

## Case 13: Incinerator (I of II)

### Booz Allen - Home Team, Round 2

Problem statement narrative	Guidance for interviewer and information provided upon request <sup>(1)</sup>
<p>The client is a waste management company in Italy. They have 3 divisions:</p> <ul style="list-style-type: none"> <li>- Recycling</li> <li>- Laboratory</li> <li>- Incinerator</li> </ul> <p>The head of the Incinerator division has asked for the headquarters funds to build an additional incinerator.</p> <p>The Headquarters has asked our help to determine whether or not the capital investments should be done.</p>	<p>This is not a problem to be solved in financial terms so avoid discussions on whether the money is better spent on one division vs. another. This is a discussion on what is driving the demand for an additional incinerator.</p> <p><i>Information given upon request</i></p> <ul style="list-style-type: none"> <li>• Each incinerator acts as a monopolist in the area where it is located (there is no competition at the local level since there is only one incinerator every X squared miles).</li> <li>• The ROI on an optimized plant is expected to be 12%</li> <li>• The utilized capacity of the current incinerator is 80% and it take 2 years to build a plant.</li> <li>• The head of the incinerator unit is stating that demand is increasing by 15% annually. This is the reason why he wants to expand capacity. Note: Candidate needs to determine if the 15% figure is correct or not (don't take 15% granted).</li> </ul>

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#### **Additional answers for candidate questions**

- Demand of capacity for incinerator capacity is negatively correlated to:
  - Strictness of environmental regulations (the stricter the rules, the lower the amount of waste that will have to be incinerated). The trend for the forthcoming years is stricter rules → demand will be less.
  - Waste generated by industries. Demand of final goods in textile, automotive, etc. will determine amount to be incinerated. The trend is that production is moving out of Italy → demand is less
- Alternative use of material to be incinerated. This material can be used as burning fuel for cement factories, etc.
- Benchmark of demand with other EU countries shows that material incinerated is less every year.

#### **Solution guide**

- The head of the incinerator unit is overestimating the demand for material to be incinerated. Although a quantification of the demand is not possible it can be easily argued that all external forces are pushing demand for incinerator capacity downwards.
- The recommendation should be NOT to invest in additional capacity since it will be already difficult to fill up the existing one.