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PRODUCT – STRATEGY FOR HIGH –TECHNOLOGICAL COMPANIES

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ABSTRACT

Organizations of modern era are passing through fiercely competitive battlefield scenario. Globally competitive and enlightened society today is standing at the threshold of a new age in the 'age of new economies' and the age of revolution. Change has changed. No longer, it is additive or linear – rather it has become abrupt, discontinuous and 'non-linear'. Emergence of knowledge society and convergence of technologies and its further sustenance has come to stay. In this 21st millennium, competition is becoming fiercer due to advancing technologies and our fleeting targets. Rethinking the future is a never – ending process tomorrow will be a fleeting targets. One has to rethink or perish. In the present cross-section of time a mediocre engineer / technocrat using today's raw materials and components can produce products which are by far superior to what an exceptional engineer could produce with the components available ten years ago.

The product strategists continuously re-define and reinvent the competitive rules, challenging status quo. The strategist has to find order out of chaos and certainty out of uncertainty. Managing a high technology company is a challenging task. It is adventurous, fast- paced, exciting, surprising and dangerous. The right moves can lead to tremendous success and wrong moves to disaster and devastation. Also, high – technology product strategy cannot be static- it has to be brutally dynamic. High technology products appear in the market very fast and disappear also into oblivion very fast. If we don't change in response to external changes, one becomes irrelevant and gradually become unproductive.

Product – strategy is like a road – map, and like a road-map it is useful only when you know where you are and where you want to go. The frame-work of product – strategy essentially renders various strategies e.g. Core Strategic Vision, product platform strategy, product line strategy, product pricing strategy, process and growth strategies. In all these processes core competence is very important and should never be outsourced. Core Strategic Vision(CSV) supplies the content for product strategy and guides those developing the product strategy indicating them general direction and destination "Vector of differentiation" plays a vital role between the company's products and competitors.

In the present paper two products – strategy cases have been discussed – Compaq computer pricing strategy and the second case of Indica V2, a Tata product. The paper opens high- technology products – strategy its frame- work and addressing successful leveraged expansion paths.

Keywords: *product strategy, core strategic vision, product pricing strategy, product platform strategy, core competency, global growth strategy.*

Introduction

Globally competitive and enlightened society, today is standing at the threshold of a new age in

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the 'age of a new economies' and age of revolution. Change has changed. No longer, it is additive or linear. Rather, it has become abrupt, discontinuous and 'non-linear'. Emergence of knowledge society and convergence of technologies and its further sustenance has come to stay. High-technology imparts the products a competitive edge. Science is universal and belongs to everyone. But, technology is possessed by those who develop it – it is wealth generator. Managing a high – technology company is a challenging task. In this twenty first millennium competition is becoming fiercer due to ever advancing technology.

The product– strategists reinvent and redefine the competitive rules – rather challenge status quo. Rethinking the future is a never – ending process- tomorrow will be a fleeting target. One has to rethink the future or perish. Strategies become redundant when aims have been achieved. Then we have to more beyond strategy. Traditional competitive strategies are failing miserably. Break- through technological changes is taking place, every now and then. In the present cross- section of time mediocre engineer / technocrat using today's raw- materials, and component, can produce products which are by far superior to what an expert engineer could have produced with components available ten years ago. (Goldratt, 1990, Rowan Gibson, 2002).

Managing a high- technology company is a challenging and adventurous task. It is fast – paced, exciting, surprising and dangerous. The right- moves can lead to tremendous success and wrong moves to disaster and devastation. High – technology product strategy cannot be static- it has to be brutally dynamic. High – technology companies present many unique challenges not faced by companies in other industries. Due to its complex technologies, it is much more difficult to adopt. At the same time high – technology products appear in the market very fast and disappear into oblivion also very fast (McGrath, 2001).

The strategist has to find order out of disorder / chaos, and certainty out of uncertainty, 'Blue ocean strategy' (un-contested waters - opportunities) has become more dominating than 'Red Ocean – bloody current competition. (W.Chan Kim etal.2005). The frame of 'Strategic Canvas' is different and the 'differentiation' strategy of the product has become pre-dominant today. Strategy is two-fold: adaptation to survive and invention for throughput. The strategists must see the changes for survival (Patel, 2005). The strategists believe in many possibilities and alternatives. He must recognize many patterns in the flow of information, trains himself in pattern recognition. Strategist finds interconnectedness in chaos and cause- and- effect- seeks the pattern in the chaotic flow. This enables a master strategy to move beyond the linear equation and find order, and linearity out of non-linearity.

The resulting strategy should be holistic, technology focused, more intuitive and ultimately, therefore be uncomfortable for doing challenging tasks. And, our aim should be to place ourselves, our society, our institutions, nations and world in a strategic state that is powerful, principled and purposeful – which will provide us a more sustainable system of life.

Finally, framework of product-strategy requires vision (Core Strategic Vision – CSV), product – platform strategy, product- line strategy, Market Platform Plan (MPP) strategy, Product – pricing strategy, process and growth of product strategies. Two case – studies, are of Compaq computer and other of Tata Indica V2- a Telco product- have been suitably presented in the paper.

Strategic Vision Alignment Framework

Strategy requires vision alignment and its execution. Strategy dimensions are woven around its three basic components: process, content and context (De Wit etal., 2004). Tactics in brief is short- term plan and strategy a long term plan. Product – strategy process defines where a

business wants to go and the people process defines who is going to get there. Operating plans provide the path for those people, (breaking long – term outputs into short term targets (de Bono, 2001; Bossidy etal., 2002). For any product, there is a product – strategy for its full development. There are many types of visions a company follow, but 'Core Strategic Vision' (CSV) is of prime importance. A CSV provides the destination and the general direction from where we currently stand. A good CSV must ask three questions for its completeness, as under (Mc Grath, 2001, Pathak etal.2007)

a. Where do we want to go?

b. How will we get there?

c. Why we will be successful?

There are various other types of visions, some organizations employ to pioneer their strategies, but most of them fall short of CSV, Few of them are:

a. *Tunnel Vision:* It takes narrow view of the future.

b. *Blindness:* Herein, the companies appear to be blind or at least sleep-walking.

c. *Short-sightedness:* Companies do not see far in the future.

d. *Hallucination:* Companies look to be illusory as a mirage.

e. *20/20 Vision:* This is average capability of vision.

f. *Peripheral vision:* They are more aware of their surrounding technologies.

g. *Fore sighted Vision*: They see adequately ahead to opportunities and parry threats that others have not yet seen. It is more nearer to CSV.

The alignment process framework, the organizations centre around critical intangible assets: people, technology, culture and leadership. The strategy Execution framework basing on Deming Cycle- Plan – Do- Check-Act and has four vital components (Bossidy etal., 2004).

a. Strategic Fit,

b. Human Capital Alignment,

c. Organizational alignment, and

d. Alignment of Planning & Control systems.

How Vision Guides Strategy

An effective CSV provides the necessary starting point for successful product – strategy point for successful product – strategy in the following ways:

a. It establishes the framework for product platform strategy.

b. It focuses the efforts of those responsible for identifying new product opportunities.

c. It aligns other strategies & initiatives.

d. It guides product development.

e. It guides technology strategy.

f. It sets future expectations for customers, employees and investors.

An effective CSV can motivate people to work not just smarter but also harder.

The CSV Boundary Framework has two very important purposes: Firstly it makes sure the strategic vision is achievable. A good CSV should be aggressive to achieve but not impossible/

unrealistic. Secondly, the framework identifies strategic changes necessary to achieve the vision, which makes it pro-active. Figure: 1 show the CSV framework and its six conditions, as under:

a. Core Competencies (Value – Chain)
b. Financial Plan (Economic Model)
c. Business Charter
d. Technology Trends / Strategy
e. Product Strategy
f. Market Trends / Competitive Strategy

Figure 1: The CSV Boundary Framework

The Market Platform Plan (MPP) Framework

Product Strategy: This framework primarily summarizes the hierarchy of the primary levels of product_strategy. The development of product strategy tends to flow from vision to platform strategy and then to product line strategy and finally to new product development (Figure: 2). Long-term success, requires a sustainable strategic vision successfully implemented with a product strategy.

The various components, shown at Figure: 2 are cited below:

a) *Core strategic Vision (CSV)*: This is most important as vision guides whole product – strategy and is at the top of the pyramid.

b) *Product Platform Strategy:* Product platform is primarily a planning construct. It is the set of architectural rules and technology elements that enable multiple product offering and offerings and define the basic value proposition competitive differentiation, capabilities, cost structure, and life cycle of these offerings. Herein, various technological elements, eg. Components, subsystems, and processes are to be integrated. Effective product platform are not static but flexible to cope with speed and customer's requirements.

c) *Product Line Strategy:* It defines the conditional time – phased product offering from a particular product platform. Each product offering targets a specific market segment.

d) *New Product Development:* This is the final level of pyramid , wherein specific functionality for each new product offering, consistent with the overall product line plan is defined.(Khalil, Tarek, M,2000, Pillai 2005)

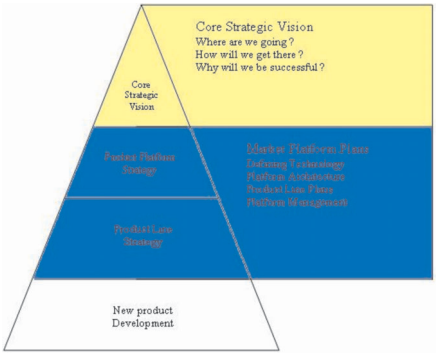

Figure 2: Product Strategy Structures

The MPP Framework

A market platform plan enables companies to translate platform strategy into a practicable attack plan for a target market. It focuses their attention on the critical issues with the most leverage for understanding the interface between a market and the products developed to meet the needs and wants. It has following parameters:

a. Characterize and prioritize customer segments.

b. Define the basis of customer value and differentiation for winning high – priority customer segments.

c. Define the offerings to the customers and outline the building blocks for developing the offering.

d. Define a monitoring plan to sense external developments that could alter strategy.

e. Establish economic metrics for measuring success in the market.

It should be emphasized that a 'product offering' is more than a tangible physical product. It includes the complete set of activities – support, professional services, and so on. – that delivers value to the customer. For bringing MPP in full action a MAT- marketing attack teams – are designed to help ensure strategy to be consistent, with the shared vision. Technology platforms are in a sense a core competency for technology – based companies.

Product Pricing Strategy

Price is a competitive factor in all high – technology markets, and is an element of strategy-whether explicit or implicit for all high technology products. Eventually success or failure of many products may depend on the pricing strategy. Appropriate price strategy varies by product, competitive pricing, and stage in the life cycle of a market. Products with distinctive vectors of differentiation can sustain a higher price. High – technology products are more susceptible to price wars. There are three basic underlying concepts of pricing strategy are cited below:

a. Price positions a product in the Market: Relative price combined with relative differentiation positions, a product in the market. Figure: 3 schematically describes the product position vis-à-vis each other basis of differentiation. Product B is the price leader in the market. It also has a lower relative differentiation than others. Products C, D and E compete in the middle of the market – they are not competitive on the price differentiation. Product A competes on its higher differentiation and a price the highest. The main objective of offensive price – based strategies is to move a product to the left of this chart (Figure 3), while preserving sufficient profit and

increasing market share. In today's market it is not simple. The relative positioning of the products actually varies by segment within the market. Each segment places its own value on the differentiation among products.

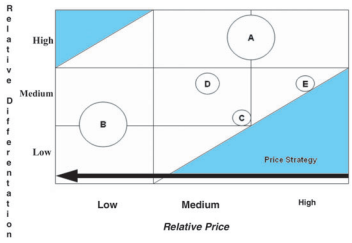

Figure 3: Product Pricing Strategy

b. *Prices decline throughout a market's evolution:* Differentiation changes throughout the life cycles i.e. development, growth, maturity and decline stages.

c) *Lower prices increase market penetration:* High- technology markets tend to be very elastic – lower prices drive higher volumes.

Offensive and Defensive Pricing Strategy

Pricing strategy may be called offensive or defensive. 'Experience Curve pricing' – repetitions improve by specific percentage- is a pre-emptive strategy of offensive nature. Adaptive pricing is one of the most popular defensive price strategies for high technology products. Some common risks of offensive pricing strategies are:

a. Price-leadership may not be sustainable. Only one company may have the lowest price.

b. Aggressive pricing could precipitate a price war.

c. Aggressive pricing may not be supported by a sufficient cost advantage.

A price leadership strategy is really a cost leadership strategy. High technology markets have unique characteristics they appear and disappear relatively faster.

Case Study of Compaq Computer Pricing Strategy

Compaq was developing and marketing a portable PC. In the very its revenues reached 100 million dollars. Then they offered desktop systems by virtue of their ability to quickly develop products with leading – edge technology. Using this ability they left behind IBM by several months. By 1988 there revenue increased by 69% followed by 40 % in 1989. The price strategy that Compaq was using was a skimming price strategy. In return for its high performance products i.e. price was never considered to be a factor for position. But all this changed in 1990 when competitors like ASRT, DEL etc used penetration price strategy and drove the computer prices lower and lower even while offering high technology and high performing computers. So Compaq lost its differentiation and in 1991 suffered its first ever loss.

In October 1991, the Compaq board of directors decided that a low – priced product strategy was required. Then through a change in internal leadership, the new CEO Eckhard Pfeiffer launched new efforts to develop lower priced PCs. Such that the whole PC design would be changed and not just incremental improvement would be incorporated. A lower – priced product strategy requires a lower cost structure. This means lower development costs, lower materials costs, lower manufacturing costs, and a lower profit margin. Then in 1992 Compaq launched its new line of cut-rate PCs-"Prolinea" resulting in 50 % rise in sales.

Lessons Learnt

i. In implementing its new price-based strategy, Compaq changed the way it considered pricing in the design of its products. It identified low price as a key to customer satisfaction.

ii. With the new emphasis on price in its product strategy, Compaq used price as the starting point instead of the ending point for product development.

iii. Visionary leadership especially CSV played also a key role in price strategy.

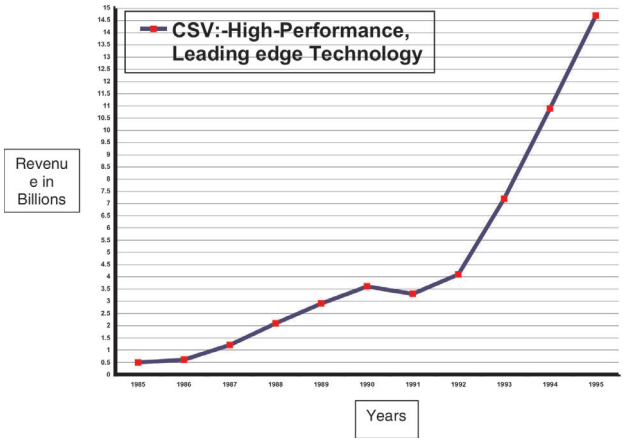

Figure 4: Compaq's Vision and Price Strategy Growth.

Case Study of Indica V2 Version

The Indica car was Ratan Tata dream project. His aim was to develop a compact car, which had a lot of space and was low priced. India had not designed and produces a car before, though it has designed and developed space vehicles and missiles. Telco with its expertise and infrastructure had therefore started work on this dream project. Towards its realization, an old Nissan car plant was purchased from Australia and repaired and renovated at Telco, Pune plant, to produce the Indica car. The total investment of this project was to tune of $400 million. The Indica was launched in December 1998. When it hit the road, customers started complaining about grinding gearshifts, poor-conditioning, lousy tyres, and excessive noise and vibrations. Excessive and uneven tyre wear was reported. This was the problem for both the front and rear wheels. After these complaints Tatas engineers swung into action. They interacted with customers and dealers, and obtained feedback, on the basis of which the Indica cars were withdrawn from the market for improvements. Telco's team under the leadership of Mr. Ratan Tata worked relentlessly to fix these manufacturing defects. Mr. Ratan Tata also took personal interest in the relaunch of the Indica and spent the weekends at the factory to help with the roll out. After the due analysis of all the problems, the suspension of the car was redesigned. The rear suspension bracket was designed so that the wheel did not loose its alignment easily. The car was also provided with wider tyres. The gear connecting rods were changed to improve shifter feel. The engine was a hardy one but lacked refinement and smoothness. This was improved to reduce noise and vibration. The improved air condition in coupled with a higher performance engine resulted in an improved car. These improvements were effected within a span of six months. The IndicaV2 was re-launched in February 2001 with improved ride quality. Since it is debut, V2 sales have been going up. V2 led the Indica's revival. Telco, which was reeling Rs.500 crore losses in 2000-01, became the largest seller in its category with the sales of 5405 cars in September 2001.

Lessons Learnt

a. The Telco top management and the entire team accepted the challenges. Indica's success was made possible by virtue of the Telco team taking up the challenges under the able leadership of Mr. Ratan Tata.

b. The team under the leadership of Mr. Ratan Tata identified the problem and rectified them effectively by their core competence. The team was able to diagnose the problem through proper analysis, to re-design the defective components leading to a trouble free vehicle. This illustrates the problem solving capability of the team.

c. By the vision and professional acumen Indica V-2 sales went up which made a success story because of well-designed plans and execution by a team of 700 engineers at Telco under a visionary leadership.

Conclusion

Emergence of knowledge society and convergence of technologies has ushered in a 'new age of economies' and the age of revolution. The product strategists continuously re-define and reinvent the competitive rules, challenging the status quo. Managing a high technology company is a challenging task. The product – strategy has to be dynamic. High technology products in the market appear very fast and disappear also very fast.

Product strategy is like a road map and is useful only when you know where you are and where you want to go. The framework of product strategy comprises of Core Strategic Vision, Product platform strategy, product line strategy, product pricing strategy, process and growth strategies. In the present paper two case studies of Compaq computer pricing and Indica Car V-2 model, have been suitably discussed.

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