

CURRENT TREND AND STUDIES IN ARCHITECTURE, PLANNING AND DESIGN



All Sciences Academy

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Editor

Assoc. Prof. Dr. Enver KENDAL





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An Application Example Based on Office Systematics: Law Firm Interior Design

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ABSTRACT

Office spaces have evolved throughout history into various spatial organization forms in response to changes in working methods, technological advancements, organizational structures, and user needs. Traditionally designed with individual, enclosed workspaces, offices have diversified over time through open office systems, partitioned open offices, team workspaces, and mixed systems incorporating diverse work styles. This transformation has made it necessary to consider not only the physical arrangement of the workspace but also numerous design parameters in office design, including user privacy, communication, collaboration, acoustic comfort, visual comfort, ergonomics, flexibility, and corporate identity. In legal offices in particular, requirements such as confidentiality, security, and client privacy differentiate the office organization from other work environments. This study examines offices within the context of enclosed, open, and mixed office systems, discussing their spatial, functional, and user-oriented characteristics. The aim of the study is to reveal the relationship between office systematics and interior design decisions and to explain how this relationship can be evaluated within the context of a law firm through a case study. In the application section of the study, the interior design of a law firm with a mixed office system using both closed and open work units was addressed. The aim of the study is to provide a framework for evaluating office systems not only in terms of physical partitioning but also in terms of the nature of work activities and user needs.

Keywords – Interior Architecture, Interior Design, Law Firm, Office Design, Office Systematics.

INTRODUCTION

The office space is the physical work environment where information production, management, communication, decision-making, and various levels of office activities are carried out. The spatial organization of offices is not merely about positioning desks and support units within a specific area, but is directly related to the nature of work activities, organizational structure, the form of communication between users, and privacy requirements. Therefore, office design is a multi-dimensional design field that should be evaluated not only in terms of architectural and interior design decisions, but also in terms of work culture and organizational structure.

To understand the current form of office spaces, it is important to examine the historical development of work environments. In particular, the emergence of the scientific management approach in the late 19th and early

20th centuries had an impact on the systematization of office activities and the spatial organization of workflows. During this period, the office ceased to be merely a space where office activities were carried out and transformed into an organizational area focused on productivity, control, and workflow regulation (Parker, 2019). The influence of the scientific management approach, which involved organizing workspaces according to employees' tasks and workflows, paved the way for associating office planning with organizational efficiency. Significant transformations occurred in the spatial organization of offices during the 20th century. The shift from traditional closed, individual offices to open office layouts, where employees are more densely concentrated within the same space, constituted a crucial stage in this transformation. The Bürolandschaft (office landscape) approach, which developed in Germany in the 1950s, was influential in moving away from the traditional hierarchical and cellular arrangement of workspaces towards a more open and flexible spatial organization that supports communication and information flow (Rumpfhuber, 2011; Rumpfhuber, 2019).

However, despite the potential of open office systems to support communication and interaction among employees, various studies have shown that they can also bring about certain problems such as noise, visual and auditory distractions, lack of privacy, and reduced personal control. Kim and de Dear (2013), in their study comparing open and closed offices, state that while open-plan work environments offer some advantages in terms of communication, they can create disadvantages in terms of acoustic comfort and privacy. Similarly, a systematic review conducted by James et al. (2021) shows that in a significant portion of research comparing open and cellular offices, open offices are associated with negative outcomes in terms of noise, privacy, job satisfaction, and some work outcomes.

This situation has brought to the forefront the need to create spatial diversity that can respond to different working styles, rather than preferring only one of the open or closed systems in office design. Today, mixed and activity-based approaches that combine open workspaces with individual work rooms, meeting areas, quiet workspaces, co-working spaces, and spatial units providing different levels of privacy have gained importance in office design (Oygür et al., 2022; Candido et al., 2021).

At this point, the main aim of office design is not to directly implement a specific office typology, but rather to determine the spatial

conditions required by the activities performed and to create a work environment suitable for these conditions. This approach is particularly prominent in professions requiring high levels of confidentiality and information-intensive work. Law firms, in this respect, create a unique workspace. While diverse work activities such as legal consultation, interviews, document review, teamwork, and individual focus take place within the same office, the confidentiality of client information and the privacy of interviews are fundamental elements that must be considered in spatial organization. Indeed, a study conducted within the context of a law firm directly examined the effects of spatial design on distractions and employee experience, as well as performance and work relationships, in an open office transformation (Morrison & Smollan, 2020).

This study, based on this relationship, addresses the connection between office systematics and interior design, and discusses the topic through the design of a law firm. The study's fundamental approach is based on the assumption that in work environments with high privacy requirements, such as law firms, closed and open office systems should not be considered alternatives to each other, but rather complementary spatial tools that respond to different work activities.

Historical Development of Offices

The spatial development of the office concept has occurred in parallel with the transformation of working methods and organizational structures. Before industrialization, office activities were mostly carried out in small-scale spaces with individual or limited numbers of employees, while after the industrial revolution, the scale and organizational complexity of offices increased with the growth of businesses and the increase in bureaucratic processes. The scientific management approach that emerged in the late 19th and early 20th centuries influenced the standardization of office activities, the organization of workflows, and the positioning of employees according to their duties (Jeacle & Parker, 2013).

During this period, the office space was considered a work environment where business processes were made visible and controllable. Parker (2019) states that in the scientific management era, the physical arrangement of the office space served not only functional requirements but also record-keeping, auditing, and control processes. Thus, issues such as the

arrangement of workstations, circulation, and document flow became important elements of office planning.

By the mid-20th century, a new transformation had occurred in the organization of office spaces, and the office landscape approach, defined as Bürolandschaft, had emerged, particularly in Europe. Developed in the late 1950s, this approach advocated for a more flexible spatial organization that considered communication and information flow, rather than positioning employees in a fixed and hierarchical order (Rumpfhuber, 2019).

With the widespread adoption of the open office concept, the organization of workspaces using fewer physical partitions provided new opportunities in terms of spatial flexibility and communication among employees. More recent research shows that this debate continues today. For example, it has been determined that the acoustic environment in open offices is related to employees' speech privacy and ability to refocus (Kang et al., 2022).

From the 1990s onwards, developments in information technology, mobile work styles, and the increasing flexibility of organizational structures transformed the concept of the office once again. Activity-based work models emerged where a fixed desk was not mandatory for every employee, and different workspaces could be used for different activities. This approach views the office space not as a system of uniform workstations, but as a whole of work environments that respond to different activities (Oygür et al., 2022).

Therefore, the historical development of offices can be considered a process that evolved from closed and individual work units to open offices, and from open offices to flexible and mixed spatial systems that support different working styles.

Classification of Office Systems

One of the most fundamental criteria in classifying office spaces is the degree of physical separation between workspaces. In this respect, offices can generally be categorized into three main groups: closed office systems, open office systems, and mixed office systems.

A closed office system is a spatial organization where work units are separated by walls, partitions, or similar physical elements, and it typically serves individual or limited users. A significant advantage of closed offices

is the privacy they provide. Physical boundaries can be a significant design advantage, especially in work environments where individual concentration, confidential meetings, and activities requiring a high level of attention are carried out.

However, disadvantages of a closed office system include greater spatial division, reduced visual and social interaction between users, and greater difficulty in rearranging the space to adapt to changing needs. Therefore, while a closed office system offers advantages in activities where privacy and concentration are prioritized, it may not be sufficient on its own in environments requiring intensive teamwork.

An open office system is based on arranging workstations within a common space largely free of physical walls. The key features of this system include high visual accessibility, proximity among employees, ease of movement, spatial flexibility, and the possibility of rearranging according to changing user numbers.

One of the main reasons for preferring open offices is that it supports communication and interaction and allows for more flexible use of space. However, research shows that employees in open offices may encounter problems such as noise and lack of privacy. Candido et al. (2021) revealed that users in open offices designed for activity-based work reported lower satisfaction, especially regarding distractions and privacy.

The hybrid office system is based on the combined use of open and closed office features within the same work environment. The main advantage of the hybrid system is that it can provide different spatial conditions for different work activities. Therefore, it can create a functional alternative, especially in offices where both individual concentration and teamwork, meetings, consulting, and communication are required within the same work environment. Current research shows that having different spatial options in the work environment is important in terms of privacy, flexibility, and user satisfaction (Hodzic et al., 2021).

In this context, the hybrid office system can be considered not merely a physical combination of open and closed systems, but also a user-centered organizational model that offers a variety of spatial options corresponding to different work activities.

Spatial Requirements in Law Offices

Law firms are work environments that require simultaneous consideration of privacy and communication needs in office design. Legal consultations, client meetings, document review, individual research, telephone calls, teamwork, and meetings may all require different spatial conditions. Therefore, instead of a single type of workspace, it is important to create spatial units with different levels of privacy in law firms. In particular, separating meetings with clients from open workspaces, ensuring sound control, and structuring controlled movement between waiting, meeting, and work areas can be considered important components of spatial organization. Morrison and Smollan's (2020) research, conducted through a law firm, is significant in this regard because it directly examines the effects of open office design on the experiences of legal professionals. The study indicates that distractions, employee experience, and working relationships should be considered together when designing open workspaces in law firms.

From this perspective, the use of closed offices in law firms for activities requiring privacy and concentration, and open spaces for communication and collaboration, makes it possible to consider the mixed-use office system as a viable spatial organization approach.

EXAMINATION OF OFFICE SYSTEMATICS WITHIN THE SCOPE OF APPLIED DESIGN, USING A LAW FIRM AS AN EXAMPLE

This study, whose interior design and implementation was carried out by the author, is located on the first floor of the Safa & Sözen Trade Center in the Fevzi Çakmak neighborhood of Karatay district in Konya, as shown in Figure 1. Its location opposite the Konya Commodity Exchange and its proximity to the industrial zone mean that the sample area is situated in a region with strong commercial circulation.



Figure 1: Location and Facade View of the Field Study.

As shown in Figure 2, the sample area has a total area of 316 m², with 188 m² on the first floor and 128 m² on the gallery floor. The first floor houses the offices of the lawyers, who work together in two separate rooms in a closed office system. A separate workspace for two clerks and other lawyers has also been created based on an open office system. This floor also includes a reception area, a meeting room, and restrooms. The gallery floor is designed as a social area and includes a kitchen counter, seating areas, and an archive.

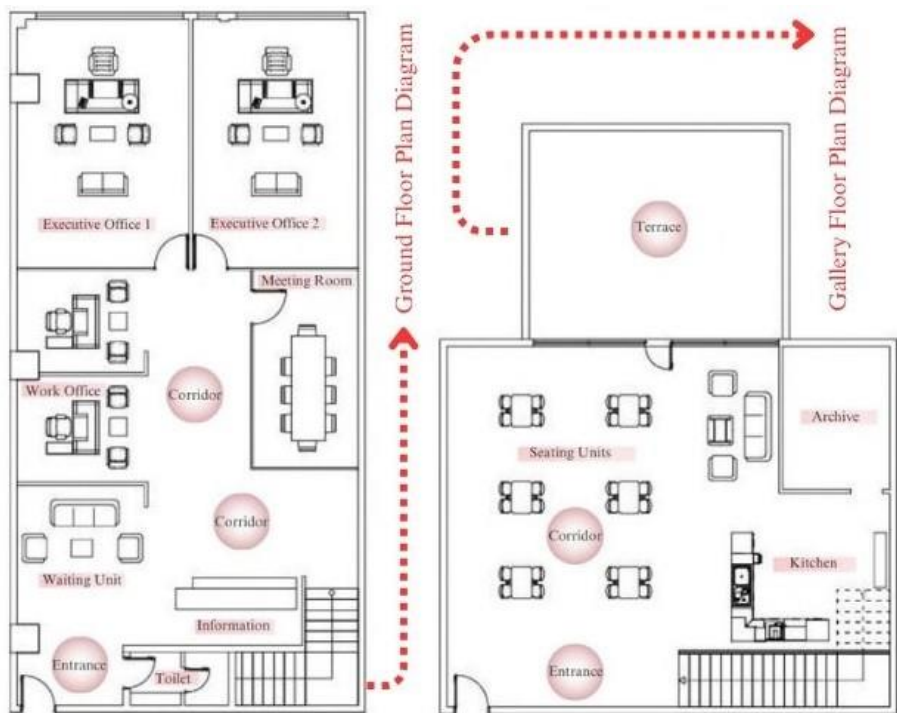


Figure 2: Law Office Floor Plan.

As shown in Figure 3, a waiting area is located on the left side of the entrance, and a reception area on the right. The reception desk is positioned to overlook both the open-plan office workspace and the closed-plan offices, including the executive offices and meeting room. Wooden and white panel cladding creates a backdrop, and niches and bookshelf areas are incorporated. The front waiting area is positioned to connect with the reception desk.



Figure 3: Information and Waiting Area.

As shown in Figure 4, the executive offices of the two-partner law firm are designed using a closed-office system. Both offices function symmetrically and are equipped with the same equipment. Wood-textured cladding materials are used throughout the office, and gray is used on the wall surfaces. Black leather seating is provided. Linear transparent foil coatings are applied to the glass panels, creating both privacy and a closed-office system, while also providing visibility and forming a control system for the main corridor.

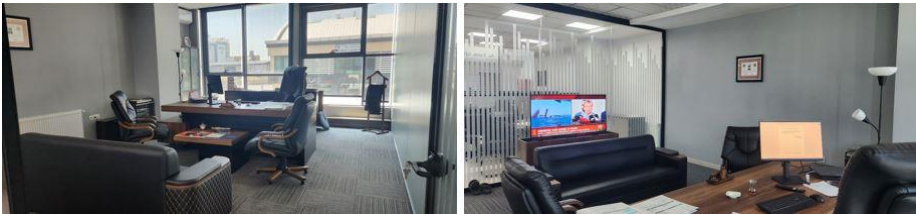


Figure 4: Executive Office.

As shown in Figure 5, the workspaces of the clerks and other lawyers are arranged according to an open office system. Located in the exact center of the integrated space, this area is directly connected to the executive offices, meeting room, and reception area. Semi-glass partitions create a psychological boundary, but communication between employees is not interrupted, thus ensuring a layout consistent with the open office system. Minimalist desk and seating arrangements are provided in colors that match the wall surfaces. Considering the possibility of adding additional desks to the waiting area in case of future staff growth, the sequential booth concept is continued along the axis of the open office system.

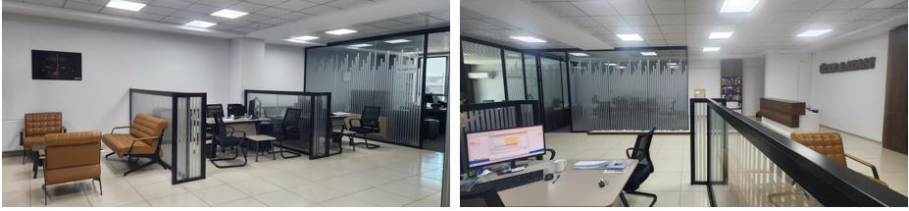


Figure 5: Open Office Workspace.

As shown in Figure 6, the upper floor of the building is designed as a social area. The materials, colors, and furnishings used here are designed to be suitable for group seating and activities. It has been transformed into a multifunctional space where activities such as multiple meetings, seminars, and dining can take place. Kitchen services are provided from here with a service counter. In addition, an archive and storage area for the office has been created on this floor with a separate section. There is also a small terrace on this floor that is included in the open space.



Figure 6: Gallery Floor Social Area.

Designed and implemented by the author, this law office exemplifies the use of both open and closed office systems, and also serves as a model for a mixed-use office typology due to its inclusion of both systems. One of the most significant aspects of the office's interior design is the use of semi-transparent glass surfaces in both open and closed office spaces, emphasizing both privacy and transparency. Furthermore, the inclusion of a social area on the gallery floor demonstrates the office's commitment to flexible spaces, moving beyond a purely office-based design.

RESULTS AND DISCUSSION

The historical development of office spaces, directly related to changes in working methods and organizational structure, has led to the emergence of different spatial organization models. The transformation from

traditional closed office systems to open office layouts, and from open offices to flexible and mixed systems that support different work activities together, shows that office design cannot be reduced to a single spatial model. Open office systems provide opportunities in terms of communication, visual accessibility, and spatial flexibility; however, they can create problems such as noise, distractions, and lack of privacy. Closed office systems, on the other hand, provide advantages in terms of individual work, concentration, and privacy, but may have some limitations in terms of communication and spatial flexibility. Studies in the literature indicate that the advantages and limitations of these two systems should be evaluated in accordance with different user requirements.

In this context, a mixed office system has the potential to meet the spatial conditions required by different work activities within the same work environment. Especially in work environments where individual concentration, teamwork, meetings, communication, and client consultations are carried out within the same spatial whole, the combined evaluation of open and closed work units can allow for the creation of different levels of privacy.

The law firm application examined in this study exemplifies a mixed-use office approach based on the combined use of open and closed office systems within the same interior space. The design aims to meet the needs of individual work and concentration, as well as communication and collaborative work, within the same organization by creating spatial units corresponding to different working styles. Thus, it is concluded that office systematics are not merely a form of physical partitioning; they are an interior design parameter that should be evaluated in terms of work activities, user needs, and spatial performance criteria.

In conclusion, it can be said that in office design, the fundamental design approach should be based on the question of "what kind of spatial environment is necessary for which work activity?" rather than the question of "open or closed?". In work environments requiring varying levels of privacy, such as law firms, hybrid systems can be considered a design approach aimed at meeting these requirements within the same spatial organization.

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Repurposing in Interior Architecture: The Transformation of a Residential Building into an Accounting Office

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ABSTRACT

Re-evaluating existing structures in line with changing user requirements and functions constitutes one of the important areas of study in sustainable and contextually sensitive interior design. This study examines the interior architectural design and implementation process carried out for the conversion of an existing building, approximately 30 years old and initially used as a residence, into an accounting office. In the study, the spatial organization, physical conditions, and structural characteristics of the existing residence are analyzed, and how the work, meeting, waiting, archive, service, and circulation areas required by the new office function are resolved within the existing building boundaries is revealed. The balance between preserving and rearranging the existing plan scheme in the residential-to-office conversion process, user requirements, privacy, visual and physical accessibility, natural and artificial lighting, storage requirements, work ergonomics, and the transfer of corporate identity to the space are evaluated as design parameters. In addition, the physical and technical limitations encountered during the adaptation of the existing structure to the new function and the effects of these limitations on the design decisions are discussed. The space, which was used as a residence for many years and has recently become a trend for office spaces in the area, was redesigned and transformed into an accounting office. During the design phase, the building's core values were preserved while creating a motivating workspace. The final result of the building, designed and implemented by the author, is illustrated with photographs.

Keywords – Accounting Office Design, Interior Architecture Transformation, Interior Design, Office Design, Repurposing.

INTRODUCTION

Re-evaluating existing structures in line with changing user requirements has become a significant area of work for both architecture and interior design disciplines today. Besides new building construction, assessing the spatial, physical, and cultural potential of existing structures is crucial for extending their lifespan, using resources more efficiently, and adapting the existing building stock to current needs. In this context, repurposing can be considered not only a change in the intended use of a building but also a comprehensive design process involving the re-evaluation of the existing spatial organization in accordance with new user and functional requirements.

From an interior design perspective, the repurposing process requires establishing harmony between the physical and spatial characteristics of the existing space and the usage scenarios required by the new function. The conversion of structures designed for individual and private living, such as residences, into offices significantly alters the way the space is used. In residences, the priorities of privacy, individual use, and domestic living practices are replaced in offices by different requirements such as work, communication, interaction between users, visitor reception, storage, accessibility, and corporate representation. This situation necessitates a design balance between preserving the existing characteristics of residential spaces and implementing the spatial arrangements required by the new function.

In office design, spatial organization is shaped not only by physical requirements but also by working methods, user profiles, professional activities, and the institution's outward identity. When considered specifically in the context of accounting offices, it is necessary to address the individual work needs of employees as well as functions such as client meetings, waiting areas, file and document storage, archiving, access, and privacy within the same structure. Therefore, converting a building originally designed as a residence into an accounting office is an interior design transformation problem requiring a re-engagement of the existing spatial configuration with new functional requirements.

This section examines the interior design and implementation work carried out to convert an existing building, approximately 30 years old and originally a residence, into an accounting office. The study evaluates the physical and spatial characteristics of the existing building and the requirements of the new office function; the limitations encountered during the design process and the solutions developed to overcome these limitations are discussed. Accordingly, this study presents the process of converting a residence into an office not merely as a change of function, but as an interior architectural transformation process based on the reinterpretation of the existing space in line with new users, functions, and working methods.

Transformation and Repurposing in Interior Design

The re-evaluation of existing structures in line with changing user requirements, functional expectations, and lifestyles has become a significant area of study in both architecture and interior design disciplines

today. Instead of simply renovating buildings physically, the reinterpretation of their existing spatial potential in accordance with new usage requirements is explained by concepts such as "adaptation," "adaptive reuse," "building conversion," and "remodeling." Douglas (2006) considers building adaptation as a whole set of interventions beyond maintenance aimed at changing the capacity, function, or performance of existing structures; he evaluates different forms of intervention such as transformation, change of use, expansion, improvement, and renovation within this scope. This approach necessitates that existing structures be considered not as fixed and unchanging objects, but as dynamic spatial resources that can be adapted to different needs over time.

From an interior design perspective, repurposing is not limited to simply changing the building's intended use; it is a design process that involves re-establishing the relationship between the organization of the existing space, user experience, circulation relationships, surfaces, materials, lighting, furnishings, and technical infrastructure, and the new function. Brooker and Stone (2004) consider the re-evaluation of existing structures as an important design area in interior architecture, emphasizing that in the remodeling process, the designer must interpret the relationship between the physical characteristics of the existing structure and its new use. In this context, interior architectural transformation can be considered a design approach that develops not through the complete elimination of what exists, but through reading the existing spatial character, identifying its potentials, and relating it to new requirements.

One of the key dimensions of the repurposing approach is the reassessment of the economic, environmental, and social resources of existing structures. Bullen and Love (2011) state that reuse decisions cannot be explained solely by physical characteristics at the building scale; different variables such as location, architectural values, economic conditions, market trends, and sustainability must be considered together. Similarly, Bullen and Love (2011) demonstrate that adaptive reuse can be an important strategy for evaluating the existing building stock and extending the lifespan of buildings. Wilkinson, Remøy, and Langston (2014) emphasize that in adapting existing structures, functional, economic, technical, and environmental factors, as well as physical conditions, must be considered together. Therefore, repurposing is not a one-dimensional "renovation"

activity, but a multi-dimensional process requiring a balance between the different characteristics of the existing structure through design decisions.

One of the fundamental problems faced by the designer in this process is managing the incompatibilities between the existing structure and the requirements of the new function. The structural system, floor height, openings, existing plan layout, natural lighting possibilities, vertical and horizontal circulation, infrastructure, or existing materials and surfaces of a building can limit the spatial organization required by a new function. Remøy and van der Voordt (2014) demonstrate that legal, financial, technical, functional, and architectural issues are fundamental elements determining the transformation potential in the conversion of buildings to a different function. Therefore, in repurposing projects, the design decision answers not only the question of "what kind of space should be designed?" but also "what design possibilities can be realized within the existing building?". This approach is becoming increasingly prominent in current discussions on interior architectural transformation. Lanz (2026) states that the concept of adaptive reuse is now considered not only as an intervention focused on energy improvement or conservation, but also as an important design practice that can respond to economic, environmental, and cultural problems. In this context, the role of the interior architect can be considered as an actor who mediates between the physical characteristics of the existing building and the new user requirements, and who guides the spatial transformation through design.

In conclusion, interior design transformation and repurposing is a design approach that adapts existing structures to new uses, considering physical, functional, aesthetic, technical, economic, and user-oriented parameters together. In this approach, the designer's task is not to completely dismantle the existing structure to adapt to the new function, but rather to establish an appropriate relationship between the existing features of the building and the requirements of the new function. Thus, repurposing can be considered not only as the physical renovation of existing structures, but also as the reinterpretation of spatial organizations created for a specific use in the past, in accordance with new users and usage scenarios.

Repurposing Residential Buildings into Office Buildings

The adaptation of residential buildings to different functions is a remarkable example of the concept of repurposing, considering user needs and spatial organization. While residences are primarily shaped according to needs such as shelter, privacy, individual use, and daily life practices, different needs arise in workspaces with various functions, such as communication between users, workflow, visitor reception, work ergonomics, storage, and corporate representation. Therefore, transforming a residence into a new function is not simply a matter of assigning existing rooms to new functions; it requires a reassessment of the relationships between spaces, circulation, levels of privacy, and usage scenarios. The literature on building transformation emphasizes that determining the suitability of an existing structure for a new function requires a combined assessment of functional and technical requirements, in addition to physical conditions (Douglas, 2006; Remøy & van der Voordt, 2014).

In this context, transforming a residence into an office requires managing the differences between the spatial needs of private life and working life. In residential buildings, spatial organization is mostly structured around living areas such as the living room, bedroom, kitchen, and bathrooms. However, in office use, this can be reinterpreted with different functions such as individual or shared workspaces, executive or specialist workspaces, meeting and consultation areas, waiting areas, archives, and storage units. Since completely changing existing walls, doors, windows, plumbing points, and circulation relationships may not always be possible, design decisions are developed based on the possibilities and limitations offered by the existing structure. Therefore, the conversion of a residence to an office can be considered an adaptation process between the requirements of the new function and the spatial character of the existing residence (Brooker & Stone, 2004; Wilkinson et al., 2014).

Another important issue in converting residential buildings into work-related functions such as offices is adapting the existing structure to the new user profile and usage intensity. Especially in work environments where direct communication with users occurs, such as consulting, law, accounting, or financial advisory services, it may be necessary to address both the individual work needs of employees and public uses such as receiving visitors, meetings, and waiting areas within the same spatial system. This

situation necessitates a re-engineering of the relatively private and hierarchical spatial structure of the residence with the more controlled but diverse user group organization required by the office. Therefore, the transformation from residence to office is not merely a physical intervention based on a change in function; it is an interior design transformation problem that considers different design parameters together, such as user, workflow, privacy, access, ergonomics, and spatial identity. This approach reveals that design decisions in adapting existing structures to new uses should be evaluated through multiple criteria (Bullen & Love, 2011; Remøy & van der Voordt, 2014).

When we look at the origins of the office, we see that it originally had no function beyond a private room. The interior of this space has varied, serving as an area for written documents, a library, a bookshelf, or boundaries that ensure commercial privacy (Dalga, 2007). With the active use of communication technology in business activities, it has enabled an increase in alternative workspaces for those engaged in intellectual work (Dalgıç, 1999). Therefore, nowadays, instead of searching for new plazas for office spaces, the repurposing of residential buildings in commercial and iconic areas through commercial conversions has gained importance.

AN EXAMPLE OF THE TRANSFORMATION OF A RESIDENTIAL BUILDING INTO AN ACCOUNTING OFFICE

People spend a large part of their daily lives at home and at work. While these spaces vary depending on a person's demographics, geography, culture, and occupation, there are generally similar spatial requirements for both residential and office spaces. The similar functions found in both residences and offices, and the preference for using well-located residential buildings as offices instead of expensive plazas, are increasing the conversion of residential buildings into offices through design stages.

In this project, designed and implemented by the author in 2025 as part of a repurposing initiative, a building that had been used as a residence for over thirty years was converted into an accounting office. The interior design work for the conversion project is located on Yeniyol Street in Meram, Konya, as shown in Figure 1.



Figure 1: Location and Facade View of the Field Study.

The building, previously used as a residence, comprises an entrance hall, a common hall serving as a shared space providing access to each room, a living room, a sitting room, bedrooms, restrooms, and a kitchen. As shown in the plan diagram in Figure 2, it has a total area of 160 m². Constructed as a masonry building, the interior features laminate flooring, plasterboard ceilings, and existing interior wall paint. There are balconies in three areas: the kitchen, the living room, and the room facing the front. The building is located on the top floor. It faces Meram Yeniyol, a well-established street, and features mature trees and street landscaping. It also receives natural daylight through large window openings.

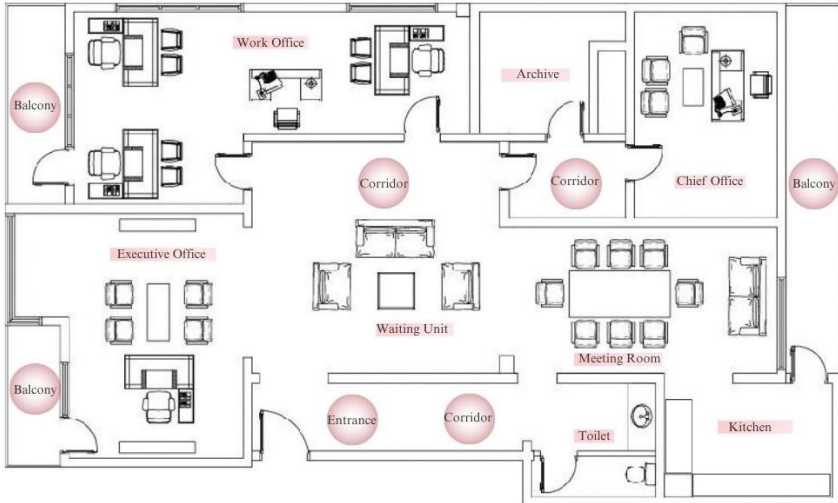


Figure 2: Accounting Office Plan Diagram.

In the entrance hall of the designed office, seating units have been placed as a waiting area for visitors, as shown in Figure 3. The seating group

was chosen to complement the door frames, which have been preserved since the year the building was constructed as a residence, the effect of the wood, and the overall atmospheric structure. Abstract, complementary paintings have been used to create a calming effect while visitors wait. Since this area encompasses all transition points, it has been designed as a waiting area in the style of a home office.



Figure 3: Entrance Hall Waiting Area.

As with the entire space, the office has been designed using simple, minimalist furnishings to avoid contradicting the dominant spirit of the building, in keeping with the main structure of the office. As seen in Figure 4, a large and simple desk is surrounded by four minimalist visitor chairs. Regional lighting highlights the surfaces of the space, and niches created with drywall surfaces are used to create a sense of depth. The green landscape in front of the large window openings is not obstructed by the filtering sunlight, as it does not directly affect the workspace; the street and tree views are used as a backdrop.



Figure 4: Executive Office.

To facilitate teamwork and workflow, an open office system was designed for the accountants, as shown in Figure 5. The design allows for

four people to work in this environment, and since two sides of the building receive natural daylight, curtains are used to control the amount of natural light. Additionally, artificial lighting is used to control the homogeneous light distribution.

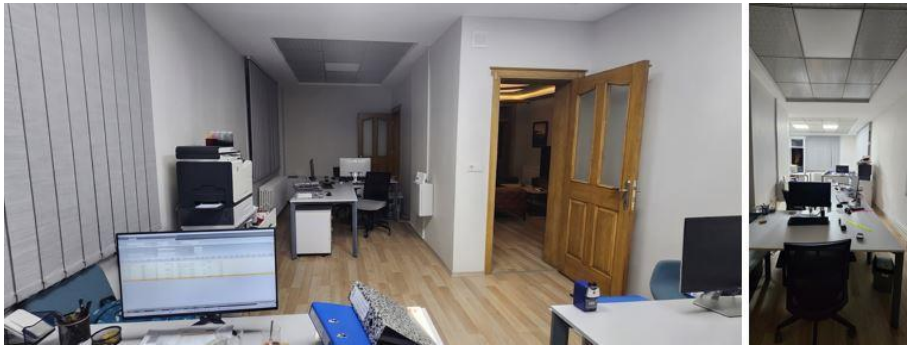


Figure 5: Open Office Workspace.

A meeting room, as shown in Figure 6, was designed for internal meetings or meetings with visiting guests. A spacious meeting area was designed with additional seating for comfortable access. Pendant lighting was installed above the table to provide artificial lighting during meetings. Furthermore, a tableau featuring visuals defining the institution's corporate identity was used, creating a dynamic and dynamic atmosphere.



Figure 6: Meeting Room Design.

In the accounting office designed as part of the transformation project, the design was implemented in a harmonious way, avoiding any elements that would clash with the dominant aspects of the building. The existing wood textures, views, and surface details were emphasized, and minimal furnishing elements were added. Designed with the constant presence of

work life in mind, overly complex design elements were avoided. The spaces were functionally organized considering movement and workflow within the office. Therefore, the waiting hall was centrally located, with meeting rooms, an open office space, and an executive office surrounding it.

RESULTS AND DISCUSSION

This interior design project, designed and implemented by the author, examines the repurposing of an existing building, used as a residence for over thirty years, into a financial consultancy office. The study considers the physical and spatial characteristics of the existing building alongside the office's needs for work, meetings, waiting areas, storage, and circulation. The transformation was carried out not by completely altering the existing structure, but by preserving its spatial and atmospheric features while adapting it to the new function.

As a result of the implementation, the existing residential plan was reinterpreted to meet the requirements of the new function, creating key work units such as an entrance and waiting area, an executive office, an open office space, and a meeting room. The centralized circulation and waiting area of the entrance hall allowed for the functional reorganization of surrounding spaces. Thus, instead of completely changing the existing residential plan, the relationships between existing spaces were re-imagined to create an organization suitable for office use.

During the design process, the existing building's wood textures, large window openings, natural light opportunities, and surrounding landscape were considered important design inputs. The preservation and highlighting of these features ensured that the new office function integrated harmoniously with the character of the existing structure. The preference for minimal furnishing elements and the avoidance of complex design features contributed to creating a simple and orderly spatial atmosphere required for work activities. The combined use of natural and artificial lighting in the open office space, the use of visual elements supporting the corporate identity in the meeting area, and the creation of a simple spatial language in the executive office demonstrate that different user needs were reflected in the design decisions.

One of the important findings of the study is that in converting residential buildings into offices, the limitations of the existing structure can be considered not only as constraints but also as guiding data in the formation of design decisions. Design decisions developed in line with existing walls, openings, circulation relationships, natural lighting possibilities, and structural features created harmony between the requirements of the new function and the existing spatial character. In this respect, the repurposing was not a forced adaptation of the existing structure

to the new function, but rather an understanding of existing potentials and their correlation with new usage scenarios.

In conclusion, this study demonstrates that existing buildings designed as residences can be adapted to professional functions such as accounting through appropriate design approaches. In the repurposing process, the combined evaluation of physical conditions, functional requirements, user needs, circulation, natural and artificial lighting, work ergonomics, and spatial identity is crucial for the success of the transformation. In the examined application, a functionally and spatially harmonious office environment was created by preserving the characteristic features of the existing structure and integrating it with the spatial organization required by the new function. In this context, the study shows that the evaluation of existing residences, especially those with advantageous locations, for new office functions can be considered as an alternative interior design transformation approach to new building construction.

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Sustainable Materials in the Reconstruction and Restoration of Rustic Houses: Insights from Vernacular Architecture in Iran and Turkey

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ABSTRACT

This paper explores the significance of sustainable materials in the reconstruction and restoration of rustic houses, focusing on vernacular architecture as a model for sustainable building practices. Vernacular architecture, characterized by its adaptation to local environmental conditions and cultural practices, demonstrates how traditional methods can address contemporary challenges such as climate change and resource depletion. Through case studies from Iran and Turkey, this study highlights the use of locally sourced materials, innovative design strategies, and the environmental, cultural, and economic benefits associated with sustainable restoration practices. The findings underscore the importance of integrating sustainable materials in architectural restoration efforts to preserve cultural heritage, foster community identity, and promote resilience in the face of modern challenges. Ultimately, this paper advocates for a renewed appreciation of vernacular architecture as a vital resource for sustainable development in the construction industry.

Keywords – Sustainable materials, Vernacular architecture, Reconstruction, Restoration, Environmental sustainability.

INTRODUCTION

Sustainable materials play a critical role in the reconstruction and restoration of rustic houses, particularly within the context of vernacular architecture. Vernacular architecture, characterized by its adaptation to local environmental conditions, cultural practices, and available materials, offers valuable insights into sustainable building practices. This architectural style is not merely a reflection of aesthetic preferences but a testament to the ingenuity of communities that have thrived for generations in harmony with their surroundings.

As global concerns regarding climate change, resource depletion, and urbanization intensify, the urgency for sustainable development in the construction industry has never been more pronounced. Traditional building methods, often dismissed as outdated, are now being recognized for their potential to address contemporary challenges. The use of local materials and time-honored techniques not only reduces environmental impact but also enhances the durability and livability of buildings. In this light, vernacular architecture emerges as a beacon of sustainability, illustrating how communities can leverage their unique contexts to create resilient structures.

The significance of sustainable materials extends beyond environmental considerations; it encompasses social, cultural, and economic dimensions as well. Sustainable restoration practices can foster a sense of community

identity and pride by preserving heritage sites that reflect local history and craftsmanship. Furthermore, they can stimulate local economies by creating jobs in construction and tourism while promoting the use of traditional skills that are at risk of being lost in an increasingly globalized world.

This paper explores the importance of sustainable materials in the restoration of rustic houses, with a focus on case studies from Iran and Turkey. These regions exemplify rich traditions of vernacular architecture that utilize locally sourced materials and innovative design strategies to create resilient living environments. By analyzing these examples, we can better understand how traditional building methods contribute to sustainability and resilience in architectural practices.

In addition to examining specific case studies, this paper will discuss the broader implications of integrating sustainable materials in restoration projects. It will highlight the environmental benefits of reducing carbon footprints, the cultural significance of preserving heritage through traditional craftsmanship, and the economic advantages of investing in sustainable practices. Ultimately, this exploration aims to underscore the critical role that sustainable materials play not only in restoring rustic houses but also in shaping a more sustainable future for architecture as a whole. As we delve into the intricacies of vernacular architecture and its relevance today, we will uncover valuable lessons that can inform contemporary building practices while honoring our past.

VERNACULAR ARCHITECTURE: A SUSTAINABLE APPROACH

Vernacular architecture refers to structures built using local materials and traditional techniques that have evolved over time to meet the specific needs of a community. This approach emphasizes harmony with the environment and cultural identity. The use of sustainable materials in vernacular architecture not only reduces environmental impact but also enhances the durability and livability of buildings.

Characteristics of Sustainable Materials

Sustainable materials are defined by their low environmental impact, renewability, and ability to contribute positively to human health and well-being. Key characteristics include:

- Local Sourcing: Materials sourced from nearby areas reduce transportation emissions and support local economies.
- Renewability: Materials that can be replenished naturally, such as timber or straw, promote sustainability.

- Energy Efficiency: Sustainable materials often possess insulating properties that reduce energy consumption for heating and cooling.
- Biodegradability: Materials that decompose naturally minimize waste and pollution.

CASE STUDIES

Iran: The Vernacular Architecture of Yazd

Yazd, located in central Iran, is renowned for its unique vernacular architecture designed to cope with extreme climatic conditions. The use of mud bricks (adobe) is prevalent due to their thermal mass properties, which help regulate indoor temperatures.

Key Features

1. Mud Brick Construction: Adobe walls provide excellent insulation against heat in the summer and cold in the winter.
2. Wind Catchers: Traditional wind catchers (badgirs) are architectural elements designed to capture cooler breezes, enhancing natural ventilation without mechanical systems.
3. Courtyards: Central courtyards serve as communal spaces that promote airflow and provide shade.

These features exemplify how sustainable materials and design principles can create comfortable living environments while minimizing ecological footprints [1][2].

Turkey: The Cave Dwellings of Cappadocia

Cappadocia is famous for its unique cave dwellings carved into soft volcanic rock. These structures highlight the innovative use of local materials and their adaptability to harsh climatic conditions.

Key Features

1. Natural Rock Formation: The soft volcanic tuff allows for easy excavation, creating naturally insulated homes that maintain stable temperatures year-round.
2. Passive Solar Design: The orientation of cave entrances maximizes sunlight exposure during winter while minimizing heat gain during summer.
3. Cultural Significance: These dwellings reflect the historical lifestyle of their inhabitants, showcasing a deep connection between culture and environment.

The cave dwellings demonstrate how traditional building practices can effectively utilize local resources while preserving cultural heritage [3][4].

IMPORTANCE OF SUSTAINABLE MATERIALS IN RESTORATION

Environmental Impact

Using sustainable materials significantly reduces the environmental impact associated with construction activities. Traditional building methods often employ locally sourced materials that require minimal processing, thereby lowering carbon emissions.

Cultural Preservation

Restoring rustic houses with sustainable materials helps preserve cultural heritage by maintaining traditional craftsmanship techniques. This practice fosters a sense of identity within communities and promotes awareness of local history.

Economic Benefits

Investing in sustainable restoration projects can stimulate local economies by creating jobs in construction, craftsmanship, and tourism. Furthermore, energy-efficient buildings result in lower utility costs for occupants [1][2].

Challenges in Implementing Sustainable Practices

Despite the benefits, several challenges hinder the widespread adoption of sustainable materials in restoration projects:

- Lack of Awareness: Many builders and homeowners may not be aware of the advantages of using sustainable materials or traditional techniques.
- Regulatory Barriers: Building codes may not accommodate traditional methods or materials, complicating restoration efforts.
- Economic Constraints: Initial costs associated with sourcing sustainable materials can be higher than conventional options, deterring investment.

CONCLUSION

The integration of sustainable materials in the reconstruction and restoration of rustic houses is vital for promoting environmental stewardship, cultural preservation, and economic development. Case studies from Iran and

Turkey illustrate how vernacular architecture embodies principles of sustainability through local material use and adaptive design strategies. As societies face increasing environmental challenges, revisiting these traditional practices offers valuable lessons for contemporary architecture.

By prioritizing sustainability in restoration efforts, we can ensure that rustic houses not only endure but thrive as integral parts of our cultural landscape while contributing positively to our environment. It is imperative for architects, builders, and policymakers to recognize the importance of these practices and work collaboratively towards a more sustainable future in architecture.

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