

# Introduction to Technology Management

## Case study “Le Petit Chef”

### *1. What is the relevant context of this case?*

This case depicts the need for a newly appointed R&D director of the company's flagship products to address R&D issues and to provide a guideline for proper R&D project selection and funding level in an urgent and imperative manner. The following were the main context that prompted the need for this swift action.

*Market:* Le Petit Chef had experienced competitive pressure from European appliances manufactures for high end market in microwave oven due to Asian consumer electronics manufactures' penetration to low-end, low-cost market.

*Company Culture:* The founder was a chef that would like to “build microwave ovens that would take the art of French microwave cooking to new levels”.

*Technology:* With company founder's objectives on cooking appliances that the technology strategy of the company was a “technology pull” based on the needs and wants from the customers

*Competition:* Le Petit Chef had competitors from both high-end market from Europe, its strong market segments as well as potential competitors from Asia that wrestling for the low-end market.

*Supplier:* 35% of manufacturing costs of a basic unit was for Most of the microwave oven manufactures buy magnetron and high voltage power supply unit, two of the main components from the same suppliers like Sharp and Samsung. Le Petit Chef enjoyed the similar economics of scale on these components as its competitors.

*Leadership:* With Brigitte Gagne as new R&D director for microwave oven division, she needed to make a pressing decision on project selections as well as the remake of Le Petit Chef's project portfolio.

*2. What factors explain Le Petit Chef's poor performance? What actions do you recommend to remedy this situation?*

The main reason was the increasing competitive pressures. When Asian manufacturers expanded their low-end microwave ovens into European markets that took away some profit margins that forced some large European companies (Electrolux and Bosch-Siemens) to move into up-market that in turn pushing down Le Petit Chef's profit margin. To counter these competitive pressures that Le Petit Chef spent much more than needed in advertising and promotion that cut into company's performance. Because the competition, the price of microwave oven also dropped by 10% each year from 1996 to 2000 that further reduce company's revenue. Other reason was the over extent their capabilities in the introductions of new products. With very limited R&D resources, Le Petit Chef had expanded its products from around 7 in 1995 to almost 30 different products in 1999. There were 7 on going projects in the pipeline and 5 proposed R&D projects.

With the company size of 600, it could not compete with other well funded big company like those Japanese, Korean companies for low-end, low-cost product and need to speed up the development of niche product that can differentiate their high-end higher margin product to attract customers. I would recommend Gagne to do

- 1) Focus on high end market to narrow the scope of R&D research
- 2) Develop the features that differentiate among other products – Customers only look for price and differentiate features in cooking appliances
- 3) With R&D scope narrowed, spend efforts to standardize features as well as components that provide competitive advantage.
- 4) Redeploy and redistribute the work among R&D engineers, since the electronic design determines a big portion of the cooking quality seen by customers besides the use of higher power magnetrons, the next engineer hired will be a designer.

*3. What should Gagne do? Specifically, what projects should shed fund and why?*

Since the founder's vision of the company is to "build microwave ovens that would take the art of French microwave cooking to new levels", this should be reaffirmed as the mission statement. With this, the strategy can be set and the tactics can be deployed.

For the short term, the company need to survive, so a low-cost low-end product proposed by marketing will be considered but with strong input put from R&D, that will be compromised to be a joint project that features will be modified to fit the capabilities and deliverable from R&D. For the long term, the R&D will focus on the differentiate features of the products like the implementation of fuzzy logic, and the implementation of more powerful magnetron the developed by supplier. The R&D designer should be designated to work on few important and not fire-fighting re-designing jobs for manufacturing product. The future R&D engineers hired will be electronic designer as the first priority.

The following projects should be funded

For short term:

- 1) Fund : (b &c) Joined project for "Cost reduction of the Eglite' to develop a low-cost low-end Fratnite' line"
  - a. Team members will be from both marketing and R&D engineer
  - b. Goal of the project, NPV(15,000,000), Time (12 Month), Resource (120 Man-Month)
- 2) Cut : (e) "Add a larger cavity model to the Liberte' line  
Reduce the resource spent and non-standardized components used.

For long term:

- 3) Fund: "Implementation of Fuzzy Logic Controller in microwave oven"
  - a. The goal is to provide a total differential feature to the microwave oven to the customer that would promote the sale.
  - b. The implementation of fuzzy logic is not that difficult, Japanese and European companies have developed the controller that used in washer and dryer. This feature will be a big sale for the Europe and Japan Market.
  - c. Goal of the project, NPV(25,000,000), Time (18 Month), Resource (120 Man-Month)

- 4) Fund the develop of “ new and more powerful magnetron developed by supplier”
  - a. It will be easy to develop and add the differentiate feature to the product
  - b. Goal of the project, NPV(15,500,000), Time (6 Month), Resource (24 Man-Month)

*4. How should she handle the executive meeting?*

Well prepare with the facts for the meeting.

- 1) Rational strategy for selection R&D projects,
- 2) The facts on why the company performed poorly and the recommendation
- 3) How to improving company's financial situations
- 4) Re-establish “Le Petit Chef” as the leader of French Chef in the microwave oven

It is will be like a kitchen in the executive meeting room, but for Gagne it will be a walk in the park for her to handle other executives.