COLLABORATIVE NEW PRODUCT IDEA MANAGEMENT: A FLEXIBLE MODEL FOR INNOVATION

by

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CERTIFICATE

The thesis entitled "Collaborative New Product Idea Management: A Flexible Model for Innovation" is being submitted by Mr. Battula Kalyana Chakravarthy to the Indian Institute of Technology Delhi, for the award of the degree of Doctor of Philosophy (Ph.D.), is a record of bonafide research work carried out by him. He has worked under my supervision, and has fulfilled the requirements for the submission of this thesis, which has attained the standard required for a Ph.D. degree of the Indian Institute of Technology Delhi. The results presented in this thesis have not been submitted elsewhere for the award of any degree or diploma.

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ABSTRACT

Today organizations all over are seeking initiatives to develop competitive advantage that could be sustained over the long run. Innovative products, experience shows, have been of immense value to organizations in this context. The role played by innovation in generating ideas for innovative products is evident. Truly it becomes imperative that an organization establishes processes that lead to or support innovation.

Current research proposes a methodology that uses a collaborative network of expertise from within and outside the organization for innovative product idea generation. The network needless to say would help in assimilating diverse knowledge and rich experience scattered across the enterprise and outside, thus giving valuable inputs right at the ideation phase of new product design.

Proposed methodology draws heavily from the Industrial Design methodology of ideation, based on the concept of visual thinking, which could be extended to the collaborative network for creative idea generation. In addition, methodology suggests that sketching or computer-aided representation of ideas is more effective for visualization and stimulates creative triggers in a collaborative network. Besides it would also result in an effective interaction due to the tangible nature of the represented idea and at the same time assist in generating a lot of reservations and discussions on the same. Hence knowledge and information sharing is more effective. Importantly collaborative teaming gains impetus for innovative product idea generation.

The research methodology followed is to have a stepwise development in the collaborative model for innovation. Exploratory study based on literature review and industry experience has culminated into a base model for innovation. Next step is the inductive research study where mock and real case studies were conducted and the learning from these used in generating an emerging model for innovation. The final step is the deductive study where in the inferences from the empirical findings

resulted in the final proposed collaborative model for innovation. This type of evolution of the model lends itself to effective implementation in the industry.

The proposed model for innovation consists of two intervening processes: the new product, concept management process and the collaborative teaming process. The concept management is divided into four steps for having better and precise control on the stages and earmarking the responsibility and the level of interaction of the participants from both within and outside the organization. This also helps in filtering the quality and type of interaction at each stage. The steps are, (i) Concept creation and generation, (ii) Concept focus and evaluation, (iii) Concept detailing and (iv) Concept refinement and finalization, creating a multistage concept development process. This helps in enthusing innovation and flexibility in the system so that innovative ideas with potential can be nurtured and taken ahead.

The collaborative teaming is made of three teams: (i) core team,(ii) enterprise wide network team and (iii) external network team. The core team's main responsibilities include innovative idea generation, creativity, visual representation and coordination of the collaborative model for innovation.

The enterprise-wide team would comprise of experts within the enterprise, who would provide valuable insights from the perspective of their functions.

The external networked team would comprise of individuals with varied expertise but not belonging to the enterprise, namely external experts. These individuals will bring in broader perspective, new knowledge and wide experience to the collaborative model. In short, this team would play a critical role in triggering and evaluating creative ideas

Globalization is suggestive of the importance of this collaborative effort as consumers in different markets represent a diverse set of needs and a successful product idea must cater to this aspect in the ideation stage of product development cycle itself minimizing the risk of failure later. The study proposes that with the help of this collaborative model organizations can develop new product ideas and come up with innovative products which are successful in delighting the consumer and effective in winning bigger market share for the enterprise.

Collaborative New Product Idea Management :

A Flexible Model for Innovation