

# A Conceptual Framework for Customer Experience Design, Implementation and Evaluation

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## 고객 경험 디자인, 구현 및 평가를 위한 개념적 프레임워크

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**Abstract** Current research and practice have increasingly sought to focus on approaches to facilitate innovation due to its expanding growth of the experience economy over the past decade. Normally, customer experience design aims to maximize the effectiveness of positive experience with a brand or company's touchpoints when customers make a purchase as well as use a certain product or service. In order to design a product or service that can provide varying levels of experiences, there needs more beneficial design process strategies to help resolve the changing nature of customer experience. Design process is one such approach that provides designers as well as researchers across various academic disciplines as an integral source of creativity, driving innovation and growth. In this regard, this study aims to look specifically at the nature of customer experience and attempts to understand what extent that design process in both practice and theoretical perspective can assist in customer experience improvement. As a further consequence, this study will focus on implementing the idea of circular design into the customer experience process, namely the Circular CX Design Process—which is expected to increase effectiveness and efficiency in addressing customer needs and demands as well as delivering positive experiences at various touchpoints along the customer journey.

**Key Words** : Experience Design, Design Process, Circular Process, Customer Experience, Customer Journey

**요약** 고객 경험 디자인은 고객이 제품 또는 서비스를 구매하고 사용할 때 브랜드나 기업의 터치포인트에서 긍정적인 경험을 최대화하는 것을 목표로 한다. 긍정적인 경험을 전달할 수 있는 제품이나 서비스를 디자인하기 위해서는 고객의 니즈와 고객 경험의 변화하는 특성을 해결하는 데 도움이 될 수 있는 다른 관점과 접근 방법이 필요하다. 디자인 프로세스는 다양한 학문 분야에 걸쳐 혁신을 주도하고 브랜드나 기업의 지속적인 성장에 필수적인 접근 방법 중 하나이다. 따라서, 본 연구에서는 고객과의 상호 작용과 고객 경험을 개선하는 것을 목표로 하는 서클러 고객 경험 디자인 프로세스(The Circular CX Design Process)를 제안한다. 본 연구에서 제안한 프레임워크는 고객 여정을 중심으로 다양한 터치포인트를 분석하고 개선함으로써 지속적으로 고객에게 긍정적인 경험을 제공하는데 그 목적이 있다.

**주제어** : 경험 디자인, 디자인 프로세스, 서클러 프로세스, 고객 경험, 고객 여정

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## 1. Introduction

### 1.1 Research Background and Objective

There has been greater interactions between creativity for innovation and the evolution of industries. In most industries there is a tendency for companies to implement new concepts, ideas, processes, or business models for developing products and services—which has been the greatest impact on innovation success in today’s contested markets. One of the main determinants for innovation success is the ‘customer experience’—that is, to pursue innovation that enhances the experience of customers by understanding of their needs and desires. Customers increasingly seek experience beyond products and services that align with their personal values and beliefs. Hassenzahl et al. once posited that in order to evoke customer happiness is to provide them with more day-to-day opportunities to engage in positive and meaningful, deliberately designed experiences[1]. Therefore, designing such experiences for the customer and derive more happiness from experiences is not merely an option, but became a basic necessity. Most notably, it is evident that how to effectively meet the needs and desires of customers, this often provides the kind of positive customer experiences can be delivered to the customer. Delivering positive experience to the customers is a complex task since the uniqueness of individual’s experience is exceptionally different from one another. There is a famous saying, ‘no two experiences are exactly alike’—which basically means that experiences are different for each individual. Therefore, experience often thrives in a highly volatile, complex, uncertain, dynamic, and ambiguous structure. In these situations, designers usually find unique ways to create new concepts and ideas through design

process, which encourages them to be able to focus on the knowledge and experience they are creating for. They are able to create and nurture experiences by understanding customer’s specific preferences, needs and desires, which can lead to better products and services. There are many variants of design processes, then how can designers begin to develop and integrate differentiating design process responsive to these considerations? What kind of design processes and strategies would prove to be beneficial in elevating customer experience?

The objective of this paper is not to be pedantic about the definition and current position of design process, rather the objective is to consider the nature of customer experience and attempt to understand what extent that design process in both practice and theoretical perspective can take a very grounded approach to customer experience improvement. Therefore, the ideas presented in this paper will seek to frame a deeper understanding of the most appropriate design process to respond to the allegations and look forward to further serve as a guideline for design of positive customer experience.

## 2. Literature Review

### 2.1 History of Design Process

The traditional economy has been linear-based for ages. Design as a discipline has also been practiced and carried out by exploring the origins of the linear economy—the take, make and dispose model[2]. A linear-based design was traditionally based on what sells, or oriented toward the product itself[3]. It was mainly focused on making new products and technologies aesthetically attractive and therefore more desirable to customers or enhancing brand perception through smart,

evocative advertising and communication strategies[4]. Through the mid-1950s, planned obsolescence was steadily adopted by industry designing products that become rapidly obsolete and replaced by customers, helping corporations to increase profits. Planned obsolescence has encouraged and enhanced the linear economy; and designing products usually were not considered as significant as it was meant to create a constant stream of newer and better products and services to accommodate societal benefits.

The design process first began to unfold as a scientific method in the early 1960s, in an era where Fuller described as a 'design science revolution.' At this time, design was primarily based on "science, technology and rationalism, to overcome the human and environmental problems,"[5] and most practitioners were dedicated to 'scientise' design by applying systematic and rational character of scientific knowledge; its methods and research processes were put into practice to see how design functions. Nevertheless, despite the fact that the relationship between design and science may pose a greater exposure to the openness of design process, there had been a "lack of success in the application of scientific methods to everyday design practice"[5]. Since then, design methodologists began to make a strong distinction between design and science, arguing that the scientific method seemed incomparable with the design. Gregory has asserted that "the scientific method is a pattern of problem-solving behaviour employed in finding out the nature of what exists, whereas the design method is a pattern of behaviour employed in inventing things of value...science is analytic; design is constructive"[6]. This indicates how design encounters in a new understanding of enriching and expanding its vision, yet most

importantly, it stands out toward the fundamental problems that lie behind the scientific practice. Through this reliance of design upon science, however, design characteristics extend beyond. Most worthwhile advances in design method inherits its distinctive features from a creative process, motivated by creative thinking and the ability to discover new ideas and solutions to existing problems. In parallel to this, design theorists Rittel and Webber identified a distinctive type of problem that defies conventional methods of design as a 'wicked problem.' They spoke extensively about the interdisciplinarity in problem-oriented research, arguing that the methods of science that often cope with tame problems do not comply with design-based problems that carry creative approach. They also focused on the application of design thinking in handling wicked problems, and how it is effective in the work of many design researchers and academics of the time.

## 2.2 Design Thinking

A non-linear approach has been resonated with design methodologists and practitioners of recent years, as the problems they face are difficult to define, cover a diverse range of subjects and are beyond the mandate of any discipline. Past research has shown the benefits of design thinking as it has been conducted traditionally by trained designers as the process of determining new innovative ideas and solutions. Design thinking has enabled many design researchers, practitioners and educators to be creative and inspired them to better understand the people's needs and experiences, yet most importantly, follows the meaningful consequences by many different aspects of defining and solving for a particular problem. One of the most well-known and commonly

used design thinking process is the Double Diamond model. This model iteratively processes through each of the four phases emerging from the Discover, Define, Develop and Deliver: the first two phases are related to exploring the problem, while the second two are related to solving the problem.

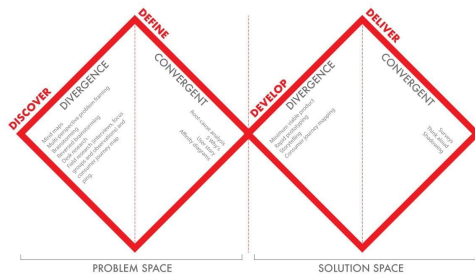


Fig. 1. The Double Diamond Model[7]

The first two phases are devoted to gathering information where the Discover phase focuses on examining the problem; and the Define phase focuses on identifying and analyzing the problem. The second two phases are devoted exclusively to processing information where the Develop phase focuses on resolving the problem and figuring out possible solutions; and the Deliver phase focuses on testing out possible solutions and making improvements.

### 3. Customer Experience

#### 3.1 Definition of Customer Experience

Schmitt once opined that “companies have moved away from traditional ‘features-and-benefits’ marketing toward creating experiences for their customers”[8]. Experiences are memorable events that engage each customer in an inherently personal way and thereby create a memory as the hallmark of that experience[9]. They involve the entire living being, often result

from direct observation or participation in events—whether they are real, dreamlike, or virtual[10]. When referring to the experiences that result from customers’ interactions with a particular brand or company, research and related inferences often use the term ‘customer experience’ to describe dimensions underlying their relationships. Put simply, customer experience is the “internal and subjective response customers have to any direct or indirect contact with a company. Direct contact generally occurs in the course of purchase, use, and service and is usually initiated by the customer. Indirect contact most often involves unplanned encounters with representatives of a company’s products, service or brands and takes the form of word-of-mouth recommendations or criticisms, advertising, news reports, reviews and so forth”[11]. More specifically, customer experience is a blend of a company’s physical performance and the emotions evoked, intuitively measured against customer expectations across all moments of contact[12]. Although there is a multiplicity in the definitions of customer experience exist in the literature, Gentile et al. has described the conceptual definition of customer experience in a fairly comprehensible manner: “the customer experience originates from a set of interactions between a customer and a product, a company, or part of its organization, which provoke a reaction. This experience is strictly personal and implies the customer’s involvement at different levels (rational, emotional, sensorial, physical and spiritual). Its evaluation depends on the comparison between a customer’s expectations and the stimuli coming from the interaction with the company and its offering in correspondence of the different moments of contact or touchpoints”[13].

### 3.2 Experience Design

From a business perspective, an experience is how the customer feels during and after the interaction with product or service offered by the brand or company[14]. It usually occurs when a company intentionally uses products and services to engage individual customers in a way that creates a memorable event[15]. Speaking of an experience in the marketing context, Schmitt recognizes the critical importance of the experience of customers by stating that “customers want products, communications, and marketing campaigns that dazzle their senses, touch their hearts, and stimulate their minds. They want products, communications, and campaigns that they can relate to and that they can incorporate into their lifestyles. They want products, communications, and marketing campaigns to deliver an experience”[10]. Schmitt proposed the concept of experiential marketing and defined five categories to engage customers: sense(sensory experiences), feel(affective experiences), think(creative cognitive experiences), act(physical experiences, behaviours and lifestyles), and relate(social-identity experiences that result from relating to a reference group or culture)[8].

From a design perspective, an experience refers to an engagement delivered to the customer through an integrated system of touchpoints[16]. Data about customers' experiences are collected at 'touchpoints': instances of direct contact either with the product or service itself or with representations of it by the company or some third party[11]. Touchpoints are the point of interaction where the customer interacts with a company that happens before, during and after encountering a product or service, which often involves a number of different stages: problem recognition,

information search, evaluation of alternatives, purchase decision, and post-purchase behaviour[17].

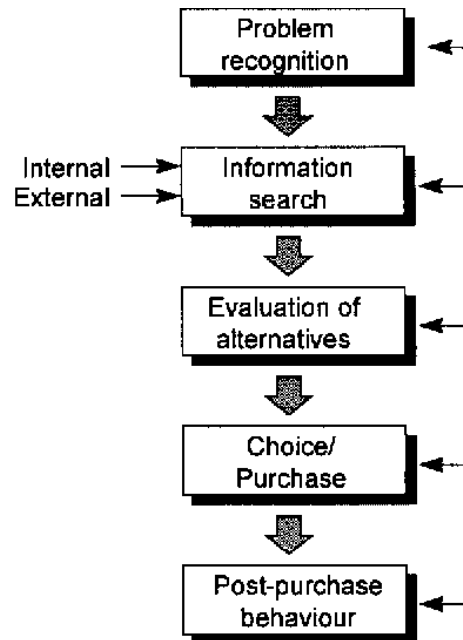


Fig. 2. Classical Customer Purchase Behaviour Model[17]

Zomerdijk and Voss suggest that experience design involves identifying these touchpoints and specifying their sequence in order to “maximize the dramatic effect on the customer”[18]. Touchpoints are important as it involves various contexts and sequence of events of what and how customers say, do, think and feel during each interaction. During these interactions, every customer's satisfaction and expectations are different and varied in nature, which follows a highly subjective matter of opinion. Customers' opinions and perceptions are largely influenced by the contact that is made with these touchpoints, which can be positive or negative depending wholly on the individual person[19].

#### 3.2.1 Customer Journey

Experiences can be created by designing all

potential touchpoints, yet in many cases it is considerably difficult to manage the entire customer experience across all these touchpoints[20]. Some of the most difficult and complex task to achieve are to respond to diverse and constantly changing customer expectations and demands. Designers might also be faced with the challenging task of keeping consistent in striving for customer satisfaction across different touchpoints. It is therefore perhaps essential to recognize the importance of managing the entire customer journey. The entire experience of a customer can be measured through touchpoints that occur along the customer's journey. With this emphasis to the fore, it is important to focus on understanding what customers do and want when they interact with multiple touchpoints and the entire journey they encounter. Duncan et al. has rather emphasized the importance of customer journey as to state that instead of designing the customer's cumulative experiences across multiple touchpoints, managing the customer's complete, end-to-end journey is even more vital for customers. This is because customers often satisfy with the cumulative experiences across multiple touchpoints over time, rather than toward a singular touchpoint[21].

The customer journey is often portrayed as a series of maps that provide insights to better understand the customer experience. Literature often characterized the customer journey as the entire process the customer goes through and consists of all individual encounters between the customer and the organization[22]. In particular, an individual often accumulates experiences across consecutive touchpoints that are related to multiple service exchanges over time and together make up the so-called 'customer journey'[23]. This phenomenon is usually

visualized as processes involving a number of steps, stages, touchpoints, or activities[24]. Trischler and Zehrer made a similar point for the customer journey as a "visualization of results and categorization of the experience into experience clues," as depicted in Figure 3[25].

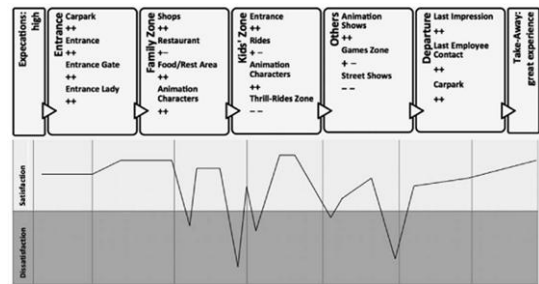


Fig. 3. Example of Customer Journey Map[25]

The figure shows an image visualization of data information such as customer emotions, customer needs, customer requirements, and pain-points[24]. Crosier and Handford also mentioned or even considered the customer journey as to measure "emotional responses to products, goods, and services"[26]. Measuring customers' experience along the customer journey helps companies understand how customer feel about their experiences at various touchpoints. To elevate and deliver an experience to the customer, it is important to focus on understanding what customers did when they interacted with a brand or company and the entire journey they encounter; discovering possible problems and ameliorating them effectively across all the touchpoints.

## 4. Conceptual Framework

### 4.1 Concept of the Process

The focus of 'Circular CX(Customer Experience) Design Process' is to be circulated in a closed-loop system, as well as designed to reprocess structures embedded in the products

and services. The concept was initially taken by academics, a circular design, which according to Maija Aho, a circular design is to organize products and services that work well in their intended function and have minimal negative and maximal positive impacts during their lifecycle[3]. By creating a cycle of continuous improvement at all aspects of a product or service, its life cycle helps to anticipate and mitigate the negative linear consequences by ongoing and iterative routine. According to the Ellen MacArthur Foundation, circular design helps to embed circular design thinking, enabling businesses to re-think value creation to develop more circular products, services and resilient, feedback-rich(non-linear) organizations[27].

#### 4.2 Proposed Model

The ideas of circular design through a closed-loop system is theoretically the production process of circular economy to provide a better product or service, yet most importantly, it helps to improve the quality of product and service, eliminate or mitigate the problem while the products and services are perpetually recovered, regenerated and restored. An iterative closed-loop procedure of the Circular CX Design Process and its principles are visualized in Fig. 4.

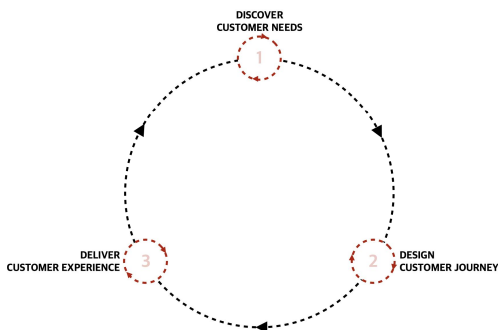


Fig. 4. The Circular CX Design Process

The three identified fundamental phases of the circular framework are: Discover Customer Needs, Design Customer Journey, and Deliver Customer Experience with each iteration between the phases. The first phase, 'Discover Customer Needs' is a fundamental process of exploration and discovery when it comes to understanding the implications and extent of customers who interact with the product or service, and the environment in which the product or service takes place. This phase corresponds to the initial contact with a particular brand or company and its products or services among potential customers. Most importantly, this phase is concerned with collecting and analyzing customer data to understand the type of customers, their behaviour and characteristics the brand or company is interacting with. The focus could be relevant in, for example, understanding who the customers are, what they are going through in life, what they are looking for, what they expect from experiences, how they are feeling and so forth.

In the second phase, 'Design Customer Journey,' the emphasis is on clearly defining various customer touchpoints and articulating why these touchpoints are particularly important to customers at various stages of the customer journey. The main concern at this phase is to understand and engage customers at the ideation and brainstorming stages, creating a hypothesis to supply a higher quality product or service and determine certain concepts in which to carry out. This enables to create a more valuable customer journey and implementation to encourage the development procedure of overall experience. During the customer journey, the customer experience and data are semantically mapped to time periods, which highlights the significance of identifying

customer pain-points, understanding changes in patterns of customer behaviour, demand and unmet needs. The key is to adopt and design better customer journey mapping insights for managing this matter, which further improves customer experience and satisfaction.

In the last phase, 'Deliver Customer Experience,' the objective is to test out prototypes and find out what worked and what needed improvement. For this phase, the end goal is to create a feedback cycle to be more inclusive, continue testing the solution to deliver innovative products, services and positive customer experiences. This is effective in lowering the risk for negative consequences such as customers' grievances, and use that feedback to understand what customers want and how best to deliver what they need.

These Circular CX Design Process tactics and its processes are integrated within the framework of a circular design, which has resulted in a spectrum of continuous, cumulative and complete cycles of creation, modification and reversion. This makes it inherently non-linear, contrary to the linear theory that are often completed sequentially. By continuously keeping the track of every step of the process in an iterative closed-loop cycles, directions, ideas, problems, and solutions would easily be repeated and revisited throughout the process. This could be a remarkably useful feature when dealing with customer experience, because it aims to approach an unbounded possibilities of outcomes, desired goals or solutions. When iterative closed-loop procedure is successfully implemented, the problems will be constantly reiterated, reprocessed, renewed and reaffirmed over the entire life cycle and come up with the best set of solutions. From a customer experience perspective, it could also help to identify and respond to customers' changing

expectations and demands by maximizing value creation of experiences and minimizing the negative effects at all touchpoints throughout customer journey. Further, it helps to enhance the customers experience by capturing and analyzing data from many sources, identifying patterns and predicting needs, and offering on-demand services.

The circular approach contrasts with the traditional linear approach. Moving toward a circular economy does not only make adjustments aimed at reducing the negative aspects of a linear, yet it is seen as a logical alternative to a linear process. In order to develop a relevant design process and find solutions surrounding customer experience, it is ideal for designers to broaden their scope on the circular design thinking and integrate these principles into their practices to be part of the customer experience design.

## 5. Conclusion

While both the theoretical and tactical framework of design process has been highly developed and dispersed, its concepts still require further refinement concerning the way the customer experience can be explained in multiple areas. The goal of this paper was to investigate and provide the most desirable model for helping facilitate the relationship among design process and the customer experience. There is a huge diversity in understanding how to successfully apply the creative, effective, efficient and research-proven methods of design process. This diversity occurs in a theoretical level, as the existing structures of design literature often do not place a strong emphasis on investigating the complexity and diversity of the customer experience. This diversity also occurs in a tactical level, as the existing characters of every customer experience



reside in innumerable causes related with unpredictable outcomes, and are even difficult to resolve. Given the indispensable role of addressing the complex and dynamic aspects of customer experience, it is necessary to drive the development of new models enabling design practices for a circular concept; in short, its methods must be analyzed and studied within the area of continuous iteration and closed-loop cycles. Currently, as the concepts and principles of the circular design have been put into practice effectively by different corporations across the changing business landscape, this paper focused and reviewed on how the circular concept places emphasis on the need for research and practice to design process in enhancing the overall customer experience, which may thus contribute to a more design reliable and sustainable process.

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