Design Research
on the Accurate Service Experience Model
for Scenarios of the New Retail

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ASTRATTO

Negli ultimi anni, i dilemmi del declino della tradizionale vendita al dettaglio e l'espansione dell'e-commerce, insieme hanno dato alla luce il nuovo modello retail "New Retail". I futuri negozi al dettaglio fisici, non hanno solo bisogno di rivoluzionare il loro sistema a livello della supply chain, in questa era economica, si dovrebbe maggiormente riflettere su come soddisfare la crescente doman-da di personalizzazione di prodotti e servizi per i clienti all'interno dei negozi, la precisione è la dire-zione di sviluppo del servizio New Retail.

Il service design come modello innovativo incentrato sulla persona è un forte strumento per rinno-vare completamente il service experience nel new retailing, tuttavia esso manca di flessibilità per adattarsi alle esigenze individuali dei differenti consumatori.

In base alla situazione sopra menzionata, questo testo propone un metodo di design del modello di service experience dettagliato per scenari di New Retail, e completare i seguenti compiti:

(1) Presentare una strategia accurata basata su un sistema di raccomandazione ottimizzato. Il sistema di raccomandazione di filtraggio è l'attuale meccanismo di raccomandazione principalmente presente sui negozi online, ma spesso ha problemi di risultati ridondanti e mancanza di innovazione, su questa base, questo testo utilizza il metodo di devianza positiva per individuare i clienti early adopter e con-duce degli studi per scoprire clienti con potenziali requisiti simili, in questo modo si ottimizza il si-stema di raccomandazione di filtraggio, ottenendo raccomandazioni più adeguate e accurate.

(2) Fornire un metodo di pianificazione per un modello accurato di service experience per lo scenario di new retail. Concentrandosi sui tre principali fattori dell'industria al dettaglio, "persone", "merci" e "settore", si utilizza una metodologia e strumenti per il service design, attraverso i tre passaggi chiave "mining delle potenziali esigenze delle differenti categorie dei clienti", "raffinare i punti chiave del processo di servizio", "stabilire scenari individuali e contesti di shopping coinvolgenti", si crea una accurata service experience, per stimolare la risposta dei clienti.

(3) Attraverso due casi pratici questo testo dimostrerà la fattibilità di usare un sistema di raccomanda-zione in negozi al dettaglio fisici, e anche un vero business case

di un negozio offline, su come im-plementare precisamente il modelli di service experience nel new retail proposto in questo testo, e la verifica del valore dell'applicazione di questo modello nello scenario di New Retail.

Riassumendo, il metodo di progettazione del modello accurato di service experience nello scenario di new retail proposto provvede una soluzione su come il service design possa rispondere in modo flessibile a fronte di esigenze più personalizzate dei clienti, riempie le lacune degli studi correlati e allo stesso tempo provvede un riferimento fattibile per il service design su come migliorare l'esperienza del consumatore nello scenario di new retail. Inoltre questa progettazione segue le tendenze del cloud computing e intelligenza artificiale, e può fornire una argomentazione e pro-spettiva per i futuri negozi senza personale umano.

Parole chiavi:

service design, new retail, economia dell'esperienza, sistema di raccomandazione, precision marketing

ABSTRACT

In recent years, a new retail formats represented by "the New Retail" has been created under the decline of traditional retail formats and the dilemma of e-commerce. Retail stores offline in the future should think more about how to meet the increasing personalized needs of customers in this era of experience economy.

As an innovation model, service design is a powerful tool for creating service experiences. However, it lacks flexibility in adapting to the different consumers' needs. Traditional recommendation method is also difficult to find the potential demands; thus, it is difficult to satisfy customers' expectations for a unique experience.

Based on the study above, this paper proposes a design method called Accurate Service Experience Model (ASEM) for scenarios of the New Retail:

(1) Propose an accurate strategy based on an optimized recommendation system. Positive deviation method is used to locate "trendy customers" and to find the potential demands that similar customers have not shown, thus, to provide customers better recommendation and more accurate service experience.

(2) Propose a design method called Accurate Service Experience Model for scenarios of the New Retail. By refining the key touch-points in service process, uncovering the potential demands of the general customers, and creating an immersive shopping environment, in order to provide an accurate service experience.

(3) Though two practical cases, demonstrated the feasibility of recommendation system in tradition retail stores, and how to practice the design strategy of Accurate Service Experience Model under a real business case.

In summary, Accurate Service Experience Model for scenarios of the New Retail provides a possibility that how service design can be more flexible when facing personalized user needs and deliver its values in the New Retail industry.

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Chapter 1: Introduction

1.1 Research Background

1.1.1 Opportunities for the Service Industry in the Era of Experience Economy

The rise of the service industry can be traced back to the 18th century. Adam Smith, the author of The Wealth of Nations, puts forward the particularity of service and defines it as non-productive labor[1]. Later, the German economist Karl Marx conducted a systematic discussion on this. In the middle and late 20th century, the industry's discussion of the service industry became active, and the boundaries between products and services became blurred. People began to believe that the difference between products and services would shrink or even disappear[2].

In fact, with the liberation and development of productivity, the framework and structure of the modern service industry have changed a lot compared with the early one. Statistician Colin Clark believes that productivity differences are an important factor in industrial restructuring, and that the future labor force will inevitably shift from manufacturing to services[3]. William Baumol, Victor Fuchs, and others have all argued that productivity growth will drive the development of the service industry[4,5].

Daniel Bell, the professor of Harvard University, divides economic development into three stages: pre-industrial society, industrial society, and post-industrial society, and the industrial society is a service-based society[4]. American futurist Alvin Toffler puts forward the idea that the product economy will gradually transform into a service economy and will eventually enter the era of experience economy[6]. The traditional product-centered innovation model will shift to a user-oriented one.

Large part of today's world economy has been occupied by the service industry, and the proportion of service industries in developed countries in Europe and America exceeds 70%, and this proportion also maintains rapid growth in China[7]. At present, China has entered the new stage of economic transformation. The opening strategy of this period is to promote an open transition focusing on service trade. President Xi Jinping proposed at the 2015 G20 summit that "focus on service industry to broaden foreign investment access field"[8], which represented an unprecedented development opportunity

in the service industry.

1.1.2 Development Dilemma of Retail Industry and the Proposal of the New Retail

After the 21st century, with the continuous outbreak of the internet dividend, e-commerce has risen rapidly. The convenience and price advantage of online retailing has brought the development dilemma to the traditional offline retail industry. Large-scale physical department stores or supermarkets have received huge impacts, and many physical retail stores continue to lose money. It has even caused many retail companies to close. In the context of the overall slowdown in China's economic growth, although some small convenience stores have grown against the trend, they cannot change the shrinking of the retail industry[9].

However, the dilemma of development has also appeared in e-commerce in recent years. Although e-commerce has many obvious advantages compared with the traditional retail industry, its own shortcomings are also factors that cause it to encounter bottlenecks. Online shopping has no way to provide a full sensory experience of products, which can only be shown through virtual channels such as pictures, texts, videos, etc., that restricts consumers' perception of products. The after-sales service efficiency of products and the proliferation of counterfeit products are also huge problems of e-commerce.

In this context, the Chinese e-commerce pioneer Alibaba Group put forward the concept of "the New Retail", which has aroused widespread concern in the society and triggered many discussions in the industry.

In such a concept, the future retail form will be based on the combination of the internet, e-commerce and physical stores. Through the deep integration of online and offline, the data of user information, commodity information and transaction information will be interconnected. With the development of technology and the popularization of smart devices, the offline retail stores in the future will realize the digital display and intelligent all-round display in the store, which can expand the time and space of the store. The author will give a detailed introduction in the next chapter.

1.1.3 The Debut of Service Design as An Innovative Model

In 1982, G. Lynn Shostack, a US service management expert, put forward the

question of "how to design a service" in "European Marketing", she attributes that "service" is the key and "design" is the tools. Since then, in 1984, she has combined "service" and "design" for the first time in the "Design for Service" published in Harvard Business Review, thus forming the theoretical prototype of service design[10].

The shift from a global economy to a service-oriented economy has pushed design into a new area, and service design thinking is an effective way to help companies transform[11]. As Uday Karmarkar puts it, research on service design methods and principles will have a huge impact on today's fast-growing service industry[12].

In the context of the rise of the service industry and the advent of the economic era, the debut of service design as an innovative model is also inevitable.

Different from the early service industry, today's service providers are faced with a larger number of user groups, and users' demands for service experience are constantly increasing, and market competition has shifted from product competition to service competition. In the field of service design, designers are exploring a service innovation method that can be followed and replicated, allowing more service providers to design experiences through a relatively standardized workflow and unified innovation.

1.2 Problem Description

1.2.1 Traditional Recommendation Mechanism is Difficult to Discover the Potential Needs of Users to Promote Consumption Upgrades

All users who live in the internet age are not familiar with the recommendation system that can be seen everywhere, whether it is the news information website we are browsing, the various apps that listen to music, or the most commonly used online shopping platform, we are getting the news, music, and merchandise that our system recommends for us.

However, when using this service, we often encounter some problems. For example, when shopping online, we will see that the system recommends products similar to those we have just purchased, and this time we obviously have no such demand of repeat purchase.

The reason for this kind of problem is related to the principle of the current recommendation system. The recommendation system is often based on the user's existing behavior data and preference data for recommendation. However, such

recommendation ideas can only predict the explicit needs of users, and the user's inner potential needs are hard to predict.

If we directly apply such an online recommendation system to the offline scene of a new retail, it is also difficult to qualitatively improve the user's service experience. Therefore, this paper hopes to explore an accurate service experience model that can closely follow the potential needs of users and make accurate recommendations.

1.2.2 Existing Service Design Methods Lack Flexibility to Meet Differentiated Needs

When technology and products have become difficult to be the barrier of market competition, meeting the user's experience needs has become a new competitive direction. In this context, user demand is also increasingly showing a personalized trend. With the diversification of consumer demand and the continuous market segmentation, many western manufacturers have tried to lower the cost of mass production through mass customization since the 1980s, and provide consumers with products that meet individual needs[13]。 For consumers, the more customizable items in a product, the higher satisfaction of individual needs, and also the higher satisfaction of consumers[14].

In the current mainstream service design work methods, it is usually based on a deep understanding of the users to be classified into several specific types of persona, and then seek a service plan that can meet the common needs of all users. In other words, the primary goal of service design is to design a general-purpose solution that is more reliable and scalable than the service plan that relies on experience-directed considerations.

However, such a design method rarely takes the different individualized needs of different customers that may occur during the actual service process into account. There is also no multi-path service solution that can adjusting according to different service scenarios.

As Zeng Ming, Chief Strategy Officer of Alibaba Group, said: Only Where there is an accurate solution, there is a future. The scenario of the New Retail must be a shopping scenario that subdivides the user's needs, there will be a large number of users in stores who have different personalities and needs.

Existing service design approach lacks flexibility in providing an accurate service experience, and there is clearly no way for a solid user journey to accommodate the

scenario of the New Retail. Therefore, this paper will discuss this situation in depth.

1.3 Goal of Research and Significance

1.3.1 Goal of Research

The research goal of this paper is to find a solution of the two problems mentioned in the previous section, and it will make academic contributions and commercial value to service design and the New Retail.

First of all, the current situation that the recommended results of the recommendation system are not ideal, the author explores an idea that can optimize and supplement the recommendation mechanism, which is used to supplement the shortcomings of the current recommendation system, and also provides a solution for the accurate experience model.

Secondly, the service design solutions generated by the current service design methods cannot meet the differentiated service requirements of different types of users. Users need to passively adapt to the services designed based on "commonness". This paper will develop an accurate service experience models that can satisfy not only the user's common needs, but also the user's individual needs.

Finally, this model focuses on the user's implementation feedback, emphasizing that the service can be adjusted in real time according to the judgment of the user when the user is in the service process, and the service design solution can be optimized and iterated according to the new user category that appears. This can complement the lack of research on service iteration in current service design.

1.3.2 Significance

1. **Theoretical Significance**
   Based on the current literature and previous research, the current research on service design pays less attention to how to meet the individual needs of users, and how the service experience is accurate and how the service design is combined with the background of the data intelligence era. This paper explores the possibility of sustainable development of service design, and fills in the research gaps in service design to meet user personality requirements and self-optimization iteration.
2. **Practical Significance**

Based on the background of Chinese retail industry, this paper proposes an accurate service experience model to provide a feasible reference for how service design can enhance user experience and create economic value in the scenarios of the New Retail.

In addition, this paper conforms to the development trend of cloud computing and artificial intelligence, providing a kind of thinking and prospect for the future intelligent unmanned stores.

1.4 Research Methods and Framework

1.4.1 Research Methods

The research in this paper is based on the route of finding problems, proposing hypotheses, establishing models, experimental verification, and drawing conclusions.

In the specific research process, this paper uses a variety of design research methods. In the part of basic research, the author uses the literature comprehensive research method to systematically sort out the research status of relevant theoretical fields, including the workflow of service design and the concept of retail format. In this part, the author also used case analysis to make the research on the New Retail concept more understandable. In the key knowledge research part, the author also uses the qualitative research method to verify the feasibility of the recommendation system in offline scene through user observation and user interview. In the experiment to verify the theory put forward by this paper, the author comprehensively used the investigation method and the experimental method to analyze, compare and summarize the theory through research, interview and test.

1.4.2 Framework

The research framework of the paper is divided into five parts: 1 Basic research, 2 Key knowledge research, 3 Proposal of the central theory, 4 Practice of the central theory, 5 the Conclusion.

1. **Basic Research**

   The background of this paper is proposed in this part, namely the rise of service industry, the debut of service design, the proposal of the New Retail and its opportunities for service design. The part leads to two key issues of this paper:

(1) Traditional recommendation system is difficult to discover the potential needs of users thus to promote consumption upgrades (which means to inspire potential consumer behavior).

(2) Current service design patterns lack the flexibility in providing accurate service experience.

Besides, this part also introducing basic concepts covered in this article like service design and the New Retail.

2. **Key Knowledge Research**

Through literature research, experimental verification and other methods, I have carried out research on the key concepts and technologies involved in the theory mentioned in this paper, namely the precise recommendation strategy.

The basic principle of the existing recommendation system is applied, as well as been supplemented by the application of the positive deviation method, thus establishing the realization idea of Accurate in the research proposition.

3. **Proposal of the Central Theory**

Based on the results of basic research and key knowledge research, this paper proposes a workflow model and method for how to design the Accurate Service Experience Model (ASEM) for offline retail stores in scenarios of the New Retail.

ASEM including pioneer customers research, key touch-points establishment, and personalized scenes creation.

This part also puts forward the key technical problems encountered in the application of ASEM, including real-time access to user feedback data, timely response to user's personalized needs, and continuous optimization of the service experience through the formation of feedback loops.

4. **Practice of the Central Theory**

The paper taking the ABS offline retail store (Chinese chain store of daily fast-moving goods) as a test site (under the help of my Chinese tutor), the application of the ASEM is applied, verified and reflected based on the experimental status quo.

5. **The Conclusion**

This part summarizes and refines the theoretical results of this paper, as well as combs and forecasts its existing limitations and future research directions.
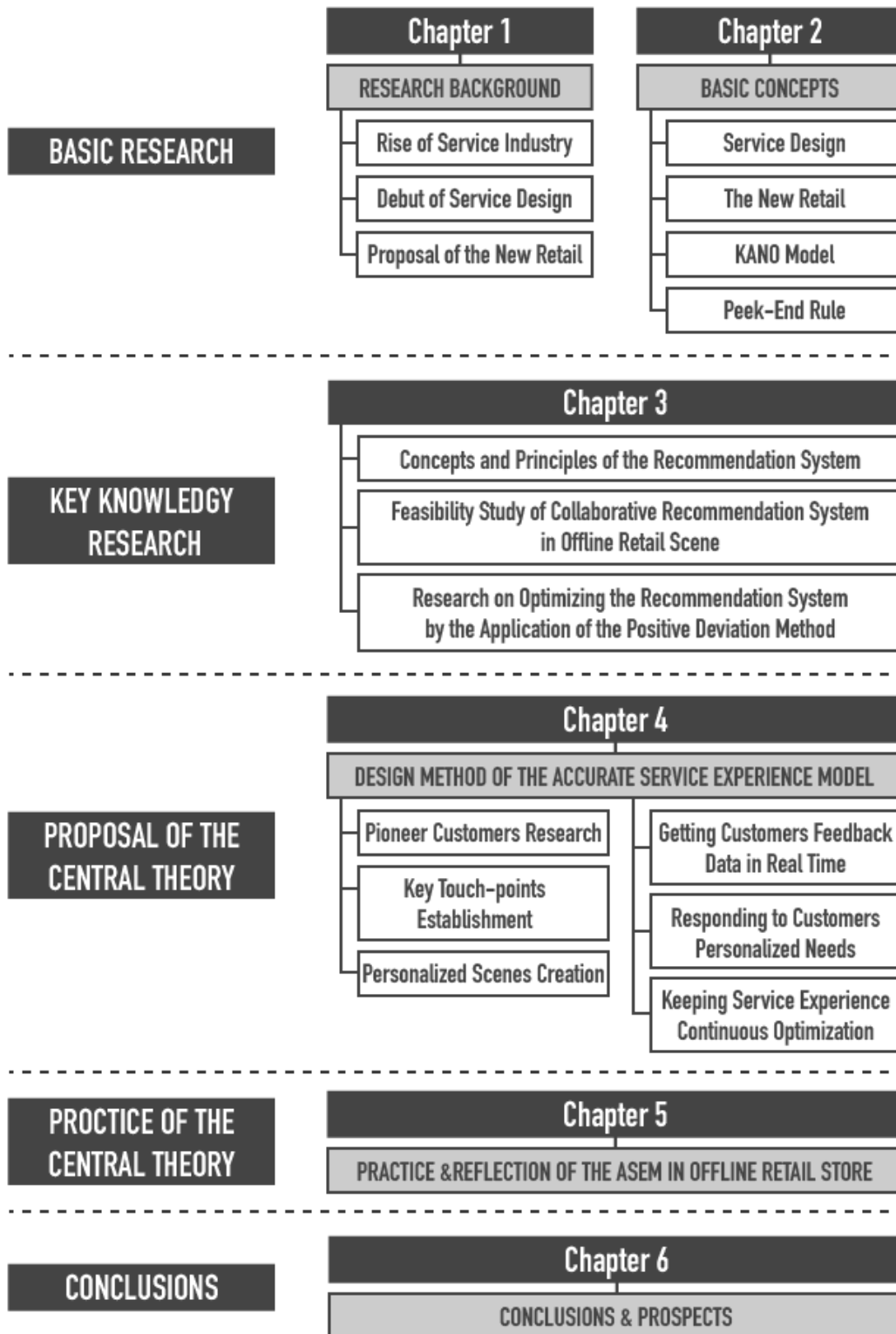
Figure 1: Research framework of the paper.

Chapter 2: Research on Related Concepts

2.1 Research on Service Design

2.1.1 Basic Concepts and Common Tools of Service Design

Lynn Shostack first proposed the design concept of combining tangible products with intangible services in 1984[11], while The term "service design" was first mentioned in the work of the Bill Hollins couple in 1991. In the same year, Dr. Michael Erlhoff of the International School of Design in Cologne, Germany, officially presented service design as a discipline[15].

The gradual rise of service design in the 1990s has had a huge impact on the fast-growing service industry and has challenged traditional innovation models[10]. Since 2000, famous design consulting companies including IDEO have incorporated service design into research and business scope, and Service Design Network (SDN) has been established among many universities in Europe.

The International Design Research Association believes that service design is to set up services from the customer's perspective[16, 17], the British National Bureau of Standards considers that service design is the stage of economically using resources to shape the services that satisfy users' reasonable and foreseeable needs[15], the Copenhagen Institute of Interaction Design believes that service design is to design a global system for users. Today, service design has not yet formed an "official definition" of universal recognition, and it is still a concept in exploration.

The author believes that service design is a holistic concept. Designers gain insights, understand user needs, and apply relevant design methodology and tools for systematic service design and planning to produce service solutions. In the experience, the user is provided with natural and comfortable services, which optimizes resource allocation and maximizes benefits in the system.

Same as the important principles of contemporary design[18], service design also follows the design philosophy of "User-Centered"[19]. Systematization is also one of the principles of service design. Service design emphasizes the design of the object as a complete ecosystem, combining interdisciplinary ideas and technologies, tangible and

intangible media.

The touch-point is the key concept in service design, which refers to the point of communication and contact in the process of the relationship between the user and the service provider. Touch-points do not have a fixed shape. On a service interface, different touch-points are distributed, which can not only be tangible, such as a label, a pen, but also be invisible, such as a greeting, a video.

The reason why touch-points are so important to the service is because touch-points provide a direct way for the service provider to communicate the core value of the service to the user. Whether in the retail, catering, logistics and other service industries, users access the service through touch-points. The user's experience and feelings about a service are also obtained through touch-points.

Service experience is continuous and is shared by all touch-points experiences in a service system. The service experience perceived by the user at each touch-point is finally superimposed, forming a user experience of the service as a whole. The (positive or negative) accidental experience of individual touch-points in a service system can also have a decisive influence on the user experience. I call this a key touch-point. Therefore, when elevating the user experience of a service, it is to find out the key touch-point s that affect the user experience, so as to locate the key pain points.

In the design process of service design, some very practical tools are often used to help innovation. Here I introduce three service design tools related to this research.

1. **Persona**

    Personas are highly summarized in terms of the characteristics and needs of target users, and are important tools for improving creative efficiency[20]. In the face of many users, it is necessary to extract common labels from them, and classify them into different types according to these labels. Each user does not exactly match any persona, but they have a commonality in the feature tags associated with service design. Therefore, persona can also be considered as the tagging of the user feature.

2. **Customer Journey Map**

    The customer journey map describes the subjective reactions and psychological feelings of the user when using the product service. The customer journey map visually presents the various aspects of the user's experience in a service process, as well as the behaviors, feelings and ideas in each specific session. In this way, we can see the user's emotion up and down in the complete journey, and can also help us to find out pain points in the service. The customer journey map shows the service

provider the needs it should meet.

3. **Service Blueprint**

    The service blueprint summarizes the service system and service processes in a global dimension. It is a visual representation of all the touch-points, it treats everyone, even inanimate characters, as a character, and interacting with each other through all the contacts[21]. In addition, service design links the entire service system from the surface to the core and how it is delivered and operated, and is linked to the user experience.

2.1.2 Two Dimensions of Service Design: Experience Design and System Design

The author believes that although service design is a holistic concept, it not only pays attention to the experience level of the user directly, but also pays attention to the system level problem directly related to the service provider (as shown in Figure 2.1). There are two dimensions of service design: experience design and system design. The problem with the accurate service experience model presented in this paper is a solution that focuses on the experience level.
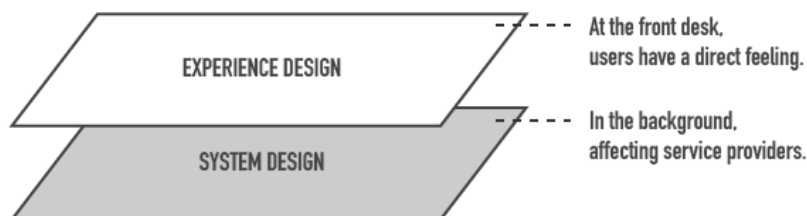
Figure 2.1: Two dimensions of service design.

1. **Experience Design**

    Although service design can't be defined only as a concept of experience level, the focus on experience is one of the core values of service design. It focuses on the user's practical experience in the service process. At this level, the logical way and working form of service design is very similar to the user experience design.

    While contemporary service design meets consumer demand, it is changing people's consumption behavior and product sales model. Professors of Cornell University psychology Travis Carter and Thomas Gilovich even found that "the shopping

experience is more enjoyable than buying a product, which can make people feel more satisfied"[22].

When judging a project that uses service design for improvement, a very straightforward measure of whether its solution is effective is whether the user experience is significantly improved. Service design can be seen as the way to enhance the experience. By establishing a user-centric service position, it pays attention to all the touch-points in the service process and ultimately leads to a better experience.

2. **System Design**

In the author's observation, it is found that the current service design is widely discussed and applied in industries that are traditionally very experience-focused, such as the internet enterprises. It is true that the method of service design can effectively improve the user experience and achieve the goal of profitability, but the function of service design to create value is more reflected in its system level.

Service design is not only a tool for designing services, but also a tool for serving services. Service design needs to focus on the interests behind the design and the business model. Service design requires building a service ecosystem, describing the service system with a service system map to emphasize the relationship of various stakeholders in the overall service system[9].

At this level, service design has certain requirements for designers to coordinate resources and promote development, and requires global awareness and business intelligence. In the New Retail, service designers need to help companies achieve higher efficiency and lower costs.

2.1.3 Common Workflow of Service Design

The creative process of service design follows the principle of co-creation, and different types of stakeholders, including users, service providers, third-party supporters, etc., are invited to join the creation. In this process, each person's different perspectives, experiences, and needs will be fully revealed, and the designer can better integrate the information to create a solution that is most resonating.

There are many workflows in service design, but they are same in basic values and concepts. In the actual application process, we often refine basic steps to form a more specific workflow. Figure 2.2 is the service design workflow commonly used by the

author. From understanding the problem to beginning to observe the research problem, and then deducing the conclusion and design direction, and making the design output, making a model that can be experienced for rapid testing. This series of processes can be repeatedly optimized to ultimately generate a solution.
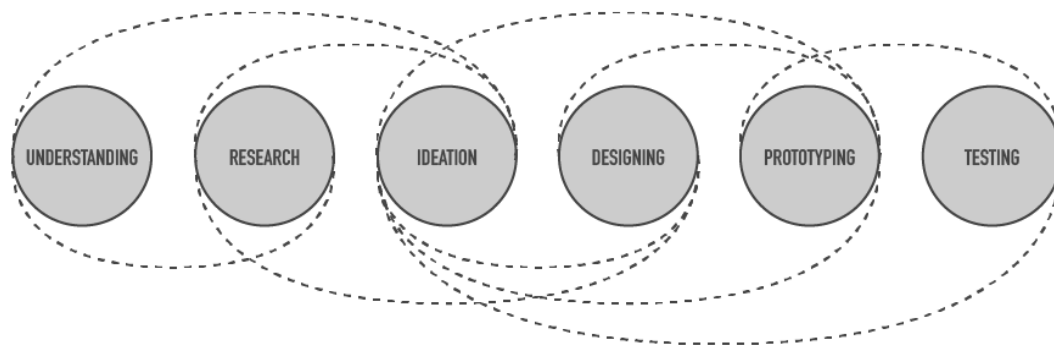
Figure 2.2: Common workflow of service design.

Another common process is the four steps of the two-drill model proposed by the British Design Society, namely Research, Insight, Ideation, and Prototype.
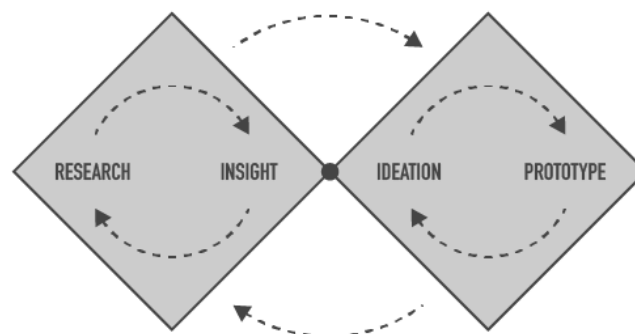
Figure 2.3: Two-drill model.

2.1.4 Reflection: How Could Service Design Adapt to More Personalized User Needs

In the current common design methods of service design, the concept of "user center" tends to focus on the common needs of users in the early stages of service design and the common creation stage. Some service designs will incorporate user feedback data in the prototype testing stage. However, service design based on commonality is difficult to meet the individual needs of users, and the user journey of

service design is often quite simple.

The service design process of Politechnico di Milano introduced by Mou Ke in his paper has a very broad representativeness, which also reflects the lack of attention to user personality needs and user feedback in the current service design academic viewpoint[23].

In addition, no matter which kind of common service design workflow, we can see that all the iterative processes mainly exist in the design process. In the follow-up of this service process model, it is difficult to see that the user feedback is reincorporated into the service system's process.

Based on the above considerations, the author believes that the current service design has deficiencies in meeting the individual needs of users. Specifically: 1 The service process is solidified after the service design is completed, and cannot reflect the personalization of the users who participating in the service. 2 The feedback mechanism at the end of the service process cannot reflect the real-time and specific feedback of the user in the service process. 3 The lack of a "feedback-optimization" mechanism of the service system to help service design to iterate.

2.2 Research on the New Retail

2.2.1 The Decline of Traditional Retail Industry and the Bottleneck of E-commerce Development

Although according to the data released by the National Bureau of Statistics of China, the total consumption of retail goods in China is increasing, the consumption demand of the nationals is increasing, and the total amount of the market is also increasing. However, it is undeniable that the growth rate of the macro economy is falling. The traditional retail industry has fallen into a downturn due to factors such as the decline in consumption and the impact of e-commerce.

In fact, since 2009, the traditional retail industry has entered the slow lane of development. Retail enterprises are faced with high costs, low returns, fierce competition, and difficult expansion. The cost of operations continues to rise, while profits and performances continue to fall. Coupled with the impact of new sales channels, the retail industry as a whole is facing tremendous pressure, and the overall slowdown in the industry has not stopped[24].

According to the author's observation and analysis, the problems existing in the traditional retail industry in China can be roughly summarized into the following three points:

1. **There are Many Retail Enterprises with Limited Scale which Can Not Enjoy the Scale Benefits**

   Many retail enterprises in China generally use direct-operated chains, which are carried out in the form of direct-investment directing stores. The biggest problem is that it relies heavily on the financial strength of the head office. However, at present, there is a lack of funds for chain retail in China, and it is difficult to obtain sufficient loan support from commercial banks[25].

2. **The Logistics Distribution Ability is Weak and the Cost is High**

   The ability to achieve fast and low-cost goods distribution service is an important part of the quality shopping experience. However, the realization of this goal needs to rely on a mature and sound logistics distribution center. However, according to the data, there is rare Chinese chain retail can truly have a distribution center with scale and efficiency. Due to the limitation of this condition, the so-called chain operation can not realize the sharing of goods, and its essence is still decentralized operation.

3. **Unbalanced Regional Development and Rural Retail Industry is Lagging Behind**

   According to the China Statistical Yearbook published by the National Bureau of Statistics of China, we can see that the number of retail stores in various regions in China in 2011(Figure 2.4) and 2015 (Figure 2.5), the overall regional development situation did not have too much volatility, still showing the city's saturated development, while the urban and rural retail development in remote areas is lagging behind. It can be foreseen that the consumption environment in the underdeveloped regions still lack significant improvement.
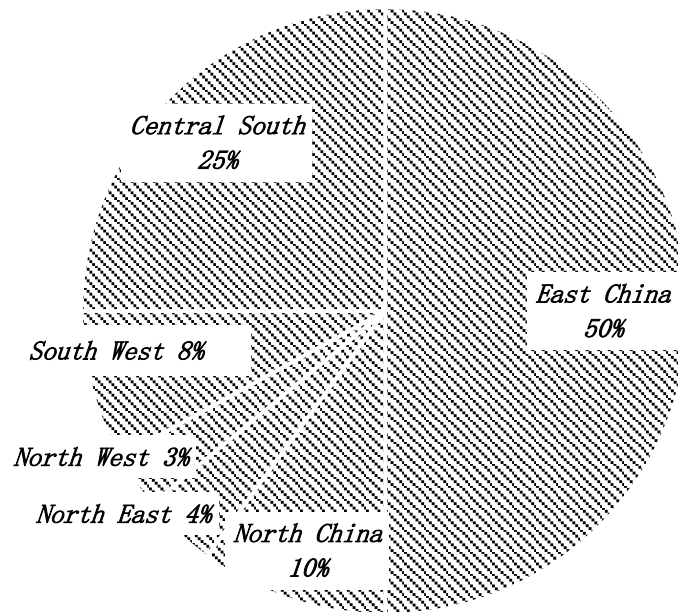
Figure 2.4: The proportion of retail stores in various regions of China in 2011 (Source: National Bureau of Statistics of China).
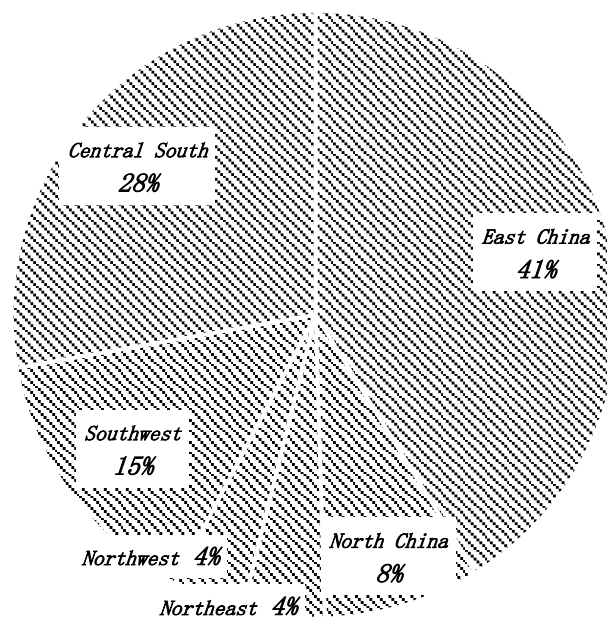
Figure 2.5: The proportion of retail stores in various regions of China in 2017 (Source: National Bureau of Statistics of China).

However, even in e-commerce has encountered difficulties in development nowadays. As of 2016, the number of online shopping users in China has reached nearly 800 million. However, according to the data released by the famous consulting company

iResearch (as shown in Figure 2.6), the growth rate of e-commerce traffic and users are slow down. It can be foreseen that the bottleneck period of e-commerce development has already occurred, at least it can be said that the traffic bottleneck period has been encountered.
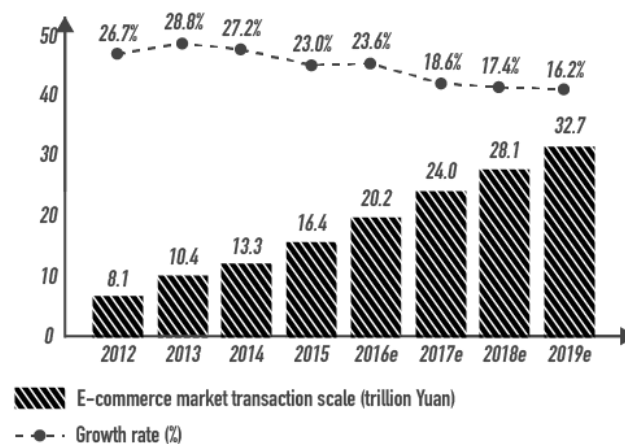
Figure 2.6: China's e-commerce market transaction scale in 2012-2019 (Source: iResearch).

Today's e-commerce model is already changing, and changes in user demand have changed the landscape of e-commerce. Large e-commerce companies, in terms of Internet promotion costs, operating costs, and technology costs, have been difficult to maintain the multi-faceted needs and targeted needs of today's users.

According to the author's observation and analysis, it is believed that the current bottleneck in the development of e-commerce in China can be roughly summarized into the following three points:

1. **Product Homogenization Problems and Quality Problems are Prominent**

   One result of the e-commerce price war thinking orientation is that many e-commerce companies neglect the construction of product quality, brand, service, etc., especially the widespread product quality problems are destroying the trust of customers. There is a general perception that high-quality, high-priced products must be purchased offline.

2. **The Development of Logistics Needs to be Strengthened**

   This problem also restricts the development of e-commerce, the immature logistics system, the imperfect supply chain, distribution and logistics standards system, lead to the disconnection between purchasing and experiencing.

3. **The Inability to Compare with the Offline Shopping Experience**

Users can not have the full-scale, figurative perception of products when shopping online, so that all the shopping experience in traditional shopping is missing on the e-commerce platform, and it has become the pain point of online shopping.

2.2.2 The Basic Concept of the New Retail

Jack Ma, Chairman of Alibaba Group, first proposed the concept of "the New Retail" at the Ali-Yunqi Conference in October 2016. In his words, the era of pure e-commerce has passed, and the era of retail fitting personality has came. In the next ten or twenty years, there is no e-commerce, but the New Retail. In the future, offline and online retail will be deeply integrated. Service providers will based on emerging technologies such as big data and cloud computing to form the future of the New Retail[26].

The term "New Retail" is a new type of retail format that distinguishes it from traditional retail. There are many opinions on the meaning of new retail.

Huang Yuanpu, founder of Yiou, believes that the New Retail can be a retail form that strives to integrate online and offline. Through the collection of customer demand, the production of products can be adapted to customer needs, thereby achieving produce the service to customers[27].

Jiang Yaping and Ren Xiaoyun interpret this as: through the Internet to integrate online and offline, re-architect the mode of offline stores and online e-commerce, thus to create a new retail form[28].

Du Ruiyun and Jiang Wei believe that the goal of the New Retail is to achieve full integration of online and offline, to achieve commercial upgrades of offline stores and online e-commerce, and to achieve a transformation to value consumption[29].

There is also literature says that the core of the New Retail is the full-link data access of consumer-centric payment, warehouse allocation, freight, inventory adn service. Thus to provide a complete service experience to all target customers online and offline., meet the full range of needs of customers at anytime, anywhere[30].

The Office of the State Council of China pointed out the direction for the development of the New Retail from the overall requirements, adjusting the business structure, innovative development methods, promoting cross-border integration, optimizing the development environment, and strengthening policy support[31].

Zhang Yong, CEO of Alibaba Group, pointed out that the sign of moving towards the New Retail is to reconstruct the commercial elements of people, goods and scene. In

Alibaba New Retail Research Report released in 2017, the New Retail is described as a "consumer-centric data-driven pan-retail approach", the basic task of which is to build completely different business model. Through heart-oriented, revolving around the consumer demand, rebuilding the people, goods, place and realizing "taking the consumer experience as the center"[32].

In my opinion, the new retail is not only a simple combination of online, offline and logistics, but also emphasizes the use of technologies such as big data, cloud computing, AI, etc. All data is recorded and online. Around us, such as Alibaba's Hema, Yonghui's Super Species and Jingdong's 7Freash, these typical pioneers of new retail are using their exploration to sketch a specific picture of the New Retail.

2.2.3 Outlook: The Development Direction and Opportunities for the New Retail

From the perspective of system in the New Retail, we can see three different development directions, which can be distinguished through the combination of online retail channels and offline traditional retail channels.

Form 2.1 Three development direction of the New Retail[33].

Type	Retail Function	Targeted Market	Products Strategy	Marketing Strategy
Independent of each other	All / independent	Different	Different	Different
Complement each other	All / collaboration	Different	Same	Same price for same goods
Fusion with each other	Division of labor / collaboration	Same	Same	Completely unified

From the perspective of experience in the New Retail, we can more intuitively see the direction and opportunities for the future development of new retail. In the traditional commodity economy era, retail marketing is product-centric, and with the liberation and development of productivity, the homogenization of products and services is serious. Toffler believes that future producers will be the people who create the experience, and experience manufacturers will become one of the basic pillars of the economy [6].

As a carrier of experience, offline retail stores have an innate advantage in online

experience that online retailers cannot match, and this is an important factor that forces e-commerce to transform. Compared to online retailing, offline physical retail stores have several advantages and are also opportunities for the New Retail.

1. Immediacy

    In the process of online shopping, there is a logistics link between ordering goods and getting goods, which requires customers to delay the satisfaction of shopping and pay a certain time cost. In the offline retail scene, there is generally no such problem, purchase and enjoyment is coherent and has a stronger psychological satisfaction and pleasure.

2. Differences

    The individualized demand that customers are suppressed is fully released is the proper meaning of the experience. Meeting individual needs requires service providers to provide differentiated services. The offline consumption experience is influenced by many factors such as geographical location, interior design, and service personnel quality, and different customers will also have different consumption experiences.

3. Participation

    In the offline retail scenario, customers can participate more fully in each shopping segment. In fact, the current user experience is shifting from traditional functional experience and brand value to experiential and participatory.

4. Full Sense

    In the online shopping process, customers can't have the experience of traditional shopping, and the perception of the body is the most simple and basic experience. In the online retail scene, customers can also fully mobilize the five senses of the body and deeper into the shopping scene.

    In the era of the New Retail, the industry needs to give more play to the experience advantages of offline retail stores, take service as the stage, goods as props to integrate customers, and through the reality-based scenes, to create a five-feeling experience and opinion recognition for customers. Thus to atract customers' attention, guide and change consumer behavior.

2.3 Research on Other Related Concepts

2.3.1 Basic Concepts and Tools of KANO Model

The KANO model was developed in 1984 by the professor of Tokyo University of Technology Noriaki Kano to classify and prioritize user needs. This tool is based on the relationship between different needs and user satisfaction, showing a non-linear relationship between different needs and user satisfaction. The KANO model divides the requirements of a product or service into three levels, namely the Must-be Requirements, the One-dimensional Requirements, and the Attractive Requirements. Correspondingly, user needs are also divided into three levels, namely the Basic Needs, the Desired Needs, and the Delighted Needs[34].

The KANO model divides the quality characteristics of product services into Basic Quality, Performance Quality, Excitement Quality, Indifferent Quality and Reverse Quality[35], and lead to the Two-dimensional Model of Satisfaction.

Figure 2.7: Two-dimensional Model of Satisfaction.

1. Five User Demand Characteristics under KANO Model

Basic Quality is the basic requirements that users expect from a product or service, which is considered to be a natural and indispensable requirement. When the product or service can't meet the user's needs, the user will be very dissatisfied. However, when the demand is met, even exceeds the user's expectations, the user will not show more good feelings, just satisfied.

Performance Quality refers to the requirement that user satisfaction is positively related to the satisfaction of demand. When such requirements are met, user satisfaction will increase significantly, and the more exceed the expectations, the more satisfied the user is. The opposite is still true.

Excitement Quality refers to demand that exceeds the user's expectations and is unexpected to the user. When such demand is met, user satisfaction will rise sharply, and even if it is not perfect, user satisfaction will be considerable. And when such demand is not met, the user will not show obvious dissatisfaction.

Indifferent Quality is what have no impact on the user experience, whether or not they are provided. This is also the situation that needs to be avoided, because the cost of investing in these requirements is out of place for the user's needs, and it is also a kind of unnecessary loss.

Reverse Quality refers to the demand that will cause user dissatisfaction after being provided. This is another version of the Indifferent Quality, and it has the opposite effect and needs.

2. **Tools of KANO Model**

The satisfaction questionnaire is a method of finding customer satisfaction when a product or service provides or does not provide a certain functional characteristic. In this questionnaire, each functional feature is divided into two questions, forward and reverse, thereby distinguishing the needs of different types of users. All answers have five levels of options.

Form 2.2: The satisfaction questionnaire.

New function/service：XXXXXXXX				
If we provide this service, how do you feel?				
□ Very happy	□ Happy	□ Do not care	□ Unhappy	□ Very unhappy
If we do not provide this service, how do you feel?				
□ Very happy	□ Happy	□ Do not care	□ Unhappy	□ Very unhappy

The demand classification table is a method of classifying user needs based on the satisfaction questionnaire. For a certain feature, and comparing the user's answers to the forward and reverse questions, you can know which type of demand in the KANO model it is[36].

Form 2.3: The demand classification table.

New function/service：XXXXXXXX		If we do not provide it				
		Very happy	Happy	Do not care	Unhappy	Very unhappy
If we provide it	Very happy	/	E	E	E	P
	Happy	R	I	I	I	B

Do not care	*R*	*I*	*I*	*I*	*B*
Unhappy	*R*	*I*	*I*	*I*	*B*
Very unhappy	*R*	*R*	*R*	*R*	*/*

B: Basic Quality, P: Performance Quality, E: Excitement Quality, I: Indifferent Quality, R: Reverse Quality

The demand qualitative table refers to the final classification of each functional characteristic based on the data given by all users in the survey at the end of the survey. Specifically, all users are classified into functional categories, and the frequency of each requirement is calculated. The highest is the final demand classification.

Form 2.4: The demand qualitative table.

New function/service: XXXXXXXX				
B	*P*	*E*	*I*	*R*
25%	39%	22%	11%	6%

B: Basic Quality, P: Performance Quality, E: Excitement Quality, I: Indifferent Quality, R: Reverse Quality

2.3.2 Basic Concepts of the Peak-End Rule

According to psychologist and Nobel laureate Daniel Kahneman, the retrospective evaluation of a previous experience is by constructing a representative moment picture, that is, "the snapshot"[37].

In a retrospective evaluation of the experience, the researchers passed a good or bad film (Fridrickson & Kahneman, 1993), icy water (Kahneman, Fridrickson, Schreiber & Redelmeier, 1993), irritating noise (Schreiber & Kahneman, 2000) to stimulate the senses, using the emotional scale to continuously record real-time experience feedback during this time, and finally reviewing the overall experience level and discovering human's feeling of an experience has certain rules[38, 39, 40, 41].

Kahneman named this law as the law of Peak-End, which means that human memory of experience is mainly determined by two factors: the peak (whether positive or negative) and the feeling at the end. This is based on the subliminal summarization experience, that is, when we have experienced something, what we can always remember is the experience at the peak and at the end. The proportion or the length of the good and the bad experience have almost no effect on the memory. "Peak" and "End" are also

called Moment of Truth (MOT)[42].
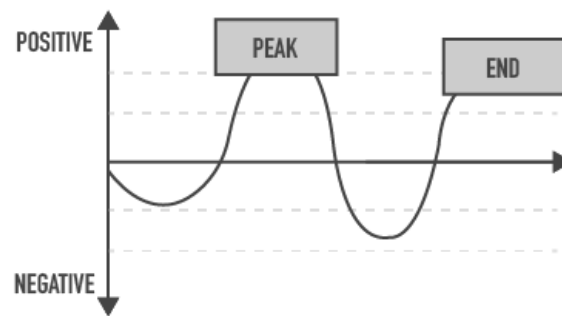
Figure 2.8: Peak-end Rule.

From the perspective of the service experience, this rule brings the insight in improving the user experience. After each service experience, the only thing that impresses them most is the peak and end experience.

Take the IKEA shopping experience as an example. The shopping line in the IKEA store is very long. Even customers who only need to buy one item often need to go the full route. The goods in the IKEA store need to be taken by the customer, few salespersons will take the initiative to help. But this does not affect the popularity of IKEA stores. One of the important reasons behind this is that IKEA can accurately grasp the MOT in the customer experience process and maximize the experience on key touch-points, such as customers can lie on the sample bed at any time to experience it, and the dining area with favorable price allows customers to truly regard IKEA as a place to be consumed.

In summary, for service providers, extracting key touch-points (or MOT) in the service process and improving them can effectively improve the user experience and improve user satisfaction, and such solution is far more effective and economical than full investment.

Chapter 3: Precision Strategy Based on Optimized Recommendation System

3.1 Concepts and Principles of the Recommendation System

3.1.1 Basic Concepts of the Recommendation System

Recommender System is a concept first born in the internet field. Its intention is to help users quickly find truly useful information when facing the problem of information overload[43], and use the vast amount of data from other users to help current users get more valuable content. Today, whether e-commerce system, news system, or music recommendation system, all rely on the effective operation of the recommendation system to bring users a personalized experience.

The recommendation system has the following three key research issues[44]: First of all, the user's personality data is the basis for the recommendation system, so obtaining personalized data is the premise and primary issue for personalized recommendation. Secondly, after obtaining the user's personality data, the information should be effectively processed, the noise data is removed, and the really useful data is left. This recommendation algorithm is the core issue of the recommendation system. Finally, since the main driving force of the recommendation system is to improve the quality of recommendation, it is necessary to evaluate the recommendation results, especially from the multi-dimensionality of accuracy and satisfaction.

As shown in Figure 3.1, the recommendation system can generally consist of three main parts: data acquisition, recommendation algorithm, and result output[45]. In the general working principle, the recommendation system will form a user model library based on a large number of user personality data. When a user enters the recommendation system, the system will associate it with the user in the model library according to the personality data obtained from the current user. Though matching categories, and finding content that matches the current user's interests through a certain recommendation algorithm, and recommending[46].
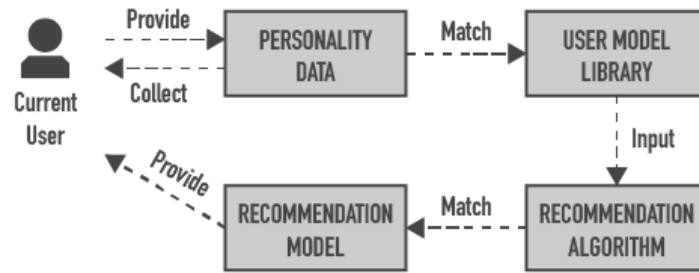
Figure 3.1: General model of recommendation system.

In addition to recommending the product to the user according to the recommendation algorithm and the user's personal interest[47], recommendation system can also find valuable potential clients from a large number of clients according to the needs of the enterprise[48]. It can provide a personalized shopping experience for customers (To C), as well as a basis for decision making and management for business (To B)[49] (Figure 3.2), and the scope of this paper focuses on the direction of recommending to users.

Figure 3.2: Two direction of recommendation system.

This idea of personalized recommendation through data accumulation and discovery of similarity[50] provides inspiration for how to achieve accurate service experience.

3.1.2 Principle of Collaborative Filtering Recommendation System

As one of the most studied and most concerned technologies in the current e-commerce recommendation strategy, the collaborative filtering recommendation system is based on a large amount of historical behavior data to infer the products users prefer.

The implementation of this recommendation mechanism generally adopts technology called Nearest Neighbor[51], including user-based and product-based. The following table shows the degree of product preference of the target user 0 and other users in the database. Target user 0 and other users have already known the goods A ~ D,

and the target use 0 has not seen goods E before.

Form 3.1: Sample of collaboratively recommended scoring database.

	Goods A	Goods B	Goods C	Goods D	Goods E
Target User 0	A_0	B_0	C_0	D_0	?
User 1	A_1	B_1	C_1	D_1	E_1
User 2	A_2	B_2	C_2	D_2	E_2
User 3	A_3	B_3	C_3	D_3	E_3
User 4	A_4	B_4	C_4	D_4	E_4

In the user-based nearest neighbor recommendation system, there are generally two steps. First, the distance between other users and the target user 0 is calculated by using the history preference information of other users, thereby determining the "nearest neighbor user" with the target user 0. Second, and then according to the nearest neighbor's weighted average of product evaluations to estimate target user's preference for goods E[52]. In this table, if it is inferred that the target user 0 has high rating for the goods E, then goods E should be recommended to target user 0.

Although this recommendation method has been successfully applied in many fields, there are certain problems on super large e-commerce platform[53]. For example, when there are a large number of nearest neighbors, it is difficult to calculate the predicted value in real time. Unlike the user-based nearest neighbor recommendation, the product-based one uses the similarity between the products for prediction, which makes it possible to preprocess in advance[54]. By comparing the scores of the goods A to D, find the "nearest neighbor product" of goods E, and the degree of preference for the goods E is estimated based on the weighted average of the product evaluation by the target user 0.

Collaborative filtering recommendation system is a very pure and direct recommendation mechanism. It is based on a large amount of user data to judge, and even does not need to be related to any data related to the product itself, the data maintenance cost is correspondingly very low. Therefore, this also reveals the obvious shortcoming of this recommendation technology, that is, in a system without a certain amount of user data, this recommendation method is difficult to use.

3.1.3 Other Common Recommendation Systems and Their Principles

In addition to the collaborative filtering recommendation system, there are also common recommendation systems including content-based recommendation system, knowledge-based recommendation systems and hybrid recommendation system. Here I briefly explain the basic principles of each system and its advantages and disadvantages.

1. Content-based Recommendation System

The principle of this system is to use the characteristics of user's preference to match the characteristics of the product. Since it does not depend on the historical data of other users, but only related to the current target user's preference characteristics and product features, it does not need to rely on a huge database of user history behaviors or opinions [53].

The key of this recommendation system is to be able to extract the characteristics of the product, that is, the word "content" in the name of this system. The features of products that the user once liked will be extracted and to be compared with the product features database to determine which products best match the user's expectations.

Form 3.2: Sample of products feature database.

	Feature 1	Feature 2	Feature 3	Feature 4	Feature 5
Goods A	A_1	B_1	C_1	D_1	E_1
Goods B	A_2	B_2	C_2	D_2	E_2
Goods C	A_3	B_3	C_3	D_3	E_3
Goods D	A_4	B_4	C_4	D_4	E_4
Goods E	A_5	B_5	C_5	D_5	E_5

It is true that content-based recommendation system can recommend accurately based on a small amount of data, but the shortcomings are also quite obvious. This is first reflected in the technical difficulty of extracting the characteristics of the goods, namely the "content". When faced with a large number of products, relying on manual judgment and acquisition is a high-cost behavior, and the feasibility is low. Another problem is that when the user's preference feature requires the user to provide feedback forwardly, the level of detail of the feedback information will be

directly related to the accuracy of the recommendation, which is a costly behavior for the user.

2. **Knowledge-based Recommendation System**

Both of the above recommended system is difficult to work with in a single purchase, lack of purchase records, and user behavior data. In addition, the purchase time of certain items is usually long ago, such as the relevant feature data left by a user when they purchased the computer many years ago. As the time span is widened, other uncertain factors also increase, such as changes in the user's psychological maturity, changes in the user's lifestyle, and changes in the user's economic situation. For this situation, a very in-depth user survey is required to clarify the user's preference characteristics and requirements (both dominant and invisible).

The knowledge-based recommendation system does not rely on individual user ratings, but in the form of similarities between user needs and products, or based on explicit recommendation rules[53]. One way to do this is to ask the user directly about the requirements for the product, such as color, price, size, etc., but this method relies heavily on the user's deep understanding of the product's characteristics (especially when it comes to professional parameters), which is hard   for users to tell what they want for the goods. Therefore, in order to understand the user more deeply, it is necessary to take into account the user's personality characteristics and preference characteristics, and combine the characteristics of the product to design an interactive survey plan for different users[55], and this strong interactivity is also the reason for we call it the conversational system[56].
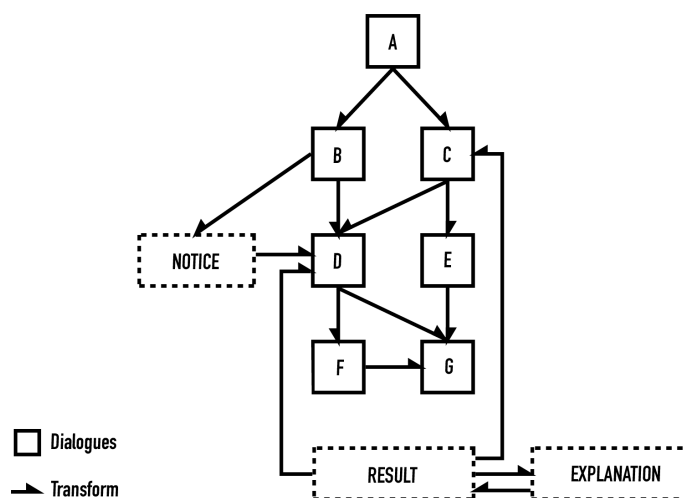
Figure 3.3: Process of knowledge-based recommendation system.

3. Hybrid Recommendation System

The above-mentioned mainstream recommendation systems use different user data, feature information, and basic logic used in the recommendation. So they have their own advantages and disadvantages in different application fields. In the actual application, there is no recommendation system that can be applied to all environments separately, but often combined by different recommendation algorithms to complement each other. The hybrid recommendation system is to combine the various recommendation algorithms to develop advantages and avoid weaknesses, so as to achieve the optimal recommendation effect.

Form 3.3 compares the differences in the data required by the above recommendation systems. The user record refers to the personal characteristic data and behavior data recorded by the current user when the online operation occurs. The group data refers to all user characteristic data and behavior data in the system. The large data groups assembled, the product features refer to the feature data marked by different commodities, and the knowledge model is the recommended rule required for the tailor-made knowledge-based recommendation system.

Form 3.3: Data required for different recommendation systems[53].

	User Records	Group Data	Product Features	Knowledge Models
Collaborative Filtering	Yes	Yes	No	No
Content-based	Yes	No	Yes	No
Knowledge-based	Yes	No	Yes	Yes

Figure 3.4 shows visually that under the hybrid recommendation system, the system can obtain a list of recommended items based on the actual user records, group data, product features or knowledge models. The highest score is what we should recommend to users.

Figure 3.4 How the hybrid recommendation system works [53].

The hybrid application of different recommendation systems are separated into monolithic design, parallel design and pipelined design, but it has little to do with the recommended system to be applied in the next chapter of this paper, so it will not be elaborated.

3.2 Feasibility Study of Collaborative Recommendation System Applied in Offline Retail Scene: Taking IKEA as an Example

3.2.1 Research Background and Purpose

In the above, the author introduces the recommendation system that is currently being studied and paid attention to. However, this accurate strategy is generally limited to the traditional online scene, but in fact, with the rapid development of the mobile Internet after entering the 21st century, people It is already possible to interact with information in a wider range of time and space, and in the Ubiquitous environment it is also necessary to explore the application of the recommendation system.

This topic is based on the precise service experience model proposed in the new retail scenario. It is a scenario based on offline. Therefore, it is necessary to discuss whether there is a possibility of recommending system application in the online retail scene, or online scene can be the principle of the recommendation mechanism that works is still valid in the offline scenario.

Based on the above research purposes, the author selects online retail scenarios to conduct related research. Because I need to find the user's law as much as possible in a short time, and I hope that the user can show their thoughts and motivations when

shopping as much as possible, I chose the IKEA store (Xuhui store) in Shanghai as the research. site. This IKEA retail store opened in Shanghai has a considerable customer flow even on weekdays. At the same time, IKEA's open and experiential shopping environment allows more customers to experience products in the store. Friends around me discuss the views on furniture.

Therefore, through the observation of IKEA customers, not only can obtain enough user data, but also insight into the psychological activities of these customers when purchasing goods.

3.2.2 Research Strategy and Method

The online recommendation system, especially the operation principle of the collaborative filtering recommendation system, is based on observations and research data of other users to predict possible interest points of the current user similar to the behavior, so if the principle of such recommendation mechanism is assumed to be online The following scenarios are still valid, so there should be several types of users with similar behaviors in the IKEA customer group. The most important goal of this research is to discover the existence of these users, thus confirming the existence of the regular characteristics.

Since the IKEA store has a very large floor space, the author selected some of the areas for user tracking observation, and as close as possible to the customers, observing their behavior and listening to their conversations without disturbing the customers' normal shopping.

The research is divided into two steps guided by the goal. The first step is the field investigation and regular research, that is, observing and summarizing several types of user characteristic behavior rules in IKEA; the second step is to verify the research, invite customers who meet the corresponding characteristics are invited to the mall to make purchases to verify the validity of the rules.

As shown in Figure 3.5, the first step is divided into three phases. The first stage is to observe the behavior journey of the customer's shopping, the motivation and thinking of the customer's shopping and the personal characteristics of the customer through silent user observation. The second stage is when it's unable to observe the customer's behavior through silent observation, it is necessary to conduct interrupted user interviews after the customer completes the shopping, so as to obtain the required data. The third

stage is to summarize and analyze the data after collecting the first and second stages, so as to find out the customers' behavior and motivation rules in offline shopping process.

Figure 3.5: Three phases of step one.

In order to prevent deviating from the key goals during the research, the author took the following three questions to observe and made detailed records:

1. **Which products have these customers observed? In which areas do they have a stay?**

2. **Why do these customers pay special attention to these products? What is their psychological activity?**

3. **Who are these customers? What are their characteristics?**

Through this phase of research, it is expected that personas and their behavior rules as shown in Figure 3.6 will be produced.
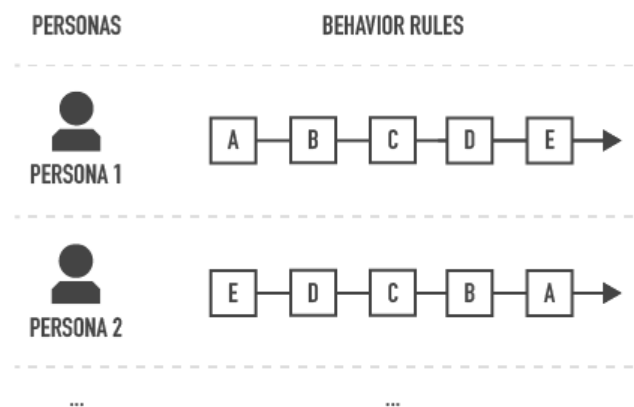
Figure 3.6: Personas and behavior rules.

As shown in Figure 3.7, the second step is divided into three phases. The first stage is to invite customers who have met the user portraits summarized in Step 1 to participate in the precise research, to observe and in-depth interviews of these customers' shopping behaviors, and to understand their real psychological activities; the second stage is to observe the actual shopping of customers. Behavior and steps are

compared with a behavioral law to find out the validity of this law. The third stage is to combine the results of the comparison with the conclusions of precision research, find the deficiencies in the law, and improve. Repeat step two continuously to improve the rules and improve the accuracy of the forecast.

Figure 3.7: Three phases of step two.

3.2.3 Field Investigation and Rule Research

The customers selected for this study are customers who purchase or intend to purchase pillows, observe their purchases in the pillow (bedding) area, and purchases in the front and rear areas of the area.

Figure 3.8 is a schematic diagram of the user's tracking observation range in this study. This figure is based on the actual shopping space in the IKEA store and is drawn to facilitate the subsequent customer shopping line. Therefore, it has dimensions with the actual physical topographic map. The difference in proportion. The customer enters the viewing range from the kitchen supplies area and leaves the luminaire area.

Considering the variety of pillow products sold in the IKEA store, it may represent the difference in characteristics behind the purchaser. Therefore, the author summarizes these pillow products and distinguishes them with the coordinates of the two dimensions of function and price.

Considering the variety of pillow products sold in IKEA stores, it may represent the difference in characteristics behind the purchaser. Therefore, the author summarizes these pillow products (as shown in Figure 3.9) and uses the coordinates of the two dimensions of function and price. Differentiate these pillow products (as shown in Figure 3.10).
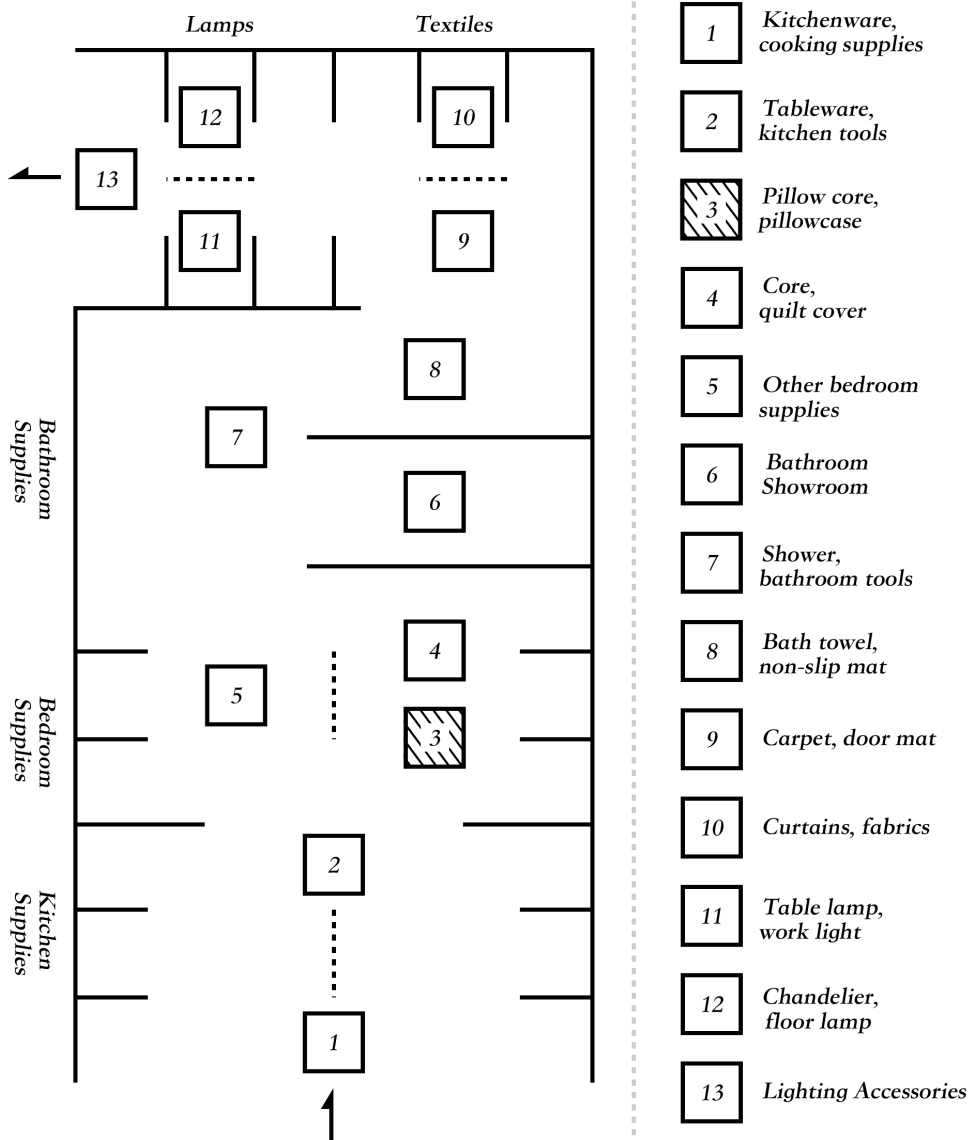
Figure 3.8: User tracking observation range.

Latex pillow
¥ 399.00

Memory sponge pillow
¥ 99.00

Memory sponge pillow
¥ 129.00

Memory sponge pillow
¥ 299.00

Memory sponge pillow
¥ 399.00

Ordinary middle pillow
¥ 11.90

Ordinary middle pillow
¥ 29.90

Ordinary middle pillow
¥ 49.00

Ordinary middle pillow
¥ 79.00

Ordinary middle pillow
¥ 99.00

Ordinary high pillow
¥ 49.00

Ordinary high pillow
¥ 59.00

Ordinary high pillow
¥ 99.00

Figure 3.9: Pillows for sale at IKEA.
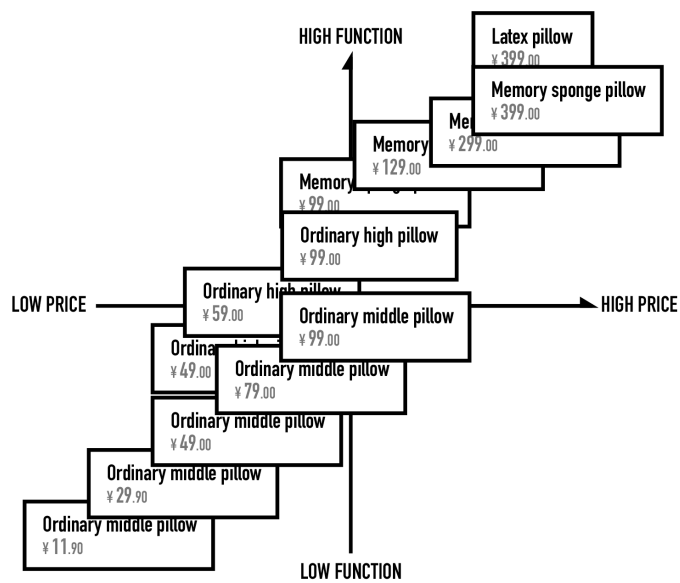
Figure 3.10: Dimension classification of pillows for sale at IKEA.

In this study, a total of 17 users were tracked and observed, including 13 effective users. The reasons for the unqualified samples were mainly due to the inability to hear the user's dialogue during the period, and it was difficult to discriminate the user's shopping purpose. Form 3.4 is a summary of the data from this field study.

Based on the experimental data, the general conclusions that can be drawn are:

1. Customers who repeatedly compare multiple pillow products/multiple prices of the same functional pillow in a certain price range often have a clear shopping purpose, and vice versa;

2. Customers who have purchased pillows/shopping behaviors and have paid attention to floor lamp/chandelier products are often users with families, and there is a high probability that there will be a need to purchase products for other members of the family;

3. Customers who purchase functional pillows and purchase bedding sets (or other product sets) are customers whose life pace is fast and are not easily affected by promotional information, and tend to favor packaged solutions;

4. Users who have purchased pillows and purchased anti-slip mats are often non-independent customers, and will consider the needs of living with cohabitants;

5. Customers who repeatedly compare the multiple prices of the same functional pillow and do not appear in the small object area of the kitchen are often concerned with the high-end customers of product quality;

6. Customers who purchase pillows and purchase small items in the kitchen are often price-sensitive customers.

Based on the general conclusions, we can classify five types of user images from these sample customers, namely single white-collar customers with fast working life, couple customers with children, couple customers who are working and cohabiting, and roommates sharing. Customers and customers who pursue quality in the business or art field.

This does not mean that this is enough to classify all IKEA customers, but that these types of customers have relatively obvious behavioral characteristics that can be summarized.

3.2.4 Verification Research

The author invited five customers who met the user's portrait to conduct regular

verification studies. The results of the comparison and the conclusions of the precise study in the study can be seen in Form 3.5.

In the study of single-collar white-collar customers with fast working life, it is found that the behavior of the user is basically consistent with the forecast; in addition to the predicted behavior, the user also looked at the kitchen gadgets, although it does not affect the prediction by other key factors. The type of user, but the need to predict the fault tolerance rate in the future; for such users can consider promoting breakthroughs in product quality and social recommendations.

In the study of young and middle-aged couple customers with children (3-16 years old), it is found that the behavior of this type of users is basically consistent; the user does not stay in the large and fixed items of bathroom supplies, but in small pieces There is a stop on the bathroom supplies, so if you want to set up the observer, you can avoid it on large items; most of the users' purchases are around children and family members; for such users, consider from a family perspective or even a child's perspective.

In the study of young couples who lived together and cohabited, it was found that there was a certain error in the behavior prediction of this type of users, but the user demand forecast was basically consistent; the user did not pay special attention to the anti-slip mat, and the previous research conclusions had certain errors; the user The purchase behavior of pillow products is in line with expectations; such users pay attention to the experience and also like to imagine. For this type of user, you can consider guiding from the perspective of building a future home environment.

In the study of young and middle-aged customers who have shared roommates, they found that they basically predicted the behavior of the users. The users basically bought or observed the predicted products; the user's purchase behavior of the pillow products was in line with expectations, and the roommates considered It is also in line with expectations; for such users, consider starting from the perspective of cost performance and peer life.

In the research on the young artists who pursue the quality of life, they found that they basically predicted the behavior of the users. The users basically bought or observed the predicted products; the user skipped the link of selecting the pillowcase because the user did not buy the pillow. Therefore, in the future detection point setting, the points with the context should not be set at the same time; for such users, we can consider starting from the cost performance and special materials, special design.

Form 3.4: Summary of field investigation data.

Customer	Shopping Goal	Point of Concern	Insights	Purchased Items	Items of Interest
Young couple	Clear	Quality	Regular bedding updates, with demand for other members of the family	¥99 ordinary middle pillow, shower	¥99 Memory foam pillow, ¥49 Ordinary pillow, ¥79 Ordinary pillow, ¥59 Ordinary high pillow, ¥99 Ordinary high pillow, pillowcase, floor lamp/chandelier, lighting accessories
4 students	Unclear	Price	Vulnerable to promotional information	¥79 ordinary middle pillow	¥99 Memory foam pillow, ¥129 memory foam pillow, ¥299 memory foam pillow, ¥29.9 ordinary middle pillow, ¥49 ordinary middle pillow, ¥99 ordinary high pillow, ¥399 latex pillow, kitchen small items, bath towel, shower curtain, etc. Anti-slip mat, table lamp
Middle-aged couple	Clear	Price	Regularly add household items and have demand for other members of the family	¥99 Memory foam pillow, non-slip mat	¥129 Memory foam pillow, ¥299 Memory foam pillow, ¥399 Latex pillow, ¥99 Ordinary pillow, bath towel, shower curtain, etc., non-slip mat, carpet, floor lamp/chandelier
Young couple	Unclear	Quality	Focus on quality of life	/	¥129 Memory foam pillow, ¥299 memory foam pillow, ¥399 memory foam pillow, ¥399 latex pillow, ¥79 ordinary middle pillow, ¥99 ordinary middle pillow, duvet cover, pillowcase, bath towel/shower curtain, carpet
Male	Clear	Price	Vulnerable to price factors	¥79 ordinary middle pillow	¥99 Memory foam pillow, ¥49 Ordinary pillow, ¥99

Customer	Shopping Goal	Point of Concern	Insights	Purchased Items	Items of Interest
student			and vulnerable to advertising		Ordinary pillow, ¥49 Ordinary high pillow, ¥59 Ordinary high pillow, pillowcase, non-slip mat
Young couple	Unclear	Price	Low income level, vulnerable to price factors	Non-slip mat	¥99 Memory foam pillow, ¥129 memory foam pillow, ¥299 memory foam pillow, ¥399 memory foam pillow, ¥11.9 ordinary middle pillow, ¥29.9 ordinary middle pillow, ¥79 ordinary high pillow, ¥399 latex pillow, kitchen small items, Bath towel/bath curtain, table lamp
2 female friends	Clear	Comprehensive	Vulnerable to the same type of people	¥99 Memory foam pillow, small kitchen items, non-slip mat	¥11.9 Ordinary pillow, ¥79 ordinary high pillow, ¥99 ordinary high pillow, ¥129 memory foam pillow, pillowcase, quilt, bed sheet, bath towel/bath curtain, table lamp
Young men	Clear	Quality	Fast pace of life, not susceptible to promotional information, like packaged solutions	¥299, memory foam pillow, quilt cover, bed cover, bed sheet, pillowcase	¥129 Memory foam pillow, ¥399 memory foam pillow, ¥399 Latex pillow, table lamp
Family of three	Unclear	Comprehensive	Have demand for other members of the family	Small kitchen items, non-slip mat	¥129 Memory foam pillow, ¥399 memory foam pillow, ¥399 latex pillow, kitchen utensils, shower, carpet, table lamp, floor lamp/chandelier
Middle-aged	Clear	Comprehensive	Have demand for other	¥99 Memory foam pillow	¥129 Memory foam pillow, ¥79 ordinary middle

Customer	Shopping Goal	Point of Concern	Insights	Purchased Items	Items of Interest
couple			members of the family		pillow, ¥99 ordinary middle pillow, quilt cover, bed sheet, pillowcase, kitchen utensils, bath towel/shower curtain, curtain, table lamp
Family of three	Unclear	Price	Vulnerable to price factors and vulnerable to advertising	/	¥99 Memory foam pillow, ¥129 memory foam pillow, ¥299 memory foam pillow, ¥399 memory foam pillow, ¥11.9 ordinary middle pillow, ¥29.9 ordinary middle pillow, ¥79 ordinary middle pillow, ¥399 latex pillow, quilt cover, kitchenware , bath towel / shower curtain, floor lamp / chandelier
Young couple	Unclear	Price	Vulnerable to price factors, vulnerable to advertising, and small in size at home	/	¥29.9 Ordinary pillow, ¥49 Ordinary pillow, ¥79 Ordinary pillow, ¥99 Ordinary pillow, ¥399 Latex pillow, pillowcase, sheets, small kitchen items, shower curtain, table lamp
Same-sex couple	Unclear	Price	Sending appointment time	¥129 Memory foam pillow, small kitchen items, non-slip mat	¥99 Memory foam pillow, ¥299 memory foam pillow, ¥29.9 ordinary middle pillow, ¥99 ordinary middle pillow, small kitchen items, bath towel/shower curtain, etc.

Form 3.5: Detailed data of verification research.

Customer Type 1： Single white-collar workers with fast pacing life		Predicted Journey	Actual Journey
Predicted Demand	**Predicted Behavioral**		
Have clear shopping goal; Favored in the packaged plan; Reasonable purchase, pursuit of quality and practicality, not susceptible to price or unexpected factors.	Will purchase / pay attention to functional high-end pillow products; Will go shopping for bedding products; Will pay attention to lighting products, especially high-end lamps.		
Customer Background	**Actual Behavior**		
Mr. Huang, 25 years old, Sichuanese; Worked in Shanghai for 2 years; Currently working in a foreign company The working life is usually faster and more stressful; Currently living alone, no contacts I have some friends in Shanghai who usually invite me to be at home.	There are some shopping activities in the tableware area, check the kettle (with sports demand) but did not buy, bought the tray (entertain friends); In the middle-up pillows, I purchased a memory foam of ¥300 (the work life is usually faster and more stressful, and I hope to improve the quality of sleep); Appreciated the chandelier in the lighting area, did not buy.		

Customer Type 2：Young and middle-aged couples with children (3-16 years old)		Predicted Journey	Actual Journey
Predicted Demand	**Predicted Behavioral**		
Have a clearer shopping goals; There are needs for other members of the family (more consideration of others); More rational when buying, will consider cost performance and practicality.	Will buy / pay attention to affordable pillow products; Will go shopping for bathroom supplies; Will pay attention to lighting products, especially floor lamps or chandeliers.		
Customer Background	**Actual Behavior**		
Mr. Su, 36 years old, from Jiangsu Province; Doctor from abroad, who has worked in Shanghai for many years; Currently working as a research and development company in a foreign company; Settled in Shanghai, there are rooms, there are also families Have a 5-year-old daughter.	Discuss with your wife about products that I have bought at IKEA and pay attention to see if there are similar products; Relatively cautious purchase (limited size at home), consider practicality first, then consider the price; When purchasing pillows, choose them in the moderately priced pillows. They are not attracted by the high-end pillows. They don't like the fixed-shaped functional pillows.		

Customer Type 3：Young couple who work and live together		Predicted Journey	Actual Journey
Predicted Demand	**Predicted Behavioral**		
Have unclear shopping goal; Vulnerable to promotional information and advertising information; The purchase will have expectations for the future and consideration of another cohabitee	Will purchase / focus on functional or ordinary mid-range pillow products; There is a high probability that a non-slip mat will be purchased; Will buy / view small kitchen items, will stay in the carpet, bathroom supplies, table lamp area, etc.		
Customer Background	**Actual Behavior**		
Miss Xu, 26 years old, from Jiangsu Province; Master of famous universities, working in Shanghai for 1 year; Boyfriend is 27 years old, Shanghai native, working in Shanghai for 4 years; Settle in Shanghai and rent a house to live together; Economic self-sufficiency, but not affluent	Girls will take the initiative to understand the supporting products; Purchased a cake grinder; When you buy a pillow, you will experience the experience of staying at the hotel; Buying pillows is willing to choose a better quality pillow, and not blindly pursue cost-effectiveness; Boys want to buy a bathroom mirror, but at the same time the girl's proposal searches online, think online has more styles, so buy online.		

Customer Type 4：Young and middle-aged people sharing roommates		Predicted Journey	Actual Journey
Predicted Demand	**Predicted Behavioral**		
Have a clearer shopping goal; Will consider the needs of roommates; Relatively sensitive to price, vulnerable to promotions and advertising information, and vulnerable to peers	Will pay attention to the middle and normal pillow products; there will be a great chance to buy non-slip mats; will pay attention to small kitchen items; will pay attention to bath towels, shower curtains, etc.; will pay attention to the table lamp		
Customer Background	**Actual Behavior**		
Miss Zhang, 32 years old, Shanghainese; Working in Shanghai, but because he lives in Fengxian, he rents a house in the city; Single, have many friends; Pursuit of cost performance, pursuing practicality, more rational.	Bought a sofa towel; I chose a soft pillow with a soft texture of ¥79 in the pillow area; I bought a new pillowcase in the bedding area; I bought a promotional anti-slip mat in the bathroom supply area; Purchased a bath towel.		

Customer Type 5：Literary youth who pursue the quality of life		Predicted Journey	Actual Journey
Predicted Demand	**Predicted Behavioral**		
No clear shopping goal; less sensitive to price, more attractive to objects with unique shapes or colors; also interested in small objects that improve the quality of life.	Will buy / pay attention to functional high-end pillow products; repeatedly compare the price of the same function pillow; will not appear in the small object area of the kitchen; carpets, chandelier areas will pay special attention.		
Customer Background	**Actual Behavior**		
Mr. Fan, 25 years old, Shandong; Graduate student in Shanghai, near graduation, internship work; Learning design, the pursuit of quality products; Carry the Kindle with you, enjoy reading, petty life.	Skip the kitchen utensils directly to see the food security clips like colorful, clips can improve the quality of life; bought a pillow, long-awaited, just cut prices; pick in the high-end pillows, fancy latex pillows, but fixed shape, So I didn't like it, didn't buy it; I bought a rolling hole sticky hair (pay attention to neat clothes); I appreciated the chandelier (hopefully I have the opportunity to buy it for decoration).		

Figure 3.11: Five invited customers in research process.

3.2.5 Conclusion

According to the results of the second step, we have optimized the user behavior rules obtained in step one, and can get the following revised conclusions:

1. For single-collar white-collar customers with fast working life, they often have clear shopping needs, favor packaged solutions, rational purchase, pursuit of quality and practicality, and are not susceptible to price or unexpected factors; Buy/pay attention to functional mid-to-high-end pillow products, may purchase bedding products, and may pay attention to lighting products, especially mid- to high-end lamps;

2. For young and middle-aged couples with children (3-16 years old), they often have more clear shopping needs and have the need to buy for other members of the family. Most of the purchases are around children and family (more consideration of others) When buying, it is more rational, and it will consider cost-effectiveness and practicability; when shopping, it will buy/pay attention to pillow products with moderate price, may purchase bathroom products, and may pay attention to lighting products, especially floor lamps or chandeliers;

3. For young couple customers who work and live together, their relationship between behavioral characteristics and user characteristics is not confirmed in this experiment;

4. For young and middle-aged customers who have roommates to share, they often have more clear shopping needs, will consider the needs of roommates, are relatively price sensitive, are susceptible to promotional information and advertising information, and are also susceptible to peers; Will buy / pay attention to the middle and low-end pillow products, a great chance will buy anti-slip mats (at least will pay attention), will pay attention to small kitchen supplies, will pay attention to bath towels, shower curtains, etc., will pay attention to the desk lamp;

5. For young artists who pursue quality of life, they often have no clear shopping needs, are less sensitive to price, are more likely to be attracted to objects with unique shapes or colors, and are interested in small objects that can improve their quality of life. In shopping, you will purchase/pay attention to functional mid-to-high-end pillow products, repeat comparisons between multiple prices of the same functional pillow, and pay special attention to the carpet and chandelier areas.

In the above research, we found that customers of similar user portraits have similarities in shopping behavior and motivation, that is, they can locate the user images described by a certain customer through behavioral characteristics, and there are behaviors that predict the customer's shopping behavior. And the possibility of motivation.

In summary, we can verify the working principle of the online recommendation system through the research in the IKEA (Shanghai Xuhui Store), that is, the same user has certain behavior rules, and the online retail scene still exists, so It has the feasibility of an offline application recommendation system.

3.3 Research on Optimizing Recommendation System by Positive Deviation Method

3.3.1 Limitation Analysis of Traditional Recommendation System

In the first section of this chapter, the author introduces the working principle, advantages and disadvantages of the current mainstream recommendation mechanism. However, in the actual application scenario, these recommendation mechanisms have certain limitations. Among all the recommendation systems, the collaborative filtering recommendation mechanism is one of the most studied and most concerned mechanisms in the current e-commerce recommendation technology. This mechanism relies on the user's historical data to settle the distance between different users, and uses the current user's weighted average of the product evaluation to predict the user's preference for a particular product. The system is based on this method. The degree of preference is the recommended recommendation for the target user.

However, the recommendation result of the collaborative filtering-based recommendation system for the user is often difficult to recommend a surprise to the user, or to the user is a recommendation result that is not needed, and even forms

interference.

The main reasons for this problem are the following three points:

1. **Data source with subjective color**

In the traditional recommendation system, the collected user feedback data usually needs to be provided by the user actively, and the user's active and conspicuous opinion expression inevitably contains emotional factors with personal bias, and thus has strong subjectivity.

2. **Behaviors that only reflect explicit needs**

The traditional recommendation system is often based on the user's current habitual behavior analysis, so as to recommend, but this way can only reflect the user's explicit awareness and needs, but it is difficult to find out the user's potential emotions and needs, it is more difficult to achieve consumption. upgrade.

3. **Lack of clustering of users**

Traditional recommendation systems usually do not distinguish between users, especially from the perspective of user value, and then adopt a differentiated recommendation strategy[54], Therefore, such an indiscriminate recommendation method that does not perform according to different characteristics of the user does not maximize the recommendation effect.

Under the effect of such a recommendation system, the user tends to harvest items that are similar to items that have been (positively) evaluated, or items that are similar to items already known to them.

If such a recommendation system is directly applied to the offline retail stores in the new retail era, it still has no problems to avoid the problems encountered in the online shopping scene, and the limitations of the online will be brought to the offline, so the shopping for the users is improved. The experience and surprise effects are still limited.

3.3.2 Concept of Positive Deviation Method and Its Effect

Deviation is usually a derogatory term in our impressions, especially in a social value that seeks to be gregarious. Deviations are often seen as heterogeneous manifestations or troublemakers who undermine the overall situation of harmony. However, the deviation is not a negative example in all cases, it also has a meaning beyond the general rules and plays a leading role. As American writers Joichi Ito and Jeff Howe point out in the book Burst: The 9 Survival Principles of the Future Society, innovation requires creativity, and

creativity needs to get rid of shackles. The rule of scientific progress is to break the rules. Positive, positive deviations can help us bundle the ultra-de-solid thinking and gain unexpected insights.

The term positive bias was first used by Richard Pascale and Jerry Sternin to describe those who are better and more successful than ordinary people in the same resources and environment.[57] After that, they deepened the concept with Monique Sternin.

In short, positive bias is used to describe the community's unusual behavior and strategies that allow them to find more than others, despite being in the same situation as others, without additional resources or knowledge. a better solution for people who are also known as positive deviation[58].

As shown in Figure 3.12, for a general community, most people show normal behavior, while a few people at both ends show negative or positive deviations.
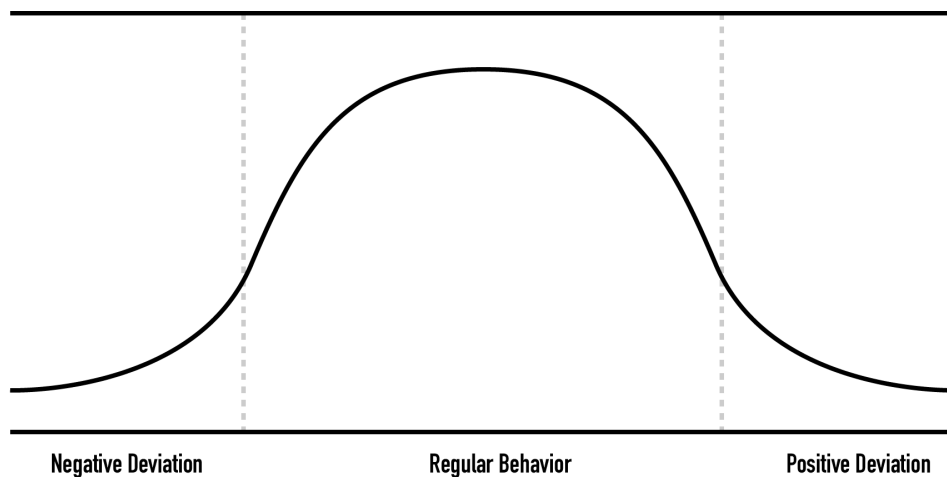
Figure 3.12: Statistics on deviation behavior.[59]

The most important positive effect of the positive bias method is that the problem solved by the individual positive biasers or the idea can be copied, applied, promoted and others[60]. Pascal and Steining believe that for companies, managers should actively seek out outstanding teams or individuals within the organization, and the success strategy that drives them forward bias can be called the owner of the company[61].

In addition to the first time, the author introduces two typical cases about the positive leading role of the positive deviation method. One is that the United Nations has used the principle of positive deviation law to correct and change the current situation of

malnutrition among children in West Bengal, India. Almost all families in West Bengal are living in poverty, and the health of local children is naturally different. However, in this community, some families have significantly better nutritional status than other children. Therefore, the strategy that the United Nations has found is to dig out the effective care and parenting styles of these families with good nutritional status, but to promote them throughout the community. Finally, through the application of the positive bias method and the intervention of other social means, the nutritional status of children in West Bengal has been improved.

The other is to use the positive bias method to prevent the spread of MRSA (a staphylococci) in hospitals in the United States. There is a senior doctor in the hospital. Because of personal good habits, there are some differences in the way of taking off gloves. The study found that when he took off his gloves in this way, he could seal the MRSA exposed to the operating environment inside the glove to prevent further spread. Since then, the hospital has spread this way, eventually reducing the infection rate of MRSA by 55%.

Through the above cases, we can all see that the positive deviation method has a positive effect on the guidance of other people, and this positive demonstration role can be used to improve the problem that the recommendation content of the current recommendation system is too dull.

3.3.3 A Recommendation System Optimized by Positive Deviation Method

As mentioned above, the basic idea of the forward bias method is to look for observable exceptions, and think that instead of narrowing the horizon to the unsuccessful routines of those inherent rules, it is better to look for those successful exceptions. Such an idea can also be used to compensate for the failure of traditional recommendation systems to recommend satisfactory, detailed results.

Taking the offline retail scenario of this article as an example, suppose that the customers who have purchased behavior for a certain product in the store are positive deviation customers, while those who are regular shopping and do not purchase the expected customers are ordinary customers, if we only follow the tradition The recommendation system principle, predicting the customer type through the customer's shopping behavior, and recommending some items that meet the customer's preferences but are expected to be difficult to really promote their consumption

conversion. And if we compare the unique habits and desires of the customers with the positive deviations of these ordinary customers to the ordinary customers and add marketing incentives, it may ignite the desire of ordinary customers, make them expect and immediately have the same life. Habits and supporting goods.

Form 3.6: Scoring database of collaborative recommendation system.

	Product A	Product B	Product C	Product D	Product E	ADs
Target Customer	1	3	1	4	1	?
Customer 1	1	4	1	5	1	I
Customer 2	2	2	5	1	1	II
Customer 3	4	1	1	1	1	III

In form 3.6, the author takes the assumption of accurate recommendation to the customer as an example. The number represents the score data left by the customer at each commodity (or contact), with 1 being the lowest satisfaction and 5 being the highest satisfaction. At present, the system has historical data of customer portraits 1, 2, and 3, and three types of advertisements for I, II, and III are designed for these three types of customers. At this point, the target customer enters the store and also leaves rating data at the merchandise (or contacts) A-E. The recommendation system needs to judge which type of advertisement to show to the target customer based on these ratings.

According to the nearest neighbor collaborative recommendation algorithm, we can know that customer 1 is the nearest neighbor to the target customer, and they have similar behaviors and preferences, so it is reasonable to present the advertisement I presented to customer 1 to the target customer.

However, according to the analysis of the limitations of the recommendation system in the foregoing, since the target customer and the customer 1 are similar users, their living habits and preferences are similar, although the advertisement I meets the target customer's expectations, but it is difficult for him to have a surprise when viewing the advertisement. It is also difficult to stimulate the intrinsic desire to buy.

According to the concept of the positive deviation method, we should strive to find a positive deviation customer who is similar to the living habits and preferences, but has

individual key differences.

Form 3.7: Scoring database of collaborative recommendation system with positive deviation customers.

	Product A	Product B	Product C	Product D	Product E	New Product	ADS
Target Customer	1	3	1	4	1	1	?
Positive Deviation Customer	1	5	1	5	1	5	IV
Customer 1	1	4	1	5	1	2	I
Customer 2	2	2	5	1	1	3	II
Customer 3	4	1	1	1	1	2	III

Form 3.7 assumes that there is such a positive deviation customer and incorporates its data at each commodity (or contact) into the database. According to the nearest neighbor collaborative recommendation algorithm, we can know that the positive deviation customer and customer 1 are the nearest neighbors to the target customers, and they have similar behaviors and preferences. But the difference is that for new products, both target customers and customers 1 give lower feedback, while positive deviation customers give very high ratings.

For this kind of unexpected situation, there must be some special factors or special lifestyle behind the positive deviation customer, so that he can be impressed by the advertisement IV for new products, and these special factors or special lifestyles may be The target customer does not have it at the moment.

At this time, if we show the target customer an advertisement IV suitable for the positive deviation customer instead of the advertisement I suitable for the customer 1, it is very likely to hit a point that can surprise the target customer, so that it also feels that the positive deviation can be made. The special factors or special lifestyles that customers feel excited about, stimulating the inner desire to upgrade their own lifestyle.

On the basis of the collaborative filtering recommendation mechanism, the recommendation of the positive deviation method is more likely to have better effects

than the traditional recommendation mechanism. In this case, the target customer and the positive deviation customer are not completely Different, but partly the same, so they have a common trend in the basic values and preferences; and they are not exactly the same, which makes the target customers have the possibility of moving closer and escalating to the positive bias customers. The recommendation results given are unexpected and reasonable.

If this kind of optimization recommendation based on positive deviation method is applied to the online retail scene, not only can you answer the question of how to be precise, but also how to accurately and what kind of precision the future retail scene needs. The strategy can surprise users and promote consumption upgrades.

3.4 Summary

This chapter mainly discusses the specific implementation of the concept of accuracy in Accurate Service Experience Model.

Accuracy is a concept widely used in modern marketing. It aims to establish a personalized customer communication service system based on precise positioning. This chapter explores this by studying the recommendation system that is widely used in the field of e-commerce, talks about both advantages and disadvantages of this idea, and through a practical study to explore the feasibility of this method in the offline retail scenario.

Finally, based on the relevant theory of positive deviation method, the optimization and improvement directions of the recommendation system are proposed, and then an accurate strategy based on the optimized recommendation system is obtained, which provides key technical support for the idea of Accurate Service Experience Model in scenarios of the New Retail in next chapter.

Chapter 4: Design Method of Accurate Service Experience Model (ASEM) in Scenarios of the New Retail

4.1 Concepts and Models of the Accurate Service Experience Model in Scenarios of the New Retail

4.1.1 The Concept of the Accurate Service Experience Model (ASEM)

In the famous American movie " The Grand Budapest Hotel (2014)", lobby manager Gustav said that his service experience is summarized as: What is doorman? The doorman is invisible, but the doorman will remember what the guests dislike, and can can predict what the guests need, even predicts that earlier than the guests aware themselves. The most important thing is that the doorman will be extremely careful, and they will never reveal any secrets of the guests.

Figure 4.1: Screenshot of the Movie "The Grand Budapest Hotel".[62]

This classic film line vividly depicts the strict requirements of a big hotel that is

proud of its ultimate service, and also reflects what kind of service can really impress customers and let them linger. Although the requirements for the doorman sound quite harsh, and there are certain some elements of artistic exaggeration, one fact that cannot be ignored is that in today's market environment where the experience economy is eradicated and service is an important competitive advantage, a service provider who can truly understand the needs of users and know how to serve users in a timely manner will be recognized by users and will be able to success at last.

Different from the background of the movie which is in the 1930s to 1960s, today's service providers are faced with consumers with rapid productivity and purchasing power, not only elites at the top of the social structure have the chance to experience the accurate service like private butler, but a larger consumer group is looking forward to enjoying a higher quality and accurate service. Because of this, the precise service that relies entirely on personal experience which is similar to the movie "The Grand Budapest Hotel" can not meet today's market demand, but needs a set of accurate service experience models that can be copied and executed.

In the new retail scenarios, the key to the accurate service experience model is to closely focus on the customers in the offline retail stores, in addition to providing them with a quality service experience that is suitable for the general customers, but also according to the personal characteristics and preferences of each customer, thus to provide them an accurate service experience, including targeted product recommendations and personalized scene experiences.

In online shopping process, important browsing behaviors and favorite information of users are silently recorded without any interruption, so as to provide users with a personalized browsing experience, the customer's shopping behavior and information can also be recorded and used to provide them with an accurate service experience in offline stores. Like the doorman of the Budapest Hotel which is an invisible existence, you can predict the needs of the guests without asking them to take the initiative. The goal of the accurate service experience is to find the potential needs of the customers and provide them to meet their needs in silence.

4.1.2 Opportunities of Accurate Service Experience Model Applied in Scenarios of the New Retail

President Xi of China (P.R.) said in his report that the main contradiction of Chinese

society has been transformed into the gap between the people's growing need for a better life and the imbalanced and inadequate development.[63]

This expression reflects the staged characteristics of Chinese social development. For the New Retail, its essence is to adapt to the development of the socialist society with Chinese characteristics at this stage. The New Retail solves the problems of the underdeveloped and unbalanced retail industry through new technologies, new designs, and new thinking, thus creating a more beautiful life scene and a better life experience for the people.

The New Retail is the reconstruction of three major elements of the retail industry, namely people, goods and scene. From the perspective of people, it is the consumption upgrade. Under the New Retail scene, the customer's consumption concept is more open than ever before, they will incorporate more emotional factors when they consume. From the perspective of goods, the boundary between traditional commodity consumption and service consumption has gradually disappeared. The two are more closely linked. From the perspective of scene, the operation of traditional sales channels will be transformed into the operation of life styles. Time and distance are no longer the threshold for restricting consumption.

In the New Retail, the reconstruction of people, goods and scenes runs through both the experience and system level, whether it is the consumer-oriented scene creation or the reorganization of the supply chain, there are always opportunities for service design as a design strategy. From the experience level, the human-centered design of service design thinking can be used to refine user grouping and build rich life scenarios. From a system perspective, service design as the tool of coordinating resource and restructuring structure can weaken the border of consumption.

Only when the relationships of people, goods and scenes are completely restructured can the consuming-service experience ecosystem in the New Retail scene be truly built, so that the New Retail can essentially satisfy the growing demands of customers. Focusing on the customer's individual needs and subdivided life scenes，from the perspective of consumption and service experience, to solve the problems

The demand is centered on the individual needs of customers and centered on the subdivided life scenes. From the perspective of consumption and service experience, the problems in the retail industry that are not fully developed.

4.1.3 Design Process of the Accurate Service Experience Model

Based on the theory and practice of service design and the New Retail, this paper combines the research on precision recommendation system and Positive Correlation method to propose an Accurate Service Experience Model for offline retail stores in scenarios of the New Retail.

This design method can be expressed in a three-dimensional model as shown in Figure 4.2. This model takes the three major elements of the retail industry, namely, people (customers), goods (touch-points), and scene as vertical dimensions, and the key steps are carried out in each dimension, that is, Customers Grouping: finding and researching "Trendy Customers", Touch-points Grading: combing and refining key touch-points, Scene Refactoring: building scenarios for different customers with different demands. The specific design steps and methods for these three dimensions will be elaborated in the following chapters.
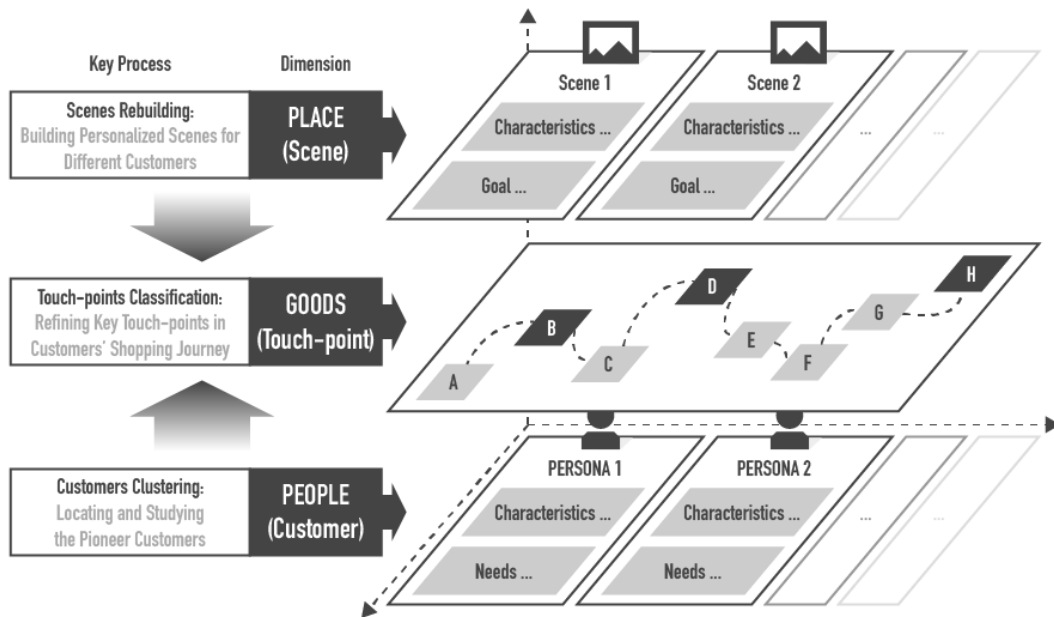
Figure 4.2: The three-dimensional model of ASEM.

Figure 4.3 shows the general working flow for this model. This process not only incorporates the general workflow of classic service design model, but also fully satisfies the customer's needs on the basis of people (customers), and considers how to continue to incorporate customer needs into the system during the operation of the program.
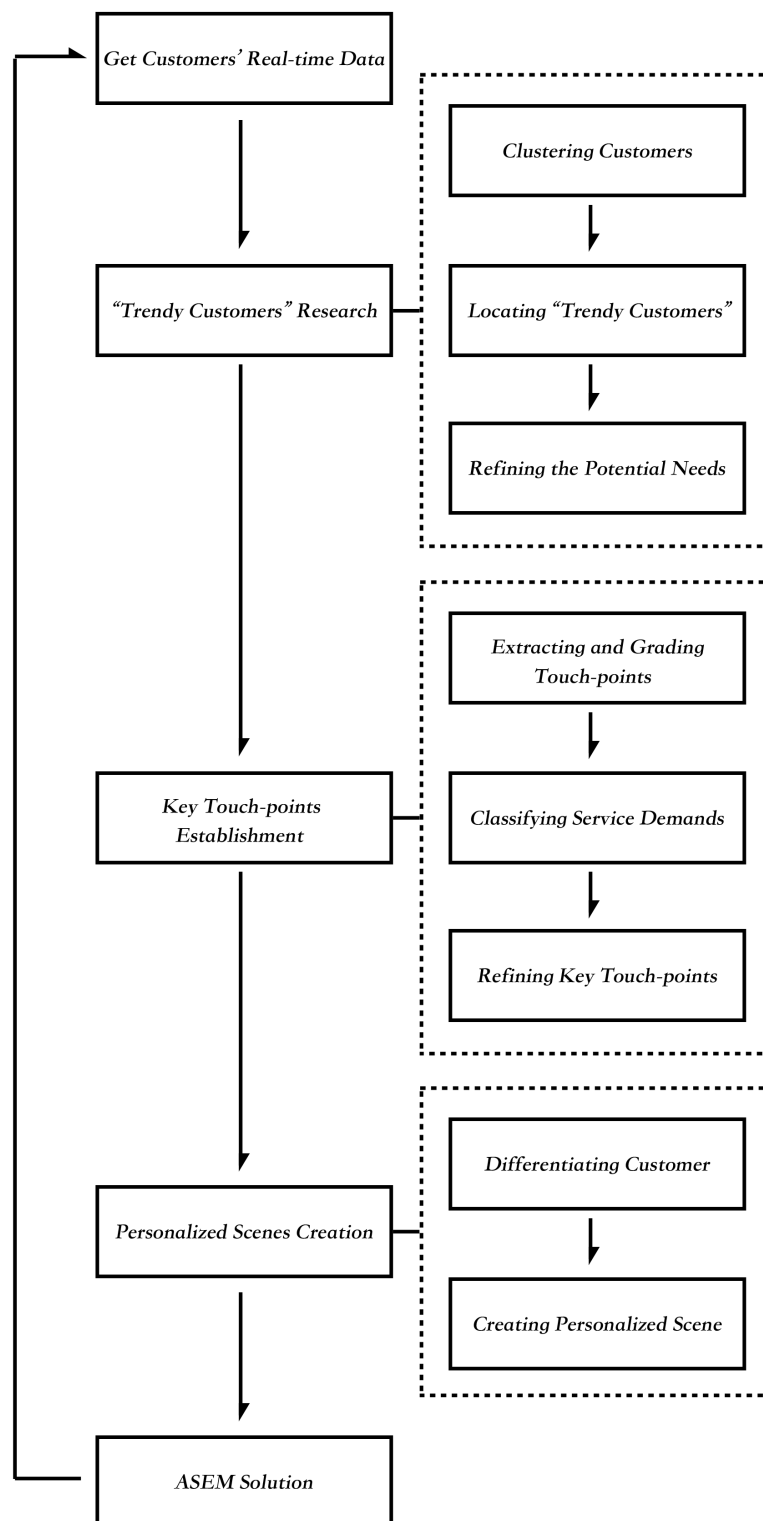
Figure 4.3: The working flow of ASEM

4.2 "Trendy Customers" Research: Exploring the Potential

Needs of Customers

In a service system, the peak of the customer's experience is often not due to the satisfaction of its basic dominant needs, but from the satisfaction of its inner potential needs. Therefore, finding and meeting the potential needs of customers is the key to achieve the ultimate service experience.

This paper proposes to find out and research the unique lifestyles and preferences of the positive deviations among customers, and to use the optimized recommendation system mentioned in the previous chapter to recommend these lifestyles and preferences to similar customers. Thus, to stimulate the inner desire and meet the potential needs of target customers.

4.2.1 Clustering Customers with Collaborative Filtering System

As author mentioned in Chapter 3.4.1 that the recommendation results provided to users under the guidance of the mainstream recommendation system are often difficult to recommend surprises, but something that users do not need, even cause interference. This is mainly because the traditional "nearest neighbor" technology can only find the explicit demand of the user, but cannot reveal the potential consumer demands. The main reason is three aspects. For the problem of subjective data source, the author will propose a solution below.

If the recommendation system is unable to distinguish the user from the perspective of user value, but simply predicts the next behavior by the user's explicit behavior, the service provider cannot provide the user with a differentiated recommendation strategy.

The basic principle of the collaborative filtering recommendation mechanism and the content-based recommendation mechanism in the recommendation system is to use the accumulated user characteristics and product features to construct a vivid persona through the behavior, evaluation and products of interest of the current user, thus to predict the preferences and personality traits that the user may have.

The collaborative filtering recommendation mechanism can also be used to cluster customers to some extent. Form 4.1 is a regular collaborative recommendation rating database, we can summarize the accumulation of different customers based on the evaluation data left by customers in the store's products or touch-points.

Form 4.1: Collaborative recommendation rating database.

	Product A	Product B	Product C	Product D	Product E	Type
Customer1	1	4	1	5	1	I
Customer2	2	2	5	1	1	II
Customer3	4	1	1	1	1	III
……	……	……	……	……	……	……

When a new customer enters into this service system, we only need to compare the evaluation data left by the current customers in store with the different evaluation data of various users in the existing database to find the nearest neighbor. Therefore, this customer can be classified into a user's portrait category and to be clustered.

4.2.2 Locating "Trendy Customers" by Positive Deviation Method

The theory of Positive Deviation Method tells us to find those who behave unusually in the same environment, by studying their behavior or strategy, and presenting these differences to other non-positive deviation customers can promote others to transform into these positive deviation customers.

In the offline environment of the New Retail, the significance of finding the positive deviation customers in the store is by studying the positive deviation customers who shop in the can help us understand what prompted them to buy. Is it related to their lifestyle and habits? Or are there any unexpected factor in the store that led to their purchases?

In the hypothesis of this paper, if we show these positive deviation customers' motivation of purchasing goods to those who behave in the similar way but did not purchase goods, it can probably stimulate their desire of chasing these unique lifestyles and habitual preferences, which is their potential needs deep inside. They can get a similar lifestyle quickly by purchasing the same products as the deviation customer do.

Because these positive deviation customers can stimulate the potential needs of ordinary customers and upgrade their lifestyles by purchasing goods that might not have been expected to be purchased, we can also analogize the communication to guide those who constitute information and influence in the group. The important source, and the minority who can influence most people's attitudes, are called opinion leaders. We can call these customers with positive deviations as pioneer customers. Their leading lifestyles and habits can lead people who are close to them to achieve leapfrogging.

upgrade.

In Chapter 3.4.3, the author uses an example to illustrate how to use the forward bias method to optimize the recommendation system, and also mentions the application of "Trendy Customer" data. The author continues to cite this example to illustrate how to distinguish between "Trendy Customers" and the characteristics that "Trendy Customer" should have.

Form 4.2: Collaborative recommendation rating database with "trendy customer".

	Product A	**Product B**	**Product C**	**Product D**	**Product E**	**New Product**
Target Customer	1	3	1	4	1	1
Customer1	1	5	1	5	1	5
Customer2	1	4	1	5	1	2
Customer3	2	2	5	1	1	3

In Form 4.2, we can see that the system records the evaluation data left by the current customers in each item or contact in the store, and the historical data of the corresponding customer types 1, 2, and 3.

First of all, according to the principle of coordinated filtering recommendation, we can know that customers 1 and 2 are the nearest neighbors of the target customers. In addition to the new products, their evaluation in behavior mode or evaluation of goods (touch-points) is similar. "A class of people, and customer 3 and the target customer "is not a passerby." Therefore, we cannot hope that the customer 3 can be called a "Trendy Customer" who guides the target customer to achieve lifestyle upgrade.

The customer 1 and the customer 2 and the target customer are very similar in the evaluation of the products A to E, the only difference is in the evaluation of the new product, and the customer 1 realizes the purchase conversion. At this time, the customer who has unusual behavior among the three customers is also the "Trendy Customer" we need to study. What we need to understand is the motivation behind the purchase of the customer 1 and his lifestyle. It is these differences that lead to buying behavior, so we need to make the target customers see and feel. The customer 2 is too close to the target customer's three views, and also gives a low evaluation of the new product. Therefore, there is no special lifestyle that needs to be displayed and conveyed to the

target customer, and it is impossible to cost the pioneer in this case. customer.

In summary, "Trendy Customers" looking for forward bias method need to have the following two characteristics:

1. Basically similar to a certain group of customers in terms of behavior, personality traits, and values;

2. The purchase of most of the products that are not expected to be purchased by customers who are not expected to buy, hides their unique lifestyle and habits.

Therefore, when developing a precise service experience strategy for offline retail stores, we need to find the pioneer customers among each type of customer classified according to customer behavior and preference data, so as to tap the potential of other general customers. Provide a reference for the needs.

4.2.3 Building Personas to Refine the Potential Needs of the General Customers

Persona is a common tool in service design. It has the characteristics of "low crossover rate". When two types of users are almost identical except for the feature tags with less weight, then these two types of users can be merged. For a user portrait. Therefore, in this way, the difference between the two types of users can be found very effectively.

When we have classified a certain number of customer groups based on relevant customer behaviors and preference data, we also found Pioneer customers in each type of customer. We can quickly compare the similar customers with the method of constructing user images. The difference between the average customer and the pioneer customer finds a clear difference between the two, thus refining the potential needs of such customers.

Figure 4.4 is the basic process of constructing persona, from the collected customer behavior data, ticket number data, evaluation data, transaction data and other data for text mining, label extraction, label clustering, etc., to obtain persona that labels the user's basic attributes (age, gender, region, occupation, etc.), behavioral characteristics, hobbies, lifestyles, psychological characteristics, purchasing power, and the like.

DATA COLLECTING	BEHAVIORAL MODELING	PERSONA BUILDING
Behavioral data, preference data, evaluation data,transaction data…	Text mining, natural language processing, clustering algorithm…	Basic attributes, behavioral characteristics, hobbies, lifestyle, psychological characteristics, purchasing power…
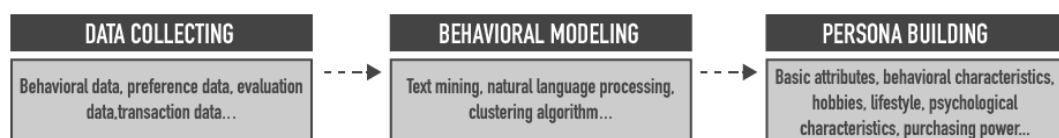
Figure 4.4: Process of building personas.

According to the definition of "Trendy Customers" in 4.3.2, the general customer and the pioneer customer are basically the same in behavior, personality traits, values, etc., so the user images of both should be on most of the tag information. Consistent, and because of the unusual purchase behavior of Pioneer customers, behind it is the embodiment of unique lifestyles and habits, so the differentiated label information will also be reflected in the user images of the two.

General Customer

Attribute 1： XXXXXXX

Attribute 2： XXXXXXX

Attribute 3： XXXXXXX

Attribute4： XXXXXXX

Habit: check for unforgetted personal belongings

Trendy Customer

Attribute 1： XXXXXXX

Attribute 2： XXXXXXX

Attribute 3： XXXXXXX

Attribute4： XXXXXXX

Habit: Look in the mirror and simply put a makeup.
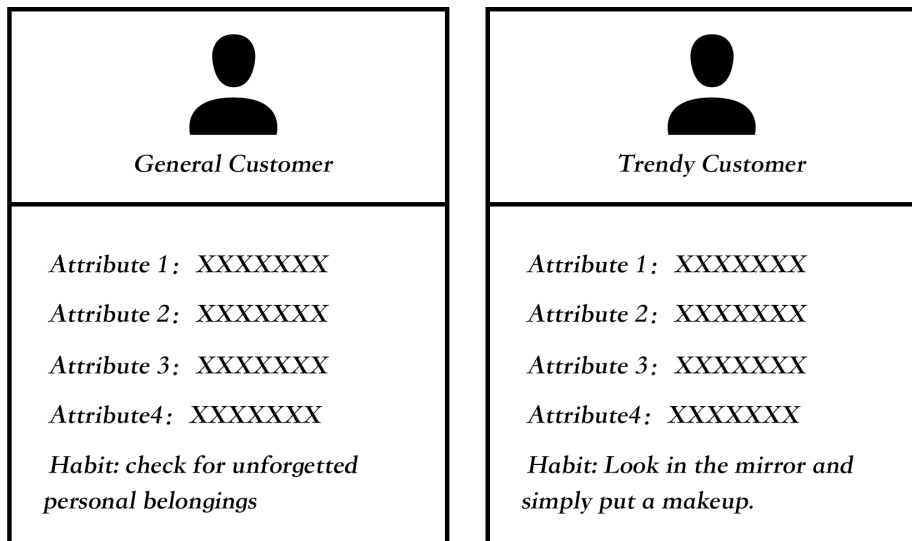
Figure 4.5: Comparison Example of Personas between General Customers and "Trendy Customers"

Figure 4.5 is an example given by the author. In a certain group of customers, we find that most of the attributes of the general customer and the "trendy customers" are roughly the same. In the habit of going out before going out, the average customer will only check whether there are any forgotten personal belongings, while "trendy customers" have the habit of paying attention to their external image. This difference may be the key point for "trendy customers" to make purchases. Therefore, we can synthesize other differences in customer characteristics and refine this difference. Potential needs, such as a refined and elegant lifestyle or a sense of care for others.

4.3 Key Touch-points Establishment: Creating Impressive Experience

In a service system, the customer's service experience comes from the experience of touch-points, so the prerequisite for improving the service experience is how to extract the touch-points that exist in a service system and find the key touch-points that affect the service experience.

This paper proposes a method for extracting all touch-points and using the satisfaction two-dimensional model of KANO to classify them. And finally positioning the key touch-points that can cause an unexpected experience through the satisfaction two-dimensional model and the peak-end rule.

4.3.1 Extracting and Grading Touch-points

In Chapter 2, the author mentions the concept of touch-points in service design, that is, when a customer enters a service process, the points of interaction he takes (including interactions between people, things and the environment) are called touch-points. The cumulative superposition of each touch-point's experience left by the customer forms the overall experience of the service. The customer's perception of the brand image and future consumption behavior are directly related to this experience. Therefore, when it comes to the issue of improving the service experience, the first task is to sort out the whole process of the service and distinguish which contacts are present in the service link.

According to the methodology of service design, for any service link in a broad sense, we can divide the process that customers experience in the three stages of pre-service, in-service and post-service, and services specific to offline retail scenarios. For the link, we can further refine it into seven phases, and then gradually refine it to extract the touch-points that exist in the service (as shown in form 4.3).

Form 4.3: Extracting touch-points in a retail store.

	Stage	Detail	Touch-point
PRE-Service	Pre-Sale	Customers understand the stage of retail stores and products (Awareness), through the network, offline advertising, friends and other channels to understand the relevant information, customers may also have the initiative to actively query relevant	Network information platform, social media, etc. Offline interactive media, print ads, etc. Landing Page ......

		information.	
	On the Way	At the stage of the customer's visit to the retail store, some new retail stores will instantly push information based on LBS (geo-based service) in the app.	App Coupons ……
IN-Service	On Location	The customer visits the goods in the retail and enjoys the stage of shopping. Most of the interactions of the customers in the store occur at this stage. It is also the best time to provide accurate services to customers. A good service experience can retain customers. Promote customer conversion to the next stage.	Commodity shelves In-store billboards In-store VI system Staffs ……
	Decision	After the customer understands the product and decides which stage to purchase or purchase, the customer generally does not show this stage to the outside world. It is a stealth stage.	Promotional information Coupons ……
	Payment	The stage of payment after the customer decides to purchase the product, the convenience of payment, and the change of the attitude of the merchant after payment will still affect the customer service experience.	Queue area Cash machine Cashier ……
POST-Service	After Sales	Customer enjoys the after-sales service (Customer Services), service providers can ensure that efficient and positive service attitude is the key to the consumption cycle at this stage.	Hotline Technical staffs Terms of Service ……
	Feedback	When the customer evaluates the service and shares the sharing experience, the	Network information platform, social

		customer may provide positive or negative feedback to the service through network or interpersonal communication.	media, etc. Friends or Families ……

From the above table, the author gives an idea of extracting the touch-points existing in the service link, that is, by continuously refining the classification granularity to find out the point at which the customer will interact. As shown in the example in Figure 4.6, when the touch-point classification maintains a coarser granularity, we can define the contacts of the payment link as "queued area", "cash area" and "invoicing area", and if If the requirements for touch-points classification are higher, further detailed contacts can be further subdivided according to the classification principle of "item/person" and "information type".
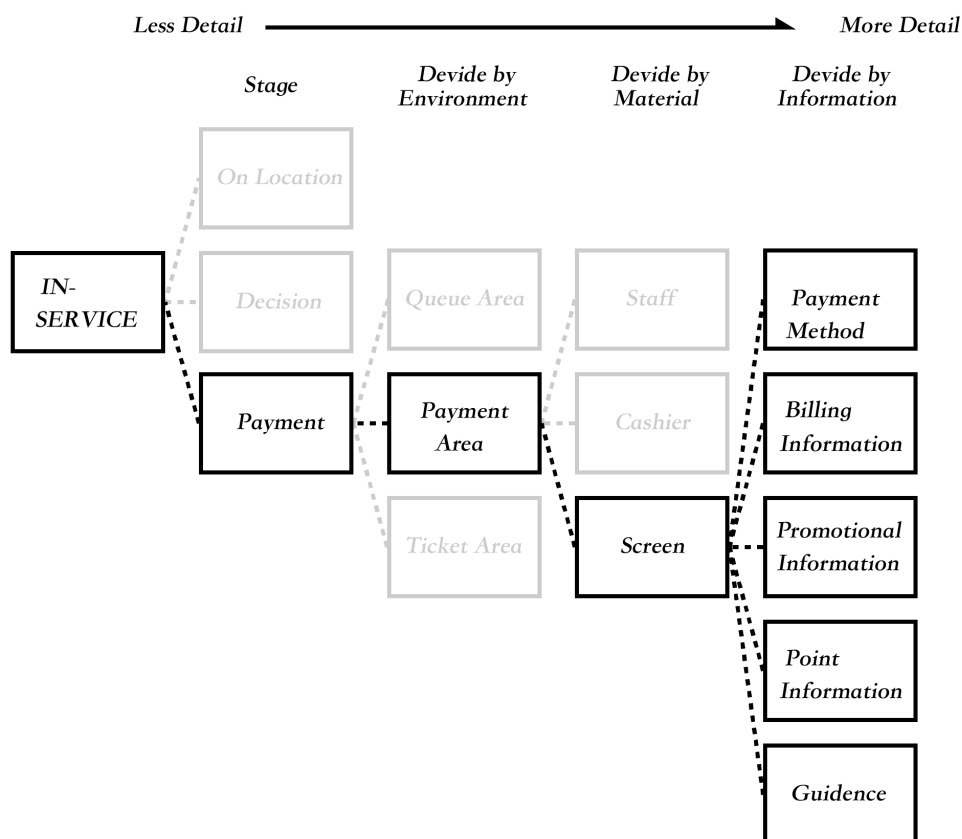

Figure 4.6: Sample of Touch-points classification

There is no fixed standard for the granularity of the touch-point classification, the classification principle, etc., and the service provider needs to weigh it according to actual needs. In general, the finer the granularity of the touch-point classification, the

more comprehensive the extraction of the service touch-points, the more multi-level touch-point scan be extracted, but the higher the cost. Balancing the experience and cost Finding the most comprehensive service touch-point is the first step in improving the service experience. Below I will explore how to find key touch-points in these contacts.

4.3.2 Classifying Service Demands behind the Touch-points by KANO Model

According to the relevant theory of the KANO model mentioned in Chapter 2.4.1, we know that customer needs can be divided into three levels: basic demand, expected demand and excitatory demand. From the satisfaction two-dimensional model, we can further Refined to five types of requirements: basic demand, expected demand, excitatory demand, non-differential demand, and reverse demand.

Touch-points are professional vocabulary in the concept of service design, and are terms that are convenient for service providers to design services, and what is represented behind the touch-points is essentially the customer's corresponding service requirements. Therefore, in the face of the many touch-points in the extracted service link, we need to first use the KANO model tool to conduct a user's questionnaire survey, and thus classify the service touch-points and the customer needs represented by them. In order to further clarify the key touch-points in the future.

Form 4.4: Offline Retail Store Demands Satisfaction Questionnaire Sample

	Stage	Touch-point	Satisfaction
PRE-Service	On the Way	Shopping Basket (Proactively provide customers with shopping baskets)	If we provide it, you would feel: □ Very Happy □ Happy □ Don't Care □ Unhappy □ Very Unhappy
			If we don't provide it, you would feel: □ Very Happy □ Happy □ Don't Care □ Unhappy □ Very Unhappy
	……	……	……
IN-Service	Payment	iPad (Invite customers to register now as a member to enjoy the offer)	If we provide it, you would feel: □ Very Happy □ Happy □ Don't Care □ Unhappy □ Very Unhappy
			If we don't provide it, you would feel: □ Very Happy □ Happy □ Don't Care □ Unhappy □ Very Unhappy

		……	……	……

Form 4.4 is an exemplary demand satisfaction questionnaire. The service touch-points that the service provider wants to study can be set in this questionnaire, and ask the customer in the form of customer demand in both positive and negative directions. The sensitivity of the demand.

In the design requirements satisfaction questionnaire, it should be noted that the classification tips in the service phase and the segmentation phase can help the customer to intuitively conceive the scenario in which the contact is located. The higher the level of touch-point refinement, the easier it is for the customer to understand. That is, the customer demand represented by a fine-grained touch-point is more intuitive and understandable than the demand represented by the coarse-grained touch-point.

After obtaining the customer's feedback data, the demand category to which the customer demand represented by each touch-point belongs can be finalized according to the form 4.5 requirement qualitative table.

Table 4.5: Offline Retail Store Demands Qualitative Form Sample

	Stage	Level A	Level B	Characterization	Proportion
Pre-Service	Payment	Queue Area	Offers Information	P (Expected Demand)	39%
			Isolation Zone	B (Basic Demand)	47%
		Checkout Counter	Display Price	B (Basic Demand)	25%
			Shelf	P (Expected Demand)	39%
			Convenient Tools	E (Dxcitatory Demand)	62%

The characterization of the secondary touch-points will provide clues for subsequent positioning of the critical touch-points from the primary touch-points, as well as provide directional guidance for subsequent key touch-points for specific design.

4.3.3 Refining Key Touch-points with KANO Satisfaction Mode and Peak-end Rule

The author mentioned in Chapter 2.4.2 that according to the law of peak end, we

know that the "peak" and "valley" in a service process can be regarded as the "critical moment" in the service experience, that is, "key touch-point". If the service provider can control these key touch-point touch-point and enhance the service experience that the user feels at these touch-points, the overall satisfaction of the user experience with the service experience can be effectively improved.

When designing a specific service, consider balancing the efficiency and touch-point granularity. Therefore, I recommend limiting the degree of touch-point subdivision to the primary touch-point when refining the key touch-point. After the key touch-points, the specific requirements of each sub-touch-point in the key touch-points are further studied.

In order to facilitate the understanding of customers in the demand satisfaction questionnaire, we present the detailed touch-points to the customers. Therefore, in the process of refining the key touch-points, we first need to process the data to obtain the corresponding level. The importance of the touch-points.

We can use the weight values of -2, -1, 0, 1, 2 to represent the reverse demand, the non-differential demand, the basic demand, the expected demand, and the excitatory demand, respectively, according to the secondary level we obtained (or The more subdivided) touch-point requirements are characterized and their specific gravity, using formula 4.1 to calculate the importance of the primary touch-point in the service link.

$$A = \frac{1}{n} \sum_{k=1}^{n} C_k \qquad (4.1)$$

In formula 4.1, A stands for the Importance, n stands for weights (-2 ~ 2), Ck stands for the Importance of no. k. After the calculation, we can get the order of importance of the touch-points as shown in form 4.6.

Form 4.6: Offline Retail Store Touch-point's Importance Ranking Sample

	Stage	Level A	Importance	Ranking
PRE-Service	On the Way	Billboard	0.5	4
		Shopping Basket	0	5
IN-Service	Payment	Shelf	1.67	1
		Cashier	1.3	2

		Queue Area	0.5	4
POST-Service	Delivery Consultation	Billboard	-0.33	6
		App	0	5
		Staff	1	3

Based on this, we can know that the key touch-point that can impress the user and affect the global service experience is that the important value is the positive contact, which is the "peak" in the peak-end law, and the larger the value, the higher the importance, the more negative the touch-point we should avoid. In addition, the "final" mentioned in the final touch-point of the service, that is, the end-of-peak law, is also a key touch-point.
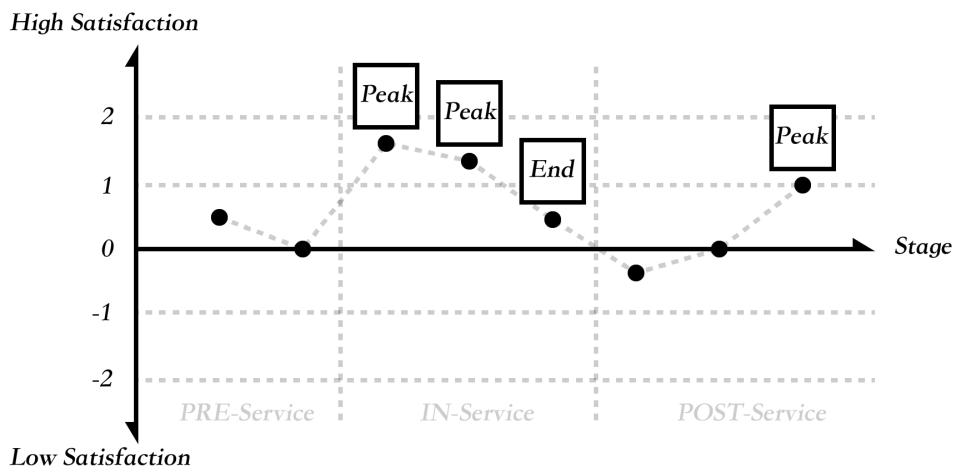
Figure 4.7: Refining key touch-points by Peak-end Rule.

For example, the importance data used in the example above is shown in Figure 4.7. Based on this, the peak-end law is used to extract all the "peak" and "final" touch-points. These touch-points are the service providers in this service process. The key touch-points deserve primary concern.

4.4 Personalized Scenes Creation: Building Immersive Shopping Context

Compared to the convenience and low cost of online consumption, today's users need more of a consumption scene, and they can deeply involved in the consumption

scene, not just a shopping portal. The competitive advantage of offline retail stores lies in the scene.

The author proposes a user behavior-motivation rule and a two-dimensional model of customer consumption by using the collaborative filtering method, thus to distinguish different types of users, so as to create a personalized scene for the appropriate time and appropriate people. And finally impressing customers' desire for consumption. Inspire customers to resonate and then make the deal.

4.4.1 Scene with Embodied Experience is the Foundation of Offline Retail Store Shopping Experience

The term scene is originally a film and television language. It refers to a certain task action or a specific life picture formed by a relationship of people in a certain time and space. Relatively speaking, it is the action and life events of the character. Staged horizontal display in the specific development process[64].

From the perspective of experience design, the scene is a real user-centered experience detail. The scene is completely based on the user. It is meaningless to discuss the scene away from the user's behavior and motivation. In offline retail stores, service providers with scenario thinking can gain a clearer insight into the real needs and feelings behind users by building a user-based scenario. The understanding of the product and the positioning of the market can be clearer. Recognize to provide a more accurate and comprehensive service (as shown in Figure 4.8).
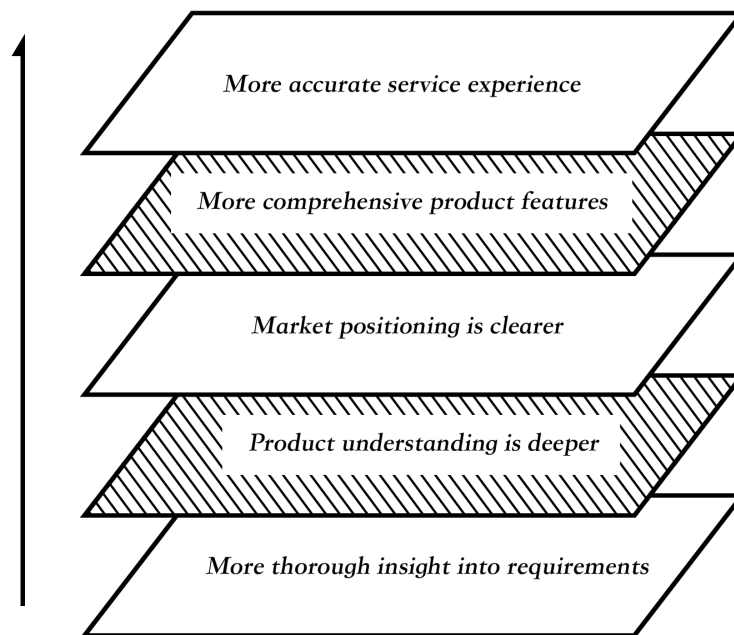
Figure 4.8: Multiple meanings of scene thinking.

In Chapter 2, the author mentioned that although the traditional retail industry has a slight decline, it still holds some advantages and some shortcomings in the development of e-commerce. In short, the online shopping transaction process shows almost no consumption. The experience, combined with the reality of scale, atmosphere and even emotional experience is the innate advantage of the physical store, but also unmatched by online retail.

When the scene thinking is applied to the marketing concept of the offline retail format, it has user orientation. Scenario marketing analyzes and classifies user data to predict the user's needs in certain scenarios, and recommends and guides them in a timely manner. In this interaction process, the brand image is strengthened and the user's demand.

Scene marketing is an online retail store with scenes as the background, products and stores as props, and service experience, which can quickly create a three-dimensional scene that integrates environment, atmosphere and place[65]. The relevant theory of embodied cognition points to the existence of cognition in the brain, the brain in the body, the body in the environment, and cognition, body and environment constitute a dynamic unity[66,] when the user presents everything in the real-life scale during the consumption process, through the all-round and three-dimensional contact of

the five senses, a kind of physical experience that is unmatched by online shopping can be obtained, thereby quickly realizing emotional resonance and inspiring purchase desire. Then the deal is reached.

In addition, compared with online shopping, the user's demand for preferential and convenient content is satisfied. The demand for the consumer scene in the online experience store is satisfied. This is not just another shopping route. It is also a consumer experience that they can have a deep sense of participation.

4.4.2 Differentiating Customer by Using Two-dimensional Model of Customer Consumption

Ito Yokado is the largest retail company in Japan and the fifth largest in the world. In recent years, it has entered the Chinese market to expand. Ito Yokado put forward the corporate values of "Faithful to our customers" and the research on customers is quite deep. They proposed a four-point method to divide the types of customers to better provide individualized needs for different customers (as shown in Figure 4.9).
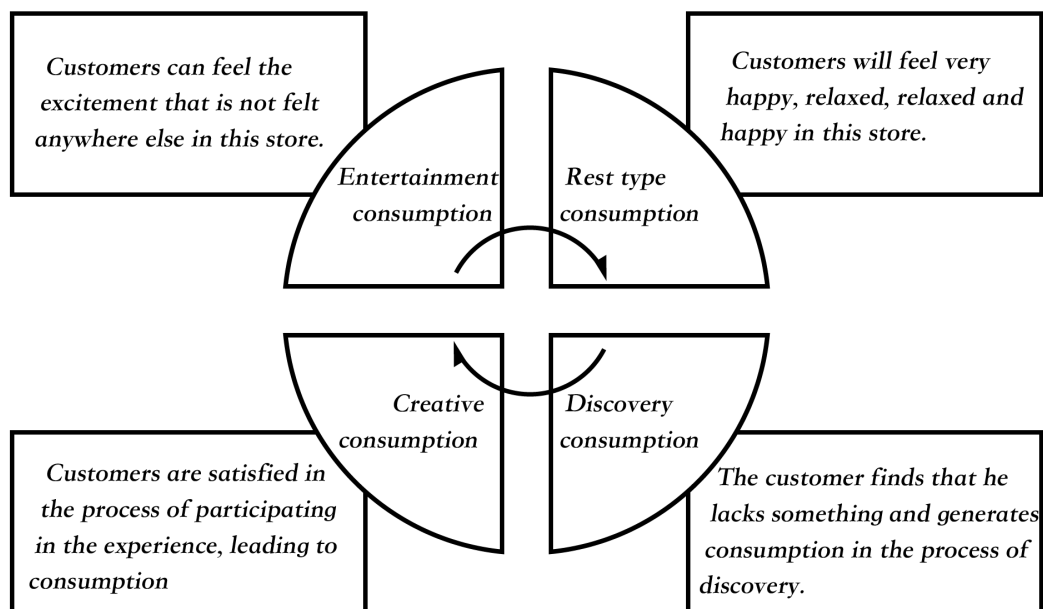
Figure 4.9: Four types of customer consumption.

Similar to the purpose of this classified user, this paper proposes a more lightweight, user "behavior-motivation" rule based on the collaborative filtering method, and uses the customer consumption two-dimensional model to distinguish the user type.
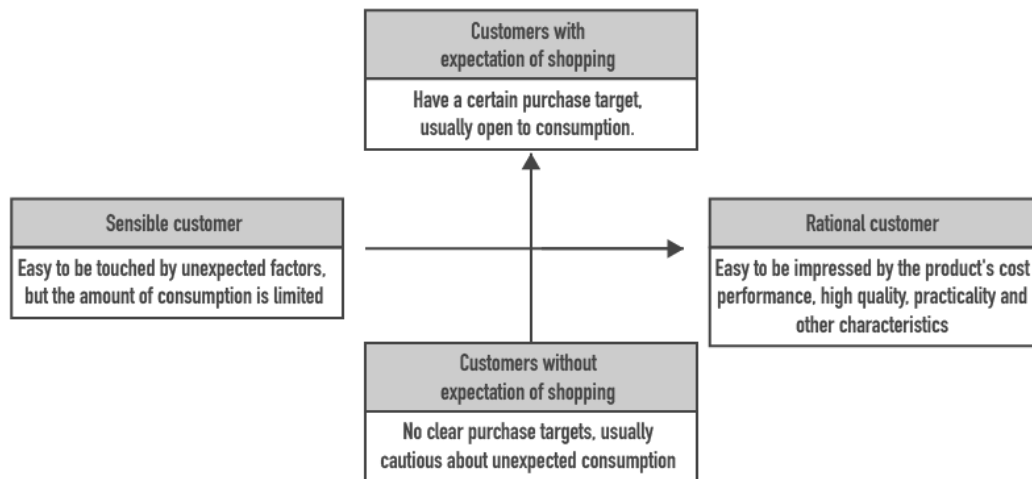
Figure 4.10: Two-dimensional model of consumption.

In the offline retail store's observation of the customer's shopping behavior, the author finds that the customer can be distinguished by the two dimensions of "whether there is a clear purchase expectation" and "whether it is a rational customer". Almost all customers have behaviors and motivations in the store. Match the two types of characteristics that exist with them. By expressing these two dimensions as two vector coordinates, a two-dimensional model of customer consumption is formed, as shown in Figure 4.10.

In the two dimensions of this model, there are customers who purchase the prospective customers on behalf of those who have meaningful purchase targets. Such customers are generally open to shop consumption; customers who do not purchase expectations represent customers who do not have clear consumption targets. Such customers are usually cautious about accidental consumption at the store; sensible customers represent customers who are easily impressed by unexpected factors (such as limited time, time limit, etc.), but such customers usually have a limited amount of spending; rational customers represent those that are easier Customers who are characterized by product characteristics (such as cost-effectiveness, high quality, and practicality) will not easily shop, but will also be subject to high-spending purchases when they are fully convinced.

Customers in online retail stores can be described by these two dimensions to form four main personality characteristics. How the customer is specifically classified needs to be discriminated by the "behavior-motivation" rule found by the collaborative filtering mechanism, and the customer's belonging category can be determined according to the

behavior characteristics exhibited by the customer when browsing or purchasing the product.

4.4.3 Creating Personalized Scene in A Timely and Appropriate Manner

Not all scenario marketing will develop in a direction that is more in line with user needs. Inappropriate application of scenario marketing is not only beneficial to the improvement of service experience, but may even bring reverse effects, such as harassment and privacy violation. Therefore, the design and application of the scenario marketing plan should be cautious, the service provider does not need to put himself in each scene, because sometimes the goal of scene analysis is not to penetrate but to avoid[67].

Many researches on scenario marketing define it as three aspects. One is to predict the consumption needs of users in different scenarios through tag clustering and customer grouping, so as to know what content should be recommended to customers; Publish information in a timely manner, so that customers can see the product or service information that the service provider wants him to see at the right time, thus maximizing the customer's desire to shop. Third, the interaction between the customer and the service provider is required, and the customer Sharing helps to help brands communicate interpersonally[68, 69].

On this basis, the author believes that a personalized scene should be created for users in a timely, appropriate and appropriate manner.
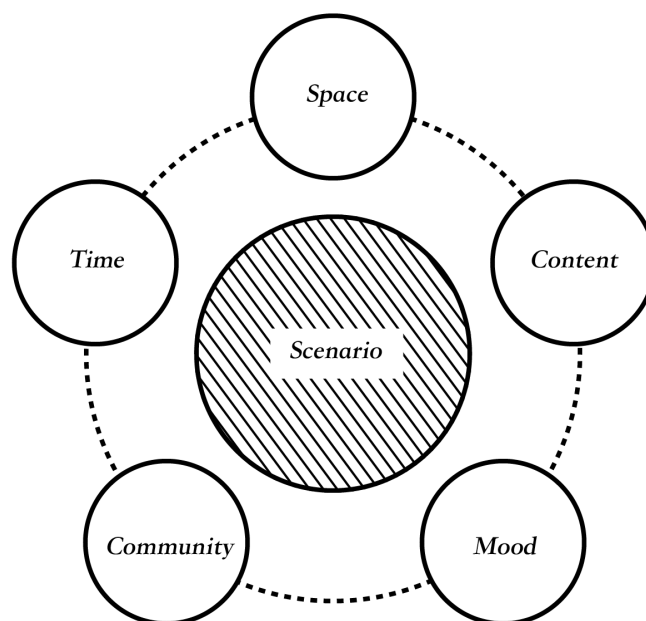
Figure 4.11: Five elements of scenario marketing.

Timely means that the timing of the scene intervention should be carried out in a timely manner after the user has deepened the motivation and desire of the machine, and the untimely scene marketing will cause the user's dislike. Appropriate people means that different scenes should be provided according to different characteristics of users. The elements of each kind of scene marketing plan (Figure 4.11) are different, so it is necessary to choose a plan suitable for the current user. Appropriate product means that all the scene marketing plans should conform to the brand positioning, coordinate with other products and services, and cannot blindly pursue the marketing effect and cause conflicts[70, 71].

The scene marketing method is a means to deliver the precise service that meets the user characteristics and hit the user's needs to the customer. The application of the correct scene marketing method in accordance with the application principle can skillfully combine the demand satisfaction with the customer's personal characteristics. In order to provide customers with a precise service experience in the most comfortable way.

4.5 Key Issues in Accurate Service Experience Model: Thinking for Unmanned Stores

In the above, the author introduces the idea of the workflow of the precision service experience model. However, it is necessary to ensure the successful operation of this service experience model, the goods become intangible from the tangible, from the store-centric to the consumer life scene. Centers, from centralized distribution to scene-based fragmented consumption, various big data analysis technologies, AR/VR virtual experience technologies, and biometric information security technologies will all become the underlying framework for supporting and securing new retail consumption experiences in the future. These specific technical knowledge is not the focus of this article, but the author puts forward these key issues, which also need to be fully considered by the service provider.

4.5.1 Getting Customer Feedback Data in Real Time

In the current working methods of mainstream service design, the link to obtain user feedback is usually placed in the Post-Service phase, which is usually an independent evaluation mechanism that is separated from the service experience link, as in the second chapter. As mentioned, the evaluation mechanism at the end of the entire service process can usually only feedback the user's evaluation of the overall service design, but can not comprehensively and effectively reflect the specific feelings of users in all aspects of the service process, and can not be based on users in all aspects. The response to adjust and change subsequent service strategies in real time.

Whether using big data, small data or live data to provide different recommended content for different users' different preferences and status, the user's behavior data can not be separated behind, including the history of users browsing the web, staying frequently , purchase records, etc., which are very easy to obtain for online e-commerce platforms.

For how to obtain similar user experience data in online scenes, the relevant theory of pervasive computing gives us a solution. According to the concept of pervasive computing, virtual reality technology is dedicated to putting people in the virtual world created by computers, and ubiquitous computing is the opposite – making computers fit into people's living spaces and forming a "none Computing environment that is not present, ubiquitous, and invisible[72]. As shown in Figure 4.12, under the ubiquitous computing concept, some of our daily items can be placed into the sensor, and our unintentional operation data will be faithfully recorded by these sensors in our state of no sense.
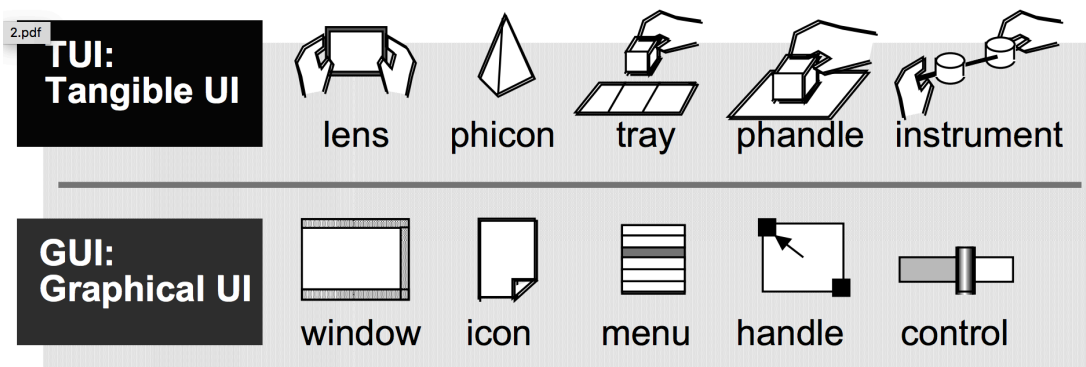
Figure 4.12: Comparison of Tangible User Interface (TUI) and Graphical User Interface (GUI) [73]

At present, Amazon's unmanned stores in the United States, Uniqlo in Japan, Suning unmanned supermarkets in China, and other shopping malls have used similar technologies, so that users' behavior data in the store can be fully recorded to improve

the category of goods in the store. layout.

Another sub-problem under the problem of obtaining real-time data of users is that the user data that needs to be collected is not only for macro analysis of the trend of user shopping behavior, but also needs to ultimately apply this big data to each specific user. This involves the user's behavior data corresponding to the user ID. When shopping online, this problem can be easily solved. Each user will leave the account information or IP address when browsing. When switching to the offline scene, you need to consider other ways to get the user ID.

Here are two solutions. One is from a technical point of view, such as setting up a face recognition camera in a new retail experience store, locating each customer in the store, and automatically generating the customer's database. At present, Suning's unmanned stores have realized face recognition of entering and leaving the store, but they have not yet been able to track customers in real time in the store. The other is from the marketing point of view, such as when the customer enters the store, providing a membership card bound to the customer, in the name of the point to encourage the user to carry the membership card, the customer's shopping process in the store will be A membership card containing an NFC chip and a sensor placed on a merchandise shelf record the customer's in-store behavior by means of near field communication.

4.5.2 Responding to the Individual Needs of Customers

Usually the output of the service design is a very clear user journey, but in the new retail space for customer segmentation scenarios and precise service experience needs, it is difficult to describe a user journey in the store with a certain user journey. The service experience process, especially when the granularity of the contacts is continuously subdivided.

The author believes that in the service design process for new retail, it is not only necessary to design a standard user service journey according to the common needs of users, but also to design and diversify the service to meet the individual needs of users according to the classification of user portraits on key contacts. The solution, and the modular approach to placing the solution under key contacts, implements calls based on the user's category, and combines into a unique user journey.

In the precision service experience workflow, we extracted the key contacts, and also extracted the potential demand represented by the pioneer users, designed a variety of

targeted and precise service solutions, so in the key contacts There will be more than one path choice. With the increase in customer visit time and the increase in behavioral data, our judgment on this customer may also change. Therefore, at the subsequent contacts, it is not necessary to provide accuracy according to the same customer group. Service plans, which have once again increased the diversity of service paths.

In summary, in the process of service design, not only the standard service journey is designed according to the common needs of users, but also the service plan that satisfies the customer's individual needs according to the classification of user portraits on the key contacts, and through the module. The way to put the solution under key contacts and implement calls based on the customer's category to form a unique user journey.

4.5.3 Ensure Continuous Optimization of the Service Experience

The existing product service system design pattern lacks a dynamic mechanism for processing user feedback and continuously optimizing the iterative service system. The precise service experience model proposed in this topic will optimize and iterate the service design according to the new user categories that appear.

In the precision service experience model described above, the service provider clusters the customers based on the existing customer behavior data and evaluation data, and proposes targeted research through the pioneer customers in each type of customer. Accurate service plan. According to the assumption of this mechanism, when a target customer enters the store in the future, the type of the customer can be judged in real time by the behavior of the target customer and the feedback data, thereby providing a corresponding accurate service. However, things that cannot be avoided, due to the limitations of the original user data, etc., we are unable to classify all customer types, and it may be found that it is difficult to be classified into any customer group by detecting the target customers. Or when the precise service plan provided for the customer does not perform as expected, such an unexpected situation must be included in the reflection in time.

When the service provider intervenes in such special circumstances in time, conduct in-depth interviews with such special customers and incorporate their characteristic data into the database to form a new and precise service plan to cope with similar situations in the future.

Today, with the rapid development of artificial intelligence, especially the new retail is very important to realize the dativization and automation of the offline experience. Therefore, it can be expected that the continuous optimization and iterative work of the service experience will be handed over to artificial intelligence in the future. automatic completion. Here, the author briefly mentions the idea of automatically completing the service system iteration for the manual auxiliary machine.

From a macroscopic logic point of view, the model discriminates after analyzing the user's real-time feedback data. If the user belongs to a category of preset user images, the system will automatically provide accurate services for the user; if the user does not belong to the preset user portrait In one of these categories, the system will learn, cluster, and form new rules to optimize the precision service experience model.

From the micro-logic, the stage of processing the user feedback data in the foreground is mainly done by machine intelligence. If there is a user who does not belong to the preset user portrait, the user will be intervened to obtain the user information in depth; the background analysis is not for the user who presets the user portrait. The stage is mainly completed by hand. After in-depth exploration and analysis of the causes, new logic will be generated for machine intelligence learning to optimize the precision service experience mode.

With the deepening of machine intelligence participation, less manual intervention is the goal of the development of the precision service experience model in the new retail scene.
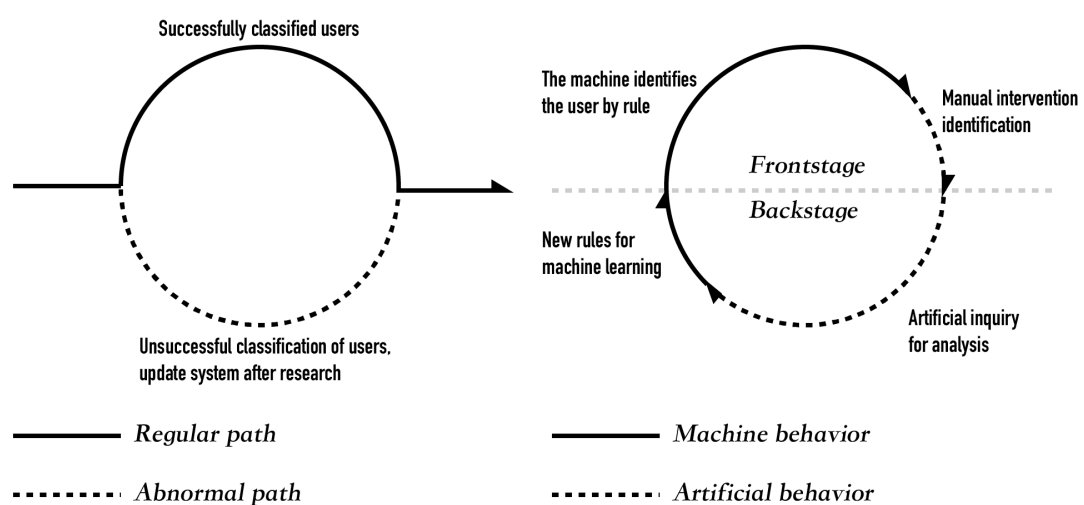
Figure 4.13: Service Experience Intelligent Iterative Model

4.6 Summary

This chapter focuses on the concept, workflow, and key technical issues of Accurate Service Experience Model.

Since service design is insufficient in meeting the individual needs of users, it is not able to flexibly respond to the different needs of users in future retail scenarios. Based on this background, the author proposes the Accurate Service Experience Model to meet needs of users' personalized service experience and to realize the iterative development of service design. The author also explores the application opportunities and form of this model in scenarios of the New Retail.

The workflow of the Accurate Service Experience Model is based on human-centered service design methodology, which is developed around people, goods, and scenes, that is, refining key contacts, researching "trendy customers", and creating individual scenes.

Finally, the author proposes three key technical issues: real-time access to user feedback data, response to user's personalized needs, and continuous optimization of service experience. This is the guarantee to ensure that the Accurate Service Experience Model can work properly.

Chapter 5: Practice of Accurate Service Experience Model in Offline Retail Stores: Taking ABS Home as an Example

5.1 Project Background Overview

ABS Home is a home furnishing retail chain that was born in China. It has more than 10 years of experience in the design and production of mainstream home retail products in Japan and Europe. Provide customers overall home solution through B2B and B2C multi-channel business model.

Figure 5.1: One of ABS Home offline stores.

In the transition to the New Retail, ABS Home hopes to upgrade its brand positioning from the original overall home solution to the family lifestyle. (There are pilot projects in each offline store, as shown in Figure 5.1, Shanghai Guangqi City Store), and comprehensively layout the New Retail strategies. In a series of brand upgrade strategies, including visual identify system design, store environment design, product layout

reconstruction, service experience enhancement and other multiple ways.

The practical research of ASEM at the offline stores in this paper is based on this background. Combined with the real business environment to verify the validity of the theory presented in this paper, and bring business value for ABS Home at the same time.

5.2 Research Goals and Methods

5.2.1 Research Goals

The objectives of this practical research project can be explained in two aspects:

1. **Theoretical Goals**

Through on-the-spot research and exploration in the ABS Home offline retail store with the concept of the New Retail, I tried to apply the theory of ASEM proposed in this paper when designing to enhance the in-store customer service experience. In the process of practical research, induction and analysis according to the actual effect, find the deficiencies and reflect on the problem, and finally make the theory better.

2. **Realistic Goals**

Study the relationship between shopping behavior, personal characteristics and potential consumer needs of ABS Home customers, thus to design a marketing plan with ASEM for ABS Home. Through the application of design strategy, helps ABS Home to achieve customer purchase conversion and create commercial value in the store.

5.2.2 Research Methods

This practical research mainly combines of user tracking observation and user interview, and validates the validity by means of prototype testing, which can be roughly divided into three stages:

Figure 5.2: Methods of Research.

First, observe and faithfully record the behavior of customers in the store, collect these feature data for analysis, and discover the rules that exist, that is, the relationship between the customer's behavior characteristics and their personality characteristics, and potential consumer demand. Thus, to establish the "behavior-preference" rule. This rule will be used for some general accurate service experience strategies, and it is also the basis for customer grouping and forecasting customer behavior.

Then, focus on investigating and researching those customers who make purchases in the store, understand their motivations and psychological activities when purchasing goods, and understand the lifestyles and habits of these customers. According to the theory of ASEM proposed in this paper, these customers are pioneer customers with positive deviation behavior, so their potential research is used to predict the potential needs of similar customers.

Finally, according to the potential needs of different group customers, the marketing plan for the accurate service experience of the demand is designed, and the plan is tested in the store to verify the effectiveness of ASEM produced by this design method.

5.3 Basic Research and Customer Grouping

5.3.1 Overview of research

During the basic research period, the author visited five offline stores of ABS Home in Shanghai and made detailed survey at the Metro City store and Jinqiao International store. A total of 49 people were observed (including 41 valid samples) and 21 people were interviewed.

In order to gain insight into the expected patterns in the shortest time and at the lowest cost, the author's scope of observation is mainly limited to the kitchen supplies area rather than the entire stores.

In the research, the author found that different stores in different business districts have different customer groups.

The Metro City store is characterized by a large customer flow. The customers are mainly young couples, mothers with children and middle-aged females are second. The purchase rate of customers is not high. These insights are very suitable for the development of this paper. So, I chose this store as a target for follow-up research.

5.3.2 Typical Personas

The author obtained the following six typical personas (shown in Figures 5.3, 5.4 and 5.5) by tracking and observing the customers in the Metro City store, and recording the behavior and, if necessary, interviews. Persona records the basic characteristics and behaviors of each customer style. Initial classification of customers is done by using the two-dimensional model of customer consumption mentioned in the previous chapter.

顾客 1　黄先生与女友
25岁左右的年轻情侣，刚工作不久，已经进入同居生活，喜欢有趣浪漫的生活方式。但经济基础一般。

▶ 关键行为：在**各种厨房小家电**前**停留驻足**，并彼此探讨使用方式及性价比，交流酸奶机在淘宝上的价格。
▶ 目标洞察：在电影开场前的时间闲逛 ABS 零售店，没有明确的购物预期。第一次来 ABS 店。
▶ 顾客分群：**无购买预期且感性**的顾客

顾客 2　李女士
40岁左右的职业女性，曾经有几次在 ABS 购物的经历，喜欢有一定品质且价格实惠的商品，有一个丈夫和一个女儿，常在家中为家人做饭。

▶ 关键行为：在**锅具**前**停留很久**，反复比较，但最后没有购买。离开前还顺便看了**餐具**。**快速观察**了其它个别**厨房小产品**。
▶ 目标洞察：在等一起吃饭的姐妹，但最近想煲汤希望购买煲汤锅，但似乎没有合适的。认同ABS 品牌，愿意购买其它商品。
▶ 顾客分群：**有购买预期且理性**的顾客

Figure 5.3: Persona 1 and 2.

First type of customer is a young couple in ABS Home. They may just graduate and have a weak economic foundation, but young people's desire for a romantic lifestyle and a warm expectation for a future life can be most evident in them. They often just happen to meet ABS Home because of other activities in the business district, such as eating, shopping, watching movies, and there is no clear shopping expectation. They will pay attention to a variety of small kitchen appliances, and imagine the future usage and life scenes. Because they are the internet generation, they will naturally use the mobile phone to see similar products online. The author initially classified them as customers with no shopping expectation and emotional.

The second type of customer is a middle-aged female customer who comes to the store alone, which is also common in ABS Home. Perhaps it is a special attribute of a home retail store, so middle-aged women who come alone will be more common than other types of stores. They usually have families and will take care of their family's diet.

Such customers are often repeat customers of ABS Home and have a certain brand recognition for ABS. They have certain purchase expectations, mainly related to cooking utensils such as pots, but will also pay attention to some tableware and kitchen products. The author initially classifies such customers as customers who have an expected and rational purchase purpose.

顾客 3　钱先生与太太
35岁左右的青年夫妻，已经结婚7年，尚未有孩子。在上海定居，平时工作比较忙，不太下厨做正餐，周末会一起逛街购物。

- 关键行为：在**酸奶机**和**电磁炉**前**停留关注**，彼此探讨用法和性价比。最后购买了一套**杯具套装**。
- 目标洞察：周末逛街散步，顺便在 ABS 购买一些实用对生活物品。有做简餐的潜在需求，和对品质生活对追求。
- 顾客分群：**无购买预期**且**理性**的顾客

顾客 4　唐女士
55岁左右的退休女性，过年期间来在上海工作的儿子媳妇家一起过年。对 ABS 从不知晓，只是从儿子处得知在这里可以购买生活用品。

- 关键行为：在**食品储物盒**前**停留很久**，反复搜索周边产品，并询问其他顾客这个是不是调味盒，最后没有购买。
- 目标洞察：发现儿子家没有老家常用的调味盒，想来帮忙购买，但店内只有调味盒。其它很多小物件也很陌生。
- 顾客分群：**有购买预期**且**理性**的顾客

Figure 5.4: Persona 3 and 4.

The third type of customer is a married young couple. The most obvious feature of this type of customer is the busy pace of life. Compared to young couples, they still have a desire for a better life, but subject to fast-paced work and lifestyle, they often have very limited time for the selection of goods. But as a result, they pay more attention to the quality of life and pay more attention to the practicality and quality of goods. They may not pay much attention to the home brand, so it is also accidental in the offline store of ABS home, and there are non-specified shopping expectations. They usually stop in front of practical appliances such as yogurt machines and induction cookers, and they also favor products with quality, such as cup sets. As long as the goods are enough to impress people, they will not lick their wallets. The author initially classified such customers as customers who did not purchase the expected and rational.

The fourth type of customer is also a female customer who comes to the store to buy, but he is too old. Although located in a fashionable business district, there are many elderly customers in the Metro City store. Such customers are often retired, but they have not withdrawn from their children's life. Because of the busy work of their children, they

took up the task of doing housework at home, and were responsible for caring for their children, even their grandchildren and granddaughters. They often have very clear buying needs, learn about ABS home from the younger generation, and are willing to spend time looking for the favorite products. They pay less attention to higher-priced electronic goods, and generally prefer very practical kitchen items such as food storage boxes and seasoning cans. However, they often seem overwhelmed by the design of the avant-garde products in the store, and need to be guided by the staff. The author initially classifies such customers as customers who have an expected and rational purchase.

顾客 5	徐小姐与母亲	顾客 6	胡先生和女友
	徐小姐是上海本地人，在国企工作，周末陪母亲逛街吃饭。平时由母亲负责为家人做饭。		22岁左右的学生情侣，过年期间会各自回家乡，是回家最后一个周末。胡先生陪女友来购买一些女士护肤品。

▶ 关键行为：在**各种厨房小物件**前**停留关注**，彼此探讨产品品质，也看了**杯具套装**。母亲常常给出不购买的建议。

▶ 目标洞察：第一次来 ABS 逛购，对品牌没有认知度。愿意接受品质佳的产品，不受价格因素过度影响。

▶ 顾客分群：**无购买预期且理性**的顾客

▶ 关键行为：在**刷杯器**前**停留很久**，互相讨论这是什么物品，表现出好奇。也对其它别致的**小物件**有一定关注。

▶ 目标洞察：没有购买厨房用品的预期，但会被新奇的物品吸引，如果可以在生活中派上用，会直接购买。

▶ 顾客分群：**有购买预期且感性**的顾客

Figure 5.5: Persona 5 and 6.

The fifth type of customer is the mother and daughter combination that often appears in ABS home stores. On the streets of Shanghai, it is also common for unmarried women to travel with their mothers. The daughters of such customers are often intellectual women who love work and family. In addition to work, they are willing to spend more time with their families, which also reflects their need and desire for a better quality of life for their families. Although the mother and daughter may be the first time to come to ABS home, there is no clear purchase expectation, but they are open to purchases of good quality products. When they stay in front of various small kitchen products, they are also talking about product quality and the way of life behind them. In this combination, the mother tends to play more rational roles and will check the purchases to avoid unnecessary expenses. The author initially classified such customers as customers who did not purchase the expected and rational.

The sixth type of customer is a young student couple. This type of customer is very similar to the first customer, but there is a crucial difference, that is, such customers have weaker purchasing power and are more constrained in purchasing because they do not have a stable source of income. Visiting the store to discover all kinds of novelty items is their unique way of socializing. They tend to be more purely immersed in the experience of visiting the store than other customers. They show interest in a variety of chic kitchen products and are keen to explore ways to use them. Although they do not have a clear purchase purpose, they have certain purchase expectations, and their purchase behavior is often impressed by the innovation of commodities. The author initially classifies such customers as customers who have expected purchases and sensibility.

5.3.3 The "Behavior-Preference" Rule for Customer Grouping

In the tracking and behavior recording stage of the store, the author uses the self-designed data collection table (as shown in Figure 5.6) to collect relevant data. When the target customer enters the observation area, first observe the observation silently, and record in detail the products that the customer is in contact with during the period and the duration of the attention. At the same time pay special attention to other special behavior characteristics and key dialogues of customers.

Figure 5.6: User data collection form for research.

After all the acquisitions are completed (as shown in Figure 5.7), the authors clustered the data to find out the relationship between the customer's behavioral characteristics in the store and its personality characteristics and potential consumer needs, and then summarized into rules.

Figure 5.7: Completed data collection form.

Form 5.1 shows the "behavior-preference" rules of the customers in the Metro City store that the author has summarized and summarized. Correspondingly, the author gives general advice on precision services, but the marketing plan of a more in-depth and accurate service experience needs to be studied after the research of the pioneer users. The author will elaborate in the following. It needs to be explained again that due to the limited time and conditions of the investigation, these rules do not fully summarize the situation of all the customers in the Metro City store.

Form 5.1: "Behavior-preference" rule of customers in the Metro City store.

	Key behavioral characteristics	Preference feature	General accurate service advice

1	Pay little attention to the scale and pay attention to small appliances such as yogurt machines and rice cookers.	Buy nothing.	Not all customers can make purchase conversions at once. In the presence of customers with such behavioral characteristics, ABS Home should play the role of information providing, branding impressions, in order to turn them into potential customers and achieve long tail effect.
2	Pay close attention to pots	Have certain purchase expectations, and also have an open purchase attitude towards the kitchen appliances associated with them.	This kind of customer is the focus of purchase conversion. It needs to judge its personality characteristics according to other behavioral characteristics, conduct targeted persuasion, and can recommend relevant kitchen utensils according to the style.
3	Pay close attention to pots or small appliances	Often more rational, focusing on product quality and practicality, price is not the first consideration.	When a customer with such behavioral characteristics appears, the customer's personality characteristics can be inferred, and the customer can be persuaded in a targeted manner along with other inferences.
4	Pay close attention to a small kitchen object and pay little attention to other similar products	Have an in-depth understanding of the product's needs and have certain potential purchase expectations.	When a customer with such behavioral characteristics appears, it is necessary to use the targeted persuasion of the small object in terms

		of usage scenarios and practicality to promote purchase conversion instead of targeted recommendation.
5	Focus only on bowls or plates and don't pay too much attention to other kitchen products	Always price sensitive personality.	When a customer with such behavioral characteristics appears, it is necessary to conduct targeted persuasion on the price and promotion of the product to promote purchase conversion, and at the same time, recommend other price advantage products in the store.
6	Pay close attention to practical items such as sinks, drain racks, pots, bowls or plates.	Relatively rational, but with certain potential purchase expectations.	This type of customer is the focus of purchase conversion. It is necessary to use the targeted persuasion of the product in terms of usage scenarios and practicality to promote purchase conversion. At the same time, it is possible to recommend a profitable product with good quality and relatively high price, such as a cup set.

Based on the rules derived from the above table, when a customer exhibits similar behavioral characteristics in the Metro City store, we can group it according to this rule, and speculate on the current customer preference characteristics and the general accurate service experience model.

5.4 Analysis of "Trendy Customers" and Potential

Consuming Demands

In Chapter 4.3, the author mentions that the customer's experience in the store reaches its peak, often because of the demand that exceeds its expectations, that is, the potential demand is met, and through the positive deviation in the customer group, that is, the "trendy customer". Research can help us find the potential needs of the general customer. In this chapter, the author also details the methods of researching "trendy customers" and analyzing potential needs.

In the early stages of practical research, the author found a typical "trendy customer" of two kinds of goods, which were customers who bought (or have a strong desire to buy) yogurt machine and customers of mahogany chopsticks. Analyze the potential needs of ABS home customers by studying these two "trendy customers".

5.4.1 "Trendy Customer" A and It's Potential Consuming Demands

In the process of the research, the author found that a young couple had a strong desire to buy yogurt machines when they were shopping. At the same time, the author compares the behavioral trajectory data of all other customers recorded, and finds three groups of customers who are similar in behavior to this customer. Form 5.2 is a record of the shopping behavior of the "trendy customer" and its ordinary customers.

Form 5.2: The shopping behavior of the "trendy customer" and its ordinary customers.

	Customer	Observed Products						
T	Young couple	Cookware **	Tableware *	Cup set **	Yogurt machine ***	Induction cooker **		
A	Young girlfriends	Scales*	Cup set *	Tableware *	Cookware *	**Yogurt machine ****	Induction cooker **	Kettle *
B	Middle-aged girlfriends	Dish set **	Cookware **	Potholder *	Wine glass **	Tableware **	Cup set **	Induction cooker **
C	Young women	Yogurt machine **	Rice cooker*	Induction cooker *	Cup set *	Cookware *		

* Indicates mild attention (the duration of attention is 5s~20s), ** Indicates moderate attention (the duration of attention is 21s~40s), *** Indicates close concern (the duration of attention is greater than

40s), the product with a gray background is a product that coincides with the track of the "trendy customer" behavior.

The author positions the young couple as "trendy customers" (T), and the remaining three groups of customers (A, B, C) are positioned as ordinary customers similar to them, and are also potential purchase customers. By using the positive bias method to study "trendy customers", you can gain insight into the habits and desires behind them and present them to potential customers to stimulate their desire to buy.

Through interviews with "trendy customers", the author learned that this is a couple of young couples who have been married for 2 years and have no children. Both sides are coming to Shanghai from other places, and they have relatively good income in Shanghai, but still feel that the cost of living and pressure are relatively high. Usually consumption is between rationality and sensibility. The home is a rented house, basic household appliances and furniture are available. "After two years of marriage, we have added a lot of small items to the family. Now I hope to add some affordable items that can improve the quality of the home, so as to add a sense of life and freshness. The yogurt machine makes people feel very novel, and I am also interested in doing some cooking by myself to help my family's health."

From the above interview results, we can extract the keywords of the customer's living habits and desires: the cost of living is high, the necessities of life are ready, the desire to increase the quality of life, the preference for affordable non-essential items, the pursuit of life fun. .

In addition to interviews with "trendy customers", the author also had to analyze the competing products of the yogurt machine that the customer was concerned with in order to deepen the understanding of the products. Form 5.3 is a horizontal comparison of competing products for yogurt machines.

Form 5.3: Horizontal comparison of competing products for yogurt machines.

Name	ABS Yogurt machine	A well-known brand yogurt machine	A popular yogurt machine	A fast-selling brand yogurt machine

Price	￥99.00	￥88.00	￥169.00	￥69.00
Character istics	4 cans of yoghurt can be made at one time; hand made, safer; constant temperature fermentation, better taste; bottle-type, easy to clean	One machine dual-use, yogurt rice wine; 1L large capacity; 304 stainless steel; constant temperature fermentation, better taste; timing function	Popular color matching, young fashion; oversized liner, multiple combinations; constant temperature fermentation, better taste; one machine dual purpose, ceramic liner	Two colors optional, young fashion; stainless steel liner, split cup combination
Marketing strategy	/	Gift of yogurt and koji	Gift of yogurt making guide	Gift of yogurt
Method of purchase	ABS offline store / online store	online store	online store	online store

Through the above comparative analysis, we can know that the ABS brand yogurt machine is in the middle position in price, and at the same time, it has little difference with the middle and high-end products in some basic functions and quality. The product advantage of the ABS brand yogurt machine is that it can be divided into cups, easy to clean, and can be purchased directly offline. There are no similar competing products near the goods. But the downside is that there is no clear marketing plan for yogurt, production guides or other price concessions.

5.4.2 "Trendy Customer" B and It's Potential Consuming Demands

In the process of practical research, the author found that three middle-aged girlfriends bought a discounted classic mahogany chopsticks gift box when they shop. At the same time, the author compares the behavioral trajectory data of all other customers recorded, and finds two groups of customers who are similar in behavior to the customer. Form 5.4 is a record of the shopping behavior of the "trendy customer" and its ordinary customers.

Form 5.4: The shopping behavior of the "trendy customer" and its ordinary customers.

Customer	Observed Products

T	Middle-aged girlfriends	Wash basin **	Soup pot **	Cup set **	Potholder *	Wine glass*	Dish set **	Mahogany chopsticks ***
A	Young women	Pan *	Pressure cooker **	Soup pot **	Potholder *	Dish set **	Mahogany chopsticks **	Wooden rice spoon *
B	Middle-aged mother and daughter	Soup pot **	Mahogany chopsticks **	Wooden rice spoon *	Dish set **	Potholder **	Cup set **	

*Indicates mild attention (the duration of attention is 5s~20s), ** Indicates moderate attention (the duration of attention is 21s~40s), *** Indicates close concern (the duration of attention is greater than 40s), the product with a gray background is a product that coincides with the track of the "trendy customer" behavior.*

The author positions these three middle-aged girlfriends as "trendy customers"(T), and the remaining two groups of customers (A, B) are positioned as ordinary customers similar to them, and are also potential purchase customers. By using the positive bias method to study "trendy customers", you can gain insight into the habits and desires behind them and present them to potential customers to stimulate their desire to buy.
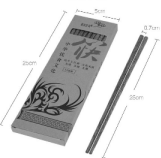
Through interviews with "trendy customers", the author learned that this is a good sister who was a former colleague before retirement. Each has a complete family, and occasionally come out to go shopping together on weekends. The three are typical Shanghai families, children or work at home, or still in college. Usually, it is the housewife's role in the family. However, the economic conditions have improved in recent years, especially since the children have already worked, so they will be more affluent in consumption than before, but they still maintain the essence of careful calculation. One of the sisters today saw the mahogany chopsticks gift box feels beautiful, ready to buy home for personal use, I feel that it can improve the quality of life, redwood chopsticks are also healthier, if you give people a face. It is very important that the member price is ¥39, which is cheaper than the retail price of ¥40, which is very good value.

From the above interview results, we can extract the key words of the customer's living habits and desires: the Shanghai family, the habit of careful planning, a little more

at ease, improving the quality of life, paying attention to physical health, and paying attention to membership benefits.

In addition to interviews with "trendy customers", the author also had to analyze the competing products of the mahogany chopsticks that the customer was concerned with in order to deepen the understanding of the products. Form 5.5 is a horizontal comparison of competing products of mahogany chopsticks.

Form 5.5: Horizontal comparison of competing products for mahogany chopsticks.

Name	ABS mahogany chopsticks	A Japanese brand rosewood chopsticks	A popular redwood chopsticks	A popular redwood chopsticks
Price	￥39.00 (Membership) ￥79.00	￥52.00	￥14.80	￥29.00
Characteristics	Natural chicken wing wood, safe and healthy; no paint and no wax; no oil, easy to clean; 10 pairs of gift boxes	Natural chicken wing wood, safe and healthy; hexagonal shape, suitable for people with larger hands; 1 stick	Natural chicken wing wood, safe and healthy; no paint and no wax; no oil, easy to clean; 10 pairs of simple	Natural chicken wing wood, safe and healthy; no paint and no wax; no oil, easy to clean; 10 pairs of gift boxes
Marketing strategy	Member exclusive offer	/	/	/
Method of purchase	ABS offline store / online store	offline store /online store	online store	online store

Through the above comparative analysis, we can find that there are many types of mahogany chopsticks, and the price is also uneven. Therefore, the chicken wings and wooden chopsticks with the same material as ABS red wood chopsticks are selected for comparison. Different brands of mahogany chopsticks have no significant difference in material and performance, but there is a large fluctuation in price. The gift box of ABS redwood chopsticks has a price advantage in the member price, and the MUJI mahogany chopsticks in the nearby store are relatively weak.

5.5 Conceptual Design for Store with Accurate Service Design Model

According to the above research, the author has a certain understanding of the customers in the ABS home Metro City store and the key products they care about, and also draws the "behavior-preference" rule displayed by the customers in the store, as well as the "trendy customers". Representing the potential needs of ordinary customers. Therefore, the author believes that there are three opportunities for ASEM in the purchase of kitchen supplies for the customers in the Metro City store, namely brand building, purchase guidance and precision marketing, with the focus on precision marketing.

These three aspects do not completely cover all customer types, but when customers meet the three aspects of service indications, they should provide accurate services in a timely manner.

Form 5.6 is a service blueprint for conceptual design.

Form 5.6: Service blueprint for conceptual design.

	PRE-Service			IN-Service	
Physical Evidence	Shopping card, shopping basket	Screen with camera	/	Screen	Precise information
Customer Behavior	Get a card or basket and enter the store	Smile at the camera and enter the store	Shopping	Screen showing product information	Customer receives a special offer for a particular item
Interaction	---				
Frontstage	The staff took the initiative to welcome the customer.	Show welcome screen, if it is a member, display customer name	/	The screen shows the product information and guidelines recommended by the customer.	The customer's mobile phone receives the offer information, or the staff member provides the offer
Visibility	---				
Backstage	Identify customer information with cards or baskets that accompany customers at the beginning of the store	The camera in the store tracks the customer	Record the time the customer spends in front of each shelf in the store, the number and time the customer picks up the item	Provide purchase advice to the customer based on the judgment of the customer behavior trajectory	Forecasting the potential needs of customers based on the judgment of customer categories, providing price sensitive customers
Inner Interaction	---				
Support	RFID	Face ID Recognition technology	Form the behavior track of the customer	Compare customer behavior trajectory with customer portrait database to determine customer type	

	IN-Service		POST-Service	
Physical Evidence	Experience event	/	/	/
Customer Behavior	Customers participate in a variety of product experience activities	Customers experience different services (such as shipping methods, payment methods, etc.)	Accept interviews with staff	/
Interaction	--			
Frontstage	Staff guide different customers to participate in different types of product experience	The staff provides different service methods according to the characteristics of different customers.	For the types of customers that the system cannot identify properly, the staff takes the initiative to understand the customer characteristics.	/
Visibility	--			
Backstage	Determining the product experience form that customers are suitable by means of customer behavior-motivation rules	Determining the customer's appropriate service method by means of customer behavior-motivation	Staff collate and feedback new customer types and characteristics to the system	/
Inner Interaction	--			
Support	Compare customer behavior trajectory with customer portrait database to determine customer type		Form new customer behavior track and customer portrait gallery	/

5.5.1 Branding Strategy

According to the "behavior-preference" rule found in the research, if the customer's indication can judge that the current customer does not purchase the expected and cannot realize the purchase conversion at one time, we should provide them with the brand introduction of ABS home, shape the brand image, and utilize Long tail effect, in the hope of turning it into a potential customer.

Service indications:

1. **Pay attention to the weighing device.**
2. **Pay attention to small appliances such as yogurt machine and rice cooker.**

Service Strategy: Staff intervention, greeting customers in an easy-going manner, delivering well-designed promotional cards with ABS QR codes, and introducing the product categories and brand advantages covered by ABS in a very brief way. At the same time, there is a coupon for the full reduction of the validity period (the specific discount plan can be adjusted according to actual needs).

Validation method: On-site attempts to obtain customer contact information, and return visits to customers after one week, to understand the customer's memory level of ABS, and the use of coupons.

Figure 5.8 is an illustration of the promotional card used.

Figure 5.8: llustration of the promotional card used.

5.5.2 Associated Recommendation Strategy

According to the "behavior-preference" rule found in the research, if the customer's

indication can judge the current customer's openness to the purchase, we can recommend the relevant products according to the potential demand of the behavior, and use the scene to create the way to guide.

Service indications:

1. **Pay close attention to pots.**

2. **Pay close attention to bowls or plates and not paying much attention to other kitchen products.**

3. **Pay close attention to sinks, drainers, pots, bowls or Practical items such as plates.**

Service strategy: staff intervention, timely implementation of the corresponding targeted recommendations based on customer specific behavior indicators. For the customer who has the indication 1, the kitchen appliance recommendation related to the pot is recommended; for the customer who has the indication 2, the kitchen product with the price advantage in the store is recommended; for the customer who has the indication 3, the quality of the cup set is recommended, and the price is also good. Relatively high profit products.

The way to verify the validity: After conducting the purchase guide for the customer, silently observe and observe the next behavior of the customer, and observe whether the customer pays special attention or purchases the items recommended by the staff.

Figure 5.9 and Figure 5.10 are schematic illustrations of the guide card used. The card is in a stowed state by default. Customers who do not have a service indication will not see it and will need to be manually displayed by the staff.
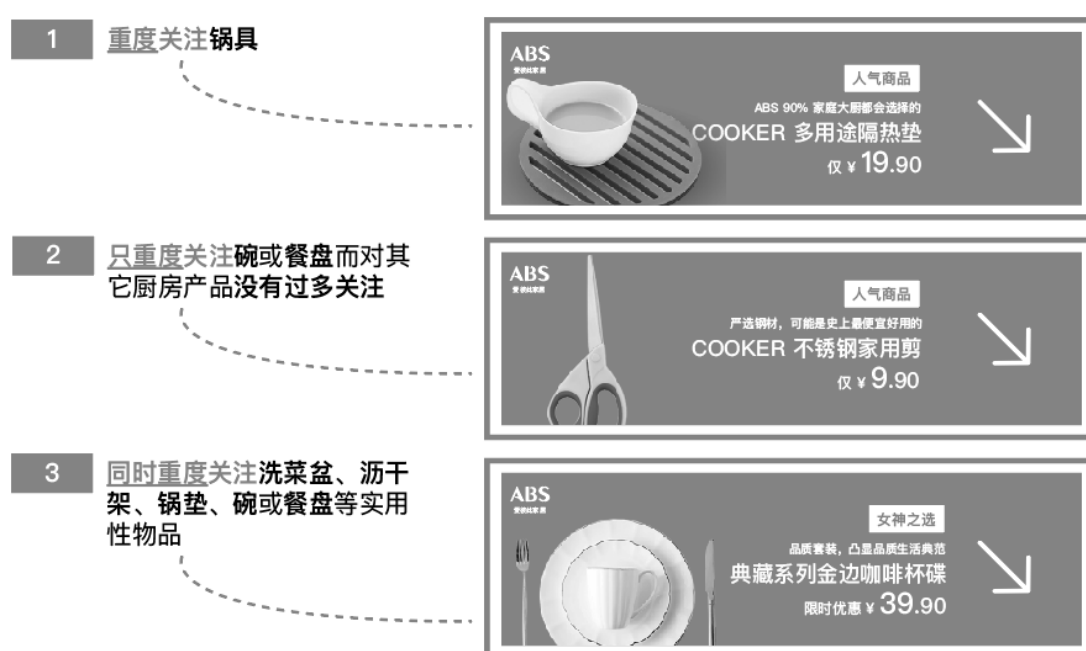
Figure 5.9: Shopping guide card board.

Figure 5.10: Shopping guide card board.

5.5.3 Scenario Accurate Marketing Strategy

This part is the most important part of this service design. It needs to judge according to the key behavior indicators and continuous behavior trajectories displayed by customers, and provide incentives to timely observe the possibility of customers making related shopping.

Service indications:

1. **Pay close attention to bowls or plates and not paying much attention to other kitchen products.**
2. **Pay close attention to practical items such as sinks, drainers, pots, bowls or plates.**
3. **Pay close attention to pots or small appliances.**
4. **Pay close attention to a small kitchen item and not pay much attention to other similar products.**

In addition to the need to discover the key behavioral indications displayed by customers, the application of this solution also needs to pay attention to the continuous purchase trajectory of customers, which is a relatively complicated judgment process. In this study, the author found relevant rules in the customers who bought the yogurt machine and the mahogany chopsticks gift box, and developed corresponding accurate marketing strategies.

The way to verify the validity: Whether the customer purchases the goods under the

precise marketing strategy adopted by the staff is a direct method of validity verification.

1. Yogurt Machine

Through research, we found that customers who purchase ABS yogurt machine show the characteristics of high cost of life, reasonable sex, and necessities of life, eager to increase the quality of life, the preference for affordable non-essential items, and the pursuit of life.

Their behavior in the kitchen area shows the commonalities shown in Figure 5.11:
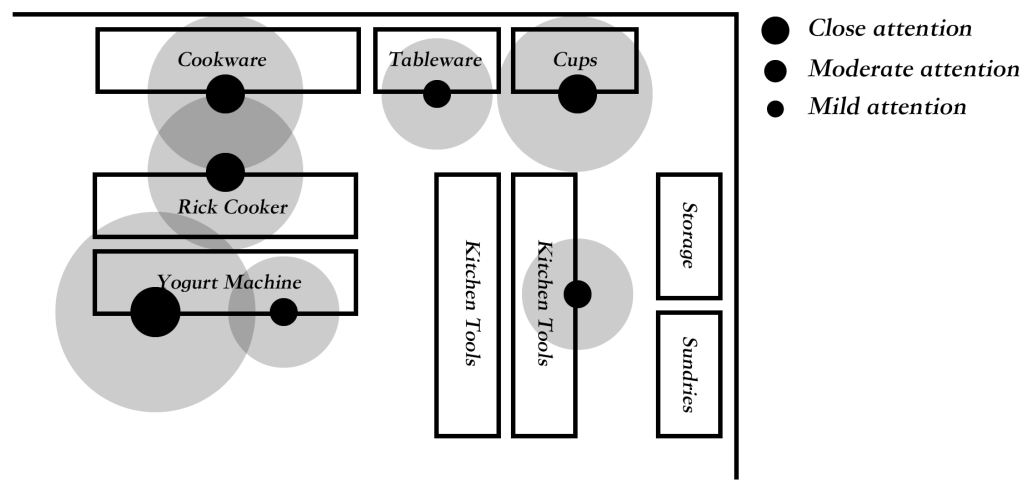
Mild attention: the duration of attention is 5s~20s), Moderate attention: the duration of attention is 21s~40s, Close concern: the duration of attention is greater than 40s.

Figure 5.11: Behavior characteristics of customers who purchase yogurt machine.

Through the research on the "trendy customers", the author has developed a life experience and price marketing solution for the ABS yogurt machine products according to the potential demand. A plan for providing a price marketing direction for customers who have an indication 1, and a plan for providing a life experience direction for customers who have indications 2, 3, and 4.

1.1 Life Experience

At the scene, we will prepare the necessary raw materials such as milk and yogurt bacteria for the preparation of yogurt. Under the leadership of the staff, please target the customers. After the experience is completed, take out the finished yogurt products and the fruits and nuts that can be matched. Please target the customers to match the yogurt dishes and taste them.

The precise marketing strategy in this direction helps target users understand the basics and convenience of ABS yogurt machines. In the process of experience, let

customers experience the fun of the yogurt machine and the improvement of the quality of life. They respectively hit the potential needs and inner desires of customers who are both "increased quality of life" and "pursuing life's taste".

1.2 Price Friendly

While introducing the ABS yogurt machine to potential customers, you can display information on other competing products, and at the same time convey the offer information to the full discount coupon, and the coupon can be used to purchase any kitchen products.

Through the precise marketing strategy in this direction, users can understand the difference between ABS yogurt machine and competing products, and supplement the product marketing shortcomings through coupons. They respectively hit the pain points and inner desires of customers with "high cost of living costs", "pursuing fun of life" and "preferentially affordable non-essential items".

2. Mahogany Chopsticks

Through research, we found that customers who purchase ABS redwood chopsticks gift boxes show that they are (or envious of) a particular Shanghai family, who is accustomed to budgeting, has ample heads, is eager to improve their lifestyle, pays attention to their health, and is attracted by membership benefits.

Their behavior in the kitchen area shows a commonality as shown in Figure 5.12:
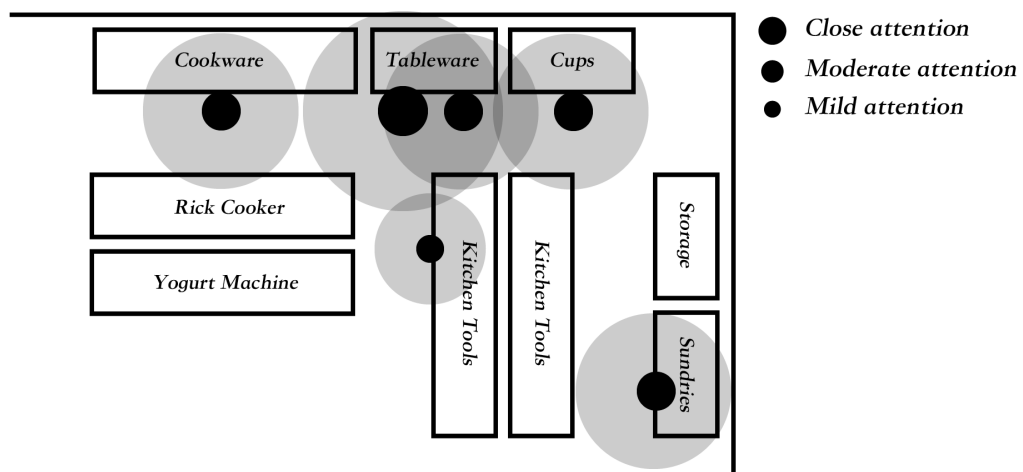
Mild attention: the duration of attention is 5s~20s), Moderate attention: the duration of attention is 21s~40s, Close concern: the duration of attention is greater than 40s.

Figure 5.12: Behavior characteristics of customers who purchase mahogany chopsticks.

Through the research on the "trendy customers", the author has developed two

different price marketing schemes for the ABS mahogany chopsticks gift box products according to their potential needs, which are selected according to the different behavior trajectories displayed by the customers.

2.1 Price Friendly A

When a customer who has a potential purchase of a mahogany chopsticks gift box is found, we will promptly convey to you a discount on the purchase of the coupon, and the coupon can be used to purchase any kitchen product.

The program hits such customers' needs for improving their living standards, and at the same time uses the words of "Shanghai Family" to resonate with local families. Considering that there are many customers coming to Shanghai from Shanghai Metro City, the establishment of local image triggers their yearning for the integration of local and long-term Shanghai life.

Hit the potential needs and inner desires of customers to "appreciate the Shanghai family", "habitually carefully counted" and "improve the quality of life".

2.2 Price Friendly B

When customers who have the potential to purchase high-temperature ceramic cookers and mahogany chopsticks are found, we will send you timely discounts on the purchase of high-temperature ceramic cookers, and the coupons can be used to buy redwood chopsticks. Gift box.

This precision marketing program, in the form of bundled sales, highlights the theme of improving the quality of life and paying attention to health, and stimulating such customers' longing for the current healthy lifestyle, while taking into account the price-sensitive personality characteristics of such customers, the customer's highly-smart promotional program uses the stew to drive the sale of mahogany chopsticks.

Meet the potential needs and inner desires of customers "habitually budgeted", "improving the quality of life" and "focusing on physical health".

5.6 Field Experiment Verification for Scenario Accurate Marketing Strategy in ASEM

The customer's shopping experience in the store is a holistic concept, and it needs to be designed globally through the workflow of the accurate service experience model

proposed in this paper. Because the practical research carried out in this paper is combined with the business environment, and has the realistic requirements of promoting customer purchase conversion, and the main contact of goods as customers in the store is undoubtedly a crucial impact on the experience, and shopping conversion is an intuitive effective service performance evaluation indicators are easy to verify validity in a limited time. Therefore, this practical research mainly validates the effectiveness of the accurate service experience model through the marketing scheme of the accurate service experience on the user's purchase of items.

The author conducted a two-day live experiment at the store with a precise marketing plan based on the accurate service experience model working method and the customer characteristics of ABS Home Metro City store. In the experiment, the author plays the staff of ABS home, and observes the customers who come to the kitchen supplies area for shopping. When some of the customers show behavioral indications similar to the target customers, the author will provide them with targeted information. The service includes providing them with coupons for specific products to see if the customer is effectively motivated, thereby facilitating purchase conversions.

In the verification study, a total of 28 target customers appeared and they were precision-marketed. A total of 11 customers were persuaded to shop (or express their willingness to shop) under the marketing strategy. As can be seen from the limited data, the service plan that uses marketing strategies to motivate customers to make related purchases brings about 40% of the purchase conversion rate, which is higher than the original purchase conversion rate of the target product.

The study preliminarily verified the feasibility of using marketing strategies to motivate customers to conduct related shopping services. Due to the limited number of samples and the existence of certain restrictions on the use of coupons (such as the inability to use on the spot, the way the coupons are effective) is also affected. There may be some error in the purchase conversion rate.

In the study, we found that the implementation of the service plan that uses marketing strategies to motivate customers to conduct related shopping is also related to the communication skills and observation level of ABS home store staff, if it is automatically adopted in the future through RFID, face recognition and other technologies. Completing the detection of customer behavior and automatically providing the corresponding marketing strategy can greatly improve the efficiency of this service plan.

Figure 5.13: The author conducts precise marketing of target customers in the store.

In addition, this study only validated the precise marketing method of using coupons to motivate customers, and it is possible to make purchase conversions closely related to whether customers are price-sensitive customers. In the previous preparatory research stage, we also discovered the behavioral characteristics of some other types of customers. For different types of customers, there can be more scene-based precision marketing methods besides price incentives. Further verification can be carried out in future research.

5.7 Solution to the Key Issues of the Accurate Service Experience Model in Store

5.7.1 Get Customer Feedback Data in Real Time

The recommendation system used in this practice research is a recommendation system based on the positive deviation method. The customer data relied on is mainly the length of time that the customer stays in front of different products, and the customer is judged by the difference in duration. The level of attention of the product. At

the same time, it is necessary to be able to distinguish and track customers and establish databases for different customers.

In Chapter 4.5.1, the author mentioned two ideas for obtaining customer feedback data in real time in the store. One is to use face recognition technology to install a face recognition camera in the ABS home store. We can separately use the camera. Record how long a customer stayed in the store, as shown in Figure 5.14.

Figure 5.14: In-store face ID data record.

However, due to the limitations of this practical research, the author mainly plays the clerk in the store, tracks and records the behavior in the store, and accordingly forms a data set of different customers to determine the type of customer and predict the customer's demand, thus to provide an accurate service experience.

5.7.2 Respond to the Individual Demands of Customers

In Chapter 4.5.2, the author mentions the idea of a user journey model of multiple service combinations, which is to adjust the precise service strategy provided by the customer according to the changes in the behavior of the customer.

The conceptual design of the three in-store precision service experience modes

described in this chapter is not a three-choice implementation strategy. Instead, it provides the required services according to the behavior of customers in the store. If the customer first demonstrates the service indication required by the brand building plan, we will determine that the customer does not have the purchase expectation and cannot realize the purchase conversion once, then provide the brand building plan. However, if the customer subsequently demonstrates the service indications required by the scene-based precision marketing plan, the customer's grouping should be adjusted in time and the corresponding service plan should be provided.

5.7.3 Ensure Continuous Optimization of the Service Experience

The intelligent and unmanned experience of many New Retail concepts is the essential feature of new retail, however, behind these features, the core is the overall optimization of the entire chain based on data[74]. The Accurate Service Experience Model proposed in this paper is based on the user behavior-preference rule obtained in the research, and the recommendation principle developed by it. But in the actual process, tracking each customer is needed to understand if they are satisfied with the accurate service.

In this practical study, the author asked feedback from each customer who enjoys accurate recommendations, and conducts in-depth interviews with customers who do not meet the forecast expectations, thus to understand the reasons for the deviation. Redesign the exceptions outside the original service experience model, explore the motives and potential needs behind it, enrich and improve the accurate service experience model to ensure effective service to this new type of customer in the future.

Chapter 6: Conclusions

6.1 Conclusions

This paper expands and applies the service design method based on the consumer demands in the experience economy era, and the thinking about the customer's store experience in scenarios of the New Retail.

1. This paper presents an accuracy strategy based on an optimized recommendation system. Collaborative filtering recommendation system is the current mainstream online recommendation system, and it often has the same recommendation results which disturbs the user. On the basis of this, this paper uses the positive deviation method to locate the "trendy customers" and conduct research to discover the potential demands of similar customers, thereby optimizing the collaborative filtering recommendation system to achieve more accurate and suitable recommendations. This accuracy strategy can make up for the lack of flexibility in service design to meet the different demands of different consumers.

2. This paper presents a design method called Accurate Service Experience Model in scenarios of the New Retail. Focusing on the three basic elements of retail industry: "people", "goods" and "scene", using the methodology and tools of service design, though three core steps: "mining the potential demands of different types of customers", "refining key touch-points in the service process", "building personality scenarios and immersive shopping contexts" to create an accurate service experience that resonates with customers.

3. This paper demonstrates the practical application of the Accurate Service Experience Model in scenarios of the New Retail through the practice research in ABS home. At the same time, this design method is oriented to the development trend of the Internet of Things and artificial intelligence, which can provides an idea to create an unforgettable experience and promote consumption upgrades.

In summary, the author's design method of the Accurate Service Experience Model provides a solution to how the service design can respond flexibly in the face of more personalized consumer demands, filling the gaps in the corresponding research. At the same time, it also provides a feasible reference for how to improve the user experience and create economic value in scenarios of the New Retail.

6.2 Direction of Further Work

Based on the principle of recommendation system, this paper proposes a feasible service experience strategy for offline retail stores based on this accurate recommendation system. It has certain limitations in research scope and solutions. In the future, we can have more and more in-depth research on precision strategies.

The research in this paper is affected by the time, venue, cost and other conditions. The amount of data researched by users cannot reach the data volume of big data analysis research. Therefore, there is a certain deviation in precision and accuracy. Especially in today's rapid development of artificial intelligence and machine learning technology, we can expect that in the future, under the guidance of precision strategies, we can continuously improve the precision of the service experience.

There are many kinds of scenarios of the New Retail, which are divided according to different user needs. There are various design goals and key points. Due to the actual conditions, the Accurate Service Experience Model experimented in this paper focuses on the transformation and marketing strategy of product sales. In the future, we can conduct in-depth discussions in other subdivisions.

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