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Re-Functioning of a Dead Shopping Mall As a University

Ölü AVM'lerin Üniversite Olarak Yeniden İşlevlendirilmesi

Merve Atmaca[1]

öz

Türkiye genelinde nüfus artışının en yoğun olduğu şehirlerden biri olan İstanbul ilinde, bu artışa bağlı olarak sosyo-ekonomik koşullarda, kamusal mekân gereksinimlerinde ve arz-talep dengesinde değişiklikler meydana gelmiştir. Son 20 yılda, İstanbul'da kentsel ölçekte kamusal kapalı mekân gereksinimlerini belli oranda karşılayan fonksiyonel mekanların başında ise sosyalleşme, kültür-sanat etkinlikleri ve alışveriş imkânı sağlayan Alışveriş ve Yaşam Merkezleri (AVM) gelmektedir. Ancak, son zamanlarda AVM yatırımlarının, özellikle bölgesel olarak talep fazlası oluşturacak nitelikte fazla sayıda inşa edilmesi, bazı AVM'lerin işlevini yitiren ve değişen gerektinimleri karşılayamayan yapılara dönüşmesine sebep olmuştur. İşlevini yitiren ancak yapısal ömrünü sürdüren bu âtıl binalar, mimari literatüre "Ölü AVM" kavramını kazandırmıştır. Bu çalışma, yatırımcıların ve karar vericilerin, Ölü AVM'lerin kamu yararına yeniden işlevlendirilmesi konusunda düşünmelerini sağlamayı amaçlamakdır. Ölü AVM'lerin, konumları, yapısal ve fiziksel özellikleri, boyutları gibi sebeplerle işlevsel dönüşüm bakımından uyumlu oldukları yapı fonksiyonları kısıtlıdır. Bu çalışma kapsamında yapılan araştırmalara göre, pek çok Ölü AVM'nin vakıf üniversitelerince dönüştürülmüş örneklerinin sayısının giderek arttığı saptanmıştır. Mevcut yerli literatürde, Ölü AVM'lerin çeşitli ticari fonksiyonlara dönüşümüne ilişkin yayınlar olmasına rağmen, üniversiteler için dönüşümünü inceleyen kaynaklara rastlanamamıştır. Çalışma, bu dönüşümü Ölü AVM'lerin kamusal dönüşümüne öncülük yapan bir vakıf üniversitesinin, tasarımcı deneyimleri ile özgün tasarım adımları akış şeması, eski ve yeni fonksiyonlara ait kat planlarının leke çalışmaları, eski-yeni iç ve dış bina görsellerinin karşılaştırılması yöntemi ile yorumlamakta ve bu anlamda yerli literatüre katkı sunmayı hedeflemektedir.

Anahtar Kelimeler: Ölü AVM, Yeniden İşlevlendirme, Dönüşüm Projesi Tasarımı, Üniversite Yapıları, Yapı ömrü.

ABSTRACT

In Istanbul, which is one of the cities with the highest population growth in Turkey, changes have occurred in socio-economic conditions, public space requirements and supply-demand balance due to this increase. In the last 20 years, Shopping Malls and Life Centers (AVM) that provide socialization, culture-art activities and shopping opportunities are the most functional spaces that meet the public indoor space requirements on an urban scale in Istanbul to a certain extent. However, the recent construction of shopping mall investments, especially in a way that will create a surplus of demand regionally, has caused some shopping malls to turn into structures that lose their function and cannot meet the changing requirements. These idle buildings, which lost their function but continued their structural life, brought the concept of "Dead Shopping Mall" to the architectural literature. This study aims to get investors and decision-makers to think about the re-functioning of dead shopping malls in the public interest. The structural functions of dead AVMs that they are compatible with in terms of functional transformation due to reasons such as their location, structural and physical properties, dimensions are limited. According to the research carried out within the scope of this study, it has been determined that the number of examples of many dead shopping malls converted by foundation universities is gradually increasing. Although there are publications in the existing domestic literature on the transformation of dead shopping malls into various commercial functions, there have been no sources examining their transformation for universities. The study interprets this transformation with the method of a foundation university that pioneers the public transformation of dead shopping malls, the flow chart of original design steps with designer experiences, stain studies of floor plans of old and new functions, comparison of old-new interior and exterior building visuals and aims to contribute to the domestic literature in this sense.

Keywords: Dead Shopping Mall, Re-Functioning, Transformation Project Design, University Buildings, Building Life- cycle

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INTRODUCTION:

The increasing population in Turkey is concentrated in certain cities due to geographical and socio-economic reasons. Istanbul is one of the leading cities in this regard in Turkey. The population change, which is the subject, causes the behaviors and expectations of the city to change. Thus, as a result of this increase in Istanbul, problems arise in the balance of supply and demand in various sectors.

The first of the shopping centers in Turkey, which is thought to meet many of the changing user needs and today's expectations under the same roof, was opened for use in Istanbul in 1988. The concept of shopping mall was quickly accepted by the residents of the city, started to be used and preferred instead of street stores. Shopping Mall investments, which showed a rapid rise until 2014, caused the formation of over-needed investments due to misdirection of investors and misleading the investors in regions where shopping mall demands have reached saturation in recent years, and shopping malls that have lost their function and are insufficient or not preferred to meet the needs and needs of individuals. This situation has brought the concepts of Dead / Dead Shopping Mall and Ghost Shopping Mall to the construction sector and according to Emlak Kulisi Magazine, 2022, it is stated that approximately 20 shopping malls in Istanbul are about to close. It is seen that many shopping mall structures that have lost their function have been re-functionalized, and they have transformed from educational institutions that have an impact on the individuals and population growth in the city to universities.

For this reason, within the scope of the study, it was seen as a need to investigate the re-functioning of shopping mall structures and their restoration to the city as a university. Universities are institutions that increase the level of education of the society and the city where it is located and play an active role in the increase of the population by affecting the commercial, sociological and economic characteristics of the city. The fact that the shopping mall buildings are located in central locations where access and transportation problems have been solved, allows the structural and physical conditions of the universities to perform their functions and is architecturally compatible encourages us to think about their easy conversion into university buildings.

In the literature search conducted in the study, the numerical distributions of active shopping malls and universities in Istanbul were examined through statistical graphs. Graphical evaluations are limited to the last 20 years. Some of the buildings converted into universities from the shopping mall buildings that lost their function in Istanbul are listed.

The data obtained in the literature research, in the "Exemplary Building Review Converted from Shopping Mall to University", the re-functionalization design processes of Beykent University Hadımköy Campus, formerly known as Westa AVM, which was previously a shopping mall structure but lost its function and was converted into a university by Beykent University with the transformation project of Architect Merve Atmaca, were examined.

As a method in the study, stain studies on architectural plans and comparison of old and new functional spaces, comparative determination of changes in space allocation were used. In addition, the transformation project steps are schematized step by step as a flow diagram and aims to create a road map for similar transformation projects. The design processes were examined with the flow chart, and the old - new plan drawings of the structure and the evaluations of the result were made with photography.

The argument that both structural and physical criteria of dead shopping malls are suitable for re-planning with university function is the hypothesis of the article.

The objectives of the research are:

- Determining the change in the University and Shopping Mall building stock in Istanbul over the years and determining the current situation,
- Determining the number of universities available on an urban scale with the increasing population and the number of students who are candidates and settled students and the capacity increase need of universities,
- Emphasizing the sustainability of urban space through the relationship between structural life and functional life of the building,
- Contributing to the inventory and literature through the University buildings converted from Dead Shopping Malls in Istanbul,
- Transformation project steps, decision and approval process analysis from the designer's point of view, to be able to guide similar quality future transformation projects with experiences.
- It is the ability to prove the functional suitability of the project by approving the changes foreseen by the designer for the transformation project by the decision authorities.

1. University and Shopping Mall Distributions at City Scale

The city is a concept that acts with the lifestyles, habits, social and economic characteristics of the society and renews itself with the changes connected to them (Birol, 2005). Man has maintained his existence in space in the historical process, and these places have constantly changed according to their needs and purposes. The concept of a city has reflected the culture and lifestyle of people and has become one of the main places in human life (Ergun, 2014). Public spaces are places that occupy an important position in the city, where people communicate and perform various activities, and where the city and society unite. (Url 3, 2022). Some of these spaces, in addition to public open spaces, are commercial spaces that meet the basic needs of people and educational areas that make a high contribution to the development of cities.

The commercial areas in the city meet the shopping action of the city people in order to meet their basic needs and expectations. In order to meet this requirement, individuals have always needed places where product sales take place. The fact that the shopping activity became architectural and became a part of the city dates back to the Ancient Greek period. In ancient Greece, the Greek "Agora", which means "people coming together", is a social and commercial center, and places that allow gathering and shopping were created. In medieval urban fiction, the act of shopping was not carried out in commercial centers, but with marketplaces and mobile fairs around cathedrals. As of the 12th century, these mobile areas turned into warehouses and covered shops (Kademoğlu, 2011). Although shopping places are named with different names in different periods, today "shopping centers" appear as shopping malls. Shopping malls are areas that serve commercial areas in the same volume without being affected by outdoor weather conditions, offer a wide range from food to textiles, and save time lost by transportation to meet different needs.

Today, shopping malls have become public spaces that allow various activities as well as commercial activities and aim to increase the level of knowledge and education of society with the cultural services they offer. Considering that shopping malls meet the changing user needs and needs over time, the number of shopping malls has increased rapidly over the years in the city scale with the effect of the increasing population.

Contrary to the linear relationship seen between the level of development and the education level of the city, there is an inverse relationship between population surplus and education level. Among the important factors affecting the controlled increase of the population is the level of education (Sertkaya Doğan, 2018; Ayhan, 2019). Although the level of education is effective with various factors in different

distributions of the population, the increase in the young population increases the need for universities. Universities, for the city where they are located; are institutions that are important in terms of education, economy, business, and social services. Staff and students working in universities contribute significantly to the city's economy with the expenditures they make for their social lives (Ergun, 2014). With the universities increasing the young population rate of the city, social, economic, and cultural changes affect the physical and consumption habits of the society. The increase in population and its reflections on the city change the supply and demand of individuals over time.

The increasing population rate in Turkey is most evident in Istanbul (Gökburun, 2017). According to Istanbul Metropolitan Municipality (IMM) 2019 data, approximately 100 shopping malls under the authority of IMM and approximately 60 universities, including state and foundation, serve the resident population of 15.519.267. According to the data in Figure 1, as of 2005, the number of shopping malls opened under the authority of IMM started to increase and continued its rate of increase until 2018 (URL 1, 2022). This increase lost its speed as of 2018 and the number of shopping malls opened after 2018 started to pause.

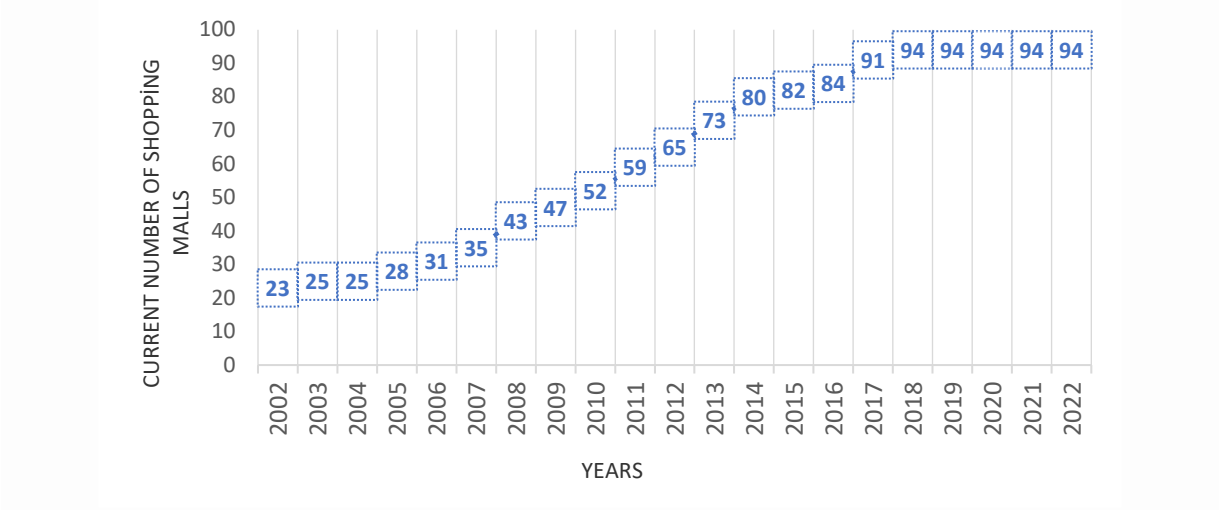


Figure 1. Numerical distribution of shopping malls opened in Istanbul in the last 20 years[2].

While the population in Istanbul is increasing rapidly with the effect of increasing migration, this pause in shopping mall investments can be interpreted as a sign that the city has reached the saturation of shopping malls. Figure 1 shows the number of shopping malls that have continued to function since the day they were opened. Throughout Istanbul, both the difficulties in the country's economy and the tens of shopping malls built by investors with unrealistic feasibility as surplus to need have closed or are about to close.

[2] Figure 1 has been prepared by the author with reference to the current number of shopping malls opened in the last 20 years, declared by the IMM official website in Istanbul.

While the closed shopping malls are described as "Dead Shopping Malls", the shopping malls that have lost their popularity and are about to close are called "Ghost Shopping Malls". Ora AVM (Bayrampaşa), Fox City (Büyükçekmece), Taksit Center AVM (Beylikdüzü), Hayat Park AVM (Güneşli), Maxi City AVM (Üsküdar), Town Center (Bakırköy) are some of the dead Shopping Malls that were opened but closed by not being able to continue their function or Istanbul shopping malls that have been re-functioned. İnteria AVM (Dudullu), Westa AVM (Hadımköy), Ağaoğlu Maslak 1453 AVM (Sarıyer), Avalon AVM

(Büyükçekmece) are examples of shopping malls that are re-functioned for different purposes without being used in this quality after construction.

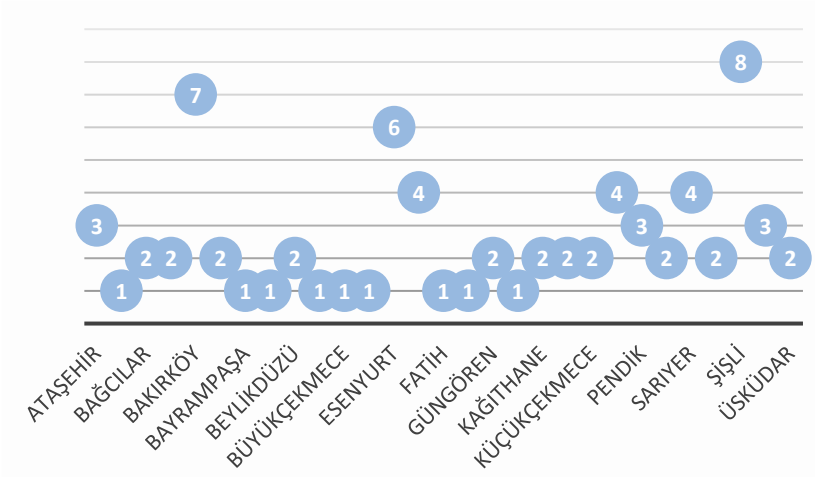


Figure 2. Numerical distribution of shopping malls opened in Istanbul' s different districts in the last 20 years[3].

In Figure 2, the number of shopping malls opened in Istanbul districts is included. The districts with the highest number of shopping malls are Bakırköy (7), Esenyurt (6), and Şişli (8) (URL 1, 2022). When the population number of the districts with the highest number of shopping malls is examined, it is known that Bakırköy district is 229.239, Esenyurt district is 954.579, and Şişli district is 279.817 (Istanbul Statistical Office, 2022). While the growth rate of the population of Istanbul shows continuity in almost every period, the highest population and the increase rate belong to Esenyurt district (Gökburun, 2017).

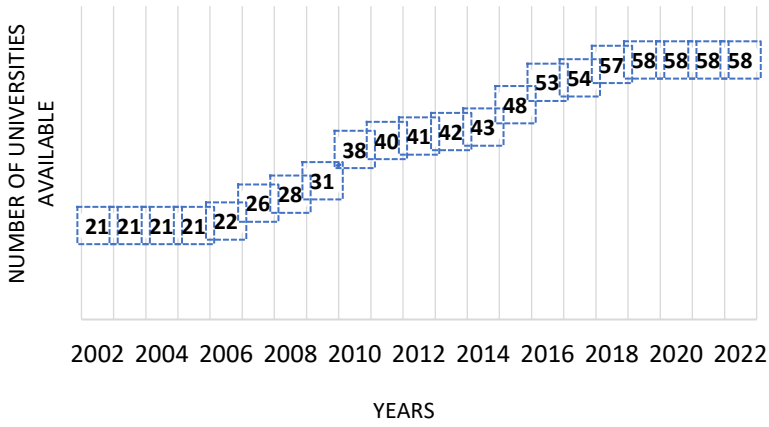


Figure 3. Numerical distribution of active universities opened in Istanbul in the last 20 years[4].

[3] Figure 2 has been prepared by the author with reference to the current number of shopping malls opened in Istanbul' s different districts in the last 20 years, declared by the IMM official website.

[4] Figure 3, the graph of the number of new universities opened in Istanbul in the last 20 years, was prepared by the author using the data published on the official website of the Council of Higher Education (YÖK).

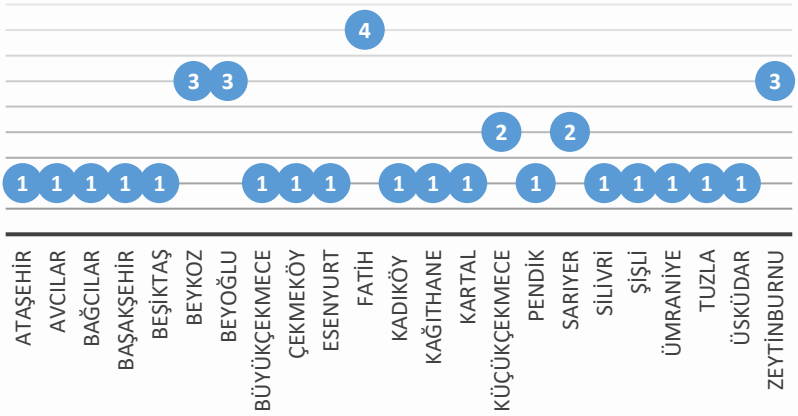


Figure 4. Numerical distribution of active universities opened in Istanbul districts in the last 20 years[5].

In the past 20 years, when we look at the newly opened and already active universities in Istanbul numerically, a rapid increase has been observed after 2007 as seen in Figure 3. When the distribution of these universities in Istanbul districts is examined, it is seen in Figure 4 that new universities, mostly foundation universities, have been opened in almost every district in parallel with the increasing population in the last 20 years (URL 2, 2022). In addition, with the increase in the number of students of existing developing universities and the opening of new faculties and departments after developing technology and innovations, the need for the physical growth of existing universities has become an ongoing process. Considering the inadequacy of the current physical conditions of the city universities and the need for additional open and closed spaces, the need for additional physical space to be allocated to the universities isvious. Again, due to this increase, the allocation of new campus/educational facilities in different locations is becoming a solution for universities that do not have the opportunity to expand on campus.

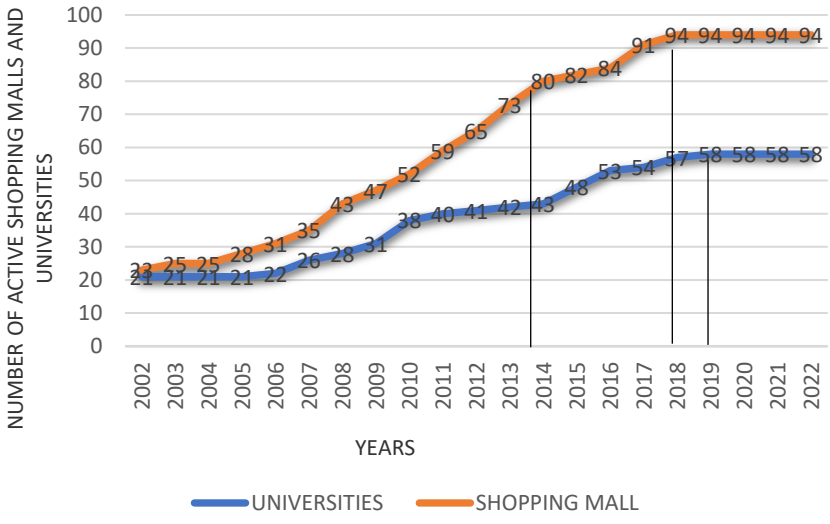


Figure 5. Digital distributions of active shopping malls and universities opened in Istanbul districts in the last 20 years[6].

[5] Figure 4 has been prepared by the author with reference to the number of universities opened in the last 20 years in different districts of Istanbul, announced on the official website of YÖK.

[6] Figure 5, has been prepared by the author by using the data of IMM and YÖK to compare the number of shopping malls and universities in Istanbul over the last 20 years.

In Figure 5, the numerical distributions of active shopping malls and universities for the last 20 years in Istanbul are examined simultaneously. While the number of new shopping mall investments was 4.76% between 2014 and 2016, an increase of 18.86% in the number of universities was observed between the same years. In the last 20 years, it has been observed that shopping malls have reached the highest number in 2018 and universities in 2019. Although there are no newly opened universities after 2019, although their growth continues due to the increase in the quota in the existing departments of the existing universities and the opening of new departments, as of 2018, the decrease in the demand for shopping mall investments has started to make investors think about the future of the shopping mall functional buildings under construction. This thinking encourages architects, urban planners, and investors to rethink the structural life and function of the building.

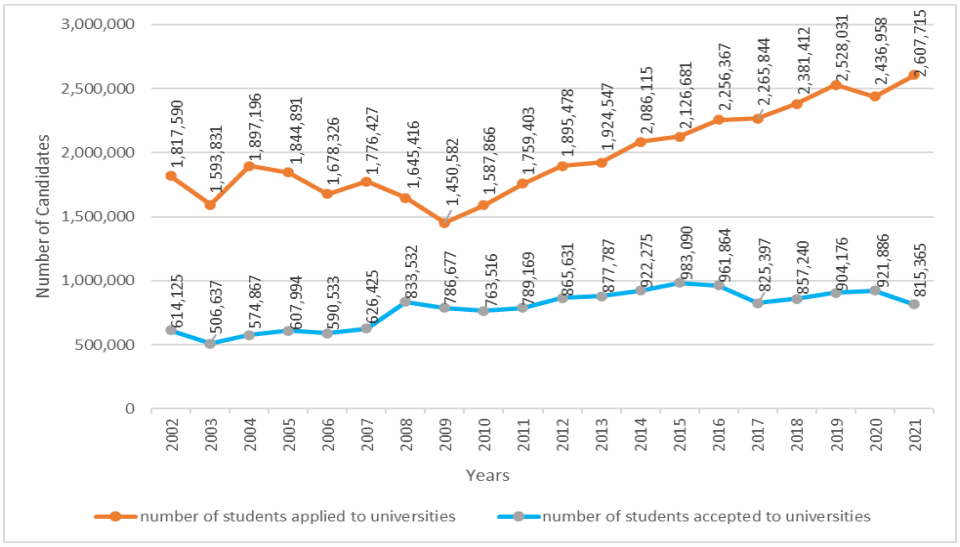


Figure 6. Number of applicants and placed in universities across Turkey between 2002 and 2021. (URL 3, 2022) [7].

In order to observe the increasing demand for universities between 2002 and 2021 and the adequacy of the existing university capacities, YÖK statistics were graphed in Figure 6 on the number of candidates applying to universities throughout the country and the number of candidates who settled in universities. In particular, it is seen that the number of applications that saw the bottom in 2009 has increased by 44.37% with a regular and rapid increase until today (excluding the 2020 pandemic year). On the other hand, the number of candidates placed in universities increased by 3.52%. The reason why the aforementioned increase is so low is the number of quotas that cannot be increased by the state due to the physical capacity problems of the existing universities, except for the rising base scores of the universities.

2. Relationship between Build Lifecycle and Functionality

Building life-cycle, in the most general terms, defines the process in which the structure cannot be used by the wear, loss of strength, aging, or deterioration of the elements that make up the structure depending on time and environmental effects. Factors such as errors during manufacturing, the use of building materials, the function of the structure, social and economic factors, and the location of the structure have an effect on the life of the structure. The life of the structure can be evaluated under two headings: the designed life and the service life.

[7] Figure 6 has been prepared by the author using TUIK data, which includes the number of students who applied and accepted to the university between 2002 and 2021.

During the design phase of the structure, the average life expected before it is physically applied is called the designed life, while the service life is the average life obtained more clearly after the application than the designed life (Kahraman, 2010).

These factors affecting the life of the structure can shorten the life of the structure or it is possible to extend the life of the structure with correct and appropriate use. Various methods are applied to extend the life of the building and one of the most well-known of these methods is refunctioning. Re-functionalization is called a protection technology and is a method that is frequently used today to extend the structure and service life. Increasing the interaction of the building and the environment and revealing the functionality value of the structure is an effective construction production technology (Çetin, 2021). Looking at repurposed buildings and dead/ghost buildings, it is a concrete inference to say that for most buildings designed with high technology, the structural life of the building is longer than its functional life. New solutions should be produced for the survival of abandoned or expired structures. Re-evaluation of existing buildings is beneficial in reducing structural damage and increasing their quality of life.

The re-functioned structures assume a supporting role in the socio-economic characteristics of the society and the identity of the city with their new functions. It is important that the function chosen for re-functioning is compatible with its structure and formal characteristics. The form and function of the structure are directly related and allow the structure to perform its functions. For the new function of the structure, the few interventions to be applied to the existing structure affect the continuity of function and the preservation of the structure-function relationship.

Thus, the highest efficiency obtained in space uses is reached (Çetin, 2021). The buildings and functions to be re-functioned should be selected accordingly and the architecture of the building should be in harmony with the new function and both the users and the standards and guidelines. Structures that are not selected in this direction will turn into spaces that cannot provide their function and will cause environmental, time, and economic losses.

3. Buildings Converted into Universities from Shopping Malls in Istanbul

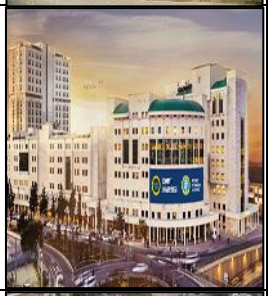
In the light of the statistical data of the cities in our country, the number of newly opened universities, the population growth and speed, and the shopping mall building stock that needs to be re-functionalized attract attention. In the literature study, it was seen that the shopping malls in Istanbul lost their function and the buildings were converted into educational institutions with the need for new campuses of the universities.

The loss of the function of the deceased/dead shopping malls and their transformation into new university structures and their reintegration into the society contribute to the country's economy, social and cultural features.

The conclusions in the Strategy Platform for Real Estate (GISP) Round Table meeting on 'Transformation of Dying Shopping Malls and New Educational Structures' that the Shopping Centers that have lost their function will contribute to the city economy with uses such as schools, student dormitories, and hospitals prove this fact.

In the interactive meetings attended by the leaders of the building and education sectors, it was emphasized that shopping malls, which are weakened by the development of online shopping and increasing retail competition, are especially on the radar of school, dormitory, and hospital investors (URL 4, 2022). In Table 1, examples of structures converted from shopping malls to universities are given.

Table 1. Examples of Buildings Converted from Shopping Malls to Universities in Istanbul[8].

	BEFORE		AFTER	
BUILDING TAGS	**SHOPPING MALL NAME**	**IMAGE**	**UNIVERSITY NAME**	**IMAGE**
Shopping Mall 2003-2013, Bakırköy	*Town Center*		*Altınbaş University Bakırköy Campus (2015)*	
Shopping Mall 2003-2012 Üsküdar, Çengelköy	*Maxi City*		*Doğuş University Çengelköy Campus (2016)*	
*Shopping Mall 2015- * Ümraniye, Dudullu*	*Interia Shopping Mall*		*Doğuş University Dudullu Campus (2020)*	
*Shopping Mall 2008- * Beykent, Büyükçekmece*	*Avalon Shopping Mall*		*Beykent University Beylikdüzü Campus (2018)*	
*Shopping Mall 2001- * HADIMKÖY, ESENYURT*	*Westa Shopping Mall*		*Beykent University Hadımköy Campus (2016)*	
Shopping Mall 2015- Maslak, Sarıyer*	*Ağaoğlu Maslak1453 Shopping Mall*		*Nişantaşı University Neotech Campus (2017)*	

* *Buildings that have been designed, built, and never opened as shopping malls.*

[8] Table 1 has been prepared by the author to show the existing university buildings converted from shopping malls in Istanbul.

The loss of the function of the deceased/dead shopping malls and their transformation into new university structures and their reintegration into the society contribute to the country's economy, social and cultural features. The conclusions in the Strategy Platform for Real Estate (GISP) Round Table meeting on 'Transformation of Dying Shopping Malls and New Educational Structures' that the Shopping Centers that have lost their function will contribute to the city economy with uses such as schools, student dormitories, and hospitals prove this fact. In the interactive meetings attended by the leaders of the building and education sectors, it was emphasized that shopping malls, which are weakened by the development of online shopping and increasing retail competition, are especially on the radar of school, dormitory, and hospital investors (URL 4, 2022). In Table 1, examples of structures converted from shopping malls to universities are given.

4. Exemplary Building Study Converted from Shopping Mall to University: The Case of Beykent University Hadımköy Campus

New campus planning methods can be grouped as organizational, reorganizational, and transformational (Öztürk, 2009). Re-projecting an existing structure as a campus is a method of transformational planning. Through the example examined within the scope of this study, the transformational design steps and the suitability of the shopping mall buildings for university use in terms of architectural and functional requirements were evaluated through the eyes of the designer.

4.1. Westa Mall

Westa Shopping Mall Project is located in Akçaburgaz neighborhood, Esenyurt district of Istanbul, to the right of Hadımköy Toll Booths, 350 m away from E-80 (European Highway). In the immediate vicinity of the building, there is "Alkop Industrial Site" where global industrial facilities are located. The housing development that started with the "Alkent 2000" project of 3.000.000 m2, which was completed in 2000 to meet the housing needs of employers in the industry, has increased rapidly with prestigious projects and housing construction in this region allows construction today. In addition, many industrial workers live in close proximity to this region.

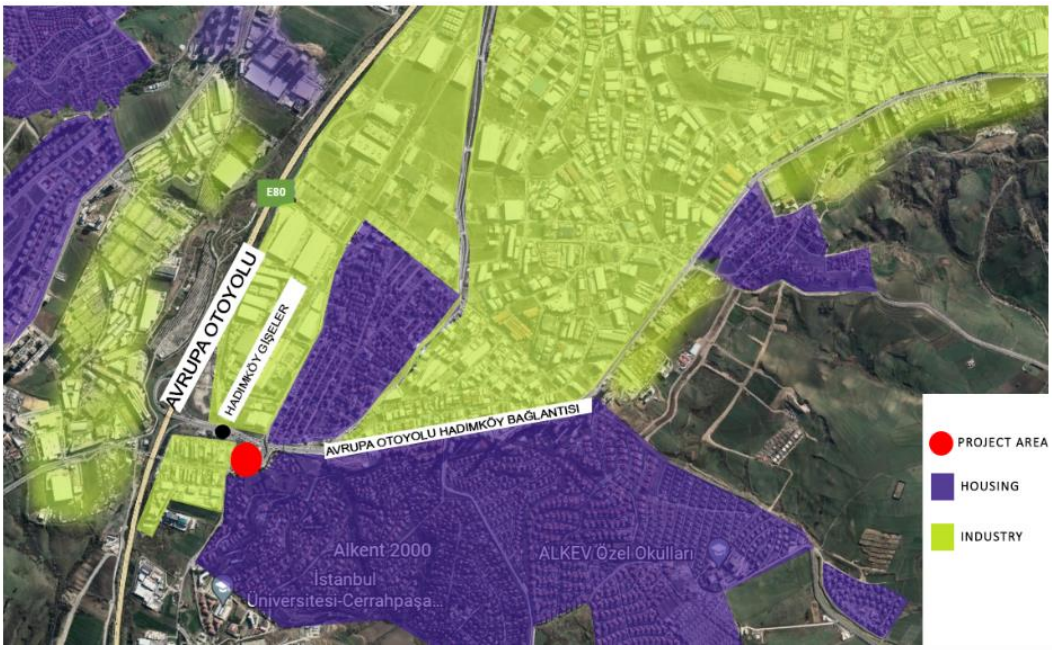


Figure 7. Top view functional stain study of the project area and its surroundings[9].

[9] Figure 7 was created by the author using Google Earth data with a case study building to show the location and social environment data of the site.

Figure 7 shows the functional distribution around the case study building as a stain study. The Westa Shopping Mall project, which was developed in 2000 considering that the increasing resident population in Esenyurt district created the need for shopping malls in the region, consists of 5 floors, including 3 basement floors and 2 above-ground floors with a closed area of 85.420 m2 built on a parcel area of 24.690 m2. Similar to the shopping mall projects of the period in which it was designed, it consists of administrative and closed deaf facades that aim to keep the concentration of customers in the structure. The dome above the free movement area in the interior area aims to make the user feel comfortable in this area by taking daylight into the space.

Table 2. Distribution of shopping mall floors and functional areas

	Sales Units (m^2)	Supermarket (m^2)	Show activity area (m^2)	Cinemas (m^2)	Game - entertainment section (m^2)	Food - Beverage section (m^2)	Food sales area (m^2)	General circulation area(m^2)	Cafe (m^2)	Visitor circulation area (m^2)	Personnel area (m^2)	Warehouse area (m^2)	Service area (m^2)	Parking Garage(m^2)	TOTAL FLOOR AREA (m^2)
2.BASEMENT FLOOR (-13.00)	0	0	0	0	0	0	0	0	0	0	0	0	0	20783	23186
1.BASEMENT FLOOR (-10.10)	0	0	0	0	0	0	0	0	0	0	410	487	1811	17539	22857
GROUND FLOOR (-5.40)	5533	7344	829	0	0	0	0	0	0	1771	0	0	0	0	18155
1. FLOOR (0.00)	7869	0	0	0	0	0	0	1919	261	0	0	0	0	0	11205
2.FLOOR (+5.40)	0	0	0	1672	2918	2263	1290	876	0	0	0	0	0	0	10008
TOTAL															85411

The carrier system of the mall has been solved as reinforced concrete. 80 x 80 reinforced concrete columns are placed on each floor with 8m x8m axle spacing. There are no sagging beams due to the use of cassette flooring. In case of possible earthquake risk, the floors were applied in 5 parts with dilations in order to prevent the monolithic operation of large floor areas. Shopping mall, outdoor car parking area 195 vehicles, 2. Basement floor indoor parking area 675 vehicles, 1. The basement floor indoor parking area has a total capacity of 1,377 vehicles, including 507 vehicles. On the 2nd basement (-13.00 elevation) floor, there are 6 stair buckets used as fire escapes in addition to the escalator and 3 elevators in the entrance hall. The technical volumes of the mall such as water tank, waste storage, and hydrophore are located on this floor. The floor has a usable area of 23.186 m2.

The 1st basement floor (-10.10 elevation), apart from the indoor parking function, contains the personnel volumes, shopping mall fuel tanks, electrical installation rooms, and service entrances. 2. In addition to the stairs and elevators on the basement floor, there are also 4 freight elevators for the acceptance and transportation of goods to the stores. The closed usage area of the floor is 22.857 m2.

The ground floor (-5.40 elevation) has a closed usage area of 18.155 m2. 7.350 m2 of this floor is designed as a supermarket. The building has a customer entrance from the European Motorway Hadımköy Connection Road façade. While this façade of the floor is at the road level, the other facades are under the ground. In the inner courtyard, the open space under the dome is divided into shows and activities.

The first floor (±0.00 elevation) provides customer access from the Hadımköy – İstanbul Street façade of the building. 80% of the closed area on the floor is reserved for sales areas. The only volume on the floor that receives daylight from the façade is the "café" section, which is located above the entrance at -5.40 elevation. There is a gallery space under the dome to be a projection of the activity all on the lower floor. In this way, the daylight taken in by the roof band windows in the dome can be transferred to the lower floor. The total usable area of the floor is 11.205 m2.

On the second floor (+5.40 elevation), the 3.550 m2 food and beverage area of the shopping mall is located on this floor. Roof lanterns have been designed on the feed drinking areas and it is aimed that

this area will benefit from natural lighting during the day hours. Game entertainment and movie theaters are also located on this floor. There is also an outdoor terrace area, which can be accessed from the entertainment area. The total indoor usage area of the floor is 10.000 m2.

The mall was implemented as projected in the qualifications shown in Table 2. However, no lease has been made for the function for which it is designed, and it has not been opened for use for this purpose. For this reason, WESTA AVM is a Dead Shopping Mall.

Figure 8. shows the exterior of WESTA AVM in 2014. The entire shell of the building, including terrace roofs, roof skylights, ramps, and floor coverings in open areas, exterior finishing materials, is 100% complete in accordance with the façade drawing in Figure 9.

Figure 8. WESTA AVM, Hadımköy-İstanbul Caddesi Façade Visual. (Yandeks)

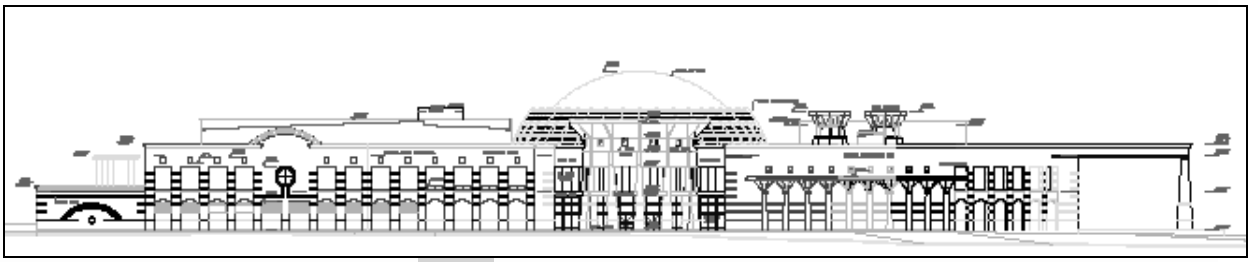


Figure 9. Drawing of the façade.

The interior photographs of the shopping mall, taken in 2016 for the purchase and feasibility studies of Beykent University, give information about the carrier system and the current condition of the building in Figure 10. At that time, the building's wet volumes and stairs were completed, including finishing work. In the current situation, the building's escalators and elevators are operational.

However, from construction work to floor, wall, and ceiling cladding has not begun. Since the segmentation of the sales areas was made according to the store sizes demanded during the store leasing works, the dividing walls were not made. In addition, there are no mechanical and electrical system applications for stores and common areas. In the year in which the shopping mall was built, it was decided to sell the building due to the fact that the existing housing stock was not enough to reach sufficient numbers in terms of shopping mall leases and the economic difficulties experienced by the investor during this process.

In the period of about 15 years until the building was sold, the resident population of the region increased considerably as stated in the data in the literature section, but during this period, close to 10 new shopping malls were opened that were easy to reach the region. For this reason, the building could not find a buyer with the shopping mall function.

Figure 10. WESTA AVM, 2016 field trip photos.

4.2. Transformation project design steps

After the Westa Shopping Center became the property of Beykent University, “Doğa Turizm ve İnş Tic AŞ” to design the university building for Beykent University. A functional architectural transformation project was designed by Architect Merve Atmaca, who works as the responsible architect in Istanbul. When designing a transformation project, the architectural approach that needs to be multifaceted and simultaneously thought for each project becomes more special. When a current building is being purged of its former function and redesigned with a university function, architectural needs programs, comfort expectations of users, analysis of the physical and structural current state of the building, structural and physical improvements when necessary, standards and regulations to be complied with should be evaluated step by step.

These projects, which are subject to supervision by different institutions of the state, are also submitted to the approval of the board of trustees for the faculties and foundation universities where the university will serve. The feedback received during the approval processes was repeated several times with feedback and revisions during the design process. Apart from architectural needs, mechanical, electrical and static project steps have been advanced with a similar flow in parallel with architecture.

One reason for the project revisions is costs, and due to initial investment and maintenance costs, some of the structural material selections have changed. The design processes and flowchart of the sample transformation project until its implementation is shown in Figure 11.

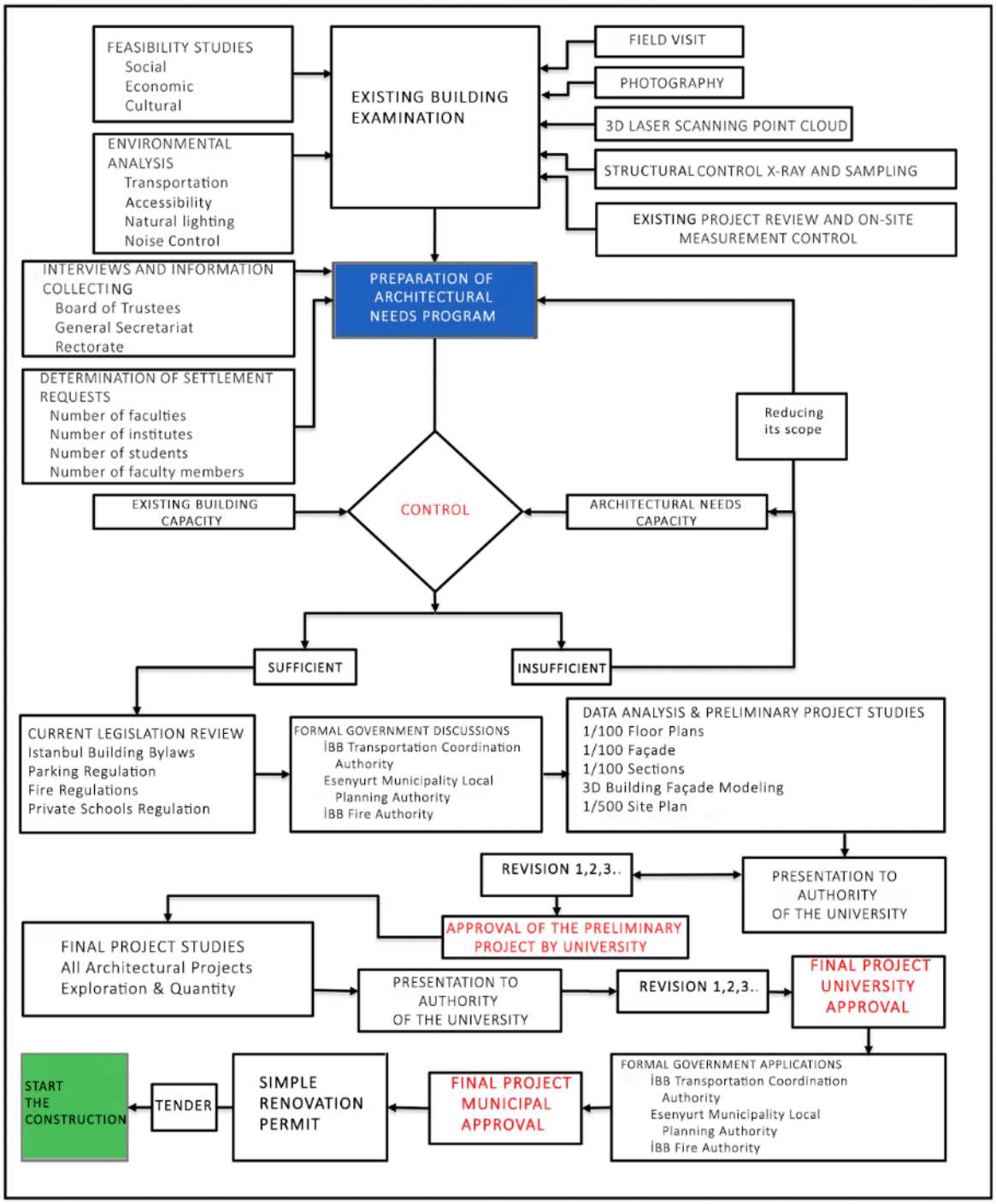


Figure 11. Flowchart of design steps of the transformation project until implementation

4.3. Beykent University Hadımköy Campus

Westa Avm, which was purchased by Beykent University in 2016, is located 8 km away from Beylikdüzü Campus with its new name, the university's previous experience of shopping mall conversion campus structures, and the main campus Beylikdüzü Campus.

The Faculty of Engineering and Architecture and the Faculty of Fine Arts are in Istanbul Şişli. In order to gain students who, want to prefer the departments of these faculties but cannot choose due to location, a branch of these departments has been created on the new campus The laboratories, workshops and all administrative units needed by the departments are also located on this campus.

Hadımköy Campus is designed to provide simultaneous service to Beykent University and Beykent Vocational High School according to the architectural needs program determined after negotiations with the board of trustees, general secretariat, and rectorate. The classroom, workshop, and office needs of each faculty were determined according to the number of people, and settlement was made by taking into account the transportation and access to the existing closed area.

Since this building, which was previously designed as a shopping mall, became idle when it was transferred to the ownership of the university, before it could be used with the AVM function, there is no dividing wall between the areas reserved for functions on the project. For this reason, in the new planning, while no additional crushing work is done, it is ensured that the application is made very quickly by using light steel wall partition systems as vertical structural elements.

Since the existing building is designed as a shopping mall, façade openings are not available in places other than café areas and entrances. In universities, although there is no obligation in the standards in the classrooms for the clean air and natural lighting needs of the students, it is recommended to have windows for indoor environment quality and user comfort.

For this reason, windows were opened to all the facades of the building that were above ground. In addition, the classrooms in the basements have been opened to the ground for fresh air and natural lighting needs. In addition, ceramic exterior tile was preferred by using a mechanical façade system that provides ease of maintenance as façade cladding. In Figure 12, there is some before and after façade images of the university.

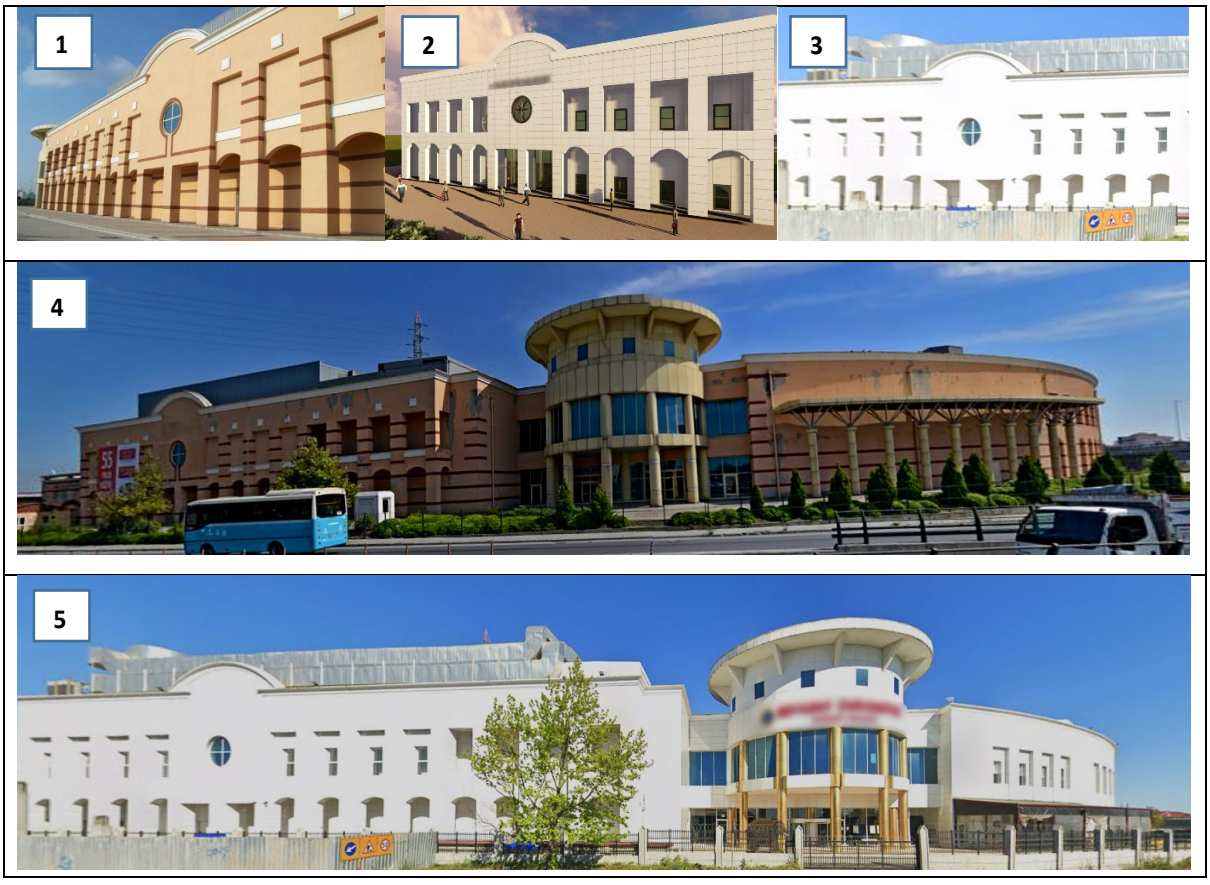


Figure 12. 1. Shopping mall façade. 2. University façade by 3D rendering 3. Current façade of university 4. Full façade of shopping mall 5. Full façade of university.

In order to get more daylight to the classrooms and offices facing the inner courtyard within the floors, the opening in the existing dome was doubled and the second row of windows was added. In the current building, the floor has no external environmental relationship as the first basement floor

(-10.10 elevation) is used as a parking lot. With the transformation project, this floor was opened to the use of students and staff, so the need for environmental relations arose. In order to meet this need, gallery space of 830 m2 was opened in the ground floor middle area and a staircase was added to this space directly reaching the lower floor.

The games & entertainment department, located on the first floor (+5.40) of the existing building, has been converted into a multi-purpose hall of the university. Since the soffit gap is not sufficient for the décor requirements in the theaters in the multi-purpose hall, the height above the stage has been increased by 2 m. Again, the cinema halls on this floor have been converted into lecture halls and conference halls for the university. In the classrooms with 4 axles in length, smart boards from advanced technology products were used to see the board clearly. In addition, the classrooms are designed in a similar way to the lecture halls in 3 stages and the stage/platform is designed for the faculty members. For accessibility, there are ramps for each level. In long classrooms, sound systems were used to transmit sound without any problems.

Another change with the transformation project is that the mechanical devices on the terrace roof of the existing building are transported from here and the terrace roof is presented to the use of the students as an activity and recreation area as an open area with the natural landscape design. In campus buildings, open space design is at least as important as indoor design. Table 3. It shows the spatial distribution of the transformation project according to the floors and the human capacity.

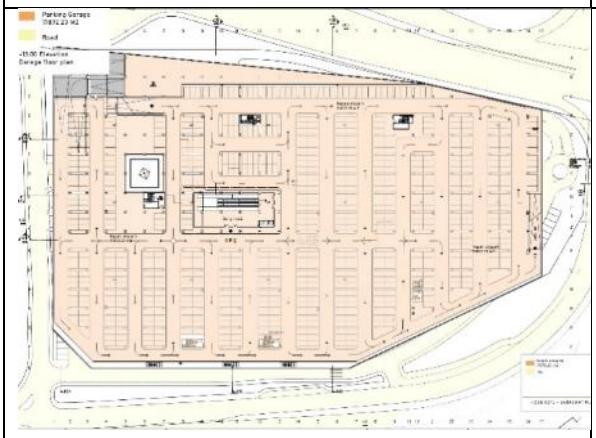
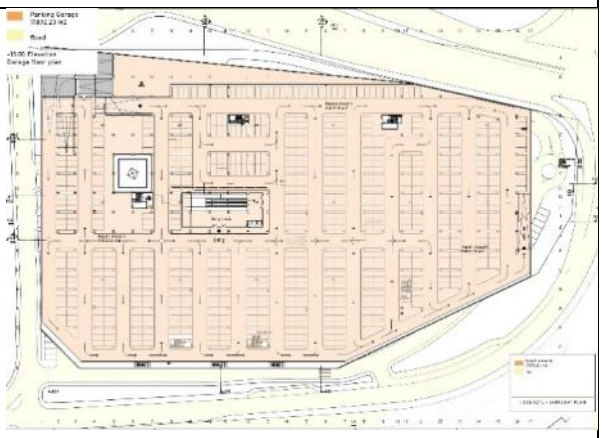
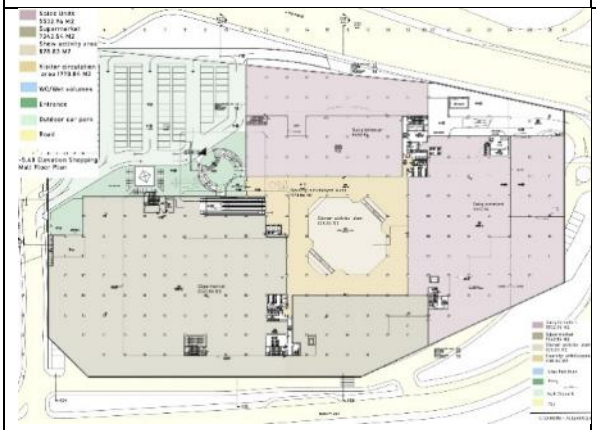
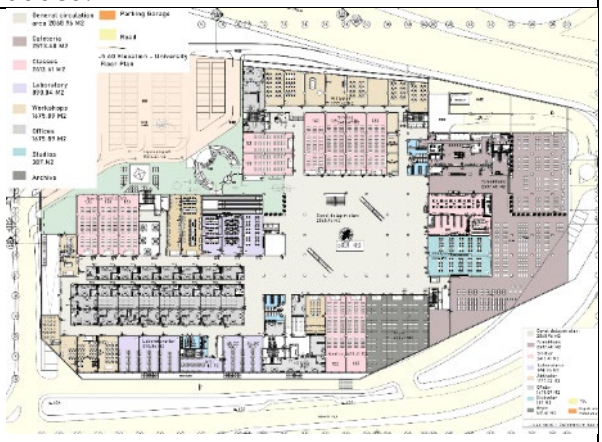
Table 3. Distribution of university floors and functional areas

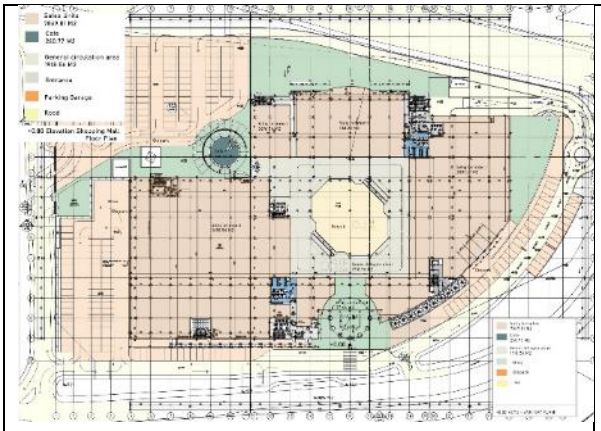
	Classroom (pc)	Classroom (m^2)	Classroom (person/ piece)	LAB. (pc)	Workshop areas (pc)	Workshop areas (m^2)	Workshop areas (person/ piece)	Office (pc)	Office (m^2)	Office (person/ piece)	Conference Hall (pc)	Conference area (m^2)	Conference Hall (person/ piece)	Parking Garage	TOTAL FLOOR AREA (m^2)
2.BASEMENT FLOOR (-13.00)	0	0	0	0	0	0	0	0	0	0	0	0	0	20783	23186
1.BASEMENT FLOOR (-10.10)	0	0	0	0	0	0	0	40	2804	204	0	0	0	9933	22857
GROUND FLOOR (-5.40)	11	2083	1739	8	19	2408	601	31	1703	187	0	0	0	0	17325
1. FLOOR (0.00)	19	2539	1669	4	11	1564	385	19	841	55	1	200	210	0	11205
2.FLOOR (+5.40)	5	1137	1030	0	0	0	0	14	653	100	3	3299	4234	0	10008
TOTAL															84581

The plans of the sample building, whose function is prepared as a shopping center, and the floor plans with university function finalized after the approval processes of the transformation project design steps are given in Table 4. In each floor plan, functional stain study is carried out for the old and new function and the changes made for the floors are presented through this table. The basic changes made to each floor are also summarized in writing.

Following the change of function in the building, spatial transformations were achieved in positions and sizes that would meet the expectations of the faculties and departments according to the architectural needs program. Each of the colors on the schematic floor plans represents a different function, and these colors are located in the upper left corners of the plan images as legends. This table serves as a method of comparing volume organization for old and new buildings.

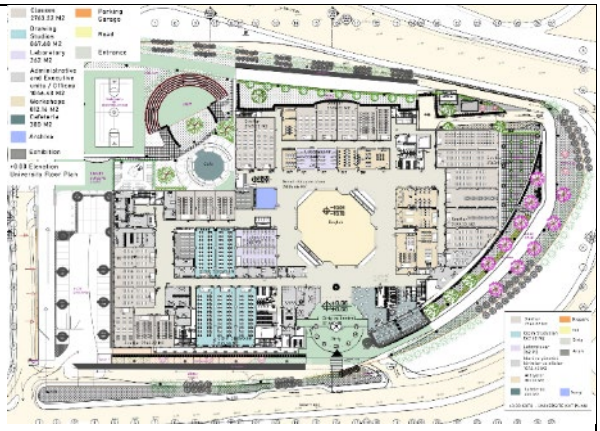
Table 4. University and shopping mall floor plans

SHOPPING MALL FLOOR PLAN	UNIVERSITY FLOOR PLAN
	
-13.00 2nd basement floor	-13.00 2nd basement floor No changes have been made.
	
-10.10 1st basement floor	-10.10 1st basement floor The indoor parking area has been reduced and common use and office areas have been added.
	
-5.40 Ground Floor There is no gallery space leading to the lower floor and no spatial partitioning. There is no areaway on ground.	-5.40 Ground Floor Spaces were created using acoustic drywall walls. The flooring in the central area was cut and a gallery space opening to the lower floor was created. areaway on ground. are designed for natural ventilation and lighting.



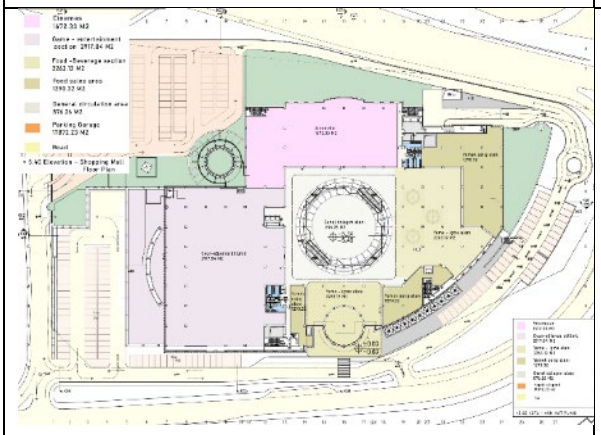
0.00 1st floor plan

Parking spaces are available in the open area. There is no spatial division. There are no façade openings outside the entrance and Cafe area.



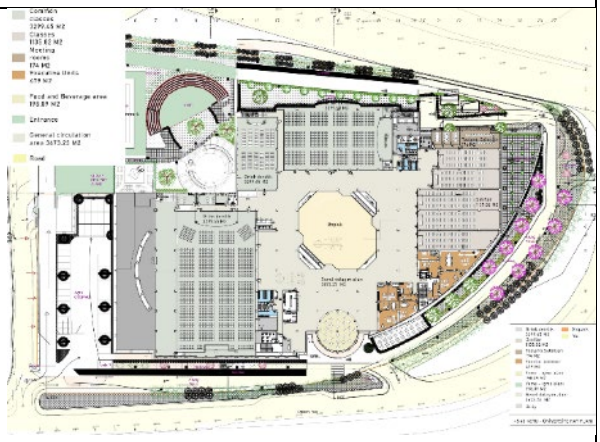
0.00 1st floor plan

Part of the outdoor car park area is designed as a sports activities and amphitheatre. Facade windows are designed that provide natural lighting and ventilation to the classrooms.



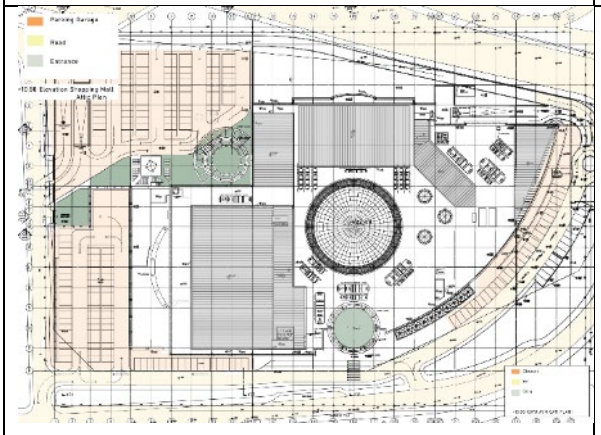
+5.40 2nd floor plan

The height of the ceiling of the game entertainment area is equal.



+5.40 2nd floor plan

The ceiling height above the stage of the multi-purpose hall has been increased.



+10.80 Roof Plan

The covered terrace for use is the roof. It is designed as a plumbing area.

+10.80 Roof Plan

Open to students, it has been converted into a terrace roof. An additional light band was added to the dome.

5. Evaluation and Conclusion

As a result of the increasing population in our country, the areas of public need to serve this entire population are also increasing. Universities, which directly affect the education level of a city, are one of the most important areas of public need. The increase in the population of the city also encourages investors to invest in business. The increase in the number of shopping malls in our country in the last 20 years is in parallel with the increase in population and meeting the needs related to it. However, the rapid increase in shopping mall investments in such a way that the supply and demand balance is not established correctly and the demand surplus has led to the definition of Dead Shopping Mall to be introduced to the construction sector. Some shopping malls have completed their functional life before they have completed their structural life and have closed. As a result, especially in Istanbul, large empty buildings in selected locations with a public transportation network have increased rapidly. This article is an architectural examination of the reuse of these buildings, which have been vacant for these reasons, for the public benefit by converting them into the function of the University. Architectural analysis includes stain studies and before and after plan examination, photography and transformation project design flow chart and process analysis. In Istanbul, the distribution of numbers according to shopping malls, universities and districts in the last 20 years has been examined in detail and the reasons for the transformation have been supported by these numerical data. The drawings, graphics and tables created within the scope of the article are original. The analyses show that Dead Shopping Malls can be transformed into the university function both statically and structurally without the need for major structural revisions.

As in the feature example building review, it is quite feasible to create spatial areas with practical, easily applicable materials for a building that is converted into a shopping mall but cannot be used for this purpose. Similar transformation projects are often ready for implementation by the relevant government agencies with a quick license or simple renovation permit, considering the public interest. The most critical point for the project process to proceed quickly and without interruption is the steps detailed in the flow chart. Following the static and structural examinations of the existing building, the creation of the new architectural needs program in a way that will meet the standards and expectations of the relevant institutions of the university is one of the most important steps. The comfort standards of building users such as students, academic and administrative staff should be evaluated sensitively. The sensitivity shown in these steps positively affects the number of possible revisions in the project approval processes.

When the architecture of the shopping malls in Istanbul is examined, it is generally encountered examples that do not have front openings, are inward-looking, and have a broken internal-external relationship to attract the attention of the customers to the stores. Universities, on the other hand, have spatial spaces that need natural lighting and natural ventilation to ensure the concentration of students. For this reason, in projects where shopping mall structures are converted into universities, façade revisions to which façade openings are added are almost inevitable. Apart from this necessary change in building facades, they usually have quite similarities in the organization of interior space. Users of both functions need common use, general circulation and social spaces. The dimensions of these structures, circulation areas with similar user numbers are in accordance with the standards. Fire escape distances and numbers are also one of these compatible headings. The fact that the shopping malls are designed according to the large carrier openings they need for spatial organization is suitable for designing lecture halls and workshops that do not have vision problems in universities.

Nowadays when sustainability is the most important agenda, functional transformation projects are of great importance for the sustainability of buildings. For this reason, the transformation of dead shopping malls into university buildings that contribute to the socio-cultural richness and education levels of the cities is an advanced solution both culturally and economically. The sample examination

in this study includes the decision and design stages of a structure that was converted from a shopping mall to a university. The project, which is a good example to new investors and decision makers, is an incentive for the reintroduction of such buildings for the public benefit.

Compliance with Ethical Standard

Conflict of Interests: *There is no conflict of interest between the authors or any third party individuals or institutions.*

Ethics Committee Approval: *Ethics committee approval is not required for this study.*

Funding Disclosure: *No financial support was required in this study.*

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