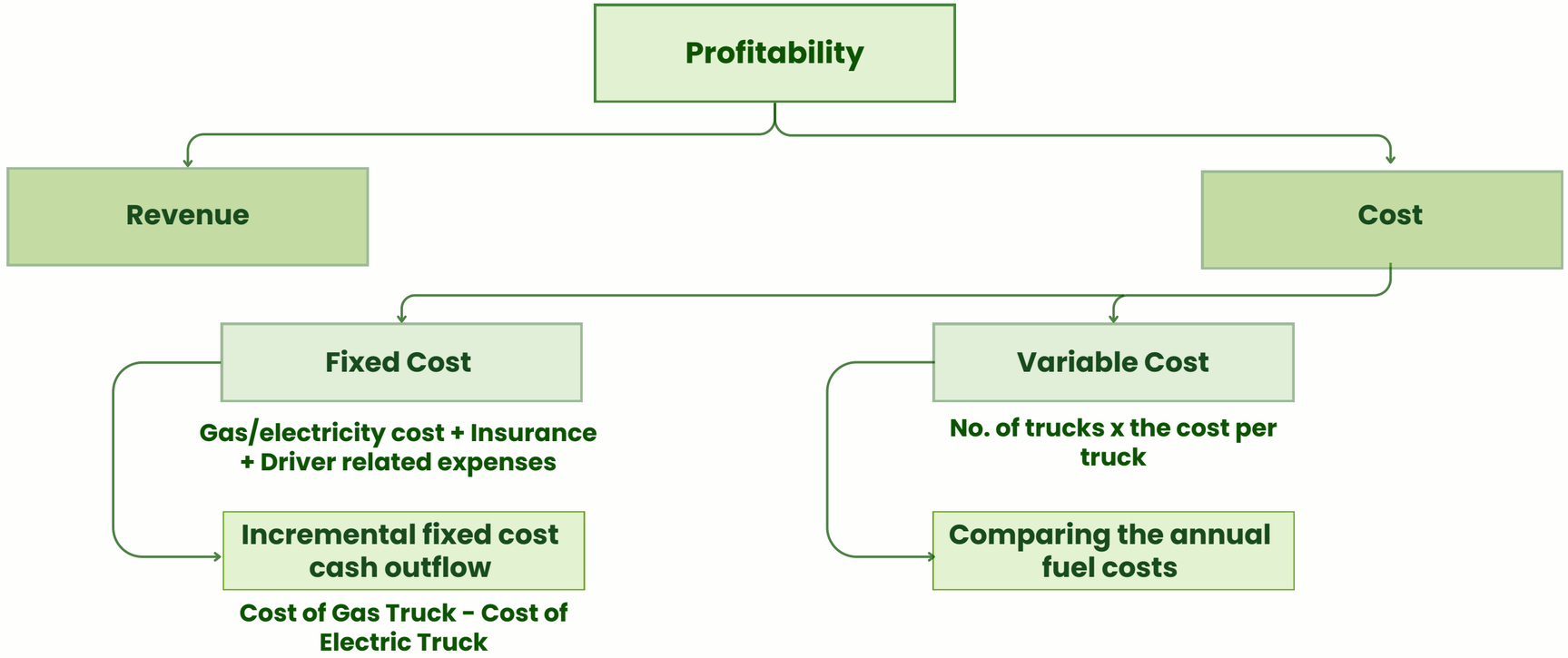
CASE FLOW

CASE FACTS

1. The primary objective for adopting the fleet is purely profitable and the company is not willing to minimise its profit for a cause.
2. It is assumed that revenue won't be affected by fleet choice, and we may concentrate on the cost.
3. We may focus only on gas/electricity costs for the variable cost and all other factors are assumed to be constant.
4. For calculations, these numbers of both fleets are given: Initial Cost, Fuel Efficiency, Fuel Cost & Distance Travelled.



The incremental fixed cost for the electric fleet would be covered by continuous savings. => **Therefore, Electric Fleet is profitable in long run**