



# The Building Edge as Public Space: Discussing the Contemporary Design Approach with Five Projects from Copenhagen

Bir Kamusal Mekan Olarak Yapı Eşiği: Yeni Tasarım Yaklaşımının Kopenhag Kentinden Beş Proje Üzerinden Tartışılması

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## ABSTRACT

*New building projects have increasingly been offering publicly accessed outdoor spaces, transforming the interfaces between the building and the city into soft edges. This approach is especially evident in the latest projects in Copenhagen. This design apprehension is considered to be in relation to the increasing emphasis on public space, changing roles of private and public entities in the production and maintenance of space, the urban policies of Copenhagen as well as the inclusive approach of the designers. The study aims to evaluate this new kind of architectural design approach where the boundaries between the city and the building blur and the edge turns into a public space serving to a wider public. The study examines five projects from Copenhagen (BLOX/DAC, Maersk Tower, Axel Towers, CopenHill and Red Cross Volunteer House), based on the criteria derived from the urban policies of Copenhagen (that owes significantly to Jan Gehl) targeted towards 2025 to analyze the spatial configuration of the edges as well as the success of the public spaces introduced within the projects. The results of the analyses demonstrate different patterns of publicness in different projects as well as in different parts of the same project. Nonetheless, the projects in question can be considered as successful soft edges offering vivid urban life by blurring the boundaries between the building and the city.*

**Keywords:** Architecture of Copenhagen, Jan Gehl, Public Space, Soft Edge, Urban Space.

## Öz

*Mimari projeler son zamanlarda giderek artan bir biçimde, binayla kent arasındaki arayüzleri yumuşak eşiklere dönüştürerek, kamusal açık alanlar sunmaya başladı. Bu yaklaşım özellikle Kopenhag kentinde yakın zamanda inşa edilen projelerde belirgin olarak görülmektedir. Bu tasarım yaklaşımının, kamusal alan üzerindeki artan vurgu, özel ve kamusal sektörlerin mekânın üretiminde ve sürdürülmesindeki değişen rolleri, Kopenhag'ın kentsel politikaları ve tasarımcıların kapsayıcı yaklaşımları ile yakından ilişkili olduğu düşünülmektedir. Bu çalışma, kentle yapı arasındaki sınırların bulanıklaştığı ve bina eşiklerinin herkese hizmet veren bir kamusal alana dönüştüğü bu yeni mimari tasarım yaklaşımını mekansal açıdan değerlendirmeyi amaçlamaktadır. Çalışma, yapısal eşiklerin mekansal biçimlenişini ve projeler dahilindeki kamusal mekanların başarısını analiz etmek üzere, Kopenhag'dan beş projeyi (BLOX/DAC, Maersk Tower, Axel Towers, CopenHill ve Red Cross Volunteer House); Jan Gehl'e çok şey borçlu olan Kopenhag'ın 2025 hedefindeki kentsel politikalarından elde edilen kriterlere dayanarak incelemektedir. Analizlerin sonuçları, farklı projelerde ve aynı projenin farklı bölümlerinde farklı kamusalıkların söz konusu olduğunu göstermektedir. Bununla beraber, söz konusu projelerin bina ve kent arasındaki sınırları muğlaklaştırarak canlı bir kentsel hayat sunan, başarılı yumuşak eşikler olduğu söylenebilir.*

**Anahtar Kelimeler:** Kopenhag Mimarlığı, Jan Gehl, Kamusal Mekan, Yumuşak Eşik, Kentsel Mekan.

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**INTRODUCTION:**

Copenhagen is a city widely praised for its high-quality urbanism<sup>2</sup>. Aiming to be the first carbon neutral capital in the world by 2025, the city is known for its sustainable urban policies. The city vision for 2025, under the name "Co-Create Copenhagen" targets a Liveable and Responsible City. The architectural policy to achieve this goal is based on three themes explained as: "Architecture That Tells A Story" which focuses on the architectural quality, "Building For Copenhagen Life" which focuses on everyday life in urban places, and "Responsible Design" that focuses on environmental and climate-related issues (Technology and Environment Department, 2017, p. 18). Within this scope, the quantity and quality of urban public spaces offering vivid city life emerge as an important aspect in terms of successful urbanism. The contribution of the Danish architect and urbanist Jan Gehl to this new urban vision is indisputable as his concepts on urbanism led to a more inclusive and pedestrian-friendly city with thriving urban spaces.

Copenhagen has been going through large construction works since the beginning of the century. The development of the new projects has a focus on the usage of the waterfront while a variety of them pay special attention to street life. In terms of their relation to urban space, the crucial point emerges to be the edges of the building masses, meaning where the building meets the city. Gehl (2010, p.74-77) proposes that building edges should be soft to enhance urban life while the latest projects in Copenhagen take a step further and offer permeable public spaces on their edges. Instead of a design principle which employs a free-standing block, they adopt an approach which offer open spaces and hence they contribute to the urban space and enhance the quality of life while ensuring the continuity of the public realm. This approach results in the abolishment of street-building differentiation as well as the public-private distinction and introduces a soft transition zone between the building and the city.

This article asserts that the recent projects developed in the Copenhagen region not only establish soft edges but also render the edge of the building as public spaces in order to ensure a continuous vivid urban realm. Another assertion is that the architectural and urban policies of the city of Copenhagen play an important role in this design approach. The aim of the paper is to evaluate and examine the spatial configurations of the public spaces these new buildings harbor in terms of quality of space according to the criteria based on the urban policies of Copenhagen, which put a special emphasis both on soft edges and the use of public spaces. In this regard, five recent projects from the city have been selected and studied to discuss the design approach in question.

**1. The Building Edge Acting as an Urban Space**

Buildings with public spaces on their edges are not a phenomenon peculiar to Copenhagen. Pompidou Center, harboring a square in front of the building, is among the earliest examples to offer public space on its urban interface. For contemporary architecture, there is usually a more integrated approach where public and private uses intertwine into each other. One of the early examples in this aspect is Yokohama Ferry Terminal (2002) where one cannot differentiate between public space and building amenities while the urban context flow into the building surfaces and the roof, rendered as a continuation of the urban realm. Another such example is the Ewha Womans University (2008), which exhibit the blurring of the public and private realms while transforming the roof and circulation of the building into publicly accessed urban spaces.

As early as 1999, Alex Wall, in his article "Programming the Urban Surface" has drawn attention to this new trend in building design and suggested that architecture and landscape design merge into a hybrid

<sup>2</sup> Recent sources on the urbanism of Copenhagen: Ariza et al, 2019; Chodikoff, 2008; Lim, 2020; Payne, 2018.

approach that does not only design the individual building but design and program the larger urban surface. In this aspect, there exist plenty of projects which pay attention to the connection of indoor-outdoor areas and integration of landscape and building. Similarly, in the book "Groundwork: Between Landscape and Architecture (2011)" many examples which transcend the border of urban design and architecture have been discussed.

Considering the recent projects, it can be claimed that designing the building-city interface does not necessarily mean offering public use in the edge. Projects such as City of Culture of Galicia in Santiago de Compostela (2011) or the Haydar Aliyev Cultural Center (2013) formally (or visually) present certain design elements that bind the building to the surrounding space in an artistic way, yet they lack public amenities, accessibility or relations to consider them as real soft edges that establish human scale. Within this framework, it is crucial to address the attributes that identify the edge or the transition between the building and the urban sphere.

### 1.1. The Concept of "Soft Edge"

Buildings are an important aspect in the way that we perceive cities, however the quality of urban area rests not only on the quality of the individual structures but also on the relations between them and their relation to the urban realm. In "The Death and Life of Great American Cities", Jane Jacobs (1961) criticizes the urban planning strategies of modernism and the way it creates dull urban spaces due to its preoccupation with the individual building. In fact, this is also true for contemporary architecture, which does not always seem to pay enough attention to the interaction of the building with the city. However, "the edge", where the "building and city meet" is very significant in terms of urban quality and it is crucial for the life in the urban space (Gehl, 2010, p. 74-75). Gehl (2010, p. 87) states that "active, open and lively edges" have the greatest impact on urban life because they help to define space while acting as exchange and experience zones. As edges have the potential to create a dialogue between the city and the building mass, they can act as a place of connection and become a mediator between public and private and let the two areas overlap (Genise, 2015, p. 59). Therefore, "soft edges" ensure both liveliness and safety in a city. The issue is stressed strongly in the "Architecture Policy of Copenhagen" where edges are considered crucial in terms of supporting activities and experiences at eye level as well as the security in the urban space; especially the theme "Building For Copenhagen Life" puts an emphasis on people and everyday life in outdoor spaces, with significant attention paid to the interaction of buildings and urban spaces (Technology and Environment Department, 2017, p. 18 and 41). A good edge is described here as the place "where the architectural treatment of the transition between building and public space contributes to a living city and a city for people" (Technology and Environment Department, 2017, p. 41). When the ground floors of the buildings harbor activities, they provide a space for lively urban life near them. Thus, the projects discussed in this paper are not limited to dense ground floor use, they in fact bestow the edge a spatial quality and transform it into a public space. In this case, it seems important to question the emerging role of public space in the recent urban developments.

### 1.2. The Concept of "Public Space" and its Recent Emphasis

It is essential to state the fact that there is an increased interest in public space worldwide. Recent urban developments seem to put a special emphasis on the employment of public spaces. However, what the term "public space" indicates is diverse and sometimes ambiguous. Although the concept is not limited to a physical place, in the urban context it usually refers to a place that is open and accessible to all. Public space brings people together and encourages interaction, therefore it is usually linked to democracy and equality between citizens. Therefore, it should not be thought of as a homogenous area, but rather as "a series of spaces that serves not a single public but multiple publics" (Sorkin, 2015).

The recent emphasis on public space heavily rests on its capacity to improve the quality of life as well as to achieve a sustainable society which becomes even more crucial in high density urban environments (Cho et al., 2016, p. 1-2). Gehl (2010, p. 3) states that public space restores the "traditional function of city space as a meeting place and social forum for city dwellers". Therefore, as places that bring citizens together to form social ties, public spaces promote social inclusion and a sense of belonging, which helps to constitute a local cultural identity.

As seen above, practices in the public space are important in terms of placemaking, so the importance given to the sense of place beginning with the second half of 20th century (Herzog, 2006, p. 7) heavily relates to the revival of public space. However, Madanipour (2019, p. 39) claims that the most important reason for the increased interest in public spaces is the changing roles of the private and public sectors, which means that such spaces are both developed and maintained by private actors more often than before. As the public realm is increasingly created and maintained by the private sector, concepts such as "hybrid urban space" (Cho et al., 2016, p. 6) are introduced into literature in order to define these new kind of in-between spaces.

### 1.3. The Concept of "Hybrid Urban Space"

It is already stated that public space has gained importance lately in the urban design context. However, it could be more accurate to designate these spaces as "publicly accessible space" as named by Németh & Schmidt (2011), because most of them are not publicly owned or managed, and are, in fact, part of a private entity, yet are open to public. Therefore, as Cho et al. (2016, p. 6) suggest they can rather be addressed as "hybrid urban spaces".

In fact, urban spaces that are privately owned are usually criticized for being exclusive and therefore offering diminished publicness. In their study, upon examining urban spaces in a district of New York, Nemeth and Schmidt (2011, p. 20) conclude that privately owned spaces practice more control over the behavior of the users and are "less public" than publicly owned spaces. However, with the new trends in the architectural and urban area, the boundaries separating public and private are now less clear and both spheres have attained certain features of the other (Cho et al., 2016, p. 5). These terms can even be evaluated as a sequence of spaces that may refer to different spatial qualities (Genise, 2015, p. 59). Besides, Staeheli and Mitchell (2008, p. 116 and 120) argue that the public character of a place is a relation between the people and place and transcends the notions of public and private. In fact, it is the very interest in public space that caused the emerging of such hybrid spaces while the conjunction of public and private realms strengthens and extends the realm of the public space as Madanipour (2019) suggests.

All the projects discussed in this paper can be considered as "hybrid urban spaces" in terms of their spatial character. They are part of private (or public-private) enterprises, yet they serve to the general public, furthermore this seems to be an aim in the development of the projects from the beginning. This approach has to be regarded as an urban development strategy, also clearly seen in the context of the Architecture Policy of Copenhagen. In Copenhagen, the publicly accessed urban spaces are not solely developed by the local government, but usually public and private entities form a collaboration to both create and maintain public spaces. In the architectural policy, the concept of "shared space" is introduced, it is where the boundaries of public and private dissolve and both buildings and public spaces contribute to urban life regardless of their status as public or private (Technology and Environment Department, 2017, p. 52). This concept is in accordance with the "hybrid urban space" concept introduced above. Blurring this boundary is among the regulations of Municipal Plan 2015, which prescribes open recreational spaces related to new constructions, both residential and

commercial (Centre for Urban Development, 2015, p. 45). In fact, Ariza et al. (2019) even link the success of the public space policy of Copenhagen to this collaboration.

## 2. Method: Evaluation Criteria Based on Copenhagen Urban Policies Targeted Towards 2025

The existence of an outdoor space does not necessarily mean that it will act as a successful public realm; it is not the presence but the quality of the place that designates a successful urbanity. Sennett (1977, p. 12-13 and 28) evaluates the erosion of public space in cities as an important aspect of the public problem and he mentions the Lever House and its ground floor that is deprived of functions, therefore is a dead public space. Sennett's assertion displays both the crucial role of architecture in the development of urban space and that an open space does not necessarily mean that it achieves a successful publicness.

The hybrid character of the spaces discussed within the scope of this paper necessitates specific criteria in order to be evaluated. For this reason, the criteria should be based on the agents that play a significant role in the emergence of these buildings, namely the urban policies of Copenhagen with their debt to the discourse of Gehl.

Co-Create Copenhagen's target for 2025 is that "Copenhagengers spend 20% more time in urban spaces" and the City of Copenhagen aims to create "Better Everyday Life in Urban Spaces" to achieve this goal (Technical and Environmental Administration, 2015, p. 5). Within the scope of the urban policies of Copenhagen, people are prioritized; urban life comes before urban space, and urban space before buildings (Technology and Environment Department, 2017, p. 75). This intention is in accordance with Gehl's (2010, p. 193 and 198) phrase stating, "Life, space, buildings — in that order". So that means architecture should be in accordance with public space and they together should support life in the city so that a pleasant urban realm is created. In the policies, some specific points stand out in terms of achieving lively living edges.

These points, derived from the urban policies of Copenhagen, will constitute the criteria of assessment for the evaluation of the selected projects. They are listed as:

### Accessibility:

It determines whether the space is physically and visually approachable without any obstacles for all.

Accessibility is, undoubtedly, a crucial aspect for every public space. In the architectural policy of Copenhagen, it is aimed that accessible solutions should be part of the architecture and urban designs should offer equal access to all users with different needs (Technology and Environment Department, 2017, p.38 and 40).

### Inclusiveness:

It determines whether the space is open to a diverse public, regardless of the social, economical or national status.

Copenhagen has an ambition to "be an inclusive city for all" and one way to accomplish this is through the making of public space. The role of high-quality public spaces on establishing social cohesion is emphasized in the Municipal Plan (Centre for Urban Development, 2015, p. 35). Inclusiveness is also important considering the ethnic diversity of the population of Copenhagen. In the architectural policy of the city, it is aimed to support "a sense of community in the city by designing public spaces that invite many different users to stay and meet regardless of culture, age and gender" (Technology and Environment Department, 2017, p. 50).

Delineation:

It determines whether the space is inviting, welcoming and clearly public in character.

Although delineation is not stressed strongly in the urban policies of Copenhagen, it is an essential criterion linked to inclusiveness, especially in the hybrid spaces, where the edges of public and private realms blur. Carmona (2019, p. 53) describes "delineated public space" as one that has a clear public use, that people are not in doubt whether they can use it or not. He points to the fact that especially certain commercial spaces can appear exclusive, and it is important that public spaces should display the message that they are welcoming, accessible and open, even if they are owned or managed by private entities (Carmona, 2019, p. 53).

Enabling staying activities:

It determines whether the space provides urban furniture, comfort and aesthetics to enable staying activities.

Accommodating a great number and wide range of activities is a strategy emphasized by the City of Copenhagen to enhance everyday life in urban spaces (Technical and Environmental Administration, 2015, p. 6). Gehl (2010, p. 18) identifies three types of urban activities, which are "necessary, optional and social". Necessary activities, as the name suggests, are the ones that have to happen unconditionally, such as walking to school or work, while optional activities are focused on recreation and fun, such as walking for leisure, resting or playing (Gehl, 2010, p. 20). And social activities simply mean the contact and communication between people, such as watching people talking or interacting (Gehl, 2010, p. 18 and 20). The optional activities are a prerequisite for social activities and social activities are a prerequisite for a versatile and lively city (Gehl, 2010, p. 22), which means that it is not the necessary but the optional activities that enhance city life. And the existence of optional activities depends on the quality of urban space, if the condition of the urban space is poor or is not inviting and secure, then there are no optional activities, therefore no social activities and the space is dull (Gehl, 2011, p. 33). In the architecture policy, it is aimed that public spaces should offer versatile use and always constitute a venue for spontaneous or planned activities (Technology and Environment Department, 2017, p. 50).

Ground floor use:

It determines whether the activities on the ground floor are open to public and are accessible.

As prioritizing people necessarily means considering the human scale, it is one of the most important issues addressed in the urban policies. In terms of establishing human scale, the design of living edges is important to encourage life and lingering around the buildings. One strategy to achieve this is through active ground floor use as well as the design of the transition between the building and the urban area as private, semi-private and public zones (Technology and Environment Department, 2017, p. 40).

Connection of inside and outside:

It determines whether the building displays both visual and physical connections with the outside and the ground floor activities interact with the surrounding realm.

Another important aspect addressed in the urban policies of Copenhagen in terms of human scale is the connection of the inside and outside through the permeability of the ground floor. The inside-outside connection makes people feel more secure while offering a rich experience of urban space as

well as a sense of belonging (Technology and Environment Department, 2017, p. 7). The visual connection enhances the edge and encourages people to interact with the building.

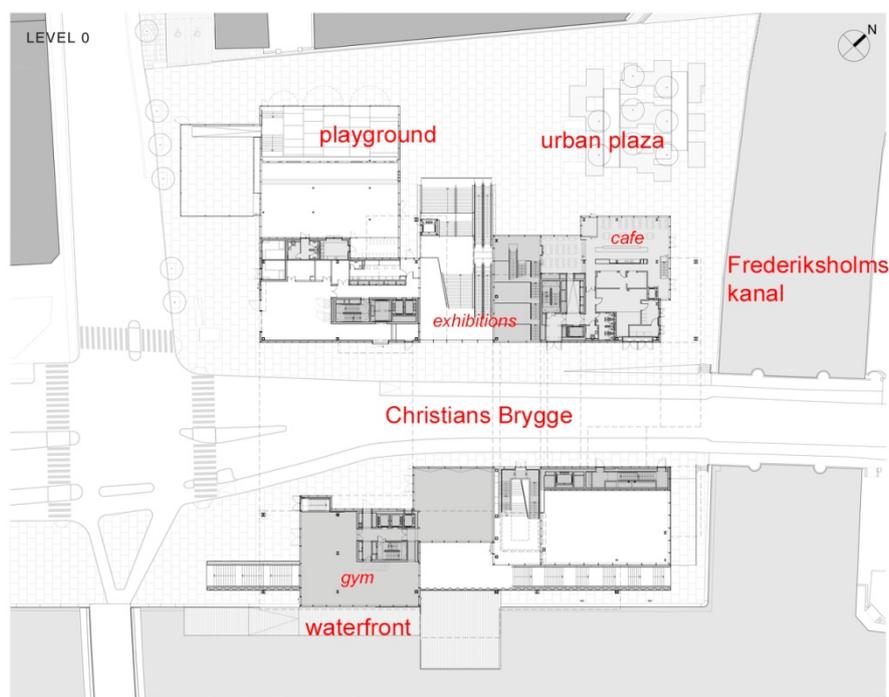
### 3. Case: Five Buildings from Copenhagen

While the new urban development strategies of most cities that target a sustainable urban growth have been based on achieving high-density and pedestrian-friendly urban areas endowed with mixed-use spaces and an emphasis on public space (Cho et al., 2016, p. 3), Copenhagen is no exception. Five projects will be discussed in detail, four of which are in the central part of Copenhagen while one of them, CopenHill, is in the industrial part. All the projects intend to contribute to public life by their design and seem to pay special attention to their urban connections.

#### 3.1. BLOX / DAC

The building, which is also the new home of the Danish Architecture Centre (DAC), was opened in 2018. The architects are OMA and Ellen van Loon while the landscape design is by Kragh & Berglund and 1:1 Landskab and the playground is by Carve. The project is a mixed-use structure with galleries, working spaces, leisure activities and residences.

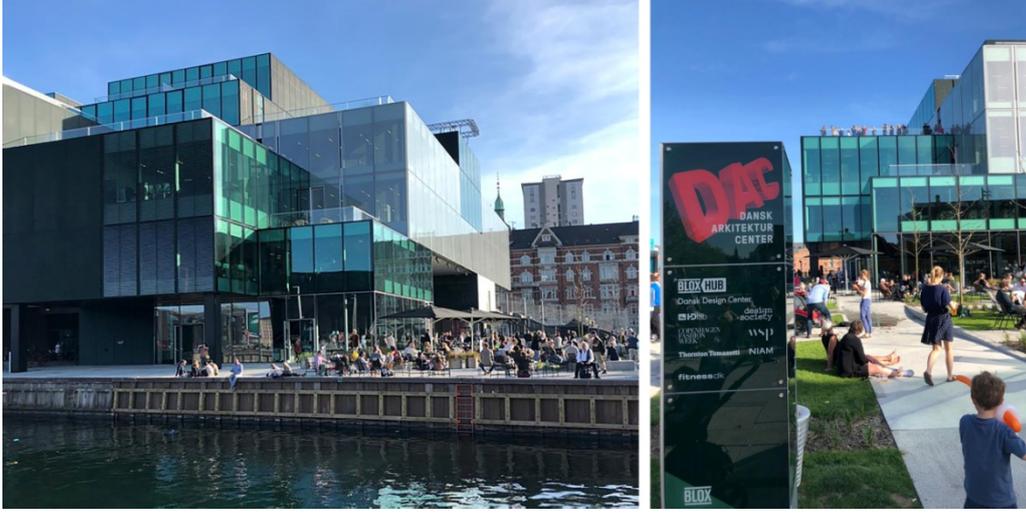
The building site comprises the land on two sides of Christians Brygge, one of the main roads parallel to the waterfront. Instead of building two separate blocks, the architects decided to design a rectangular mass that has an opening on ground level to let the road and pedestrians pass through (Figure 1). This passage mostly has blank walls, only offering a window to have a glimpse of the open space located behind the building, however the low ceiling and the confined feeling it brings restrains one from enjoying that view.



**Figure 1.** BLOX/DAC. Ground floor plan [drawing by OMA; found at (Archdaily, 2018)].

The building is mostly transparent on the waterfront façade, one can see the fitness area while passing by. Ellen van Loon (as cited in Stevens, 2018) remarks that interaction and to be seen are specifically important for the young generation. The visual connection between the inside and outside of the building is considered to help establish human scale while it offers security and belonging as suggested

in the Architecture Policy of Copenhagen (Technology and Environment Department, 2017, p. 6). However, this approach raises the question of whether only visual connection is enough for interaction; as this place offers no staying activity just as the passage.



**Figure 2.** BLOX/DAC. The urban plaza is crowded and packed with people (Candemir, 2019).



**Figure 3.** The playground adjacent to the façade of BLOX/DAC. Kids enjoy using it even on a cold and rainy Copenhagen day (Author, 2019).

The public facilities are concentrated at the back of the building, where there is an open urban space surrounded by the playground, the entrance of the exhibition space, the DAC and the cafe, as well as

a traditional Danish building and Frederiksholmskanal (Figure 2-3). This urban space offers activities and has a connection to the building both visually and functionally. The two-storey playground performs as an amphitheater, stage or open-air cinema when needed, and is a strong center of attraction. The area is strongly enclosed as there is the building mass separating it from the main road and defining a clear open public space. There seems to be no problem with accessibility or delineation, as it is very obvious that the area is public and accessible; the benches, the temporary exhibition structure as well as the playground convey the feeling that this place belongs to anyone who desires to enjoy it.

Although the open urban space offers a soft edge, the fact that the building is a closed and opaque box on the Christians Brygge and the confined feeling of the passage disrupt the pedestrian experience. Another issue can be the connection between the inside and outside; despite the big glass surfaces, the building cannot be regarded as permeable except the big stairs leading to the exhibition area and the cafe which has a strong connection to the outside. Overall, the strong connection of inside-outside on the back of the building is not expanded to other parts of the building, which are the waterfront and the facades on Christians Brygge. However, the harbor in the front is subject to further space organizations (Perry, 2018), which may offer more public facilities in the future. In general, the building has a soft edge when compared to most of the others, especially older buildings in the city. This, in fact, also seems to be the aim of the architects as they state:

"Contrary to most city blocks in Copenhagen – often introverted and inaccessible – the building absorbs the city's life." (OMA and van Loon as cited in Archdaily, 2018)

The designers seem to have achieved this goal especially at the plaza which acts as a publicly accessible courtyard.

### 3.2. Maersk Tower

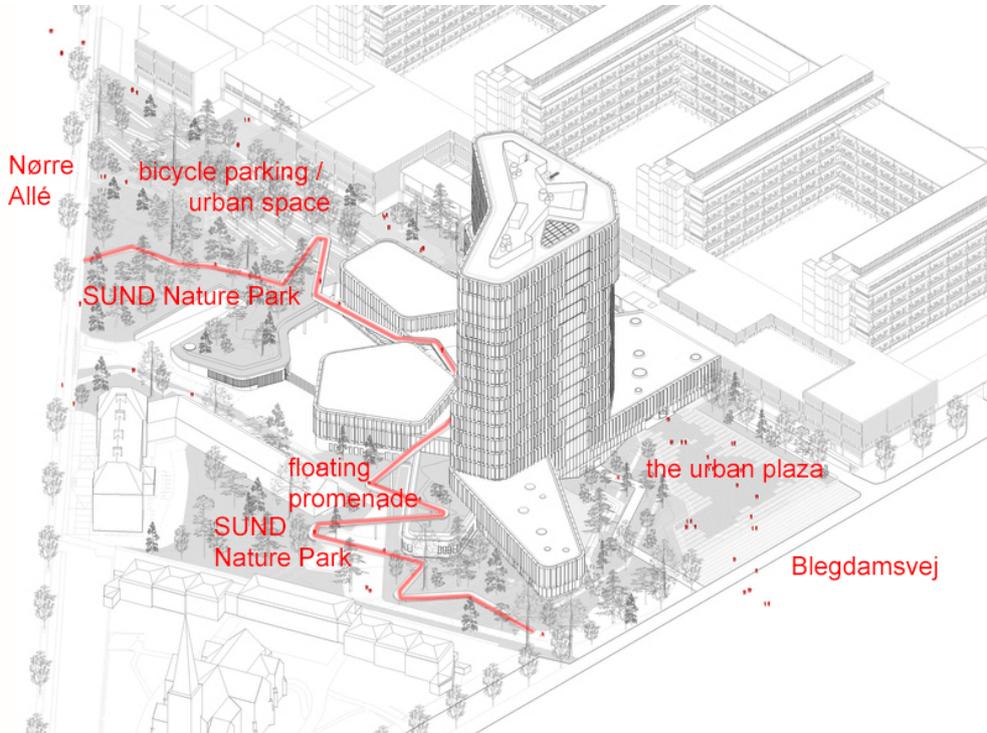
The Maersk Tower, opened in 2017, is designed by C.F. Møller Architects. Serving as an extension of the University of Copenhagen's Faculty of Health and Medical Sciences (the Panum Complex), it harbors research and teaching facilities. The landscape design, green roofs and the SUND Nature Park surrounding the building are by SLA, which won the "Scandinavian Green Roof Award" for the design of the complex.

The tower itself sits on an extensive base, that has green roofs and a transparent façade on the Blegdamsvej street which hosts the main entrance (Figure 4). The base offers a significantly soft edge by the urban plaza facing Blegdamsvej, the transparency of the ground floor, the surrounding park and by the pedestrian/bicycle promenade that twists around the building. At the back entrance from Nørre Allé, the bicycle parking area is turned into another open space with seating and landscape elements (Figure 5).

Although the urban plaza is primarily a circulation zone, leading to the main entrance of the building, it still acts as an attraction spot with the offered sitting. Gehl (2011, p. 197) states that resting places in front of buildings are a way to create good connection between indoors and outdoors, in that it is "a valuable contribution to a given function" (Gehl, 2011, p. 197). The top floors, where a cafe and lounge are located, are also open to public (arch2o, n.d.), yet connection to the outside is weaker when compared to the plaza.



**Figure 4.** Maersk Tower. The promenade is seen on the front while the urban plaza is at the right back providing the entrance from Blegdamsvej (Dragør Luftfoto and BYGST, n.d.).



**Figure 5.** Maersk Tower. Isometric view [drawing by C.F. Møller Architects; found at (C.F. Møller Architects, 2018)].

The transparency of the ground floor enables a soft transition between the building and the city (arch2o.com, n.d.) while it "allows the interior of the building to blend in with the external green landscape" (C.F. Møller Architects, n.d., p. 13). The permeable façade lets the viewer see the inside of the base while this visual connection offers increased safety for the green landscape (Figure 6). The canteen area is also open functionally to the outside offering access to the building, enhancing the permeability.



**Figure 6.** Maersk Tower. Looking through the transparent base from the Nature Park and the start of the floating promenade as seen from the park on the side of Nørre Allé (Author, 2019).

It can be claimed that the most inclusive part of the design is the recreational space, namely the SUND Nature Park surrounding the building. As an urban landscape, the park acts particularly important at the back and sides of the building, which otherwise could have been subject to become an unemployed land as it has no direct connection to the building. SLA (n.d.) describes the park as a landscape consisting of "varied mini-biotopes" with "peaceful pockets for contemplation" while the open design allows lots of informal events. The biodiversity of the landscape is in connection to the cultural diversity of the neighborhood (Landezine, 2017). The landscape facilities offered are clearly public in character and welcoming, therefore inclusive, as they serve not only to the students of Panum but also to a diverse public (SLA, n.d.).

The most innovative part of the design is the floating promenade, which takes the pedestrian and the cyclist through the building connecting the open spaces at the front and back. It has the potential of being an outdoor counterpart of the "architectural promenade" of Le Corbusier, letting the wanderer explore the space and have different viewpoints and perspectives. The fact that the promenade connects the front and back of the building, enhances the potential of the back areas, which turns the building into a binding tool rather than a separating mass. Just as the plaza and the park, delineation is strong as the path is welcoming and clearly public in character. However, it does not have any connection to the building; floating in the air, it only offers visual connection, and the wanderer cannot reach the green roofs except the last one connecting to Nørre Allé. Therefore, the connection is established at the basis of seeing rather than experiencing. However, it is still innovative that the urban wanderer can experience the parts of the building that are normally not visible from the street level.

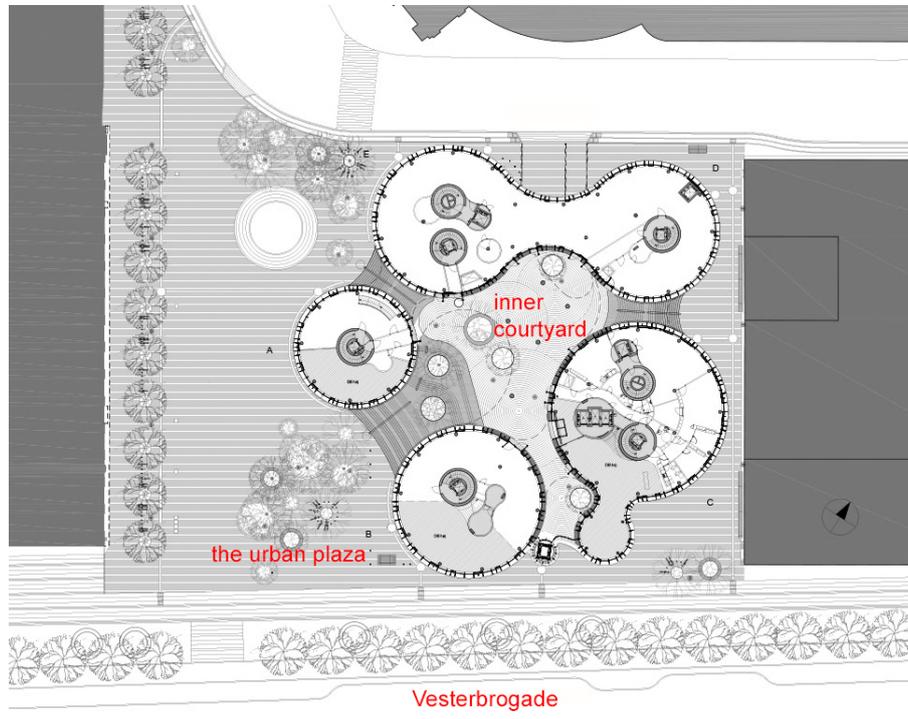
The architects clearly state that their aim was to create a green urban park that is open to public and allow people to get close to the building with the floating promenade (C.F. Møller Architects, n.d., p. 22-23). In fact, Michael Kruse (as cited in Perry, 2020) states that the question of how "it interacts in the urban context" is a key point for every project they design. They assume that the design links "the University of Copenhagen with the surrounding neighborhoods and wider city" (C.F. Møller Architects, n.d., p. 4). Architect Mads Mandrup explains the intention of the design as:

"The new complex is also intended to act as the generator of a positive urban development in its immediate neighborhood and in relation to the entire city." (Mandrup, 2017).

With this aim, the project applies to the "shared space" concept introduced in the architectural policy of Copenhagen (Technology and Environment Department, 2017, p. 52). The shared space here not only blurs the boundary between the public and private but also between the building user and the urban dweller.

### 3.3. Axel Towers

Axel Towers are designed by Lundgaard & Tranberg Architects while the landscape design is by Julie Kierkegaard A/S. The complex, opened in 2017, consists of five circular buildings of different heights and dimensions organized around an elevated courtyard. The towers are home to a law firm while the ground floors harbor public facilities such as cafes and shops and there is a restaurant on the 9th and 10th floors.



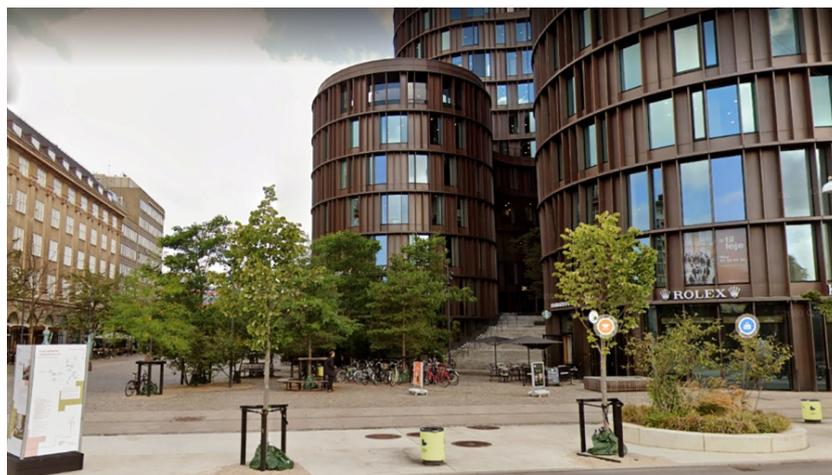
**Figure 7.** Axel Towers. 1st floor plan [drawing by Lundgaard & Tranberg Architects; found at (Stoughton, 2018)].

The building is located at the heart of Copenhagen, near Axeltoiv Square, close to the Town Hall and across Tivoli, which means the location has a very busy urban life, so a soft edge becomes even more important in order to avoid a disruptive urban experience in such a dense urban context. The elevated garden, approached by stairs on three sides, is the most crucial part of the design in terms of building-city interface (Figure 7-8). This design approach is reminiscent of Alvar Aalto's Säynätsalo Town Hall (1952) in that it constitutes its own landscape, reshaping the land to change and redefining the connection of the building with its surrounding. Furthermore, it renders the building as a permeable structure offering connections rather than a muted mass. Michael Kvist (as cited in Stoughton, 2018), architect at Lundgaard & Tranberg Arkitekter, names the court as "Citygarden", claiming that it is one of the achievements of the project. Emphasizing that this urban space is always open, he asserts that it is "an alluring, intimately, varying and surprising urban space that embraces" people (Kvist as cited in Stoughton, 2018). Hosting the entrance to the towers and offering seating benches and landscape

elements, the inner garden is also considered as a place offering a tranquil point in this busy part of the city (Lungaard & Tranberg Arkitekter, n.d.). The façades surrounding the court are transparent, therefore allowing visual connection, however there are no activities that constitute a connection between the inside and outside. Another issue is the question of accessibility and delineation. Stairs can be an ideal place for informal sitting, yet the obvious corporate identity of the building makes a doubt about being comfortable. Although the stairs are intended to be welcoming, the connection can be claimed to be rather weak in terms of delineation (Figure 5).



**Figure 8.** Axel Towers. The elevated garden and the stairs (Author, 2019).



**Figure 9.** Axel Towers. The urban plaza seen from Vesterbrogade (Google Maps Street View, September 2020).

The towers have strong inside-outside connections on the ground level facing the surrounding streets. As the street interface has public facilities such as shops and cafes, it opens the edges of the building to public use, therefore life inside and outside of the building flow into each other. According to Gehl (2010, p. 232), designating ground floor public activities is an important tool in establishing human

scale, which becomes even more important in the high-rise buildings located in central urban areas. As the building mass retreats from the street on the side of Vesterbrogade, there emerges a small urban piazza with seating areas (Figure 9). This space is also used as outdoor seating by the cafes on the ground floor; so the functions extend to the street and bind the outdoor area with the building.

The public amenities on the ground floor were intended to "create an inviting environment for locals and tourists alike" just like the elevated garden (DAC, n.d.). So, the project becomes not only offices but a spot for all citizens with the elevated garden as well as the permeable ground floor functions extending to the street.

### 3.4. CopenHill

CopenHill Energy Plant and Urban Recreation Center was opened in 2019. It is a waste-to-energy plant with recreational facilities such as ski slope, climbing wall, rooftop bar and viewing plateau on the roof. It is designed by BIG while the landscape design is by SLA, which won the "Scandinavian Green Roof Award" again in 2019 with the project.

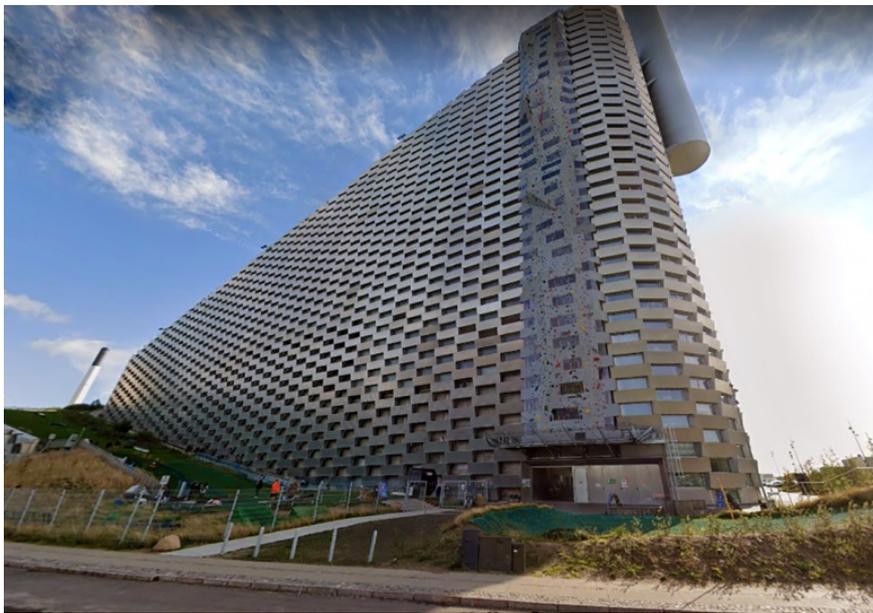


**Figure 10.** CopenHill from above. (Hjortshøj, n.d.\_1).

The featured design approach is the roof that is turned into a recreational landscape, which is not only a ski slope but also has hiking trails, playgrounds, cross fit area and a roof top bar (Figure 10). In fact, rendering the roof as a habitable public area has been an intrinsic part of contemporary design since Yokohama Terminal (2002). For Scandinavia, Oslo Opera House, opened in 2007, is praised by Gehl because of its roof designed as an urban space inviting people and erasing "the boundaries between city and building" (Gehl, 2010, p. 208). Therefore, it is obvious that there is nothing new about using the roof, however what is innovative for CopenHill is the courage of opening up an industrial building that would otherwise be introverted and closed to public because of its function.

Another aspect is the introduction of nature to the industrial site, where it is least expected. In fact, a greener Copenhagen is part of the Municipal Plan 2015 which prescribes more rooftop gardens (Centre for Urban Development, 2015, p. 44) and Copenhagen's green roof policy which dictates that new buildings with roof slopes of 30 degrees or less should have green space on their roof (Lim, 2020). Another issue about utilizing the roof is the "reclaimed space" concept, as the area is reclaimed both from the industrial area and from the building plot.

Here, it may be meaningless to discuss the ground floor connections, both because of the fact that the building exists in an industrial area rather than a vivid urban environment, and because of the function. Yet, there still exist windows on the roof to offer a glimpse of the inside to establish the inside-outside connection in minimal terms. Walking around the building on the ground level, one cannot have any connection with the building while the scale is overwhelming. However, this situation changes on the entrance façade, where the ramp starts and where the climbing wall is located, turning the façade of the building into a performance to watch and interact (Figure 11).



**Figure 11.** CopenHill. The entrance façade with the climbing wall and the start of the ramp (Google Maps Street View, October 2020).

The accessibility and delineation are controversial, the slope is meant to give the feeling that it is the continuation of the street, therefore it is welcoming. However, the contrast between the green ramp and the surrounding area is so stark that it is clear that the ramp is not a continuity of the urban realm, therefore it gives the feeling of entering a space that may not be public in character. Although the design is not exclusive, it does not offer the continuity and delineation to perceive it as a public space, and because of the lack of transitional space, it conveys the feeling of a private recreational area with defined boundaries. The existence of the barriers at the start of the ramp enhances this feeling of exclusiveness, although it is obvious that they are not part of the design originally (Figure 11).

The architects designate the building as "hedonistic sustainability" (BIG, n.d.) and Bjarke Ingels (as cited in Baldwin, 2019), declares that they aimed to turn the building into "the bedrock of the social life of the city". Considering the surrounding industrial area, it is still a success that the building creates a recreational landscape, reclaiming the space from the industry and giving it back to the citizens.

### 3.5. Red Cross Volunteer House

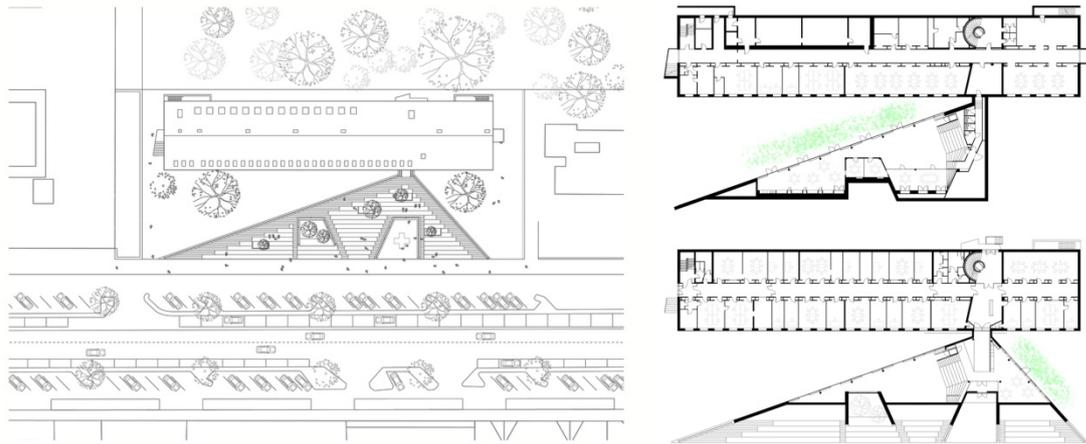
Red Cross Volunteer House, designed by COBE, was opened in 2017 as an extension of the Red Cross Headquarters. The building acts as a meeting place for the volunteers as well as an entrance to the main building. The triangle structure holds exhibition and workshop spaces, an open auditorium, meeting/conference rooms and a cafe.

The most influential part of the design is the roof which is designed as public stairs (Figure 12). The roof in fact transforms into the front façade of the building and it connects the street to the second level of the headquarters behind, so that it offers a visual as well as physical connection between the street and the main building.



**Figure 12.** Red Cross Volunteer House with people on the public stairs (Hjortshøj, n.d.\_2).

Although there are no offered activities other than sitting, the openness and the informality of the design create a very strong urban and inclusive character. The publicness is rendered very clear as the whole façade transforms into an urban space. The unpretentious design of the roof contributes to the strong delineation and inclusiveness while the stairs emerge as welcoming and approachable. Additionally, activities taking place inside the building can be seen through the big cut-out window on the roof, establishing a connection between the inside and outside (COBE, n.d.). The indoor-outdoor connection, that is not only visual but also fortified with entrances, is enhanced by the transparent façade facing the green area at the other side of the building (Figure 13).



**Figure 13.** Red Cross Volunteer House. Site plan and floor plans. The floor plans show the connection to the green areas at the sides of the buildings at different levels [drawings by COBE; found at (Barandy, 2018)].

The public stairs turn the building into a giant urban furniture and render the neighborhood very vivid and alive (Figure 12). Gehl (2011, p. 183) emphasizes the importance of public resting areas in connection to buildings for the contribution of quality to the urban place. He stresses the importance of such activities as follows:

"..... comfortable resting areas, placed on the public side of buildings and with direct connection to them, influence life between buildings. ... for the scope and character of life between buildings, the conditions offered for long-lasting outdoor activities play the decisive role." (Gehl, 2011, p. 183).

The existence of the stairs as well as their relation to the building are successful examples of the situation Gehl (2011) describes. Dan Stubbergaard (as cited in COBE, n.d.), architect and founder of COBE, explains that the stairs are not only meant to be an attraction for the volunteers, but they also serve to the passers-by and the public. So, it is clear that the aim of the architects was to include the public from the beginning of the design process. According to the architects, it is "a building turned into public space" (COBE, n.d.). They explain it as:

"Shaped as a triangle with a publicly accessible roof surface, the Volunteer House is designed with the ambition of being inviting and encouraging passers-by to come in and explore. This is a building for the Red Cross volunteers to meet and share knowledge, but it is also a public space for everyone" (COBE, n.d.).

In this aspect, the building can be considered as an "urban living room" as Barandy (2018) suggests. In terms of this design approach, it is crucial to remember that one of the functions of the public space is "the exercise of democracy" (Fera, 2012, p. 6). This open design which encourages interaction to promote the sense of equality among citizens, is very important in the act of placemaking as well as creating a sense of belonging.

## RESULTS:

Five projects from Copenhagen have been discussed concerning the urban spaces on their edges. The criteria identified for the evaluation of space configurations of each project are summarized in Table 1.

**Table 1. Public Space Evaluation Criteria Concerning the Projects**

	<i>BLOX/DAC</i>			<i>Maersk Tower</i>			<i>Axel Towers</i>		<i>CopenHill</i>	<i>Red Cross Volunteer</i>
	<i>back of building</i>	<i>passage</i>	<i>waterfront</i>	<i>plaza</i>	<i>park</i>	<i>promenade</i>	<i>Inner court</i>	<i>street</i>		
accessibility	Strong	Moderate	Moderate	Strong	Strong	Strong	Moderate	Strong	Strong	Strong
inclusiveness	Strong	Moderate	Moderate	Strong	Strong	Strong	Weak	Strong	Moderate	Strong
delineation	Strong	Moderate	Moderate	Strong	Strong	Strong	Weak	Strong	Weak	Strong
enabling staying activities	Strong	Weak	Weak	Moderate	Strong	Moderate	Moderate	Strong	Strong	Strong
ground floor use	Strong	Weak	Weak	Moderate	Moderate	Irrelevant	Moderate	Strong	Irrelevant	Strong
connection of inside and outside	Strong	Moderate	Strong	Strong	Strong	Moderate	Moderate	Strong	Irrelevant	Strong

■ Strong   
■ Moderate   
■ Weak   
 Irrelevant

It is clearly seen from the table that different levels of publicness can manifest in different parts of the same project while some criteria are irrelevant for certain buildings (for example the ground floor use for CopenHill). All the projects seem to demonstrate different patterns of publicness. The back side of BLOX, the street façade of Axel Towers and the Red Cross Volunteer House are the urban spaces that offer a strong characteristic in all the criteria while the passage of BLOX and the inner court of Axel Towers have no strong characteristic in any of the criteria. Accessibility seems to be the criteria that is most widely met, while ground floor use is the one that is met the least. Yet, overall, it can be claimed that all the projects demonstrate a certain kind of urban context and render their edges as successful public spaces, constituting soft transition zones between the building and the city.

### CONCLUSION:

As seen from the evaluation of the projects, the emerging design approach which renders the edge of the building as an urban space reveals itself as very relevant in the recent projects of Copenhagen. This design approach is meant to achieve a more inclusive, sustainable and open urban space which renders the urban life more vivid. The blurring of the boundaries between private and public is deliberately sought and achieved at different levels in each project. In this aspect, they can be considered as hybrid urban spaces. It is clearly seen that there is a motivation of promoting public uses and opening the edges of the buildings to all citizens. Another important aspect is the wish to embrace the diverse public on equal grounds, therefore the concern for inclusiveness emerges as a crucial design criterion for all the projects. All the mentioned aspects seem to contribute to the "Building For Copenhagen Life" theme introduced within the city vision for 2025. Therefore, it is seen clearly that the architectural, urban and environmental policies of Copenhagen have been very important and influential in the development of soft edges. In addition, the regulations of the Municipality considering green roofs or public spaces seem to be decisive in the development of the design approaches. The influence of Jan Gehl to the development of the city vision should also be considered important for his studies on the urban area emphasized the importance of public space and life in urban space.

Still, life is bigger than buildings, and it is only time that can show whether these soft edges will accomplish in terms of urban quality. Further studies can be done on how the newly developed habits during Covid-19 affect the way people use the common spaces and how they affect the shaping of the policies put forward by decision makers in the post-pandemic world. This and many other questions will be answered by the passage of time and experience of urban dwellers. For now, it is fair enough to claim that there exists a new kind of architectural design approach which designates a soft, continuous public realm between the building and the city.

### **Compliance with Ethical Standard**

**Conflict of Interests:** *The author declares that for this article she has no actual, potential or perceived conflict of interests.*

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