

# ESSENTIAL DECISIONS A MINIMAL APPROACH TO DESIGN

BY

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# A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF FINE ARTS IN DESIGN COLLEGE OF DESIGN

# GRADUATE SCHOOL, RANGSIT UNIVERSITY ACADEMIC YEAR 2020

Thesis entitled

#### ESSENTIAL DECISIONS A MINIMAL APPROACH TO DESIGN

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was submitted in partial fulfillment of the requirements for the degree of Master of Fine Arts in Design

> Rangsit University Academic Year 2020

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#### Acknowledgements

The research work of this thesis completed under the careful guidance of the teachers of Rangsit University. Thank you to every teacher who helped me, Ajarn David, Ajarn Tnop and Ajarn Sridhar, and thank you very much to every student in the MFA class the help with me, Dao, Kit, Ajarn Chart, Ware, Big, P Vee, Aoey, P Ai and Ivan, especially Dao, not only helped me a lot in learning but also helped me a lot in life.

Two years of study time abroad, I am pleased to meet everyone, this time is a treasure of my life for me, I will always be in my heart. In my future life, I will continue to move forward to make myself better.



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Thesis Title	:	Essential Decisions a Minimal Approach to Design
Program	:	Master of Fine Arts in Design
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#### Abstract

In a materially rich modern world, how does one apply the core minimalist concept possessing and consuming less but actually more, and use this as a guide to design products and change our lives? Minimalism is an art and design style that follows the maxim, 'less is more' and has recently evolved and integrated into a lifestyle followed by many things. The author was curious as to in this age of material abundance, how it was possible to possess few items, and to choose items one needs. The author began with understanding the essence of minimalism by reading widely on this topic and following the works of luminary Japanese designers and a well-known Japanese housewife, Maria Kondo and her approach to organising possessions at home. To follow which the author applied this understanding to her own room to get a deeper insight into how these principles actually work in life, a few participants were recruited for this study, and they were required to send pictures of their desks and engage in a conversation via chatting apps to provide insights into how they organise their possessions. The author found that a modular system that is highly adaptable to suit multiple users and their needs to organise their possessions, but still retains the overall concept of minimalism does indeed help improve their lives.

(Total 51 pages)

Keywords: Minimalism, Minimalist Design, Minimalist Lifestyle, Redesign

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#### Chapter 1

#### Introduction

#### **1.1 Background and Significance of Minimalism**

From the 1920s to the 1980s, the trend of design has gradually shown a diversified development trend. In this so-called post-modern period, a new design style, minimalism, has emerged in Western society. The design style of minimalism presents a kind of simple, intuitive, pure, function but does not break the characteristic of complete and productive. The style of minimalism inherits the development of modernism and abstractionism in the 20th century and becomes its indispensable design feature with simple forms, rich in connotation and ultimate function. In the 1970s, due to the energy crisis caused by the excessive development of Western society, people gradually began to realize the dangerous adverse effects brought by excessive consumption of resources and the rapid expansion of material desires. People began to reflect that, under such a background, the minimalist design style was generated and developed. At the same time, more and more people are adopting a minimalist approach.

Minimalism attempts to transform figurative and complicated things in the most primitive, most straightforward and most intuitive way. In other words, the characteristic of minimalism is to explore the essence and origin of things. In today's society, many designers often ignore the essential meaning of the product to pursue "minimalism blindly". Minimalism is not just "minimalist". The design of minimalism pays more attention to the study of thinking concepts, hoping to use this to guide us to understand the principles and development trends of product design more readily when facing the complex and ever-changing design environment. The development of minimalism in the design field is like providing a purification function. In form, minimalist design pursues simple shapes, reflecting the current desire to return to

reality, focusing on high-standard thinking concepts and pure spirit. The minimalist design just explains this brand-new artistic value and new satisfaction, showing a serious and logical layout.

It is precise because of the characteristics presented by minimalism that minimalist design also puts forward higher standards for designers invisible. The designer must have the ability to remove unnecessary decorations and erase his emotions. With the most compact shape, the least extreme external structure, and the most simplistic colors, he can jump out of the metaphorical expressions and show the work is mighty Pure power, tell the essence of the product.

#### **1.2 Research Objectives**

The purpose of this study is to get a better understanding of the related practical problem, and thereby improve lifestyle and quality of life through a modular system of organizer that is highly customizable and is flexible enough to accommodate multiple users and their needs.

#### **1.3 Research Question**

How to solve the problem of desktop clutter use the core concept of minimalism to design a product and.

#### Chapter 2

#### **Literature Review**

Minimalism is a design style and a way of life. This chapter will give an indepth understanding of minimalism from two aspects: the application of minimalism in lifestyle, and the other is through the analysis of product design. To better understand minimalism.

### 2.1 Minimalism Lifestyle

The minimalist lifestyle is about living with only the things you need. Minimalists are free from the desire to buy and accumulate more. Instead, they find happiness in relationships and experiences.

Japanese minimalist Sasaki (2017a) wrote a book on how to become a minimalist, Goodbye, Things: On Minimalist Living, which describes the emergence of minimalists and how to abandon items to change your life. At the beginning of the book, he wrote that "less is happiness". In the author's opinion, this is another explanation of the minimalist design "less even more" applied in life. Sasaki (2017b) states in the book that one of the causes of minimalism is the flood of information and matter. He believes that 'functionality' is the criterion for judging whether an item is needed.

His house was initially full of debris, and every time he came home from work, his clothes thrown away, he lurked at a coffee-stained desk to drink and eat snacks, and Sasaki tried to move through the house once. Things, the freight costs, almost went bankrupt. His mentality at that time was also extraordinarily, chaotic, and irritable. When he felt desperate about life, he suddenly realized that life does not need many accessories, so he began a life of dizziness, from flying all over the sky to breaking away, and now to minimalism.

Of course, in the beginning, "the hardest part is deciding what you need." For the items that thrown away directly, if you can sell, you can sell, and if you can donate, you donate. Over the next two years, he has compressed all the items around him to meet the most basic life. In the closet, there are only three shirts, four pairs of pants, four pairs of socks, and other scattered items. The bedroom is as simple as a sleeping bed. A desk and a wooden chair in the living room are the most conspicuous household items—only a few of the most commonly used utensils and kitchenware left in the kitchen.



Figure 2.1 Sasaki's bedroom Source: Sasaki, 2017a

"Minimalism" is influenced by the Japanese "Zen" culture. Minimalists pursue "less is more" and reduce pressure by significantly reducing the items they have. There is also a fundamental reason for the popularity of minimalism in Japan: the Japanese earthquake and tsunami. According to statistics, the 2011 East Japan 9 magnitude earthquake and tsunami killed about 20,000 people, and 30-50% of the casualties were due to cause by falling objects. Minimalists believe that this lifestyle can reduce losses during the earthquake.

A Japanese housewife Kondo (2014) gave an efficient method on how to discard items and how to organize them after discarding them. "The Life-Changing Magic of Tidying Up" has obvious explanations and ideas from how to discard items on how to organize them. She insists that one rule is to leave items that make your heart-moving, she only did two things, throwing things away and organizing them, and throwing out the trash was the first thing.

First of all, before discarding items, you should first think about what your ideal life is like, and then start to sort the items and sort them according to the sort order of clothes, books, documents, small items, and souvenirs. When selecting an item, you must touch it with your hand, perceive the item, and leave the item that hearts you. This approach coincides with the concept of minimalism designed without thought. When sorting, we also start sorting according to this order, but before sorting, we must clear three principles: first, set the location of all items in the home, and items must have a fixed storage place; second, storage should be simplified to the limit; third, do not scatter the storage place, such as living alone, it is more convenient to organize. If you live with other people, there should be a specific storage space for everyone. From person to object: only through continuous sorting and screening can we reflect on and improve our past behaviour, and we can continuously understand our values and outlook on life, and we can have a more confident and more precise plan for the future. We are constantly breaking away, slowly reaching the state of integration of knowledge and action. And gain a lot of benefits, such as: create space for your essential things, gain more freedom, pay more attention to health and hobbies, reduce attention to material wealth, have a peace of mind, get more happiness, feeling happy, finding happiness by enjoying a slow-paced life, reducing fear of failure, being more confident, and so on. This is called changing your life through organization.

#### 2.2 Analysis of minimalist representative designers and design

Naoto fukasawa, a well-known Japanese product designer, founded a minimalist brand  $\pm$  0 and served as a design consultant for a well-known Japanese company called MUJI.

Fukasawa's core of his design thinking approach is described by him as 'Without Thought' and he explains that with a simple example: As per him, when we walk on the ground, we perceive and feel the ground under each step which depends on quite a bit on our subconscious, which does not mean that there is no active thinking, but maybe there is no conscious perception of this act of walking, but our bodies such as hands and feet have recognized the environment and respond.

"Without Thought" requires simplification of objects in the design process, the creativity is reflected in the design objects, so that the design is expressed in people's unconscious behavior. The CD player designed by Fukasawas transplants the action and feeling of using the exhaust fan into the design of the player, and realizes the music playback through the pulling motion. The expression and realization of its functions are bright, powerful, and clear at a glance. As a designer, you can guide people's behavior through designed products. When people interact harmoniously with the environment, we call it beauty. The function of a minimalist product design must be clear and direct, and not deliberately emphasized, to eliminate the gap between people and things, so that people can operate naturally with intuition. The meaning of the design object conveyed through the intuitive level is unintentionally accepted by the user, usually, which brings people a pleasant experience and comfortable operation.



Figure 2.2 CD player Source: Fukasawa, 2018

For the design of products under the minimalist style, the intuitive and straightforward geometric form is not the only way to express the shape of objects. Different products have different material properties, which, to some extent, soften the cold, severe and impersonal sensory experience of the geometric form and directly awaken people's sensory perception.

In the year 2004, Kenya Hara, a world-class Japanese designer, curated an exhibition with the theme "HAPTIC", which is the awakening of the five senses. The word haptic means the feeling of touch or touch of comfort. He uses this word as the name of the exhibition and wants to think about the attitude of cognition based on the perceptual experience of touch to people. No matter what design you work on, the creative process deals with shapes, colors, materials, and textures. Our eyes, nose, mouth, ears, and skin play different sensory roles and human senses are keen, free, and bold. Therefore, this requires the designer in the design of the work should be very concerned about the work to bring a variety of sensory experiences. (Kenya, 2004)



Figure 2.3 Naoto Fukasawa's Juice Skin design from the HAPTIC exhibition Source: Fukasawa, 2014

From this exhibition Fukasawa's work "Juice Skin", you can get a secure experience of natural texture and tension. The design form and product function of "Juice Skin" is clear at a glance. The strawberry juice box vividly reflects the particles and unevenness on the surface of the strawberry, and the design of the kiwi is the same. From this, we can see that the designer has grasped the essential material attributes of the product in the design. The product is exposed to us in a way that is closest to the original characteristics of the material. In this way, even if there is no text or image on the product, we can understand the properties and functions of the product at a glance. This is a design constructed in the mind of the recipient; this is not just a simple external imitation, but also that it awakens people's perception.

Fukasawa and Morrison (2007) collected 204 everyday items, to find a solution to the extraordinary design examples collected in the Super Normal - Sensations of the Ordinary. Fukasawa explains the design concept of 'Super Normal', when asked why it was "Super". In his opinion, "if our sense of the ordinary belongs to the field of no design, then the incredible attempt will weaken all bold and overly absurd behaviours, and arrogant statements will be deemed to be beyond design". He thinks 'Normal' is the way things are. 'A Super Normal' is something that is designed to be Normal, as we know it to be primitive, although it does not have any personality whatsoever.

Fukasawa and Morrison's elaboration on the design concept of 'Super Normal' fully reflects the typical style of minimalist design and advocates the concept of 'no design' in design. Extreme is the source of design, and the original appearance of things is the essence of what we are pursuing. According to him, this is a 'natural' reasonable and sincere expression.

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Braungart and McDonough (2019) an architect and a chemist, set out from their professional practice to illustrate their redesigned sustainable development model in the book Cradle to Cradle by describing the growing patterns of cherries for readers. It used to shout out the slogan "Reduce, Reuse, Recycle", but it did not change the design at the source. Moreover, the existing strategies of energy conservation and recycling can only prolong or degrade the life cycle of products and reduce energy consumption, but the resources will eventually run out. This book learns from nature; all things are nutrients, can return to nature. Using the concept of "nutrient management", product outcomes are carefully conceived from the product design stage so that substances can be recycled continuously. This concept is put forward, has a higher-level request to the design and the high-level request to the designer.

The Japanese brand Muji launched notebooks and notepads made of nonbleach paper, which is fundamentally different from the paper products we buy in traditional stationery stores. They are naturally a light tan in colour and are easy to recycle. Muji extended its application to packaging, labels and many other materials. Simplifying the production process significantly reduced the costs and from an environmental point of view, this significantly reduces pollution. Formed with a unique aesthetic value, these products are in sharp contrast to traditional, overproduced commodities, which are widely available all over the world. Especially in today's society, a large number of trees and vegetation are cut down, and excessive production leads to excessive waste, environmental pollution, and energy shortage. People can no longer ignore the challenges facing the environment.

#### 2.3 Case study

## 2.3.1 REDESIGN -daily product of 21st century" exhibition

In 2000, Kenya Hara planned a "RE DESIGN -daily product of 21st century" exhibition. "RE DESIGN" here refers to the de-familiarization and redesign of everyday items that we are used to. The meaning of "redesign" is to redesign and think about the society to achieve a common understanding of objects, from which to solve the problems faced by most people, thereby triggering people's values change and spiritual recognition.

The toilet paper designed by designer Shigeru Ban designed the core in the middle to be quadrilateral so that when we draw the roll paper, it generates a specific resistance, which can control the use of paper. This design also directly conveys the energy-saving information. And in terms of storage, the roll paper of the cylinder will have a large gap between them, and the stability is not excellent, and this quadrilateral

roll paper quickly solves this problem, making storage more convenient and spacesaving.



Figure 2.4 Toilet Paper designed by Shigeru Ban Source: Ban, 2004

Matches, designed by designer Kaoru Mende, give life to dendritic matches in a bionic form, awakening people's awe and thinking of all things in the world, such as nature, fire, and trees, at the moment of burning.



Figure 2.5 Matches designed by designer Kaoru Mende Source: Mende, 2004

#### 2.3.1 MUJI AWARD international design competition in China 04

Pebble Chalk, a stone shaped chalk. When we were young, we used to play with small stones. Hope this feeling of happiness and peace of mind during the graffiti can continue forever.



Figure 2.6 Pebble Chalk Source: Odaka, 2013

Air-Dry Standing Cup. After washing the cup, turn it over and place it. The cup handle will support the cup to create a gap between the cup and the table to facilitate ventilation. In modern life, it may not be possible to open doors and windows frequently for ventilation. Now, when using this vented cup, it can be dried naturally in the cabinet.



Figure 2.7 Air-Dry Standing Cup Source: Igawa, 2013

2/3 Table Lamp, this table lamp can work tightly against the wall. Desk lamp often can rely on a wall to use; if it can eliminate the space of dead Angle between chimney and wall, it can more join metope, can use space more effectively thereby.



Figure 2.8 2/3 Table Lamp Source: Tsubakimoto, 2013

Door-in-Door, in recent years, under the influence of declining birthrate and high housing prices, houses with small squares, and a small number of homes have become popular. Recently, there has been a wave of pigeon houses. Tiny square houses have become the mainstream and become the mainstream of the housing market. How to use home storage skills in a limited space to create a more substantial area is essential. To make effective use of the space in the room, the concept of "door" was rethought. Combine "storage" with the door to ensure the storage space in the door.



Figure 2.9 Door-in-Door Source: Jiajheng, 2013

STACK PIN, this design change the previous round shape of the pin to a stackable form. Make scattered pin can be arranged simply when taking down from the wall, also make force smaller than circular pushpin.



Figure 2.10 STACK PIN Source: Shihao, 2013 "Quick-Release Tape" is an all-in-one tool that is useful when you pack. The tape includes a wire so that you do not have to use scissors to cut when opening the box. With this simple but practical tape, you can pack and unpack your big box in one step without any damage to the box.



Figure 2.11 Quick-Release Tape Source: Weiyao, 2013

#### Chapter 3

#### **Research Methodology**

The main content of this chapter is that after profound analysis of the minimalist design, the problem of desktop clutter is proposed, and the situation of people's desktop clutter is observed through picture surveys and inquiries. The data is analyzed after the data is obtained. And according to this problem, design a reasonable product to solve this problem. This chapter will describe the development process that has been designed for the entire investigation process.

## 3.1 Investigate and observe people's desktop and data analysis

I interviewed 28 people. In the first interview, I asked them to take pictures of their desks and send them back to me. These photos were analyzed for insights that would trigger a creative solution for what is normally a very messy desk in everybody's home. A typical desk is equipped with a computer, whether it is a laptop or a desktop computer, it can be seen that the computer is an indispensable item for people now. Because the computer and its accessories occupy a large amount of space on the desk, as long as you place some other items on the desktop, the desktop is always prone to get cluttered.



Figure 3.1 Photos of the interviewer's desktop Source: Researcher

I analyzed the photos to list all the objects found in these photos, which shows how many objects all these 28 participants owned more clearly. Through collating the data and observing the pictures, I found that although the 28 people interviewed belong to the same age group, they have different jobs, genders, and identities, so their desktops do not have typical office supplies like the desktops of ordinary office workers. But most of the desktop is still a computer with a bunch of folders and some random clutter on the desktop. Through observation of different photos and combining with the occupation of the picture owner, the things they put on the desk are all related to work. For example, there is a soy sauce in the data. The owner of the soy sauce is actually an office worker in a soy sauce company. There is also the person who puts the bowl on the table because this person is a school teacher, she takes her own food to school to eat, so she will put the bowl on the table; And coins, mostly because people are so busy at work that the change they get from their purchases is thrown on the table. However, according to the data, pens are the most frequently put on the desk, followed by regular office supplies. The computer and its accessories are all fixed, it is not the cause of desktop clutter.

Item	Number	Item	Number
Computer	23	Key	3
Mouse	18	Measuring rule	2
Mouse mat	10	Printer	2
Keyboard	8	USB	2
Pen	158	Coin	2
Book	44	Watch	2
Cup	26	Bag	2
Document	17	Clamp	2
Cable & earphone	17	Bluetooth speaker	1
Tissue paper	12	Clip	1
Food & medicine	12	Sponge	1
Power strip	9	Toothbrush	1
Cosmetic	9	Lighter	1
Phone	8	Nail clipper	1
Glasses	8	Photo frame	1
Scissor & cutter	8	Hat	1
Post-it note	7	Bowl	1
Plants	5	Spoon	1
Comb	5	Screw-driver	1
Calendar	4	Rag	1
Mirror	4	Ashtray	1
Toy 💋	4	Kettle	1
Таре	4	Cotton swab	1
Table lamp	4	Shaver	1
Stapler	38/20	Soy sauce	1
Calculator	3 61819.920	Gift box	1
	- 0 1 6 1 8	Router	1

Table 3.1 The list of the number of items owned by 28 people

I believe that the observation of the pictures can be very intuitive to get a peek into other people's desktops and help in designing solutions that are suitable for most users and not just the designer. Therefore, in the second interview, I asked people about their demands for desktop items and based on other responses the following table was created. I believe that the things people think of must be the necessities in people's hearts. Knowing what customers really think is the most important thing for designers.

We can clearly see from the table that each of the 28 people has different needs for desktop items, but all 28 people think pens are the most needed items. The second is regular office supplies. At the same time, a small number of people chose items not closely related to office supplies, such as coins, food and medicines.

Item	Number of people	Item	Number of people
Pen	28	Measuring rule	8
Cup	25	Clamp	7
Phone	25	Bag	5
USB	25	Key	5
Tissue paper	24	Calendar	4
Book	23	Таре	4
Document	21	Bluetooth speaker	9
Post-it note	19	Mirror	7
Earphone	19	Cosmetic	6
Power strip	18	Pinter	6
Table lamp	17	Watch	6
Glasses	16	Comb	5
Stapler	16	Food & medicine	4
Calculator	9	Coin	3
Scissor & cutter	8	Тоу	3
Plants	8		

Table 3.2 The list of the 28 people choose what they really need

Through two interviews and observation of the pictures and data analysis, I found that there are many items that cause clutter on the desktop, and different people have different needs for the desktop. If you want to set their fixed position for each item, This is obviously not the best method, because each person's needs are different, I can not set what each person must possess or what items must be placed in what position. The data from the two interviews provides me with some design directions.I needs to make a design that can be used by people in different work fields.

#### **3.2 Design evolution and thinking process**

In the beginning, I proposed three design directions. The first direction (Figure3.2 below) is to use the vertical space of the wall to organize all the desktop space on the wall to store it, to solve the problem of desktop clutter. The second direction (Figure3.3 below) is to design a modular desk organizer. The third direction (Figure3.4 below) is to use the space inside the table to design and hide all the items inside the table to achieve the neat effect of the table.



Figure 3.2 First direction sketch, use the vertical space of the wall



Figure 3.3 The second direction sketch, modular desk organizer



Figure 3.4 The third direction sketch, hide all the items inside the table

I chose the second idea, using the space on the surface of the desk to design a convenient and portable desk organizer, I thought of using the internal area of the cube to design, I want to try to put all the functions in a cube I realized it internally, so I went to understand the various unfolded drawings of the cube and tried to make an integrated, portable desk organizer.



Figure 3.5 The first sketch of use the internal space of the cube to make a design



Figure 3.6 The second sketch of use the internal space of the cube to make a design

Most of our conventional table storage is made of acrylic materials and pen holders, which lacks aesthetics and versatility. However, not setting the position of each item can solve this problem. This method is not called design. Due to the rapid progress of the times, many products have been replaced. For example, people used to listen to songs with MP3 players and used calculators to calculate numbers. Now they are replaced by mobile phones. Because the internal settings of this cube are integrated, the desk organizer module and the module cannot be changed between each other, the position is fixed, and the function of each part is set, so the idea of multi-function is not realized.

In the design process, I still consider how to use a cube to complete the multifunctional design, so I thought of the method of using boxes to install boxes and try to create more possibilities. Large boxes and small boxes can fit many small boxes, but how to connect these little boxes is also a problem to be considered. I tried to use cork chips for practical operation, and found a suitable structure from practice, and adopted the connection method of embedding each other with modules to connect.



Figure 3.7 Put all small boxes into big boxes



Figure 3.8 Embedded connections between frames

After confirming that this structure can be implemented, I started to use SketchUp to make 3D models and put daily necessities in the model to see the whole. This modular design gives a lot of space for people to assemble and connect freely. People gather and place objects according to their usage habits. The design of free assembly also provides users with assembly pleasure.



Figure 3.9 3D models of the desk organizer

After confirming that the structure does not change, I started to use the module to create more possibilities and try more connection methods. During the process, I found that because my module only has a square frame, it will always be connected no matter how It's square, and the design of only the box is boring and boring, because no matter how you connect it, the box is still connected. I think that if you look at the frame separately, it is actually a panel. If there is only a panel, it can also be connected by an embedded method, so adding the panel on the basis of the original box only will create more possibility.



Figure 3.10 Different connections after joining the panel

In the original box module, the panel is added, so that the modular system design increases the possibility of more combinations. At the same time, I had a question about whether this design is stable. If I place objects on each frame, will the frame deform. Then I found that the current frame has only four sides, and it is very likely to be inclined. It may also deform when carrying items because it lacks a back to support it. I consider adding a backplane behind each module. Still, it will make the entire connection system untenable and difficult to control, so the best way is to design a whole backplane so that all unit modules can be installed freely. On the board, it also does not affect the use and creation of the embedded connection system.



Figure 3.11 Full grid backboard

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After adding the backplane, after embedding the unit frame and panel on the backboard, each unit module is stabilized, and the product will not bend or tilt when placing items. At the same time, since modules can be freely combined, the entire backboard provides substantial support for various possibilities.



Figure 3.12 Rendering of after adding backboard 1



Figure 3.13 Rendering of after adding backboard 2

Now, this system design is a complete system; modules can be freely combined and then embedded into the backboard firmly. When I use this system to a combination of different combinations, suddenly thought, unit module currently only vertical and horizontal movement may be the backboard, no possibility allows the unit modules may move it sideways. I found that the square backplate No matter how it is spliced, it is still a rectangular backboard. It has the same doubts as before when there is only a box. Can the shape of the backboard be changed, so that the combination of backboards also generates more creative possibilities. So, I tried to convert the backplane into a triangle, because I think triangles can be combined into squares, rectangles, or parallelograms. But if the backboard is square, no matter how it is connected, it will be square. And I also added an oblique embedding method on the backboard so that the unit module has more ways to move.



Figure 3.14 Triangle backboard

At the intersection of each line on the backboard, a hole is formed. This hole can be placed with a pin to hang some small objects, such as hanging some data cables, headphones, and so on.



Figure 3.15 Hanging items with pins



Figure 3.16 Unit module embedded in the backboard

The backboard needs to be fixed to the wall with screws—the remaining three movable modules. Frame, panel, and pin can be freely combined and used according to the user's habits. Create your combination method. Use it in another combination to make it fresher.

## Chapter 4

## **Final Design**

This chapter will give a detailed introduction to the final design, as well as a description of all aspects of the product and the use steps. And put it forward more possibilities for the future development of the product.

## 4.1 Grid System Design

In response to the problem of desktop clutter, the final design is a grid system design and a freely assembled modular design.



Figure 4.1 Grid system design Rendering 1



Figure 4.2 Grid system design Rendering 2

According to the previous survey data and results, it is known that different occupations have a different use of necessities. The design of this system does not define what items each module must place, but the users themselves define their use functions: any age and any different working group.

People who regard painting as a profession, use this grid system to place their painting tools, which not only can be freely matched and assembled but also keep the desktop neat and tidy, leaving the most significant space for a painting to create.



Figure 4.3 Painting professions place painting tools

The businessman put all office supplies on the grid system to keep their desktops clean. A clean space can effectively improve office efficiency.



Figure 4.4 Place office items

People can choose the color combination and combination according to their decoration style or personal preference. Each module can be purchased separately.



Figure 4.5 Different combination and styles 1



Figure 4.6 Different combination and styles 2

#### **4.2 Product Details**

This system design consists of four parts, the basic backboard, frame, panel, and pin. The frame includes triangle frames and quadrilateral frames of different sizes.



Figure 4.7 Each unit module of the grid system design

Only the backboard of the entire system needs to be fixed on the wall with screws, and the remaining modules can be freely moved and combined. The slot of the backboard is 25mm deep, and the embedded module can be stable without falling. The material used for the backboard is Richlite, which has many advantages. It is an Abrasion and corrosion-resistant material. It can support any edge details, including custom-edge designs, and several color options. It's an ideal substitute for hardwood and steel. It applies to different areas, Architectural millwork, Furniture, Industrial, Musical Instruments, and so on.



Figure 4.8 Backboard details

The material of other movable modules is aluminum. Frame corners can be connected to different unit modules.



Figure 4.9 Frame details

I designed the shape of the pin like a snowflake instead of the shape of a traditional round stick or square stick. Due to the gap formed by the intersection of each line of the backboard, the shape of this snowflake can fit well on each side, and it is better fixed and fixed on the backboard, which is not easy to fall off.



Figure 4.10 Pin details

The panel is also connected in the same way, and the material is aluminum.



Figure 4.11 Panel details



Figure 4.12 Installation steps

#### 4.3 Product application and future development possibilities

The design was initially intended to be a desk organizer for placement on the desktop. Later, it was discovered that the use of wall space could more effectively keep the desktop clean and tidy, but it is not only placed on the wall. Sometimes there are not many items on the desktop, but there is a lack of something to make the items concentrated, instead of so messy placed on all corners of the desktop, so this time, the unit module can be taken out separately and put some scattered Small items or items that you like to keep at hand. This mode can be used both on the wall and on the desktop. All methods of use are determined by the user.



Figure 4.13 The unit module is used on the desktop

After solving the problem of desktop clutter, place this design in a different space. It can not only solve the desktop clutter, but it can also be placed in different areas for different items, such as in the living room—excellent decorations.



Figure 4.14 Apply to the living room

Since the materials used are waterproof and corrosion-resistant materials, this grid design can also be applied to spaces with more water, such as bathrooms and kitchens.



Figure 4.15 Apply to bathroom



Figure 4.16 Apply to kitchen

It can also be used as a shelf for children to put toys on, show all their beloved models, and let the children create a display stand for their dear models.



Figure 4.17 Place toys as display racks

Considering the future development of the product, this system can be regarded as the basis of furniture. After expanding the scale of the system, it can become a TV cabinet and a different wardrobe.



Figure 4.18 Become a TV cabinet



Figure 4.19 Become a wardrobe

This wardrobe, which is different from the usual one, reminds me that after I graduated, I went to work in another city. I needed to rent a house for living, but like young people who just came out to work, they generally would not rent a good space, so inside Generally, there will not be customized cabinets and some supporting facilities. This system allows me to see the possibility of future development as product design. In the future, this system will be expanded in a larger direction, and this system will present more possibilities.



#### Chapter 5

#### **Conclusion and Recommendations**

#### **5.1 Conclusion**

The project started with minimalism, through the analysis of minimalist products to discover the application of minimalist theory on products, and applied to the design of grid systems. The grid system design of this project uses the most straightforward shape and few modules to create more useful functions. In the system design, no edge or blade is redundant, which is also in line with minimalism. Use the concept of minimalism to design, let the designer more clearly understand the essence of the design, do not need to design some extra meaningless decoration, make the design return to the essence. In this project, the design of the grid system can effectively solve the problem of desktop clutter. A neat and clean space can effectively improve people's work efficiency, delight people's moods, change people's lifestyles, and improve people's quality of life.

#### **5.2 Recommendations**

The design of this grid system has shown a lot of development. Considering the future development of the product, we will change this system to a different scale to discover more functions. For example, I thought before that it could become a TV cabinet and a wardrobe. This system is also very likely to be a bookcase, or even applied to other furniture in the room, and become an essential module for more furniture. In the future, it is considered to develop more potential in the system.

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