

Developing a new product for the teeth whitening market

Stockholm products, based in Sweden, is an industrial gas company with a long history of supplying liquid oxygen to health care markets and carbon dioxide to the drinks and beverages industry. It has a rich history of successful R&D and this has helped it maintain its dominant position in the market over the past 80 years.

The company employs 32,000 people in more than 70 countries worldwide and sales last year were £12.1billion with an annual R&D budget of £100million. Recently it had to decide whether to invest 10% of this budget in a single project – teeth whitening.

Amongst over 100 projects running within R&D, was one that was exploring applications for the use of plasma as a cleaning agent. Plasma is an ionised gas capable of conducting electricity and absorbing energy from an electrical supply. When a gas absorbs electrical energy, its temperature increases, causing the ions to vibrate faster and hence “scrub” a surface. Stockholm products had found a patent submitted by the University of Southern California which claimed that plasma had been used to sterilise teeth and one of the side effects was a whitening of the teeth. This intrigued the scientists and a team of researchers was set up to explore whether the idea could be a viable business opportunity. The team was given 12 months and a budget of £1million.

The plasma cleaning project - 12 months later

The R&D Manager convened a meeting to review the project.

Michael Glass, the R&D project leader presented his findings. The results were promising. After reviewing milestones in the project, he showed some convincing slides. Using pig’s teeth (experimentation is not allowed on human teeth) the product that the research team had developed showed some dramatic changes following exposure to the plasma. Discoloured yellow teeth noticeably changed to a shade of white.

Bernard Bing, the product development manager produced statistics that demonstrated a gap in the market for an effective simple teeth whitening product. He explained that it was a lucrative and growing market. Currently, for major toothpastes, averting tooth decay is not sufficient. Products now offer additional benefits such as fresher breath, healthier gums and whiter teeth. He cautioned that entry into this market would be difficult, given the extent of competitors and these multinationals, such as Colgate-Palmolive and Procter &Gamble had huge power. However, Bernard went on to say that this power also presented opportunities, especially when it comes to licensing technology. Powerful multinational brand management firms are always looking for competitive advantage and exclusive access to a unique technology would provide such an opportunity. This was indeed, food for thought.

Discussion continued with views being expressed

- Dental scientists felt more research was needed to prove and fully explain the product
- Some business development managers thought that teeth whitening was a fad and the product should be marketed as a cleaning tool

However, one key issue dominated the meeting: Should the company target the professional market – ie, dentists with large cylinders of plasma or the consumer market with a simple to use micro cylinder product.

Stefan Boch was Licensing Manager for Stockholm gases. He explained how licensing would allow the company to gain revenue from its plasma technology by licensing it to other companies so that it could be integrated into an end product. This option would enable the company to exit at this stage without any further additional costs and guarantee revenue for years to come.

Maria Klaus, the marketing manager had a different viewpoint. She thought that the consumer product offered the most potential. “I can envisage a hand held small plasma toothbrush in bathrooms all over the world” Maria went on to explain that, in her view, it was the business model that they constructed and selected would ultimately influence the outcome of discussions.

Decision Time

The R&D Manager was chairing the meeting and after 2 hours he decided to bring the panel members back to focus on the decision in front of them. “We need a decision today” he explained. “We need to make a recommendation to the board about whether to invest and we need to be clear and unambiguous”.

Yes or no to the investment?

Which particular product, market and business model?