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EVERGLOW: Enhancing Digital Touchpoint in Customer Decision Journey for Luxury Jewelry Retail

Graduate School of Media Design,
Keio University

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A Master's Thesis
submitted to Graduate School of Media Design, Keio University
in partial fulfillment of the requirements for the degree of
MASTER of Media Design

KO WEI NIEN

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EVERGLOW: Enhancing Digital Touchpoint in Customer Decision Journey for Luxury Jewelry Retail

Category: Design

Summary

In the 21st century, digital impression of jewelry has become a key feature in the trading of jewelry. While some company owns the resource to make Hollywood style production, most of the small-size jewelry studios struggle to appeal. The two obstacles are time and set up. *Everglow* media design package is an integrated media manual to simplify the photoshoot process. *Everglow* merges brainstorm, scene set-up, filming, and post-production into one stage. As the steps are simplified, efficiency is increased. In literature review, the author dives into the concept of luxury strategy and its digital opportunity. Ethnography research is conducted to understand the mental model of different creators and sales. The result shows that most creative thinking can be bounded by "color of gemstones," "motif of inspiration," and "type of accessory." The three keywords are designed to form a matching system between jewelry merchandise and motion graphics. Final production is a video shorts of jewelry impression under 30 seconds to be sent to customer via direct messaging. Upon user test, the author realizes the prototype matches the needs of young professionals the best. Future development is discussed to help creators to not only customize videos based on merchandise, but also to speak to the emotions of customers and of creators.

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Chapter 1

Introduction

1.1. Background

Fine jewelry is a design for the pleasure of the eye. In the history of visual arts, she is always to be depicted. Her glamor blossom as the finest luxury and preciousness the beauty of each possessor. The tradition continues to dominate our daily visual in modern society. In the 21st century, the advancement of film technology further allows creators to demonstrate the brilliancy of jewelry in motion. In the movie industry, we see the depictions of "Heart of the Ocean" diamond in *Titanic* and the "Jeanne Toussaint necklace" in the late *Ocean's 8*.
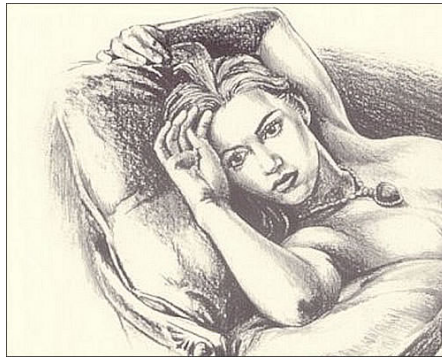
Figure 1.1: Drawing of Rose wearing *Heart of the Ocean* in *Titanic*

The jewelry industry embraces the potential of jewelry in motion graphics. In 2006, *Cartier* began its movie series on YouTube channel. The most stunning

development came out in 2011 "Cartier Odyssey" when the legendary Panther takes the viewer on a journey through Cartier's royal history into modernity. The 3-minute short took 5.3 million dollar, 2-year film with post-production, and over 70 crew. "Cartier Odyssey" symbolized the ambition of the jewelry industry to enter the age of the Internet and new media [11].

Figure 1.2: Cover of *Cartier Odyssey*

Million dollar production is always exciting but it does not happen on a daily basis, especially not all the companies can afford the spending. How does all the media advancement affect the small jewelry business? Very much but not very well. As the daughter to a small jewelry business in Taiwan, the author sees how the people have worked to catch up with technology. Attempts are made with effort but none successful.

The focus of the research is to enhance customer experience for small private jewelry boutique, which will lead the boutiques to connect with the new shopping behavior. These jewelry designers produce original designs with top local craftsmen. Their business model takes care of customers on a one-on-one basis. They advocate brand identity and loyalty via words of trust from customers. The research joins collaboration with the following industry for research ground: Alexs Fancy Jewelry & Fine Arts (Taipei & Shanghai), Universal Jewelry (Hong Kong), and Pink Sapphire (Shanghai). Through the research, the author discovers the niche of the business falls in customer loyalty and retention rate. All the successful stores work with long-term, over 10-year customers. Therefore, the author aims to better one of the most frequent digital touch point—direct messaging on

social media between sales and customers–to create a better integrated customer experience.

The old thinking is that luxury business should be heavily based on tactile shopping experience that the VIPs are best tended when they are physically present. As the internet develops, the strategy is facing changes. The shifting trust to internet or social media trust is significant with the Millenial generation (born from 1985 to 1994). Simultaneously, the elder generation or the exisiting customers age around sixty is also gradually adapting to the trend. Whether it is based on habit or by the irresistable convenience, all customers are dependent on the digital world in some digree. As a result, the jewelry market is seeing a stronger digital presence as the key to successful engagment with customers.

The jewelry market in Taiwan is no exception from the global trend. If not, they may actually be one of the first to experience the benefits of the technology advancement. Jewelry business operate in small teams and high confidentiality. Therefore, strategic connection with customers over the private messaging have proved to be very useful.

As a background, in the city of Taipei, there are 1,143 registered small and medium-sized jewelry studios. Most of them are family business, others are young start-ups with close friends. Amongst the studios, about 4% are fine jewelry. They operate in a small base, usually no more than 20 people. Less than 10 is more commonly seen. The fine jewelry studios provide for the top 1% wealthy Taiwanese and make good profit. The problem is wealthy rich is a highly competitive market. Every luxury industry, jewelry, haute couture, car, real estate, have their eyes on the wealthy rich. While other industries follow the progression of normal business: start-up, make profit, expand business, hire more people, take more orders, and etc. Fine jewelry is an elite-based industry that is always understaffed.

The nature of fine jewelry disagrees with premature expansion. Rare gem is an extremely valuable asset in small volume. For example, the Blue Moon of Josephine, a rare 12-carat blue diamond (roughly half of a thumb), is auctioned for 48 million dollar by Sothebys' . Gem is easily transported and easily lost. Therefore, for fine jewelry, it is almost always limited to family relatives or close friends. Exception is, of course, to the extreme–the titans like Bulgari, Cartier who have become corporates. In a world where a picture is worth a thousand

words. Private studios are at a disadvantage, as they cannot produce visually stunning jewelry imagery for their customers. The lack of capitals decides they cannot make the video at an affordable budget within reasonable time frame. Yet, the market demands a better internet language.

Currently, studios outsource photography work to professional photographers or use VUE filming application. The former one takes about NTD 50,000 and over two months to complete. Studios only photograph star design every quarter. The rest of the design are recorded with VUE application which brings out the color of stone but cannot reflect well. The kit is a solution that cuts down time, budget, and manpower while upholding the beauty of jewelry. The kit provides a manual, several videos available under open resource, and a projector. The video and manual will be designed to match the different qualities of stone. The projector must be the new type that can project large imagery in a close distance. In this research, the author uses Sony Xperia Touch which enables close-up projection of less than 10cm distance.

1.2. Research Objective

The need for an appealing, vivid digital presence is the same for small-size jewelry studio, if not stronger. Their customers are sophisticated and highly mobile. Private retail spends more time exchanging digital contents over direct messaging. In other words, refining digital touchpoint becomes a keypoint for the decision journey. Yet, there has yet to be an efficient and visually-pleasing way to create jewelry impression. Creators must choose between high-budget professional photography or diverge staff time to make mediocre photoshoot. *Everglow* is an integrated media package that makes jewelry filming more user-friendly by simplifying the thought and creation process. The production is full of substance and entertainment. The motion shorts increases refractory brilliancy of jewelry within short video time, along with inplant visual motifs as visual stimulation. Therefore, *Everglow* provides a new approach to easy-customization of jewelry motion graphics.

1.3. Product Description

The kit is an integration of late projector technology with jewelry display, and point-and-shoot record with ones own phone camera. Content of the package include: a database of opensource motion graphics, a manual, and a short-throw projector that is compatible with all flat surface. User will select a combination of motion graphics and jewelry piece. After the integrated scene is set, user can easily film the video with a phone camera in less than 10 minutes. The completed product is a combination of beauty and creativity.

In this essay, prototype is built with SONY XPERIA TOUCH (short-throw projector), SONY XZ1 phone camera, self-designed jewelry manual based on data gathering, and a database of opensource motion graphics. Users project a 14-inch wide video on a smooth surface. Then, display the jewelry to catch the proper lighting. Since projector shoots out a 180-degree light source of flickering color, the jewelry will catch the light in an even manner. As a result, the jewel reflects sparkles and even changing colors of stone. Users can use as simple as a phone camera to videotape the layout. The video will present a beautiful jewelry of proper lighting in an ambiance.

1.4. Significance

For today's small-size jewelry business, a large percentage of customer interaction happens over direct messaging. The potential of visual image over messaging is yet to be realized. Companies have been hesitant to produce fine digital impression due to lack of time and money. As *Everglow* proposes a media package that produces motion graphics of jewelry of customization with a short frame of time, the potential can continued to be explored. The beauty of jewelry will no longer have to be described via text or still-life photo, but it will be a lively demonstration of its characteristics (presenting a view as if the viewer is fondling with the physical item). With *Everglow*, the spark of interest for a product can begin far before physical meet up and creating a higher chance for successful sales.

1.5. Organization of Thesis

This thesis is divided into five chapters, in addition to bibliography and appendix.

Chapter 1 introduces the context, motivation, and objectives of this research, with preview of design concept and business model.

Chapter 2 reviews the related studies and existing solution on the market.

Chapter 3 explains the design of the kit in detail, including initial research, ethnography fieldwork, in-depth interview within the industry, and implementation.

Chapter 4 tests the Studio Kit prototype with target users to address potential revision.

Chapter 5 discusses the findings in literature review, experiment result, and future implementation.

Chapter 2

Related Works

2.1. Fine Jewelry & Artisan Craftsmanship

In the modern day, jewelry is more often associated with the concept of "luxury goods" rather than craftsmanship. While the high-end marketing strategy and its sky-high price do seem to agree so, one must not forget "craftsman skill–the transformation by skilled individuals of raw materials into quality household goods or products to serve the community [15]" as the fundamental to its very existence. The history of jewelry making dates to pre-civilization. Its purpose, design, and material have also gone through many transformations. For this research, only modern jewelry is brought into conversation. The modern period for jewelry in the western civilization is linked with the rise of global economy at the beginning of the twentieth century. It is the time when studios of future luxury jewelry brands were found and began to extend its global influence. The design along with western expansion come to a smooth transition of concept into the new days. On the other hand, Chinese jewelry, as with its history, goes through a gap between its origin and western modernization.

2.1.1 Western Jewelry at the Turn of 20th Century

Jewelry is an "insatiable desire," as well as, a political vessel [1]. Innovations and social movements at the beginning of the twentieth century made the world a global village. The mysterious facade of fine jewelry and its royal customers was

lifted. Through mass media, commoners were able to peek into the glamorous high society gala. Designers, in terms, gained access to cross-culture inspiration. Development and progression led to prosper opportunities for the jewelry business. Louis-Francois Cartier founded Maison de Cartier in Paris in 1847 [3], simultaneously Sotitio Bulgari opened its studio in Italy in 1884 [1],. Along the way, Chaumet established its official brand in 1900 [4], Van Cleef Arpels joined business in 1906 [7], Harry Winston took over the New York upper east side in 1932 [2], etc.

Pre-1900s period, jewelry studios like Bulgari and Cartier upheld local authenticity, as Bvlgari did the traditional Greek and Roman aesthetics. Their iconic style was architectural beauty with blood combination of colors. Around 1920s, the fabulously rich Indian royalty "the Maharajas family" visited Europe and inspired an Indian influence on many jewelry maison. Upon commission of the Maharajas, Cartier resettled a 20-carat emerald along with its emerald and diamond set onto a new crown. Cartier kept a close relationship with the royalties, along with many other rulers around the world, including Russia, Switzerland, Spain, etc. Collection beyond 1920s demonstrated a clear shift from local roots to diversity. Take Bvlgari for an example. It accepted Art Deco style from the States and launched a completely different line from its original Roman motifs. Court aesthetic and globalization were not the solitary progression. The developments by the Industrial Revolution also encouraged designers to explore and experience with new material. Cartier was crowned "jeweler of Kings, King of Jeweler" when she introduced platinum into jewelry making.

2.1.2 Chinese Court Jewelry & Its Modernization

As stated above, the western world is filled with jewelry studios to service the royal and the rich. In the first part, China did have an existing hierarchy that supported the collection of the rare and the beautiful. In fact, Kang Xi from the Qing Dynasty was known to have his treasury for trinkets. China did not produce a rich variety of gem stones, the antique jewelry mainly circled around jade, pearl, and gold. Jewelry was used more for political purpose, as their court uniform or the scepter to the royal family. The National Palace Museum in Taiwan showcased some different materials such as turquoise, diamond, rhinoceros horn, and ruby.

Those were the result of foreign trading and reserved for the royal family only. Family of jade trading did move into the twentieth century. Yet, there was one big issue for the modernization of Chinese jewelry—the influence of the west. As China was quickly absorbing the thinking and aesthetic of the west, many of the traditions were neglected. Especially, east and west jewelry differed greatly in color combination and motifs. Therefore, modern day jewelry studios did not begin their branding till much later. Some that were more successful and took the international notion include Cindy Chao, Anna Hu, Chou Shengsheng, etc. They began their design journey at the turn of 21st century. Even so, their design is still more of western tradition rather than Chinese taste.

2.2. Digital Impression of Fine Jewelry

Every century brings a new challenge to the jewelry industry. The explosion of internet has changed the shopping habit drastically. Customers, regardless of age, turn to the internet and social media for suggestions and answers. While in-store experience is still a must for high end luxury shopping, "53% of customers believe they will benefit greatly if they can learn about the products on the internet before visiting the actual store; 43% of people state that if they can learn about the availability of the desired merchandise online or through applications, they will still prefer to shop at the store [16]." In other words, if traditional retail store can embrace the possibility of internet promotion, they will foresee a promising profit. Customers are more comfortable to express their desired merchandise over internet chatting. Therefore, it is crucial for shops to capture the attention of customers.

2.2.1 Taiwan & Internet 4G Era

In Taiwan, the users for 4G service is over 20 million people, about 92% of the total population. To be exact, Taiwanese citizens spends more than 3 hours on smartphone browsing, which is 55 minutes more than global average. The high coverage of 4G data is a result of cheap service. In Taiwan, 4G data comes with an all-you-can-eat plan starting at NTD 999 (around 3,000 yen) [10]. As Taiwan is able to support cheap 4G service, there is more opportunity for customers and sales

to communicate via Internet. Customers are less likely to worry about opening digital file and wasting their data usage. High speed also gives more freedom of the format of file. 1G movie takes less than two minutes to download, so any file size smaller than that can be downloaded within the blink of an eye [16].

2.2.2 Jewelry Photography & Online Tutorials

Jewelry photography is the most commonly made digital imprint. Photography is used in global campaign and phone snap to send via text. Private studios also collaborate with professional photographers, who makes beautiful but time costly shots. In Taiwan, depending on the schedule of the photographer, a photo-shoot takes from 1 to 2 months. The average charge is NTD 50,000 to 100,000 (around 180,000 360,000 yen).

As the shooting takes time, many turn to alternatives. More often, jewelry studios will have some basic equipment for photo-shoot. Depending on the skill of the staff, shooting usually takes an afternoon to 1-day. In comparison with professional photography, in-house shooting is cheaper and safer. However, in-house photography can only capture the outline of the jewelry. Many problems emerge, such as unable to proper macro focus on small jewelry, catching the surrounding reflections. In-house photography also lacks the potential to change the settings of photography. The background is kept as black or white, acrylic board or cloth. Any additional design with have to be depended on the skill of the staff. Some are more crafty and can make small units, but most cannot and thus limited creativity.

Tutorials on in-house photography can be roughly separated into two categories: textual-base or video based. Text-based tutorial breaks down the steps into pure paragraph description. Some of the procedures are accompanied by photos to better explain the situation. In most cases, text-based provided more professional suggestions, such as the settings of camera and the model for different equipment (Figure 2.1). Yet, as jewelry studio staff are not necessarily photo-shoot enthusiast, it is often not a joyful experience for them to read through the paragraph.

Video tutorial is a popular method in todays Internet world. Each video ranges from 3 to 10 minutes, covering from set-up to shooting to final edit. Some
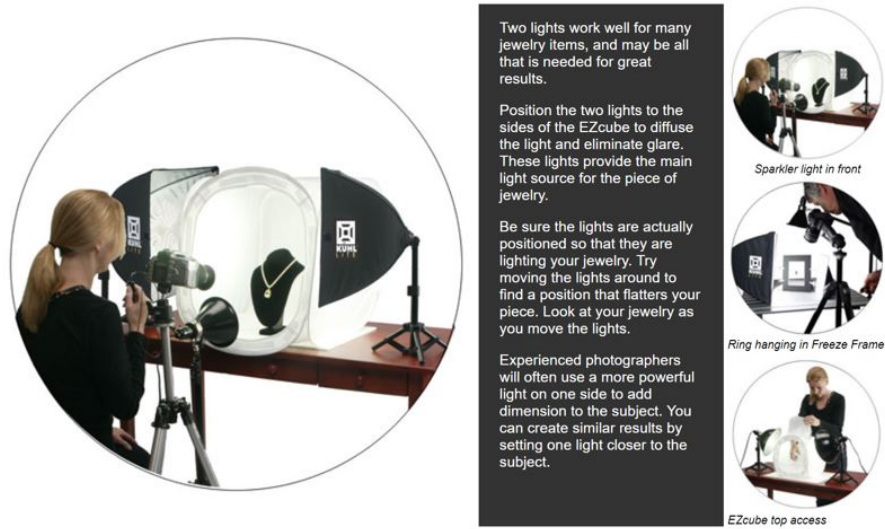
Figure 2.1: TableTop website tutorial

parts of the video will be fast forwarded or shortened. Different youtuber also has a different emphasis. "My Studio" explains in detail how to record different types of jewelry. There is also an emphasis on how to tilt the jewelry to avoid reflection(Figure 2.2). Video tutorial is quick to watch and easy to understand. However, it may provide less information than text-based tutorial.

2.2.3 VUE application on Smartphone

VUE is a smartphone application that can be installed both on iOS and Android system. It has been observed as one of the jewelry photography method by the author during the Hong Kong International Jewelry Fair in March 2018. An agent from Shanghai was searching for several over 10-carat ruby and emerald gems. Images of gem are asked to be recorded solely with VUE application and sent via WeChat messenger. VUE is designed as an application for easy filming.

Figure 2.2: Photographer trying angles to search for the best angle to photo-shoot, order is top left, top right, bottom left, to bottom right
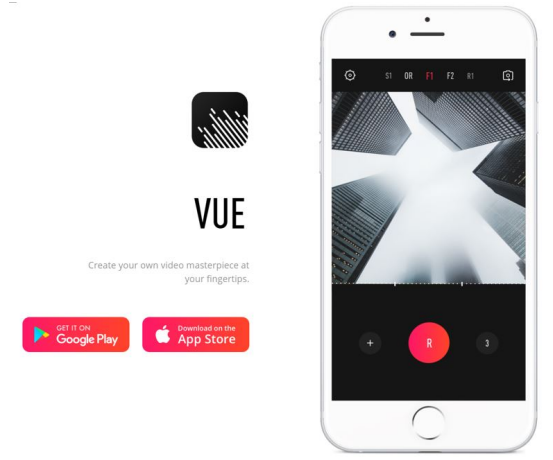
Figure 2.3: Concept image for VUE application

2.3. Private Fine Jewelry Studio and Relationship Marketing

Positioning has become one of the key focus for jewelry business. Upon careful consideration, the author sees that "craftsmanship" is the heart of fine jewelry, and "luxury strategy" is her social appearance. Private studio puts relationship with customers above all. As Kapferer explains in *Luxury Strategy* [12],

1. Luxury gives a very strong of emotion and creates an illusion of intimacy and deep satisfaction

2. Luxury cannot exist without a history.

3. A luxury product is derived from the spirit of the creator.

4. Luxury provides exclusivity and rarity

The value of luxury product is the emotional connection it creates with its customers. When a customer believes the sales, she sees the value in stone, in design, and in service. When invests large money, she wants to feel secured.

Private studios have natural advantages in relationship marketing. The customers are introduced on reference-base, which naturally creates a sense of security and intimacy. Second of all, the studio is set to be by reservation-based. Therefore, each customer can enjoy full privacy and service.It is unlike in an open store where interactions can be constantly interrupted. Therefore, in private studios, the aim is sometimes not so much to attract new customers but to "maintain, and in multiple-service organization-enhancing customer relationships [5]." The key point for on-line promotion for the jewelry studio is not to dazzle the potential customers, but to showcase promise to the existing customers. The positioning should be targeted as a gratitude towards customers for their trust.

2.4. Luxury Retail & Digital Market

The 'right' digital strategy differs for every luxury brand, but the essential elements are the same: a strong mobile presence, a selective approach to social media, and a tight focus on carefully chosen metrics. [9]

Luxury retail used to believe that only mass products are suitable for multi-brand retail websites. Highend customers are not willing to pay premium price over the internet. However, successful ventures like "Net-A-Porter" or Chinese Daigou has proven otherwise. "One telling statistic: while overall sales of luxury goods grew by a mere 2 percent in 2013, online luxury sales increased by 20 percent to an estimated 9 billion. We believe this growth will continue; we project

that sales of luxury goods online will more than double to approximately 20 billion in the next five years."

E-commerce is only part of the iceberg. There is more to digital opportunity. "Our research found that an additional 40 percent of luxury purchases are in some way influenced by consumers digital experience–for example, through online research of an item that is subsequently bought offline, or social-media "buzz" that leads to an in-store purchase."

It is ideal to engage customer in every stage of "customer decision journey." Especially, when the internet empowers more time to shop. For example, when customers are commuting, dining, or shopping, they can be connected to a desirable luxury research on their smartphone. However, in reality, brands are more selective of channels based on their positioning. There comes in many ways for proper digital promotion but it all comes down to what the company is good at. A successful strategy should take the company's e-commerce profit, online reach, and marketing survey to determine its best "digital archetype" (Figure 2.4).

We have identified three digital archetypes within each luxury category.

'Plugged-in pro'	'Selective e-tailer'	'Hesitant holdout'

• Diversified retail strategy (both mono- and multibrand stores)
 • 360° use of digital, from social media to full-fledged online store
	• Tight retail control (monobrand sites only)
	 • Opportunistic use of digital as entry point for aspirational customers
	   - Marketing channel
	   - Online store for entry-level products only
		• Small companies
		 • Tight control of retail (monobrand stores only)
		 • Use of online as showroom only

McKinsey&Company

Figure 2.4: Archetypes of Online Strategy

The top three solutions are mono-brand mobile application, multi-brand shopping websites feature, and social media mass media. Yet, hurried investment proves futile. Only 4% of luxury shoppers, defined as high-income consumers who purchased at least one item from a luxury brand in the preceding year–reported downing a luxury-brand app. Only about a quarter had downloaded any mobile

apps at all. Social media users only post in "an infrequent rate: less than one post per month on average, with majority of the posts taking a neutral position on a luxury product (for example, posting pictures of leather handbags) rather than expressing either a positive or negative opinion about a particular brand or company." There appears no perfect solution to what is best for e-promotion. Evaluation of small business shows that it is most suitable for one to take on the "hesitant holdout" section. There is less investment and require less manpower to uphold the entire channel. If the small business can take on one successful standpoint, then there is still a chance for them to take a lead in the online world.

2.4.1 Transformation of Customer Experience
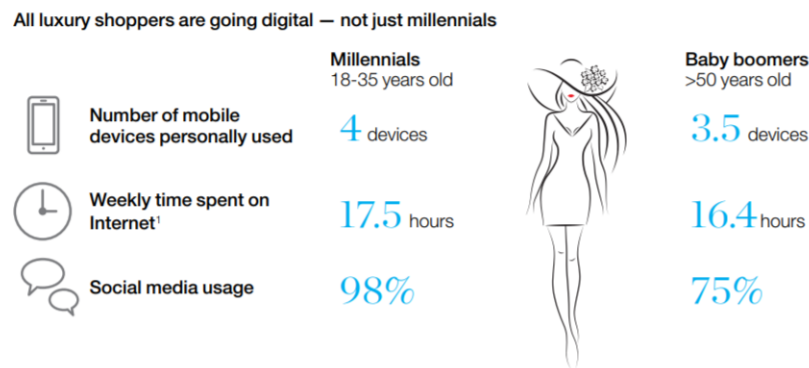
Figure 2.5: Comparison between behavior of Millennials and Baby Boomers

According to 2018 McKinsey report, there is a increasing population of next generation shopping. Millennial is slowing replacing the baby boomers as the main force in sales growth. A new social group means new preference. Baby boomers tend to believe in words of mouth, that is, awareness by reference in person. On the contrary, Millennial turns to social media for luxury research. They follow the opinions of their opinion leaders. Statistics shows that they spend 98% of time on social media(Figure 2.5). Their customer decision journey is thus, more heavily influenced by their online experience. The traditional bonding method to send handwritten postcards is inapt to the change in shopping behavior. In a digital world where consumer is "trained to expect continuous excitement," customized motion graphics is the perfect solution for small-size luxury jewelry retail.

2.4.2 Customer Decision Journey

Customer decision journey refers to "the process when customer is open to suggestions [8]", such as physical billboard, telephone customer care, blogger on social media, etc. The traditional concept takes the process as a funnel, but it is now more commonly as a circular motion. Especially, when brand consideration is introduced and re-interrupted into day's cycle.

High consumer satisfaction leads to positive success. Yet, "too often a focus on specific touchpoints or channels results in incremental progress that only allows a company to keep pace with the changing customer landscape." It is not easy to get a comprehensive view of customer journey(Figure 2.6 [14]). Even with the latest technology and market report, the customer multi-channel shopping behavior is increasingly difficult to understand.
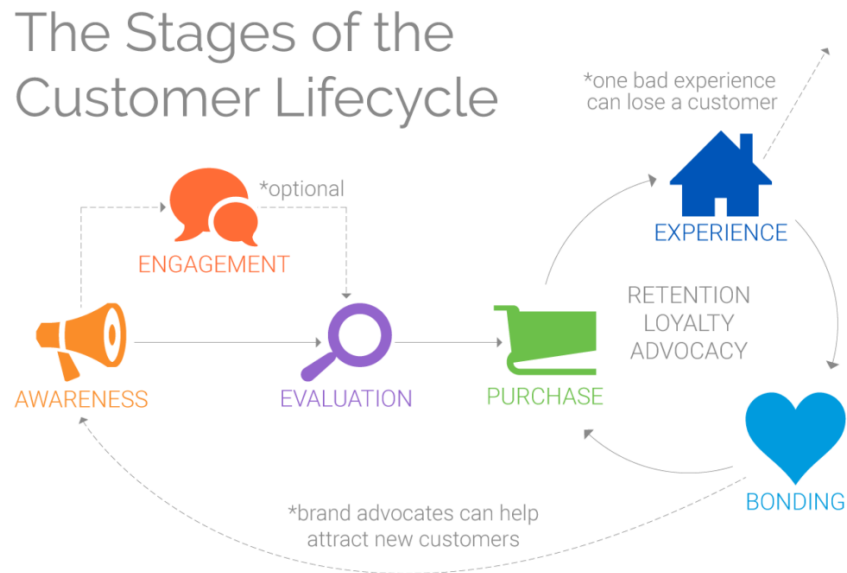
Figure 2.6: The decision-making process is now a circular journey with four phases: initial consideration; active evaluation, or the process of researching potential purchases; closure, when consumers buy brands; and postpurchase, when consumers experience them by McKinsey

"Designing excellent customer journeysan orchestrated sequence of touchpoints that customers traverse to address common requests and issues, often in a mix of live and digital channelsis critical to a customer-experience transformation [13]."

There is the physical touchpoint, such as call center and other customer care service channels. Usually, data are gathered from various digital touchpoints of different functions (sales, marketing, and customer care) and analyze pain point from these individual touchpoints. However, "lack of visibility across functions hindered more sweeping, lasting progress."

2.4.3 Growing Chinese Customer & Their Online Shopping
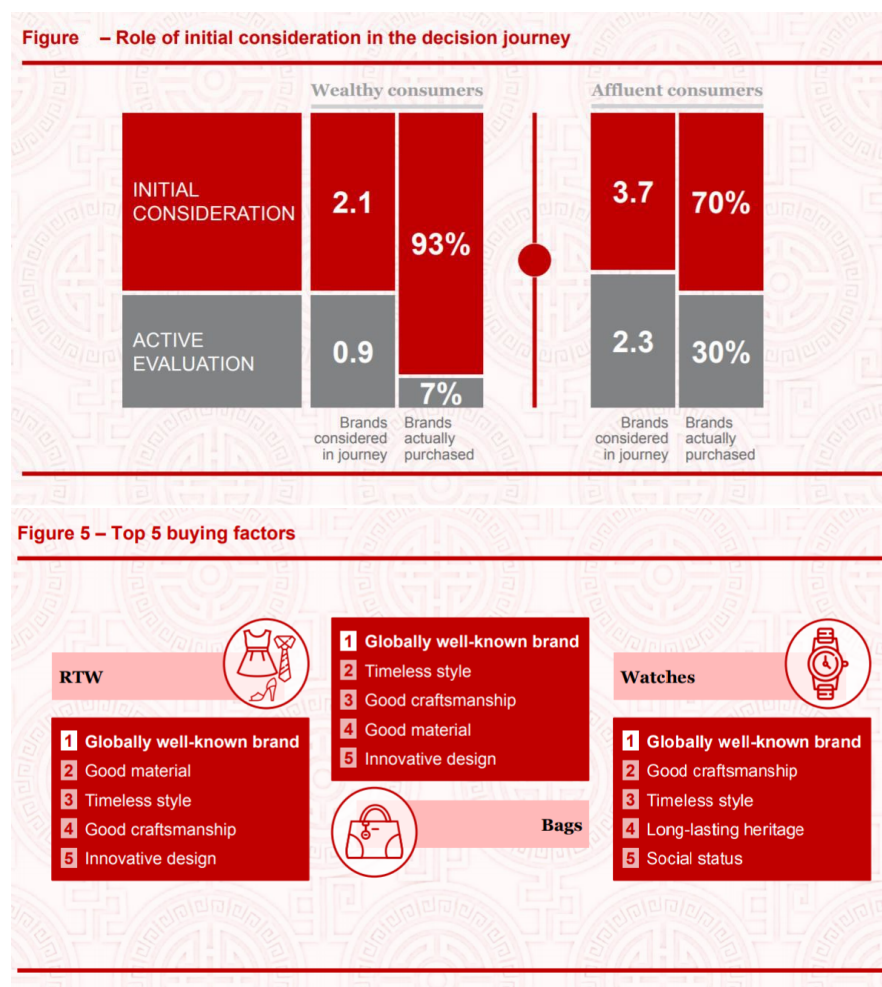
Figure 2.7: Market report on Chinese consumer behavior

China is undeniably one of the largest market for luxury shopping. As selections flooded the country, her people are also rapidly developing a unique, sophis-

ticated way of shopping. Statistics show that Chinese consumers are beginning to put heavier consideration on "quality of materials or craftsmanship than with brand recognition"(Figure 2.7). China houses one of the most innovative social media platforms like WeChat, TMall, Alibaba, and Tencent. The open source allows users to be connected with information that has yet to launch in mainland. Most brands take data and then decide the best way to promote. What seems not to have caught up with their speedy development is the fact that online purchase for luxury retail has yet to take-off as "only 7% of Chinese luxury sales occur in official online channels. [6]" The gap between strong interest and low purchase is not a result of lack of online usage, but due to the awareness of prices difference between national and international market. Most Chinese prefer to shop abroad or at duty free location, for example Hong Kong.

Another major reason for low purchase rate in China is due to the "mainland mismatch." In physicality "80% of luxury stores are located in the top 15 Chinese cities that only account for 25% of wealthy Chinese consumers of luxury. [6]" In spirit, mainland stores are weak in providing a global view on fashion trend, as well as, providing premium private service to their VIP customers. Most customers would seem to believe they receive better care and quality insurance when they are abroad.

2.5. Open Source Creative License

VIDEVO is a website that gives out free creative license for all online users and creators. Based on the different usage and terms, many of the videos can be used for business creations as well. In today's online world, many of the creators follow a sharing economy. Even though they do not receive direct monetary gain, they can create to make the creative world a better place. For the research, the author downloads motion graphics that is under Royal, which is free to all usage.

2.6. Summary: Related Works

This section of literature review serves showcase the niche for fine jewelry retail in online marketing. The first section sets the boundary for term of research

"Fine Jewelry," a refined craftsmanship industry that traces its history back to the existence of human civilization. Pre-nineteenth century, the treasure is reserved for the pleasure of the aristocrats but has since expanded the horizon. Fine jewelry now goes under the category of luxury retail for its value, spirit, and attachment with customers. Kapferer explains that the value of luxury (in which, as explained, links to crafts) is the emotional attachment between customer and retail sales. The more the sales appeal to the customer, the more likely the purchase.

A series of online reports and luxury retail textbook review then shows that luxury market is going through a transformation stage. A challenge unique to the age of 21st century Internet–how to continue in e-commerce. From the surface, traditional industries dont agree with the mass media. Luxury industry prizes its personalized customer service and tactile shopping experience, while the Internet is visual and conceptual. Yet, it is the undeniable fact that more and more luxury consumers are adapting to the vast world of Internet. In other words, the importance of digital touchpoints is becoming more dominant. If a store wishes to survive, one must learn to make a cyber stand. The solution to the two growing forces does not have to be an "either-or." In fact, the more successful companies can create an integrated online-and-offline experience, the more successful they are in securing their customer in decision journey. As McKinsey explains in three types of online strategy, the Plugged-in Pro, the Selective e-tailer, and the Hesitant holdout, most small companies can afford to maintain the hesitant holdout. They lack the capital and the human power to sustain logistics and contents on multi-channel sales.

Due to personal background, the research takes a specific focus on the Chinese market, also one of the largest growing luxury market in the world. With the rise of the economy, Chinese customers are starting to see the value in quality goods. This means luxury promotion is entering a new stage. Retail sales must learn to convey the value to customer based on person-by-person base (as oppose to simply luxury branding). There is a noticeable lack of development in luxury online retail, which is a great digital opportunity even for small business. In fact, as small business is more likely to encounter high income consumer on a friend-base, it is more likely for them to approach the customers in the most charming, appealing way.

The aim of the *Everglow* research is to find the niche for small brands in Internet marketing. Since everyone is moving onto the e-world, so does every staff in the jewelry world. They are already in the world. The customer decision journey is a long travel from awareness, evaluation, purchase, to retention. The process involves multiple touchpoints and each one of them can make a significant impact on the customer experience. If small companies cannot uphold multi digital touchpoints, then the author proposes to find the most frequently used touchpoint and makes it the best. The concept of *Everglow*, as will be further developed in Chapter 3 Concept, is to enhance digital touchpoint in retention stage. *Everglow* will guide retail sales to create sustainable, relatable digital conversation with their customer through a manual of digital package.

Chapter 3

Design

3.1. Concept

Color of gemstone, motif of design, and type of accessory are the three key elements for jewelry. *Everglow* utilize the three to guide the creator and simplify the video production process. Thus, allowing the creator to produce customized video efficiently.
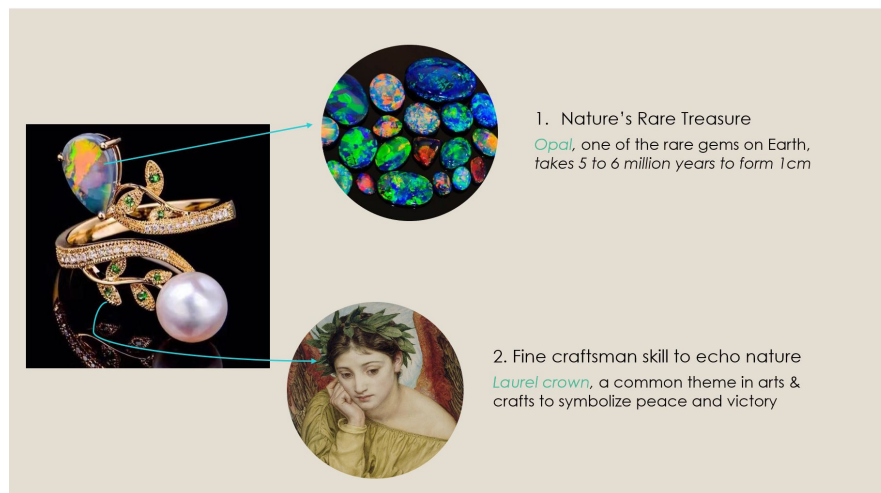
Figure 3.1: Nature of jewelry

Jewelry incorporates both the beauty of nature and the essence of human aesthetic. Gems take millions of years to form and are found deep down in the

core of Earth [1] . Men take the inspiration from nature and turn them into high art (Figure 3.1). However, photo and videos of the design have failed to capture its beauty as it is. There are attempts to simulate its brilliancy via animation technology, while others insinuate stories. Yet, neither is able to demonstrate the natural refraction of gem. The research of *Everglow* brings together the two mechanismsa video that showcases the beauty of the gem and creativity. *Everglow* is a videography manual based on jewelry analysis. Videos are downloaded from opensource motion graphics website and categorized by keywords. Short-throw projection squares in the jewelry like a mini lightbox to allow easy filming.

3.1.1 Design Thinking

Concept development is based on the method of "design thinking" developed by professor Okude Naohito. The procedure begins with fieldwork research to understand the mental model and target persona. To begin, the author joins work with several private boutiques in Taipei, Hong Kong, and Shanghai to closely observe their service to customer decision journey. While the three locations are separated by a sea of ocean, they have a long history of joint jewelry ventures. Thus, they share more similarities in service, customer service, and business model than other East Asian countries. The author chose several retail sales and assistants to understand the existing digital touchpoints, as well as, their visual design. The Design chapter takes the development of the media package in the following stages (Figure 3.2):
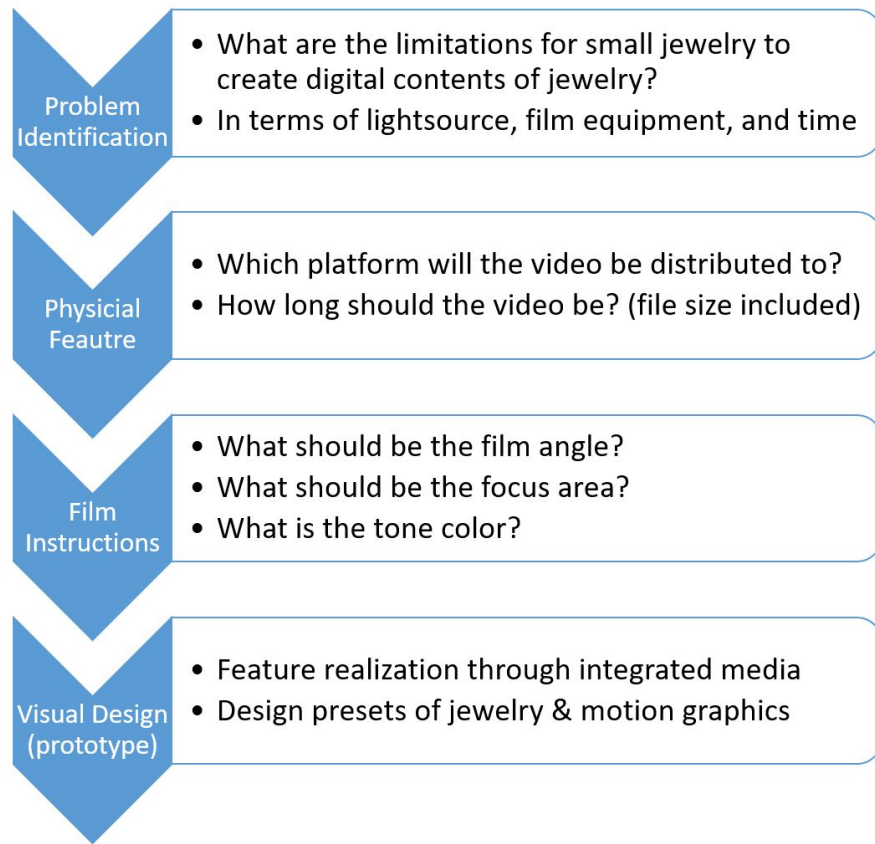
Figure 3.2: Stages of concept development

"Problem Identification" is conducted with the visual assistant staff who is responsible for generating social media content and private invitation cards. The "Physical Feature" section is through fieldwork with two sales in the jewelry business. Each of them interacts with customers on a 1-to-1 and 1-to-many basis, respectively. The author is interested to know which communication is most effective to decide the physical features of the video. The "Film Instruction" is designed when the author follows an international buyer and observes how she record jewelry for her oversea customers.. "Visual Design" is discussed in the separate section as "Prototype." The author explains how the elements observed in fieldwork can be realized in an affordable manner for small studios. Integrated media technology allows the production to be done on a 1-person basis. The author has also designed film categories for the major stone family as presets to be

tested out in Chapter 4 Evaluation.

3.1.2 Cultural Factor

The core value to *Everglow* is user-friendly design to serve Chinese consumer psychology and society custom.

There is a unique beauty to "taking a step back" in Chinese ideology. *Everglow* is inspired by the subtle Chinese romanticism. It is common and most heartwarming to invite people in China based on the changing weather. In "Invitation to Mr. Liu," poet Bai Ju-yi paints the picture of a winter snow to come and gently bears his friend over for a glass of wine (Figure 3.3). In Chinese custom, there is a romanticism given to casual spontaneity. An unexpected invitation is a subtle expression for "the changing weather makes me think of you, as you are always on my mind." While it is titled "romance," the concept is applicable to allfriends, family, lovers. As stated above, poetic imagery over changing season is very important. The author hopes that the production of *Everglow* conveys the ephemeral but long-lasting relationship, as such in every Chinese bond.

【問劉十九】　At Home to Liu Shijiu
白居易 (Bai Ju-Yi, 772-846 AD, China)

綠螘新醅酒 The green wine is freshly brewed,

紅泥小火爐 A small red-clay stove fires the mood.

晚來天欲雪 It's dark and about to snow too,

能飲一杯無　Sparing me just one drink will do.

(Sun, 2008)

Figure 3.3: Chinese poem

3.2. Ethnography

In the following section, the author has conducted several fieldworks to learn about the current situation in jewelry business and the digital visual design for different jewelry stores.

First through third fieldwork is conducted to understand the business model.

The first one is with visual design staff for jewelry studio. The author observes how she makes a Mother's Day promotion poster. The author learns that color, composition, and texture are the three most outstanding elements when making a digital invitation. According to the staff, the biggest obstacle for in-house photo-shoot is lighting. Due to the lack of professional equipment in the office, she needs to take two times the normal time to simulate a proper light source. The second fieldwork is with the lead sales at Alex's Fancy Jewelry & Fine Arts. Through the fieldwork, the author observes how lead sales interacts with consumers. She has a strong connection with all her customers and when she messages them directly, she is sure to receive a reply. The third fieldwork is with junior sales at Alex's Fancy Jewelry & Fine Arts. Though the fieldwork, the author observes how junior sales invites consumers for re-visit. Customer response rate is near zero for text messaging and telephone calls. While they are responsive on social messenger LINE, they usually reply with a no. The author understands that customer is not moved by a general text of new campaign launch.

Fourth through fifth fieldwork are conducted to understand the visual design in the jewelry world.

The fourth fieldwork is at Hong Kong Jewelry Exposition in March. The author follows a private jeweler from Shanghai, as she scouts for the large gem for her customer. The author is instructed to take videos of potential jewelry product with a smartphone application called VUE. The application is a new trend for digital demonstration in Shanghai. The filter is subtle but makes the color of stone stands out better. The author learns that as jewelry merchandise is small, it is important to keep a close-up, focused angle of shooting. The fifth fieldwork master is a Hong Kong jewelry studio that has been in business for three generations. The author joins one of their sales process. She learns that while some jewelry seems ordinary in the display case, they can exhibit their full potential when given to a professional photographer. It is a key about placement of the piece.

3.2.1 Visual Design Assistant & Greeting Card Production

The fieldwork was conducted with Rong, assistant at Alex's Fancy Jewelry & Fine Arts, Taipei Boutique (Figure 3.4). The aim was to understand the current

focal point for the boutique when they are making seasonal greeting cards. The design will echo the happening of female-related festivals, such as Mother's Day, in addition to general commercial festival like Lunar New Year and Christmas. Rong has decided to add jewelry onto the greeting card design to further emphasize the boutique business. The fieldwork was conducted on April 15th, two weeks after Rong joined the boutique. She had recently graduated from National Taiwan Normal University with a bachelor's degree in interior design. She has developed an interest in jewelry design and decides to take a shift in career direction. The author followed her as she completed the photoshoot and design within the boutique.

Figure 3.4: Rong, assistant at Alex's Fancy Jewelry & Fine Arts

JEWELRY PHOTOGRAPHY WITHIN BOUTIQUE

Rong has only just joined the business, so she does not have access to the company safe. She is given access to look through the digital inventory and suggests what she thinks may be useful. After Lee the C.E.O. approves, Fenny takes the jewelry to Rong. During her entire work progress, the author is asked to be present all time. Rong wants to mount the jewelry on a printed postcard to create a three-dimensional visual. She chooses carnation with pearl-themed jewelry.

Figure 3.5: Postcard samples

Rong has a difficult time finding the proper light source. The light cannot hit the diamond part to create the right shine. Simultaneously, pearl is reflective of light, so she cannot get too close to the object. In actual photo, the jewelry does not stand out from the postcard too much, as there is not enough color contrast. Therefore, Rong spends an extra hour in photoshop to change the color saturation for different section. Afterwards, Lee and Fenny give her some tips on how to change the design. It is not only important to create something beautiful, but also has to be something that highlights the jewelry. Rong's design is heartwarming but do not give enough attention to the jewelry, Lee explains.

RONG: HER GOAL & MENTAL MODEL

From the fieldwork master, the author closely observes a new assistant at work. Her goal and mental model fit the target persona of the concept for *Everglow* media package. The author learns in card design that color, composition, and contrast are the three elements to alternate with. Yet, the alteration is highly limited because jewelry is highly reflective of surrounding material. Furthermore, the security concern puts a limit on access for the new staff. Since they cannot study in detail, it is even harder for them to come up with new ideas. What they think look pretty in design may not necessary equal to the sales langauge in

jewelry. The focal point can be different.

GOAL

- Make beautiful and creative greeting cards to attract customer attention

- Learn more about the whole jewelry industry, especially of design

  MENTAL GOAL

- Always making drawings on her notebook to brainstorm

- Read different magazines for inspiration

- Testing on phone camera for better angle

Figure 3.6: Flow Model, Cultural Model, Sequence Model, Artifact Model for Rong

3.2.2 Private Buyer & HK Jewelry Expo

The fieldwork was conducted with private buyer Jenny at the 35th Hong Kong International Jewelry Show (short as HKTDC). The exposition lasted from March 1st to 4th and featured over 10,000 exhibitors and buyers around the globe. It had a long tradition and considered as the most important jewelry event in Asia. Jenny is a private buyer who currently resides in Shanghai. Private buyers take orders directly from top VIP customers. They travel around the world to different brands to find the most fitting merchandise that fits the customer's desire. Jenny

has been in the jewelry business for over 40 years. Her customers are all over the world, from China to Singapore, London to New York. She is considered a legend in the private buyer circle and also Lee's mentor. The two have previously arranged to meet on the third day of the exposition, partly to catch up and discuss business. Jenny is at the exposition to look for three over 10-carat, top quality, emerald gems. She believes the exposition provides the best opportunity for her to find the most fitting stone. The author follows Jenny as her assistant to learn how she shares the detail of gem with her target customers. The aim is to understand the method currently in use to send jewelry information over internet to customers.

Figure 3.7: Jenny, private jewelry buyer

HONG KONG INTERNATIONAL JEWELRY SHOW

One of the largest jewelry shows in the world, after BASEL JEWELLERY and LONDON SHOW. The show takes place in March, June, and September. The show is at Hong Kong Convention and Exhibition Centre. The building is three-story high. Over 10,000 exhibitors are divided into sections according to their merchandise. March and September coincide with Chinese Lunar New Year and post summer vacation season, which makes them the high season for jewelry business. The show service all jewelry purpose, from gem wholesale, private designer limited edition, silvery wholesale, to wedding ring custom made. The show has two-day reserved for jewelry professionals and then it is opened to the public. Therefore, at the exposition, people can choose to wholesale for company or

personal pleasure shopping. Exhibitors come from all around the world, as Asia has become the best market for jewelry business. English and Mandarin are the two most common languages spoken at the exposition. Yet, Cantonese, Hindu, French, Arabic, and other languages are also used depending on the visitor's nationality. Over the years, many exhibitors have become friends with each other. They send each other business information over the internet, but the exposition is still a big event for them to meet up with each other.

Figure 3.8: Environment of Hong Kong Jewelry show

DIGITAL JEWELRY RECORD & VUE APP

Jenny takes the author to a wholesale gem booth, whom the owner she knows for over decades. They greet each other and ask about each other's business. Recently, it has not been a good time for luxury retail. Jenny explains her request to the owner. The owner points to a few gem in the display case and says he will go double check on his inventory. Jenny obtains his permission to photograph the jewelry before the owner enters the backroom. Jenny puts on her glasses to study the gems closely. Price for 10-carat emerald goes from USD 100,000 to 300,000. Therefore, Jenny does not plan to take the physical merchandise until the customer confirms purchase. Jenny asks the author to download an application on smartphoneVUE. Her assistant explains that VUE is their primary jewelry

record application recently because VUE makes gem color stand out more without disturbing the truth. Jenny selects three gems out of the recommendations and asks the author to record. As the author videotapes, Jenny's assistant asks the author to pan the phone around the gem, so the customer can see the cutting and mounting of the stone. Five minutes later, the owner returns and explains that he doesn't have that many big gem at the moment. If Jenny likes, he will continue to search and sends her follow-ups. Jenny agrees and bids him goodbye. Before Lee and Jenny part, Jenny also takes 2 phone calls from her assistant who are in Thailand to look for gem stones. She asks the assistant to send video and inventory over for better examination.

JENNY: HER GOAL & MENTAL MODEL

The fieldwork with Jenny confirms the design concept for *Everglow* media package. The author learns that digital image of jewelry should demonstrate the shimmering, brilliancy, and design of the jewelry in a relatively honest way. Furthermore, in terms of technicality, the file must remain under 5MB to ensure easy, successful transfer on mobile application. Jenny uses WeChat which can take up to 10MB maximum. While Jenny and her assistant talk about filming application, they are not very crafty with its footage. Jenny explains she only sees the final product but does not know it is made. Her assistant, who is also in her fifties, knows the click the button to start filming but is hesitant to study further development. The author learns that for elderly jewelry sales, they have more difficulties utilizing current technology. They will need a user-friendly manual or a highly technology literate assistant.

GOAL

- Find the best gem according to her customer's request

- Transport different area's beautiful jewelry to another place

MENTAL MODEL

- Constantly on the lookout for better market

- Travels to meet different distributor in jewelry business
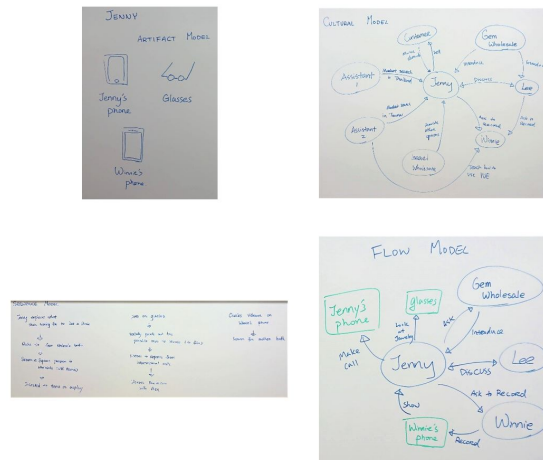
Figure 3.9: Flow Model, Cultural Model, Sequence Model, Artifact Model for Jenny

3.2.3 Lead sales & Taiwan Private Jewelry Boutique

The fieldwork was conducted with Lee, CEO of Alex's Fancy Jewelry & Fine Arts, at her Taipei studio (Figure 3.10). The purpose of the fieldwork was to understand how lead sales interact with consumer at a private boutique. Lee had been in the jewelry business for more than twenty years. Before she opened her own boutique, she was on the sales team for several famous Taiwanese luxury jewelry store and fine arts gallery. When she was young, Lee enjoyed fashion and accessory coordination. Nowadays, she saw jewelry as the key to every woman's dream. Jewelry is the extract of the finest materials and hearts on Earth. The gems are brewed over millions of years in Earth's high pressure. The craftsmanship to design, to mount piece is the proof for civilization and dedication. She had always been proud of her design.

Figure 3.10: Lee, C.E.O. of Alex's Fancy Jewelry & Fine Arts

PRIVATE JEWELRY BOUTIQUE IN TAIWAN

The city of Taipei has a mature jewelry market. According to Gemological Institute of America, Taiwan branch, there are over 3000 jewelry stores in downtown area. Private boutique takes up about 10 percent. Definition for private boutique is small, non-corporate stores. They produce original design with rare gems, like diamond, ruby, sapphire, etc. Some of them are open store, while others only service on reservation base. Alex's Fancy Jewelry & Fine Arts is the latter. The boutique is located on the eighth floor of a condominium. Many of Lee's customers have known her for more than ten years, and continue to bring new customer to her. Many people do not want others to see their jewelry transaction. Private boutique is able to provide the service in a more secured and undisturbed manner. Also, since the boutique only receives one group of customer a time, the customer can also learn about the knowledge of gems in depth.

Figure 3.11: Environment of Alex's Fancy Jewelry & Fine Arts, Taipei boutique

INTERACTION WITH CUSTOMER

When customer comes to the boutique, Lee is strategic with when the customer sees the jewelry merchandise. "It is always better to create suspense first," Lee explains. She will greet the customer in the lounge area with tea and snacks. For the customer she knows well, she asks about their recent well-beings. Many of them travel, others love talking about their children. For the new customer, Lee shares her recent hobby on wine, tea, arts, or music. One of the four usually opens up the conversation. When the customer talks about her hobby experience, Lee listens. She sometimes asks question to learn how the customer feels about certain issue. In other words, Lee comes in as a friend. When the most fitting time comes, Lee stands up, almost making a posture, and invites the customer

into the main showroom. "We meet as friends, but when I show them the jewelry, I must be the firm professional," Lee explains. The showroom is ready with first set of jewelry, with no more than 12 items. Lee talks the customer through based on their interests. Then, she reflects on their previous conversation and asks the Junior Sales to bring out second or third set of jewelry. Lee keeps check of customer preference in color, style, accessory type. She also remembers if they have special events coming up. For ladies who have many parties, she also makes suggestions on how to become the spotlight of the event. "I study the customer before they come, and learn more about them as we talk in the lounge, so the jewelry they see is not random. I try my best to show no more than 40 pieces. People get overwhelmed when provided with too many," Lee explains. During the process, Lee asks if the customer has interest to hear the price for certain piece. If the customer says yes, then she takes the item to a different tray. When all the desired pieces are moved to the tray, Lee gives out the price based on inventory. Then, there is a negotiation on price. In the end, they reach an agreement and complete the sales.

LEE: HER GOAL & MENTAL MODEL

In the following section, the author presents the mental model of Lee (Figure 3.12). The research shows that the best way to understand the need of a customer is to relate with their everyday life, which is the aim of *Everglow* media package.

GOAL OF LEE

- Help customers find the most fitting jewelery for their fashion style, life style, and financial situations.

- Make every woman's dream come true.

  MENTAL MODEL

- Learn the most up-to-date trend and technique from designers and craftsmen

- Choose the most fitting jewelry for customer based on expertise

- Wear jewelry because she loves them

  CULTURAL MODEL

- Information goes directly to Lee but only factual inventory is passed onto the company admins
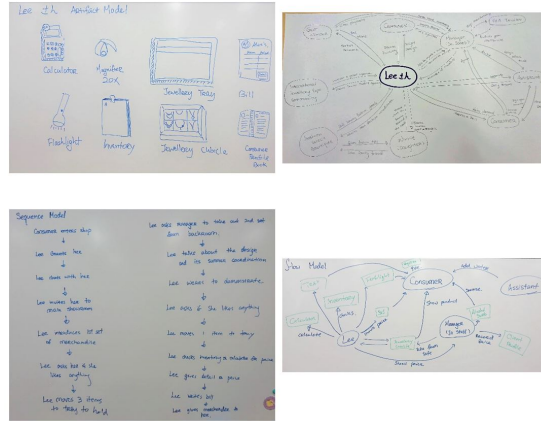
Figure 3.12: Flow Model, Cultural Model, Sequence Model, Artifact Model for Lee

3.2.4 Junior Sales & Customer Invitation

The fieldwork was conducted with Fenny, the junior sales at Alex's Fancy Jewelry Boutique, Taipei boutique. Fenny has had 10 year of working experience in the jewelry industry. Before joining Lee's boutique, Fenny has been on the sales team for other jewelry boutiques in Taipei. This is her second year with Lee. Even though she is familiar with jewelry knowledge, she still needs time to get to know all the customers. The aim was to understand how customer react to current invitation process. In order to obtain a larger quantity in customer response, the author chose to conduct the fieldwork on April 26th. Fenny was responsible for the campaign promotion for the upcoming Mother's Day sale (on May 13th). Therefore, the fieldwork was mainly conducted in the afternoon of April 26th, but the author was also aware of the follow-ups in the following days. The actual fieldwork would last from April 26th to April 30th. In terms of procedure, the boutique did not send out paper invitation on campaign. Digital postcard, made by assistant, was sent out along with informational text. In addition, junior sales (Fenny) would also call the customer mobile directly to confirm reservation. When the full process is completed, Fenny would report to Lee on her result.

Figure 3.13: Office at Alex's Fancy Jewelry & Fine Arts, Taipei Boutique

CUSTOMER RESPONSE TO TELEPHONE CALLS

While the models depict only two customers, Fenny actually contacted 20 customers via telephone in the afternoon. 15 out of 20 did not pick up their phones but replied with text (to be discussed in the next session). Out of the 5 who picked up, 3 explained that they were abroad or busy at the moment, so Fenny quickly ended the conversation. The 2 ladies who listened to Fenny's greeting and invitation stated that they had no intention for jewelry shopping lately. 0 out of 20 made a positive response in the telephone section. The author suspects that telephone calls demand a higher mental response, especially Fenny makes the phone call through company landline. Taiwanese tend to view landline phonecalls as fraud calls. Even for those who keep boutqiue landline as their contact, they do not want to offend people by rejecting invitation in phone calls. They reply with text which is less direct. Out of the two who picked up and listened, they don't feel the pressure to agree to Fenny's invitation. After all, they are friends with Lee, the boss. Therefore, the author learns that the more direct the communication method, the higher relationship intimacy needs to be. Simultaneously, telephone call is also more likely to encounter bad timing for the receiver.

CUSTOMER RESPONSE TO TEXT MESSAGE

As stated above, Fenny sends text message to the 20 customers, in addition to phone calls. The text message are sent to three platformsmobile number, LINE, and WeChat. Nearly all Taiwanese use LINE application to chat, but some of the

Taiwanese also travel to China and prefer to use WeChat. Out of the 15 customers who didn't pick up the phone call, 9 of them replied to the text message over LINE or WeChat. The 5 customer who answered the phone did not respond. Mobile message did not receive any reply. The author suspects it is a monetary reason. Mobile message is an additional charge to phone bill, while smartphone application coversation is included by internet service. Unfortunately, the customers did not show interests in the promotional text. Some replied with "thank you but don't have plans lately," some as stated above did not reply at all. The author learns that smartphone application receives a high percentage of response, but if the message looks very general, then the customer is still not going to agree to visit the studio for a second time. Customers do not see the pull factor in seasonal greeting text, even if they are accompanied with seasonal postcard.

Fenny: HER GOAL & MENTAL MODEL

The following section showcases the mental model and goal of Fenny (Figure 3.14). Her goal fits the target persona for the concept of *Everglow* media package.

GOAL

- Invite customer to visit boutique again

- Develop closer relationship with customer

   MENTAL MODEL

- Learns customer information from Lee and Winnie

- Makes better promotion plan to attract customer

- Teach assistant how to interact with customer

Figure 3.14: Flow Model, Cultural Model, Sequence Model, Artifact Model for Fenny

3.2.5 Shareholders

Shareholder is indicated as Figure 3.15:

Consumers

- Description: Millennium ladies who have travelled and lived in many different countries. Aware of global trends and confident to make their own style

- Value Proposition: They cherish legacy and fine detailes. They also value futuristic concept. They like to see integrated media that helps them learn about jewelry visually.

Suppliers

- Description: Individual who have a supply of original quality jewelry. They are experts of jewelry and gem, and service VIP customers on a 1-to-1 base.
- Value Proposition: They value customer's experience and always seeking for optimal service.

Junior Studio Staff

- Description: Staff who have less than 2-year working experience. They make the digital contents of jewelry.
- Value Proposition: They can make videos without high level of movie editing skill. They can also spend less time studying the jewelry and start work right away.

Craftsmen

- Description: Experienced craftsmen living in HK or Taipei. They make quality product with fine details.
- Value Proposition: They love to see a new display that demonstrate the full potential of their masterpiece.

Figure 3.15: Shareholders

3.2.6 Service Ecosystem

The relationship between each shareholder is depicted as below (Figure 3.16):
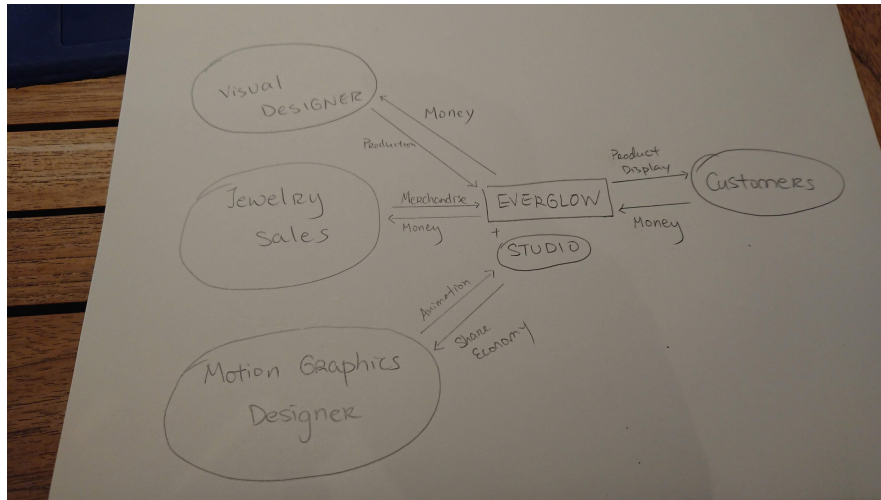
Figure 3.16: Ecosystem

3.3. Design

In the previous Fieldwork section, the author learns the following mental model of customer:

- Enjoy videos of jewelry in direct messaging application

- Appreciative of anything "tailor-made"

- Highlights in jewelry sales (face-to-face) are : 1. Value & Quality of Gem 2. Fine Craftsmanship 3. Time and place for wearing jewelry (coordination)
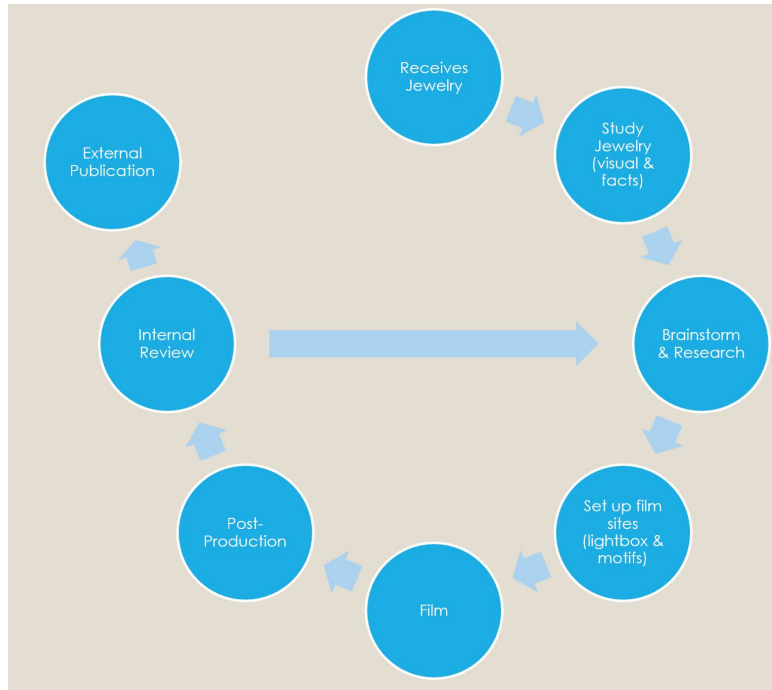
Figure 3.17: Traditional creation process of jewelry photography

There appears to be a niche for creating personalized jewelry videos for customers with certain keywords.

In the traditional creation process for jewelry photography is as (Figure 3.17). Excessive amount of time is spent on stage 4 through 6 when the creator must handle all creative process on one's own ability. As a result, creator is stressed with time. Utilizing the concept of *Everglow* "Color of gemstone, motif of design, and type of accessory are the three key elements for jewelry. *Everglow* utilize the three to guide the creator and simplify the video production process. Thus, allowing the creator to produce customized video efficiently." The creation process can be shortened to 5-stage visual design (Figure 3.18).
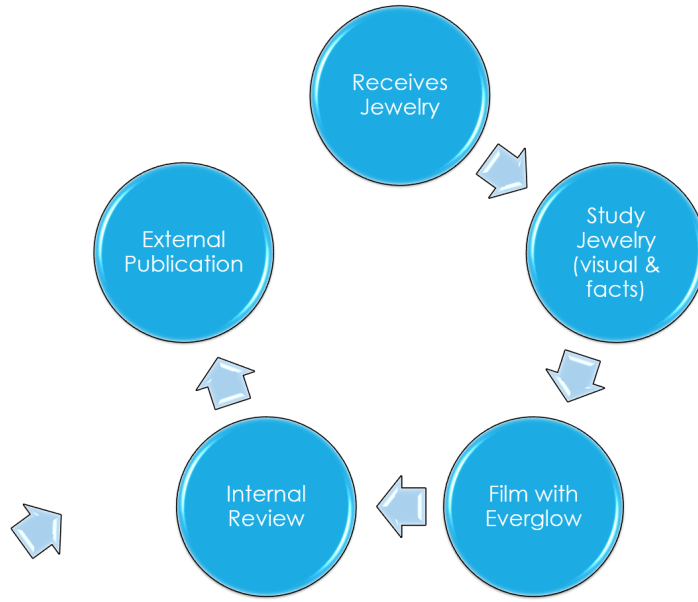
Figure 3.18: New creation process with *Everglow*

3.3.1 Development

In the development stage, the author matched different video with kinds of jewelry category (Figure 3.19 & Figure 3.20). Keyword "Color of Gemstone" is based on color theory. Gemstone color differ from each other by subtlety. Gemologists put variations into shades of color to make class. For example, GRS society puts red of ruby from "Pigeon Blood" to "Deep Red" "Pinkish-red," most valuable to less preferred. Under strong light, the color variation is less dominant. Therefore, in order to keep the color palette simple and clean, the comparison testing was dual-color base with "complementary" and "analogous." Complementary color is a contrast of opposites and creates a vibrant feeling, while analogous color is similar shades that creates a serene feeling. Further explanation on color theory (Appendix: Color Theory). Keyword "Nature motif" is to test the light effect and scenery. Comparison test is done between abstract particles and nature scenery. Abstract particles play reflectory effect on the jewelry. To expand on the nature scenery, the desginers can draw inspiration from society, culture, and daily experience. For example, dragonfly is associated with rain, good fortune in Chinese culture. Yet, it is also a natural creature of summer. There are summer flow-

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ers, like lotus and dandelions to go with the flying insect. In other words, the dragonfly brooch shown in the graph below can be matched with analogous color, abstract particle to demonstrate its artisanal craftsmanship, the summer imagery based on its story. As the preset is designed, there is at least 3 variations for a single gemstone, from color tone or from figurative image.
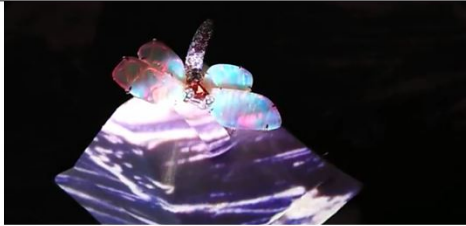
		Sample	Color Theory	Effect
Color of Gemstones	Mono-chrome (red, blue, green, etc.)	Pink Conch Pearl	Complementary (blue)	
			Analogous (shades of pink)	
	Multi-Color (rainbow, gradient etc.)	Rainbow Opal (main surface is white)	Complementary (Navy Black)	
			Analogous (shades of white)	
	Chameleon (green to purple, etc.)	Rare gemstone that is less than 3 types, and is combined with multi-color testing.		

Figure 3.19: Keyword "Color of Gemstones" research

Motif of Design	Geometric (sphere, rectangle, etc)	Circular ring	Abstract particles	
			Rainy scene	
	Nature motif (animal, plants, etc)	Flower and goldfish	Abstract partiles	
		Flower and dragonfly	Rainy Scene	

Figure 3.20: Keyword "Motif of Design" research

3.3.2 Creator Review

The development process is reviewed by the three staffs of Alex's Fancy Jewelry & Fine Arts. They are introduced earlier in the fieldwork section, Lee, Fenny, and

Rong. They each gave comments on the first prototype as sales, assistant, and visual creators.

First category "Color of Gemstone," they all agree that analogous color scheme is the better choice. The overall visual still keeps a strong focus on the jewelry itself, when it is complementary, the "eyes are naturally attracted onto the other tone and is distracting." Lee adds that the sharp contrast between jewelry and projection image makes the gem look "less valuable." Rong enjoys the contrast as it creates more "mysterious feeling," but "[she doesn't] want to spend extra time to adjust the balance of saturation between jewelry and projector image."

Second category "Motif of Design," Lee explains "the light particles creates a natural brilliancy for the jewelry which is unthought of and very nice." Fenny has a stronger preference for "abstract particle," as she fails to see "how rain is connected to dragonfly." Rong thinks similarly with the author set-up and understands that "dragonfly comes out in the rain." Further experiment will be conducted in Chapter 4. However, at the moment, "abstract particle" is the safer choice as it does not receive too much negative opinions.

Third category "Accessory Type" is a combination of first and second category. Therefore, it is not additionally tested.

3.4. Prototype: Kit Package

The prototype is a keyword search system interface that matches the video with desired jewelry. According to the experiment result in Development section, the author creates an interface of database research based on the three keywords "Color of Gemstone," "Motif of Design," and "Type of Accessory" (Figure 3.21).

Keyword Categories
how to search for proper motion graphics

**Color of
Stone**

Mono-chrome, Multi-Color, or Chameleon? Check the gem to understand its nature, whether it is pure monocrhome (red, yellow, green, etc), multi-color (rainbow, gradient, etc), Chameleon (green to purple, etc.)

**Motif of
Design**

How we will look? Geometric or Figurative? Geometric forms of sphere, square, infinity symbol, etc. or figurative forms like clover, heart, dragonfly, rabbit etc.

**Type of
Jewelry**

How to wear? Earrings, necklace, multi-purpose etc.

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Figure 3.21: Keyword categories

Motion graphics are selected based on whether or not they are analogous color scheme to the common jewelry colors, whether they present the proper flickering lighting, whether they are abstract or figurative imagery, whether they are long enough to be made into a video. The selected motion graphics are then categorized

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by different keyword.

The system is included as part of the "*Everglow*" manual. To realize the integration of media and jewelry, additional information on equipment and film instruction is given in the manual. The package serves small-size jewelry studio (less than 5 people) to produce digital jewelry content in a short time and small manpower. Digital content is a 10- to 20-second video of jewelry under the ambiance of an integrated media surface. Instructions on jewelry and media background are provided to best showcase the characteristics of jewelry, such as brilliancy, color-changing, transparency, etc. Video shorts is often used in jewelry promotion, but the privilege of stunning visual design has been limited to expensive equipment or crafty art makers. For those who cannot operate technology or handcraft, for those who seek innovation and creativity, *Everglow* provides a new approach to easy-customization of jewelry motion graphics. Content of the package include: a database of opensource motion graphics, a set of film instruction flashcard, and a short-throw projector that is compatible with all flat surface. User will select a combination of motion graphics and jewelry piece. After the integrated scene is set, user can easily film the video with a phone camera in less than 10 minutes. The completed product is a combination of beauty and creativity. The user can customize the scene and supplement the beauty of jewelry with personalized elements of weather, icon, or sound. Elements are a demonstration of full attention to the happiness of the customer. In other words, the junior sales can form a stronger bond with their customers with common topics of care and compassion.

3.5. Visual Effect Review

In previous Fieldwork section, the author identifies the main problem of jewelry video production for small business is visually unappealing. To be exact, digital impression of jewelry cannot reflect the proper color of gemstone, nor can it aid the viewer to focus on the highlight part of the jewelry design. It lacks directional lightsource to guide the eye to to focus on the top three highlights in a glance. The production of *Everglow* is effective in solving the problem. Motion shorts of the jewelry with *Everglow* has the quality to showcase brilliancy of gemstone, as

well as, showcase spirit of design with the first five second. First of all, the moving lightsource will naturally act as shimmering particles on the piece. The effect is similar as if the viewer is wearing the design and moving around to check the diamond refractory. However, since it is the lightsource alternating, the camera itself does not have to move. Therefore, the video still appears static and do no cause discomfort for video watching experience. Second of all, the imagery whether abstract particle or nature symbol is specifically selected to match the jewelry design. Therefore, at first glance, message of the design is intuitively communicated as a combo with the jewelry. The effect is a silent motion motion shorts that act as storytelling.

In conclusion, within the first five second of watching the video, the viewer should already comprehend the color of the gemstone and its refractory quality, such as opal can reflect multi-color like a rainbow, along with the design shape. Then, the viewer can continue watching the replay of the video to further appreciate the beauty of jewelry.

Notes

1   http://www.gemstory.com.au/advanced1-how-opal-is-formed.html

Figure 3.22: Prototype P1

everglow
jewelry filmography made simple
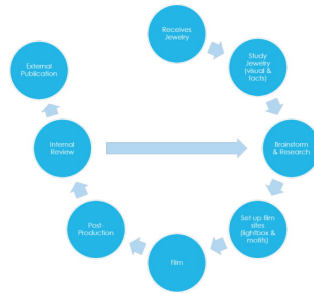
Everglow brings an integrated media package to simplify the film process for jewelry. Instead of going through brainstorm, manual scene set-up, film, and post-production separately, you can do it in ONE STEP!

Receives Jewelry

Study Jewelry (visual & facts)

Brainstorm & Research

Set up film sites (lightbox & motifs)

Film

Post-Production

Internal Review

External Publication

Receives Jewelry

Study Jewelry (visual & facts)

Film with Everglow

Internal Review

External Publication
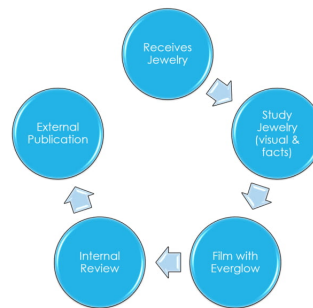
Figure 3.23: Prototype P2

SET UP
with equipment

Environment

Surface
Larger than 20in screen

Surface Medium:
Flat, smooth texture

Room Light:
Natural mellow to dark room

Equipment-

Short-throw Projector:
Recommended XPERIA TOUCH

Camera:
Any .

Figure 3.24: Prototype P3

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Filming Step-by-Step
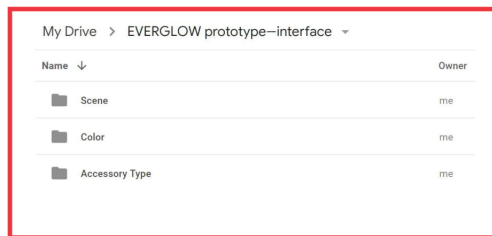
STEP 1: Select the most fitting video based on keyword search
(refer to the next section)

STEP 2: Place jewelry on the surface within short-throw projection distance
(less than 25cm)

Figure 3.25: Prototype P4
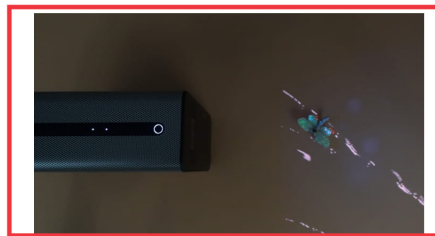
STEP 3: Dim the room lights & turn on projector with selected video

STEP 4: Start filming!

Figure 3.26: Prototype P5

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Film Instructions
and Implementation

Camera Shots	Mid Shot to Medium Close Up
	Shows some part of the subject in more detail while still giving an
	impression of the whole subject.
Film Distance	Keep your camera from 7cm to 18cm from the object
Camera Movement	Still, or Pan slowly
Platform	LINE or WeChat, or other direct messaging application
Video Duration	10 to 20 seconds
File Size	Around 1MB (no more than 5MB)

Figure 3.27: Prototype P6

The Mobile Device Grid System
and Application

Mobile Device Web Grid
System Examples

This shows approved layouts with a
responsive grid for mobile devices
of our website. This will be used for
websites, landing pages etc.

Sirius

About us

Clients

Contact
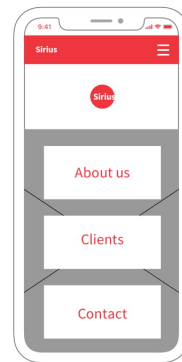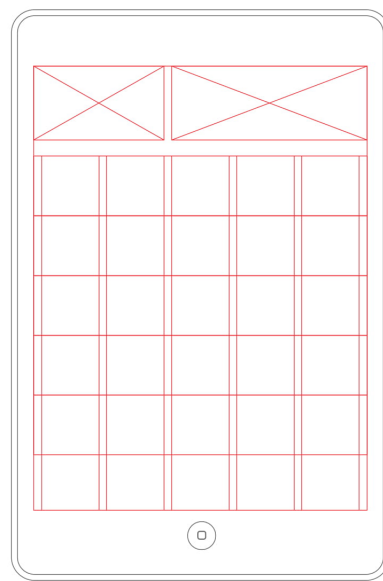
Figure 3.28: Prototype P7

Keyword Categories
how to search for proper motion graphics

Color of Stone

Mono-chrome, Multi-Color, or Chameleon? Check the gem to understand its nature, whether it is pure monocrhome (red, yellow, green, etc), multi-color (rainbow, gradient, etc), Chameleon (green to purple, etc.)

Motif of Design

How we will look? Geometric or Figurative? Geometric forms of sphere, square, infinity symbol, etc. or figurative forms like clover, heart, dragonfly, rabbit etc.

Type of Jewelry

How to wear? Earrings, necklace, multi-purpose etc.

Figure 3.29: Prototype P8

My Drive > EVERGLOW prototype−interface ▾

Name ↓	Owner	Last modified	File size
📁 Scene	me	11:41 PM me	–
📁 Color	me	11:40 PM me	–
📁 Accessory Type	me	11:41 PM me	–

🔍 Search Drive   ▾

Type	Any ▾	✕
Owner	Anyone ▾	
Location	📁 EVERGLOW PROTOTYPE--INTERFACE	
	☐ In trash ☐ Starred	
Date modified	Any time ▾	
Item name	Enter a term that matches part of the file name	
Has the words	Enter words found in the file	
Shared with	Enter a name or email address...	
Follow up	– ▾	

LEARN MORE   RESET   SEARCH

Figure 3.30: Prototype P9

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Chapter 4

Evaluation

To gain user review for Everglow, the following quantitative and qualitative experiments are conducted with 31 users across cities of Taipei, Hong Kong, Tokyo, and Shanghai.

4.1. Hypothesis

- Users will give positive review to the visual effect of Everglow (visual)

- Users will utilize the presets as elements to customize video production (emotional attachment)

- Creation process for jewelry photography will be significantly reduced (time efficiency)

Users are divided into groups based on work experience as listed in Figure 4.1:

	Group identity	Experience with Jewelry Industry	Male	Female	Total Number of People
1	KMD students	Zero experience (representation of potential staff in jewelry business)	6	14	20
2	New Staff	Less than 1 year	0	3	3
3	Freelance Designers	Freelance	0	2	2
4	Junior Staff	1 to 10 years	0	2	2
5	Senior Staff	10+ years	1	3	4
		TOTAL	7	24	31

Figure 4.1: Table of users

4.2. Experiment Design & Methodology

All participants are given the Everglow media package (its manual and designated equipment) and identical jewelry merchandise. The evaluation is a comparison between control and experiment groups.

- Control Group: traditional jewelry photography method or however they previously do it

- Experiment Group: Everglow media package

After the experiment, users are asked to fill out a quantitative survey and a 10-minute qualitative interview. Junior and Senior staff groups will also send the complete production to customers to learn about user-side response. The quantitative evaluation is a questionnaire. Users are asked to compare traditional and Everglow film method and rank them from a 1-to-5 scale (from least favorite to most favorite) (Figure 4.2).

	Cannot use	Disappointing	Standard	Good eyecatching	Stunning
Clarity of design	○	○	○	○	○
Showcase the beauty of stone	○	○	○	○	○
Showcase the uniqueness of stone	○	○	○	○	○
Emotional attachment	○	○	○	○	○
Easy to use	○	○	○	○	○
Time consuming	○	○	○	○	○

Figure 4.2: Survey questions

The qualitative evaluation is when the users verbally discuss with the author of the problems they encounter during the entire experiment process. Comments are recorded in text format.

4.2.1 Regarding Demographic Sample

Due to the limits in time and population available, the essay research is only able to reach a small pool sample. The author makes the best effort to make the test subjects match the usual demographics in the jewelry industry (Appendix Table). The male-female ratio is 2-to-3. Also, seniority of users is purposely selected to fall majorly in the "senior staff" and "new staff" category.

4.3. User Review

4.3.1 GROUP 1 KMD students

KMD students are graduate students who study at Graduate School of Media Design at Keio University. The author conducted experiments with 20 students

who age between 22 to 32-year-old. The male to female demographic is 2-to-3. KMD students rank the highest in digital literacy amongst all groups, as most of them can utilize advanced programming, editing, or filming technique. While none of the participants worked in the jewelry industry before, they represent the potential members of jewelry industry. Since they do not have experience in jewelry photography, users are asked to compare between VUE smartphone application and Everglow media package.
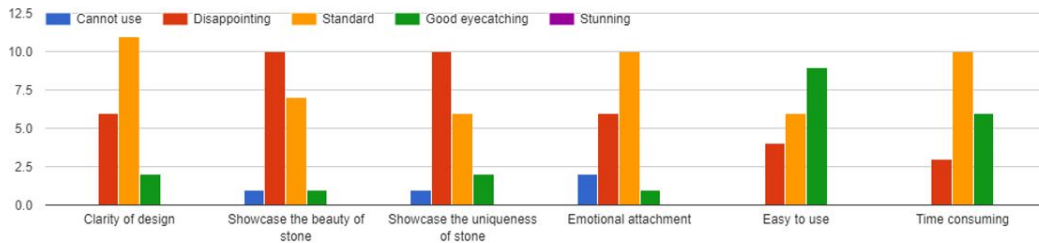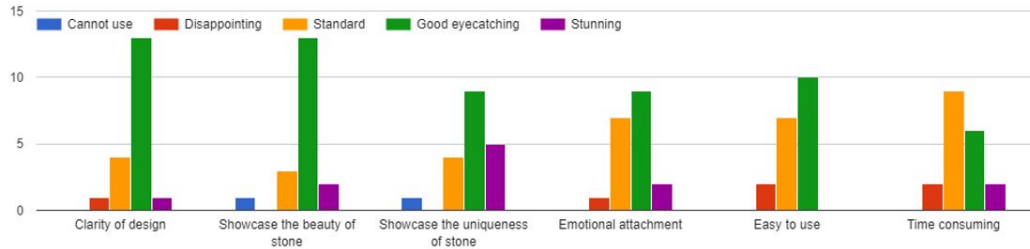
Figure 4.3: KMD student results

Comparison of the two charts shows that the students give a positive response to Everglow media package (Figure 4.3). For *Clarity of Design, Showcase the Beauty of Stone, Showcase the Uniqueness of Stone*, the numerical scale indicates at least +1 higher level of appreciation. Students explain they can really see the visual difference between using phone filter and recording the actual refraction of jewelry. User explains "since [she] is not using a filter, [she] feels its a more

faithful demonstration of reality (Figure 4.4)." One common complain for both design from another user is that "[he] dislikes the insufficient aperture" which makes the focus of detail not up to his standard. However, "[one] can solve this problem by using better phone model or camera model," he adds.
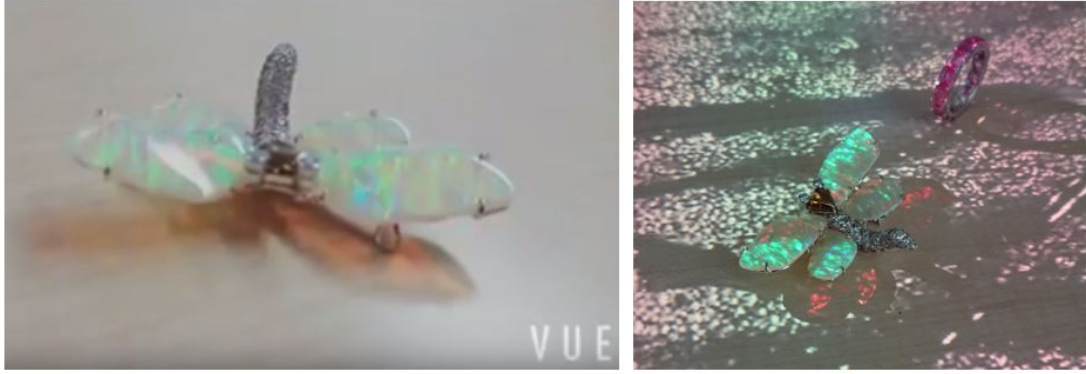
Figure 4.4: Screenshots comparison between VUE and Everglow from the same user

Emotional Attachment section shows the greatest improvement as the majority of the response falls in between *standard* to *stunning*. One user explains that "VUE has nothing to do with what [she] thinks but [she] sees the connection between rain and dragonfly." On the other hand, one user states that "rain make [him] feel gloomy." Emotion comes naturally when the motion graphics is more figurative; however, the author sees that one must be careful with the negative psychological effect motion graphics can exert on users with different cultural and personal background.

Easy to use and *Time Consuming* demonstrates result opposite of the hypothesis as the numerical evaluation shows no significance in growth. User explains that "[she] spends time going through the filter for VUE, but [she] also spends time choosing motion graphics to demonstrate the visual concept [she] has for the jewelry.

4.3.2 GROUP 2: New Staff (less than 1 year work experience)

New staff is the group who joins the industry for less than a year. The three participants has a bachelor degree in interior design, Public Relations, and business management respectively. Therefore, one has a strong design background while the other two are more focused on media strategy. The two business background staff give a very positive response to Everglow. One explains that "Everglow allows [her] to realize promotion concept in less than 2 hours, so [she] can spend more time constructing the overall campaign." The alternative staff dislikes anything design-related. She has always had trouble when she needs to make a design project. She views Everglow as a template to get work done.

The design background student responds more like KMD students. She explains that "[she] really likes the feature but [she] might end up spending more time to fix the little visual detail" to get what she wants exactly.

4.3.3 GROUP 3: Freelance Designer

The two freelance designers are in their 30s and take on multiple jobs simultaneously, their jewelry products come less in amount to private jewelry boutique. The author has taken them into the sample as a mean to understand if there is a different spin of possibility. The first user is a silversmith Ms. Sun in Taipei. For her, jewelry making is like a life journal. Therefore, she is more interested in sharing the process of her making jewelry, rather than just the final product. She shares her process on social media. Normally, photos of incomplete products receive less attention. "[She] would like to use Everglow with VLOG to further demonstrate her creative process." She is curious to find out if there can be more motion graphics with different nature motifs, as "[nature motif] is [her] main inspiration."

The second freelance designer Ms. Fang trades in the antique jewelry market. For her work, she needs to travel between Europe, America, and Shanghai. She keeps in touch with her customers over WeChat application. On June 11, 2018, the author contacted her over WeChat voice call as she was in Rome for business travel. After reviewing the prototype manual, Fang explained that the concept

did not really fit her media promotion goal. For antique jewelry, "it is most important to show its original publication photo, so [she] always use[d] magazine or catalogue material." The visual effect may be a cute addition for the seasonal greeting cards to send to her customers, she added.

4.3.4 GROUP 4: Junior Staff (1 to 10 years work experience)

The two junior staffs are both in their early 30s. Hannah works at a designer studio in Shanghai while Kristel works in Hong Kong. Hannah has been in jewelry business for five years. She is always on business trips around cities in China to host jewelry showcase for her boss. She sees value for Everglow, if she is new in the industry and doesnt know how to talk to the client. "These days, [she] would go directly to customers and show them the merchandise. [She] got no time and place to do all the PR stuff." Kristel is based in downtown Hong Kong and she talks to her clients over Whats App. Usually she would share social events that her clients might be interested. Once the appointment is made, they would meet for a meal before and discuss potential business. "In Hong Kong, it is difficult to book someones time, if she is not interested in you as a person. This could be a good excuse to ring [her] potential client and get together for lunch."

4.3.5 GROUP 5: Senior Staff (10+ years work experience)

4 participants are invited to review the prototype. 3 females (age 40s, 50s, and 70s) and 1 male (60s). Female user Fenny (in her 40s) has a positive user experience with Everglow. She already sends many digital contents to customers (as discussed in Fieldwork), and she sees how this can speed up work process. "The first thing that comes into [her] mind is to send videos for special festivals. There are so many videos for dragon boat festival, it would be really interesting to have boats raising along with diamonds on the side." The keyword search system took her sometime to understand, especially since the author has to translate all keywords to mandarin Chinese for her. Yet, she was able to utilize the search on a basic level. The other three users liked the concept but had difficulty in actual operation. The main obstacle was that they did not understand the difference

between 2D video projection and 3D modeling. During the testing, Lee was always going over the boundary of video projection. Furthermore, she has difficulty on choosing the correct keyword to search for what she wants. She says a long sentence to describe the stone but cannot narrow it down to 1 keyword. The male user Wang had trouble getting the right focal point for jewelry when he took video. The last user Jenny in her 70s simply gave up after checking the prototype. "[She] hires young assistant to do all digital stuff." She explained.

4.4. Summary: User Test

The three keywords "Color of Gemstone," "Motif of Design," and "Type of Accessory" have been proven sufficient to cover all 31 peoples visual concept. They all agree that it shows visual beauty. Other than that, user experience is predominantly affected by technology literacy, position hierarchy, and design experience (Table 4.1).

Table 4.1: Factors for User Experience

	25-35	36-49	50+
Age Group	:D	:D	:(
	High	Medium	Low
Technology Literacy	:D	:D	:(
	Beginner	Jr	Sr
Job Rank	:D	:)	:(
	High	Medium	Low
Design Background	:)	:D	:(

Technology literacy decreases with user age. The older they are, the lower they score on technology literacy. The ideal age group for Everglow range from 20s to 40s. They understand online keyword search, operation of projector, and phone camera filming. Therefore, the manual provides sufficient instructions. Once they hit 50s and above, they encounter major difficulties. Most procedures the author is able to teach them to get by, but the author realizes that "keyword search" is a skill that comes natural to the internet generation but not so for others.

Users position in the industry also makes a difference. New staffs are more likely to be assigned digital content jobs and want to have a new, better method. Staffs of higher ranks may enjoy the concept but they do not have time to make the actual production anymore.

The concept of Everglow is to simplify the film process. However, if the user has a background in design, then he or she will spend more time. Non-design users are conceptual, strategic creators. They look at the overall pictures and are fine with realizing the concept. On the other hand, designers are picky with imagery detail. For example, whether or not the light source hits at 80 or 90-degree. When Everglow allows them to quickly compete basic set-up, the designers then want to aim for even high effect, such as creative shot angles. Although the result does not agree with the hypothesis "Everglow speeds up creation process," the result is not negative. If time is not a concern, then either creator is fine.

One unexpected finding is that users see potential for further customization and emotional connections through Everglow. The original design concept is to customer based on the characteristic of jewelry; however, during the experiment, many have demonstrated intentions to customize the video based on the receiver. Some users want to include more figurative elements to echo the preference of receiver. For example, the freelance designer wants to create a beach scene for her customer who is having a holiday in Santorini. Yet, as motion graphics portray a more realistic imagery, the projector cannot always present the correct saturation of light. The drop of light quality can significantly affect the realness of video image.

Chapter 5

Conclusion

Jewelry business has a long history with visual tradition. For centuries, she has searched and urged for better impression of her beauty and glamor. The desire continues to grow into 21st century, when entertainment technology is made available for all. Jewelry corporates with high capital and large pool of creative crew collaborates with Hollywood industry to showcase their heritage and dominance. The effort brings the whole jewelry industry to a higher level. By all means, the inspiration, the motif, and the story of designer, craftsman, and creator are successfully carried through with the new medium. Jewelry is no longer limited to the still life but her beauty is brought to life by moving frames in fast rotation.Since a new and better method is presented, all members in the industry must catch up.

The success of the promotion can be replicated with small-size business, if adapted. Currently, impressions of jewelry in the circle of small-size jewelry studios do not differ much from 20 years ago. Creators take desk lamp, flashlights, and table cloth to construct a mini photo studio. Depending on the skill of the creator, the production ranges from mediocre to low quality. Quality of photo is not the only concern for the functioning of studio. It is an investment to conduct the photoshoot, as most studios are understaffed with only 3 to 7 staff. The inability to produce a satisfactory photo in an time- and cost-efficient way has challenged the development of business. The research of Everglow aims to find a solution.

Everglow is a manual that makes jewelry photography process—easy in tech-

nique and fast in brainstorm. The manual includes a media package that instantly turns small office space into mini photo studio. Creator can easily match the selected jewelry with proper motion graphics to demonstrate the maximum potential of the jewelry. The centerpiece is a keyword search system that is designed upon fieldwork and literature research. "Color of Gemstone," "Motif of Inspiration," and "Type of Accessory" are three magical keywords that sets a creative yet professional boundary for jewelry motion graphics. The final production is a motion shorts (less than 30 seconds) of "spotlighted" jewelry merchandise to be sent through direct message application (from sales to customers).

Thesis writing is separated into two categories: data gathering in Chapter 2 Related Works and fieldwork ethnography in Chapter 3. In "Related Works, the author narrates through need of better digital presence for fine jewelry in todays Internet world. The first section of the chapter introduces the development of modern fine jewelry, as well as, its relations in East Asian society. Fine jewelry is a gift from nature and the highest essence of human civilization. The gems formed under high pressure of the crust and mined by human force. Before the final mounting, the gem must go through inspection, polishing, and creativity design. The rare luxury used to be limited to royalty and has only opened up to the public in modernity. While her exclusivity continues, fine jewelry cannot resist the knocking of the age of high speed internet. The expansion of internet has completely revolutionized customer shopping behavior. In-person evaluation is no longer the only choice for luxury purchase. As a result, more and more digital touchpoints are added into campaign strategy as compensation. The research of Everglow acknowledges the change of nature in jewelry industry. Everglow utilizes the new dynamic to find a new digital niche for small-size jewelry business. As Chapter 2 acknowledges the need to improve digital touchpoint, Chapter 3 begins with ethnography research. Several fieldworks are conducted to understand the current situation and attempted solution. The author learns that in-house photography places high pressure on the creators time and creativity. Furthermore, for mandarin-speaking community, online messaging is specifically limited in LINE and WeChat application. To gain a positive response from the customer, sales must exert time and attention. Customers only respond to personal messages.

After data and fieldwork research, the initial concept is designed to allow "cre-

ators to customize jewelry motion graphics to a certain degree for their targeted customers." Then, the author begins the internal development stage. She chooses and analyzes motion graphics of varied color theory and of light source fraction. The formula of jewelry and motion shorts are paired to create a visually soothing frame with directional lightsource to make jewelry shine. In addition, the motifs of jewelry can also be matched with different sceneries to enhance the scenario of design. In addition, the author seeks review from the creators, the staff from jewelry studios. Prototype is then designed to construct a keyword research system to match motion graphics with jewelry based on: "color of gemstone," "motif of inspiration," and "type of accessory." The system is implemented into Everglow media package manual which creators also have access to short-throw projector and film instructions.

Prototype is tested in Chapter 4 Evaluation. The author invites five groups of creators (with different age range and jewelry experience) to evaluate the following hypothesis:

1. Users will give positive review to the visual effect of Everglow (visual)

2. Users will utilize the presets as elements to customize video production (emotional attachment)

3. Creation process for jewelry photography will be significantly reduced (time efficiency)

Visual appearance is highly praised amongst all five groups. The design helps realize many of ideation concept in a beautiful and easy manner. Time efficiency proves to vary based on technology literacy and design background. The higher the technology literacy, the faster they can use the system. On the contrary, the more design skill they possess, the longer it takes for them to complete the production, as they would want to refine each detail. Emotional attachment is the most surprising area. The original intention for Everglow is to customize based on the characteristic of jewelry, but more than half of the creators exert intentions to customize the videos based on preference of their imagined receiver. This shows that Everglow has a potential to be used more than just improvement of digital touchpoint, but as an innovative touchpoint in customer decision journey to strengthen brand awareness and relationship bonding.

5.1. Future Development

Based on the result, the target users are separated into three categories:

1. Group: Young, High-tech, Low jewelry experience

   - With professionalism in design—need to understand the sales point of jewelry
   - With no training in design—appropriator for prototype

2. Group: Mid-30s, Sufficient technology and jewelry knowledge

   - Interest/Profession in new media—need elements for personal customization
   - No social media interest—*GIVE UP*

3. Group: 50+, Low technology, Little time, High jewelry experience o—*GIVE UP*

Future development is discussed for Group 1 and media people of Group 2. Even though Group 3 is an important and wise community in the jewelry world, the author realizes certain technology concept is too difficult for them to understand. Furthermore, non-media people of Group 2 and Group 3 are less likely to personally create digital contents.

1. Group 1: Need to understand the sales point of jewelry

   During the user test, this group is the most active and creative. They are energetic but sometimes can go overboard and loose focus of the merchandise. If the author can try to compile the wisdom from senior staff into simple film guidance, this group can certainly make the best production. The obstacle lies in effective summary of sales point from senior sales.

2. Group 2: Need elements for personal customization

   This group is sensitive to the emotional message in every production. They want to have more figurative motion graphics for them to tell a good jewelry story. The concept is great but require better technology improvement to

realize. The more realistic the motion graphics, the sharper the contrast it is when projected onto jewelry merchandise. Furthermore, different motion graphics creates a different set of emotions. For some, rain is romance while others find rain gloomy and blue. There will need more variation of motion graphics for them.

3. Future collaboration with animation designer

   There is still a limit of variations to the videos online with opensource. There are so many talented students studying animation. After a mature community of users is formed, Everglow hopes to expand its business ecosystem. Young animators can relate to private studios to make motion graphics specifically tailored for their brand identity.

4. Make Everglow truly anywhere, anytime

   Everglow has greatly improved the visual appearance of jewelry impression, but the prototype still has a lot of physical limits. Creators must find a flat surface that is under appropriate natural light. If the environment is too dark, then the jewelry is nearly invisible. If the environment is too bright, then the motion graphics becomes too light. This means that at the current stage, Everglow is most suitable for indoor, studio production. If the record or projector equipment can be made more accessible to the commercial market, then there is a possibility that creators can make the video even when they are traveling.

Thus, the research of *Everglow* is temporarily concluded. The world of jewelry and internet continues to develop, so does the author as a social being, there is no boundary to the creativity of jewelry impression and online retail. Hopefully, life will present more opportunities for opportunities, challenges, and improvements.

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Appendix

A. Photos of Jewelry in movies and shorts

Figure 5.1: Anne Hathaway wearing *Cartier* Jeanne Toussaint necklace in *Ocean's 8*

Figure 5.2: *Cartier Odyssey1*
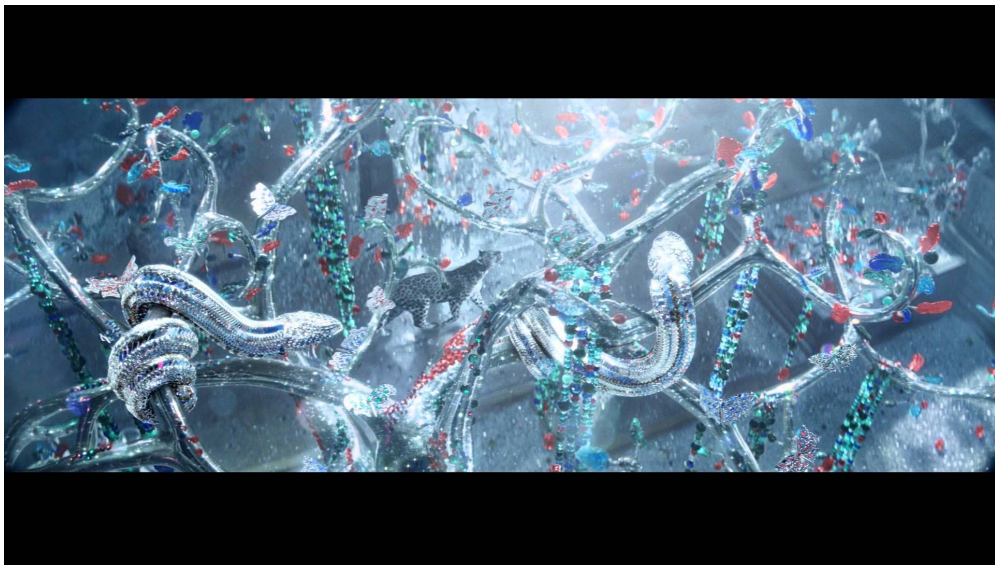
Figure 5.3: *Cartier Odyssey2*

Figure 5.4: *Cartier Odyssey3*

B. Color Theory Explanation

Color theory as discussed in Chapter 3 Figure B

Complementary color scheme

Colors that are opposite each other on the color wheel are considered to be complementary colors (example: red and green).

The high contrast of complementary colors creates a vibrant look especially when used at full saturation. This color scheme must be managed well so it is not jarring.

Complementary color schemes are tricky to use in large doses, but work well when you want something to stand out.

Complementary colors are really bad for text.
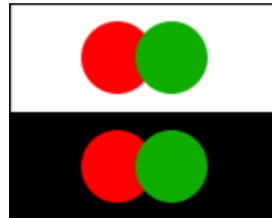
Analogous color scheme

Analogous color schemes use colors that are next to each other on the color wheel. They usually match well and create serene and comfortable designs.

Analogous color schemes are often found in nature and are harmonious and pleasing to the eye.

Make sure you have enough contrast when choosing an analogous color scheme.

Choose one color to dominate, a second to support. The third color is used (along with black, white or gray) as an accent.

C. User Demographics

Table 5.1: Participants Information

	Name	Age	Technology Literacy	Seniority in Jewelry	Des
	Scale	20s, 30s, 40s, 50+	High, Medium, Low	New, Jr, Sr	High
	KMD students				
1	Nancy	20s	High	New	Med
2	Massimo	30s	High	New	High
3	Fah	20s	High	New	Med
4	Fadhila	20s	High	New	High
5	Ananymous	20s	High	New	Med
6	Diandra	20s	High	New	Med
7	Yoong Hong Loon	30s	High	New	Med
8	Ryan	20s	High	New	Med
9	Zineb	20s	High	New	Med
10	Yuluan	20s	High	New	Med
11	Genie	20s	High	New	Med
12	Mark	20s	High	New	Med
13	Mitchi	20s	High	New	Med
14	Kim	20s	High	New	Med
15	Laura	20s	High	New	High
16	Frances	20s	High	New	Med
17	Nana	20s	High	New	Med
18	Randy	20s	High	New	Med
19	Michelle	20s	High	New	High
20	Stephanie	20s	High	New	High

Table 5.2: Participants Information contd.

	Name	Age	Technology Literacy	Seniority in Jewe
	Scale	20s, 30s, 40s, 50+	High, Medium, Low	New, Jr, Sr
	New Staff (less than 1 year)			
21	Rong	20s	High	New
22	Candace	20s	Medium	New
23	Trista	20s	Medium	New
	Freelance Designer			
24	Sun	30s	Medium	Jr
25	Fang	30s	Medium	Jr
	Jr Staff (1 to 10 years)			
26	Hannah	30s	Medium	Jr
27	Kristel	30s	Medium	Jr
	Sr Staff (10+ years)			
28	Fenny	40s	Medium	Sr
29	Lee	50s	Low	Sr
30	Jenny	70s	Low	Sr
31	Wonder	60s	Low	Sr

C.1 Definition of Terms

Technology Literacy...ability to: High: 6+...Medium: 3+...Low: 2 or less

- Use online engine search

- Install and uninstall software

- Do advanced programming (ruby, jave, etc.)

- Link information residing in different applications

- Use HTML or a web-authoring tool to create, edit, and publish well organized websites with effective navigation

- Understand what appropriate and responsible use of copyrighted content

Design Background High: receives college education or work experience in related area...Medium: Basic operation...Low: cannot use