

Configuration of an Architectural Model by Rehabilitation of the Exterior Space Combinations of Street Markets with Dynamic Usage of Screens

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Abstract

The aim of the current study is to create an architectural model configuration for rehabilitation of the spatial combinations in street markets with dynamic usage of screens which redefine the exterior layers of retail and circulation spaces and to offer a suggestion for this configuration to trigger exterior space interaction processes in street markets. In this context, by evaluating the literature data of the previous authors' study about street markets, examining how the related themes present common intersection areas and in which contexts they overlap, publications touching on the ability of digital media components to play a role as components in the exterior configuration of street markets constitute the conceptual and practical scope of the study. Therefore, the following street markets are aimed to be addressed: Ballarò Market (Palermo, Italy), Maltby Street Market (London, UK), Market Day (Sarlat, France), Mathallen (Oslo, Norway), Markthalle Neun (Berlin, Germany), Mercado de San Miguel (Madrid, Spain), Mercato Centrale (Florence, Italy), Östermalms Saluhall (Stockholm, Sweden), Belvarosi Piac (Budapest, Hungary), Mercado da Ribeira (Lisbon, Portugal). The findings of the study show that exterior space transformation processes provided through dynamic horizontal components of screens create social intersection areas, unlike conventional space production processes. These intersection areas trigger a dynamic series of exterior solutions and bring into question the role of screen modules in the use of space in cities for the formation of new interaction spaces. Consequently, for rehabilitation of the exterior spatial combinations, data obtained from decisive points in the work of pioneering figures give rise to the need for the configuration of an architectural model. This need provides a basis for the potential of open, semi-open, and closed spaces to be incorporated into the functioning of street markets through dynamic usage of screens, which will be created by a series of media components in different sizes and arrangements for the ground and upper layers.

Keywords

spatial combinations; architectural components; dynamic screens; architectural design.

1. Introduction

Throughout history, markets have been the center of social, economic, and cultural interactions. As public spaces, markets have played an important role in creating an ideal environment to increase social interactions for all. However, over time, the concept of markets has changed. Modern shopping malls seem to be a viable alternative to the markets in terms of accessibility, quality of space, maintenance, sense of security and entertainment activities. Examining the reasons why people prefer shopping malls over traditional markets and the characteristics of shopping malls that contribute to this preference, studies focus on

understanding the evolving concepts of public spaces and on investigating people's preferences between shopping malls and street markets as well as the impact of the services offered by shopping malls on user satisfaction, while solutions influenced by indicators such as atmosphere, safety, accessibility, and entertainment stand out. Users' causes for avoidance of traditional markets include narrow roads, poorly maintained environment, lack of parking and toilet facilities, and over-crowding. (Iqbal et al., 2022). It is known that the choice of materials directly influences the spatial identity of marketplaces. Markets stand out as places of chaos made up of different voices, things, people, where

different and colors are intertwined together, dynamically, and sometimes statically. Due to the wrong choice of materials in some areas and even inconsistent material choices in some markets, it can be seen that the quality of use of the area has transformed to harm the identity of the place. In the process of chaoticization of space and place, it is seen that architectural mistakes are often made due to some basic material and identity selection errors. Determinations about how anonymous or how characterful a marketplace will be, can be read through the relationships established by the determining spaces with other elements representing that area. Although pollution and chaos seem to be the usual themes of an open marketplace, what determines the architectural quality of an open marketplace is the ability to apply spatial solutions specific to its indoors and outdoors (Magagnini & Santuccio, 2020).

The aim of the current study is to create an architectural model configuration for rehabilitation of the spatial combinations in street markets with dynamic usage of screens which redefine the exterior layers of retail and circulation spaces and to offer a suggestion for this configuration to trigger exterior space interaction processes in street markets. In this context, by evaluating the literature data of the previous studies about street markets, examining how the related themes present common intersection areas and in which contexts they overlap, publications touching on the ability of digital media components to play a role as components in the exterior configuration of street markets constitute the conceptual and practical scope of the study. Therefore, the following street markets will be addressed: Ballarò Market (Palermo, Italy), Maltby Street Market (London, UK), Market Day (Sarlat, France), Mathallen (Oslo, Norway), Markthalle Neun (Berlin, Germany), Mercado de San Miguel (Madrid, Spain), Mercato Centrale (Florence, Italy), Östermalms Saluhall (Stockholm, Sweden), Belvarosi Piac (Budapest, Hungary), Mercado da Ribeira (Lisbon, Portugal). The findings of the study show that exterior space transformation processes provided through dynamic horizontal components of screens create social intersection areas, unlike conventional space production processes. These intersection areas trigger a dynamic series of exterior solutions and bring into question the role of screen modules in the use of space in cities for the formation of

new spaces. Consequently, for rehabilitation of the exterior spatial combinations, data obtained from decisive points in the work of pioneering figures give rise to the need for the configuration of an architectural model. This need provides a basis for the potential of open, semi-open, and closed spaces to be incorporated into the functioning of street markets through dynamic usage of screens, which will be created by a series of media components in different sizes and arrangements for the ground and upper layers.

2. Overview of Street markets

The physical and symbolic transformation of an open market, which has transformed from an ordinarily developed market to a landmark and a symbolic tourism area, has certain qualities that can be a reference for the transformation of street markets in many respects. In this way, street markets, which are which are an important area for work and experimentation, where fashion brands and immigrants mingle their positions by defining their unique and special identity and turn into a recognizable brand element over the years (Pang & Sterling, 2013). Rather than relying on a simplified version of Foucault's (1977) concept of the panopticon, it is important to note that closed-circuit television (CCTV) surveillance in open streets emerged from many different social positions. Within a comprehensive governance framework, open street CCTV can be organised from above, middle, or below. Power moves among the population, and therefore groups of citizens have the power to object to regulations in their communities. Studies that offer a more nuanced theoretical perspective by drawing on the sociology of governance, risk, and critical media studies as well as challenging theories that reproduce top-down conceptualizations of power, politics, and communication are also important in this context (Walby, 2005).

In this context, the steadily increasing share of supermarkets and convenience stores in markets creates various problems that lead to the centralization of food distribution and reduce public access to fresh food. Regarding this issue, a study that reveals that those who prefer street markets are generally aware of the advantages and disadvantages of existing types of food retailing, that they look favourably on supermarkets, but that they generally prefer street markets due to their proximity, shows that shopping habits

need to change significantly to adapt to the modern retail environment. In turn, since the closure of the street market's retail facilities will increase the distance to the nearest fresh food retailer, it is necessary to carefully consider the effects of this plan on residents' access to healthy food and propose some fruitful steps forward. Focusing on spatial components, such as walking distance to residential areas and key foci of spaces, can help the area excel in integrating its current state and future strategies (Atomei, 2017).

Strolling through street markets is one of the most preferred outdoor activities in some countries, and these markets contribute to the local economy and boost tourism. In hot and humid weather conditions that persist throughout the year, staying outside for a long time, especially at noon, can lead to heat-related health problems. To mitigate such health risks, solutions such as artificial canopy structures and tree canopies are used in grocery stores. These structures aim to increase outdoor thermal comfort in street markets by protecting market shopkeepers and visitors from direct sun rays. During periods of high temperatures, people can spend more time in the market thanks to the protection provided by the shade. Thus, the vitality of the market is maintained and trading activities increase. Tree canopies offer a natural solution, providing an aesthetic appearance and contributing to environmental sustainability. At the same time, artificial shade structures can be easily used in different parts of the market because they are flexible and portable. Such shading strategies ensure that both sellers and customers have a comfortable shopping experience. Thanks to the shades, it is aimed to reduce the effects of heat waves and protect people from sun-related diseases. In addition, cool areas under shade attract tourists visiting the market and allow them to stay in the market place longer (Jareemit & Srivanit, 2022).

Street markets need to be specifically designed not only in the context of modulating indoor and outdoor arrangements, but also in the context of producing a system that can be used as part of the process of green design to improve ventilation and air quality. In order to ensure environmental heat exchange, basic effects such as calculating the height of the forehead and using some simplified thermal boundary

conditions must be included in the system. In this context, it is necessary to take into account the effects of the sun. Since this issue is directly related to architectural design, outdoor factors can also be very decisive in how marketplaces can be designed. therefore, micro solutions to maximise the effects of shading and minimising incoming sun radiation are some of the factors that play a direct determining role in the outdoor design of markets (Chen et al., 2021).

Identifying the sales success of street markets and how sales revenues vary according to the organisation of the market environment and other environmental factors and factors helps to make street markets controllable in the context of business success. The open market business is a process that most businesses have understood as a micro-entrepreneurship area. In the context of associating environmental factors with sales units in street markets, it is known that some basic factors that positively affect sales revenues mediate the creation of strong strategies against high levels of unemployment. In this context, street markets play a role not only in strengthening the urban informal economy, but also in increasing its overall economic resilience. Street markets can be made more efficient with the help of some facilitating steps for food vendors, and social functioning in these areas can be strengthened with some work flowcharts that will positively improve sales revenues. In order to respond to strategically developed basic solutions to be directly responded to in three dimensions in the marketplace, a series of solution-oriented strategies must be included in the life on the market in order to identify controllable and uncontrollable factors in the field and to develop these factors step by step (Demong et al., 2020).

The small-scale capitalism symbolized by open-air markets is often informal and often not addressed in the context of Eastern and Central Europe's transitional processes. In this context, (1) the prevalence of the informal economy in the literature evaluating the theoretical information to examine the characteristics of open-air markets and how these markets were shaped in the post-communist period; (2) the influence of ethnic communities in these markets; (3) moral perspectives on markets; (4) the relationship of open-air

markets to social capital and other forms of informal social control; (5) and the key role that social structure plays in the diversification and shaping of open-air markets have been clearly demonstrated. Open-air markets often form an important part of the informal economy in their respective cities, and these markets have proliferated in Eastern and Central Europe during the post-communist era. However, the degree of informality of these markets' economies should be considered during their study. These markets allow many businesses to operate without being formally registered. In addition, these markets provide an important area of trade and socialization for ethnic communities. The role of ethnic communities in these markets is of great importance, both economically and socially, and these communities have a significant impact on the dynamics of the markets. Moral perspectives on markets are another important factor to consider in the analysis of open-air markets. Open-air markets are often valued by locals within a moral value system, which directly affects the operation and acceptance of the market. Social capital plays a critical role in the sustainability of such markets. Open-air markets contribute to the development of social capital by fostering trust and cooperation among participants. This social capital also ensures that informal social control mechanisms are effective in regulating and supervising the market. The role that social structure plays in shaping open-air markets cannot be overlooked. Social structure determines the relationships and interactions between the participants of the market, and these relationships directly affect the overall structure and functioning of the market. This decisive role of the social structure is a fundamental factor in the diversification and emergence of open-air markets in different forms. As a result, open-air markets, as a reflection of small-scale capitalism, develop and take shape under the influence of various factors such as the informal economy, the influence of ethnic communities, moral perspectives on markets, social capital, and social structure. Examining these markets in the context of the transformational process in post-communist Eastern and Central Europe is crucial to understanding how each of these factors affects the dynamics of markets. This type of analysis allows us to better understand how outdoor markets function and develop as part of the economic and social structure of a city (Wallace & Endre, 1999).

The development of organic strategies for open marketplaces and the cooperation of a number of sellers and suppliers to sell more organic products in these areas basically mediates street markets to offer much more adaptable solutions. In this context, some changes can be made in all open marketplaces and studies in children demonstrate that a series of short organic food supply chains trigger each other and drive innovation that can define the identity of organic street markets (Oliveira et al., 2021).

Findings that the therapeutic choices of women vendors in street markets are aimed at meeting their customers' perceived health needs may be directly related to the examination of women's basic health choices. In this context, women and women vendors, who are one of the most important customer groups of street markets and with whom have direct verbal contact, provide important clues showing how health initiatives and needs in street markets play a role in determining the identity of street markets. Creating routes where the health needs of both vendors and active users of street markets can be met in the market and deriving new modulations in the context of these routes allows a series of strategies used to meet the needs of street markets (Magalhaes et al., 2020).

Some of the historical thresholds in different countries' development can also make a difference. In this context, the use of historical and anthropological evidence can provide basic insights into varying origins of places before and after historical ruptures. Historical ruptures that will partially change the architecture and spatial criteria of countries show that the origins of the market were shaped before these ruptures (Czako & Endre, 1999).

Sometimes, the main reasons why a product is not sold in the market or shops stop selling it in the market may include factors such as low demand for that product, high wholesale purchase costs, and the deterioration of the taste of the product over time. Similarly, unstable supply can be a significant obstacle to market expansion and growth. As in the case of open-air markets, such types of marketplaces may not always be a profitable sales channel for farm-grown produce. The dimensions of the products

and the export quota requirements are also among the other important problems encountered in such markets. For these reasons, analysing points of sale such as open-air markets, supermarkets, and restaurant markets is of great importance in order to understand such problems and find solutions. When a product is not in demand in the market, it is mostly due to low consumer interest in this product. Low consumer demand means that manufacturers and sellers are unable to make enough profit from these products. In addition, high wholesale prices also increase the retail price of the product, which negatively affects its sales by reducing the competitiveness of the product. The deterioration of the taste of the product over time can also shake consumers' confidence in this product, causing the demand to decrease even more. Discrepancies in supply is a major factor hindering the stability and growth of the market. Selling farm-grown produce, in particular in open-air markets, can face many uncertainties and challenges. Such marketplaces may not be able to guarantee that products are constantly available, undermining the trust of both manufacturers and consumers. Although open-air markets are often an important sales channel for local producers, careful planning and management are required to ensure the profitability and sustainability of these markets. Larger and organized sales channels, such as supermarkets and restaurants, can provide a more stable market, but these channels also have their own challenges. The advantages and disadvantages of each of these outlets should be carefully analysed, enabling manufacturers and sellers to develop optimal strategies. In conclusion, in order to understand why product sales may fail or be stopped, several factors such as demand, wholesale prices, flavour, consistency of supply, product sizes, and export quotas need to be considered. These analyses are crucial to understanding the specific dynamics and challenges of each of the different outlets, such as open-air markets, supermarkets, and restaurants. In this way, it can be ensured that the market grows more steadily and profitably (Funez et al., 2003).

The world's biocultural diversity, with its biological, cultural, and linguistic richness, is in danger of disappearing rapidly. Our ability to recognize and value the remaining diversity is essential to its survival. But not all forms of diversity are appreciated to the same extent, and insensitivity to

plants' life is increasing, suggesting that people are ignoring the plants around them. In this context, open-air markets stand out as places that bring people together culturally and as areas where fruits, vegetables, and medicinal plants representing local biodiversity are exhibited. People visit these areas to find various types of vegetables and fruits in the markets. In addition to offering local fruits and vegetables, these markets offer many advantages such as opportunities for socializing, affordable prices, the ability to bargain, the freshness of the products and easy access. In addition, various products such as herbs and snacks can be found in the markets. By providing a fun environment, markets become more than just places to shop, they become spaces where people come together and strengthen their social bonds. In order to protect biocultural diversity, we need to value the spaces and practices that support this diversity. Open-air markets are not only places of trade, but also areas where cultural and social interactions take place and communities come together. In these markets, locals interact with each other, exchange information and strengthen community bonds. These markets also contribute to the survival of local culture and traditions. Outdoor markets play a major role in preserving and promoting local biodiversity. These markets support local producers by offering fresh and natural products to consumers. At the same time, they contribute to the sustainability of biocultural diversity by increasing people's interest in natural products. In addition to stimulating the local economy, markets also undertake the task of preserving cultural heritage and passing it on to future generations. As a result, open-air markets are of great importance in terms of the protection and promotion of biocultural diversity. People's interest in these markets helps to keep local biodiversity and cultural values alive. Markets, which function as areas for socializing and strengthening community ties, also support the local economy and cultural heritage and ensure the integrity of society. Therefore, recognizing and protecting the value of outdoor markets plays a critical role in the sustainability of biocultural diversity (Franco et al., 2020).

3. Exterior Space Combinations of Street Markets

In the theoretical context discussed above, the following ten street markets will be discussed in the context of previous spatial features and will be evaluated in terms of both “Evaluated Items for Screen Placement” and “Solutions and Design Potentials for Screen Placement” approaches.

3.1. Ballarò Market (Palermo, Italy)

The Ballarò Market in Palermo is important in terms of expanding the use of open space and meeting the needs of daily life. There are various studies on this topic, focusing on the changes of the neighbourhood and the social role of the market. Studies that deal with the relationship between the formalization process of the market and its role in social confusion emphasize that the changes to be made in the process should be examined in detail. The urban transformation of the Albergheria-Ballarò neighbourhood in Palermo and its effects on the formalization of a local street market provides a comprehensive example for important implications for many open-air markets (Prestileo, 2022). The existence of cultural connotations in the region as well as their use in a strategy to rethink and develop the urban environment, is one of the issues to reflect on in the effort to find unexpected places among the contradictions and tensions at the intersection of urban areas. The process of reallocation and development of Piazza Mediterraneo is very important, with processes officially recognized here by the municipality and local institutions (schools, neighbourhoods, associations) (Giubilato, 2019). Studies on the market power of street markets are important given the elasticity of demand, even if there is a market defect. The market share and market power of any sales unit in the industry must be carefully evaluated in imperfect market conditions. Similarly, firms’ non-price strategies must include a certain market power. Therefore, modified market power indices make valuable contributions to theoretical results (Rao, 2024) (Table 1).

3.2. Maltby Street Market (London, UK)

Research examining curatorial practices and atmosphere-creating processes in pop-up street food markets in London is important in this context. Interviews with market organizers and the study of different curatorial processes, as well as the selection of markets that serve different

purposes and audiences, help us to investigate the curatorial study of these markets and to understand the importance of curating street food markets in creating tasting places (Concha, 2020).

The curation of food markets is a delicate design process that entails harnessing different cultural and aesthetic information, creating an atmosphere of place, and creating feelings of belonging and exclusion in this context, drawing on large-scale gentrification processes. While curation refers to the arrangement of various material, emotional, and sensory elements, it should be noted that this process must be carefully analyzed (Concha, 2022).

Ongoing research on street markets in Greater London shows that factors such as the number of lanes of traffic, traffic re-routing practices, and the number of bench lines can be assessed in the evaluation of the configuration of the markets. In addition, factors such as the flexibility of the market environment, the narrowness of market passages, pedestrianization, or strengthening of existing retail spaces also play an important role in this process (Suzuki & Almazan, 2016) (Table 2).

3.3. Market Day (Sarlat, France)

Studies that attempt to comprehensively analyse the development of tourism in Sarlat-la-Canéda, a small and historic city located in southwestern France, suggest that data on the geographical location and transportation accessibility of the region could be examined in greater detail, taking into account that this region, which is a UNESCO World Heritage Site, welcomes more than 2 million tourists every year despite its population of only tenthousand people. Studies reveal that the flow of tourists increases significantly not only due to cultural heritage objects, but also thanks to events such as local fairs, festivals (event tourism), and local specialties (gastronomic and wine tourism), and that the recreational potential of nearby settlements with local and cultural landscapes in the region also represent important factors for tourism (Maksakovskiy & Maksakovskaya, 2022) (Table 3).

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| Perspective 1  | Perspective 2  | Perspective 3  | Perspective 4  |
| Evaluated Items for Screen Placement Pedestrian line - Sidewalks - Pergolas - Exterior walls - Lighting units - Signs | | | |
| Solutions and Design Potentials for Screen Placement | | | |
| Tarpaulins Vertical dividers Horizontal dividers Lighting on the walkway Stationary vending units Trash cans Lighting units Pergolas Gazebos Artistic objects Signs and information signs Water elements Bicycle and scooter parking spaces | Corner boards Tarpaulins Vertical dividers Horizontal dividers Lighting on the walkway Stationary vending units Trash cans Lighting units Pergolas Gazebos Artistic objects Signs and information signs Water elements Bicycle and scooter parking spaces | Special countertops for buffets Corner boards Tarpaulins Vertical dividers Horizontal dividers Lighting on the walkway Moving vending units Trash cans Lighting units Pergolas Gazebos Artistic objects Signs and information signs Water elements Bicycle and scooter parking spaces | Special countertops for buffets Corner boards Tarpaulins Vertical dividers Horizontal dividers Lighting on the walkway Moving vending units Trash cans Lighting units Pergolas Gazebos Artistic objects Signs and information signs Water elements Bicycle and scooter parking spaces |

Table 1. Ballarò Market (Palermo, Italy).

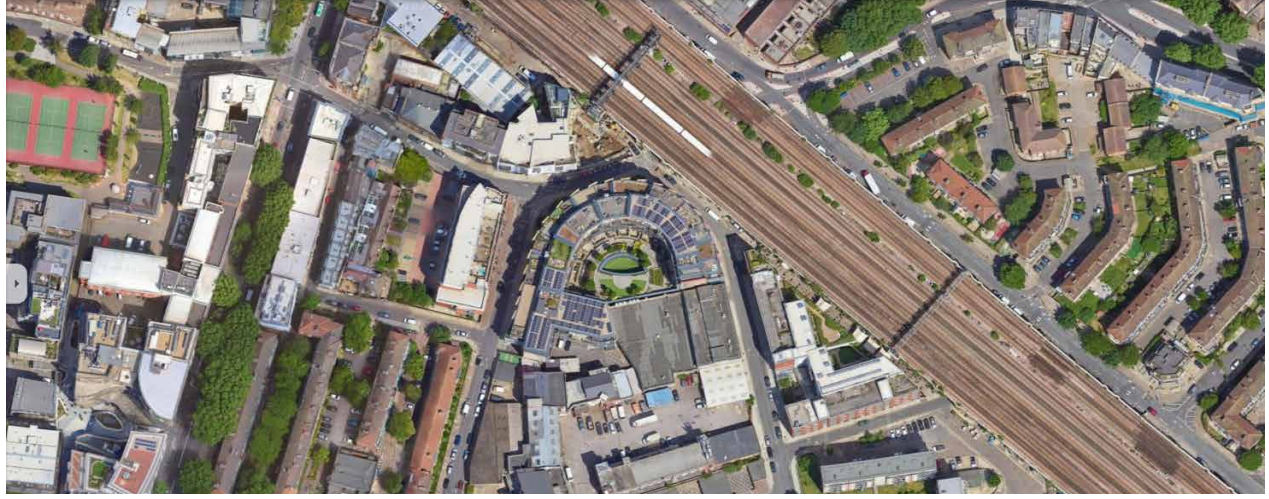




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| <p>Evaluated Items for Screen Placement</p> | | | |
| <p>Pedestrian line - Sidewalks - Pergolas - Exterior walls - Lighting units - Signs</p> | | | |
| <p>Solutions and Design Potentials for Screen Placement</p> | | | |
| <p>Tarpaulins</p> <p>Vertical dividers</p> <p>Trash cans</p> <p>Lighting units</p> <p>Pergolas</p> <p>Gazebos</p> <p>Artistic objects</p> <p>Signs and information signs</p> <p>Water elements</p> <p>Bicycle and scooter parking spaces</p> | <p>Corner boards</p> <p>Tarpaulins</p> <p>Vertical dividers</p> <p>Horizontal dividers</p> <p>Lighting units</p> <p>Pergolas</p> <p>Gazebos</p> <p>Artistic objects</p> <p>Signs and information signs</p> <p>Water elements</p> <p>Bicycle and scooter parking spaces</p> | <p>Special countertops for buffets</p> <p>Corner boards</p> <p>Tarpaulins</p> <p>Vertical dividers</p> <p>Horizontal dividers</p> <p>Lighting on the walkway</p> <p>Moving vending units</p> <p>Trash cans</p> <p>Lighting units</p> <p>Pergolas</p> | <p>Special countertops for buffets</p> <p>Corner boards</p> <p>Moving vending units</p> <p>Trash cans</p> <p>Lighting units</p> <p>Pergolas</p> <p>Gazebos</p> <p>Artistic objects</p> <p>Signs and information signs</p> <p>Water elements</p> <p>Bicycle and scooter parking spaces</p> |

Table 2. Maltby Street Market (London, UK).

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| <ul style="list-style-type: none"> Tarpaulins Vertical dividers Horizontal dividers Lighting on the walkway Stationary vending units Trash cans Artistic objects Signs and information signs Water elements Bicycle and scooter parking spaces | <ul style="list-style-type: none"> Corner boards Stationary vending units Trash cans Lighting units Pergolas Gazebos Artistic objects Signs and information signs Water elements Bicycle and scooter parking spaces | <ul style="list-style-type: none"> Special countertops for buffets Corner boards Tarpaulins Vertical dividers Horizontal dividers Pergolas Gazebos Artistic objects Signs and information signs Water elements Bicycle and scooter parking spaces | <ul style="list-style-type: none"> Special countertops for buffets Corner boards Tarpaulins Pergolas Gazebos Artistic objects Signs and information signs Water elements Bicycle and scooter parking spaces |

Table 3. Market Day (Sarlat, France).

3.4. Mathallen (Oslo, Norway)

Mathallen Oslo, a popular gastronomic centre in Oslo, is an indoor market located in the Norwegian capital. It is located in the Vulkan region, on the banks of the river Akerselva. Opened in 2012, Mathallen Oslo offers a wide range of food and drinks to locals and tourists alike. From fresh fish and seafood to quality meat and cheese, you can find everything here. In addition to Norwegian cuisine, there are also various delicacies from world cuisines. The market is open every day of the week and is quite crowded, especially on weekends. Mathallen Oslo focuses on organic and sustainable products sourced directly from local producers. It has an important place in Oslo's gastronomy scene and hosts many events. It offers special experiences to visitors with cooking classes and tasting events. In addition, restaurants and cafes led by local chefs are also located in the market. Mathallen Oslo is a popular spot for shopping and social events. The atmosphere of the market is enlivened by live music performances and other cultural events. The Vulkan district is known as one of Oslo's creative and innovative neighbourhoods, and Mathallen Oslo reflects this dynamic character. The market is an important platform for local farmers and producers to showcase their products. Norway's famous salmon and other seafood can be obtained fresh here. It offers a variety of options for wine and beer lovers as well. Handmade chocolates, freshly baked breads, and gourmet coffees can also be found at the market. Mathallen Oslo serves to support the local gastronomic culture and offer visitors a unique shopping experience (Mathallen Oslo Website, 2024) (Table 4).

3.5. Markthalle Neun (Berlin, Germany)

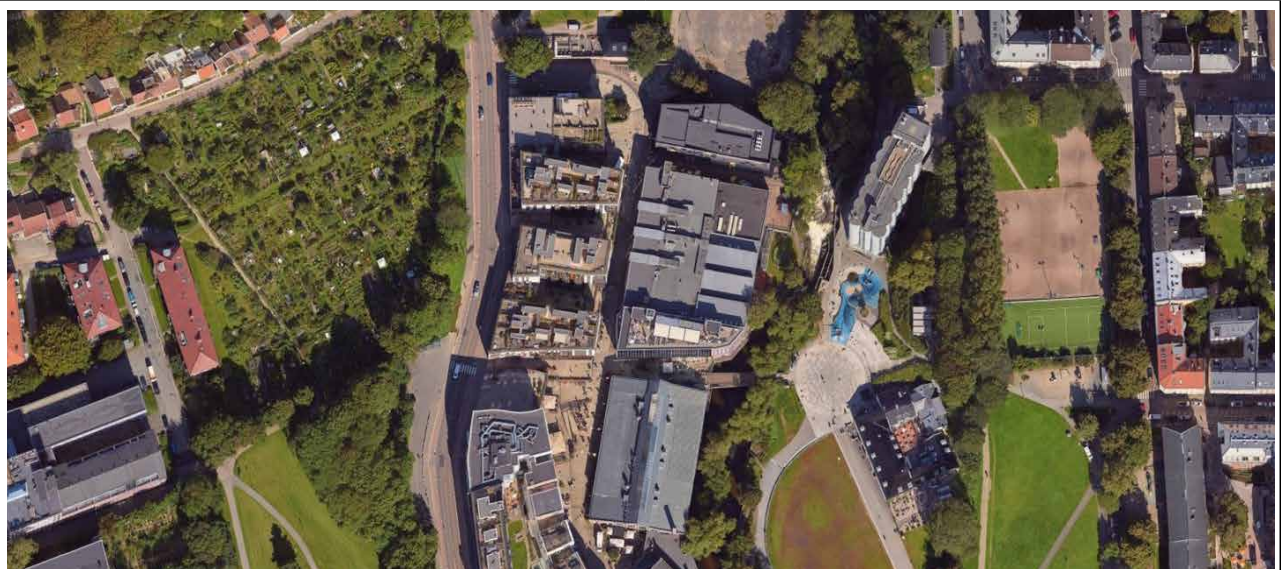
Under this heading, studies examining how urban protests in the modern city are affected by the processes of neoliberalization and depoliticization draw attention. The Markthalle Neun in Berlin-Kreuzberg has gained prominence as the headquarters of a protest group demanding a more accessible and inclusive marketplace for all. From the perspective of urban struggles about marketplaces, it is more clearly understood that conflicts shaped around apparent opposites, rather than negotiating on fundamental issues, stem from the post-political nature of politics and public discourse (Lydssan, 2020).

Location management is of particular importance in this context. Location management can be defined as the collaborative work of passionate individuals on the "patch" of a place. This practice is carried out in a specific place and that place has its own political, legal, economic, technological, and social environment. People get more information about places in those places. Location management is more akin to gardening than architecture. Location managers can and should learn from each other. Different places and people can serve as inspiration – although this does not always offer easily viable solutions (because legal or political contexts may not be amenable to one-to-one interventions) – and can offer alternative perspectives and methods that can then be adapted in the local context. Expanding the pool of knowledge and evidence that practitioners can draw on when solving spatial problems can ultimately lead to more successful, liveable, and equitable spaces (Kalandides et al., 2016).

The rise and development of the Worker Centre Berlin can provide insight into the future of similar markets, as it was founded by a group of activists, workers, and researchers. Studies examining the establishment process and current status of the Worker Centre Berlin are of great importance in terms of addressing the strengths and challenges faced by similar initiatives (Berlin, 2024) (Table 5).

3.6. Mercado de San Miguel (Madrid, Spain)

Mercado de San Miguel is located in Madrid, the capital of Spain, and is one of the most famous gastronomic markets in the city. First built in 1916, this historic market attracts attention with its elegant iron architecture and glass facades. Located right next to the Plaza de San Miguel in the centre of the city, the market is a popular destination for locals and tourists alike. Mercado de San Miguel offers a wide range of local delicacies such as fresh seafood, delicatessen products, tapas, cheeses, pastries, and Spanish wines. Reopened in 2009 as a modern gastronomic centre after an extensive restoration, the market is an ideal spot both for those who want to explore traditional Spanish cuisine and for those who want to experience the vibrant atmosphere of Madrid. The market is open every day of the week and is quite busy, especially in the evening hours (Monumenta Madrid, 2024) (Table 6).



Evaluated Items for Screen Placement

Pedestrian line – Sidewalks – Pergolas - Exterior walls - Lighting units - Signs

Solutions and Design Potentials for Screen Placement

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| <ul style="list-style-type: none"> Tarpaulins Vertical dividers Horizontal dividers Lighting on the walkway Stationary vending units Trash cans Lighting units | <ul style="list-style-type: none"> Corner boards Tarpaulins Vertical dividers Horizontal dividers Lighting on the walkway Stationary vending units Trash cans Lighting units | <ul style="list-style-type: none"> Special countertops for buffets Corner boards Tarpaulins Vertical dividers Artistic objects Signs and information signs Water elements Bicycle and scooter parking spaces | <ul style="list-style-type: none"> Trash cans Lighting units Pergolas Gazebos Artistic objects Signs and information signs Water elements Bicycle and scooter parking spaces |
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Table 4. Mathallen (Oslo, Norway).





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| <p>Pedestrian line - Sidewalks - Pergolas - Exterior walls - Lighting units - Signs</p> | | | |
| <p>Solutions and Design Potentials for Screen Placement</p> | | | |
| <p>Tarpaulins</p> <p>Vertical dividers</p> <p>Horizontal dividers</p> <p>Lighting units</p> <p>Pergolas</p> <p>Gazebos</p> <p>Artistic objects</p> <p>Signs and information signs</p> <p>Water elements</p> <p>Bicycle and scooter parking spaces</p> | <p>Corner boards</p> <p>Tarpaulins</p> <p>Vertical dividers</p> <p>Horizontal dividers</p> <p>Lighting on the walkway</p> <p>Stationary vending units</p> <p>Artistic objects</p> <p>Signs and information signs</p> <p>Water elements</p> <p>Bicycle and scooter parking spaces</p> | <p>Special countertops for buffets</p> <p>Corner boards</p> <p>Tarpaulins</p> <p>Vertical dividers</p> <p>Horizontal dividers</p> <p>Lighting on the walkway</p> <p>Pergolas</p> <p>Gazebos</p> <p>Artistic objects</p> <p>Signs and information signs</p> <p>Water elements</p> <p>Bicycle and scooter parking spaces</p> | <p>Special countertops for buffets</p> <p>Corner boards</p> <p>Tarpaulins</p> <p>Moving vending units</p> <p>Trash cans</p> <p>Lighting units</p> <p>Pergolas</p> <p>Gazebos</p> <p>Artistic objects</p> <p>Signs and information signs</p> <p>Water elements</p> <p>Bicycle and scooter parking spaces</p> |

Table 5. Markthalle Neun (Berlin, Germany).






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| Perspective 1 | Perspective 2 | Perspective 3 | Perspective 4 |
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| Evaluated Items for Screen Placement | | | |
| Pedestrian line – Sidewalks – Pergolas - Exterior walls - Lighting units - Signs | | | |
| Solutions and Design Potentials for Screen Placement | | | |
| Tarpaulins | Corner boards | Special countertops for buffets | Special countertops for buffets |
| Vertical dividers | Tarpaulins | Corner boards | Corner boards |
| Horizontal dividers | Vertical dividers | Tarpaulins | Tarpaulins |
| Lighting on the walkway | Horizontal dividers | Vertical dividers | Vertical dividers |
| Stationary vending units | Lighting on the walkway | Trash cans | Horizontal dividers |
| Trash cans | Stationary vending units | Lighting units | Lighting on the walkway |
| Lighting units | Trash cans | Pergolas | Moving vending units |
| Pergolas | Lighting units | Gazebos | Trash cans |
| Gazebos | Pergolas | Artistic objects | Lighting units |
| Artistic objects | Gazebos | Signs and information signs | Signs and information signs |
| Signs and information signs | Artistic objects | Water elements | Water elements |
| Water elements | | Bicycle and scooter parking spaces | Bicycle and scooter parking spaces |
| Bicycle and scooter parking spaces | | | |

Table 6. Mercado de San Miguel (Madrid, Spain).

3.7. Mercato Centrale (Florence, Italy)

Modern-day Piazza della Repubblica, Florence's former mercato vecchio, has a long history as a meeting place for various layers of urban society. The market allowed various members of society to come together as vendors and customers. However, historical sources, such as census data, tax records, and digital humanities projects to track trends in identity, status, and movement in Florence, offer more information. The market is located on the city's walking routes and remains important for anyone who wants to understand Florence's urban environment. Architects and urban planners have expressed this sense of loss by promoting an open public forum to discuss new proposals for the public market (Weintritt, 2022) (Table 7).

3.8. Östermalms Saluhall (Stockholm, Sweden)

Opened in 1888, the Östermalms Saluhall was built with astonishing speed. Östermalms Saluhallar Limited was founded in the spring of 1888 and an architectural competition was held for the construction of a large indoor market. The selected project was carried out by young architects Isak Gustaf Clason and Kasper Salin. The structure was inspired by markets in Northern Germany, Italy, and France. The building permit was obtained on March 13, foundation work began on June 1, and the building was completed on September 29 1888. This magnificent building, which was opened with a big ceremony, started to serve as a dining hall. Although trade was slow at first, things accelerated when the City of Stockholm bought the building in 1914 and banned market trade. Important parts of the original interior have been preserved and survived to this day. The Östermalms Saluhall has existed as a vibrant and impressive structure for over 130 years and there is still an active market (Östermalms Saluhall Website, 2024) (Table 8).

3.9. Belvarosi Piac (Budapest, Hungary)

The history of Belvárosi Piac dates back to 1891. During this time, the market has undergone significant structural changes. Located in the heart of the city centre, Belvárosi Piac has been re-designed to combine the atmosphere of a modern shopping mall with the atmosphere of an old village market. The well-planned area consists of two sections with a farmer's market and a market selling regional products (City Seeker, 2024) (Table 9).

3.10. Mercado da Ribeira (Lisbon, Portugal)

In 2014, the editors of Time Out Lisbon rented half of the Mercado da Ribeira, turning the historic market into a Time Out Market. This innovative marketplace is the world's first food and culture market, bringing together the city's best chefs, beverages, and cultural experiences under one roof. This previously neglected building has now become a popular destination for locals and tourists alike. In 2019, the market welcomed 4.1 million visitors, who experienced food from 32 restaurants and buffets, had drinks from eight bars and cafes, shopped at five stores, attended workshops at the Chef's Academy and events at the Time Out Studio. Three of Time Out Market's chefs earned four Michelin stars for their respective restaurants in 2018. Time Out Market Lisbon has enjoyed great success since its opening in May 2014 and has become one of Portugal's most popular attractions. Following this success in Lisbon, Time Out Group began to expand the same format to other cities (Mercato de Ribeira Website, 2024) (Table 10).






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| Perspective 1  | Perspective 2  | Perspective 3  | Perspective 4  |
| Evaluated Items for Screen Placement Pedestrian line – Sidewalks – Pergolas - Exterior walls - Lighting units - Signs | | | |
| Solutions and Design Potentials for Screen Placement | | | |
| Tarpaulins Vertical dividers Horizontal dividers Lighting on the walkway Stationary vending units Trash cans Lighting units Pergolas Gazebos Artistic objects Signs and information signs Water elements Bicycle and scooter parking spaces | Corner boards Tarpaulins Vertical dividers Horizontal dividers Lighting on the walkway Pergolas Gazebos Artistic objects Signs and information signs Water elements Bicycle and scooter parking spaces | Special countertops for buffets Corner boards Tarpaulins Lighting units Pergolas Gazebos Artistic objects Signs and information signs Water elements Bicycle and scooter parking spaces | Special countertops for buffets Corner boards Tarpaulins Vertical dividers Horizontal dividers Lighting on the walkway Moving vending units Trash cans Lighting units Pergolas Gazebos Artistic objects |

Table 7. Mercato Centrale (Florence, Italy).






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| Perspective 1  | Perspective 2  | Perspective 3  | Perspective 4  |
| Evaluated Items for Screen Placement Pedestrian line – Sidewalks – Pergolas - Exterior walls - Lighting units - Signs | | | |
| Solutions and Design Potentials for Screen Placement | | | |
| Tarpaulins Vertical dividers Horizontal dividers Lighting on the walkway Stationary vending units Trash cans Lighting units Pergolas Gazebos Artistic objects Signs and information signs | Corner boards Tarpaulins Stationary vending units Trash cans Lighting units Pergolas Gazebos Artistic objects Signs and information signs Water elements Bicycle and scooter parking spaces | Special countertops for buffets Corner boards Tarpaulins Vertical dividers Horizontal dividers Lighting on the walkway Moving vending units Trash cans Lighting units Pergolas Gazebos Artistic objects | Special countertops for buffets Corner boards Tarpaulins Vertical dividers Pergolas Gazebos Artistic objects Signs and information signs Water elements Bicycle and scooter parking spaces |

Table 8. Östermalms Saluhall (Stockholm, Sweden).

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| Perspective 1 | Perspective 2 | Perspective 3 | Perspective 4 |
|  |  |  |  |
| Evaluated Items for Screen Placement | | | |
| Pedestrian line – Sidewalks – Pergolas – Exterior walls – Lighting units – Signs | | | |
| Solutions and Design Potentials for Screen Placement | | | |
| <ul style="list-style-type: none"> Tarpaulins Vertical dividers Horizontal dividers Lighting on the walkway Stationary vending units Trash cans Lighting units Pergolas Gazebos Artistic objects Signs and information signs | <ul style="list-style-type: none"> Corner boards Tarpaulins Vertical dividers Horizontal dividers Lighting on the walkway Stationary vending units Trash cans Lighting units Signs and information signs Water elements Bicycle and scooter parking spaces | <ul style="list-style-type: none"> Special countertops for buffets Corner boards Tarpaulins Vertical dividers Horizontal dividers Pergolas Gazebos Artistic objects Signs and information signs Water elements Bicycle and scooter parking spaces | <ul style="list-style-type: none"> Special countertops for buffets Corner boards Tarpaulins Vertical dividers Horizontal dividers Pergolas Gazebos Artistic objects Signs and information signs Water elements Bicycle and scooter parking spaces |

Table 9. Belvarosi Piac (Budapest, Hungary).

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| <p>Perspective 1</p>  | <p>Perspective 2</p>  | <p>Perspective 3</p>  | <p>Perspective 4</p>  |
| <p>Evaluated Items for Screen Placement</p> | | | |
| <p>Pedestrian line – Sidewalks – Pergolas - Exterior walls - Lighting units - Signs</p> | | | |
| <p>Solutions and Design Potentials for Screen Placement</p> | | | |
| <p>Tarpaulins</p> <p>Vertical dividers</p> <p>Horizontal dividers</p> <p>Lighting on the walkway</p> <p>Stationary vending units</p> <p>Trash cans</p> <p>Lighting units</p> <p>Pergolas</p> <p>Gazebos</p> <p>Artistic objects</p> <p>Signs and information signs</p> <p>Water elements</p> <p>Bicycle and scooter parking spaces</p> | <p>Corner boards</p> <p>Tarpaulins</p> <p>Vertical dividers</p> <p>Horizontal dividers</p> <p>Lighting on the walkway</p> <p>Stationary vending units</p> <p>Trash cans</p> <p>Lighting units</p> <p>Pergolas</p> <p>Gazebos</p> <p>Artistic objects</p> <p>Signs and information signs</p> <p>Water elements</p> | <p>Special countertops for buffets</p> <p>Corner boards</p> <p>Tarpaulins</p> <p>Vertical dividers</p> <p>Horizontal dividers</p> <p>Trash cans</p> <p>Lighting units</p> <p>Pergolas</p> <p>Gazebos</p> <p>Artistic objects</p> <p>Signs and information signs</p> <p>Water elements</p> <p>Bicycle and scooter parking spaces</p> | <p>Special countertops for buffets</p> <p>Corner boards</p> <p>Tarpaulins</p> <p>Vertical dividers</p> <p>Horizontal dividers</p> <p>Lighting on the walkway</p> <p>Moving vending units</p> <p>Trash cans</p> <p>Artistic objects</p> <p>Signs and information signs</p> <p>Water elements</p> <p>Bicycle and scooter parking spaces</p> |

Table 10. Mercado da Ribeira (Lisbon, Portugal).

4. Discussion and Conclusion

The findings of the study show that exterior space transformation processes provided through dynamic horizontal components of screens create social intersection areas, unlike conventional space production processes. These intersection areas trigger a dynamic series of exterior solutions and bring into question the role of screen modules in the use of space in cities for the formation of new spaces. Consequently, for the rehabilitation of exterior spatial combinations, data obtained from outstanding publications of pioneering figures in the field of architectural configuration give rise to the need for the configuration of an architectural model to reinterpret the usage possibilities of street markets. This need provides a basis for the potential of open, semi-open, and closed spaces to be incorporated into the functioning of street markets through dynamic usage of screens, which will be created by a series of media components in different sizes and arrangements for the ground and upper layers.

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