



FOCUSING ON BAH MODEL, ENHANCED FEATURES OF PRODUCTS, IMPROVES BUYING BEHAVIOR DURING PURCHASING ON INDUSTRIAL PRODUCTS.

J. Phani Krishna¹, Dr.Ashok Kumar Katta^{2*}

Article History: Received: 12.12.2022

Revised: 29.01.2023

Accepted: 15.03.2023

Abstract

This paper aims to recognize the relationship between improvised buying behavior from product mix. Product enhancement is the method of added few more features to product for the marketplace. One's strategically needed to engage in this process due to changes in buyer's preferences, increasing competition and advances in technology or to capitalise on a new opportunity.

Successful ramifications and enhancing features improvement is an important cornerstone of company success. The main view of this paper mentions that the product's quality, product information, its brand name has a significant affective relationship on buying behavior, where product details and its quality had the most contribution factors that affect buying behavior.

The paper summarizes by improvising product features its selling factors, suggested points that could be adopted to measure these factors, and proposes minimum evaluation tools and methods to make use of these factors in a modified popular Booz, Allen and Hamilton (1982) model (BAH model). However, the modified model can reword and can be deployed in many firms that are in capital goods context.

Keywords: Buyer behavior, Capital goods, BAH Model

¹PhD Research Scholar, Department of Management Studies, VELS Institute of Science, Technology and Advanced Studies (VISTAS), Chennai.

^{2*}Associate Professor & Research Supervisor, School of Management Studies, VELS Institute of Science, Technology and Advanced Studies (VISTAS), Chennai

Email: ¹awakening2008phani@gmail.com, ^{2*}yoursashok1984@gmail.com

DOI: 10.31838/ecb/2023.12.s2.252

1. Introduction

Preface:

With a well-conceived product innovation strategy, firm can avoid destroying time, money and business resources. An innovation approach will help firms to organise product planning and research, capture respective customers' views and expectations, and accurately plan and resource firm's project. Decent strategy will also help you avoid:

- overvaluing and misreading one's target market
- launching a poorly designed product, or a product that doesn't meet the needs of intended target customers
- incorrectly pricing products
- high spending resources refers to development costs
- exposing firm's business to risks and threats from unexpected competition.

Problem Definition:

Without a right product process firms cannot professionally manage the inherent risk of new product development. A substantial measurement of complexity results from the fact that communications and data management technologies now allow, and even encourage, the methods to be rightfully dispersed – both structurally as well as geographically.

The said products Heat exchangers and Air pollution Control products are categorized in vast and are necessarily required in all industries. The constant feature that is expected is higher efficiency at low price. This drives the sellers to innovate and hence attract buyers. The study of measuring the success factors in each phase and framework to measure the success factors is vital. The tools required to evaluate these measured values are equally important.

Objectives of Research:

Identify the defining stages in features enhancing focusing on heat exchangers and Air pollution control and narrow down to promulgate success

factors for each stage and create a template to measure the success factors. List the minimum tools required to evaluate these measured values specifically to Capital Goods environment.

Scope of Research:

Current scope of research surrounds in the industrial verticals were focussed on innovation and developing features of products that are necessary to compete in dynamic markets focussing on capital goods. Various stages are detailed and metrics for measuring are categorically mentioned. Heat exchangers are critical products those once deployed need attention frequently for proper operating performance, various product essentials are playing a key role in convincing buyers to buy, because of this fact marketers and producers gives utmost attention to this subject while setting up their strategies.

Theoretical Framework:

Organizationally, defined processes operates best when it can capitalize on key inputs from multiple functional areas within the firm, including marketing, engineering, production, finance, etc.

In general, no single organizational unit optimally represents at the same time the voice of the customer, as well as all the technical, operational, and financial competences of the firm. The processes clearly benefit's from gathered inputs from sources outside of the organization.

- from key customers,
- from important competitors,
- and from strategic partners such as the firm's principal suppliers.

Over years, several detailed models have been referring, the well acknowledged model which is Booz, Allen and Hamilton (1982) model, shown in Figure 1, also known as the BAH model, which underlies most other systems that have been put forward. This well recognized model appears to covers all the basic stages of models found in the many literatures.

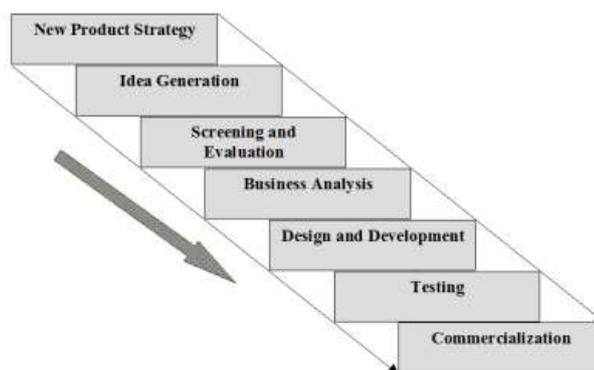


Figure 1. Phases of PRODUCT INNOVATION (Booz, Allen & Hamilton, 1982)

The stages of the model are as follows:

- New Product Strategy: Refers to product innovation process to organization objectives.
- Concept generation: Explores for new product ideas those can meet organizational objectives.
- Screening: An initial analysis to determine which ideas are relevant and deserve more detailed study.
- Business Analysis: Deeper evaluation of the developed ideas based on quantitative factors.
- Development: Turns potential scrutinized idea from paper into a product that is demonstrable and producible.
- Testing: Performs commercial experiments necessary to verify earlier business judgments.
- Commercialization: Launches product.

A not-so-deviation from the BAH model, adopted to capital goods from a continuous production firm will improve the results of objectives.

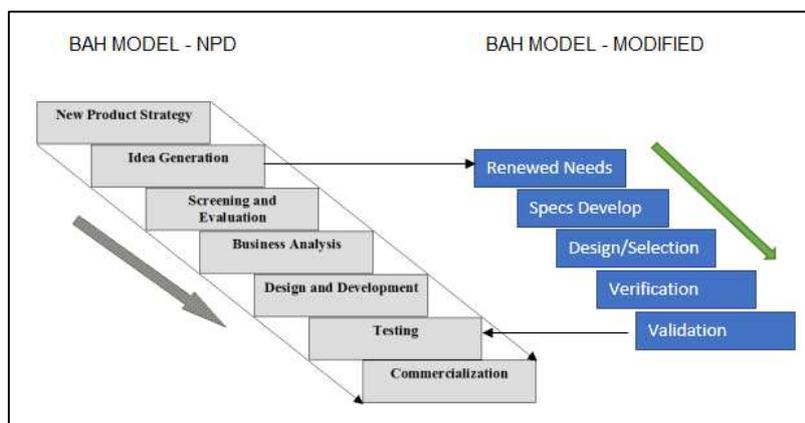
The product innovation works on improvements to existing models or adding additional features inline with updating in technology, availability of materials etc to meets renewed requirements. The modified BAH model in Figure 2, is reliable for the renovation and extending the existing core designs

but with modified accessories to suit the renewed needs.

The stages of the BAH modified model are as follows:

- New Product Strategy: Links the product innovation process to company objectives and provides focus for idea/concept generation and guidelines for establishing screening criteria.
- Renewed Needs: Reviews the existing designs and possible modifications that can improve market penetrations.
- Specifications Develop: Renewed needs translates by exploring to improve specifications and new technologies that are commercially available and feasible.
- Design and Selections: Transform concept into preliminary technical product, Perform Design Review (Intermediate), Update verification & Validation Plan
- Verification and Validation: Verify the design, Complete the design & ready for Validation, Finalise on drawings & specifications (release for Prototype), Ensure performance (Factory Test)

Figure 2 Modified BAH model



Modified BAH model originates from the existing designs and tuned them for meeting renewed needs at buyers' requirements. A well-known fact, the idea is to determine what factors in PRODUCT INNOVATION are essential for success, and how to measure the extent of this success. The challenge is to design a process for successful product innovation - a process whereby new product projects can move quickly and effectively from the idea stage to a successful launch and beyond.

A tracking of metrics performance and allows a firm to measure the impact of process improvement over time. Metrics will play a key role in helping companies to enhance their PRODUCT

INNOVATION efforts and are important for at least three reasons.

First, document the value and are used to justify investments in this fundamental, long term, and risky venture.

Second, good metrics enable decision makers to evaluate people, objectives, programs, and projects to allocate resources effectively.

Third, metrics affect behavior. When PRODUCT INNOVATION team members are assessed on certain metrics, they generally take decisions, take actions, and otherwise alter their behavior to improve the metrics.

Metrics measurements and Evaluation Tools over BAH model modified:

BAH Model-Modified	Metrics	Evaluation tools
Renewed Needs	Modified designs-Sales inputs Program management Existing operational data	Financial analysis Business plans
Specifications Develop	Vendor's development Design tools	Commercially viability
Design and Selections	Design reviews Appropriation and decisions Degree of functional integration	Prototype test feedback Documented Lessons
Verification and Validation	Different materials/options	Lab trials tests Customer involvement Scaled models Customer-Perceived Value

In Heat exchangers the reducing losses, handling of equipment, operability, cleaning on internals makes a good list of scope for improving features, similarly for most of air pollution control products controlling the outlet emissions is major feature and backward looking to improve is major. The right parameters aligns involved personnel goals with those of the organization whereas, wrong parameters are counter-productive and lead to narrow, short-term, risky decisions and actions.

Modified BAH model adaptation and description:

Left side is a type of discharge valve for gravity discharging of dry powders. Since fine powder been handling there is prone to leakages from ends, to arrest this air purging been provided on both ends. Now from modified BAH model, it was adopted that the air purging equipment's, accessories are being fitted into the valve itself as shown in the left side that gives the buyer only one point and less work at place of installation.

2. Discussions and Conclusions

This paper examined and detailed the features enhancing process from prominent BAH model to modified model in capital goods context and attempted to identify ways in which firms can improve their performance when developing new products, mainly through the study of factors that are critical to success. The evaluation tools are important and handy in evaluation the performance of product innovation process that are commonly missed to documented whereas it is essential. These are necessary for firms to review the direction in

which product strategy originally envisaged is going in right track or not.

However, the modified model will be useful for many firms in capital goods market segment for improving their market promotion penetration in existing markets.

3. Reference

- Balakrishnan, A. (1998). Concurrent engineering: Models and metrics. Master dissertation, McGill University, Canada.
- Belliveau, P., Griffin, A., & Somermeyer, S. (2002). Meltzer, R. in *The PDMA toolbox for new product development*, New York: John Wiley & Sons.
- Booz, Allen, & Hamilton. (1982). *New product management for the 1980's*. New York: Booz, Allen & Hamilton, Inc.
- Crawford, C. (1992). The hidden costs of accelerated product development. *Journal of Product Innovation Management*, 9(3), 188-199. <http://dx.doi.org/10.1111/1540-5885.930188>
- Crawford, C. (1987,1997). *New product management*. (2nd Ed. & 5th Ed.). Illinois: Richard D. Irwin.
- Daniel, R. (1961). Management data crisis. *Harvard Business Review*, Sept-Oct, 111-112.
- de Brentani, U. (1989). Success and failure in new industrial services. *Journal of Product Innovation Management*, 6, 239-58. [http://dx.doi.org/10.1016/0737-6782\(89\)90077-5](http://dx.doi.org/10.1016/0737-6782(89)90077-5)
- Griffin, A. (1997). PDMA research on new product development practices: Updating trends and

- benchmarking best practices. *Journal of Product Innovation Management*, 14(6), 429-458. [http://dx.doi.org/10.1016/S0737-6782\(97\)00061-1](http://dx.doi.org/10.1016/S0737-6782(97)00061-1)
- Rosenau, M., Griffin, A., Castellion, G., & Anschuetz, N. (1996). *The PDMA Handbook of New Product development*. John Wiley and Sons, Inc.
- Scheuing, E. (1974), *New product management*. Hinsdale: The Darden Press.
- Song, M., & Parry, M. (1996). What separates Japanese new product winners from losers. *Journal of Product Innovation Management*, 13, 422-439. [http://dx.doi.org/10.1016/0737-6782\(96\)00055-0](http://dx.doi.org/10.1016/0737-6782(96)00055-0)
- Souder, W. (1987). *Managing new products innovations*. Massachusetts: D.C. Health and Company.