The Jacobs Division 2010

Background

- Richard Soderberg is a financial analyst for Jacobs Division of MacFadden Chemical Company
- Most of MacFadden's divisions have products that focus around one chemical
- The Jacobs Division is an exception

The Jacobs Division

- The newest and smallest division
- No products exceeding $5 million in sales
- One of the fastest growing divisions

MacFadden Capital Budgeting Standards

- 8% for cost reduction projects
- 12% for expansion of facilities
- 14% for new products and processes

Jacobs Division Standards

- Set by Mark Reynolds, the division manager
- Wanted higher returns than the MacFadden standards
- Expected improvement in assets to total between 3 years
- Skeptical of estimates and therefore wanted at least 4% more than the company's set hurdle before becoming enthusiastic about a project

The Silicone X Project

- Added slipperiness to a surface with a special coating to reduce friction
- Sound product because of its hardness, adhesiveness, and durability
- Superior to current substitutes

Silicone X as an Investment

- Large number of buyers, but only a few would buy in bulk (5,000+ lbs per year)
- $2/lb price seemed maximum price, but a lower price was unlikely to increase volume
- For planning purposes, $1.90/lb was used
- First year demand estimated to be between 500,000 and 2 million with 1.2 million lbs being the most likely.

Options for Investment

- Mr. Soderberg used a 20% discount rate to be conservative and a 15 year life
- Two methods the company could use if it chose to invest
  - Labor-intensive, limited-capacity
  - Capital-intensive

Comparing Approaches

Labor Intensive	Capital-Intensive
• $695,000 start-up for plant and equipment • Could be sold for $301,500 if abandoned • 1.5 MM lb pound capacity	• $1.1MMillion start-up for plant and equipment • Can be sold for $1.56 million • 3 MMlbs pound capacity

Labor-Intensive Strengths and Weaknesses

Strengths	Weaknesses
• Lowest start-up cost • Can begin producing immediately • Positive NPV at both 20% and 40% rates	• Cannot benefit a high demand without incremental costs • Could be susceptible if competition entered the market

Capital-Intensive Strengths and Weaknesses

Strengths	Weaknesses
• Strong if product is in high-demand • Lower cost/unit • Lower fixed costs • Discourages competition	• High initial cost • Very little production and profitability in beginning years • Negative NPV at 20%

Labor-Intensive, Capital-Intensive, or no investment?

Labor-intensive satisfies both of Mr. Reynolds's requirements of exceeding company standards and having strong returns within 3 years

Addressing Concerns

What if new competition enters the market and cut the price by $0.10?

- Break-even point is 540,000 lbs. Under a $1.20 price out, break-even point would raise to 900,000 lbs sold.
- Mr. Soderberg was concerned competition would enter once demand reached 1,000,000
- In this scenario, Jacobs Division would be able to meet that breaking point with just 30% market share
  - They already established relationships and competitive pricing would almost guarantee this much of the market

Addressing Concerns

What if demand was raised above plant capacity?

- Jacobs Division has no products with more than $5 million in sales revenue.
- Meeting this type of demand is not a primary concern of the company.
- Could lose the capital-intensive approach later if necessary.

Evaluation of Mr. Reynolds

- His research and due-diligence essentially make all of his projects risk-free.
- MacFadden may get frustrated that he rejects so many potentially strong investments.

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