Bergerac Systems

Case study 3.1

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TABLE OF CONTENTS

Introduction

Bergerac Systems, Veterinarian Supplier

Strengths	Weaknesses
Bergerac Systems is **growing,** averaging 17% annually for the last 3 years. **Proprietary product** used already by 7500 machines.	A **dependence** on **Plastic cartridge Suppliers** makes it less competitive. Experiences **lack of stock** at times.
Opportunities	**Threats**
The **end of contract** with Elsinore Plastics in 3 weeks. Projected 8% to 10% **industry growth** over 5 years. Growth in **customer** base with OmniVue Mobile sales.	Still **small** compared to its **competitors.** **Lack of stock** at times, causing negative feedback.

1.Describe the strategic and operational challenges facing Bergerac Systems

Key Challenges

Strategic	Operational
- **Reducing** its **dependency** on plastic cartridges suppliers - **Scaling up cartridge production** for its expanding product line - Responding effectively to **spikes in demand** - Creating Veterinarians' **brand loyalty** and potential **OmniVue Mobile customers**	- Surge in petrochemical pricing creating **difficulties for demand forecasting** - **Consistently supplying** its OmniVue customers with Cartridges - Maintaining **lower costs** per cartridge than **Abaxis**, staying competitive in the market segment

2.Should Bergerac Systems integrate backwards into the manufacture of injection-molded parts for its cartridges? If so, how?

- **What is backward integration?**
  - Company **expands its role** to accomplish tasks previously assigned to businesses up the supply chain.
  - Pursued when expected to result in improved efficiency and cost savings.
- **Backward integration in Bergerac Systems' scenario**
  - Tackling **unreliable cartridge production suppliers** (Elsinore and GenieTech).
  - Main options are acquiring GenieTech or creating in house production.
- **Bergerac Systems' competitive edge and market shift opportunity**
  - Bergerac was not the market leader in diagnostic instruments market
  - They vied with 3 major competitors and some of them were ahead in branding, distribution and production.
  - Backwards integration is an opportunity to increase Bergerac's competitiveness. Also, industry analysts projected 8 to 10% annual growth for the in-house diagnostics market over the next five years.

2.Should Bergerac Systems integrate backwards into the manufacture of injection-molded parts for its cartridges? If so, how?

➔ The supplier buyout option

- For $5.75 million, 8 molding presses, each with 10 cavity molds and operating with a 75-second cycle time.
- Reduces overhead and lowers costs by ~26c/unit
- Payback period around 5 years.
- Good relationship with Genie Tech. Founder looking forward to retire.
- Acquisition comes with experienced complete labor force (spares the need of staff)
- Predictions show that 90% uptime over 3 shifts and a 5-day working week, 4 molding presses could meet Bergerac's current cartridge parts needs.
- Bergerac's business equals around 50% of GenieTech's revenue, and the remaining molding presses could be used for outside business, for example some of GenieTech's long-term contractual basis with.

2.Should Bergerac Systems integrate backwards into the manufacture of injection-molded parts for its cartridges? If so, how?

➔ **The in-house build opportunity**

- In house development would require only 4 molding presses, instead of the 8 offered by the Genie Tech buyout.
- Opportunity to acquire newer and more efficient machinery.
- When setup is done this option would save 57 cents/unit and payback period is around 16 months.
- Setup would require time for installation, testing and training/hiring additional staff.

➔ **Next up we will take a closer look at the advantages/disadvantages of both.**

2.a) What are the strategic and operational advantages and disadvantages of acquisition vs.developing in-house capabilities?

Strategic	Acquisition	In-House
Advantages	GenieTech owner is open to the acquisition. Production rate that can supply over what the company needs. New market opportunities.	The production rate is enough to meet supply needs. Lower entry cost. Low payback period, being only 16 months.
Disadvantages	Have to manage the newly acquired GenieTech. Steep entry cost. Payback period is nearly five years.	Lack of experienced professionals may become detrimental to the long term development and management of the new production lines.

2.a) What are the strategic and operational advantages and disadvantages of acquisition vs.developing in-house capabilities?

Operational	Acquisition	In-House
Advantages	The eight presses allow for a much larger production rate. No need to train or hire new staff, as they are already experienced.	Producing each cartridge would cost 57 cents less. Newer machinery is much more efficient and breaks down less.
Disadvantages	Producing each cartridge would only cost 26 cents less. Older machinery is less efficient and is more prone to failure, may lead to a higher maintenance cost.	Requires hiring and training new staff. Requires the purchase of machinery.

2.b) What are the economics of the different alternatives?

Genie Tech	2010	2011	2012	2013	2014	2015
Annual Production of Cartridges	4,687,500	5,156,250	5,671,875	6,239,063	6,862,969	7,549,266
Total Operating Costs	**$11,968,725**	**$12,933,350**	**$13,989,791**	**$15,147,140**	**$16,415,390**	**$17,805,537**
Cost per Unit	**$2.553**	**$2.508**	**$2.467**	**$2.428**	**$2.392**	**$2.359**
Annual Savings @ Current Production	**$1,203,150**	**$1,555,713**	**$1,948,177**	**$2,384,626**	**$2,869,552**	**$3,407,900**

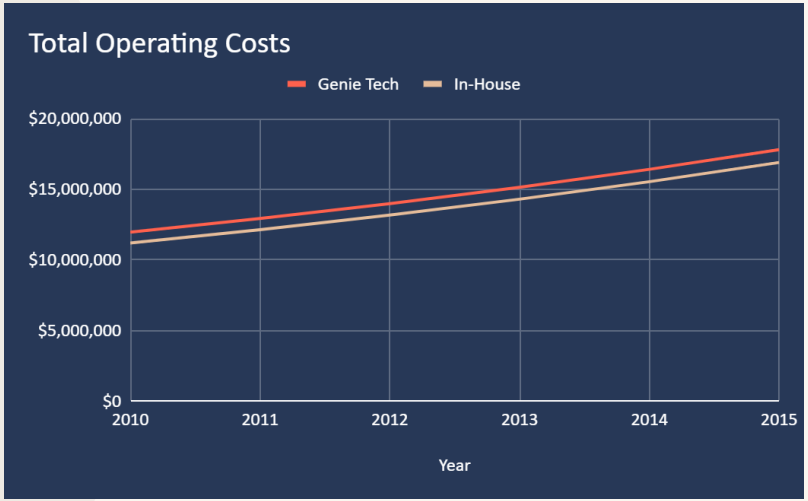
Regarding the data from the complementary spreadsheet, these are the values for Total Operating Costs, Cost per Unit and Annual Savings between 2010 and 2015, for the option of buying Geni Tech.

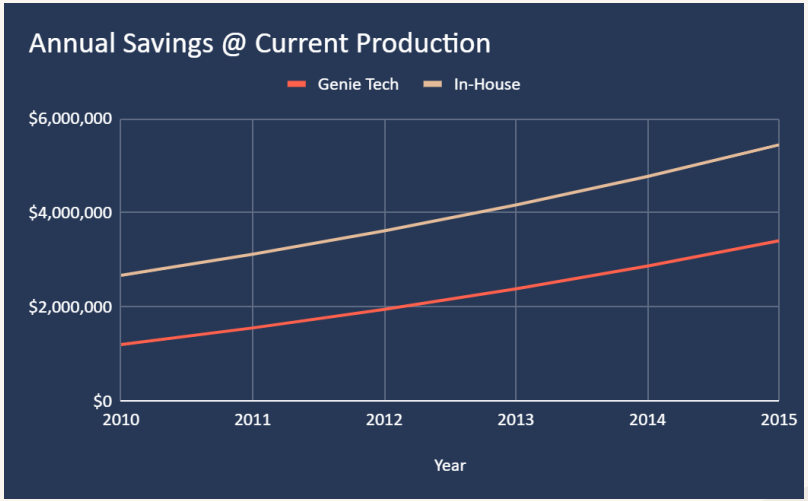
2.b) What are the economics of the different alternatives?

In-House	2010	2011	2012	2013	2014	2015
Annual Production of Cartridges	4,687,500	5,156,250	5,671,875	6,239,063	6,862,969	7,549,266
Total Operating Costs	**$11,201,181**	**$12,141,267**	**$13,171,761**	**$14,301,632**	**$15,540,744**	**$16,899,946**
Cost per Unit	**$2.390**	**$2.355**	**$2.322**	**$2.292**	**$2.264**	**$2.239**
Annual Savings @ Current Production	**$2,673,819**	**$3,121,233**	**$3,616,989**	**$4,165,993**	**$4,773,643**	**$5,445,880**

Regarding the data from the complementary spreadsheet, these are the values for Total Operating Costs, Cost per Unit and Annual Savings between 2010 and 2015, for the In-House option.

2.b) What are the economics of the different alternatives?





3.What other advice would you offer to Ian Wyckoff about this manufacturing operation?

Some options that Bergerac should consider to improve its business position are:

- **Explicit Contract** between GennieTech and Bergerac. A deal could be struck where in times of lack of supply, Bergerac could have the priority of Gennie's Tech production with Bergerac paying an extra charge
- Have a better inventory with a good forecast of demand to better manage the business' future expectations
- Make a deal with another supplier that can cover the lack of supplies from the companies that are already supplying for Bergerac

Conclusion

- After this analysis, we can say that both studied options answer the current threats to the business model and allow for future scalability, predicted after the introduction of OmniVue Mobile
- There are some hidden costs, such as the purchase cost of the machines, we can't evaluate due to lack of data, that would help on choosing an option with more certainty
- With both the advantages and disadvantages in mind of both "In-House" or "Buy" options and the associated payback times (16 months for "In-House, almost 5 years for "Buy") we think that the "In-House" approach would be the best decision for the company in the long run

Conclusion

Alternative:

- As mentioned before, there are some disadvantages associated to building the materials “in-House”. One alternative that could be studied and explored could be:
    - Instead of going full “in-House” production, we could start the production with only two presses, buy the missing cartidrages the demand requires from other supplier.
    - When the in-house process becomes more efficient and more productive, Bergerac would move to full-production and end its dependence on other suppliers regarding OmniVue

THANKS!