

# Orbital engine corporation Ltd: case study essay

[Business](#), [Branding](#)



## TABLE OF CONTENTS 1. EXECUTIVE SUMMARY 2. ANALYSIS 1.

Two marketing activities which were wise given OEC's main objective 1. addressing credibility and performance issues, which is one of the primary concerns of car manufacturers 2. improved OCP engines to be readily applicable to current manufacturing practice 2.

Reasons OEC failed to have engine adopted by any major car manufacturer 1. failed to understand the real wants of major car manufacturers 2. failed to formulate strategic market segmentation 3. poor competitive strategy execution 4. lack of branding activities . Marketing lessons from adoption of OEC's technology by US marine outboard motors maker 3. CONCLUSION 1. 0 EXECUTIVE SUMMARY In this report we will be evaluating the recital of Orbital Engine Corporation Ltd.

pertaining to car manufacture and outboard marines. Detail analysis has been carried out on marketing decision or activities in relation to OEC's objective, identify the unsuccessful reasons behind the idea of engine adoption by OEC and explore the successful marketing lessons how OEC's technology has been adopted by the marine makers outboard motor in the US. Following the above studies we conclude by providing our recommendations to grow OEC in terms of revenue and market based assets. Introduction Orbital Engine Corporation Ltd (OEC) is an Australian engine technology company for automobiles, boats and motorcycles. The technology used is known as Orbital Combustion Process (OCP) whereby it reduce fuel consumption and emission output. Contribution from license and

test engine sales generates the most revenue of OEC. In 1992 it contributed \$40million to sales revenue but in same year dropped to \$11million.

By next four years the pre-tax profits drop to an operating loss of \$21million.

| | 1992 | 1996 | | Sales |\$ 47 million |\$ 30 million | | Profit / (Loss) before tax

|\$ 33 million |\$ (21) million | Table: summary of sales and profit / (loss)

earned by OEC 2. ANALYSIS 2.

## 1 TWO MARKETING ACTIVITIES WHICH WERE WISE GIVEN OEC'S MAIN

OBJECTIVESince its inception, OEC has been concentrating on lucrative

automotive industry. In commercializing its innovative engine technology,

OEC had implemented various marketing strategies to convince the big

players in the market to adopt their system into car manufacturing. In the

process of strategizing marketing activities, conducting market research and

focusing on customers' wants are very important.

Based on the SWOT analysis, it is clear that OEC's technologies are beyond

current market offerings, which is a fantastically strong point. Their future

looks bright with increasing demands for fuel efficient and low emission cars.

However, credibility concerns and economic costs had proven to be the

barrier to acceptance in the automotive industry. OEC would have to

concentrate on overcoming these objections in their pursuit to be successful

in this category. SWOT Analysis for Orbital Engine (in relation to the

Automotive Industry) The two wise marketing activities implemented by OEC

to achieve their objectives were: 2. 1.

1 Addressing credibility and performance issues, which are the primary concerns of car manufacturers. The highly concentrated automotive industry places great demand on new engines' durability and stability before making decision. Understanding the targeted customers, addressing what they really want and concern is of top priority. Before 1995, OEC relied on in-house testing, which obviously did not convince their potential customers. From 1995, OEC engaged independent parties such as Porsche, California Air Resources Board (CARB), RWTYV Fahrzeug and Swiss Federal Laboratories to verify their claim about its engine's capabilities. These tests confirmed the mechanical durability of the engine and significantly outperformed the stringent emission standards set by the regulators.

Acquiring external endorsements would certainly boost OEC's credibility and trustworthiness in the pursuit to win over their customers. Besides, OEC presented real-life application of OCP engines to exhibit the viability of their engines in consumers market. To demonstrate the maturity and feasibility of their engine, OEC participated in the Genesis project to commercialize their engines into 100 Ford Festivas for Australian government. This was a key breakthrough as OCP-powered vehicles could be utilized by the consumers and substantiated the engine's advantages. After obtaining market utilization data, a more comprehensive proposal could be presented to car manufacturers. 2.

Improved OCP engines to be readily applicable to current manufacturing practice. After understanding the fact that the major players in the automotive industry were reluctant to bear exorbitant retooling costs, OEC



options. However, large scale production would require huge capital investments and expenses to re-orientate the current manufacturing line. Even though this action may promise positive results but from the car manufacturers' point of view, the cost of retooling greatly exceeded their potential benefits. d. Gradual improvements, but never radical innovation Throughout the history of automotive industry, it is practically impossible for a radically innovated product to be implemented and introduced to the market. They are very conservative in embracing a new technology.

e. Emission is not their main concern, as they have the power to lobby government. Although emission regulation for automotive is in progress, the major players had the power to lobby local governments in delaying their implementation.

1. Failed to formulate strategic market segmentation OEC targeted the entire car industry without giving due thought to market segmentation. OEC could have done more in-depth market research of cars categories which match their engines' advantages. Merely "pushing" their engines to convince the manufacturers in adapting a broad-spectrum implementation was proved fruitless. 2. Poor competitive strategy execution OEC tried to justify a "Price Differentiation" strategy based on the rationale that their engine will lower manufacturing costs as they involve fewer parts.

However, the car manufacturers had a different viewpoint, as they are not convinced with the higher-than-market licence cost. 3. Fear of brands damage if new products failed in the current market Introducing a new engine carries risk associated with product reliability which can result in

product recall and other liabilities issues. Failed engines even with warranty services will portray a negative perception of the car makers. 3. Marketing lessons from adoption of OEC's technology by US marine outboard motors maker Louis Pasteur once said " Chance favors the prepared mind". This can be said of OEC's success in the US marine outboard motors segment. When the opportunity came knocking in the form new legislations introduced on the back of an increasingly environmentally conscious society, OEC was prepared to capitalise on it.

We learnt and concluded the following; 1. OEC had a developed and superior well researched Product (technology) that can result in the production of motors with the following attributes. a. Fuel efficient b. Low emission c.

Almost double the power to weight engine d. Fewer parts, lower production cost e. Fewer moving parts, durable and reliable resulting in lower maintenance cost 2. Market Research and Segmentation OEC had engaged the necessary market research to identify the segment that will welcome its new technology and happily in this case the US outboard motor manufacturers were also looking for alternatives arising from the changes in legislations. Hence when OEC came along with the requisite enabling technology that will meet the needs (comply to legislations) and also wants (lesser re-tooling of plant, lesser perceived risk of a totally new category/segment), it is no wonder that the US outboard motor manufacturers embrace the technology and became early adopters of the technology. The key was OEC spotting and acting on the opportunity afforded by the change in the market place. 3.





leader in green technology • break into new market segments Market Based AssetWe recommend a comprehensive branding exercise encompassing the following to be undertaken to build OEC's MBA. • Brand analysis o Based on existing extensive market done by OEC • Brand Identity o Re-position OEC as a leader in Green technology • Brand Strategy o Negotiate with the manufacturers to place a visible OEC logo onto all engines in the vein of "powered by Intel" on Personal Computers.

- Brand Alignment o Re-alignment OEC as green technology provider instead of provider for 2 stroke engine and 4-stroke engine technology provider o Association of the brand should not be limited to marine automotive manufacturer only but appealing directly to the end-consumer who wields the real influence on technology adoption. • Brand Initiatives Champion and participate in environment consciousness programs organised by Governments, NGOs and other environmental pressure groups. o Engage the lawmakers as a environmentally responsible corporate citizen to pursue changes in legislation • Brand Communication o Create visibility by taking the lead in public forum and debates on the environmental issues o Publish white-papers on its environmentally responsible researches and invite news network to trumpet the responsibility of society in initiating change. • Brand Performance o Get feedback from customers to determine if the product meet their functional needs. Market Consolidation into the outboard motor segmentContrary to convention to cash in on the near monopolistic grip on the US 2 stroke outboard motor market, we recommend a graduated tiered rebate in technology royalty be applied across all motors segments to further stimulate adoption of the technologies in the next 12 months. Market

Development Pursue the pioneer advantage in the countries with high use of motorbikes and scooters such as Vietnam and Indonesia where stricter emission controls are likely to be introduced in the foreseeable future.

A further detailed study of these emerging markets is necessary to develop a good marketing plan to break into these markets. While this is outside the present scope of our present review, one possible option that warrants further examination is for OEC to produce its own engines. While these involve significant investments its upside potential is very significant. A separate evaluation of this is highly recommended. Government funding is possible given the strategic impact of the approach on the national economy and environmental benefits.

Market Focus (Automotive Section) We recommend a strategic retreat from the 2-stroke engine for the automotive segment and focus on the lean burn stratified charge technology for 4-stroke engines on the basis of the following;

- Focus on incremental innovation that is more acceptable to the automotive manufacturer rather than radical change.
- Market segment sub-compact cars
- The rise of global fuel price in the foreseeable future will place a premium on fuel efficient engines. Similar legislations to those for the outboard marine motors may be introduced in the foreseeable future as environmental issues become more pressing and OEC ought to be ready to capitalize on the opportunity when it presents itself.

- Conserve (operating loss) and maximise efficient use of resource

————— STRENGTHS

- Meets the tough standards of the European Stage II emission legislation.
- Fewer parts compared to a conventional 4-

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stroke engine, which will reduce manufacturing cost. • Smaller size, less wear, reduced weight, lower manufacturing cost • Have high number of patents to protect their innovative product • Backed up by endorsements from independent tests WEAKNESSES • High licensing cost. • Weak financial position Little knowledge about the excessive bureaucracy in car industry • Re-tooling cost & capital expenditures for manufacturing plants Low credibility and negative brand image (Australian investors & Two-stroke engines) OPPORTUNITIES • Increasing pressure for the automotive industry in terms of fuel efficiency and compliance with emission regulations. • Increasing market demand for cars with bigger passenger space, improved safety features and aerodynamics. THREATS • Preference by the automotive industry to improve the 4-stroke technology.

- Market risks for new radically innovated products • Automotive industry to lobby the government to delay introduction of more stringent emission levels. Political • OEC have tacit support by the local government giving various grants and loans to research and promote its technology. In the target markets, the major players in the automotive industry have significant clout in lobbying the governments to delay introduction of more stringent emission regulations. Economic • Global competition had pressed manufacturers to reduce manufacturing costs, which is a favourable position for OEC.

- Strong resistance for the automotive industry to adopt the orbital engine, which is a new technology, as it would result in high capital outlay (as it would involve re-tooling of the manufacturing plants), market risk, marketing

and product liability risk. • The car manufacturers are concerned about possible product recall costs if this new product doesn't deliver the desired level of customers' satisfaction Social Market perception in the international market is that Australian inventors do not have the necessary expertise which is an echo of its own countrymen's perception. • The negative perception of the society which associate two-stroke engines with dirty lawnmowers and scooters • Potential risks of failure of the new orbital engine would have a negative impact on the reputation of the leading automotive player. Technological • There is a demand for fuel efficient engines and systems • Automotive industry is very conservative about embracing new engine technology. • R&D departments in major car manufacturing are reluctant to embrace external technology and often execute reverse engineering to save royalty cost. Legal Although fuel emission regulation is predicted, leading automotive companies have massive lobby in governments to delay environmental legislations. Environmental • Increased pressure for the automotive industry to be more innovative in terms of fuel efficiency and compliance with emission regulations.

Threat of New Entrants LOW • Automotive industry has strong resistance to new developments • High entry cost involved in R&D and rigorous product reliability testing needed Rivalry Among Existing Industry Competitors Very HIGH • From existing 4-stroke engine technologies. • None for 2 stroke engine technologies. Threat of Substitutes Low • Improved 4-stroke engine Bargaining Power of Suppliers LOW High acceptance barrier for OEC's new technology Bargaining Power of Customers VERY HIGH • Very small number

of customers (car manufacturers) • automotive industry reluctant to adopt new technology Bargaining Power of Customers Low given the lack of choice for the immediate future. Bargaining Power of Suppliers High as OCP monopolises the 2-stroke engine segment at least for the time being. (Room for reasonable price increase on the technology) Threat of Substitutes • 4-stroke engine used by some other motor manufacturers Rivalry Among Existing Industry Competitors No mentioned of competitors for 2-stroke engines that meet the new legislations. However, motors using 4 stroke engines are definitely a threat.

(brand extension strategy for OEC) Threat of New Entrants Low as a dedicated patent management team is in place. Threat of new technologies is there but likely only over the medium and longer term. THREATS • Near term improvements in 4-stroke technology. • Longer term maturing of alternative green technologies such as electric motor or hybrids. • Lobby Groups of other technologies • Loss of key personnel • Loss of financial backing • Economic Downturn • OPPORTUNITIES • Similar legislations may be introduced to other motorized segments. • High motorbikes markets (high pollution as well) in developing countries such as Vietnam, Indonesia etc. Position OEC as a leader in Green Technology.

Create a strong Green Tech Brand. WEAKNESSES • Funding • Not known widely accepted for bigger engine capacity • Cross-roads (Diversity vs. Focus) STRENGTHS • Superior fuel efficiency and emission over engine of its class. • Independently verified to exceed EU II, ULEV, ECE99, USEPA standards. • Almost doubled the engine power to weight ratio (exhibit 3) -

lighter • Lower number of parts / production cost • Well accepted by Out-board motor makers • Fuel efficiency and emission level is well accepted by the end-users.

• Established R&D team • Patent technology • Strategic Alliances with major names such as Siemens.