

A Case Study of Design-driven Startup Companies in South Korea

Boyoung Kim^{1*}, Hyojin Kim²

¹Seoul Business School, Seoul School of Integrated Sciences and Technologies, Seoul, Korea

²International Design School for Advanced Studies, Hongik University, Seoul, Korea

Abstract

Background If the continued growth and affluence of the welfare state are to be sustained, we need to show strength within future growth areas. As one of the areas, design is a central element in the cultural and creative economy, which is one of the major economic growth areas in South Korea. Design startup businesses, which are typically newly emerged entrepreneurial ventures and follow a new business model, are increasingly meeting the market need by developing innovative products, processes or services in the design industry and creative economy. In this background, this study explores to suggest the findings as critical factors to design startup firms, and discussed to improve design startup business development in new startup business environment.

Methods This study divided design startups into four types and conducted a multiple-case study, which analyzed the cases into consideration the four types of design startups. The study selected around 70 design startup firms based on the data base of KIPD(Korea Institute of Design Promotion) and KCCA(Korea Creative Content Agency). In the end KIDU, SHAPL, 3Dconnection, and dALL were selected as the four study subjects. The paper uses a design startup business framework by four types: market-capital oriented startup, market-social oriented startup, technology-capital oriented startup and technology-social oriented startup. Each case of the type framework was analyzed to find the critical characteristics to business-building and development by the SERM model, which included the subject, environment, resource and mechanism.

Results It was found that Korea's design-driven startup companies consider the experience of the founder and the understanding of the customer very seriously: they emphasize drawing the interest of investors award activities, differentiated and integrated processes and platform development. These results provide four implications: first, design startup companies have to go beyond specialized core design capabilities and technologies to create integrated, enterprise-wide enterprise processes from planning to production, distribution, logistics and marketing. Second, design startups need active PR activities to ensure reliability within the market and brand awareness for market entry, so companies use design awards to actively attract investors. Third, startup companies have the limitation that product characteristics can easily be changed due to the small company size, or the corporate vision can collapse. Finally, since the market of startup companies today needs to be globalized, discussion about the entry of design startup companies in Korea into the overseas market and the need for products to target the global market, needs to be more active.

Conclusions This research examines the design startup companies that are active in the Korean industry through case studies of four types of representative companies: market-based economy type, market-based society type, technology-based economy type and technology-based society type. The results show that Korea's startup companies consider the experience of the founder and the understanding of the customer very seriously, and that they emphasize investment attraction, award activities, the differentiated and integrated processes and platform development.

Keywords Startup, Design Business, Innovation, Business Model, Design Industry

* Corresponding author: Boyoung Kim (bykim2@assist.ac.kr)

Citation: Kim, B., & Kim, H. (2018). A Case Study of Design-driven Startup Companies in South Korea. *Archives of Design Research*, 31(2), 51-65.

<http://dx.doi.org/10.15187/adr.2018.05.31.2.51>

Received : Sep. 18. 2017 ; **Reviewed :** Oct. 18. 2017 ; **Accepted :** Oct. 19. 2017
pISSN 1226-8046
eISSN 2288-2987

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1. Introduction

Today creativity invigorates the manufacturing, service, retail, and entertainment industries beyond the deficient development of information and software (Howkins, 2002; Coy, 2000). A case of the South Korea has been industrialized within merely half a century and has maintained economic growth by developing IT and digital-based knowledge and information with manufacturing industries. The growth of online and mobile business and the development of not only the cultural and creative industry but also the contents and knowledge industry has expanded and diversified the existing business models and created new ones, triggering new interpretations and discussions on business models.

These changing business trends have paved the way for the expansion of the design industry and opened new windows of opportunity for the traditionally small and non-specialized design business. And there are various creative economy-related businesses being conducted in Korea, which have been supported by the government since 2008, the supporting environment has been constructed to utilize the internal and external systems of design firms (Kim et al., 2017; Cho, 2014).

Until now, the design business had not been distinguished from design industry or design service and had not been viewed as an independent field. Rather, the design business had merely been part of a process. As such, the lack of clear definition and structured system had been a bottleneck for many design companies, trying to achieve capital and social success and establish the foundation for growth strategy in line with the changing environment. Against this backdrop of design startup business, which is typically a newly emerged entrepreneurial venture and business model, is fast-growing to meet a market place need by developing an innovative product, process or service in design industry and creative economy.

This paper aims to clearly define the design startup innovation and critical issue factors of design startup firms based on a type model of new design business. Most of all to overcoming the limitation is that not enough the existed researches about design startup innovation, this paper suggests the definition of design startup and shows new research trends of startup innovation in design industry. To this end, the paper proposes a design startup business framework and related cases, which classifies the business model into four types based on business approaches between the capital or social, and business activities into product or service.

2. Literature Review

2. 1. Understanding Design Startup Innovation

Business organizations are seeking ways to reinforce innovation strategies, new technologies, and customer understanding for business success (Jang & Ko, 2017). It is through careful insight into customers' minds that a business can improve its product and gain more buyers and subsequently more revenue. In this situation design is often regarded as a soft parameter – on par with human resources and marketing – which is difficult to quantify since its mechanism cannot be defined in isolated terms. While marketing within the recent 10-

15 years has been granted individual status in company accounts, the economic benefits of design are still difficult to identify due to the comprehensive nature of the activity (NAEH, 2003). This is why most assets are poured into research and development (R&D) in all industries (Hamilton, 1986, Winter, 2003).

‘Design R&D’ is the process by which products and ideas are refined into better ones. Innumerable details are dug up to gain an insight into who the core customers are, and what they want or need. This is where a brand creation, market trend consideration, and new product testing comes into play. Furthermore, design R&D catalyzes new design thinking, design applications and production processes to create killer applications, and can provide an important niche market for a non-mainstream platform. It does so through rigorous multi-disciplinary research into new strategies, tools, and tactics of design conceptualization and realization (Kim & Back, 2011).

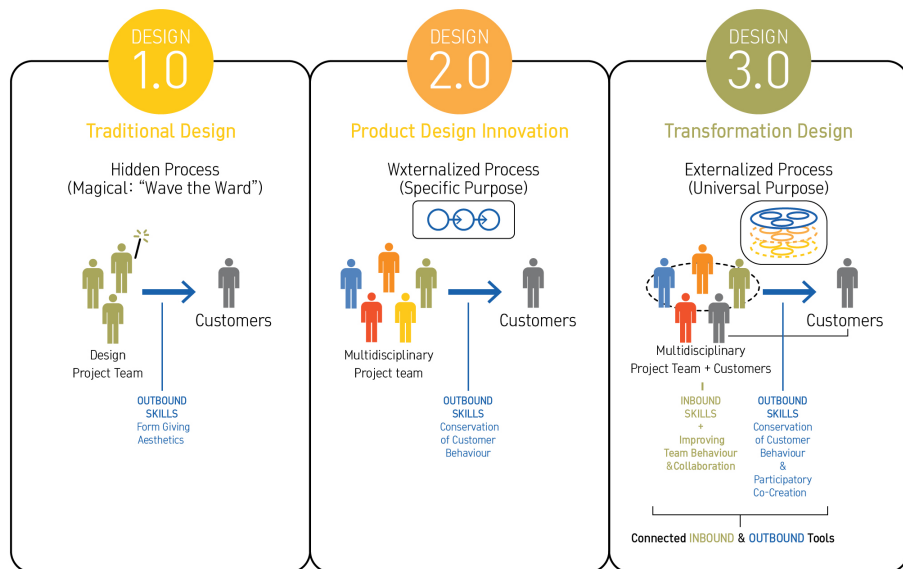


Figure 1 Paradigm Change of Design Industry (NextD Journal, 2009)

In this environment, today design firms and designers should be able to suggest highly successful design activities not by performing subjective aesthetic process but objective and scientific design development process through market-oriented information seeking, scientific design development and effective design management etc. In addition, designers should cultivate design business mind and model by various sources such as new creative idea, new design trend to market change or design thinking for new customer service (Kim & Yi, 2007).

And the end of these activities new design startup companies had launched in the global market and design-driven startup market is growing by design groups and designers who want to build their own business. The exact definition of startup is widely debated. However, at their core, most definitions are similar to what the U.S. Small Business Administration describes as a "Startup business is typically technology oriented and has high growth potential." (Barney, 1991). A startup is usually a company such as a small business, a partnership or an organization designed to rapidly develop scalable business model (Chung et al., 2007). Design service expansion in creative economy is an alternative strategy for startup

firms to seek growth. Design business usually involves launching a new operation in an unfamiliar business (Barringer & Greening, 1998; Berger & De Young, 2001; Emmons et al., 2004).

2. 2. Status of Startup Business in Korean Design Industry

Recently, the government pledged to put Korea in the top seven countries for startup accelerators. The Korean government has funds that support startups and are continuing their efforts to support new and innovative tech startup companies in Korea (Park et al., 2016). South Korean President Park Geun-hye has promised to cut through red tape and provide financial incentives for young entrepreneurs, promising \$92 billion to support small and mid-sized businesses, which also encompasses startups (Son & Yoon, 2011).

Table 1 The Status of Startup Establishment in the South Korea (KSEF, 2017)

Year	~2011	2012	2013	2014	2015~	Total
Frequency	32	20	58	69	116	295
%	10.8	6.8	19.7	23.5	39.3	100

KSEF(2017) reported the survey result of startup establishment status in the South Korea from 2011 to 2016. Total 295 firms have established in Korea business market and 116 firms (39.3%) launched their business in 2015. The report explains the Korean startup market gradually are growing (see Table 1). Also Platium(2017) announced the investment situation of Korean startup market in 2016 (see Figure 2). In accordance with survey total 249 investment companies worked with total 313 startup firms. The investment number was 237 events, and M&A was occurred on 22 times.

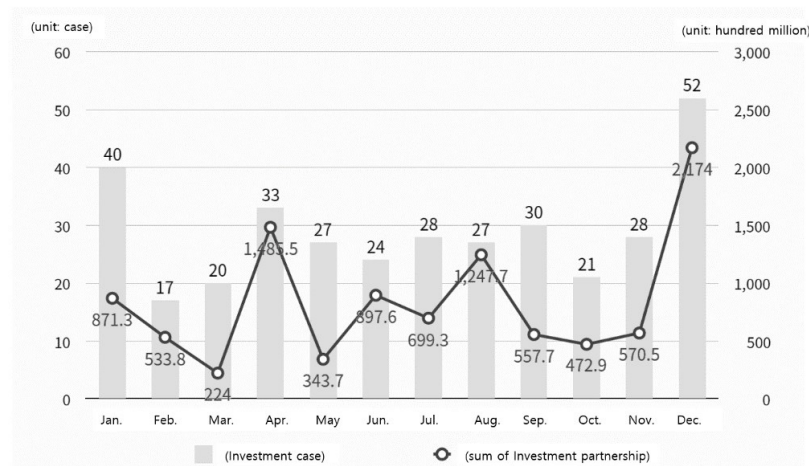


Figure 2 Investment Situation to Korean Startups in 2016 (Platium, 2017)

But the importance of design and design industry as the pivot of knowledge foundation industry in 21st century has been largely understood as a core factor in order to increase the international competitive power subject in industry development. And, the role of design is importantly recognized to citizen's daily life in general not only in the industrial development of state and enterprising activities (Keum, 2000). Furthermore, Consumer demands in the

21st century are becoming more sophisticated and diverse, and the future society driven by this trend is expected to become a people-oriented and diversified society where more emphasis is placed upon quality rather than quantity, design over function of a product, and uniqueness rather than standardized products. Accordingly, the customer-centered design industry is expected to be presented with an enormous growth potential, and the importance of the industry is expected to be strengthened, thereby increasing demand for design-related information and knowledge.

Design connects industries and new value creators. The government of South Korea is therefore supporting technological development through linking its design companies with the city’s leading industries. In recent years, over 170,000 jobs have been generated within Seoul’s design industry alone. Moreover, Korea is home to thousands of advertising specialists, architects, game designers and digital content developers (KSEF, 2017).

3. Research Method

3. 1. A Conceptual Framework to Startup Type

Most of all to overcoming the limitation is that not enough the existed researches about design startup innovation, the paper suggests the definition of design startup and shows new research trends of startup innovation in the design industry. And to this end, the paper proposes a design startup business framework and related cases into four types based on the business approach type model by Lee & Lee (2016). The model concept created both the source and the result of the value creation simultaneously from literature review.

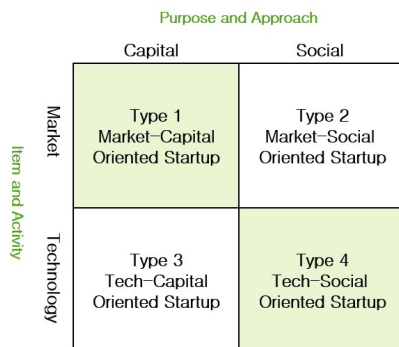


Figure 3 The framework of design startup type

This study listed up around 70 design startup firms based on data base of KIPD(Korea Institute of Design Promotion) and KCCA(Korea Creative Content Agency). And finally, KIDU, SHAPL, 3Dconnection, and dALL were selected as the four cases (see Table 2).

On the basis of the framework, this study divided design startup into four types and conducted as a multiple-case study which analyzed the cases regarding the four types of design startup. The case selection of each type is based on the corporate vision and strategic focus to develop their business.

Table 2 The Selected Firms to Case Study

Section	Company Name	Start Year	Main Item
Type1. Market-Capital Oriented Startup	SHAPL	2012	Smart Bottle for Shower
Type2. Market-Social Oriented Startup	KIDU	2014	Car Seatbelt-Doll for Kids
Type3. Tech-Capital Oriented Startup	3Dconnection	2013	Traditional product by 3D printer
Type4. Tech-Social Oriented Startup	dALL	2017	Typeface for the disabled

3. 2. Research Analytical Model

As a research methodology, this study attempts to investigate the success cases of differentiation for supporting corporate management and product development of the startup firms through subject, environment and resource, which are the inputs for the mechanism using the environment-based strategy model (Cho & Lee, 1998).

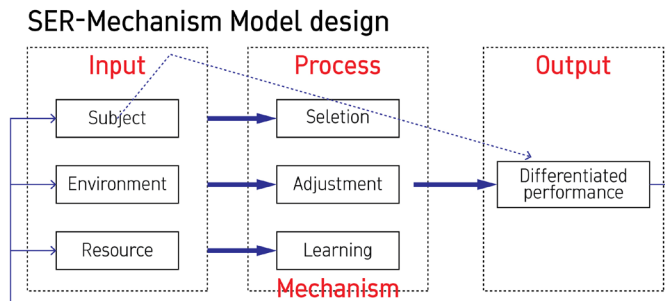


Figure 4 Mediating effect the research model (Cho & Lee, 1998)

4. Case Study

4. 1. Market-Economic Type: SHAPL

(1) Overview

In 2012, of Jin Chang Soo has established a design and distribution company, SHAPL. Later in 2013, the company received an investment of 55,000 dollars from the funding of a crowd-funding site called Kickstarter in order to mass-produce the smart bottles. Further, it has been awarded by the Ministry of the Future Creation Science and the Seoul Business City Entrepreneurship Award. Currently, the products are now exported to seven countries.



Figure 5 SHAPL's Smart Bottle for Shower

(2) Subject Approach

The case of SHAPL is pretty much similar to the establishment of other startup companies as they began selling idea products based on the experience of the representative of the company. CEO, Jin Chang Soo served in the Iraqi Zaytun unit in 2006 and experienced the product concept and ideas. The first version of the product title fully reflects his ideas, then named it as 'Smart Bottle'. In the process of such product development, the product development and the role of the company for CEO Jin, was a broker between the consumers and producers, and therefore, the company was defined in the design to the production and to distribution for actualizing the idea and needs. So, the three designers of SHAPL were far beyond developing and designing the products, but also had this integrated ability to manage all the processes from the development of consumer goods to the supply of service goods. In order to be responsible for the competitive pricing, fast development and delivery, they have applied the principles of self-operated management policy by using the competence of internal members rather than external outsourcing system.

(3) Environment Approach

SHAPL succeeded in entering the market in two stages. SHAPL developed a direct product and produced a comprehensive advance to export, sales and marketing. The next stage was to expand the market through a global service platform, leveraging the sales and distribution infrastructure that entered in the first stage. In the first stage, SHAPL identified consumer responses through Kickstarter, a pre-sale and pre-purchase structure, and developed and marketed market-type products that read and reflect the flow of distribution MDs through data. Later in the second stage, SHAPL has established a global platform market environment for selling such products all around the world and developed products or services in order to enter into the global market.

As table 3 shows, the process was able to develop as an advantageous platform for revitalizing the rapid development and consumption of design ideas products reflecting trends.

Table 3 SHAPL Total Design Platform Structure

15 days	Designer engagement Select designs according to user's preference
15 days	Social marketing pre-sale
60 days	Specialized process by product, OEM production.
90 days in total	Wholesale direct sales, Global delivery

(4) Resource Approach

After the idea has actualized, the company registered into a business registration in 2012. Then in 2013, after four times of failures of smart bottle prototypes, the company was able to register into the US social funding site called, kickstarter in the same year of August. In the next 60 days, \$55,026(58.32 million won) was collected and 57% of the original target was surpassed. The crowd-funding site has a regulation that allows the company to receive money only after when they have passed the target amount. It was priced at \$20 for three 35 mL and \$24 for three 65 mL, so 1,063 users were willing to pay for SHAPL to purchase the product. Further, SHAPL received the authoritative international design awards like IDEA and REDDOT, and they were able to continuously verify the idea and release the updated product. And they were able to acquire rapid driving force as well as strengthening global distribution and competitiveness while succeeding in "smart bottle" products with the appearance as an international startup.

(5) Mechanism Approach

SHAPL has a human-sensitive sentimental philosophy, as the company was named by taking the vulnerable of honesty, harmony, ability, joy, and love. All of products within the company are structured by configuring the company management aimed at the point of starting from consumers and being offered to consumers and seeking customer feedback and customer-oriented strategies in all stages of product production to upgrade.

Particularly, SHAPL is a design-oriented company where design mind is regarded as a focal point according to the configuration of design majors and the CEO's philosophy. SHAPL has established a design platform in each process, from technology to production distribution and export, and systematically implements basic design competitiveness in products and services. In order to establish a design-minded company, designers develop the desired products whenever they want, and institutionalized a design system platform that allows them to receive a royalty of their ideas.

4. 2. Market-Social Type: KIDU

(1) Overview

KIDU is a company that was established in February 2014. It was based on the idea of products that Jung Sekyoung, Yu Soojin, the two graduates of the master's degree in KAIST's Department of Industrial Design, who has received two awards for the first prize through "KAIST E * 5 Start-up competition" in August 2013. Kidu's kick starting item and a flagship brand 'Hugdoll' is an infant and child-specific car seat belt designed to relieve the physical and emotional discomfort that children may have when wearing their seatbelts on.



Figure 6 Kidu Hugdoll

(2) Subject Approach

Kidu's designers are focused on consumer-oriented thinking and sensitive organizational culture. Especially in development of characters to build the identity of children's products was considered important, they developed the four kinds of characters named as, meticulous nature PONG, mischief LEO, winsomeness ANCHO, prudishly COMEE to derive child's curiosity and while bringing inspiration. Kidu also strives to access moms with brands based on sensitivity and storytelling. Startup firms often start with product development centered on technology or idea concept products. However, companies that specialize in product development and design, such as Kidu, who focuses on finding customers' needs as children's products, needs a challenge and passion of leadership, as well as the professionalism of designers and the individual creativity of each team is an important success factor.

(3) Environment Approach

In the case of Kidu, an initial investment cost with the startup company of the character-

based design industry was not high. However, in the child's infant market, because brand and reputation are important, it was necessary to ensure that reliability can be provided. Particularly, the characteristics of parents' customers, who are customers in Korea's infant products market are very active and delicate, so it was important to trust, fame and actual customer satisfaction beyond Kidu's creativity as a startup company. In the case of 'Hugdoll', they carried out an image training to wear children's safety belts from product package to promotional channel in order to secure social contribution and trust of brand by linking with children's traffic safety campaign.

This is not a distribution channel like online or editing shops, but a branding that can be trusted by mothers by entering a department store for children's goods department, which is an offline channel that can secure reliability to maximize the importance of brand recognition and reliability.

(4) Resource Approach

As a startup design company, Kidu is the most important source of competitiveness among designers. All the designers of Kidu are based on the outstanding teamwork and mutual understanding about their design work. For the development of these designers, Kidu is actively encouraging competition activities. For example, by creating a simple idea of holding a fluffy doll or relying on a character doll instead of a rough-surface belt, Kidu won the prize of KAIST E * 5 Start-up competition sponsored by the KAIST Business Start-up and continues to challenge the global design competition. In addition, since they are a character-based company, they strengthened the character design capabilities for characters and tailor-made characters that are suitable for trends, while continuing education and campaigns to understand customers based on the merchantability targeted to children. It continues to strengthen the network with business, relating government agencies and specialized vendors.

(5) Mechanism Approach

Kidu considers an infant product, but parents, especially mothers, are a key customer target, so they need to create an emotional and humane product and service culture. Kidu Mom Workshop, differentiated from other companies, is periodically operated to listen to and listen to customers' opinions and develop and update their products. They form a formal meeting based on offline meetings, an informal experts' evaluation team, and an online community. Kidu continue to operate a system that reflects the needs of customers by product development stage. As a result, Kidu's core competence based on a customer-oriented product development strategy is to find innovative ideas together with customers as a startup company and to internalize the synergy strategy to build stronger credibility.

4. 3. Technology–Economic Type: 3Dconnection

(1) Overview

Shin KiJin, who was recognized as a product designer, developed a new business model as soon as a new technology of 3D printer came out in 2013 and established 3Dconnection. 3Dconnection has the role of mentor for exchanges in various industrial fields and startup and preliminary founders through 2015 3D printing online platform, not only consulting, but also product development based on 3D printing technology.

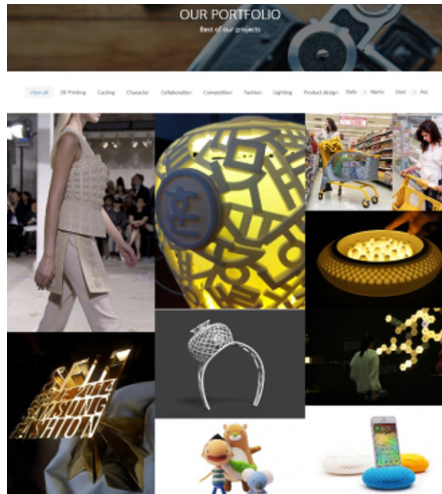


Figure 7 3Dconnection 3D Printer Technology Integrated Product

(2) Subject Approach

Shin KiJin representative is an industrial designer, who has a sense of drawing production technology as a designer as well as being able to output not only the products the customer wants, but also selling products that he designed voluntarily. For these reasons, he could boldly jump into 3D printing related field. In particular, Shin KiJin, the head of the company, once heard his son crying because he lost his favorite block on his way home. This personal experience has enabled the sharing of printable drawings and education to create own products, creating a business model that allows 3D printing to be used at home.

3Dconnection continues to collaborate with diverse fields that can be based on character toys, crafts, fashion accessories, and product design. From the beginning to the present, 3Dconnection is a system to construct a short-term operating system by restructuring experts in each field by project.

(3) Environment Approach

There is a service such as a 'thingiverse' that shares the 3D product of general-purpose products through the internet for the general public without expertise. Utilization by 3D printer application is applied in all directions from living at the one-line industrial site to a close field, and the direct production of parts is 19%, the proportion of the prototype type exceeds 12%, 3D printer market of 30 billion won scale in 2012 has grown rapidly to 11.6 billion won in 2016.

In order to be prepared the era of replacing one at a time like a past document printer, 3Dconnection has created a unique educational program MOP(Makers One Project: project unit Public development program for the development of products and services making use of 3D printing technology). In the long run, 3Dconnection does not have a basic knowledge of 3D printing and specialized customers for product design in the long term. However, 3Dconnection has three aspects (function, interaction, form) and customized services in stages.

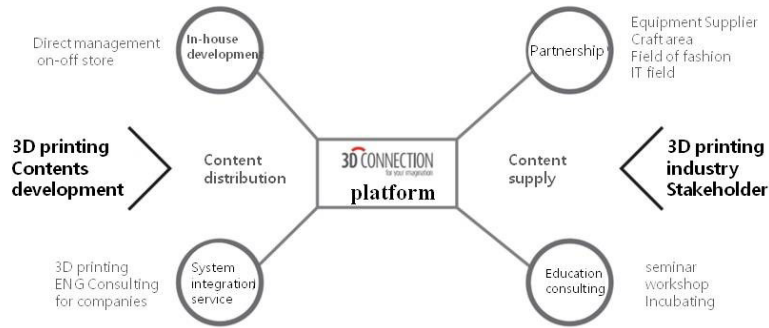


Figure 8 3Dconnection platform structure (3Dconnection website, 2017)

(4) Resource Approach

In the case of 3Dconnection, the company's product design contents have centered on traditional culture. Especially, the design of products using traditional materials or the differentiation strategy to create stories was constructed. 3D printer technology is a futuristic technology, but if it does not contain content and story, it cannot have the meaning and differentiation as a product. Therefore, it is possible to produce a product in which a proprietor of traditional culture, emphasizing that it should be realized through a new technology.

As a result, 3Dconnection builds processes and develops new products so that 3D printing technology can collaborate step by step with traditional craft experts. Especially, in order to realize the intangible direction that must put the mentality that is important in the traditional culture into the technology, 3Dconnection aims to complete the product development within at least 6 months, launch it to the market, and distribute to sales revenue.

(5) Mechanism Approach

3Dconnection is leading the market for 3D printing industry and leading the market in Korea by networking 3D printing related technology, market and talent. 3Dconnection leads manufacturing innovation 3D printing, resource sharing and cooperative production activities, close connection with new product ideas and 3D printing technology, 3D printing specialized with makers and designers, they continue to collaborate design collaboration, based on these systems to realize the development of new products. In addition, they realize the corporate philosophy to lead the expansion of product development partnership and spread of 3D printing through the design collaboration creation workshop called, Weekly Monster (MOP: Makers One Project) and point to differentiate the market it has strengthened.

4. 4. Technology–Social Type: dALL

(1) Overview

Lee JoungGeun is a designer who felt that a typeface for constant design, age and disability, universal design, equal design was always necessary, he made himself feel uncomfortable reading the explanation of the product. As dALL solves inconveniences of living by obfuscating misreading of presbyopia (presbyopia, low vision, cataract), they also aimed for a

sustainable company and received a support funding from Korea social Enterprise Promotion Agency in February 2017.

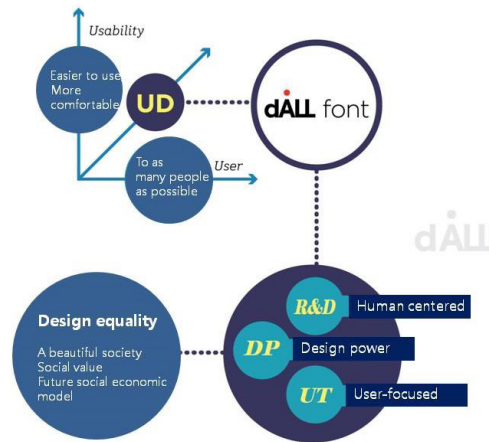


Figure 9 Overview of dAll Foundation Platform Structure

(2) Subject Approach

Lee JoungGeun, who has extensive experience in the design industry, worked with font experts to create universal fonts and collaborated with product experts to create the Universal Design Guidelines product networking. The reason for choosing a font as a startup product is that the starting point of the design work is the font, and the starting point of the social problem to be solved can be solved by using the font.

CEO Lee has actively introduced examples of Japan's Iwata company, which found business models through solving similar social problems a few years ago and benchmarked the expert network of domestic design school and typography companies. CEO Lee's ability to have a variety of experience as a representative of the company plays a central role of the enterprise but basically collaboration with experts and institutional cooperation on various aspects of the font is important.

(3) Environment Approach

dALL determined that the fonts used for the consent of the provision of personal information are invisible to the eyes of the recent problems, desperately need the change in the social institution and aimed at developing a universal design font. Unlike existing general fonts, universal design fonts have problems in cognition to improve design of Hangul small letters and must be designed without misreading. Particularly in case of Hangul, it is very difficult to distinguish between "ㄷ" and "ㅌ", it is necessary to set the spatial distribution well by optimization of suicide bomb 80% champion, without bleeding on vinyl and plastic containers on the ground, Ink Trap must be implemented so that it can be done. dALL mainly utilizes foods, medicines and many other supplies for the aged population, through the change of the usage environment of the basic typeface, mainly to overcome the inconvenience of life for the visually impaired, to prevent accidents, to prevent information weakness and to overcome withdrawing, developing voluntary or institutional support institutional changes.

(4) Resource Approach

Because of a financial assistance of Korea social enterprise promotion agency, rather than a general support of funding, the beneficiaries of the presbyopia of forties and older provide social benefits and then the food and drug administration, pharmaceuticals, electronics, and specialized design companies are practicing collaboration marketing and distribution plan in stages to introduce sales to the competitiveness of the font itself which is more expressive than before. dALL is the first Korean company to develop and expand the universal design font, and it is occupying the position of professionalism through licensing contract through TLab, which specializes in typeface sales.

(5) Mechanism Approach

dALL is a startup company based on the social enterprise mission of Korea social Enterprise Promotion Agency, which is a design investment capable of returning to society. It is currently building a platform to spread products and contents from universal fonts. A certain percentage of the business income is the personal information education for the high-ranking people and the first step of the development of the universal design font for the vision impairments. dALL is a design company that interests in social contribution, a small food company and operates in conjunction with the program. dALL's product development and expansion platform, which aims to realize social value and future-oriented social economic integration model through design equality.

4. 5. Synthesis Result

As can be seen in Table 4, we analyzed the characteristics of representative design startup firms in the Korean market by analyzing its each type.

Table 4 The Synthetic Analysis Result

Section	Subject	Environment	Resource	Mechanism
SHAPL (Market-Economic Type)	<ul style="list-style-type: none"> - Based on CEO experience - Enterprise process management capability 	<ul style="list-style-type: none"> - Total design platform - Customer needs development centered product development 	<ul style="list-style-type: none"> - Cloud funding - Award winning - Establishment of a local corporation 	<ul style="list-style-type: none"> - Customer-based product development process - Design platform system
KIDU (Market-Social Type)	<ul style="list-style-type: none"> - Women's leadership - Emotional creativity - Customer-oriented integrated development capability 	<ul style="list-style-type: none"> - Core offline channel attack - Promoting social contribution and trust through campaign 	<ul style="list-style-type: none"> - Professional designers - Competition or awards - Customer related stakeholder network 	<ul style="list-style-type: none"> - Customer-based product development process
3Dconnection (Technology-Economic Type)	<ul style="list-style-type: none"> - CEO know-how and experience - Cooperation with internal and external experts 	<ul style="list-style-type: none"> - Education program (MOP) - Customized service 	<ul style="list-style-type: none"> - Patent related technology - Traditional culture contents - Craftsman collaboration 	<ul style="list-style-type: none"> - Joint hybrid partnership - Leading the market
dALL (Technology-Social Type)	<ul style="list-style-type: none"> - CEO know-how and philosophy - Expert network 	<ul style="list-style-type: none"> - Universal design font development - Wide range of customers 	<ul style="list-style-type: none"> - Attracting government agencies and enterprises - Strengthen intellectual property 	<ul style="list-style-type: none"> - Product spreading platform - Collaboration of corporate social contribution programs

5. Conclusion

This research examines the design startup companies that are active in the Korean industry through case studies of four types of representative companies: market-based economy, market-based society type, technology-based economy type and technology-based society type. As a result, Korea's startup companies consider the experience of the founder and the understanding of the customer very seriously, emphasizing the investment attraction and award activities and the differentiated and integrated process and platform development.

These results provide four implications; first, design startup companies have to go beyond specialized core design capabilities and technologies to create integrated, enterprise-wide enterprise processes from planning to production, distribution, logistics and marketing. Second, design startup needs active PR activities to ensure the reliability within the market and brand awareness for market entry, so companies use design awards to actively attract investment. Third, Startup companies have the limitation that product characteristics can easily be changed by small company size or corporate vision can be collapsed. Therefore, the will of the founder is important, and the product development and the market securing should be based on the idea and the design ability of the founder. Finally, this study has analyzed the design startup companies in the Korean market. However, since the market of the startup companies today needs to be globalized, the discussion about the entry of the design startup companies in Korea into overseas market and product aiming at global market, it needs to be more active.

Nonetheless this study has the following limitations; First, even if the cases were selected based on the literature review the standard is on intuitive standards by business approaches and activities and conceptual level. The design startup type model can be identified by an empirical research method to business type classification in future research. Second, the case to analyze design startup business was collected in Korean design industry. It means that the cases have the unusual status and situation on Korean business environment and culture. To gain an assertion validation this study need to be developed on global design startup firms.

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