Interviewer :

The head of an aluminum producer asks you if there is an opportunity to invest in additional production capacity in Russia. Their work consists of producing alloys used in aeronautic construction. At the moment, we have collected the following information on the local competitors for this alloy:

	Capacity	Price per ton	Local sales	International sales
Client	300	2000	300	
Competitor 1	1500	1800	1000	500
Competitor 2	1500	1800	900	600

Local price per ton ($)	2300
International price per ton ($)	1850

Candidate :

I suggest looking at the three following factors:

- Local and international market dynamics
- Client ability to position in these markets
- Assessment of the different scenarios

Interviewer : Great! What should we start with?

Candidate :

I noticed a substantial gap between the international and local prices. I can imagine that there are significant trade barriers for this product.

Interviewer : Correct!

Candidate :

We can assume that demand is fully met by local production. The market thus has surplus production capacity, creating potential for export. Regarding the export market, what is the level of demand?

Interviewer : Demand for this product is very strong: the market faces significant shortfalls in production.

Candidate :

Noted. Let's move on to the ability of the client to position in these markets.
There are two key areas to consider:

- increasing local market share by differentiating from our competitors
- lowering the costs of production to position a new unit for profitable export

In the local market I imagine price is critical, given the commoditization of the product. Perhaps certain non-price factors like responsiveness and on time delivery could allow us to differentiate.

Interviewer : It's a fact that price is key for our customers.

Candidate :

In this case, only a price war would allow us to significantly increase market share. To position to export, I need to understand why my production costs are higher than my competitors. Could it be linked to production technology or economies scale?

Interviewer :

It's nearly exclusively a result of economies of scale. It is estimated that a unit of 500 kT allows a company to achieve the optimal price of $1 800 per ton.

Candidate :

I suggest evaluating a scenario in which a complimentary 500 kT unit is created to serve the export market. What is the required investment for this unit?

Interviewer : It's around $300 M.

Candidate :

Simplifying the calculations, with one we get a net present value of $-50M. An investment addressing the export market is thus not attractive. As a result, we should consider the scenario where this investment targets the local market. To increase market share, we have to engage in a price war. I propose looking at the lowest possible price that is still attractive (compared to the current situation), taking into account the price loss on our current volume and the volume gain with the new investment. For a calculation of NPV with a discount rate of 10%, we get a price of $2 025 per ton.

Interviewer : Very good! Can you summarize your work?

Candidate :

There is an opportunity to grow in the export market, which lacks capacity. However, investing in this new area is not profitable with a discount rate of 10%. As a result, an alternative scenario is to take advantage of higher prices in the local market by engaging in a price war. To be profitable, the price cannot be lowered beyond $2 025 per ton compared to the current price of $2 300 per ton. It is now necessary to determine if lowering the price without going below $2 025 per ton will allow the company to increase market share enough to sell the total volume produced by the new unit. For next steps, I suggest looking at if customers could be willing to change suppliers for a significantly lower price, breaking off customer-supplier ties. It is also necessary to assess switching costs for our new potential customers. Finally, we must predict the reaction of our competitors, notably to understand if they are interested in engaging in a price war given their volumes sold.