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Design for Consumer Products – An Innovation

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ABSTRACT: In the turbulent time of present, what has been the most prominent is the competition in every walk of life. Never before has the word seen such a keen endeavor and struggle by individual; and organization to surpass other or even just to survive.

Among the many factors that give rise to this phenomenon is wider access to the strategic resources to a much large number of players. In earlier times of technology, natural resources or even market were limited only to lucky participants who could therefore enjoy their exclusive advantage. In the present context however resources required such as capital equipment, technology, experience, information's, market and customer are much more widely available particularly with increasing privatization and globalization being more and more widely accepted and practiced, the playing field is becoming more and more level.

Under such prevailing condition, no individual company, no matter how successful today can afford to relax under the assumption that its prime position will automatically and endlessly retained. One can see several examples of market leaders being toppled or taken over by even smaller players. What has however been the most dominating reason for an organization's survival and success, has been its attitude towards creativity and innovation.

An innovative approach in designing products by itself has not been a sufficient reason for success, understanding user requirements, conceiving of appropriate items and systems, and innovative selling approaches are also necessary.

KEYWORDS: Mutation, selection, diffusion, push model, pull model.

I. INTRODUCTION

Innovation is the crucial aspect of many kinds of human activity. In natural science the invention of new instruments, development and application of new mathematical methods, creation of new concepts; all serve a key function in an improved understanding of nature. Introduction of new features in fine arts material and conception of new styles and forms, emergence of new tastes and demands; all these have analogous significance in determining the pattern of change to be observed in painting or architecture or design or sculpture.

In social sphere equally as much the process of adoption and innovation takes place. Development, testing and spread of new machines, techniques and industrial progress in only one piece of innovation, intellectual, artistic, educational, social and political can be considered as its fellow spices. Process of innovation may be referred to by using following names borrowed from zoology.

i. The phase of mutation.
ii. The phase of selection.
iii. The phase of dominance and diffusion.

During mutation phase, a pool of novel variant (mutant) is created on which the experience and intelligence of practical man can proceed to exercise itself.

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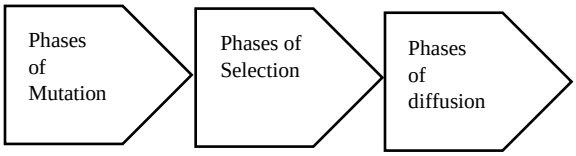

Figure 1: Phases of Innovation Development

Innovation is defined as a process by which new a products and techniques are introduced into the economic system. In Schumpeter's view, innovation results in establishment of new production function- a change in the set of possibilities that defines what can be produced and how.

According to Bright, innovation is seen as a process, incorporating sequence of evolutionary steps:

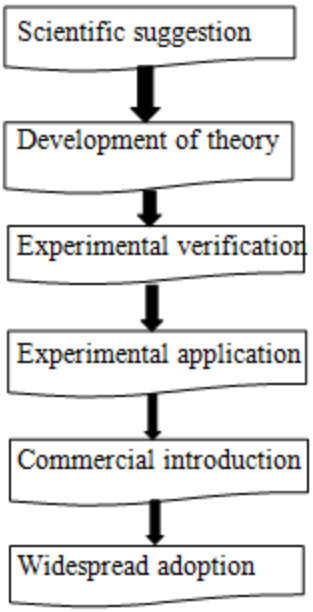

Figure 2: Sequence of evolutionary Steps

J. M. Clark stipulates it as, innovation involves two stages, the invention of something new and its industrial or commercial introduction and exploitation. Inventions are numerous and most of them never reach the stage of exploitation, while many attempted exploitation's fail to achieve economic success. From a societal point of view innovation can be described by suggested by Glabe et al as shown in the Table 2.1[2].

Preconception period	Innovation Period	Post Innovative Period
Discovery	-	-
Technological Advances	Invention Application	Diffusion New application Improvement

Table2.1: Periods in Innovation

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In the preconception period, the scientific and technological foundation for innovation is laid and the post innovative period ends with the extinction of innovation.

Gardiner and Rothwell illustrated the process of innovation by Push-Pull models as shown in Figure. 3(a) and Figure 3(b) and Figure. 4. Figure. 3 shows the two traditional views of process of innovation, first of which is the "Technology Push Model", commencing with basic science, then through applied science and manufacturing to the market. The second view is complimentary i.e. "Market Pull Model" beginning with market needs and responding with development of manufacturing concluding with sales. Basic Applied Science Manufacturing Marketing Science Engineering.

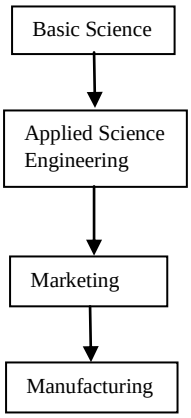

Figure 3(a): Technology Push Model

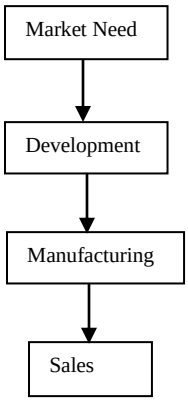

Figure 3(b): Technology Push Model

Figure. 3(a) and (b) presents an 'interactive model' which rarely follow either the market pull or technology push model, but whichever is the case is not critical to outcome, as long as the innovating company forms the interactive link between the two in its development

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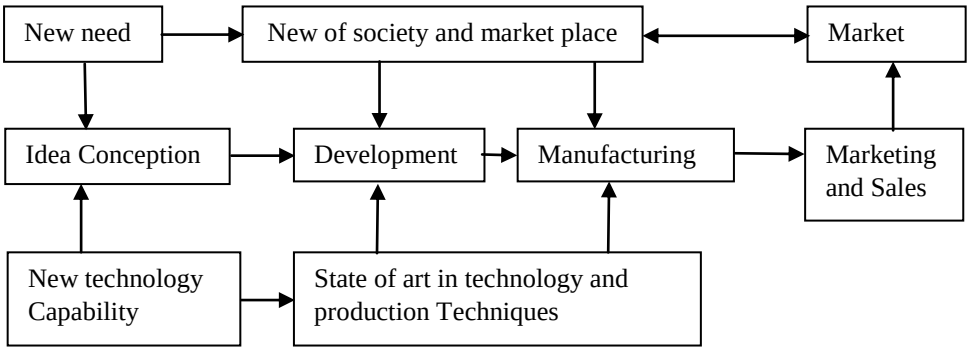

Figure 3: Interactive Model of Innovation [6]

II. ATTRIBUTES AND MOTIVATION

Radosevick characterizes innovative culture in terms of several attributes listed in Table 2.2. Although one may not agree 100 percent with all the statements, the table indicates that a climate conductive to efficiency in current operations will have a negative effect on innovative activities.

A. ATTRIBUTES CHARACTERISING INNOVATIVE AND NON- INNOVATIVE BUSINESS UNIT [5]

	Attribute	Innovative Units	Non -innovative Units
1.	Management problem-solving orientation	External, oriented to the environment long – range time horizons	Internal, short – range time horizons
2.	Activity Characteristics	Unique, creative, self – described and self-directed	Repetitive program maple, described by formal job description
3.	Resource Inputs	Highly trained professionals, brain – intensive	Lower skill personnel, capital intensive, automation of process
4.	Reward System basis	Self-actualization, intellectual curiosity role autonomy	Economic, status associated with position based authority
5.	Decision Process	Primarily intuitive models with some adhoc analytical studies	Analyzable decisions with some explicit quantitative models
6.	Risk Attitudes	Take chances, tolerate failures	Control uncertainties at low levels
7.	Evaluation basis	Self and peer (professional) evaluation	Formal system with predetermined criteria
8.	Technology Used	Complex, near state – of the art, often advanced internally	Relatively simple, borrowed or converted from – innovative group or from outside the firm
9.	Co-ordination basis	Face-to-face, two-way communication	Plans, memoranda, one-way directives

Table 1: Characteristics of Innovation

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III. CONCLUSION

To create an organization with innovative ideas is not easy. The ideas produced are to introduce new products with strong competitions from internal corporate venture. The overall scenarios to be handled when the team lead retires. The paper tries to produce the innovative vision for the successful business unit. The key lies with ideas, innovation and the complete success story.

REFERENCES

[1] Tolumin Stephen, "Factor in transfer of Technology", MIT Press Cambridge, 1992
[2] Knulf Holt, "Product innovation Management", Butleworth London, 1988.
[3] Baijus. L. Barry, "Are products life cycle really getting shorter", the journal of product innovation management Vol II Sep 1994.
[4] World book encyclopedia – Ascot Fetzer Company.
[5] Coper Robert, "Winning at new products", Gager Educational publication 1987 – London.
[6] Scheduling Eberhard, "The new product manangement", A Bell and Howell Information company 1989.
[7] John. F.A, "Industrial product innovation organization management", Nicholas publishing company New York, 1985.
[8] Robert Edward, "Managing innovation and invention", journal of Reassert Technology Management, Jan 1988.
[9] Fanjo Kodama, "Emerging management and organization", Havard business scholl press, Boston, 1995.
[10] Scheuning E, "The new product Management", the Dryden Press USA 1974.