

## **DESIGN MANAGEMENT IN TODAY'S BUSINESS: A REVIEW**

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### **ABSTRACT**

*Design is a part of business that cannot be separated from human life today. From business products to service industries, design has been used as part of improving competitive advantage or finding solutions to problems faced. Design can no longer be seen as just an aesthetic companion, but has broader role to play. With the design industry is currently quite in demand, it can be seen in the development of fields in the field of design or jobs that require design. For this reason, design management is indispensable. Management and design are complementary fields in the process. In this initial study research, the researcher wanted to prove the assumption of design management in the business industry, as well as to get an initial model of Design Management. This research is qualitative research by conducting desk-research and a multi-disciplinary approach, which are design and management, through the study of management functions, management strategies, the design process becomes a reference in this research, to become a starting point for Design Management research. The main activity of this research is a literature study of previous research that resulted in an initial model of Design Management.*

**Keywords:** *design, design management, strategic management*

### **1. INTRODUCTION**

The business world is growing rapidly and more companies are being established to produce the same products. Almost every business has competition, both companies that produce products and services. High quality products are the main key to winning the competition and ultimately being able to provide a high level of satisfaction to customers. Customers face a wide range of choices regarding the goods and services they buy. Customers now have much greater and more diverse value requirements. Consumers are heavily influenced by their perceptions of advertising and design in making purchasing decisions on products offered.[1] Design as a part of business nowadays plays an important role in many parts of today's society. Whether in the product industry, or the service industry. Design is constantly undergoing dynamic development to be able to adjust to the needs of the times and the needs of its users, for this reason design is and will always be needed. Design needs to be seen as more than just a style.[2] The results of design in many aspects play a big role as an added value for businesses both large and small scale, in the life of a person and society. This means that the role of design is very broad and diverse. In this case, it also shows the important role of designers, especially as creative people who apply their skills in solving problems, helping to provide solutions in business, through different ways, through work approach and tangible results.

The design industry in practice has its own breadth that is not understood by ordinary people, just like other industries that require technical expertise, the design industry has opportunities in various career stages, various jobs in organizations and in each stage of different projects, but has the same goal of promoting and utilizing the value of design to solve problems in

society. [3] In terms of the creative industry, the field design is a subsector that can support and achieve success in the creative industry field.[4]

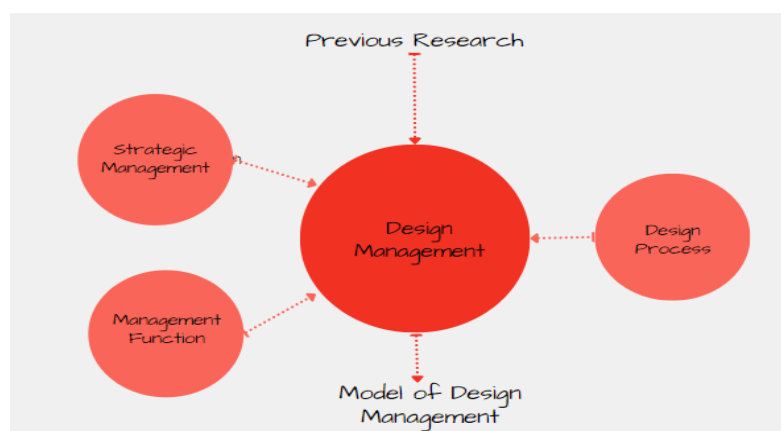
According to John A. Walker, design is a specialist activity associated with the industrial revolution, mass production, the modern architectural movement and society as a consumer.[5] Design is a part of the creative industry that cannot be separated from humans. Design is an important part of the contribution of many industries to gain superior competition in cultural expression and entrepreneurship. Design with some proof through creative and innovation has brought a company or product to success.[6] Design can improve the efficient use of objects, space and act as a means to improve communication. The established principles and criteria that determine design success are based on the relationship between human needs and the efficiency of design solutions to meet those needs. [7] This definition will then help to formulate design management in this paper.

Studies on Design Management have not been done much, especially in Indonesia. Researchers on several occasions have visited industries that require design in them, such as the furniture industry, interior design industry, product design industry, businesses that utilize design as added value. Almost all do not understand the context of Design Management, even though it has been implemented. The interrelationship between the fields of management and design has not been widely literated, so generally a 'design manager' has no management background or training or experience until they are placed as a decision-maker in design management.[8] The designer's position in the field is often related to the management of a project. Time management skills, design work management, interdisciplinary cooperation management, resource management and so on, show that design needs to be well managed.

The purpose of this research is an initial study to summarize and analyze the definitions and activities of design, management, and design management itself. As well as being able to find an initial model of the position of design in business and how it is managed, so it can then be studied and researched further.

The research method used is qualitative research by conducting desk-research, with a multi-disciplinary approach, which are management and design.

This rationale involves strategic management, management functions and the design process to be examined so that a model can be applied to the design division.



**Figure 1.** Theoretical Framework of Design Management Review

## **The Development of Management Science**

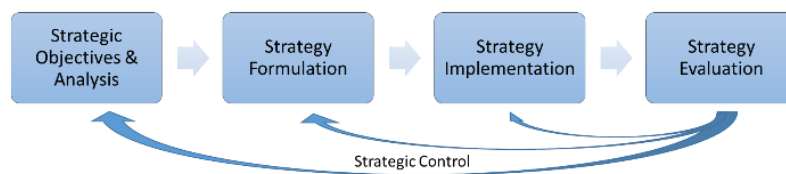
Throughout the history of human civilization, it is inseparable from the existence of management in its continuity to this day. The demands and developments of the times since the stone age to enter the industrial age 5.0, management skills are needed so that human life lasts and becomes sustainable. The scientific management movement has started since entering the industrial period 1.0, where engineers in the United States and Europe are looking for and developing new ways from managing works to companies. One of them is the role of managers in mobilizing and increasing company productivity. The role of a manager includes wisdom in management and decision making is very important, as well as an understanding of human resources and their reciprocity, so as to create conditions to increase work productivity. [9]

In later developments, around almost in the last century, management has paid more attention to human relations towards employees.[9] This is an answer to the anxiety of the weaknesses in task-oriented management, which results in monotonous and boring works and tends to reduce productivity. In facing of today's increasingly advanced industrial world, as well as increasingly fierce competition, management needs to be more flexible when managing. This becomes good, in many activities that require creativity, but creativity also needs to be managed.

## **Management**

Management according to Stoner, Freeman, and Gilbert (1995) is a process or framework, which involves the guidance and or direction of a group of people towards organizational goals or real goals. Meanwhile, according to Follet, management is the art of getting work done through other people. Management is an activity that in its implementation is managed by managers or organizers (subjects). Management is carried out to achieve certain goals. Inside there are activities that include planning, managing, motivating, dividing works and controlling. [10]

Management is necessary and inseparable from organization, administration and leadership. Humans have a tendency to organize in society. Every organization has a goal of improving public services or in the private sector in order to increase the organization's revenue[11]. Based on these objectives, leadership and administration are needed in its implementation. Over time, an organization will face both internal and external challenges, so strategic management is needed in its implementation. Strategic Management is the art of formulating, implementing and evaluating organizational decisions to achieve the expected goals. The purpose of strategic management is to exploit and create new and different opportunities for tomorrow.[12]. Thus, strategic management is always associated with the process of forming vision-mission and internal-external analysis to produce strategic plans and policies to realize short-term and long-term corporate goals as described in the following chart. After that, it is implemented and then evaluated. This process needs to be done continuously through a continuous control function.



**Figure 2.** A Comprehensive Model of Strategic Management

In management there are Management Functions which support the running of Strategic Management as previously explained. These functions were proposed by Louis Allen, which consists of 4 basic components, namely: Planning, Organizing, Actuating, and Controlling. [13] In the Management Principles, these 4 activities are related to sustainable management, so that a business has continuity to the business itself and to society.

## Design

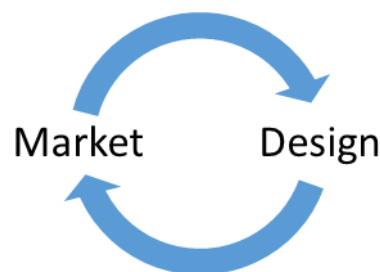
Design in terminology has been used to refer to a profession or science. In Indonesia, design is a new word to replace the word "rancang/rancangan/merancang". Etymologically, the word 'design' is thought to be derived from the word disegno (Italian), which means drawing[14]. The meaning of "design" itself is evolving to be more rational than just another form of aesthetic art, but also as follows:

Design is problem solving with a clear target (Acher 1965), others describe that Design is action and initiative to change human work (Jones, 1970). Next Bruce Archer reviewed the definition of "design" as follows: Design is a form of human physical and spiritual needs elaborated through various fields of experience, expertise and knowledge that reflect attention to appreciation and adaptation to their surroundings, especially those related to the form, composition, meaning, value, and various purposes of man-made objects (Archer, 1976). Design has long been recognized as an effective tool to improve product competitiveness. Not only enhances beauty through aesthetic elements, but it also enhances the ability to produce technological inventions and innovative ideas aimed at market demand in both services and products.[15]. Design has long been recognized as an effective tool to improve product competitiveness. Not only enhances beauty through aesthetic elements, but it also enhances the ability to produce technological inventions and innovative ideas aimed at market demand in both services and products. The process carried out by a designer is the process of creating new ideas that can solve a problem by using a user-centered approach to think creatively and innovatively according to the needs desired by the user. So that the design process can produce products which are innovative, unique and have a competitive advantage. [4] Daniel H. Pink has placed design in the first place in human intelligence as high concept and high touch (Pink, 2007: 71). Design development and creation are indispensable when market competition is getting tougher. Almost all countries in the world have placed design as a market force in order to compete.

Furthermore, Garner and Evans emphasize that: "A design process is a nonlinear sequence of phases during which different activities are performed. The design methods often depend on the nature of the mandate, and a certain level of flexibility is vital. One of the leading design thinkers of our time, John Christopher Jones, noted 'Methodology should not be a fixed track to a fixed destination, but a conversation about everything that could be made to happen.'" [16]

The scope of design work is very broad, but it covers aspects that need problem solving done through human imagination and creativity. The various design professions known nowadays: Industrial Product Design, Graphic Design, Interior Design, Multimedia Design, Visual Communication Design. These five fields of design are in the realm of fine arts. Which can be different or touch each other in the realm of engineering and design (architecture). The scope of Design work nowadays is increasingly blended with professionals who combine from each of these groups. But in the end, the work by designers aims to solve the problems needed by the market or users.

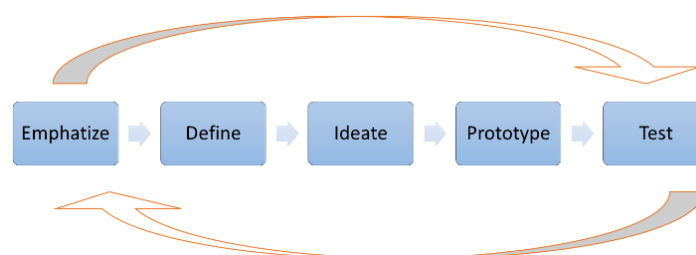
According to John Heskett (1986) regarding the origins of professional industrial design, that innovation and design ideas related to the creativity of experts have variations in the objectives to be achieved. Design is usually related to the ability to produce technological creations that can describe market demand or even influence the market itself from creativity that is realized in reality. Design and the market are interrelated and closely connected through research and innovation development.



**Figure 3.** Innovation in Design Circle [15]

Design as a framework is the elaboration of innovation and design ideas which are then developed with market information and existing research into a detail in determining alternative images and design models for production. This means that there is a design process that will consider functional, technical, ergonomic, economic, environmental, socio-cultural and visual aesthetics certainly. [15]

The design process by Maureen Carroll of Stanford University has 5 stages which are as follows in the figure.



**Figure 4.** Design Process adaptation from The Stanford University Hasso Plattner Institute of Design [17]

Design is a repeated process to find a solution to a particular problem.[16] In Figure 2 there is a diagram of the design process which consists of 5 stages, as the following:

**Empathize.** At this stage the designer thinks based on humans as the basis of creation. The activities include: user observation, involving interacting and interviewing users, and being able to position themselves in the user experience.

**Define.** This stage is the stage of analysis and synthesis of the findings to be adjusted to the needs and desires. The goal is to develop a deep understanding of the user and design for later action. The results of deepening user or market desires are made in the form of design concepts that will be implemented later.

**Ideate.** This is the third stage which focuses on the realization of ideas through the exploration of many ideas as well as the diversity between them. The result is a sketch of ideas.

**Prototype.** The prototype stage is the stage of realizing ideas into a physical form that can interact with users. Examples: dummy, mock-up, prototype, etc. that can be seen and touched, generally in the form of 3 dimensions, can be felt in texture.

**Test.** Test is an opportunity to put the realized prototype to the user so that it can then be evaluated and refined to achieve better results. Evaluation can be tested by a competent organization, tested by humans as users, or market tests through exhibitions or questionnaires to the public.

Design is now recognized by companies in a number of industries, both in products and services have used design as a competitive advantage. Because of this, the design business is growing, it can be seen in the recruitment of designers, cooperation with design agencies or design houses to produce new innovations. The reason for this movement according to Hertenstein et al. (20015) is that design is recognized to have contributed greatly to the increase in cash flow, net profit and financial performance.[18]

## **Design Management**

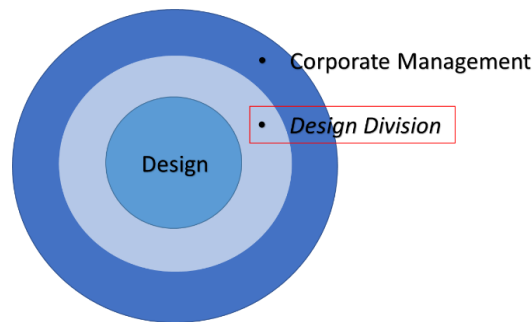
To date, there is no universally agreed definition of "Design Management", much in the same way that the definition of "design" itself is not universally agreed upon. The word "Design" can refer as a noun i.e. the design outcome itself and a verb i.e. the design activity. Looking at design outcomes in products, interiors, buildings, etc., it can be inferred that design projects are managed. However, the management of design projects is only one aspect of Design Management.[19] For this reason, the formulation of Design Management can still be further developed. Because design is a business or as part of a business, which needs management in managing its work.

Important aspects of design management have the following objectives:

1. To understand the strategic goals of an organization and how design can play a role in that organization.
2. Effectively put in place ways and means, tools and methods, team and planning requirements, enthusiasm to achieve the goal.

Design Management starts at the design organization which includes two different levels: at the corporate level and at the project level.[19] At the Corporate level, the existence of a design organization can be linked to corporate needs to visualize the corporate image. Design at the Project Level is tasked with implementing creative products that respond to market desires. Corporations generally have divisions related to creativity, either related to marketing

activities or creative activities for product development. That's where the role of the design division is.



**Figure 5.** Position/ the Role of Design Management in Company

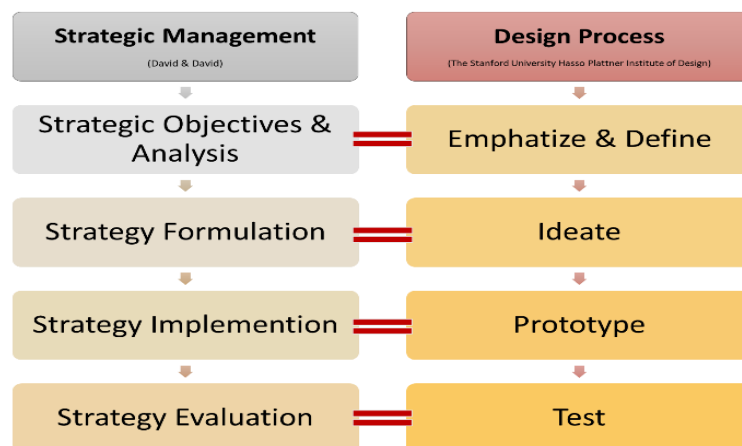
In this case, Topalian also states that the development of Design Management needs to be developed to include participants that participate in the design problem statement and the size of the project and corporate environment to solve the problem.[19]. Design Management is currently a business discipline that uses project management, process design, strategy management and supply chain engineering to control the creative process, support a culture of creativity, and build structures and organizations for design businesses. [20] The various meanings of design management are classified under five sub fields: office design management, educating designers for management, educating managers for design, design project management and design management organization. [21]

Design Management according to Borja de Mozota in the Design Management book [19] has 2 major objectives:

1. To familiarize managers with the existence of the role of design and designers with management, as well as
2. To develop methods that integrate design into the corporate environment and make design one of the tools that can improve performance in the company.

## 2. FINDINGS AND DISCUSSIONS

Referring to the theories which have already mentioned, the starting point for design management research will use the 5 stages of the Design Process and the 4 stages of the Strategic Management Process. Which can be seen in the following chart:



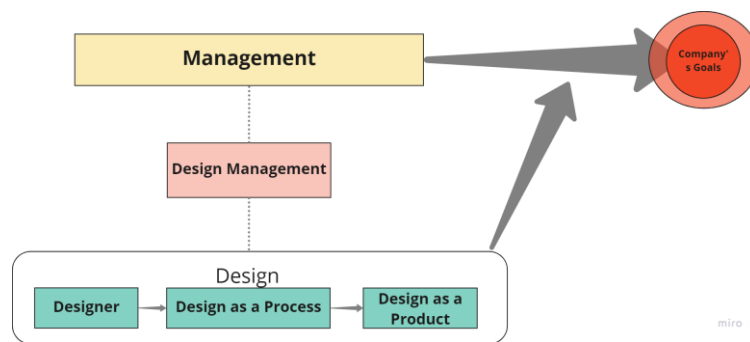
**Figure 6.** Strategic Management Process vs Design Process

In the chart above, there are similarities between the management process carried out in a business and the process of producing design work.

Based on the results of the review above, the following conclusions are obtained:

Design as part of business nowadays. Design comes in as a supporter of a business related to the visualization of the company's image, product visualization to product development that answers market needs. Design that has a big role in a business needs to be managed properly. It is necessary for a company to understand design as the spearhead to introduce the company or product to the market, on the other hand designers need to understand the management system to be able to understand the company and be able to visualize it. Design in the company is found to be related to marketing, and product development. For this reason, the position of design as illustrated in figure 5.

Design management is needed to be a communication bridge for designers and companies. This can be seen in the following figure:



**Figure 7.** Design position in supporting company’s goals

Next can be seen in the following table is a summary of the form of work of the strategic management formulation and design process as follows:

**Table 1** Summary of Activity form result of Strategic Management vs Design Process

		Strategic Management			
		Strategic Objectives & Analysis	Strategic Formulation	Strategic Implementation	Strategic Evaluation
Design Process	Emphatize	<ul style="list-style-type: none"> <li>• Identification problem</li> <li>• Identification Market’s wants and needs</li> </ul>			
	Define	Design brief			
	Ideate		<ul style="list-style-type: none"> <li>• Sketching</li> <li>• Alternatives design</li> </ul>		
	Prototype			<ul style="list-style-type: none"> <li>• Prototyping</li> <li>• Dummy</li> <li>• Mock up</li> </ul>	
	Test				<ul style="list-style-type: none"> <li>• Product test/Trial</li> <li>• Market test/Exhibition</li> </ul>



At the environmental analysis stage and in formulating management strategies, the design process is expressed as an empathy and define process. Which in the process, business actors conduct research related to the market wants and needs, problems faced by the market and then stated in the form of a design strategy in the design brief/design concept. Furthermore, the stage continues by visualizing ideas, making alternatives based on the concepts that have been made. The next stage is the implementation or prototyping stage, making a dummy, or mock-up, so it can be seen the shape, material, appropriateness of the design in accordance with the existing design principles. And finally, testing will be carried out. Testing can be done with variety of methods, for example product trials with tools, product trials by users, market tests through exhibitions to get input from the finished design.

### **3. CONCLUSIONS**

Based on the findings and discussions in the previous discussion, it can be concluded that there is a close relationship between management science and design, in supporting business nowadays. Design as an integral part of business, contributes to answering consumer needs based on the displayed design, consumers are facilitated in making decisions. Design plays a role in the success of a product so that it will increase sales and lead to increased business. For this reason, design as a designer, design as a product, and design as a process need to be managed so these can synergize, and business and design become a unity in a business that is carried out continuously. The end of this desk-research which aims to get a new model that synergizes design and management as novelty. For further research, it can be continued with a description of the initial model that has been obtained.

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