Rubber Bumper

McKinsey | Round 1 | Manufacturing

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Rubber Bumper Co is a small family owned producer of rubber products. It prides itself on producing a limited range of products but producing the highest quality on the market. In general, new products are introduced after much deliberation and careful market study. The company has recently appointed a new President who noticed decreasing profits over the last couple of years.

(See the next page for Framework directions)

Clarifying Information:

Note: Provide this only if corresponding questions are asked.

What type of products do they sell? The company only sells two products; rubber bands and condoms

Is the company seeing similar declines in topline sales? Topline sales have remained relatively stable over the last 3 years

What is Rubber Bumper's market position? Rubber Bumper is the market leader in both of their product industries

BEHAVIORAL INTERVIEW QUESTION:

1. Why do you want to pursue a career in Consulting?

2. (Optional)

Framework Guidance:

Note: There are many possible alternatives to this framework. These are only provided as possible suggestions.

Rubber Bumper Co has hired our firm to fix the decline in profits. What are all of the areas that need to be examined in order to identify any major issues that should be a priority?

How to Move Forward:

To get to the next portion of the case, the interviewee should ask to explore:

Expected Analysis: There are a number of possible frameworks for this question. A good answer will cover all areas you'd expect: **industry trends, margins, product mix, competitors, etc within reason. Generic frameworks are inappropriate.**

EXHIBIT 1

Rubber bands sold each year (millions of pounds of rubber)							
	2011	2012	2013	2014	2015	2016	2017
Rubber Bumper	4	3	3	2.5	2.5	2.5	2
Max Rubber	17	19	21	21	22	23	24
Others (8)	9	9	8	7.5	6.5	4.5	5
Total	30	31	32	31	31	30	31

Condoms sold each year (millions of condoms)							
	2011	2012	2013	2014	2015	2016	2017
Rubber Bumper	1	2	5	10	10	10	10
Spartan	100	110	108	115	117	115	115
Durable	150	155	152	158	159	165	170
Others (15)	99	93	105	107	119	130	155
Total	350	360	370	390	405	420	450

Exhibit Guidance:

The interviewee should notice and verbally acknowledge the following in Exhibit 1. This is where you insert question and the answers to the question

Question 1: The team decided to look at the product mix and their industry wide positions. The company only has two products: rubber bands and condoms. The analysts on our team compiled these two tables. (Display Ex. 1). What does this tell you?

How to Move Forward:

Expected Insights:

1.The rubber band market is flat whereas the condom market is showing strong growth in the United States

2.The dominant player in the rubber band industry is gaining more and more market share

3.While the condom industry is growing (30% from 2005 to 2011) the major competitors are not growing as fast (~15% each).

4.The condom industry is more fragmented than the rubber band industry, and the smaller players are getting a larger proportion of the market

Commentary:

The candidate should ultimately start to see that the rubber band industry is becoming less attractive and the condom industry is showing growth and the major market players are not keeping up with the growth. A great response will automatically want to see why Rubber Bumper's condom growth has tapered off while the industry keeps expanding. If they do not get to that issue, prod them until they do.

Question 2: Rubber Bumper Co has two factories, each producing one of their two products. They essentially do not share any fixed costs and for the most part are run as separate P&L's. The team would like you to put together a quick summary and compare the financial profitability of each of the two factories for the most recent year.

Rubber Band Factory

- They make boxes of 500 rubber bands that they sell to retailers for $20 a box
- 1 pound of rubber makes approximately 125 rubber bands
- They should already have the amount of rubber they used from the exhibit
- The rubber band factory has an inclusive $4MM in annual overhead
- **[ONLY PROVIDE WHEN ASKED]** It costs $1 to turn a pound of rubber into a pound of rubber bands (assume no waste)

Condom Factory

- They sell 4 packs of condoms to retailers for $3 a pack
- They factory is smaller than the rubber band factory and only costs $2 MM in annual overhead, inclusive of everything
- **[ONLY PROVIDE WHEN ASKED]** Each condom costs $0.10 to make

Expected Calculations: (Question 2)

Students may get tripped up because one starts with the number of condoms, and the other starts with the amount of pure rubber and need to infer the number of bands sold. (rb = rubber band):

- 2MM lbs of rubber x 125rb's/lb = 250 MM rb's
- 250MM rb's / 500 rbs/box = 500K boxes x $20 box = $10MM in Revenue
- 2MM lbs of rubber x $1 = $2MM in variable costs
- RB Profit = $10 - $2 - $4 = $4MM in profit
- 10 MM condoms / 4 pack = 2.5 MM packs x $3 = $7.5MM in Revenue
- 10MM condoms x $0.10 = $1MM in variable costs
- Condom Profit = 7.5 – 1 – 2 = 4.5MM in profit

Commentary: A good answer will arrive at the math and note that the two profits are fairly comparable. A great answer will also note that the margin on the condoms is significantly higher (4.5 MM in profit for 3 MM in costs, rather than 4MM in profit for 6 MM in costs). Also, a great answer will question why the overhead for the condom factory is small compared with the rubber band.

Question 3: It turns out that the two overhead figures are significantly different because the capacity of the second factory is much smaller, about half as much. The President has asked us to evaluate whether we should switch production of the first plant to make more condoms since we have reached capacity at the smaller plant (assume a factory can only make 1 thing).

Supplementary Information

Give out the following information ONLY WHEN REQUESTED.

- It will cost $2MM dollars to refurbish the new plant and take 1 year to complete during which time the factory will be off line. (If asked, assume there are no tax benefits from depreciating the CapEx and no cost of capital)
- Overhead would remain the same
- During this time, we won't be able to make any rubber bands
- The bigger plant can produce twice the volume of condoms as the smaller plant.
- Rubber Bumper Co's payback period for such projects is 4 years.
- Assume that Rubber Bumpers rubber band demand has stabilized at 2MM lbs per year.

Expected Calculations: (Question 3)

A bad answer will simply look at 4.5MM in profit and 4.0MM and say that Rubber Bumper should make more condoms. A great answer will look into the costs, the opportunity costs, and the payback period to evaluate whether this should go forward. Also a great interviewee will recognize the timing of the payments, and while we don't have a cost of capital there is a timeline such investments must prove profitable.

- 1 year offline they are losing (10MM – 2MM) = $8MM in contribution
- Capital Expenditures = $2MM
- Total Cost of Project = 8 + 2 = $10MM

Note we assume that overhead will be paid while the factory is offline, but it should not count as an additional cost, since we would pay that anyways.

- The benefit is the difference in profitability between the two products.
- The bigger factory can produce twice as many condoms; 6.5MM x 2 = 13MM
- The bigger factory is currently producing 8MM in contribution (because we are looking for the difference, the $4MM of overhead is a wash)
- Switching will create an additional $13 – 8 = 5MM in profit.
- The interviewee should draw a conclusion towards the end noting that under these assumptions the project will repay itself in year 3 (1 year offline + 2 years of operation) and that it is within the required time frame. Additional second level insights are encouraged.

BRAINSTORM

What are some of the risks involved with this project?

Brainstorming Guidance

This is a “what else” section. Below are some basics but ideally you’re looking for the interviewee to be as creative as possible. As with most questions of this type, a bad answer will stop at one or two. A good answer will have a creative list. A great answer will have a structure that makes the answer MECE. A great answer should also prioritize the findings indicating which ones he thinks are the most important.

Key Points to Consider

- Assumes that Rubber Bumper can sell 3x the number of condoms it sells today, immediately.
- Assumes that rubber band demand wont rebound. The bigger plant is equally profitable because it is being underutilized
- Political parties could kill sex ed.
- Less diversification in products exposes them to increased market risk
- Condoms are not as generic of a product as rubber bands and may require a larger investment in advertising to compete on a higher level
- Potentially more legal risk in selling contraception than rubber bands
- Employees may not want to make condoms.

CONCLUSION

The President is walking in the board room and expects a summary. Please summarize your findings.

Expected Analysis

The summary should start with a recommendation. “You should convert the plant” and then back track into the reasoning: industry trends and financial justification. Finally it should mention which of the risks are the most problematic and how he would mitigate it. The interviewer should feel free to challenge any part of the conclusion and expect a well worded response.

INTERVIEWER FEEDBACK FORM

Case Name _____ **Interviewer** _____

Case Book _____ **Case Type** _____ **Difficulty** _____

Case Execution:

- ❑ Framework 1 2 3 4 5
  - ❑ Logical approach
  - ❑ MECE
  - ❑ Creativity

  Notes:

- ❑ Quantitative Ability 1 2 3 4 5
  - ❑ Accuracy
  - ❑ Speed
  - ❑ Analytical Approach
  - ❑ Errors / Guidance

  Notes:

- ❑ Business Acumen 1 2 3 4 5
  - ❑ Insightful
  - ❑ Implementable
  - ❑ Business Judgment
  - ❑ Creative Brainstorm

  Notes:

Communication:

- ❑ Presence & Non-Verbal 1 2 3 4 5
  - ❑ Confidence
  - ❑ Poise / Posture
  - ❑ Clear & Concise
  - ❑ Body Language
  - ❑ Coachability

  Notes:

- ❑ Case Materials 1 2 3 4 5
  - ❑ Organized Page Layout
  - ❑ Recognition of Errors
  - ❑ Resource References

  Notes:

Behavioral:

- ❑ Overall Performance
  - ❑ Quality of Answers 1 2 3 4 5
  - ❑ Relevance 1 2 3 4 5
  - ❑ Clarity & Time 1 2 3 4 5

Strengths:

Opportunities:

Case Execution: ___ / 15
Communication: ___ / 10
Behavioral: ___ / 15

Total Score: ___ / 40

Total Time: _____ : _____