

## Article

# Common Spaces of Multi-Commercial Complexes from Urban Sustainability

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**Abstract:** In contemporary society, multi-commercial complexes have been developed in various ways according to the circumstances and historical situation of different cities with a vision to implement sustainability. Design direction centered on public and common spaces proposed in recent commercial complexes has shown a tendency to perform beyond its original role, not only supporting private space, but also taking a public role. In this study, urban sustainability implemented in the perspective of architectural design was defined in three categories: environmental, social, and economic sustainability. For each category, the planned aspects of multi-commercial complexes of passive circulation system, amenity and mobility, complexity, and flexibility were analyzed. Multi-commercial complexes from the viewpoint of urban sustainability were analyzed. The results showed that they were displayed through various expansion methods of common space rather than specific programs or designated spaces. Additionally, the development aspect of expansion could be characterized by common space, boundary, ground, and context. The results of this study revealed that a planned strategy for urban sustainability did not increase the program or space quantitatively. Therefore, the possibility of extending common space in terms of quality should be seriously considered. Moreover, it is imperative to monitor its actual use after completion.

**Keywords:** extension of common spaces; boundary and context level; passive circulation system; amenity and mobility; complexity and flexibility

## 1. Introduction

As contemporary society continues to grow, quantitative and qualitative expansion accelerates, causing boundaries to become increasingly blurred as the exchange between countries and cities increases. As a representative type of complex development, multi-commercial complexes have been developed in different aspects according to the circumstances and historical situation of each city [1]. In particular, multi-commercial complexes reflect the economic ripple effect and modern lifestyle of the people in a city. It is the best way to express the direction of a contemporary city. In addition, the design direction focusing on public space proposed in recent commercial complexes has showed a tendency to perform a public role for the city beyond simply supporting private space [2]. The objective of this study was to emphasize the potential of multi-commercial complexes as design elements of common and public space by explaining the characteristics and ripple effects of public space through the planning of multi-commercial complexes from the perspective of sustainability.

Multi-commercial facilities in contemporary cities attract citizens and serve as community spaces. In addition to economically synergizing the surrounding facilities, community spaces also exert great influence on the surrounding commercial areas, leading to the development of multi-commercial complexes, which have been suggested as an alternative for the activation of a city. Since 2000, the development of commercial complexes, both domestically and abroad, has been actively pursued on a large-scale basis. Additionally, plans are being made to provide a venue that can invigorate a city as its new cultural space. Recently, owing to the diversification of the elements of multi-commercial

complexes, including space, function, and circulation, such spaces have grown to be regarded as complex cultural spaces that surpass mere commercial spaces. They can also be comprehended from the perspective of public facilities. This implies that it is not only the access to individual facilities but also the impact on the city that should be taken into account when developing a commercial complex.

The latest multi-commercial complexes disperse not only goods but also information regarding lifestyles and living. With changes in the concepts of consumption and consumer society, contemporary commercial facilities are growing in size and concentration. This, as a result, forms a highly complex large-scale commercial space that creates a more dynamic and expanded urban space. Moreover, as the role of commercial facilities in a complex is emphasized, commercial facilities are placed at the center of the overall plan of the complex. Accordingly, the move to revitalize devastated or declining areas through the activation of commercial facilities has enjoyed success in several cases, and has become a common development trend around the world.

Today's consumers do not simply want to use shopping facilities for the sole purpose of purchasing goods, but demand a variety of attractions and experiences as well. Factors such as the five-day work week have increased leisure time and capital, compared to the past, and have encouraged the consumption desire for time and space. Thus, the commercial complex has become the most common, easily found location in the daily life of urban people. A public space that is well-connected and that often comprises spaces that are not defined is where contemporary people often find the inspiration to sustain and increase the value of their life in the city [3]. Logical flow of the study is shown in (Figure 1).

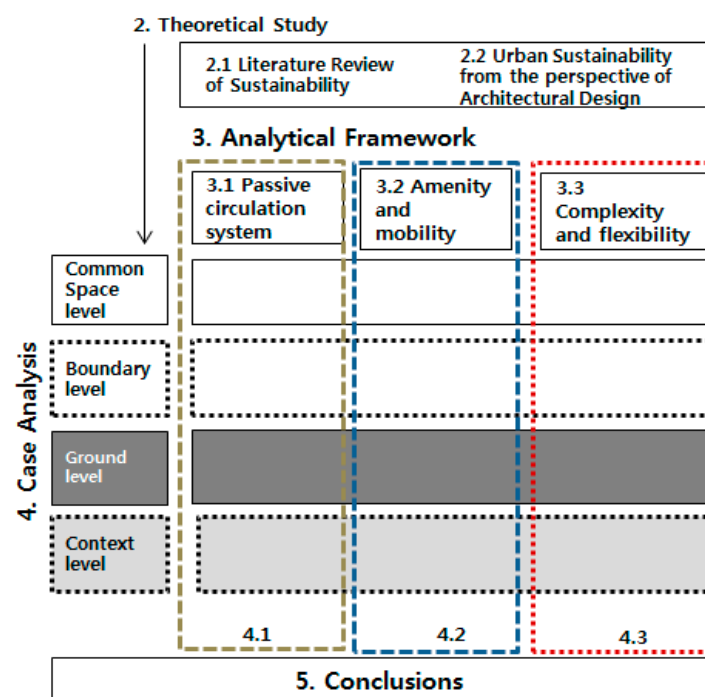


Figure 1. Logical flow of the study.

## 2. Theoretical Study

### 2.1. Literature Review of Sustainability

The concept of sustainable development was used in the report “Our Common Future” published in 1987 by the World Commission on Environment and Development (WCED). A new development concept that simultaneously pursued environmental conservation and development had emerged. In other words, it could be defined as “development that could meet the needs and demands of

the present generation without disturbing the ability of future generations to meet their own needs and demands". In addition, there are major threats to the future of the whole of humanity: such as population growth, global warming, and the destruction of the quality of the environment. To overcome these threats, sustainable development is necessary for humanity. The process of sustainable development globally through international organizations is shown in Table 1.

**Table 1.** Process of sustainable development.

Year	International Organization	Explanation
1972	United Nations Conference on Human Environment	Global environmental conservation is chosen as a global common task for the first time
1980	International Federation Meeting for Natural Resources and Nature Conservation	Adopted the World Conservation Strategy-Presenting a concept that pursues both development and environmental preservation
1982	UN Environment Program Conference	Nairobi Declaration Adoption: An opportunity to approach the opinions of developed and developing countries on 'environment' and 'development'
1983	Establishment of the World Commission on Environment and Development	Establish long-term global environmental conservation strategy
1987	World Commission on Environment and Development	Through our joint Future Report, we will use the term "environmentally sound and sustainable development"
1992	UN Conference on Environment and Development	Agenda 21: Increasing international interest in the balance of conservation and development
1996	UN Conference on the Second Human Settlement	Announcement of Habitat II Agenda: Proposal of detailed development policy on human settlement

Peter Newman (Professor of Sustainability at Delft University, author of numerous publications on sustainable cities) has suggested that economic development was required first. Second, environmental protection was needed for various ecologies. Third, social justice and cultural diversity that a community could use to express the values of communities were needed. In another view, Caring for the Earth (1991) defined sustainability as "Development that enhanced the quality of human life within the environmental capacity of an ecosystem" [4].

## 2.2. Urban Sustainability from the Perspective of Architectural Design

The goal of sustainable design is to eliminate negative environmental impacts through skilled and sensible designs, to exclude non-renewable resources, to give the least impact to the environment, and to symbolize the connection between the natural environment and humans. Sustainable design has been applied in all human-related fields [5]. Sustainable design from an urban perspective has been based on the views of many scholars. Urban sustainability could be classified into three aspects, as follows.

The first aspect of urban sustainability is environmental sustainability. Since human activity has played a role in the ecosystem, environmental sustainability is a concept compatible with ecological sustainability. Environmental marginal capacity is the maximum capacity required to support healthy life while maintaining productivity, adaptability, and a reproduction ability in an ecosystem. Maintaining sustainability within the environmental marginal capacity is called ecological sustainability. It is related to the improvement of the quality of life, the preservation of ecosystem diversity, and the effort to reproduce resources and minimize waste. It is directly related to the environment. It has a correlation with the recycling of resources. In sustainable design, environmental features characteristically reflect the design principle of respect for the natural environment; and it has this tendency in its conceptual aspect. Design that expresses concern for the environment appears to show regression towards the past and a longing for nature through design development that is similar to the shapes and colors of the natural environment. Nature-friendlyism, which has become the basis of environment-friendly values, is dominated by designs that express a longing to return to the less

polluted past or implicate an improved and ecological environment. It expresses the longing to return to nature and reflects a natural and friendly commercial image. In addition, it focuses on the design perspective that preserves and maintains the natural environment, which can be self-sufficient, as well as the surrounding environment [6].

The second aspect of urban sustainability is social sustainability. It is the relationship between development and value norms. Social norms were formed on the basis of religion, tradition, and custom. When social marginal capacity is imposed on development, social norms in gradual change need to be maintained. Thus, social sustainability had a direct relationship with Agenda 21 on principles and institutions. It is related to social culture, local identity, accessibility, stability, and fairness [7]. Sustainable design is influenced by the solid relationship between human society and the environment. Throughout history, design has reflected the values and cultural aspects of the era. Modern society is globally oriented, and globalization has expanded the fields of business to make the world a smaller place. Now, you can have the same culture and products in any area, coexisting with information and communication. Therefore, the specificity of various regions that have blended into our social culture is mixed, and creates a tendency towards more universal design elements. This results in a new culture and image. Furthermore, sustainable design is based on the principle of sociality based on solidarity among local communities [6].

The third aspect of urban sustainability is economic sustainability. Economic sustainability is determined by the relationship between benefits and costs. Economic benefits must be achieved or at least balanced to achieve economic sustainability. In other words, it is related to saving in quantitative fields to achieve efficient growth, development, and productivity [7].

Economic features of sustainable design include recycling, redesign, reuse, energy efficiency, and timeliness (extended lifespan). Historically, eco-friendly designs have attempted design methodologies that reclaim and utilize resources through transformation or rework. These designs have been widely applied mainly by recycling waste or modifying the shape and use of materials. Recycling means that the waste is reprocessed or revitalized before being reused to recover other products or materials through a series of stages including collection, separation, and processing. Sustainable design can be realized by keeping economic principles in mind during the processes of material recycling, modularization, and reuse design. The recyclability of materials is determined by designs that help maximize the potential of a part of or the whole material when using environmental products during assembly or disassembly, according to changes in circumstances and over time. Furthermore, it means mitigating the gap between the tribes by securing the infrastructure and amenities of the city and guaranteeing the quality of life [6].

### 3. Analytical Framework

The components of sustainability in the aspect of urban space planning were extracted through reviewing previous research. First, in terms of environmental aspects, energy conservation, the minimization of pollution, the preservation of natural terrain, the creation of parks and green areas, securing open space, and the maximization of land use efficiency through three-dimensional and complex development could significantly increase efficiency [8]. Second, in the socio-cultural aspect, the preservation of historical buildings and places, and the preservation of norms, customs, values, and revitalization of local communities were needed. Third, from the economic point of view, economic growth, the reduction of development costs, the mitigation of the gap between social classes through urban infrastructure and amenity securing, and a quality of life guarantee were required [3]. The framework for analyzing the planned implementation of urban sustainability for multi-commercial complexes subjected to this study is shown as follows [9]. Categories of sustainability is shown in Table 2.



**Table 2.** Categories of Sustainability.

Categories of Sustainability	Explanation for Urban Sustainability	Architectural Keywords
Environmental sustainability	Comforting environment, revitalizing, recycling	Passive circulation system
Social sustainability	Culture and local identity, accessibility, safety, redistribution of space	Amenity, mobility
Economical sustainability	Balanced relationship, efficient growth and development, productivity	Space complexity and flexibility

### 3.1. Passive Circulation System

A passive circulation system is a planning element to realize environmental sustainability [1]. Passive circulation refers to sustainable architectural requirements in an environmental sense. The most important planning requirement for sustainable buildings is to provide natural circulation and self-sustainable measures for temperature control of the internal environment without resorting to any mechanical devices. Above all, it needed to empty building complexes for ventilation and circulation. This was one of the critical functions of open space.

### 3.2. Amenity and Mobility

From an urban perspective, the “Ground” area, which is the space that is open for urban residents or users in the multi-commercial complexes, can play an important role in creating the image of a sustainable city. This is the space that urban residents can enjoy and form new memories. It serves as an amenity area that enables breaks, meetings, memories, events, and so on among commercial areas [10].

Mobility [11] is a concept that includes accessibility. If accessibility is focused more on the ease of access of the inner portion of a facility from the outside, mobility has become a circulation-based concept that includes aspects such as entering into the facility from outside, reaching outside from within the facility, and the free flow of movements within the facility [12]. Mobility could be divided into mobility from the outside that creates natural access to the building from the city, and internal mobility that facilitates horizontal or vertical transportation within the facility. The former was especially related to the city’s context. Through outdoor space, the “Ground” could be manipulated around the building [13]. This is an important planning factor that determines whether the relationship between the building and its surroundings is sustainable. Therefore, amenity and mobility are planning elements that embody social sustainability.

### 3.3. Complexity and Flexibility

For complex development, the basic concept of complexity was to combine various facilities to pursue a synergy effect economically. A combination of commercial facilities has been representative of complex development in recent years. The reason why multi-commercial complexes can explain the modern urban space is due to this “complexity” aspect. Its goal is to maximize synergy among functions while accommodating the most appropriate functions according to a consistent program.

Depending on how complexity is implemented, the physical and visual areas of each element can be exchanged. It is possible to realize various effects of complexity, such as the boundary between the inside and the outside, and external conditions such as earth, walking, and green space being infiltrated into the inside of the building. This could be expressed as flexibility. Thus, complexity and flexibility are planning elements of economic sustainability. The process of sustainable development globally through international organizations is shown in Table 1.

## 4. Case Analysis

This study aims to reveal the sustainable characteristics in the architectural space where it is related with the urban context or citizens' spend times. Therefore, in this article, urban sustainability represented in the architectural space is focused on many kinds of approaches toward sustainability.

### 4.1. Passive Circulation System

The most important thing for environmental comfort is a passive circulation system. It is especially important for large buildings. There are various types of design techniques, including the use of public space itself, the relationship between the interior and exterior, connection with the site, and expanding into urban space.

#### 4.1.1. Passive Circulation System from the Perspective of the Common Space Level

The method of extending a passive circulation system via superimposing a common space can diversify the recognition area through an interlaced lamination of a horizontal and vertical footprint. It shows a representative aspect of a stacked mall and a staggered escalator crossing the direction of the physical and visual domain applied to the Festival Walk (Hong Kong, 1998). In order to shape the irregular cross-section of the stratum, the escalator was arranged alternately with the shopping mall in the atrium, which had a dynamic and irregular image reminding one of a valley when in the inner mall. When moving along the laminated structure of the shopping mall, consumers are vertically moved along the staggered escalator, making the view appear in a crossed way. As the area of physical flow and visual perception became enriched through the interlaced lamination of horizontal and vertical circulation, the extension was performed in a way that the perceived area was diversified.

#### 4.1.2. Amenity and Mobility from the Perspective of the Boundary Level

City 7 (Changwon, Korea, 2007) [14] is an example of maximizing the passive circulation by positively utilizing the abolishment of boundaries regarding interior and exterior spaces. The walking street that started from the outside was made as a nodal point of the entrance area so that the movement of people flows naturally into the inside of the facility, making the exterior areas penetrate each other and become a passing line. The three consecutive walking streets led to three themes. One was the "Sky Cone", planned as an exterior space but existing as an atrium of semi-exterior space. The boundary between the inside and the outside was broken down by infusing the change of light movement with time. Internal facilities were radially arranged around the atrium located at the center of the entire facility. Therefore, it was easy to connect the external space and the internal space in any direction, and they connected naturally. Whichever way a person might walk, the plaza was easily accessible, similar to a European plaza. The natural connection between these interior and exterior spaces caused the extension of passive circulation, leading to diverse experiences compared to a conventional short and efficient circulatory route.

#### 4.1.3. Passive Circulation System from the Perspective of the Ground Level

Sustainability was achieved through applying an image of waves to Vivo City (Singapore, 2006) [15] by forming a court connecting each floor and linking the buildings' exterior and the building itself. Under the concept of "waves", it expands programs and activities through activating space using water, by dividing elements of natural use, climate, and open space into the first, second, and third floor, respectively. Based on the image of experience between commodity and space, the elevated surface composed of an organic material is formed to communicate with the surroundings by embodying the image of the site onto the architectural surface. The second courtyard is linked to the "Play Court". It is used as a rest place. On the third floor, an open-air café and entertainment facility using a "Sky Park" was planned. As a result, communication with the artificial ground through the building was made so that one could enjoy a panoramic view of Sentosa Island and its surroundings.

#### 4.1.4. Passive Circulation System from the Perspective of the Context Level

Historical landscapes and urban flows had allowed Omotesando Hills (Tokyo, 2006) [16] to operate natural circulation systems through open spaces extending over ground and underground. The open space of the central part was arranged so that natural light could flow into the underground, while a comfortable environment was placed inside the building. In addition, the connection of vertical and horizontal lines consisted of a conceptual ramp that could naturally penetrate up and down from below, forming a continuous horizon so that the act can be continued without dividing layers. In other words, the landscape of the zelkova tree restricted to the height of the building (23.3 m) was used. In order to secure the lack of area or profitability, an underground space was actively planned. It is used to switch between historical scenery and city flow.

#### 4.2. *Amenity and Mobility*

Amenity improves the quality of life and comfort of the city through the experience and image presentation of a new city. Mobility enhances the accessibility to the city. It increases physical mobility and visual communication within the building. They are discussed in detail as follows.

##### 4.2.1. Passive Circulation System from the Perspective of the Context Level

Langham Place was planned based on a manor of descale. It offers a unique vertical experience by making full use of the height of the building. Escalators floating on the air (floors 4–8 and 8–12) and spiral ramps (floor 8–13) are installed, making it feel like climbing hills. At the intersection of the escalator, the planned aerial hall and the spiral ramp were planned in the air of the fourth floor, which connects the three main facilities (hotel, shopping mall, and office). This space in a sense is a type of public hall, through which the flow of the user is spread to each floor and each facility. The physical connection of the circulation is guided through the spiral ramp moving around the hall. In this way, visual communication is made.

##### 4.2.2. Amenity and Mobility from the Perspective of the Boundary Level

In the Zlota Center (2007, Warszawa Hungary), the wavy transparent roof is set as a boundary between the architecture and the city, thereby providing the city with the image that it is developing into a sustainable city by providing new scenery [17]. Amenity and mobility from the perspective of the boundary level can be extended by increasing inner and outer communications. It is realized by the interaction between interior and exterior areas through an infusion of organic forms of light. The Zlota Center is a type of urban redevelopment designed to connect a destroyed urban structure. The external elevation is reflected the context of the city while the interior is designed to capture the activities of entertainment facilities. The large wavy skyline covering the central square was made to ensure communication internally and externally with programs and activities that take place without differentiating between the roof and the wall. With this type of ceiling, organic forms of light were introduced through wavy integrated skylights. This in turn resulted in interactions between the interior and exterior areas, thus expanding the space in between.

##### 4.2.3. Amenity and Mobility from the Perspective of the Ground Level

The method of expanding by the superimposition of outer space appeared to fuse natural and cultural elements through the vertical expansion of surface continuity of outer space. Namba Park (Osaka, 2003) [18] is a representative example. Namba Park was planned as a natural hilly area that is composed of a green space for roof parks and a city square with the aim to create a space where people could experience the city and nature together. The rooftop garden area is about 10,000 square meters on each floor, drawing the horizon of the site to the building. It forms a second surface by vertically expanding the surface continuity [14]. It is also planned so that natural elements and cultural elements could flow naturally through the movement of people when they walked through gardens

in the building. By re-establishing the relationship between architecture and the site, it provides a physical environment and the visual image of a pleasant park.

#### 4.2.4. Amenity and Mobility from the Perspective of the Context Level

La Citadella (Kawasaki, 2002/2010) tried to induce activation by using dynamism in the interior space by changing the connection with existing commercial facilities to revitalize the declining central city area due to suburbanization. It is planned as a town center with an alley similar to an Italian hill town. The inside of the building is designed as a spiral hillside. Commercial facilities are provided to dynamically change the way of connecting with the surrounding area. In this way, urban amenity is enlivened in the city by modifying the context and the unique composition of circulation.

### 4.3. Complexity and Flexibility

Complexity is the most important characteristic of multi-commercial complexes. It is being realized not only in the program, but also in the space. In addition, the original configuration of unconfirmed space and the flexibility of the program and space utilization can be implemented in different aspects according to the application categories.

#### 4.3.1. Complexity and Flexibility from the Perspective of the Common Space Level

The scenery created through the passage and plaza of each floor applied to Canal City (Fukuoka, 1996) [19] showed the typical use of space. The square formed along the artificial canal symbolizing water with the passage of each floor overlooking it. It can be moved from the general mall so that one could enjoy the canal [17]. It becomes a space where visual experience can be performed. The canal is a main element of movement that induces peoples' movement and forms a landscape. In conjunction with this, the canal creates five themed plazas. They are used as space for new functions by inducing experience elements. It is divided into five areas: the Star Court, the Moon Walk, the Sun Plaza, the Earth Walk, and the Sea Court. Among them, the Sun Plaza is a floating space on the canal. When there is a performance, the passage of each floor is changed into seating area for a waterfront stage. At the same time, visitors become part of the street experience, thus creating a new scene. This was an example that urban landscape is completed by a physical object while citizens become participants of the cultural landscape, thus creating variability in the city.

#### 4.3.2. Complexity and Flexibility from the Perspective of the Boundary Level

The method of implementing extension through the sequence switching of inner and outer space was manifested through interaction with nature and activation of experience through a sequential structure penetrating the inside and the outside. Its representative type is shown through an open space connecting the inside and outside of River Walk (Kitakyushu, 2003) [17]. In River Walk, the sequence flow through the interior and exterior areas is induced through an open space connecting the interior and exterior, the inside atmosphere, and the open outside terrace setting. The relationship between interior and exterior was positively reflected by associating excellent surroundings with architectural plan as much as possible. By providing interior space surrounded by buildings and pedestrians moving through it with the motive of mountains and nature of Japan, a sequential experience and landscape was provided so that not only the public space, but also surrounding areas could communicate with nature. The entire facility consisted of two passageways (Urban Walk and Canyon Walk) connecting two squares with a fountain (energy court and mystic court). Horizontal and vertical migration lines of the 8-shape mall maximize the circulation of the whole facility. It also provides emotional stimulation. The aisle space is used as a theater of the stage when performances and events are constituted. It serves as a theater exposed to the city. Various events, water, and the stimulus of senses via light and others all help to create more active experiences.

#### 4.3.3. Complexity and Flexibility from the Perspective of the Ground Level

An example of providing a sustainable environment to the city through a building site is Maydan Shopping Center (Istanbul, 2007). It shows a representative type through a square where the flow of the terrain is converged with the structure of the facility to fill the raised terrain according to the shape of the applied site. The concept of Maydan Shopping Center was “Green Oasis in Urban”, where the geomorphological continuity of buildings and gardens and the land of the area where the city met are absorbed into the building and naturally converge to form a square. The facility is composed of a ring-shaped structure surrounding the center of the square. The space is filled with facilities inside the space that had been lifted along the shape of the site. Interaction with the site is achieved through topography and continuous space. In addition, external activities derived from each facility are exposed to the site, as they are communicated through activities such as events and performances occurring in the open square.

#### 4.3.4. Complexity and Flexibility from the Perspective of the Context Level

Oasis 21 (Nagoya, 2002) implements complexity and variability at the city level through inserting space from the surrounding context. Oasis 21 has developed a landmark image of pleasant rest and cultural space by constructing shopping center and bus terminal facilities connected to Central Park and JR Nagoya station. By establishing a theme of the universe and constructing an elliptical artificial fixture set as the concept of “space ship of the water” that traveled the universe and the concept of “the Earth without a gap” as its main concept, it was connected to surrounding greenery axes, extended to the inside, and naturally connected with Nagoya Station. By constructing the park as a place of landmark images that could aid participation and theme setting by people rather than just be a space for rest, the relationship between the urban space and its influence can be achieved. This not only creates a flexible image of the city, but also enables constant change and complex activities.

### 5. Conclusions

As a result of analyzing multi-commercial complexes in contemporary cities from the viewpoint of urban sustainability, it was found that various expansion methods could be used for common space rather than using a specific program or dedicated space. Therefore, common space could be expanded by including space, boundary, ground, and context.

First, the features of expansion were obtained through overlapping spatial components implemented at the common space level. This was able to be achieved by extending through the overlapping of spatial elements, the creation of new functions implementing urban amenity or mobility, and the conversion of space usage by increasing complexity or flexibility. This indicated that aspects of overlap, creation, and conversion are linked to each other in a complex way. In addition, the effects of expansion were not only seen in common space, but also seen in surrounding facilities.







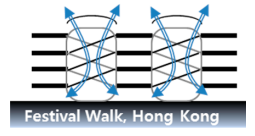
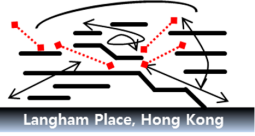
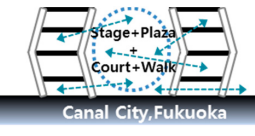


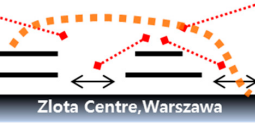


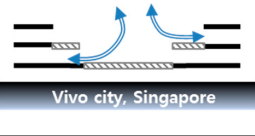




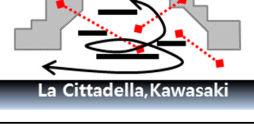
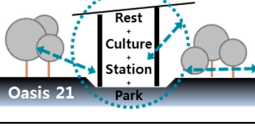
Second, at the boundary level, sequential experiences were increased through the maximizing of passive circulation by increasing the internal and external usability of the common or public space, planning the roof, defining the interior and exterior of the building, the feeling, and performances. This suggested that this change of space could be used as an unconventional space, and can play a role to revitalize not only the neighboring functions but also the whole facility, which could be the most effective way to implement urban sustainability.

Third, from the perspective of the ground level, common space was mediated and the environment outside the facility can be expanded to the inside of the facility. There were many methods to utilize internal space. Communication between the building and the environment could be achieved by using the internal space of an external environment. This was to be extended to communication with the urban environment.

Fourth, from the perspective of the urban context, architectural language was used to construct internal order, such as axis and space settings, by introducing the axis or flow of the city into

the building. In addition, the space that reflected the surrounding context could be set. It is to be transformed vertically and horizontally inside the building as a converted form. In this way, the extension method of multi-commercial complexes are extended to an urban area beyond communication with the building or the surrounding land to increase its connection with the city. The Comparative analysis of multi-commercial complexes from urban sustainability can be illustrated in Table 3.

**Table 3.** Comparative analysis of multi-commercial complexes from urban sustainability.

	Ventilation  <b>Passive Circulation System</b>	Visual Access  Physical Access  <b>Amenity and Mobility</b>	Complexity of Functions  Flexible Usage  <b>Complexity and Flexibility</b>
<b>Common space level</b> 	 Festival Walk, Hong Kong	 Langham Place, Hong Kong	 Canal City, Fukuoka
<b>Boundary level</b> 	 The City 7, Changwon, Korea	 Zlota Centre, Warszawa	 River Walk, Kitakyushu
<b>Ground level</b> 	 Vivo city, Singapore	 Namba Park, Osaka	 Shopping Square, Meydan
<b>Context level</b> 	 Omotesando Hills, Tokyo	 La Cittadella, Kawasaki	 Oasis 21

In conclusion, the planned strategy for urban sustainability is not by increasing the program or space quantitatively, but by studying the possibility for the expansion of common space from a qualitative point of view to find the appropriate method. Given the spillover and interactive effect of common space on a city, it is necessary to continuously monitor whether the act can be continued without dividing layers. In other words, the landscape of the zelkova tree restricted to the height of the building (23.3 m) is used. In order to secure the lack of area or profitability, an underground space was actively planned. It was used to switch between historical scenery and city flow.

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