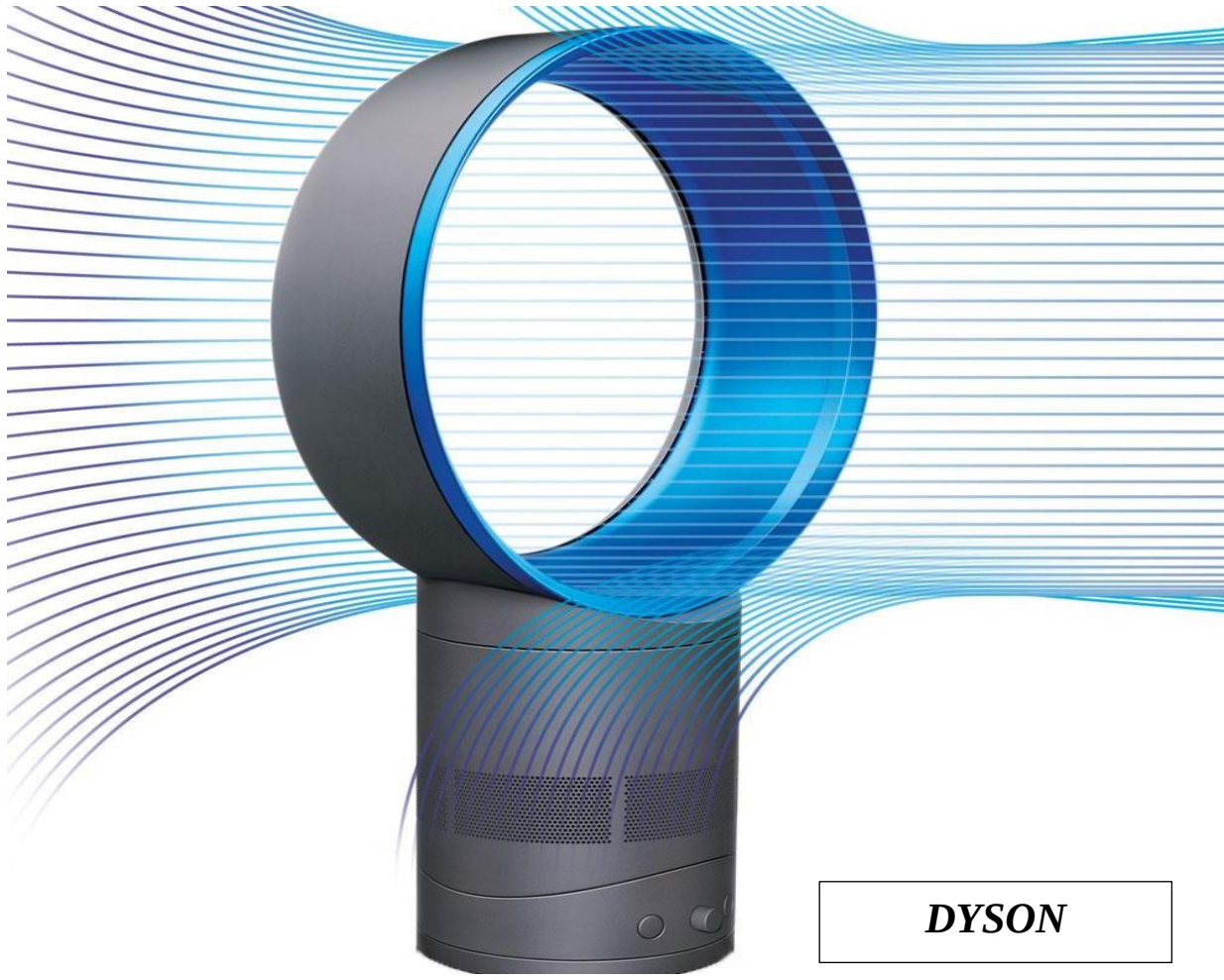


INNOVATION IN CRISIS



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EXECUTIVE SUMMARY

The study show idea of adapting bladeless fan as an innovation to replace conventional fans for meeting customer needs over the marketplace. The study further explores the innovative opportunity of Dyson Limited with regards to its bladeless fan that are efficient and affordable. Consequently, the bladeless fan is emphasized to utilize the air-multiplier technology for sucking 5.28 gallons of air per second to ensure that strong air flows throughout the room. Besides, the bladeless fan is determined to follow disruptive type of innovation to create new technology for serving needs of modern market. (Dyson | Dyson on: Dyson Year in Review: 2019) .

Open and close innovation models are also elaborated along with their possible benefits and limitations. Furthermore, the innovation process of bladeless fan is explored along with utilization of Lewin's force field analysis to understand effectiveness of the innovation to serve people's needs.

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1. INTRODUCTION

Innovation refers to the implementation of new ideas and thoughts that assures initiation of new products or services that are highly appreciated by customers over the market space. (Luenendonk, 2019). In regards, innovation intends to implement ideas of creativity for enhancing efficiency and competitive success within an organization. In contrast, Creativity relates to the capability of individuals to develop something new that is valuable and highly appreciated. Moreover, the concept of innovation assures introduction to change over stabilized systems, while creativity differs as it focuses over unleashing potential of individual's mind to conceive new ideas and thoughts.

Dyson is a technological organization that designs and manufactures ,sale and services domestic appliances and commercial hand dryers and has developed an innovative product bladeless fan to meet customer needs. The organization was established in the year 1991 with headquarters in Malmesbury and United Kingdom.

The purpose of the report is to explore the innovative opportunity of Dyson Limited in regards to its bladeless fan serving needs of marketplace efficiently. There are various types of innovation shown through innovation matrix along with evaluation of innovation models .Also, open and close innovation models are analyzed with explanation of the innovation process and its relative effectiveness. Furthermore, recommendation is cited for appropriate leadership style to be implemented over the business process.

2. DESCRIPTION

2.1 Explanation of innovation opportunities

Innovation opportunities refers to the possibility of realizing economic inherent of new products and services in order to meet market needs and customer preferences . Therefore, it is analyzed that operating ceiling fan has certain limitations converging to difficulty in cleaning or maintaining the fans and has conventional risk of cuts and injuries. Moreover, the fans are noisy and long time usage leads to migraine and body aches relatively (Wang et al., 2020). Also, ceiling fans cause certain health issues such as congestion, allergenic reactions and so on. Even though, the air

conditioners provide an upgraded system of cooling by mitigating ceiling fan issues, it is more expensive to operate and not everybody can afford the expensive air conditioners due to its high electricity consumption. In regards to this, a more conventional system of cooling is required through fans that are affordable and serve needs of people over the market place. The pandemic spread of COVID-19 impacted the market space with financial degradations due to the lockdown imposed by government to protect people. With the COVID-19 situation most businesses initiated e-commerce operations to sustain needs of customers over the marketplace. However, the pandemic situation provided opportunity for Dyson Limited. to create innovative product and sell it through online media .Hence, the innovative opportunity of bladeless fan is identified to serve potential needs of cooling system concerning economic fundamentals.

The innovative opportunity to meet the marketplace requirements is adaptation of bladeless fan produced by the Dyson organization. It is further evaluated that bladeless fan is a sustainable device which multiplies the air flow that comes out and provides highly efficient cooling. Moreover, the bladeless fan consumes less energy with its air sucking mechanism and saves high amount of electricity (Jeong et al., 2017). Also, the bladeless fan as an opportunity is safer for utilization with hidden blades presented at the base and hollow tube surface makes it easier to clean and maintain. Therefore, the bladeless fans are remote controlled and much lighter than conventional ceiling fan. Furthermore, bladeless fans are less noisy and does not affect human health rather provide smooth cooling experience. The adaptation of online sale of bladeless fan in the COVID-19 situation, provided Dyson Limited with suitable opportunity to perform quality marketing aspect for generating higher profit and meeting customer demands. The online source of supply for bladeless fan is done adhering to COVID-19 protocols set by the government to ensure delivery of goods to customer's doorsteps and increase business efficiency and recognition.

It is evaluated that the innovative opportunity of adapting bladeless fan has potential efficiency in utilizing the air-multiplier technological innovation for generating better airflow within rooms. It is further anticipated that bladeless fans are an upgraded version of the ceiling fan that overcomes all possible limitations of conventional fans and are affordable to serve purpose of the marketplace with lighter weight and easily managing features. It is emphasized that the innovative opportunity intends to provide modern advancement in serving efficient cooling and are elegant with its unique designs to be blended with other furniture in the room respectively (Gurav , 2020).

2.2 Distinct types of innovation

Innovation matrix indicates visualizing various aspects of innovation types that an organization adheres with its new product or service. It is further evaluated that innovation matrix provides key information of strategic approach that fits into organization's correspondence and benefits in meeting customer expectations. (Hevner and Gregor, 2020). The various types of innovation that are explored through the innovation matrix involve Breakthrough innovation, sustaining innovation, basic research innovation and disruptive innovation altogether. Moreover, the innovation matrix is suitably applied to the innovative idea of bladeless fan by Dyson Limited. Therefore, the innovation matrix is filled with the new idea that are initiated for overcoming issues of conventional fan through adaptation of bladeless fan, so the potential of change and its viability is effectively provided (Antons et al., 2020). Therefore, the utilization of innovation matrix provides idea for challenging current technology over marketplace, introducing new idea at current market, challenging current technology, and developing new ones for sustainable new market space.

Furthermore, innovation indicates the adaptation of new idea designed to make changes over products or services to meet customer requirements over the marketplace and enhance growth of the organization. On the other side, innovation is a solution to problems associated to the marketplace that has possibility of high adaptation such that improvement serves customer expectations and gain valuable income for the organization to enhance its revenue structure. (Kahn, 2018). The concept of innovation further increases market competition and supports improvised productivity with reduced prices, so that profit is gained along with increasing organizational recognition. In response, innovation in this case is related to adaptation of bladeless fans as a replacement to the conventional fans for supporting an improvised vision to customers and gain better market efficiency.

Well	<u>Breakthrough innovation</u> • Issue with conventional fans due to high noise and power consumption • Issue with marketing innovative goods through best approaches during lockdown phase of COVID-19 • Idea of developing innovative cooling system with better efficiency and affordability	<u>Sustaining innovation</u> • Initiation of air-multiplier technology for generating impressive airflow • Initiation of e-commerce business model of Business-to-customers for generating creative approach to sell goods • Elegant hollow design for better maintenance and cleaning
Not-well	<u>Basic research innovation</u> • The air conditioners available are expensive for every individual to utilize in marketplace • The retail outlets and franchises are closed during the lockdown phase of COVID-19 situation • Conventional fans are heavier and adhere to certain safety risks	<u>Disruptive innovation</u> • Bladeless fan that are noise free and operates conveniently as per market needs • Bladeless fans are sold optimally through e-commerce aspect to serve customer needs in the crisis situation of COVID-19 • Bladeless fans have competitive advantages over other cooling system being efficient and affordable as per market requirements.
	Not-well	Well

Table 1: Innovation matrix for bladeless fan

From the above innovation matrix, it is identified that bladeless fans of Dyson Limited. ensures disruptive innovation as it creates new technology for serving needs of modern market space and improvise customer's vision. (Si and Chen, 2020). Also, it is analyzed that bladeless fan affects the organizational function as the product is developed considering all the limitations that

conventional fans possess, so that customer expectations are highly appreciated. Therefore, it is anticipated that innovation matrix provides insight of bladeless fan utilizing air-multiplier technology to demonstrate an efficient cooling system within affordable prices.

2.3 Innovation models

2.3.1 Open and close innovation models

Open innovation indicates utilization of inflows and outflows of knowledge for accelerating internal innovation and simultaneously expanding market space for external utilization of the innovation (Bogers et al, 2018). In respect to this, various models of open innovation include:

- **Inbound open innovation model:** The model indicates its utilization within an organization's external source of innovation. In other words, innovative technology developed at an external site is impregnated over organization's process for managing a technological solution to mitigate crisis without really developing the product (Rexhepi et al., 2019).
- **Outbound open innovation model:** The model ensures utilization of an external pathway for development and commercialization of innovation.
- **Coupled innovation model:** The model exhibits combination of both inbound and outbound models of open innovation for organization to work together for developing new and innovative knowledge and solution in crisis (Rexhepi *et al.*, 2019).

It is anticipated that utilization of open innovation model has certain benefits and limitations. Inbound innovation model has potential benefits such as faster technological access, lower cost of development, low commitment, and high reversibility. Also, outbound innovation model are advantageous concerning less technological aspects and market risk along with protection of patents through the strategic approach (Zobel, 2017). Therefore, coupled innovation has strengths involving technological convergence, better coordination and control and smoother information flow to generate standard of business process. In contrast, the inbound innovation model has certain limitations as it has loss of control over decision-making process. In contrast, the outbound model is restricted to gain independent competitive advantage as it depends upon the externally initiated technology and has risk to infringement litigation with other firms. Moreover, coupled innovation model possess weakness of high commitment, organizational risk and low to medium reversibility aspects.

Close innovation specifies that innovations are developed by organizations, including generation of ideas for development to its market process. (Alawamleh *et al.*, 2018). Accordingly, close innovation is explored through certain models as follows:

- **Incremental disruptive model:** The model specifies creation of innovative change that transforms current market by introducing new products within the organization (Benzidia *et al.*, 2021). The model is furthermore focusing over improvement of cost and features in existing products or service.
- **Entrepreneurial innovation model:** The model emphasizes innovation of product by significant contribution from workers and entrepreneurs initiating new idea and thoughts. Moreover, the entrepreneurial innovation model entertains creation of innovative business entity to support a crisis faced by the market. (Yun *et al.*, 2019).

It is analyzed that application of close innovation model ensures certain possible strength and weaknesses. Incremental disruptive model is beneficial in modifying existing products that enhances functionality and reduce cost of production. Also, the incremental disruptive model enhances market position and competition extensively. Therefore, entrepreneurial innovation model possesses benefits concerning enhanced brand value and business recognition along with boost over product sales. (Nosratabadi *et al.*, 2019). Furthermore, the incremental disruptive model is limited in security concern and prematurely rejecting ideas and thoughts with regards to change in business process. The entrepreneurial innovation model has weakness as in case new ideas fail, might lead to retardation of organizational growth and revenue structure.

2.3.2 Innovation process

Innovation process implicates the path of translating new ideas and thoughts to marketable solutions to reduce crisis situations through innovation. So, the innovation process is a successful decisive aspect that intends to generate competitive advantage and enhance market value for the organization. (Dziallas and Blind, 2019). The innovation process is essential to increase opportunity to create and make reliable changes that transform vision towards a specific product or service along with adherence to specific strategic approach for gaining business optimization.

In Dyson Limited, the innovation process reflects the implementation of air-multiplier technology through bladeless fans that are convenient to support needs of people over the market space.

It is emphasized that in case of bladeless fan, hidden blades are present at the base of pedestal stand that sucks 5.28 gallons of air per second and ensures that air flows strongly throughout the room (Cong, 2021). The innovative mechanism of sucking air multiplies the airflow to 15 times as compared with conventional fans. Moreover, the blades of the fan are operated through brushless electric motor that produces less noise and assure that nine asymmetrical alignment of blades to push air through stationary blades for smoother airflow ensuring effective cooling experience with significant remote-controlled speed. (Cong, 2021). The innovation process of bladeless motor further adheres to physical laws of inducement and entrainment for drawing the air to transverse a low-pressure region for managing cool breezes throughout the room. The bladeless fans of Dyson Limited are further adhered to customer-based pricing strategy ensuring a lower price depending upon customer requirements and serves as an innovative process to gain competitive revenue growth. Moreover, the products of Dyson Limited are sold through the e-commerce business model of business-to-customers assuring the innovation process in managing efficiency of business. With regards to this, the creative marketing approach is convenient for operating business practices in the organization and assures that the firm grows in near future suiting distinct customer needs of purchasing goods from multiple channels. (Innovation the Dyson Way, 2016).

Therefore, the contemporary marketing approach is significant to not only cope-up with the pandemic situation but serve customer's needs for near future and assure business growth for generating consistent profit reliably. Thus, the innovative idea of implementing air-multiplier technology to mitigate crisis related to conventional fans serves as a potential aspect for developing marketing solutions.

2.3.3 Accessing effectiveness of innovation process

It is evaluated that initiation of bladeless fan through air-multiplier innovative process has potential effectiveness in ensuring better cooling opportunities at affordable costs. Moreover, the hidden blades of bladeless fans provide a convenient safety to its usage without risk of cuts. In response, the effectiveness of the innovation process is determined through application of Lewin's force field analysis. This type of analysis provides an insight of variable factors that drives individuals towards or away from a change being initiated with standardized marketing. (Smartt *et al.*, 2018). The method of analysis further ensures that forces act correspondence to the current situation to

adapt bladeless fan and generate a balanced outcome to understand possible effects of the innovative approach to serve customer needs over the market space.

Relative force strength	Forces for change	Adapt the bladeless fan that utilizes air-multiplier technology	Forces against change
1.	Customers requiring new and innovative product (5)		Not beneficial in high temperature regions (4)
2.	Consumption of less electricity (3)		Higher cost than conventional fans (4)
3.	Elegantly manageable and easy to clean (3)		Vacuum cleaner sound experience at times of operating with high speed (4)
4.	Safer than conventional fans (4)		Ineffective marketing as staff are less aware of its utility (2)
5.	Better cooling effect than conventional fans (3)		
6.	Remote control operation (2)		
7.	Green product (3)		
8.	Innovative business model for marketing in crisis (3)		
Total	26		14

Table 2: Lewin's force field analysis

From the above analysis, it is anticipated that force for change to adapt the bladeless fan utilizing air-multiplier technology is higher with standardized grading that emphasizes a score of 26, while forces against the innovation exhibits a score of 14.

3.CONCLUSION

The report has shown that the innovation of bladeless fan has potential in solving market crisis generated through limitations of conventional ceiling fans. Therefore, the innovation opportunity of bladeless fan is identified and exhibited for adaptation in order to meet the needs of market and provide a convenient source of cooling system. Also, innovation matrix is used to analyze the type of innovation identified for the specific bladeless fan concerning disruptive innovation as it creates new technology for serving needs of modern market. Also, the innovative business model of e-commerce serves purpose of managing sale of bladeless fans even in the pandemic that outmost profit growth for Dyson Limited.

Moreover, it is concluded that open and close innovation models are quality approaches in signifying benefits of innovation in accelerating internal systems to gain reliability with their strategies and enhance market value. Therefore, the innovation process concerning air-multiplier mechanism of bladeless fan is evaluated along with determination of Lewin's force field analysis for understating effectiveness of the innovative process.

4. RECOMMENDATION

It is analyzed that there exist certain limitations to the utilization of bladeless fans as it provides a vacuum cleaner experience when operated at highest possible speed and do not serve cooling needs for higher temperature regions. Even though the price of bladeless fan is more affordable than the air conditioner, it is comparatively higher from price of conventional fan. For this point of view, it is recommended that soundless disc motors can be impregnated replacing the brushless motors so that efficient cooling is served with completely soundless system even being operated at higher speed. Moreover, it is suggested that autocratic leadership style should be implemented over business process of Dyson Limited, so that the organization gains better market value through its leader's guidance in selling convenient bladeless fans. The leadership style will centralize decision-making process concerned with them and assure guidance over authority and task initiated for other employees so that minimal mistakes are processed in marketing customer-

friendly goods. (What is Autocratic Leadership? Definition of Autocratic Leadership, Autocratic Leadership Meaning - The Economic Times, 2021).

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