

Revitalizing Seoul's old cityscape through design insight and management: Case study of the N Seoul Tower of Namsan Mountain

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Abstract: Seoul has been designated as World Design Capital for 2010. To fit this criterion, the city is bustling with renovations to make everything “new”. However, in this design age of material and energy responsibility, design values and challenges are crucial in discriminating the essential factors that reveal values within the chaos of the old cityscape.

This paper is a study of city renewal through design. The paper will contain research to support the argument that retaining the existing cityscape is design-worthy when proper design planning and management is put into effect. The paper will focus on case study of the N Seoul Tower and how it can be a model of maintaining old city culture and values whilst successfully transforming into a visually refined user oriented environment through an integrated design approach.

Key words: *revitalization, design factor values, N Seoul Tower, Namsan Mountain*

1. Introduction

1.1 Research Context and Aim

The original city of Seoul is surrounded by four mountains. Buk Ak Mountain covers the north side; Naksan Mountain is to the east while Inwang Mountain lies westward. To the south is the Mokryuk Mountain, otherwise known as Namsan Mountain. Shaped like a mystical bird, there are two peaks that spread out and N Seoul Tower rests on the slight higher west peak.¹ Namsan Mountain is vital to the people of Seoul not only because it serves as a park but also is an important part of Seoul's ecological circulation. During the Chosun dynasty, it also served as a form of communication by using smoke during the day and fire during the night. A watchtower known as "Bongsudae" alerted the people of Seoul of good and bad events for almost for 500 years. From a historical point of view, the fact that N Seoul Tower's original purpose was a communications relay tower is significant.

In 1969, three main Korean broadcast stations co-invested in building an all-purpose communications and observatory tower at Namsan Mountain. Upon its completion the tower became Korea's first communications relay tower that sent out TV and radio transmission. For security reasons, the tower was not opened to the public until 1980. In 2000, the television station YTN bought the tower and renovated the entire site in cooperation with CJ Corporation in 2005. Today, the tower serves four main broadcasting stations, various radio stations, and Korea Telecommunications. Approximately 48% of Seoul's household receives transmission through the tower.

Today, the city images of the world are becoming more similar due to the basic structural bases that are common throughout. Therefore, in order to maintain a unique element, similarly developed cities are recognizing the value of city brand.² In order to raise its image, Seoul is undertaking massive renewal projects throughout many parts of the city. N Seoul Tower is not directly part of this phenomenon but can be viewed as an ideal example of city structure renewal through design.

This research aims to first, determine which design factors are involved in design-oriented renewal of a city structure by looking at related design areas. Secondly, the determined design factors will be used to analyze N Seoul Tower's renewed design characteristics. Thirdly, the research will serve as a tool that aids in detecting existing design values within a city structure and ultimately results in maintaining those structures that add to the city's brand image.

1.2 Research Method

In order to determine the value of the design renewed elements of N Seoul Tower, this research first studied literature and scientific journals to gather factors of design to create an evaluation table. The three tables include input from public design, cityscape design, and product design. Attributes of N Seoul Tower was then viewed according to each of the evaluation categories to ascertain the validity of renewal through design. N Seoul Tower's specific information was based on a previous in-depth study commissioned by the city of Seoul. Since this research is a case study of a structure that already been successfully design-renovated it was used as an

[1] Wansu, Choi. (2002) *Hanyang cityscape viewed by Gyunjaejungsun*, Dong Ah Ilbo, Seoul

[2] So-Min, Ahn, Dong-Ryun, Chang, Sung-Min Hong. (2007) *Effect of Innovative Urban Landscape Design on City Brand Promotion*, Journal of Korean Society of Design Science Vol. 20, No. 4, pp 131

experimental standard from which further empirical studies can be conducted from. The resulting findings helped to set a guideline that contained three design disciplines for city structure design revitalizing process.

2. Determining Design-Oriented Renewal of City Structure

2.1 City Brand Image and the Need for Revitalization

Urban landscape is an important part of deciding the image of a city. Since the term urban landscape connotes a whole, macro perspective of the city, this research will use the term 'cityscape' to relay a more detailed image of city structures. The term city brand image is same as city image, that is, it is the people's overall impression of a city. However, the purposes of the two terms are different. While city image aims to increase life quality of its inhabitants through city environment improvements, city brand image focuses on the unique commodity value compared to other cities.³ Improving the city environment for the welfare of its citizens is a mandate and Seoul has continuously undergone this process. However, the current situation is unique because Seoul faces several other factors that force it to undertake revitalization. The main reason behind much of Seoul's design focused projects is due to being selected by International Council of Societies of Industrial Design (ICSID) as the World Design Capital (WDC) of 2010. The city of Seoul is hundreds of years old and fitting into modern criteria of a design city will be difficult. In response, city-wide projects such as 'Han River Renaissance' and new city hall construction are currently in progress. When the design subject did not previously exist, the obvious course of action is to create something entirely new. However, what happens when an existing structure becomes the subject of design?

2.2 City Structure Design Factor Evaluation Method

The following are evaluation tables in which design factors from various disciplines are selected to determine the design values of a city structure. Three disciplines are divided into three tables. Within each of the discipline, type is categorized so that similar determining factors can be grouped together. Specific content column describes the nature of each factor. Finally, a five-point Likert scale is used to determine the intensity of cityscape and public design factors while product design factors are weighed by a feasibility scale. The intensity scale measures the amount of the particular design factor that the target structure contains. For product design, a measure of feasibility is logical since the city structure's product design values basically lie in the ability to become a merchandisable concept. The basic structure of the table was based on a study by Woo-Jong Lee and Nam-Jung Kim on the elements of city brand image and influences. Determining factors of cityscape design was also referenced from this study. Determining factors of Public design was referenced from Hong Kyung Shin from the book 'Story of Design City'. Lastly, determining factors of product design was gained from Beverly Gordon in the 1986 winter issue of Journal of Popular culture.

[3] Lee, Woo-Jong, Nam-Jung, Kim, (2005) *A Study the Elements of City Brand Image and Influences*, Journal of Korea Planners Association, Vol. 40, No. 6

Table 1. City Structure Evaluation According to Cityscape Design Factors

Design Discipline	Type	Determining Factors ⁴	Specific Content	Intensity Scale				
				1	2	3	4	5
Cityscape Design	Substantial	Unit facility(structure)	Things that exist in specific cities such as Facility name, Structure name					
		Location	Things that are specifically recognized as a location					
		Nature, Environment	Things that are related to Natural environment, Environment management					
		Urban environment	Things related to Urban environment such as population and crowd					
	Symbolic	Social/ Cultural Activity	Things related to Social, Cultural Activities					
		Urban space, Geography, Topology	Things relative to Size of city, Location, and Symbol					
		Period, Time	Things relative to Specific period and Continuity of time such as war, development					
		Urban life	Things related to basic urban life such as residence, and commodity price					

Table 2. City Structure Evaluation According to Public Design Factors

Design Discipline	Type	Determining Factors ⁵	Specific Content	Intensity Scale				
				1	2	3	4	5
Public Design	Location	Location and History	Facts associated with the location that reveal history					
		Events and Space	Historical events that took place at the location					
		Leaving traces, recording	Leaving our traces about the big and little happenings in our lives					
		Harmonizing with location	The level of harmonization of existing design with the surrounding environment					
	Coordination	Moderate, Minimal	The level of control exerted to the location in order to coordinate with existing environment					
		Clear (concise)	Level of functional integration and control of forms to relay a clear image					
		Connection	How each elements within the location connects to each other through design					

[4] Lee, Woo-Jong, Nam-Jung, Kim, (2005) *A Study the Elements of City Brand Image and Influences*, Journal of Korea Planners Association, Vol. 40, No. 6

[5] Shin, Hong Kyung, (2008) *Story of Design City*, Kwangmoonkag Publishing, Seoul

		Organic flow	The level of natural flow and openness of the location					
	Medium	Image	Does the structure/location serve as a self-sufficing image?					
		Plaza	Does the plaza area serve as cultural, resting place for the visitors?					
		Monument	Is there a monumental element that creates stories and gives meaning to the location?					
		Artistry	Does the structure have artistic values that are appreciated by the public?					

Table 3. City Structure Evaluation According to Product Design Factors

Design Discipline	Type	Determining Factors ⁶	Specific Content	Feasibility Scale				
				1	2	3	4	5
		Symbolic Shorthand	Story product that is attached to a special place and time such as Eiffel Tower miniatures					
		Marker	Story records that is attached to a special place and time such as printed T-shirts and key holders					

3. N Seoul Tower Design Factor Observation

The following are observations of the design factors that are contained in the N Seoul Tower according to the evaluation tables created above. Specific information about the tower was referenced from in-depth study of N Seoul Tower that was commissioned as ‘Seoul Design Asset’ project by the city of Seoul.⁷

3.1 Cityscape Design Factor Observation

Cityscape design factor observation is divided into two main categories for revitalization; substantial and symbolic. Substantial category represents the physical, tangible aspects of N Seoul Tower relative to Seoul. The symbolic category deals with contextual issues surrounding the tower.

In the substantial category ‘unit facility’ factor can be rated high because of the significance of a tower within a major metropolitan city. A large tower such as N Seoul Tower gives great presence to a city, especially when it is constructed on top of a mountain. (Figure. 1) ‘Location’ can be rated high because when Seoul expanded to the south of the Han River, Namsan Mountain and N Seoul Tower literally became the center of the

[6] Gordon, Beverly (1986) *The Souvenir: Messenger of the Extraordinary*, Journal of Popular Culture, Vol. 20, Issue 3, pp. 135-146

[7] Park, Youngsoon, Kim, Anthony, Kim, Sung ah (2009) *100 Seoul Design Assets: N Seoul Tower*, Seoul Design Center Foundation

city. The city of Seoul measured the GPS coordinates in January of 2009 and marked the center very close to the tower. (Figure. 2) The ‘nature/environment’ factor is also high because of the Namsan Mountain. The mountain’s rich natural environment greatly enhances the whole experience of the tower. (Figure. 3) ‘Urban environment’ has a high rating because of reasons similar to the location factor. Since the tower rests on top of a mountain that is the center of the city, the tower is visible virtually from anywhere in Seoul. Also, in terms of transportation, personal vehicles became banned from entering the direct road to the N Seoul Tower. An environmentally friendly shuttle bus system is in place to accommodate the visitors. (Figure. 4)

In the symbolic category ‘social/cultural activity’ factor is viewed high because it was one of the major reasons behind N Seoul Tower’s renewal. Through various social and cultural activities held throughout the year, YTN and CJ Corporation have boosted the visitor and revenue rate. (Figure. 5) ‘Geography’ factor is high for being not only the physical center of Seoul, but symbolic one as well. (Figure. 6)

‘Period and time’ are very important factors for evaluation. In order to preserve a city structure, its historical value must have enough significance. Figure. 7 is a picture of the tower at its early stages of existence. It can be observed that there was no structure for sightseeing that exists today. During this time, national security was of immense importance and the tower presented a security risk because of its line of sight directly visible to North Korea. The tower represents no direct relation to ‘urban life’ factor but indirectly, it is extremely valuable. The tower and Namsan Mountain has come to be recognized as singular symbol of Seoul. This value of this relationship can be realized from the fact that the tower is the only high-rise structure that remains at Namsan Mountain today. In the past, apartment complexes for foreigners was torn down because of its detrimental nature to the overall image of the tower and mountain.(Figure. 8)



Figure. 1 Top of Namsan Mtn.



Figure. 2 Exact GPS center of Seoul



Figure. 3 Rich natural environment of Namsan Mtn.



Figure. 4 Shuttle bus system



Figure. 5 Social and cultural events



Figure. 6 Physical/Symbolic center of Seoul



Figure. 7 Early stages of tower construction



Figure. 8 Apartments being torn down

3.2 Public Design Factor Observation

Public design factor observation is divided into three main categories for revitalization; location, coordination and medium. Location category represents the historically significant location aspects of N Seoul Tower. The coordination category deals with the harmonization of various design elements. Lastly, medium category looks at design elements related to communication, media, and art.

In the location category 'location and history' factor can be rated high because the tower has always been a well-recognized image of Seoul. Before the construction of the tower, Namsan Mountain's historical value was well known through the Bongsudae. It was a traditional alert system developed to warn the people of Seoul in times of crisis. By using smoke during the day and fire during the night, a relay system enabled the country's capital to prepare for oncoming enemy. (Figure. 9) 'Events and place' element of Namsan Mountain is moderate. The most significant historical events took place during the Japanese occupation of Korea when an imperial shrine was built. (Figure. 10) Since its renovation, N Seoul Tower has set up many visitor activities that offer unique experiences related to 'leaving traces'. When young couples visit the tower they can each place a lock on a fence with their names on it. They then throw away the keys to the lock. It has become a ritual for visiting couples to do this as a symbolic gesture of their unbreakable relationship. (Figure. 11) Another location design factor is the level of 'harmonization'. N Seoul Tower is right next to a traditional building known as "Palgakjung" (Figure. 12) mixture of traditional and modern is a unique experience to the visitors and does not come across as something incompatible. Visitors can enjoy viewing the modern sight of the tower from Palgakjung and vice versa from the tower.

In the coordination category 'moderate and minimal' factors are assessed to find the level of design control exerted to the location in order to coordinate with the existing environment. Figure 13 is an example of such control. Minimal use of decoration and colors allow the existing tower environment and design elements to co-exist without conflict. The tower also has high 'clear' category because of the design language application. Coordinated use of lines, natural materials, and color allow a clear representation of the space. (Figure. 14) Furthermore, use of wood panels for the floor of the entire outer lobby area creates a definite 'connection' factor. (Figure. 15) Connection within the design space is important for coordination, but in order to achieve an overall connection, the forest context must be taken into consideration. The importance of the 'organic flow' factor varies depending on the location's characteristics. In N Seoul Tower's case, this factor is very important because the basic element of scenery is the heart of the site. The N Seoul Tower's lobby area allows for plenty of organic flow while covering just enough to enhance the viewing experience from the outer observation deck. (Figure. 16)

In the medium category, the tower's 'image' factor is viewed very high. Due to its location and uniqueness, The N Seoul Tower leaves a visual strong impression to its visitors. (Figure. 17) As mentioned above, the effective use of space of the 'plaza' factor is crucial because it is the central location where people come to rest and be entertained. (Figure. 18) Among various other structures, a tower is one of the most monumental structures of a city and therefore obviously rates high 'monument' value. (Figure. 19) Finally, 'artistry' medium factor became much greater since the tower's renovation due to installations of artist and designers works. (Figure. 20)



Figure. 9 'Bongsudae' alert system



Figure. 10 Japanese shrine during the occupation



Figure. 11 Lock & key ritual for couples



Figure. 12 'Palgakjung'



Figure. 13 Minimal design



Figure. 14 Clear use of space



Figure. 15 Connection with the surrounding context



Figure. 16 Observation deck



Figure. 17 Strong graphic identity



Figure. 18 Plaza area



Figure. 19 Monumental value



Figure. 20 Various art installations

3.3 Product Design Factor Observation

Product design factor evaluation has one category. For a city structure to have revitalizing value, it must have a souvenir element to it. That is, the structure must have two determining factors as mentioned by Gordon 1986; Symbolic shorthand, and Marker. Like the Eiffel Tower of Paris, N Seoul Tower's 'Symbolic shorthand' products also possess much potential. As one of the key images of Seoul, the tower is an excellent design source for souvenir production. (Figure. 21) At the same time items such as, key chains and mugs are already for sale at N Seoul Tower and accounts for high feasibility value. (Figure. 22)



Figure. 21 Souvenir



Figure. 22 Key chains

3.4. Results

Observation of N Seoul Tower's case study of design renewal according the evaluation tables resulted in overall high values. Cityscape and public design factors revealed important details that are innate to the location. Also, from a design perspective, the design renewed tower offers many characteristics that are important in determining the revitalizing worthiness of a city structure. The overall coordination and management of the tower is evident in its uniform design language and because of the strong symbolic element, N Seoul Tower's product design factors allow for great progress to be made in developing well designed souvenir items.

4. Conclusions

Although the design factor evaluation table was created from various preceding studies application of the N Seoul Tower's design revitalization factors was mainly based on Park, Kim, and Kim's study of the N Seoul Tower and therefore lacks empirical validation. Further studies and verification of the evaluation table is required through surveys in order to be a useful scientific tool.

In conclusion, the value of this paper can be found in the trial of integrating various design disciplines to evaluate a single city structure. In order to evaluate a subject complex as a city structure for revitalization, a singular design perspective is not enough to determine its value. This paper used crucial factors from various design disciplines and combined them to suggest a new method of evaluation before a particular city structure can be renewed. It can provide a rational approach to maintaining the true value of the old city while enhancing certain factors to result in a synergy effect. One of the best examples of this is the Tate Modern museum of UK. By revitalizing the former Bankside Power Station, Tate Modern became famous for its historical significance even before actual galleries became known. As such, Seoul's revitalizing efforts through design is commendable, but without careful considerations of the city's true beauty, reckless designing will prove more harm than good.

5. References and Citations

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