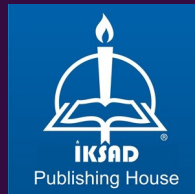




NEW TRENDS IN REAL ESTATE DEVELOPMENT PROJECTS

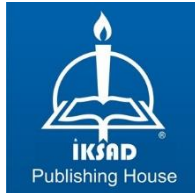
Dr. Naci BÜYÜKKARACIĞAN



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Dr. Naci BÜYÜKKARACIĞAN

DOI: <https://dx.doi.org/10.5281/zenodo.10269770>



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Institution of Economic Development and Social Researches Publications®

(The Licence Number of Publicator: 2014/31220)

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Iksad Publications – 2023©

ISBN: 978-625-367-448-9

Cover Design: İbrahim KAYA

December / 2023

Ankara / Türkiye

Size: 16x24cm

PREFACE

In the developing and growing Turkish economy, the real estate sector should not be regarded as a stagnant and rent-seeking sector, but as a dynamic real sector that produces, provides employment and pays taxes. The real estate sector includes developers, contractors, service units such as architecture, engineering, consultancy, management, and more than 200 suppliers and producers and sub-business lines. In this respect, it is understood that this sector is a very important, locomotive and real sector.

Construction and real estate sectors are affected by both global and internal dynamics. In this context, it is necessary to implement the right real estate development projects in the sector in order to minimize the possible disruptions and to transform the positive situations into sustainable ones.. In recent years, investments in Turkish real estate, especially in technology, data centers and energy infrastructure facilities, have contributed to the development of the sector.

Although the importance of environmental, social and governance (ESG) is recognized as a trend in the real estate development industry, consistency and transparency in benchmarking and measuring energy performance are not guaranteed. Building certification, energy efficiency and carbon emissions reduction are used to report sustainability. While providing information about other trending approaches in the study, an attempt was made to bring a different perspective to real estate development project management.

Hoping that the study will contribute to the literature on real estate development...

Dr. Naci BÜYÜKKARACIĞAN
Konya- 2023

With all my respect and gratitude to my beloved father,
Tevfik BÜYÜKKARACIĞAN,
who has been serving in the Real Estate Development Sector for
50 years...

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INTRODUCTION

Real estate refers to any tangible property, typically including land and structures. Real estate development involves several phases, including building new structures, renovating existing ones, and changing land use to increase property value and functionality. It is thought that the first example of real estate development in the world was when human beings closed the entrance of a cave with a rock and created a sheltered, safe and closed area for their family, away from environmental influences. Real estate, which was initially affected by needs and traditions, has become affected by social and economic development over time. In parallel with the change in the needs of society, the construction of the living environment was not limited to the construction of a detached living space and also improved inter-societal relations (Miles et al. 2007).

The real estate sector is one of the most popular sectors with real estate being seen as an investment instrument lately. The main factors affecting this development are the rapid increase in the profitability of the sector and the fact that real estate products are one of the most prominent investment tools in Turkey. The market where all kinds of real estate is bought, sold, rented and managed is in a great development process. With this development, the rate of profitability in the market is increasing. Increasing profitability rates are becoming an attractive market for local and international businesses. In the real estate sector in Türkiye, housing production is the area where user demand is the most intense and where real estate development companies are most oriented. With the rapid population growth in Türkiye, especially in big cities, a significant portion of the required housing need has been met through the construction of housing without construction licenses.

The first quarter of 2023 has been left behind as a period of increased financial uncertainty in the world economy. The problems experienced in the USA in March 2023 increased concerns about the banking system. However, these concerns have been partially alleviated with the liquidity-increasing measures taken by regulatory institutions and central banks. In the first quarter of 2023, housing sales decreased by 11.5% according to the previous year's data, reaching 283,215 units. Thus, housing sales decreased on an annual basis for three consecutive quarters. The earthquake disaster that occurred on

February 6, 2023 affected Türkiye's eastern provinces and other surrounding provinces and countries, causing loss of life. This earthquake brought to light various discussions about building supply in Türkiye, which is an earthquake country, and survey reports, especially building inspection reports in commercial real estate, began to be requested as a priority by users and investors (GYODER, 2023).

Scope analyses are necessary to provide an up-to-date definition of real estate development. There are two widely accepted views on the scope of real estate development. The first one is that real estate development is limited to development activities related to existing or new construction projects, and the other one is that development activities related to land should also be included in this scope. The development activities related to existing or new construction projects are referred to herein as "construction project development", while the development activities related to land are referred to as "land development". Many different professions work in real estate development. This complex situation gives dynamism to the sector. It is particularly important in shaping the urban landscape, providing residential and commercial space and contributing to economic growth.

As mentioned earlier, many professional groups contribute to the realisation of a real estate development project. Especially at the project design stage, the potential impact on the social life of public authorities and investors, residents and workers in the area where the real estate is developed should be taken into consideration.

The effectiveness of the real estate development process depends on the project development costs, cash flows, project financing, customer satisfaction, environmental satisfaction and reputation for future business in order to maximise profit by spending less financial resources and time. While real estate developers consider all these efficiency elements, they should also try to minimize the negative effects of the development process by making a social impact assessment. estate is developed should be considered (Graaskamp 1989).

Especially in the last decade, there have been positive changes in the risk-taking tendencies of commercial real estate investors due to the globalisation of free market activities and increased competition. Real estate investments have different characteristics as investments with higher relative risks and

uncertainties compared to other investment instruments. The reasons for the difference are low information, high capital requirement, being immovable property, long-term repayment periods, long project life spans and low liquidity. For this reason, risk-based real estate investment valuation has become an important field of study for the real estate industry. In today's world, where taking risks has become the most important criterion for real estate investment, identifying, analyzing and managing risks is the most important determinant of the profitability of investments.

Model cities can be created by using them in real estate development, urban design and design supervision. In addition, it can also contribute to the development of existing cities. The creation of qualified structures and areas can be achieved by selecting the most suitable areas and correctly analyzing the available data. Laws, regulations, multifunctional morphological, social and economic data. It directly or indirectly affects the urban design and transaction process.

During the design phase of energy efficient and sustainable settlement units, the effects of technology, comfort needs, quality of life, transportation and urban life on human beings on the one hand, and ecological balance and effective utilisation of alternative energy sources on the other hand should be taken into consideration. For this reason, in real estate development projects, experts from different disciplines such as economics, urban planning, architecture, engineering, sociology, psychology, environmental sciences, etc. should be assigned and cooperation with public and non-governmental organisations should increase efficiency.

The future of real estate development is determined by various emerging trends and challenges. Here, the tendency towards real estate and the change in environmental awareness should be investigated. This includes incorporating energy-efficient technologies, environmentally friendly materials and innovative design principles to minimize the environmental impact of new developments.

However, real estate developers must overcome several challenges, such as knowing complex legal and regulatory legislation, securing financing for projects, and managing risks associated with market fluctuations and unforeseen events. Additionally, developers must adapt to changing consumer preferences and demographic shifts, such as increased demand for affordable

housing and the rise of remote working, which may impact the types of properties and amenities in demand.

As a result, real estate development is a dynamic and evolving field with future trends and challenges that require developers to constantly adapt and innova

In this study, different project development process steps in the literature were discussed and an alternative process was created. In addition, new approaches and trends in the real estate property development sector have been investigated from the perspective of design, engineering, economic, cultural and social developments in recent years.

1. BASIC CONCEPTS OF REAL ESTATE DEVELOPMENT

1.1. Real Estate Definition and Scope

Real estate is a parcel or land and the immovable assets located on it or built subsequently. In other words, immovable properties that are generally shaped by humans and designed and offered for certain activities in a certain period of time can be considered real estate (Büyükkaracıgan and Ödük, 2023). However, the piece of land on which the real estate is fixed and the products obtained from this piece are excluded from the scope. The use of real estate in daily life, on the other hand, is a concept that expresses a piece of land limited horizontally and vertically, the layers of land beneath this piece, the sky above it, everything fixed to this piece, and the products obtained from this piece (Costello and Preller, 2010).

The concept of real estate is based on land. The concept of real estate started with the existence of mankind. However, it has taken its present meaning with the transition of people to settled life. The scope and legislation of property has changed throughout history. Today, each state in the world has different approaches to the scope of real estate ownership. However, in general, the right to use, utilisation, dispose of real estate on a legal basis and to intervene to deprive anyone else of these rights constitutes the scope of real estate ownership. Exceptions to this scope are restrictions arising from legal proceedings and the law and easement rights (Graaskamp 1989).

According to the Turkish Civil Code, land, independent sections and independent and permanent rights on them constitute the subject of real estate ownership. Ownership can only be acquired through registration in the title deed. Death-related dispositions and property regime agreements are subject to their own specific forms. Contracts for the transfer of real estate ownership that are not officially regulated are not valid. As can be seen, the Civil Code includes things fixed in place within the scope of real estate ownership. In the light of these explanations, real estate is a piece of land with definite boundaries. (Bay, 2019).

Real estates are divided into two main groups as real and legal persons according to the basis of ownership. Real estates belonging to real persons are residences and workplaces where the title deed is registered on the individual

and the right of disposal belongs to the individual. Real estates used for commercial, industrial or social purposes that are in the assets of enterprises or other legal entities are considered as real estates belonging to legal entities. Although it is not very common, there are also residences registered in the assets of legal entities.

It is possible to generally classify real estate as built and unbuilt. While non-built real estate is land and land, built real estate can be grouped as residential, commercial and industrial real estate. Post- built property can be subdivided into residential, commercial, infrastructure (sewage, drinking water, infrastructure networks) and transportation (roads, bridges and canals), or agricultural, residential, commercial, public, industrial, infrastructure and environmental structures. It is also possible to divide built real estate into two groups: buildings built for shelter and buildings built for other purposes. The general view in the sector is to divide real estate into five main products: residential, office, commercial, industrial and land, instead of dividing them into built-unbuilt. The purposes of use of real estate are housing, workplace, production, education, military, health, agriculture and animal husbandry (Peiser and Frej, 2003; Sarker et al. 2012; Lundgren and Thun, 2013; Büyükkaracığın and Ödük, 2023).

Land is an uninhabited, empty piece of land with horizontal or vertical boundaries. Land is a limited natural resource on which real estate decisions are based, which may contain limited natural resources such as minerals, which may be destroyed by natural disasters such as earthquakes and floods, or which may be wasted due to unconsciousness of the use of land. Human beings have used lands as a source of life, settlement or production place since their existence. The ways of utilisation of lands have undergone great changes.

Housing is a tool that meets one of the most important needs of people, the need for shelter. A residence is a place, dwelling, residence, such as a house or apartment, where a person sleeps, stays outside of work time, or where an organization with legal personality is located. In this respect, the house has a much more function than a physical structure. It has the functions of being a shelter, a produced good, a consumer good, providing economic and legal security, being a tool in the reproduction of social relations, and being a cultural easement in the creation of the environment. Housing, on the one hand, has turned into spaces that support social life, with the existence of various spaces

such as hobby rooms, workshops, sports fields, where social needs are met, and on the other hand, it has turned into spaces such as work offices, also called home-offices, which have become widespread especially with the impact of the current epidemic on working life. It has also been effective in giving different functions to its design, apart from its known meaning (Güney Yüksel, 2022).

Commercial real estates are structures that aim to generate income and offer individuals a working space rather than a living space. Offices, shopping centres, hotels, warehouses, production facilities, apartment complexes and all areas with potential for commercial use constitute the interland of commercial real estate. These are an important need that must be met in order for society to maintain its social and economic life in a healthy way. Commercial real estate is also an important concept that attracts the attention of individuals for investment purposes (Afma et al., 2019).

Industrial and industrial buildings are the structures where industrial and industrial activities are carried out, mostly established in areas outside the city (such as organised industry), designed to be protected against environmental factors. Since it is a production-oriented system, it contains many different operational processes. Industrial real estates are used for industrial production purposes and cover different purposes from the R&D phase of the products to the distribution of the products.

The classification of real estate according to their intended use is divided into four main groups. These are: residences, workplaces, land and parcels and other structures. Residences are residential buildings such as houses, apartments or lodgings. Workplaces are real estate used for commercial and industrial purposes. Shop, commercial building, warehouse, factory, workshop, etc. structures are included in this group.

Land, which is one of the types of real estate according to its intended use, is registered in the land registry and is considered real estate. A piece of land whose borders, surface area and characteristics are sufficiently defined is called a parcel. Land includes not only the surface of the soil but also everything above and below it. On the other hand, land is a zoning parcel that is divided by the zoning tool in terms of shape and size, the necessary road network has been built, water and electricity needs have been met and the connection to the sewerage system has been prepared.

Buildings other than residences and workplaces, which are mostly used for special purposes, can be expressed as other buildings. This group includes buildings such as hospitals, nurses etc. used for sanitary and social purposes, schools etc. used as cultural buildings and mosques and churches used in religious buildings.

1.2. Real Estate Development Concept

Real estate development emerged with idea of meeting needs of both the user and the property owner. This idea can be implemented through land, labor, capital, administration and entrepreneurial approach components. Under all these factors, more than one business area is included in the real estate development process and creates this complex structure. This makes the development process more comprehensive.

As stated in the introduction, there are different views on the scope of real estate development project activities. According to the first view, activities such as renovation of an existing real estate and changing the type of use are considered real estate development, while the activity of developing a new construction project is considered project development. According to the second view, real estate development includes both the type of use of the building and a new construction project activity. Another acceptance claims that although real estate development and project development are seen as separate from each other, real estate development companies must carry out activities related to both, otherwise they may encounter developers who do not take into account the preferences of the user, for example. In addition to these groups, there are also those who evaluate and use both activities exactly the same (Lundgren and Thun 2013).

Real estate development is a process that changes the environment in which it is implemented. In this change, economic, political, economic, social, legislation and physical components are effective. Each real estate development project is unique. Activities which occur throughout the real estate development activities are parts of constant change. Real estate development is a innovative activity that can be partly instinctive and partly logical (Heiser and Schwanke, 1991).

Real estate development is an innovative activity. Development encompasses different activities from land production to sturcture

construction, buying and selling, renting and management. The concept of real estate development is a multi-dimensional activity that includes different activities such as modernizing and renting out existing buildings, purchasing vacant land and selling zoned parcels, and producing and selling new buildings. Real estate development also consists of a complex, creative artistic activity that is partly instinctive and partly logical. The beginning of the real estate development process is the purchase of a piece of land. Afterwards, it continues until the determination of the target market, the program and design of the building, obtaining the necessary legal permissions and providing financing, the production, marketing, management and finally the sale of the building. The real estate development process is described as an organic and dynamic process that shapes the environment and develops depending on economic, social, political, legal and physical factors. Real estate development projects are not alike and the activities carried out during the development are constantly changing (Peiser and Frej, 2003).

The aim of real estate development should be to produce sustainable projects together with decision-making authorities by bringing together various professional groups for the purpose of orderly structuring of cities and efficient use of urban areas.

Urban transformation activities are very important in real estate development. Because the main subject of these activities is real estate. These activities consist of the development process of the built environment and its marketing, which is important in the real estate market. Meanwhile, the transformation and use of urban land is the main subject of real estate development. Real estate development projects in transformation activities; It produces environmentally compatible real estate that is economically competitive, creates business potential, has a social position, provides sustainable profit conditions, with location, entrepreneurial idea and financing factors (Gargiulo and De Ciutiis, 2009).

Important capabilities of real estate development are certain long economic life of the project, investment power, stability and having a land parcel that has the qualities required by the project. It is very difficult to change the decisions made at the beginning of a real estate project. Because the development project is a very complex and expensive investment. Therefore, a

detailed feasibility study is necessary to implement the decisions made in a real estate development Project (Rattanaprichavej, 2014).

There are diversity and richness in the product of real estate development. Main subject of development project may be a physical work such as the construction of a new building or renovation of an existing building, or it may be in the form of obtaining a new real estate permit. While it may include land subdivision and road works, water supply infrastructure, sewerage and rainwater drainage lines, these works may be excluded from the scope if provided by public institutions (Taygfeld et al. 2012).

Real estate development projects can be designed in different areas for different types of real estate. The main fundamental element in the project is the monetary value of time-space units. Real estate development in general, and construction project development in particular, can be carried out without any restrictions in a wide range of application areas (Coiacetto, 2012).

The starting point in real estate development is coming up with an innovative idea to increase the value of an existing property. At this point, the tools that can be used to concretize the idea are land, technology, capital, workforce, professional expertise and entrepreneurial management factors. If the developer can use these tools optimally, it ensures the effectiveness of the real estate development process. The success of the real estate development process depends on the performance of the actors. Actors can be successful if they work with the proper development method. The real estate developer's problem-solving skills are also important. Because the project is a long activity that involves risks. The risks in question are issues such as management and organization, financing, economy, and government interventions (Ratcliffe et al., 2021).

Real estate development is a service aimed at meeting social needs and increasing economic vitality by increasing living standards without harming the environment. Designing and maintaining structures such as roads, infrastructure systems, residences, office buildings, commercial units and hospitals in the places we live, and redesigning the environment are within the scope of the real estate development. Therefore, the Project activities need to be well understood by sector components.

Real estate development encompasses a variety of project types, each serving specific market segments and purposes. The developer is the person

who coordinates these activities and implements the ideas on paper on the real estate. Developers undertake 5 different types of development; land, residences, workplaces (offices), industrial and small commercial places (Dasso, 2009).

Land development is a very tiring process. In the process, the selection and purchase of the parcel or land and its feasibility are the first steps. In this process, it is necessary to work in conjunction with the private or public. Meanwhile, designing project alternatives takes a certain amount of time. As with other development projects, market research is essential. Financing the project is an activity that should be carried out by taking expert opinions. In project field implementation, we work with contractors. The management and sale of the parceled land is the last step. Land development basically covers the change of the type and nature of the land and consists only of land-related activities. These activities may include changing the raw or semi-raw state of the land for agriculture or settlement, dividing the lands allocated for settlement into residential, commercial, industrial and mixed use parcels with the help of zoning plans and converting them into land parcels or changing the existing use of the land (Peiser and Frej 2003, Tanrıvermiş 2011). All this information shows that real estate development has two main fields of activity: land development and construction project development.

A housing real estate development project involves the planning, design, construction, and sale or lease of housing units ranging from single-family homes to condominiums. This sector operates especially in urban areas where population growth is rapid. Recently, housing developers have been highlighting sustainable and green building practices to minimize environmental impacts and improve the users's life quality. This includes energy-efficient materials, renewable energy sources, and innovative design strategies that promote resource conservation and reduce waste.

Commercial real estate development has a wide scope of activities, including acquisitions, planning, design, construction and leasing of various types of commercial properties. These properties may include office buildings, retail centers, hotels and industrial facilities, among others. The process typically begins with market research and site selection, followed by feasibility analysis and financial planning to ensure the viability of the project. Once a suitable site is obtained, developers must go through the complex process of

obtaining authorization and permits from local authorities, which can include addressing zoning, environmental and community concerns.

Industrial real estate development involves the creation and management of properties designed for the production, production, storage and distribution of goods. Industrial properties can be classified into several categories, including warehouses, distribution centers, manufacturing facilities and flexible spaces that combine office and industrial uses.

Mixed-use real estate development occurs through the integration of various projects, property types, such as residential, commercial and industrial spaces, into a single development project. This approach to real estate development has gained popularity in recent years due to its potential to create sustainable, vibrant and diverse communities. Mixed-use developments often include a combination of housing, office spaces, retail, and recreational facilities that can contribute to a higher quality of life for residents and increased economic activity in the area. One of the key benefits of mixed-use development is the efficient use of land and resources, as it promotes compact urban form and reduces the need for extensive infrastructure. (Kompson, 2017).

1.3. Features of Real Estate Development Projects

Real estate development is a dynamic process. This process consist of apidly changing connections between construction works, technological developments, sectoral regulations, markets, financing, real estate management and other elements. Development is also an interdisciplinary business that looks at real estate from a commercial perspective, is entrepreneurial, expensive as it requires the investment of significant financial resources, has no guaranteed return due to its unique conditions, is riskier than many other investments, and in turn has a high profit expectation. (Flanagan and Norman 2000).

Real estate development projects create a certain and long-lasting capacity. They receive physical inputs from the economy (such as raw materials, labor, capital goods). It should also supply goods and services to domestic and foreign economies. All work related to the establishment of a new facility that meets these conditions or increasing the capacity of an existing facility is in scope of the project. Non-profit developments are projects which has to been carried out in accordance with the law or contracts. Public projects such as schools, hospitals, and land consolidation can be given as examples of

this type. In profit-oriented projects, enterprises evaluate their projects in terms of private profitability and aim to realize projects with the highest profitability rate.

The features of construction projects can be listed as follows:

- Production methods vary as construction type, location and conditions are different in each project.

- External factors have a significant impact on production. Risks and uncertainties are high in construction projects due to external factors that the management cannot control.

- Construction projects are long-term projects. While many industrial products are produced within hours or days, a construction product requires years of effort.

- Construction workers usually work temporarily and it is very difficult to ensure productivity because the workers' knowledge level is low.

- In the construction sector, as in the manufacturing sector, it is not possible for the buyer to see price and quality together. Quality is specified by the employer in its own specifications.

The relevant parties of a construction project are investors, contractors and subcontractors. The investor is the owner and resource provider of the resulting production. The contractor is the company that controls and monitors every manufacturing item to be implemented in construction. For this purpose, the contractor company makes a contract with subcontractors and transfers all work items to them. Constructions are temporary activities for the individuals and organizations involved and their typical lifespan is between six months and five years. Management, organization and information flow systems are recreated for each construction. Generally, businesses or their subdivisions undertaking a construction job may be working on various construction projects at the same time, each of which may be at a different stage of their life cycle. In construction projects, weight surveys are typically carried out at the beginning of the work. Then, the design, supply and construction phases are carried out respectively.

In order for the project to meet the desired specifications and be completed, the cooperation of everyone involved in the construction is required. For this, cooperation with architects, engineers, contractors and subcontractors is essential in the design and construction stages. Commercial real estate

development financing can be obtained from a variety of sources, including debt financing, equity financing, and public-private partnerships. Once completed, marketing and leasing efforts are undertaken to attract tenants and generate income, while property management and maintenance ensure the long-term development success. Various factors such as economic conditions, globalization and technological innovations that can affect the demand and value of commercial properties affect the commercial real estate development industry (Geltner et al., 2016).

Real estate development emerges as an idea to meet the structural needs of the user or property owner and becomes reality with land, workforce, capital, management and entrepreneurship. For this reason, the real estate development activities cover comprehensive process involving many professional groups (Miles et al., 1996).

Every type of real estate development project requires a unique approach that considers factors such as location, target market and regulatory requirements. Identifying the differences between these categories is crucial for developers, investors and other stakeholders involved in the property development process.

1.4. Real Estate Developers

Land Developers are concerned with making land suitable for construction, that is, subdivision. For this purpose, the aim is to lift the construction ban on the land through the necessary zoning regulation activities. This paves the way for making the land developable. The parceled land can be marketed to other developers or end users.

Speculator Developers' sole purpose is to benefit themselves. Here they work on how to make more money from real estate. For this purpose, they can keep their properties in the long term and design them to provide low operating and maintenance costs.

Commercial Builders either market the real estate as is or sell it after building the necessary renovations. Here, the best efficient use analysis is performed. The sale of the property can be made during the construction phase or after construction is completed. The aim here is to design the sale with a high rental income, especially for those who want to invest to generate income.

Paid Developers are people who manage the development project for a fee. Here, the developer's expertise in the project is essential. They make an agreement with the property owner regarding their area of expertise.

Renovating and Transforming Developers undertake renovations to increase the value of an existing property. The renovation here is more about realizing the functional change design and construction of the property. (Zuckerman and Blevins, 1991).

Real estate developers work with professional groups in different disciplines, some of which are; construction and building professionals, including architects, urban planners, contractors and consultants; people in the real estate marketing business; tenants and customers; lawyers, bankers and investors, official institutions, government agencies, controllers and non-governmental organizations (Leelarasamee, 2005).

The main coordinator of real estate development activities is the real estate developer. It provides coordination of all activities in the R&D, Financing, Design and Construction, Marketing and Sales, and Operation stages.

1.4.1. Design Developers

Design developers are the key people in the project. Their duties are land analysis and building design. In addition, they also contribute to construction site management.

Architects; They are at the center of the real estate development design process. In the real estate development process, architects are obliged to provide the most appropriate solutions for the targeted "market share" and design for the "subject project".

Landscape Architects, together with architects, are responsible for the arrangement of soil and vegetation in all external areas and the design of the specific environment for the project. They design the natural environment where the project will be carried out. For this reason, it has great importance in real estate development projects.

The task of urban designers is to organize open spaces and building layouts, to plan transportation and circulation well, and to create easily usable areas.

Engineers are technical personnel involved in ensuring physical security. Soil engineers conduct research on soil structure, reliability, subsurface water level, and presence of toxic substances. Survey engineers work in determining the physical boundaries of the land by measuring on the ground and creating maps of the infrastructure system. Civil engineers are people who make calculations regarding the physical survival and durability of the structure. It is also the main control element in the construction of the building. In addition, mechanical engineers take part in heating, cooling, ventilation, water and waste water installations and elevator projects. Designs electricity, TV and internet projects.

1.4.2. Production Developers

Construction contractors work to physically complete the project at the targeted time, quality and cost. The construction contractor manages the construction site of the Project. They are also responsible of provision of subcontractors required for the electrical, mechanical and infrastructure works that will take part in this process.

Construction Managers are experts who better coordinate the real estate developer's relationships with actors in the design, construction, marketing, finance, business and public sectors during the construction phase. The construction contractor plans the work of different subcontractors and ensures that the program runs smoothly.

1.4.3. Real Estate Service Developers

Service developers undertake short-term, specific assignments in the real estate development business. Market Consultants are the people who prepare the feasibility report by conducting the feasibility study of the project and analyzing the conditions for that day and project completion time. The market consultancy company prepares a detailed study in which tenants, targeted buyers and rental conditions are specified, as well as user needs.

Valuation companies prepare reports containing data showing the market value of the proposed project. An appraisal company calculates the value of a property based on standard methods. They prepare valuation reports especially for credit-granting institutions.

Lawyers are involved in working with local planning organizations and politicians, negotiating agreements, contracts and legal processes related to the project under development.

Surety Companies provide the insurance property developers need to protect themselves if a construction contractor fails to comply with an agreed contract. Often construction contractors contact a surety company directly to obtain performance and payment insurance. Before issuing an insurance, the surety company analyzes the construction contractor's company in detail. It examines the personnel's qualifications, financial management, Project production management organization, previous experience and equipment stock. Starting from this point, if the firm is found stable, appropriate insurance is arranged.

The duty of real estate brokerage and marketers is to work towards the rental or sale the development project to target tenants and buyers. Real estate developers must decide between hiring an outside real estate brokerage firm or establishing an in-house marketing team, depending on the characteristics of the project.

Building managers start to work actively when the building is occupied after its construction is completed. Daily management operations; It includes collecting rents, paying expenses, managing common areas and making necessary repairs.

Asset managers sit above building managers and guide them in developing strategic plans to maximize the value of their assets. An asset manager; They have responsibilities such as preparing the building strategic plan, rent/sales analysis, evaluating investment opportunities in the building, adjusting the main expenses, and presenting the performance of the building.

Institutions that want to purchase real estate or carry out large projects obtain the funds they need from financial institutions. Non-institutional financing is household individual savings, savings and loan associations, contractor loans, housing cooperatives. Corporate finance is a financing system that has received permission from government institutions and whose activities are determined by law.

Since the real estate development process is based on legal foundations, support from lawyers should be obtained in the entire process. In addition, if

we consider it from the beginning, it is possible to make a classification as follows:

1. During the land selection phase, real estate agents, brokerage companies, market consultants,
2. During the feasibility study phase, market researchers, economic consultants, mortgage brokers and bankers, engineers
3. In the design phase, architects, contractor companies, surveyor, engineers (soils, civil, mechanical, electrical, environmental etc.), urban planners, landscape architects,
4. In the financing and money raising phase, mortgage brokers and bankers, lending institutions, assurance companies, appraisers,
5. During the construction phase, architects, contractor companies, engineers, landscape architects, subcontractors,
6. In the marketing phase, real estate agents, public relations firms, advertising agencies, graphic artists,
7. Portfolio managers take part in the operation phase, real estate agents and appraisers take part in the sales phase.

The real estate developer brings the following factors to the project;

- Capital: Must have the necessary financial strength under risk.
- Ownership: It must have an area such as land or land that it can manage.
- Financial Management: A financial management that can complete the Project must have the ability (EPA, 2023).
- Tenant/User: Must have or have the ability to provide the tenant

2. REAL ESTATE DEVELOPMENT MODELS AND MANAGEMENT METHODS

2.1. Real Estate Development Models

There are many methods in the literature to facilitate real estate development efforts. Some of these development models are described below.

Equilibrium Models: It assumes that development activity is determined by economic indicators about effective demand reflected in rents and incomes. This type of model is a direct product of the neo-classical tradition in economics. In addition, it is necessary to establish a good balance between land efficiency and concept efficiency. The fact that the project offers a different and innovative living concept is of great importance when considering purchasing.

Event Sequence Models: It is a model based on the management of the stages that make up the development process. In other words, real estate development is a whole process in which events progress step by step. In this management-oriented model, the roles, interests, expectations and strategies of the actors involved in the process are considered secondary. These models are derived primarily from property management concerns for managing the development process.

Agency Models: It is a model based on the decisions, behaviors, strategies and relationships of the actors involved in the development process. These models were first developed in academic research to describe the development process from a behavioral or institutional perspective. Since only participant-based thinking is dominant in this approach, economic, sociological, political, time and space factors can be eliminated. Since the model assumes that the actors in the sector have a certain level of knowledge, business culture and ability, it may give unsuccessful results in practice.

Structural Models: This model prioritizes authorities that regulate relationships and determine the dynamics of development activities. These patterns are created by urban political economies. The model is insufficient to reveal a healthy connection between different production types, economic factors, human behavior and events. Because, while structural elements are emphasized in the model, sharing elements are relegated to the background. In the approach, numerical analysis methods are generally used to evaluate real

estate market performance using factors such as supply-demand, price, profitability, revenue, rental income, return on investment (Leishman, 2003).

Institutional Models: The basis of the model is the interactions of real estate markets. According to the model, the real estate market is shaped by the relationships and interactions of actors. Accordingly, the development sector has various systems within which relationships are based on trust and respect. According to model, real estate development is a physical, economic and social process. He focuses on organizations and relationship networks in real estate development. The main drawback of the model based on the idea that it does not pay attention to the type of investment opportunities, resource sharing and interactions, and the inherent connections between these issues. Despite this, it provides more successful results than other models.

2.2. Real Estate Process Management Methods

Some research is necessary to determine the demand required for the creation of a real estate development project. First of all, the current industrial situation, population development activities and demographic data should be examined. Development plans and economic change trends should be determined. In addition, social change trends should be examined. Afterwards, the effects and difficulties of the laws should be checked to avoid problems in the legal process.

In order to build the emerging real estate development ideas, the existence of obstacles that limit the supply of production factors at affordable prices should first be investigated. Afterwards, the environmental impacts of the project should be checked for compliance with the rules and principles determined officially or unofficially by the state and the public. Factors that prevent the appropriate distribution of the product to the market should be reviewed. The real estate project organizer is required to carry out market analysis and research. Market research can be defined as the collection, analysis and evaluation of information on issues such as supply, demand and price regarding all stages of the product from production to the end consumer. Various inputs must be used in the production of the goods to be produced with the project. Therefore, in the market research to be carried out for the project, the supply market for the inputs to the real estate project that is planned to be established should be investigated. Goods and real estate market analysis and

research should be carried out regarding the sales and services that are planned to be put on the market.

The next stage in real estate project design is feasibility studies. A feasibility study is directly linked to the likelihood of the project being successful. Feasibility Study is the realization of economic, financial and technical analysis of the investment to be made. It is a report covering economic, technical and financial studies made before the final investment decision is taken and the final project is prepared. After the feasibility studies are completed, an investment project is created.

Selection of establishment location is very important in terms of investment analysis and project management. In selecting the establishment location, it is necessary to move from the general to the specific, such as selecting the region, selecting a specially suitable sub-region in the region, and selecting the land where the investment will be made. At this stage, businesses evaluate different establishment location alternatives, but in order to choose one of them, they must take into account the criteria that are important in choosing the establishment location. While the selection of the establishment location consists of fixed expenses paid for the land price and legal procedures, it also causes variable costs such as transportation of finished products, transportation of raw materials and regional worker wages. Economic factors, natural factors, social factors, psychological, physiological and political factors affect the choice of establishment location.

Concept development and project cycle in real estate projects, after the formation of project ideas and suggestions;

1. Concept development,
2. Final feasibility study,
3. Project financing,
4. Project implementation, that is, construction,
5. Development of the sales and business model consists of stages.

Real estate development projects have a purpose and goal.

The important thing in the project is to make a good return and cost analysis. Many activities are carried out for this. Resources such as labor, hardware, software and information technologies are used for these activities. Sometimes there may be a need for external resources. These resources can be purchased or rented.

According to general opinion, there are three different understandings of real estate development projects. These understandings are;

- Land for an expected use,
- Use for a land expectation,
- Capital for development prospect

Which of these methods may be suitable for the development project is possible with a good analysis. Land, project idea and capital must come together for realizing project.

Real estate development project types offer different options in the project area, depending on the expertise and imagination of real estate developers. They can specialize in areas such as land, residences, offices, shopping malls, tourism and entertainment facilities, offices, factories, re-evaluation of real estates according to today's needs, industrial structures, and parking lot development. Real estate developer companies that create new markets successfully combine many project functions and produce mixed-use development projects with high environmental benefits (Bostancı and Demir, 2008).

The development studies consist of four stages;

1. Land selection, consolidation, obtaining approval from official institutions and development design,
2. Construction (production),
3. Rental and marketing,
4. Stable operation of the property.

The real estate development model proposed by Miles, Berens and Weiss (1996) begins with idea generation. In the second step, the idea is evaluated and developed. The third step is the feasibility study. In this step, it is examined whether the idea is physically possible and financially feasible. After the feasibility stage, contract negotiations and negotiations are held. In the fourth step, contract negotiations are carried out. If binding contracts are made, the continuation of the process is ensured. A go/no go decision is made in the first five stages of the model. If compliance is not achieved at this step, the process returns to the beginning. If the project is found suitable after the first five stages, official permissions are obtained and the construction process begins. After the completion of the building, the resulting product is opened and the business begins. The last step of the model is asset management (Miles et al., 1996).

According to Zuckerman and Blevins (1991), three main groups must be together for the real estate development. These are the consumers, real estate users and the tenants. These groups interact with each other. The developer group is the group that creates the product. The entrepreneurial group strives to create products for needs of the consumer. The local infrastructure group provides the necessary infrastructure for the project, such as roads, public services, schools and fire departments (Zuckerman et al., 1991).

A real estate development project can be realized by bringing together different professional groups that have the ability to complement each other. This often causes the project to have more than one stakeholder. As stated before, in order to make an investment decision in a real estate development project, at least one of the following is required: land, information, customers or capital. If the developer has more than one of these resources, the chance of success increases. If the real estate developer owns the land, then the business works through supply. In this case, the use function for a land is investigated. If the real estate developer has the knowledge or the client, then the project will proceed according to demand. In this case, land suitable for a certain use function is searched. If the real estate developer has capital, there is an unlimited choice (Peiser and Frej, 2003).

2.2.1 Creation Development Project Idea Management

The ideas identified as problems or needs depend on the field of study. This is the basis of idea development projects. An idea can only arise with the existence of a problem or need. Question/answer is the best method when creating a project idea. Determining the connection between social priorities and identified deficiencies is effective in developing the project idea.

The point that should not be forgotten here is the minimum efficiency that the developer expects from the Project. If the project's rate of return is lower than the expected rate of return, the project is rejected. If this project is financed through credit, the investment yield rate must be at least equal to this loan rate. The project's yield rate is divided into two: before-tax yield and after-tax yield.

The public sector's plans for new settlements and infrastructure services, and the private sector's portfolio and investment in new sectors, settlement and growth-related usage targets are the driving forces of development (Wyatt 2013). Factors affecting the creation of ideas in real estate development:

- Access to land,
- Communication based on employees,
- Political decisions, local knowledge,
- Active ideas,
- Business relationships,
- The current portfolio can be listed as correction or improvement.

New ideas often emerge during close collaboration and regular meetings between units and actors. These meetings are effective in turning the idea into a project proposal or continuing with new ideas. Real estate developers take the most active role in these meetings (Lundgren and Thun, 2013).

Preparation, implementation and completion of a real estate development project is an activity that requires both labor intensive and large finances. Mistakes made during the determination of the development project subject cause great difficulties in the execution of the project, even if it is a well-designed project in terms of finance and technique. In addition, the expected results from the project may not be achieved. At this stage, data regarding the project subject should be consulted with experts and investment institutions.

At this stage, it should be determined what type of building project the project will be about and who will use it. In order for the project to be realizable, studies such as determining the location, supplying the parcel and land, financing modeling analyses, and obtaining legal permissions must be carried out. Thus, the project can be marketed and sold after the construction is completed (Thomas, 1993).

2.2.2. Market research Process Management

Market research refers to the process by which developers collect data about customers and markets to determine marketing strategies. Market research involves designing a research project, collecting relevant data, analyzing and reporting. This data analysis process allows businesses to collect and analyze information about the market and consumer behavior. It helps companies understand why customers buy certain products or prefer brands. The best market research companies can also help companies grow and achieve their goals with the services they provide.

In this process, the feasibility of the project in terms of cost, value, market, scope, duration and quality is tested. This phase covers a series of

studies from determining the need for land use change to the point where detailed design and construction begins. It involves determining factors related to the availability, financing opportunities and marketability of land for the project. The aim is to determine the location and physical characteristics of candidate lands for the project, possible usage conditions, necessary public permits, project life, financial return expectations, initial design justifications, draft sketches, cost limits, appropriate procurement methods and contract type. It serves to obtain owner approval as a result of the research (Wyatt 2013).

In order to form a basis for market research, the most efficient and best use analysis, the uses allowed by the existing plan conditions are determined, and in projects that will compete in the market for these uses; Market research is carried out according to the usage types and components of the projects.

The figures that can be rented or sold are estimated after market research results, based on the types of projects to be developed on the land according to the brand power and sales capabilities of the developer.

The risk that investors will face in future periods increases in proportion to the expected income return. Whether the risk undertaken is worth it can only be determined by studying its feasibility. When making feasibility decisions; Factors such as the value spent to obtain the land to be developed, the value of the expenditure incurred for construction, marketing speed, and sales price are estimated. (Tokgöz, 2007).

Market research and analysis processes in the real estate sector can be summarized as follows;

- Analyzing the area subject to investment in full detail, taking into account factors such as technology and population changes in the region, consumption habits that change over time, and the fluctuating course of public policies, investigating to what extent these changes may affect the demand for the project and the costs, the location chosen for the project and the zoning of this place. Establishing relationships between status-related rules, project timing, and future zoning status changes;

- Examining in detail the parts of the projects that have already been implemented or those that are still in the planning stage, especially those that will provide great returns, and generating ideas on them,

- Investigating in detail the supply-demand balance in the region where the investment will be made,

- Analyzing the market needs within the target,
- To investigate whether there are non-governmental organizations, institutions and communities that may hinder the project goals, to eliminate the negative effects of the project and to work to minimize the concerns of these institutions and communities.

- Determining which type of investment such as office, house, residence, commercial area (hotel, etc.) will be most suitable for, by examining the region where the investment is made, which type of planning processes will be most appropriate for that type,

- Determining the strengths and weaknesses of the investments to be made based on SWOT analysis and adding the opportunities determined to be likely to arise during this determination to the valuation report,

- Creating reports explaining how to examine other investment areas that are similar to the investment area from many aspects and how to avoid the deficiencies and possible negative situations that may occur in these areas and how to directly turn the negativities into positive situations,

- Operating income, rental income, etc. of previously located real estate in the investment area, if any. analyzing income situations,

- Determining what kind of potential the customers in the region have and their current socio-economic situation.

The most important goal in market research is to determine supply and demand accurately. For this purpose, demand and supply analyzes are made. When performing demand analysis, factors that will determine the plan, location and content of the project are taken into account. These factors are information about the demographic structure, household purchasing power, unemployment rates, migration phenomenon, and the positive and negative climatic, topographic and ground characteristics of the region. While performing supply analysis, the characteristics of other projects in the project market, their costs, sales percentages, sales speed, buyer target audience of the project, occupancy/vacancy levels, and the reasons why vacant areas remain vacant are analyzed. It is obvious that there will be customers with many different characteristics in the market to which a project is directed. The following factors are commonly used in market segmentation: demographic factors, socio-economic factors, geographical factors, users of the product, domestic and foreign market.

Another important issue in market research is determining perceptions and expectations in the real estate market. In addition to being a means of shelter, real estate also has the feature of providing security for the future, an investment tool, or a commodity used as collateral when necessary. Many people expect an increase in value and therefore a profit when purchasing real estate, and this is the main reason for people's increasing willingness to own real estate. Satisfaction gained from owning real estate; Owning a shelter is not limited to profiting from the increase in value that will arise by making an investment.

The real estate sector is a sector that may encounter devastating consequences because it produces high-cost outputs. In this respect, it is very important and time-consuming to conduct more detailed analyzes on determining the needs and what kind of project to produce, the resources required for the project, land characteristics, expertise and personnel needs, owner relations and similar issues. For successful project development, it is important to accurately predict how the project will affect the project parties and how they will affect the project (Wyatt 2013).

Marketing research helps companies in the real estate development sector to make decisions about the future and therefore to plan by determining their goals and objectives. Companies that make plans and know their strengths and weaknesses are able to deal with the threats they may encounter and also have the opportunity to evaluate opportunities.

2.2.3. Feasibility Analysis

The comprehensive review activities carried out before the financial real estate development project is realized and the entrepreneurial activities physically begin are called feasibility. In order for a real estate property to be viable for investment, it must be physically suitable for realisation, financial preparations must be sufficient and it must have a project with optimum legally permissible efficiency. In this respect, feasibility study is a very important process in real estate projects. Feasibility studies are carried out in the decision-making process for land purchase, and in processes such as project planning, sales, marketing and management after land purchase. After the decision-making phase, which is the first step of the project, the phase that should take the project forward is the feasibility studies. Market researchers, economic

consultants, mortgage brokers, bankers and engineers are involved in the feasibility study phase.

The purpose of feasibility analysis; preparing status reports and determining assumptions about the final project. Feasibility studies essentially evaluate cash flow, profit and loss estimates as a whole, taking into account supply, demand and market conditions. The success of the feasibility study depends on Strong predictions are very important for feasibility success. Scope of the process; These include evaluating the physical characteristics and functions of the land, determining the initial project concept, profiling the market, determining the area of the market, estimating the impact of regulatory practices, analyzing the development cost and financing program, and determining the project profit rate.

Feasibility study can be done for a new investment decision, or it can be done for the expansion and renewal of existing facilities. These studies may sometimes come to the agenda as a result of a request. The feasibility report is a tool used by public or financial institutions that will provide the loans and incentives needed for investment to see the feasibility of this work.

The developer faces legal issues at every stage of the real estate development process. Zoning permits form the basis for feasibility studies carried out during the investment decision-making phase. In this process, the use that can be constructed in accordance with the legislation should be taken into account. For this reason, the term "highest and best use" used in the literature needs to be explained.

The best and most productive use of a property is the most efficient use of a property that is physically suitable, permitted by law, financially feasible, and provides the highest return on the property being valued. It is necessary to seek answers to the following questions for discovering the most effective use.

- Is the use reasonable and probable?
- Is the use in compliance with the legislation?
- Is the proposed change physically possible?
- Is the proposed use financially feasible?

The form of use that answers these questions positively is the most effective and efficient use of real estate.

In the feasibility study, during the technical analysis phase, calculations should be made with construction conditions in accordance with legal and

administrative regulations such as construction area, building layout, number of floors. Within the scope of the study, the calculations made based on the zoning plan, plan notes, building functions and usage areas that are not allowed by the relevant laws and regulations are far from reality and cause companies to make wrong decisions.

In general, feasibility studies consist of the following stages.

- Both the weaknesses and strengths of the area where the real estate will be located are determined by analysis,

- The needs in the region are determined.

- The texture of the regional structure is determined.

- Possible investments to be made to the region in question in the short and long term are determined and what effects they will bring are also determined.

- It is determined how the project will be evaluated in the most efficient way.

- The zoning status of the project and the renovation requirements to be included in this plan are determined.

- A project is developed on the zoned parcel according to the zoning status determined for the project and a cost analysis of this project is prepared.

- All data is turned into a project for a certain time period, an estimate of the investment value of the investment to be made is created and the real estate feasibility report application is completed.

Feasibility study is an economic analysis consisting of three basic stages called technical analysis, legal and social analysis and fiscal-financial analysis.

In technical analysis, it is mostly investigated with physical and environmental issues. For this purpose, the following issues are evaluated:

1. Evaluating the location of the land, determining the existence of useful opportunities,

2. Evaluation of the shape and size of the land,

3. Access to the land and evaluation of its facades,

4. Determination of natural drainage features,

5. Determining the characteristic structure of the soil,

6. Assessment of climate impact,

7. Determining the effects of the natural environment.

In technical analysis, the size and shape of the land should be sufficient for the area required for the project to be developed and regular for an economical site plan. It influences the collection and flow of land, surface water, the location of buildings and roads, and other design-related development features. Determining the properties of soil and other environmental resources is important for determining the soil and water potential for creating different land use patterns in accordance with the principle of ecological, social and economic sustainability, in addition to its impact on project design. It is also necessary to investigate whether the development project will affect the health and safety of the environment created by nature and living creatures.

In legal and social analysis, topographical constraints are mostly evaluated. In particular, restrictions arising from real estate legislation can be a significant problem for the developer. For this reason, these restrictive regulations below should be examined carefully:

1. Identifying social factors and
2. Determination of political factors,
3. Determination of restrictions arising from zoning legislation,
4. Determining the possible effects of zoning restrictions,
5. Determination of possible legal restrictions on individual parcels,
6. Determination of legal restrictions, especially regarding ownership

Another requirement for a development project to be successful is the support of the Society. Law regulations draw the legal boundaries of the project. In real estate development projects, zoning laws and regulations are restrictive factors in the development intensity of the land, the conditions of use and characteristics of the land and structures. For this reason, the building layout, construction approach limit and garden distances, building height and depth, settlement density, floor area and floor area, number of floors, land use, property boundaries, and the condition of the existing building should be thoroughly investigated. At this sub-stage, developers strive to find places that are compatible with their own ideas or owner's wishes, can be a source of investment, and have a favorable return. To this end; By determining land resources and regions, they develop new lands and parcels or find private lands, and look at the physical feasibility of these places and the availability of land use and building permits. They obtain the opinions of users, owners, financiers,

other parties and experts, choose among alternatives, prepare the preliminary project and make first stage estimates (Bragança et al. 2014, Mendes, 2022).

Legal restrictions on a land may prevent development. This situation can only be resolved with waivers and special agreements. For this reason, property-related restrictions such as lien rights, easements, annotations and mortgages must be determined.

In financial analysis, the financial resources of the project must be determined, long-term payment methods must be decided, and the return/expense ratio must be determined. It is necessary to estimate the material, labor and equipment costs and other construction costs required for the development project. For this purpose; Predictions regarding future demand, growth and contraction are made with linear or non-linear mathematical models using historical data. The project setup should be based on the most appropriate method by considering the cost-profit cycle. For financial viability, it is necessary to first determine the costs, returns and financing of the project. (Ostwald 2001).

Financial viability is important for long-term sustainability. For this, financial resource analysis should be made from the beginning to the end of the project. In this analysis, total expense estimation, total net income estimation, cash flow planning during the development period, profitability estimation and financial risk analysis should be done with precision.

2.2.4. Site Selection Process Management

Choosing the location where the project will be carried out is one of the most important factors of success. Because the project location directly concerns the scope and objectives of the project. These determine the location selection criteria. Site selection is based on site inspections according to project requirements. According to the demands determined here, important issues such as location, size, infrastructure service status, ground structure and demographic environment are important. For the success of the project, it is recommended to identify alternative areas and compare them with the project location.

The project location selection process begins with evaluation of site suitability. Choosing the most suitable land has the following potential benefits. To improve the purpose of land use, to provide excellent benefits for land users,

improved aesthetics, less negative environmental impact, reduction of construction, operation and maintenance costs.

Project site selection research is completed in two stages: pre-planning, data collection and analysis. In the first stage:

1. Explaining project goals and requirements
2. Determining location selection criteria,

In the second stage:

1. Determination of potential areas,
2. Evaluating the suitability of each area,
3. Listing alternative areas,
4. Selecting the best area and documenting the results,

5. Studies are carried out to test the feasibility of the project. Especially at this stage, topography, soils, geology, vegetation and hazards should be investigated. In addition, legal conditions such as laws and regulations, ownership, and zoning plan related to the area are investigated.

Undoubtedly, in site selection, location, access, topography and relations with the immediate environment are among the data that must be obtained first. Suitable construction conditions for the project area (building layout, construction area, number of floors, etc.) are determined by the zoning plans prepared by the relevant municipality. In addition to the construction conditions, it is important to research the data of the immediate environment in which the project area is located and include it in the design process to produce a building that is compatible with the environment and sensitive to the environment.

The socioeconomic, social and cultural characteristics of the region where the project area is located are important design data. The influencing and determining factors of the immediate environment include landscape orientation, relationship with neighboring buildings, traffic flow and density, historical buildings and natural environment. Unwanted environmental data are noise, odor and smoke and the factors that cause them. In addition, climate, direction and prevailing winds, humidity conditions, orientation and insolation conditions, orientation and vegetation are also the unique characteristics of the area.

2.2.5. Land Procurement Process Management

Land acquisition and due diligence are crucial steps in the real estate development process, ensuring that the selected site is suitable for the intended project and that potential risks are identified and mitigated. The land acquisition process begins with market research and site selection, where developers identify potential sites based on factors such as location, accessibility and local market conditions. Once a suitable site is identified, developers conduct a feasibility analysis and financial planning to determine the viability of the project.

Land acquisition is the process of supplying a land or retaining rights related to a land, including all developments and easement rights related to the land. In general, the process for the procurement of any good is also valid for the procurement of real estate.

Supply planning is made between demand forecasts and material supply timing. The important factor here is that market constraints should not be overlooked. Procurement planning, feasibility (investigating whether the expected benefits in the future exceed the expected costs), commitment (the advantages of spending capital for such a project should be examined in terms of the risks and returns), contract (monetary values, project control, risks and content transferred from the seller to the buyer should be determined), situation analysis (investigating whether legal, physical and economic assumptions are valid) and closing (fulfillment of all conditions necessary for the completion of the project, preparation of all necessary documents, control).

For project developers, the decrease in land cost means an increase in the amount of profit. But cheap land does not mean much profit. At this point, the best solution between benefit/cost should be planned according to process. Here, the developer provides expert knowledge and financial resources to the project. A potential disadvantage of a joint venture is that the developer may not be able to exercise certain controls over the project in a way that the developer determines. (Floyd et al., 2015).

Purchasing or expropriating land, providing supplies through donations, and exchange are the acquisition methods. Here it is necessary to comply with the rules of local laws. It covers the process of determining the suitability of the selected land for the project goals both physically and officially. The land is the

starting point of the processes and will be transformed into a new real estate after construction. (Madichie and Madichie 2009).

Parcels can be combined or divided, mortgaged or rented during process work. This is related to the size of the project. Land purchasing or consolidation transactions, environmental impact studies, determination of regional limitations, legal regulations and rules, pedestrian and vehicle traffic, facilities that can be used and ground conditions, preparation of zoning plans if necessary, preparation of zoning status and obtaining building permits are among the activities in this process (Polat and Çıracı, 2005).

In land due diligence, developers must thoroughly survey the site to uncover potential legal, environmental, or financial issues that could affect the project. This process includes reviewing zoning regulations, conducting environmental studies, and reviewing the property's ownership history. At this stage, developers should get support from architects, engineers and other professionals. In this way, developers can minimize risks by conducting comprehensive due diligence (Miles et al, 2015).

2.2.6. Land Arrangement Process Management

After land acquisition, it is primarily aimed to design an architectural project on the land in question in accordance with the existing zoning permits. With the analyzes made before the architectural design, topographic studies are carried out in the area where the construction will be carried out by obtaining documents such as the zoning status certificate, zoning plan notes, zoning diameter and zoning direction from the relevant municipality. By clarifying where the slope, direction, ground class, and basement elevation of the land can be obtained, the building mass and the total area to be built are revealed according to the zoning diameter, building seating area, total number of floors and total floor areas, closed and open projections, attic, basement etc. It becomes clear how much areas can be built. In addition, many criteria that may affect the construction can be determined, such as existing infrastructure, sewerage, electricity, water, communication, drainage, infrastructure depth and length, retaining wall.

In order to carry out the operations described above, land preparation works must be carried out. The land arrangement process consists of preparation of land information, preparation of planning and subdivision plans,

land engineering (map measurement activities) and design studies. During the preparation of the land information required for planning, it is aimed to plan the land in accordance with the project to be carried out. Certain maps such as ready-made maps, map of the development area, measurement of borders and infrastructure map are used while planning for this intention.

The land planning activities starts with the idea of producing and then marketing land that will allow buildings to be built on it. The final product is the land that emerges as a result of the subdivision maps created according to the zoning application plans of the land. Most developers develop both land and construction projects (houses, apartments, warehouses, etc.). Since they carry out both development types together, they see these two different development types as a single project. Land development and construction project development are different businesses and each should be analyzed on its own terms.

Land development; It involves the process of taking raw land, producing mature, infrastructure-appropriate parcels for development and selling them in the market. The idea that the developer should carry out both subdivision and construction project development work together is becoming widespread.

The land development process can be examined in three stages. The first of these stages; It is the inactive stage and at this stage, the land can be described as raw land. The second stage is the development stage. The maturity is final stage, where development of the land has been completed and it can be used as determined in the zoning plans (if it is a residential area in the zoning plan, housing construction is allowed).

In development plans, the topographic and geological structure of the land, Technical infrastructure, Easements and restrictions, Pavement structure, bicycle paths and other roads, Entrances and Exits, walking and intermediate paths, Private and public open spaces, Market information, Locations of sales offices, Noise It contains information such as mitigation tools and their locations, security areas, prohibited areas, and types of buildings.

First of all, a land planning team consisting of contractors, engineers, consultants and sales personnel is established. This team studies the future use of the land and the relationships between the surrounding lands. For this purpose, after first designing the road layout, open areas, social, recreation and entertainment places, a plan is prepared showing the layout of the temporary

parcels. Then, before starting the construction, the plan is created and the relevant authorized persons or additionally other There is a phase of obtaining approval for the project plan from authorized state institutions. Agreeing on what type of property will be built on the land depends on negotiations between the municipalities and the developer (Huxam, 2010).

2.2.7. Planning and Design Process Management

Plan drawing is made during the planning and engineering analysis process. The important thing to pay attention to at this stage is to analyze the properties and legal limitations of the real estate well. Restrictions specific to real estate; Characteristics of neighboring regions around it, Zoning works and other development regulations, Access and highway features, Physical features of the land, Structural features. Legal features are; Changing existing zoning classifications, density and uses. engineering regulations on streets, pavement, curb and gutter improvements, Classification, sediment control and rain water management, Making changes such as additions and combinations within real estate, Obtaining land use approval.

The parceling process is the basic arrangement in the development of a city. Technically, subdivided land is the process by which a developer legally and physically prepares raw land and turns it into development land. Parcel plans are transportation conditions, rising housing values and environmental features.

Design is a type of evaluation and decision-making process, such as planning, programming and making decisions for the future. In this process, sketching, plan making, problem determination and solving are done. Building design is a complex process that includes the organization of appropriate spaces according to functions, starting from the placement of a building on the land, its location and its harmony with the environment. In addition, the compatibility of the building with the socio-cultural environment in which it will be built, construction cost and economy; There are also external components of the process, such as the use of different techniques and technologies, the use of local labor and materials, and the fact that the materials used do not harm human health.

Design is of course at the heart of the development, with all its angles and possible consequences for all parties. Therefore the final design; it must emerge from iterative stages that include feedback and renewal (Fisher 2005).

Although design development can be done in many ways, the basic traditional design is generally; After completion of the planning process, it begins with approval by the owner. The proposed building meets the needs and is economically feasible, and then the selection of individuals or institutions that can be called architects and/or design professionals with a background of expertise in building design. Architect responsible management and coordination during design process. However, due to increasingly complex tasks, it may be possible to appoint a separate project manager for this job (Wyatt 2013).

Architectural design stages:

1. Information collection: Customer requests, environmental and infrastructure conditions where the building will be built, official records

2. Analysis: Analysis in itself means analysis.

3. Synthesis: It is a way of thinking that goes from the simple to the complex, from the necessary to the possible, from the principle to its application, from the general law to the individual situation, from the cause to the effect, from the premise to the conclusion. In short, it is the proposed solution to the problem in the light of the analysis.

4. Evaluation: This is the stage of itemizing and comparing the opinions resulting from the synthesis.

5. Decision: Selecting the most appropriate opinion from the evaluation results.

As design evolves, details increase, which means that for most buildings, the core experts are consultants on structure (load-bearing system and internal elements such as wall coverings, floors and ceilings, etc.), machinery and electrical (heating, air conditioning, plumbing and elevator installations, etc.). It requires engineers. In addition, it may be necessary to contact experts such as a landscape architect or interior designer for large projects, an acoustician for a concert hall, a hospitalist for a hospital, or an educator for a school. The design team may also need the support of experts in health, safety, cost, programming, planning, sustainability, accessibility, project management and other issues (Mendes, 2022).

In summary, design in real estate development projects consists of three steps. During preliminary design step, the design team and consultants come together. The team discusses project alternatives, opportunities and limitations and decides what kind of design to make. For this, they work on specification drafts, implementation schedule, planning strategy, contract and procurement options, program and process strategy, constructability, limitations and opportunities. Construction site plan and area relations, conceptual design criteria for the carrier system and mechanical and electrical systems, materials, products and performance criteria required for the construction and carrier system are also determined. At the same time, information about the use of the building, heating, cooling, lighting, ventilation, water, wastewater, landscape and materials, as well as the functions and dimensions of the building and interior, environmental and spatial performance, comfort applications and energy requirements are calculated. As a result of this stage, rough estimates of construction costs are made.

In the second phase of design, design development, the final real estate development project is completed. After focusing from general relationships and functions to more technical issues such as constructability, integration of systems and components, and developing the agreed schemes at the preliminary design stage into more detailed plans and sections, all critical design decisions are taken by consensus and the results are shown in the first stage application drawings and specification outputs. With the help of the data obtained and previous similar costs, a detailed cost plan will be prepared, risk assessments will be made, and preliminary cost estimates will be made.

In the final phase of the design, contract documents are prepared by architects and engineers. At this stage, implementation projects, general and technical specifications, contract draft and administrative specifications are completed. Application projects and general and technical specifications; It covers the results of finalizing the final project and other documents obtained during the design development phase, based on the financial resources of the project, and transforming them into application projects and general and technical specifications. The contract draft includes issues such as the location, nature, amount, duration of the work to be done, information about the contract parties, contract type, expenses included in the contract price, subcontractor

conditions and mutual responsibilities of the contract parties. Administrative specification; It is another document prepared at the contract documents stage.

It includes information on the technical and financial qualifications required for bidders to participate in the tender, how and in what manner the bids will be submitted, and how the contractor will be selected.

2.2.8. Contractor Selection and Contract Management

Contractor selection is vital for the successful realization of the project. The success of the project depends on regulating the relationship between a wide range of construction industry employers and construction companies. Therefore, bid evaluation and selection of the best bidder in the public and private sectors is the most important event faced by employers or their consultants. Employers in various industries have different procedures for evaluating construction bids. The private sector has a non-restrictive system for bid evaluation and private sector employers are not required to follow strict rules for contractor selection. For this reason, they usually develop their own methods (Alsugair, 1999).

However, the established method for contractor selection in the public sector is generally to award the contract to the bidder offering the lowest bid. Because bidders are responsible to the public and must provide the best service/value for their money. In other words, the basic idea behind this phenomenon of competitive bidding is the system of selecting the contractor with the lowest bid; It protects the public from waste, discrimination, bribery and other inappropriate practices by public officials. In this way, the bidding process will be independent of any political, social and economic pressures. Experience over the past years clearly shows that the lowest bid is the strongest criterion because it is free from subjectivity and meets most of the requirements of public accounts control (Hatush and Skitmore, 1997).

The lowest price may not always be the best final price.

- The contractor who receives the job with the lowest bid may cause interruptions during construction.
- At the end of the project, good ideas about improving the project may be ignored because the work is given at a low price.
- Effective planning may miss an opportunity
- Security, productivity and alternative thoughts can be ignored.

The criteria required for the selection of the contractor are briefly stated. These are;

- Contractor's personal situation
- Contractor's professional skills
- Financial situation
- Specialized talent
- Quality assurance standards
- Environmental management skills

Development processes are generally carried out through two separate contracts between these three main stakeholders. The first of these is signed between the owner and the designer; It is a contract covering planning, design and construction management. The second is the construction contract signed between the owner and the contractor. This structure also creates an indirect relationship between the designer and the contractor.

Owners often choose to contract with a contractor called the prime contractor. The main (general) contractor who is given responsibility for the construction of the project may do some or all of the work or none of it. Usually, most of the work is carried out by specialists called subcontractors. The main contractor is responsible to the owner for the coordination and performance of the works. If the owner does not have previous experience, he can also sign a consultancy agreement with a project construction management company as a third contract. In this contract, which is also described as a consultancy contract, the role of the consultant is; These include taking part in the owner's side and providing expertise support to the owner, production support to the designer, and design support to the producer (Wyatt, 2013).

2.2.9. Pre-Construction Process Management

This process covers the elimination of any uncertainties and difficulties that may arise in practice before the start of construction and the preparations before starting the implementation. This phase includes legal procedures regarding construction. Before starting construction, a building permit must be obtained within the framework of the Zoning Law No. 3194. It is mandatory to obtain a license to even begin excavation operations. It is essential to have insurance against possible accidents immediately after obtaining the construction permit. At this stage, the decisions that need to be taken before

construction must be made and the next stage must be moved on without hesitation. This stage always includes the preparation of permit documents, the establishment of the people to work and the team, the purchase of materials, the project and the team in charge of the project. The concepts of time and budget are also adjusted at this stage. At this stage, there are official procedures such as collecting documents regarding the land on which the construction will be carried out and obtaining permission from the municipality for construction. Preliminary work stages of construction are as follows:

- Obtaining information and documents regarding the zoning status from relevant government institutions
- Making profit and loss calculations based on the zoning status and starting the analysis process
- Preparation of direction survey if construction is decided by considering the profit-loss balance.
- Preparing the project as a draft and including its drawing (e.g. sketch, section)
- Clarification on the details of the team and the person or persons who carried out the construction
- Starting to prepare the license project
- Starting ground works
- Submitting the project to the relevant professional chamber and/or professional chambers and obtaining approval
- Obtaining the necessary license for construction and subsequently opening the workplace file
- Initiating insurance against risks and accidents

Under industry conditions, correct pre-construction analysis and preparations, production during the construction process in accordance with the legislation and execution of post-construction operations make legal process management essential in all these actions.

Although the real estate development process is the same for every product, there are significant differences in details and emphasis, which determines the character of the project. To explain this situation with a simple example; While pre-leasing activity is not required in residential development, pre-leasing is vital in projects such as office and shopping malls.

At this stage, the contractor and the design team come together and discuss alternatives, opportunities and limitations, and work on what kind of design to make, specification drafts, implementation schedule, planning strategy, contract and supply options, program and process strategy, constructability, limitations and opportunities. At this stage, all plans, including infrastructure supplies such as roads, sewerage, drinking water and electricity, as well as landscaping, work flow diagram, implementation schedule and standards are reviewed. With the help of the obtained data and previous similar costs, a detailed cost plan will be prepared, risk assessments will be made, and preliminary cost estimates will be checked.

In practice, it is aimed to start sales process at the beginning of construction in order to provide a significant part of the construction cost. For this reason, obtaining a building permit for construction companies means the beginning of the sales and marketing process. After obtaining the building permit, a floor easement must be established in order for the independent sections in the project to be subject to sale. Within the scope of legal process management during the construction phase, the process that companies must do before sales is the establishment of a floor easement following the obtaining of a building permit. If a residence or commercial unit is purchased from a project for which a floor easement has been established, the location of the residence and commercial unit, independent section number, land share, block, floor, etc. The properties will be officially determined and recorded in the land registry.

For the establishment of floor easement and condominium ownership, a single management plan covering all structures and places within the scope of mass construction is prepared. The Management Plan binds all flat owners within the scope of the collective building. In order to change the management plan, the vote of four-fifths of the total number of independent sections represented by the members of the collective building representatives board is required.

Before starting the construction, the building owner must sign the building inspection service contract personally or through his/her legally authorized representative. The building owner is obliged to pay the building inspection service fee installments on time. Within the scope of the Regulation on the Registration of Building Contractors and Site Supervisors and Certified Masters; It is essential that all buildings subject to a building permit be built

under the responsibility of a building contractor, that each contractor obtains a building contractor authorization number, and that this number is used in the building license, building occupancy permit and construction works contracts (Building Inspection Law Article 5). Thus, it is aimed to employ competent personnel in building construction, to keep contractor records regularly, to take necessary precautions during construction, and contractor duties and responsibilities are defined.

2.2.10. Construction Process Management

The design and construction phase in the real estate development process is a critical phase that involves transforming the project concept into a concrete structure. This phase begins after land acquisition, due diligence and authorizations are secured, and financial planning is done. It begins with selecting architects and engineers who collaborate to create detailed design plans, ensuring the proposed development complies with local building codes, zoning regulations and sustainability standards. These professionals also conduct feasibility studies to optimize the project's functionality, aesthetics, and cost-effectiveness.

Once the design plans are completed and approved, the developer hires contractors and subcontractors to carry out the construction work. This phase requires meticulous project management to ensure that construction progresses according to the predetermined timeline and budget. Regular site inspections and progress monitoring are essential to identify and address potential problems or deviations from the original plan. The design and construction phase ends when the project is completed and all necessary inspections and certifications are received, paving the way for marketing, leasing and property management activities.

The main goal of project developers should be to complete the construction works as soon as possible by transferring the land as soon as possible. Throughout the construction process, developers will be making millions of small decisions, from material selection to construction details, and implementing these decisions. A date should be determined for the completion of the project and this date should be notified to all subcontractors to ensure that the project is delivered to investors or tenants within the promised time. In large projects, contractors generally implement their projects in stages, and

while construction works continue in a part of the project, sales and rental works can be carried out simultaneously in the completed parts (Brown, 2015).

The construction phase begins with the delivery of the site to the contractor. This process means that the owner gives permission to the contractor to begin work. At this stage, the real estate developer is generally the party that monitors the realization of costs within the total resources, approves the changes suggested by the market professionals and the development team, resolves disputes regarding the construction, monitors and controls the work done, ensures that the work is carried out in accordance with the schedule, and ensures that the required personnel are assigned to work. With the establishment of the construction site, the foundations of the construction are considered to have been laid. (Lundgren and Thun 2013. The mobilization stages in construction are as follows:

- Site delivery to the contractor
- The construction site area is determined and security measures such as fencing begin to be taken.
- The construction site board is brought to the construction site.
- Connections such as water, electricity and natural gas are provided.
- Obtaining and documenting permits from the necessary places for excavation and dumping of excavation

At this stage, if the ground needs to be strengthened, there are also stages such as strengthening the ground, cleaning it and making it suitable for use. A container and electrical panel are installed on the construction site, and electricity and water subscriptions are purchased for the construction site. After these processes are completed, the fine work remains. Plaster works, plastering, painting and whitewashing, installation of windows, electrical installation, installation of windows and doors. Following these procedures, after the checks inside the building are completed, external checks are also carried out. Garden design, landscaping works and lighting operations are completed.

The construction phase consists of two separate production areas:

1. Rough Construction: It begins with operations such as excavation on the area where the structure will be located and providing mechanical stabilization. Laying lean concrete, laying iron or similar materials, pouring concrete, etc. It covers basic operations. In addition, making formwork, providing elevator or crane systems if necessary, preparing formwork poles and

assigning the site manager and project manager for all these operations are important points in rough construction. All detailed works such as waste water outlet, clean water inlet, electrical connections, placement of empty PVC pipes within the foundation are carried out with care. After the rough construction is completed, fine construction applications are started to realize all the details in the structure.

2. Fine Construction: In turnkey construction projects, all details regarding fine construction belong to the contractor company. In construction, in addition to fine works such as electrical sockets, boiler outlets, telephone sockets, TV antennas, smart electricity meters, under-screed thermal insulation, suspended ceilings, entrance spots, different details can also be determined depending on preference. All fine construction works are based on the customer's requests and suggestions. In general terms, the supply of bathroom accessories, optional placement of a bathtub or shower cabin, placement of a solid countertop cabinet in the bathroom, bathroom towel rail radiator, etc. transactions are carried out. In other rooms, customers' requests and suggestions are taken into consideration and the building is made ready for use at the end of the fine construction.

One of the most critical elements during the construction phase is to accurately plan and analyze the potential income and expenses that will create the cash flow. Starting the construction project without obtaining sufficient equity capital and credit resources and relying on sales and sales speed is one of the risks that a developer should not take. Due to banks' distance from funding construction projects, letters of intent for pre-purchase or leasing to be obtained from potential investors before the beginning of construction process will also increase the credibility of the project (Özazman, 2019).

2.2.11. Admission process Management

The acceptance process begins after the work is completed. Acceptance of the production; It covers the period from completion of the work to identification and elimination of missing lists.

During admission; The developer, architects and engineers, main and subcontractors, owner, some manufacturers and suppliers are examining the building. Many engineering projects also include standard activities such as commissioning of various systems and equipment after construction and

training the owner's employees on maintenance and repair. Therefore, at this stage, it is also possible to replace or repair faulty, incomplete or lower than desired products, initiate warranty procedures and provide the necessary training. These activities are carried out either through a special contract or as a part of the main contract (Çıracı 2010). After it is determined that the building is built in accordance with the project, a building use certificate is obtained by applying to the relevant administration. Thus, the development project is completed legally.

In public development projects, the acceptance process is completed in two stages. First of all, tender documents such as projects, approximate cost, technical specifications and site list of the work to be done are prepared. Then a tender is held. A contract is signed between the person or contractor that wins the tender and the administration. Then, a control organization is established for building inspection. A provisional acceptance petition is submitted by the contractor on the date the work is completed. The control organization goes to the workplace, pre-examines the job, issues the provisional acceptance offer document, and a provisional acceptance commission is formed. After the work is completed, the contractor submits a petition and requests that the work be completed and provisional acceptance be made. Based on the petition, the control organization goes to the workplace and checks whether the work is done in accordance with the project and its annexes. Then, it checks whether there are any deficiencies or defects that prevent temporary acceptance. If the contractor does not submit a petition on the date the work is completed according to the contract, the control organization must go to the workplace on the day the work is completed and examine the status of the work. In the temporary acceptance process for construction works, if it is determined that the work is at least 95% or above and that there are no obstacles to the use of the building, the temporary acceptance offer document is submitted to the administration and a temporary acceptance commission is formed. Otherwise, if the work is less than 95% or there are defects and deficiencies that prevent temporary acceptance, these deficiencies are determined in the minutes and the offer document cannot be issued.

In order for provisional acceptance to be made, it is not enough for the work to be above 95% level. For temporary acceptance, the building must first be usable. Obstructions to the use of the building mean that temporary

acceptance cannot be made. For example, lack of an entrance door, lack of a disabled ramp, etc. Since these situations directly affect the use, they can be considered as obstacles to temporary acceptance. In case the work is ready for temporary acceptance, a temporary acceptance commission will be formed by the administration, consisting of at least 3 people and in an odd number, after the temporary acceptance offer document is prepared for the construction works. Since the decisions of the commission will be determined by majority vote, the commissions consist of an odd number to avoid equality. Commissions consist of a commission chairman and members. In construction works, all members of temporary acceptance commissions are required to be technical personnel. A final acceptance offer document is given and a temporary acceptance commission is formed.

The temporary acceptance commission established by the administration goes to the workplace within 10 days following the establishment of the commission and inspects whether the work is carried out in accordance with the project and its annexes in accordance with Article 41 of the General Specification for Construction Works. It identifies deficiencies and defects in the work and prepares a provisional acceptance report. If there is no missing or defective manufacturing, a report is prepared and submitted to the administration. In case of any deficiencies or defects, these deficiencies are recorded in the minutes and the contractor is given a date depending on the nature of the work to correct these deficiencies. The provisional acceptance report stating the deficiencies is forwarded to the control organization. When the contractor completes the deficiencies, he submits his petition and the control organization examines and approves that the deficiencies in question are completed and the work is provisionally accepted. Final acceptance procedures are carried out 1 year after provisional acceptance.

The final acceptance process in construction works is an inspection process carried out after the completion of construction. During this process, it is checked that the construction is carried out in accordance with the design, the building materials are of high quality, the workmanship is good and the structures are safe. The final acceptance process is made after the completion of construction and is usually made between the customer, contractor and inspection company. In this process, it is checked whether the conditions specified in the contract are fulfilled. It is determined whether the construction

is ready for use. The documents required for the use of the construction are given and the construction is delivered after the final acceptance process is successfully completed.

The process of parceling and selling raw lands after purchase results in the determination of regulation areas, crossing the regulation boundary, obtaining title deed records and parcel boundaries, making an indication in the land registry records, and determining the structures and areas that need to be protected, and then creating parcels of appropriate sizes. The council ultimately decides on the relevant zoning change. If the place where the change occurs is within the metropolitan borders, the zoning change must be passed by the metropolitan council after the district council decision.

2.2.12. Marketing Management

Marketing is the whole of business activities carried out to determine the demand for a business's products or services, to stimulate it, to satisfy it, to meet the demand by making the products and services available in the most effective way and to make a profit. In marketing, the concept of sales in determining the values offered to the customer starts with the production site, at the end, it means making a profit from the sale of existing products. (Kotler, 2000).

Real estate marketing, which is called the processes of transferring ownership of real estate and real estate-related products; It refers to the process of creating demand to satisfy consumer needs and desires by determining product, price, promotion and distribution strategies, and supporting the demand with purchasing activities. The main purpose of real estate marketing is to announce the real estate to the target audience through all promotional tools and start the sales process.

The marketing process in real estate purchases is a little more complicated than marketing other products. Marketing of development projects; It consists of the introduction of the project, rental and sales stages. Even if the development is started without signing a contract with the buyers or tenants, the process of finding buyers or tenants for the security of the project is high and the production period is very long. Consumers who demand real estate can express their demands and requests while the house is under construction. Thus, sales can be made before the project is completed. This

process also includes all kinds of marketing activities aimed at promoting the project and attracting the attention of potential tenants or buyers.

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2.2.13. Property, Asset and Portfolio Managemet

Usage begins unofficially with the provision of infrastructure connections or with official residence permits. After these transactions are completed, it is possible for users to settle in the real estate. The same time for the start of use means that the management plan comes into play. The document, which collects the issues related to the apartment such as the management of the apartment, the way of use, the wages to be received by the apartment staff and the duties of the management, and is in the form of a contract that binds all the rights holders in the apartment, is called the apartment management plan. Accordingly, every property owner must live in accordance with the determined management plan.

Usage process, asset management, performance monitoring, maintenance when necessary, it consists of the stages of repair, renewal and evaluation and the introduction of new opportunities. These stages are carried out by professionals appointed by the real estate developer or managers appointed by the owners.

User needs that may arise during the life cycle of the project; It may result in changing, expanding and transforming the building. Selling, buying or re-renting may be alternatives. Real estate can be bought, sold or used for different purposes many times throughout its life (Wyatt 2013).

In the real estate sector, asset and portfolio management should be about developing and growing. The continuity and increase of the value of the

project should be adopted in property management. Detailed management plans, budget, monitoring of daily business activities, flexibility to change depending on market conditions are required in project management (Miles et al., 2000).

3. FINANCING OF REAL ESTATE DEVELOPMENT PROJECTS

Real estate development projects are typically undertaken through special purpose financial and corporate entities. Liabilities of project firms are generally clearly separated from direct commitments of investors, at least from the perspective of financial statements. Infrastructure projects, in particular, require large amounts of capital. This financing method is widely used in the implementation of infrastructure projects around the world.

3.1. Project Financing Concept

Project finance is an indispensable source of finance for the implementation and advancement of a project. This type of financing is based on an approach based on the prospective cash flows and assets of the project rather than the creditworthiness of the project owner in determining the debt payment capacity. Therefore, it ensures that financial transactions are carried out effectively in special projects.

Project financing is quite costly. Because the project; It takes a long time for it to be evaluated by lenders and their technical and legal teams. In addition, the increased insurance coverage that may be required to cover indirect damage and political risk is quite costly. The expenses incurred for monitoring the technical progress and performance of the project in order to keep the risk under surveillance during the maturity of the project finance loan are high. Additional fees imposed on the borrower by lenders for assuming additional risks create an additional burden.

For the reasons explained above, the advantages of the project to be obtained by those who finance the project must be sufficient to cover the expenses. The reasons for project developers' requests for financial resources are financial risk sharing, political risks, accounting methods, borrowing restrictions and tax advantages.

If a developer has secured the financing resources, he can develop that project regardless of whether the project is good or bad. Even if not all stages are realized, financing the project is the main factor for development. Financing

of the project is provided from reliable credit sources in this sector. It is rare for a developer to source all the funds needed to undertake the project on their own. For this reason, it is very important for the developer, who cannot provide financing alone, to obtain financing resources (Yalçın, 2013).

Items that will be accepted as collateral in project financing: It is the mortgage established on the tangible assets of the Project and the assignment of the cash flow rights of the Project. In loans used in project financing, collateral consists of the cash flows and contracts of the project. Guarantee is either limited or non-existent for investors. The facilities of the company established in accordance with the project purpose, the income to be obtained from the project, the contracts made, licenses and permits are the issues that need to be taken into consideration in project financing.

Project financing can be more expensive than commercial loans. In addition, keeping the determined time schedule long and monitoring the repayments after use are valid reasons for investors to prefer project financing. Project financing is preferred in order to share the risks arising from large projects with other parties. In some legal systems, tax exemptions or other tax deductions are among the reasons why project financing is preferred by investors.

Equity financing is done through several different partnership structures, each with their own unique legal requirements and varying tax requirements. The simplest and most used partnership structure is direct partnership. Partnership is a partnership structure consisting of two or more individuals or legal entities, sharing profits and losses. A partnership can be of various types. In a general partnership, all partners share the profit or loss of the project and are jointly responsible for the management of the operational structure of the partnership. Each partner is responsible for all actions of the partnership. These payments received by partners are taxed. Another disadvantage is that tax losses are reflected to the partners (Topal, 2019).

Land development financing is often obtained from a variety of institutional lenders. Because construction loans are inherently risky, interest rates are higher than permanent debt financing. If the loan will be short-term, the funds will be used only during the construction process. However, when using these resources, the financial manager must also consider the cost and tax impact of the funds.

3.2. Funding Sources

Short-term financing sources are generally funds used to finance working capital, especially receivables and inventories. The business finance manager first wants to meet these needs from own resources. However, in cases where equity capital is not sufficient, the business will want to use foreign resources or auto-financing.

3.2.1. Equity (Own Resources)

Financing provided from equity sources is the capital that the business owner or partners put into the business during or after the establishment of the business. The adequacy of its equity capital is valuable information for those doing business with the company and the public. Finance provided by equity capital has some advantages for businesses;

1. Repayments such as interest are not possible for these resources. This will ensure that all profits remain in the business.
2. There is no usage time limitation for equity capital.
3. Equity is a parameter that shows the strength of the business.

Own resources; It consists of equity capital, legal reserves, extraordinary (discretionary) reserves and undistributed profits. Equity capital is the cash or non-cash amounts committed or partially or fully paid by the shareholders specified in the articles of association during the establishment of the business. Reserves are the resources consisting of the amounts that must be set aside in accordance with legal obligations from the profits obtained as a result of the activities of the business, which are not distributed in order to protect, maintain and strengthen the future activities of the business, or which are decided to be distributed by the decision of the general assembly. It consists of the profits earned by businesses in previous years and left as a fund in the business. The profit generated as a result of the activities of the business is not distributed either by law or by the decision of the business management and is added to the working capital; That is, the business provides self-financing.

Intellectual capital is effective for elements to create value. It needs to be brought together and managed in some way. The knowledge, skills and experiences possessed by employees, the likes of which cannot be possessed by employees in other businesses, should be used very well. They should be transformed into organizational capital (Kurşunmaden, 2007).

3.2.2. External Sources

The source of external resources is banks or other financial institutions. These debts must be repaid at the end of a certain maturity. Businesses can meet a certain part of their capital needs by borrowing from these sources. Borrowings with a maturity of one year or up to one year in a passive structure in the statement of financial position of businesses are called Short-term foreign resources. These are loans, short-term part of bond issuances and borrowings such as financial bills, repo, commercial debts and taxes to be paid and other legal obligations, bonuses and debts. The amount consisting of borrowings longer than one year in a passive structure in the financial position statement of businesses is called Long-Term foreign resources.

The advantages of external resources for the business are that they provide the business with the opportunity to obtain capital without hiring a new partner and that the interest paid can be deducted from taxes as an expense. The disadvantages that external resources bring to the business are that the interest burden may increase if the interest time limit is exceeded, and that the assets of the business may be seized if the loans cannot be paid at all.

Finding long-term resources is not a problem that businesses often encounter; it occurs during the establishment phase of the business or when large-scale new investments are made. The main long-term financing sources can be listed as loans taken from banks, issuing bonds, and obtaining financing against mortgages. Providing resources by issuing shares is also considered in this group.

3.2.3. Auto Financing

The profit generated as a result of the activities of the business is not distributed either by law or by the decision of the business management and is added to the working capital; That is, the business provides self-financing.

Basic principles of autofinancing:

- Economic self-sufficiency, self-financing and self-management of enterprises are indicators of independence.
- material interest in the results of economic activities of teams and each employee;
- Financial responsibility for results

- Money management.

Self-financing is the principle of managing the economy. It envisages that the revenues obtained from the sale of goods and the performance of works and services completely cover the operating costs.

3.3. Financing Methods

Although the functions of foreign resources and equity used in long-term financing are basically the same, these financing preferences have different characteristics. There are some differences between equity financing and foreign financing methods due to the equity-debt distinctions mentioned above. The fact that companies have different capital structures may cause changes in the costs of their debt and equity capital. Because businesses that use more foreign resources will have a higher financial risk, which will increase the return expected by the partners and thus increase the cost of equity capital. As the company's use of foreign resources increases, the cost of foreign resources increases (Kılıç, 2017).

The financial manager must maintain a balance between long-term and short-term financing. Seasonal fluctuations regarding the goods or services produced by the business itself, and stability-recession-fluctuations in the economy and business life in general are factors that should be taken into account in maintaining this balance.

3.3.1. Financing via Equity Method

Equity financing of a real estate project developer; These are the profits made by the real estate development enterprise during its establishment or activities. In addition, increasing the capital of the business or providing funds by re-investing them into the business without distributing the profit is also a method of financing. In addition, it is used in the method of not distributing previous years' profits for legal reasons or reasons necessitated by business activities, but leaving them in business assets.

The adequacy of a company's equity capital is important for its creditors and the public. For businesses, equity can be defined as a financial instrument that does not have a predetermined lifespan. The fact that equity does not have a predetermined lifespan means that its maturity is infinite.

The basic function of equity is to meet the financing needs of the business, as in foreign resources. However, in addition to this function, it has a number of unique features and functions, unlike foreign sources. These functions and features are as follows:

1. Business activation function
2. Representation function
3. Limited liability
4. Number of shares
5. Right to receive dividends
6. The right to buy more shares
7. Right to vote

Equity constitutes the first source of funds during the establishment phase of companies. It allows existing companies to obtain foreign resources for their businesses by borrowing. Equity is an indicator of security and risk for lenders. Businesses may take on new partners to increase their equity capital or, if they are a joint-stock company, may issue shares. In addition, it can increase its capital by keeping the profits it has made (Akgüç, 2011).

Stability in sales and profits, Future predictions, Unsuitability of alternative financing sources, Financial structure, Liquidity situation, Resource cost may be the reasons for using the equity method.

3.3.2. Financing via Foreign Source Method

In the finance system with the foreign funding method, resources are provided from third parties for the operation and investment purposes of the business in return for a certain cost (interest or profit share). These funds, which are obtained from foreign sources in order to provide resources for the business, are divided into two according to their maturity: short-term foreign resources and long-term foreign resources.

Short-term financing sources or liabilities are generally used to finance current assets, especially receivables and inventories. However, today, many businesses constantly use short-term funds to finance fixed assets. In fact, the normal thing is to use short-term funds to finance fixed assets for a temporary period. For example, when the supply of long-term funds in the form of issuing bonds or taking medium or long-term loans from banks is delayed; In order to avoid delays in fixed asset investments, the company can finance the fixed

assets in question with short-term funds in the first stage. Later, when continuous resources are provided, it can repay the short-term debts taken for this purpose.

Major short-term financing or funding sources;

1. Trade loans (vendor loans)
2. Commercial bank loans
3. Short-term bills (financial bills) sold in the money market and
4. It consists of factoring.

Among the main long-term foreign resources are;

1. Bank loans
2. Issuance of bonds
3. Financial leasing
4. Forfaiting
5. Profit and Loss Sharing Certificate sales can be counted.

The differences between long-term loans and short-term loans are: repayment period (amortization) method, loan security and loan agreement.

3.4. Financial Feasibility

Financial feasibility is the study of estimating the profitability of an investment or project that is about to be planned by examining it as a whole. Financial feasibility is also done while the project is still at the idea stage or while it is ongoing.

It is possible to have an idea about financial feasibility cash flow, to determine debt repayment capacity, especially for projects with seasonality, to measure project performance such as profitability, to identify risks, to improve investor capital profitability, to determine the prices to be offered in public tenders and to improve the financeability of the project. .

A good financial feasibility analysis prevents the formation of financiers who will not be satisfied with the rental returns, which will result in unsuccessful development projects. For this reason, making a detailed financial feasibility analysis prevents optimistic thoughts about the future. At this stage, caution should be exercised as it may be tempting to manipulate the figures of the financial feasibility studies to achieve the desired result. The purpose of financial feasibility studies is not to manipulate numbers until the desired outcome is achieved, but to determine the profitability of a planned

development success. If the figures of the financial feasibility studies are not realistic, this will be very negative for the developer (Topal, 2019).

Financial feasibility analysis consists of five stages:

- 1- Estimation of the total capital expenditures of the project,
- 2- Estimation of total project revenue,
- 3- Making a cash flow plan for the development period,
- 4- Estimation of the profitability of the project and the investors' goals comparison,
- 5- Conducting a risk analysis on the proposed project (Switala, 2003).

The first stage of financial feasibility analysis studies is the estimation of total capital expenditure. In this context, capital is used to provide funds used in the acquisition of assets in the form of property. The next stage in the financial feasibility analysis is to determine the total project revenue. Making accurate revenue estimates is crucial in calculating project cash flows. For this reason, when estimating income, the expected return from the project must be presented in the most accurate way. The cash flow statement is one of the basic financial statements that shows the cash obtained or disposed of by the business as a result of its operating, financing and investment activities in a certain period and the sources of cash change. The cash flow statement provides information about the company's internal and external environment, in other words, the board of directors, senior managers, investors, credit institutions and organizations and other stakeholders, about the company's liquidity creation and use. The success of a development is measured by how well it meets the investor's objectives. These targets may be in terms of increasing the return to the highest possible level, eliminating inflation and providing services for public needs. The payback period is the time required for cash flows to fully repay the total initial investment amount. (Demirbugan, 2008).

Net Present Value analysis is the reduction of the cash and investment expenses to be obtained from a project throughout its economic life over the years with a certain discount rate and finding the present value of the project's net cash flows. The profitability index (benefit-cost ratio) of an investment for the company developing the real estate project; It is the ratio of the present value of the cash inflows that the investment will provide throughout its economic life, based on a certain weighted average cost of capital (discount

rate), to the present value of the cash outflows (investment amount) required by the investment.

4. RISK ANALYSIS OF REAL ESTATE DEVELOPMENT PROJECTS

Developing real estate often requires a process that spans years and consists of a series of steps along the way. Due to the complexity of this process, risks are many and it is not uncommon to encounter unforeseen obstacles along the way. This makes it vital that anyone considering joining has a comprehensive and in-depth understanding of how to navigate the development stages to one day secure the sought-after, satisfying returns on investment (ROI). Although it provides an insight into the risk dynamics that develop in development projects, it is crucial to note that purchasing or refinancing existing buildings carries similar risks. Factors such as sponsor credibility and expertise, prevailing economic scenarios and market dynamics play critical roles in each area.

Due to their structure, real estate development projects involve uncertainties at some stages. These uncertainties may lead to negative effects that will prevent the project from being completed within the planned time and budget and/or achieving the targeted output quality. The consequences of the negative effects that these uncertainties may have on the project are called project risks. In order for projects to be successful, risks that may have a negative impact on the project should be identified starting from the project planning process.

Uncertainty is defined as a situation in which the probability of events occurring is unknown or an unknown situation. It is the unknown probability of the possible change impact of future events on project objectives (Jaafari, 2001). Uncertainty lies at the root of project risks. Lack of clarity in the behavior of the project parties, lack of data, lack of detail, lack of a structure to discuss the issues, functioning and framework assumptions, known or unknown sources of prejudices and lack of information about the current situation (Ward and Chapman, 2003). projects are subjects of uncertainty due to three main sources. These; external factors are changes in business objectives and inability to determine the method of project implementation. Risk is associated with uncertainty. Risk is measurable uncertainty.

4.1. Project Risk Management

Examples of risks that should be considered in project management are time slippage, product requirements not being met, budget exceeding, delivery of products with high error density, poor product performance, problems in supplies, and personnel recruitment.

There are four main ways to prevent these risks in the real estate sector (Tüz and Ebeseke, 2017);

- Umbrella approach in which the risk premium is added to the price, taking into account all possible outcomes,
- The ostrich approach, in which situations that may hinder the results are ignored and it is assumed that everything will go well.
- Intuitive approach, which recommends trusting the inner voice and intuition instead of relying on all the fancy analysis available,
- It is a brute force approach that focuses on out-of-control risk and states that although it is not possible to prevent all problems, everything can be controlled by force.

4.1.1. Risk Management Planning

Risk management planning is the process of deciding how to approach and plan risk management activities for a project. It is important to plan subsequent risk management processes to ensure that the level, type and visibility of risk management is commensurate with the risk and significance of both the project and the organisation. There are six inputs in risk management planning. These are the project charter, the organization's risk management policies, defined roles and responsibilities, stakeholder risk tolerances, the organization's template for the risk management plan, and the work breakdown structure.

4.1.2. Identifying Risks

In this process, an attempt is made to reveal what could go wrong in the project. In this way, project risks are determined. In this process, in addition to this determination, documentation regarding risks is also made. This process continues throughout the project lifecycle, as new risks may arise as the project progresses. Delays and/or disruptions that may occur in information areas may

cause project risks to arise. Therefore, all areas of information should be taken into account in the process of identifying risks.

Risks may be internal to the project or may be external to the project. In the process of identifying risks, the sources of risks are also identified. In this process, the common methods are obtaining expert opinions, reviewing the documents in the project, information collection methods (brainstorming, Delphi method, interview, main cause analysis, etc.), checklist analysis, assumption analysis, SWOT analysis, cause-effect (IshikaXa or fishbone analysis). Approaches such as relationship, process flow and impact diagrams are used.

4.1.3. Qualitative Risk Analysis

The identified risks are prioritized among themselves in this process. While prioritizing, the likelihood of risks occurring and the impact they will have on the project are evaluated together. Meanwhile, checking the risk data quality is also important to confirm the accuracy of the risk analysis. In addition, risk classification and risk urgency assessments are made in this process. As a result of all these evaluations and analyses, the project risk list is rearranged in a relative order. Meanwhile, other sections in the project risk list, such as the classification of risks, the list of answers to be given, etc. is also updated at the end of this process.

4.1.4. Quantitative Risk Analysis

In qualitative risk analysis, risk probabilities and their effects on the project are evaluated qualitatively. Subjectivity in qualitative risk analysis is eliminated in quantitative risk analysis performed numerically. Indeed, in the quantitative risk analysis process, the probabilities of identified risks and their possible effects on the project are expressed with objective numerical values. Project risks are calculated numerically using modeling and simulation (such as Monte Carlo simulation model) approaches. In this process, even the financial cost of the negativity that the risk will cause can be calculated. The project list is updated according to the prioritized risk ranking resulting from the calculations.

4.1.5. Planning Risk Response Strategies

After the prioritized project risk list is determined with the help of qualitative/quantitative risk analyses, the activities to be taken to prevent the occurrence of risks that may arise in the project or to reduce their effects are determined in this process. Responses to risks can, in some cases, pave the way for opportunities to arise within the project. The inputs to this process are the project risk management plan and risk list. In addition to expert opinions, approaches such as strategies used against risks or threats, strategies for opportunities and contingency response strategies are used to update the project risk list, risk-related insurance, etc., which are the outputs of this process. contract decisions are made, project management plan and project document updates are obtained.

4.1.6. Monitoring and Controlling Risks

It is the planning process in which the effectiveness of risk management plan implementation is monitored by monitoring the project risks identified during the project, implementing the planned response strategies against these risks, identifying new emerging risks and analyzing them. In this process, the level, type and visibility of risk management are planned. In risk management planning, the project charter, the organization's risk management policies, defined roles and responsibilities, stakeholder risk tolerances, the organization's template for the risk management plan and the work breakdown structure are addressed.

4.2. Project Risk Analysis Methods

The aim of risk analysis is to determine which risk event will be responded to by analyzing previously identified risks and determining their ranking for management priority. By covering all applicable options and analyzing the variable outcomes of each decision, risk analysis shows what might happen if the project does not progress as planned due to potential risks and warns decision makers and managers about the responses required to deal with the risks (Flanagan and Norman, 2000).

Two different risk analysis methods, Qualitative Risk Analysis and Risk Analysis, are used for evaluating the project. The process of evaluating the probability of occurrence and impact of identified risks is called Qualitative

Risk Analysis. By using qualitative risk measurement techniques such as risk probability and impact research, probability/impact matrix, detailed analysis of assumptions, data accuracy ranking, the overall risk threat ranking of the project, risk trends and prevention ideas can be revealed. In quantitative risk analysis, the threat ratio of risks is determined with numerical values by using past results.

Scaffolding Response Planning – developing methods and techniques that will improve opportunities and reduce threats. Identifying and scaling risks is not enough. The main idea is to manage them. Each agreed and funded risk requires the identification and appointment of one or more individuals who will take responsibility for the response (risk responders).

Development enterprise risk management is applied with different approaches and methods for organizations of different sizes. A company's business plan, operational and strategic goals are elements that should be taken into consideration when creating its risk management strategy. Within the scope of relevant planning, studies should be carried out to effectively manage the operational, financial, environmental and performance-related risks of companies.

5. REAL ESTATE DEVELOPMENT SECTOR in TÜRKİYE

Economic growth preferences in the country sometimes cause different sectors to come to the fore. The construction sector in general and the real estate sector in particular is one of the sectors that should be evaluated in this way in our country. However, fundamental changes in factors such as lack of confidence, insufficient demand, cost increases, high interest rates, exchange rate increases and inadequacy of the legal framework resulting from economic policies and cyclical developments can significantly affect the sector. Sales prices and demand in the sector are very sensitive to political stability and economic developments. Markets with high economic growth trends are characterized by high growth in property sales over long periods, supported by sustained high rates of economic growth and improvements in living standards, ongoing urbanization and strong demand.

In the Real Estate Development and Construction-Housing Sector, where entry into the sector is relatively easy, the profit margin and growth trends of the sector emerge as determining criteria. Since the importance of substitute product and seasonality criteria in this sector is relatively weak, they are excluded from the scope of evaluation. Another factor affecting the sector within the scope of systemic risk is the government policies implemented in this sector rather than a specific regulatory structure. In the sector in question, the state's regulations regarding taxes, incentives, housing and zoning, and its impact on housing supply through its own institutions (such as TOKİ) affect the demands and prices in the sector.

In the real estate development process, people or institutions with different expertise from many different disciplines work together in the design, manufacturing or construction, operation and sales phases of the product. This is a must for the quality and success of the product to be obtained. Working together of people from different disciplines and structures is a dynamic process that requires coordination and affects each other. The personnel other than the real estate developer who manage this process are generally consultancy, engineering-architecture and service companies who are experts in their fields and have sufficient knowledge (Yıldızcı, 2007).

The construction and real estate sector is affected by both global and internal dynamics. In this context, it may be appropriate to make some regulations, from legal regulations to financial instruments and institutions, in

order to reduce the negative effects that may be experienced and to transform the positive situations into sustainable ones. Our construction and real estate sector has reached a global size in terms of both employment and production and does its best to make the process more sustainable.

The construction sector is different from other sectors because each produces its own unique high-cost outputs and has the potential to have devastating consequences. In this respect, it is very important and time-consuming to conduct more detailed analyzes on determining the needs and what kind of project to produce, the resources required for the project, land characteristics, expertise and personnel needs, owner relations and similar issues.

The rapid development in the construction sector in Türkiye, the implementation of market-oriented projects, the emergence of very large constructions and large investments have made it necessary for the emergence of professional real estate developer companies that closely follow the developments in the world. Although there are many problems in the real estate development sector in Türkiye today, very rapid developments are being made compared to yesterday. The number of real estate development companies and real estate projects that are increasing day by day in the sector are good signs of the point that can be reached in the future.

One of the important sectors in real estate development is the land development market. They are generally planned on large land areas and include projects with multiple uses. Land values reflect the present value of the income that the land will bring when it is put into use after a certain period of time. Current and future land use expectations are the determining factor in measuring the amount of increased income generated over the years (SPD, 2018).

The detached housing market for sale, the multi-family housing market, and the multi-family apartment market are also important markets in real estate development. With the pandemic, the time spent at home increased and remote working became common. As a result, demand for larger, balconied and detached houses increased. The increase in demand caused both housing prices and land prices to increase. Detached houses across Türkiye increased by 64.43% in 2022. While the return on investment of detached houses in Türkiye is 31 years, house prices and land prices increased by 31.68% and 36.91% in

Türkiye in the last year. These also show the importance of detached and family residences.

In addition, the retail market includes small single-use buildings such as restaurants and stores, shopping malls, living centers, and multi-storey buildings with many offices in denser areas. Each project targets its own specific customers. That's why tenant selection is critical.

The office market: The sector includes both office buildings located on ground floors around the city center and in less dense areas, and multi-storey buildings with many offices in more dense areas in the city center. Each project targets its own specific customers. That's why tenant selection is critical. The earthquake disaster that occurred in Türkiye on February 6, 2023, affected Türkiye's eastern provinces and other surrounding provinces and countries, causing loss of life. This earthquake brought to light various discussions about building supply in Türkiye, which is an earthquake country, and ground and foundation survey reports, especially earthquake resistance reports in commercial real estate, began to be requested as a priority by users and investors. This shows the importance of the office market in real estate development.

Industrial market: This sector includes warehouse and distribution facilities, research and development facilities, and business centers far from the city center. Especially after the pandemic, the increase in production has increased the importance of this sector and it has grown.

Accommodation market: This sector has a very broad structure. It generally consists of two categories: hotels with limited service and all-inclusive format. It is a sector that requires high experience and where sudden rises and bankruptcies may occur.

Development projects in Türkiye are generally solved through partnership structures, the finance part of which is undertaken by large banks, and the construction part of which is undertaken by expert construction companies. Foreign investors also prefer to carry out real estate-based investments and developments in Türkiye with these companies that are well-known and experienced in their business fields.

Today, the real estate development sector in Türkiye; It is witnessing the rapid development of large shopping malls, multi-storey office buildings, urban planned housing projects consisting of luxury villas or apartments, satellite

cities and tourism complexes. Although there are many problems in the real estate development sector in Türkiye today, very rapid developments are being made compared to yesterday. The number of real estate development companies and real estate projects that are increasing day by day in the sector are good signs of the point that can be reached in the future.

Real estate development processes in Türkiye can only be explained with multiple sequential-event models that have been developed specifically for Türkiye and vary according to geography/sub-sectors. Because in Türkiye specifically in the sector; The unbalanced distribution of the population over the geography, economic weakness, the influx of rural people looking for work and food to the city, the absence of zoning plans and zoning amnesties, the inadequacy of municipalities in providing infrastructure and transportation facilities, the inadequacy of land production with infrastructure, the inability to create new attraction centers on a regional scale, will reduce migration in rural areas. failure to realize policies, increasing need for housing, lack of sound and permanent housing policies by governments, failure to create a housing finance system for low incomes, difficulties in obtaining construction building (basic) licenses, informal economy and lack of supervision, lack of definition of professional formation for construction contracting in laws, lack of effective and tax-free policies. height factors.

Urban transformations are an important factor in terms of the real estate market, the development process in which the built environment is created, shaped and put on the market, and the effective use of urban land. The main objectives of real estate development projects are to produce real estate that is economically competitive with location, entrepreneurial idea and financing factors, has a social position that creates business potential, is compatible with the environment, and provides sustainable profit conditions (Fiederichs, 1996, p.55).

When designing a real estate development project, public authorities and investors must take into account its potential effects on the social lives of those living and working in the area where the real estate is developed. The effectiveness of the real estate development process depends on factors such as project development expenses, cash flows, financing of the project, customer satisfaction, satisfaction of environmental elements and the prestige to be provided for future works in order to ensure maximum profit by spending less

financial resources and time. While considering all these efficiency elements, real estate developers should also try to minimize the negative effects of the development process by conducting a social impact assessment.

5.1. Real Estate Development Project Construction Methods

Since real estate projects require high investment and labor and involve irreversible situations, the location, quality, volume, scope, profitability maximization, operation, budget and duration of the project are only possible with correct planning. When we look at successful real estate projects, we see that where, how, when, how long and with what budget they will be done are well planned and how they will be operated and managed correctly to ensure that the project continues its vitality and provides constant added value.

The real estate development industry is a sector known for its potential profits that attract the attention of many entrepreneurs. However, financing projects can sometimes be a challenging process due to factors such as operating costs and risks. Real estate developers can generally develop projects in 4 different ways.

- 1-Project development method in return for floor
- 2-Turnkey project development method
- 3-Revenue sharing project development method in exchange for land sales
- 4-Build-Operate-Transfer

Project development method in return for flat and turnkey lump sum project development methods are widely used methods. The method of project development through revenue sharing is a method mostly preferred by public institutions. The revenue sharing model is a method that is also used by private sector companies, but is not yet widespread. The Build-Operate-Transfer method is generally preferred by public authorities.

5.1.1. Project Development Model in Exchange for Land

In this model, land owners make an agreement with a contractor to build a building in exchange for an independent section at a certain rate. The contractor delivers the produced independent sections to the land owners instead of paying the land price. It finances the project by selling the remaining

independent sections. In other words, the contractor is not paid for the land price, instead it is paid to the land owner as an independent section at the agreed rate (or amount). This method is especially common in the central and demanded districts of cities where large lands are valuable. It is also used in areas where urban transformation occurs. Another sensitive point of the relevant method is that the real estate sector must be vibrant. Contractors are required to sell the independent sections produced in order to finance the building they will build and make a profit.

It is a double-type mixed contract, in which the contractor undertakes to create a work in return for the transfer or commitment to transfer a certain share or all of a real estate to the contractor, its validity depends on the form, as a rule it is sudden (discontinuous) and imposes a debt on both parties (Uğur, 2002).

Advantages of this management:

1. Allowing agreement on approved plans, leading to shorter completion times.
2. Work can be carried out with a simple agreement between the investor and the property owners for land-based construction.
3. Ease of application in urban transformation areas
4. While investors gain ownership at low cost, construction companies have the advantage of financing their projects and sharing risks
5. Developers can use investors' financial contribution to complete their projects faster.
6. Developers reduce the need to procure land while providing resources to finance their projects.

Disadvantages of this management:

1. Decreasing the project value by putting downward pressure on the value of the remaining houses as a result of the independent sections promised to the land owners by the contractors being sold at low prices by the land owners with the desire to convert them into cash in a short time.
2. In cases where the number of beneficiaries is high, agreements in large areas may lead to longer completion times or failure to complete projects.
3. Construction projects may not always progress as expected and investors may not receive their properties on time. Therefore, it is important for investors to make careful consideration when choosing the project and making

an agreement with the construction company. This can be achieved with the right partner selection and legal consultancy.

4. Construction projects may gain or lose value depending on demand and market conditions. Investors must evaluate the future value potential of the project and are required to conduct market analysis to diversify risks.

5. The contractor can sell the independent sections under his name at a low value when he has financial difficulties. Or there may be cases where the independent sections given by the contractor are sold at low prices by subcontractors. These can also reduce the value of the project.

The success of the method depends on choosing a reliable and experienced construction company and carefully evaluating the projects. It is important for investors to examine the company's previous projects, analyze its financial situation and consult its references. It is also crucial to understand all the details of the contract and seek legal advice.

5.1.2. Project Development Model with Revenue Sharing in Return for Land Sales

This method is a method that has become widely used in many sectors, especially the internet and telecommunications sector. Mass housing construction, which has gained momentum in recent years in our country, requires large financial resources. This method is important in meeting the financial need in question.

As in projects developed in exchange for flats, in the Revenue Sharing model, the project developer company does not bear the cost of the land at the beginning of the work, but pays the land owner's share as the sale progresses. This payment is made based on the land owner's income share rate determined at the contract stage. The money from the sale is shared by the parties at this rate.

In the Revenue Sharing Method in Return for Land Sale, the contractor has the obligation to build the relevant structure and to mediate the sale of independent sections. In return, the land owner promises to sell the independent sections to be built on his land to third parties and agrees to share the income obtained from the sale of the constructed independent sections with the contractor. (Alioğlu, 2019).

In this method, the project developer is responsible for all risks. The project developer is responsible for the completion of the project, the sale of independent sections, delivery and after-sales services. The contractor undertakes to the land owner an income not lower than the appraised value of the land at the date of the contract. The land owner does not have any risks or responsibilities. The land owner receives a minimum income from the sales made in the contract signed with the contractor.

This model is developed by the Mass Housing Administration and Emlak Konut GYO A.Ş. in our country. It is implemented by. Accordingly, provided that the income is defined in the specifications, the income to be obtained from the sale of the construction and parts of the constructions, where the contractor will cover the entire project cost, in accordance with the project deemed appropriate by the administration, on the land and/or land owned by the administration, is shared between the administration and the contractor according to the principles determined in the contract. These institutions, which own land, receive a minimum income guarantee from contractors in return for the lands they offer through tenders. Contractors develop projects on these lands and sell independent sections to buyers.

Advantages of this management:

1. Project developers do not incur land costs and instill confidence in buyers.

2. The prices of the houses purchased by the buyers through the project are not paid directly to the Project developers. This eliminates contractor risk and increases sales.

3. It ensures rapid transformation, especially in urban transformation areas.

4. The private sector can own lands that it would not normally be able to obtain. They make high profits from the construction on this land.

5. This method provides growth opportunities especially for Real Estate Investment Trusts.

Advantages of this management:

1. Pre-sale collections must be made by reliable persons or institutions.

2. The income obtained must be made according to the percentage of project progress.

3. Not every land owner can develop a project with this model. This is why it is sometimes difficult to control construction levels with the trustee and his own engineer staff.

4. Construction projects may not always progress as expected or payments may not be made on time.

The success of this model depends on the collections made as a result of pre-sales being collected by a reliable hand and distributed to the parties according to the progress percentage. In practice, buyers generally pay all or a large part of the sales price of the independent section before the construction is completed. The Revenue Sharing project development model is generally used for economically attractive lands where demand is high.

5.1.3. Turnkey Lump Sum Project Development Model

Lump-Sum Project Development Model is a project delivery system in which a single contractor undertakes all stages of a project or infrastructure component, such as design, material supply, construction and commissioning. In this system, the contractor builds a project so that it can be sold to the customer as a completed product. Turnkey construction is a widely used method, especially in complex and technical projects such as industrial facilities, thermal power plants and pipelines. It is a project development method. The construction company builds the development project on its own land. In addition, the developer also manages sales and after-sales services. It manages all processes itself. The developer company may carry out the entire construction itself, or may divide the work into sections and tender it to subcontractors. The land owner assumes all risks including project development, financing, marketing and sales. Income from independent section sales belongs entirely to the land owner.

In this model, the credibility of the contractor is of great importance. Because the project cost, including the land, is entirely the responsibility of the contractors. There are some rules determined for the Allocation of Real Estate Project Finance Loans. These rules are listed below (Aktuž, 2019).

Advantages of this method:

1. Turnkey construction is a building model that greatly simplifies things for the owner (future owner of the project).

2. In this process, the owner is only responsible for waiting for the contractor to finish the work.

3. Project owners or employers only assist in obtaining licenses and permits.

4. It is the execution of all construction works from a single source.

5. Time-strapped project developers do not have to take an active role in the design, procurement, purchasing and construction phases.

Disadvantages of this method:

1. The client has limited control over the project

2. The credibility and reliability of the project developer is of great importance.

3. It is difficult to change the contractor.

4. There may be situations where the real estate development project is not completed on time or does not meet expectations.

The success of this model depends on being selective in financing the real estate projects developed. In addition, the project developer must have a certain amount of equity capital (preferably 20-25%) in the project at the beginning. The ratio of the loan to be used for the project to the total project cost should not exceed 70%. Turnkey real estate development projects have become a developing sector in Türkiye in recent years. Especially in regions at risk of earthquakes, structures that are light, durable and can be built quickly, such as steel structure systems, are preferred. These structures can be used for both residential and commercial purposes.

5.1.4. Build-Operate-Transfer (BOT)

Considering public financing opportunities, it is very difficult to cover this amount with public resources alone. In this context, local and foreign private investors are needed. In the BOT model, a company consisting entirely of private sector companies or established as a public-private partnership undertakes the duties of providing financing for an investment project, its construction and operation for a certain period of time (e.g. 15-20 years). When the operating period is completed, the facility is transferred to the public sector.

Build-operate-transfer model, where all costs of a public service are covered by a private enterprise within the framework of a contract made between public institutions or organizations and national or international

private sector actors, and the resulting facility is operated for a certain period of time by the private enterprise that covers the costs, at the end of the period specified in the contract. It is a form of public investment and financing that ensures that the facility is transferred to the relevant institutions or organizations in a working condition, free from all kinds of commitments and debts. According to the Council of State, the build-operate-transfer model is a special financing model developed to be used in the realization of projects requiring advanced technology and high financial resources (www.yenifrm.com).

In order for the model to be implemented, there must be a domestic or foreign capital company that is the most important actor of this project. Fees or contributions to be paid in return for the goods and/or services to be produced as a result of the investment to be realized through the build-operate-transfer model are determined by the administration in state-owned structures. Between private companies, it depends on mutual agreement.

Advantages of the model:

1. The most important advantage of the model is the financing opportunity. The state, freed from debt with this financing source, gains a significant advantage in debt management.

2. By using the model, the scope of the private sector expands and the entry of foreign capital into the country becomes easier.

3. The model increases the applicability of the principles of profitability, efficiency and effectiveness of the private sector and the understandings in line with the performance management system to public services.

4. By ensuring the transfer of advanced technology to public services, public services are produced at lower costs and with higher quality.

5. It is ensured that the project is completed on time or earlier.

6. With the establishment of local and foreign partnerships, it becomes possible to open up to international markets with a new management and new marketing approach.

Disadvantages of the model:

Model 1 envisages the transfer of the facility to the public after the costs are fully covered and the private sector earns sufficient profit. Therefore, there is a risk of overestimating costs in order to increase profits.

2. The fact that the concession granted covers a long period of time, the nature and amount of the investment to be made, and the fact that many organizations are parties to the project content may pose risks.

3. The political and economic conditions of the country directly affect the success of the project. Foreign capital shows great sensitivity to political and economic stability to invest due to reasons such as the investment reaching very large amounts, the return taking a long time, and the counterparty in the contract being in the public administration.

4. With this model, the company investing in its field may demand profit assurance, increasing the investment cost and making it expensive. Thus, the total cost increases even more.

5.2. Real Estate Legislation

In real estate development, it is necessary to follow and regularly review the legal, economic, official and administrative activities required by a project development cycle that continues from the land purchase phase to the sales phase of the project, and to ensure that the project and all manufacturing or revisions within the scope of the project are carried out within the framework of laws and regulations.

The real estate development sector is a shared process in which the public sector and the private sector constantly interact for mutual benefit. The public sector must recognize the legal and operational problems experienced in the real estate development process and make appropriate regulations, and the private sector must unconditionally comply with these regulations.

Although project management in terms of legal process is the monitoring of the permissions of relevant public institutions at every stage of the development process. In addition, construction is carried out in accordance with the applicable law, zoning plan, relevant regulation provisions, scientific rules, technical specifications, science, art and health rules and all legislative provisions, supervision of building production and approval and inspection of relevant projects and obtaining building occupancy permits, sales. It also includes the stages of making lease agreements.

Real estate project development legislation covers multifaceted, technical and complex issues. Accordingly, real estate legislation; It includes the legal status of real estate, real estate projects or real estate-based rights and

benefits, zoning practices, loss of property rights and expropriation, municipal administrations and other institutions authorized to implement zoning, land registry and cadastre issues, construction quality and construction inspection, and taxation of real estate.

Legislation regarding real estate development in Türkiye is quite dispersed. Important parts of this legislation are discussed here. What is important here is the legislation regarding property and the legislation regarding zoning. Legislative titles related to real estate development:

1. Provisions of the Turkish Civil Code regarding real estate ownership, possession and land registry
2. Zoning law and relevant regulations
3. Settlement law and implementing regulations
4. Condominium law
5. Municipal law and relevant regulations
6. Metropolitan municipality law
7. Expropriation law
8. Land registry law and relevant legislation
9. Cadastral law
10. Law and implementing regulations on construction inspection
11. Law and implementation regulation on the transformation of areas under disaster risk
12. Legislation regarding real estate leases
13. Property tax law
14. Taxation of real estate purchase, sale and construction profits
15. Taxation of profits obtained from renting real estate
16. Regulation on Occupational Health and Safety in Construction Works

5.2.1 Provisions of the Turkish Civil Code Regarding Real Estate Ownership, Possession and Land Registry

The definition of property is made in the Turkish Civil Code. The person who owns something has the authority to use, benefit and dispose of that thing as he wishes, within the boundaries of the legal order. Ownership types are as follows;

Independent Ownership: If a real estate has a single owner, the type of ownership in this real estate is "independent ownership". In the "ownership" section of the land registry, the phrases "full" or "1/1" in the "owner's name, surname, father's name" column indicate that that person or institution owns the entire immovable property as independent ownership.

Joint Ownership: Joint ownership is of two types:

- a) Shared ownership (joint – joint ownership)
- b) Joint ownership (ownership in partnership)

Registration is the founding element of the property right. Acquisition of real estate ownership; It is realized through sale, donation, barter, partition, maintenance until death, inheritance, occupation, creation of new land and acquisitive statute of limitations.

Restrictions on real estate ownership occur in four ways:

1. Restrictions on the Right to Transfer

a. **Legal Right of Pre-emption:** The right of pre-emption expires after three months have passed since the date on which the sale was notified to the right holder, and in any case two years have passed since the sale. The right of pre-emption is exercised by filing a lawsuit against the buyer. In shared ownership, if a stakeholder sells his/her share of the real estate in whole or in part to a third party, other stakeholders may exercise their right of pre-emption.

b. **Contractual Right of Preemption:** In any case, the effect of the annotation ends ten years after the date on which the annotation was given. The provisions regarding the exercise and waiver of the legal right of pre-emption also apply to contractual pre-emption.

c. **Redemption and Redemption Rights:** In any case, the effect of the annotation ends ten years after the date on which the annotation was given.

2. Neighbour's Right

Right Everyone is obliged to avoid unrest that will negatively affect their neighbors while exercising the powers arising from real estate ownership and especially while carrying out business activities. Provisions regarding flooded structures apply to structures that violate the rules of neighborhood law.

3. Right to Enter Someone Else's Land

Unless prohibited by the competent authorities in order to protect the vegetation, everyone can enter someone else's forests and pastures and collect and take wild fruits, mushrooms and similar things growing there, to the extent

permitted by local customs. and If a person can prevent a harm that threatens himself or someone else, or an existing danger at that moment, only by intervening in someone else's immovable property, and if this damage or danger is significantly greater than the damage that may arise from intervening in the immovable property, the owner must bear it.

4. Public Law Restrictions

The right of easement provides the right to use and benefit from the real estate to the owner of this right. It prevents the obligated immovable owner from exercising some of the powers granted by the right of ownership against another person or the immovable owner and requires permission for these by the person who has the easement right. About the easement, while the person who has this right obtains the right to use and benefit; The owner of the immovable property for which the easement has been established is obliged to bear this right. In other words, the immovable for which the easement has been established becomes liable.

Right of Residence gives the authority to use a building or part of it as a residence. The right of residence cannot be transferred to anyone else and does not pass on to heirs. Unless otherwise provided by law, the provisions regarding usufruct rights also apply to the right of residence. If the right of occupancy entitles you to benefit from the entire building or part of it; Repair and renovation expenses necessary for the preservation and ordinary maintenance of the building or section belong to the owner of the residence right.

Right of Superstructure: An immovable property owner may establish an easement right in favor of a third party, which gives the authority to build a structure above or below his land or to preserve an existing structure. Unless otherwise agreed, this right is transferable and passes to the heirs. If the right of construction is independent and permanent, it can be recorded as an immovable property in the land registry upon the request of the owner of the right of construction. The superstructure right established for at least 30 years is permanent. The right of construction can be established as an independent right for a maximum of one hundred years.

Resource Right, Easement right on a resource located on someone else's land, obliges the owner of this land to bear the taking and discharging of water. This right can be transferred to someone else and passes to the heir, unless otherwise agreed. If the resource right is independent and has been established

for at least thirty years, it can be registered in the land registry as an immovable property.

There are three types of real estate liens. These are Mortgage, Mortgaged Debt Note, and Annuity Note. A real estate pledge can be established for a certain receivable, the amount of which is indicated in Turkish currency. The foreign currencies in which pledge rights can be established are determined by the President. It is not possible to pledge unregistered roads, squares, as well as marketplaces, pastures and similar places designated for public benefit.

The transfer of the mortgaged real estate does not bring about a change in the liability of the debtor and the security, unless otherwise agreed. If the new owner assumes the debt and does not notify the previous debtor in writing within one year that the creditor reserves the right to appeal to him, the debtor will be released from his debt.

A land registry is kept to show the rights over real estate. The land registry consists of the land registry and condominium registry, as well as the journal book, documents and plans that complement them. The land registry consists of the main and auxiliary registry listed below.

1- Land Registry: A page is allocated for each real estate in the register and the page numbers follow each other. In special columns on each page of the register, ownership, easements established on the immovable property or on another immovable property in favor of that immovable property, immovable burden, and lien rights on the immovable property are registered.

2- Condominium Ownership Register: Independent sections subject to condominium ownership are recorded in the condominium ownership register, which will be kept separately.

3- Journal Book: Requests that require action on the land registry or that are rejected are recorded in the journal book.

4- Official Documents: Official documents, which can be counted as official deeds, court decisions and others, are used to determine the scope of real rights and constitute the legal basis of land registry records.

5- Plan: Cadastral Map, called "deed plan" in the Turkish Civil Code and the Land Registry Regulation, is a scaled map showing the boundaries of cadastral islands and cadastral parcels.

6- Registry of Dismissals: It is the registry that checks whether the power of attorney has been canceled or not in transactions carried out with a power of attorney in the land registry.

7- Corrections Register: The reason for corrections that do not need to be written in the journal is recorded in the corrections register. If there is an incorrect spelling in the land registry, this spelling will never be scratched or deleted. The reason for this incorrect spelling is corrected by stating and recording it in the corrections register.

8- Public Common Goods Registry: Public common goods such as pastures, pastures, winter pastures, pastures, threshing floors and fairgrounds are recorded in the private registry.

9- Land Registry Inventory Book: All registers, minutes book, journal book, official deed volumes and auxiliary registers in the directorate are recorded in the land registry inventory book.

10- Administrative Borders Registry: Decisions regarding administrative borders and village borders determined by the competent authorities are recorded in the administrative borders registry and the documents are kept in a special file.

Declarations The writings made in the declarations section of the land registry are called "declarations". These writings are seen as 'Public Law Restrictions'. Declarations are records that are different from registration and annotation, that only show the legal and actual status of a real estate and provide clarification on some issues or some already existing rights. These records are generally informative of public law restrictions.

5.2.2. Zoning Law and Relevant Regulations

Reconstruction means public works, improvement, development, repair and improvement. Zoning practice, on the other hand, envisages regulations for unplanned areas as well as the implementation of immovable properties in line with plan decisions. Although the Zoning Laws have given broad powers to local governments to ensure orderly urban construction based on zoning plans, it is not possible to say that planned urbanization in accordance with health and environmental conditions has been achieved in the past time.

Among the exceptions included in the law;

- a. Tourism Incentive Law No. 2634,

- b. Law on the Protection of Cultural and Natural Heritage No. 2863,
- c. Istanbul Bosphorus Law No. 2960
- d. Metropolitan Municipality Law No. 5216

Implementation zoning plan: The various regions drawn according to the principles of the master zoning plan, with the cadastral status, if any, recorded on the certified current maps; It is a plan that shows in detail the building blocks, their density and layout, roads, the implementation stages that will be the basis of the zoning application programs required for implementation, and other information.

In some cases, the Ministry is authorized to make zoning plans ex officio, replacing the municipality. These are defined as: Public buildings, state of disaster, Mass housing applications, Slum law application, Metropolitan area plans including more than one municipality, Places with railway, highway passing through or around, airport and sea connection.

Building Permit: Required to start construction, for excavation and excavation permits, for establishing a construction site, for connecting water, electricity, natural gas, etc. to the building site, for employee insurance, for the registration of the building owner to the tax office, for establishing a floor easement and for obtaining a building occupancy permit. .

Building permits can be obtained from Metropolitan Municipalities for projects and shopping centers required by the duties and services assigned to the Metropolitan Municipality.

Apart from municipalities and adjacent areas, no building permit is required for residential buildings to be built in village settlements, surrounding areas and hamlets, or for agricultural and animal husbandry purposes that are not integrated facilities and do not require a zoning plan. The validity period of the license is 2 years from the date of the license to start construction. And the construction must be completed within 5 years from the date of the permit.

Zoning Peace: Within the scope of preparation for disaster risks, in order to register unlicensed buildings or structures that are contrary to licenses and annexes and to ensure zoning peace, to apply to the Ministry of Environment and Urbanization and the institutions and organizations. Building Registration Certificate can be issued if the conditions in this article are met and the registration fee is paid by 31/12/2018. The ownership status of the building and its land subject to the application, building class and group and other issues are

recorded in the Building Registration System prepared by the Ministry, according to the declaration of the building owner.

Building Registration Certificate; In buildings that do not have a building license or occupancy permit, in buildings that have a building occupancy permit for the entire building, in which independent section(s) the violation of the license and its annexes is made, the building must be closed separately for each independent section(s), or if the entire building belongs to a single owner and the violation is made in all independent sections. is arranged for the whole. The Building Registration Certificate is valid until the reconstruction of the building or urban transformation application. In case of renewal of buildings for which a Building Registration Certificate has been issued, the provisions of the zoning legislation in force are applied.

With the provisions introduced by Article 18 of the Zoning Law and the Regulation on the Principles Regarding the Land and Land Arrangement to be Made in Pursuance of Article 18 of the Zoning Law (AAD Regulation), which was issued to demonstrate the implementation of this article, the administrations tried to solve the implementation problems without expropriation.

Zoning blocks are first divided into temporary parcels, taking into account the building order and other relevant provisions in the zoning plan and regulation. Parcel numbers within each zoning block are assigned clockwise, starting from the northwest. Zoning islands are divided into parcels in accordance with the conditions of the zoning plan and regulations. After the area is determined, in order not to leave the parcel in a shared state, its boundaries are finalized by shifting it a small amount, provided that it does not contradict the plan and regulations. In order to prevent more than one existing building from entering the parcel to be established in residential areas and to make the parcel independent, instead of creating a proper zoning parcel (provided that a building can be built in accordance with the legislation), cadastral parcel boundaries can be taken as zoning parcels. Zoning islands are given successive numbers, starting from the island number given by the cadastral directorate. In places whose cadastre is not in the island system, island numbers start from 101. If the application has already been made in the area where the arrangement is made, the block numbers are given starting from the last zoning block number. Even if any of the islands to which a number is given

is not subject to registration, the same number cannot be given to another candidate.

5.2.3. Settlement Law and Implementing Regulations

Settlement Law No. 5543; The settlement works to be carried out for immigrants, nomads, those whose lands have been expropriated and for reasons of national security, the practical conditions and measures to be taken regarding the regulation of physical settlement in villages, and the rights and obligations of those who are settled are regulated. The definitions included in this regulation are as follows.

For purposes such as the settlement of those whose places have been expropriated, the construction of dams, dam adjacent areas, conservation areas, airports, highways, railways, factories, other facilities related to economy and defense, protection of historical and natural assets to be built by public institutions and organizations, or due to the implementation of special laws;

a. Families who had to leave their homes as a result of partial or complete expropriation of their immovable properties,

b. Families who settled in the expropriation area at least three years before the beginning of the calendar year in which the settlement planning studies started, but do not own immovable property, are resettled in accordance with the provisions of the Settlement Law in places to be specified by the Ministry, upon their request.

There are forms and conditions for settlement within the scope of the law. It is notified in writing by the governorship to the legal entities and to the person authorized to represent the nomadic group in the case of nomads, and is also announced by hanging it in visible places such as municipality, school, headman's office for thirty days. The posting and downloading of the announcement text is documented with a report prepared jointly by the representatives of the legal entity or, in the case of nomads, the representatives of the nomadic group and the personnel appointed by the governorship.

For those applying for settlement, within the announcement period or within ninety days at the latest after the end of the announcement, and for nomads, within one hundred and eighty days, a petition must be submitted to the district governorship or governorship to which they are affiliated, together with the family population registration copy and the Republic of Türkiye

identification number, by the family representative or one of the spouses. It is essential. Those whose real estate has been expropriated must meet certain conditions in order to request resettlement. Families who have to leave their places as a result of partial or complete expropriation of their real estate, and families who settled in the expropriation area at least three years before the beginning of the calendar year in which the settlement planning studies started, but do not own any real estate, are made beneficiaries.

According to the law on immigrants, those who do not seek resettlement within two years from the date of their arrival in Türkiye cannot be eligible. Loans for immovable properties given to those who are settled are collected without interest in fifteen equal installments over fifteen years, with the first installment being collected in the sixtieth month following the loan.

5.2.4. Condominium Law

According to the law, "Floor easement is a type of easement depending on the land share, and after obtaining the building occupancy permit, upon the request of the owner of the land or the joint owners with the floor easement or one of them to the land registry office, it is converted into a condominium in accordance with the conditions specified in this Law." It is said. "The floor easement terminates automatically when the land subject to it is completely destroyed, becomes unfit for construction, or is expropriated." It was written as. In the termination of the floor easement, if no building is built on the land subject to the floor easement within five years, according to the plan given during the establishment of this easement, upon the request of one of the owners, the judge of peace, listening to the relevant parties when necessary, decides to terminate the floor easement or extend it for a certain period of time, depending on the situation. The period can be extended again upon request. When the floor easement is removed in accordance with the above paragraph, the record in the land registry is deleted.

The scope of condominium ownership:

Independent Section: Each of the privately owned sections of a completed and entirely masonry building, such as floors, flats, business offices, shops, stores, cellars and warehouses, which are suitable for use separately and on their own, is called an independent section. The first requirement for establishing an independent section on a building is that the entire building must

be made of masonry. Condominium ownership cannot be established in buildings that are not entirely made of masonry. **Masonry Building:** The type of building whose load-bearing walls are made of materials such as stone, brick, concrete or briquette is called masonry building.

Plugin: Places that are outside an independent section and are directly allocated to that section are called "plugins". The ownership over the extensions is linked to the ownership over the independent section. Here, there is ownership attached to an item. Law No. 634 gave some examples of what can be considered an add-on; Places such as coal shed, water tank, garage, electricity, water and gas meter slots, toilet are add-ons.

Land Share and Common Places Flat owners have shared ownership over the land and common places. Article 3/I of Law No. 634 states that condominium is a special type of ownership related to land share and common areas.

Claim lawsuit against the person who is in unjust possession in the independent section; In order to prevent unfair seizures, a lawsuit for preventing seizures can be filed by the flat owner. Three more special provisions have been introduced by the law to make condominiums independent. According to this;

1. It is not possible to request the elimination of partnership in real estate that is subject to condominium ownership or floor easement. In other words, the owner or owners of one of the independent sections cannot request the elimination of the partnership by sharing or selling against the owners of other independent sections.

2. Each of the independent sections may be subject to lawsuits and pursuits like an independent real estate.

3. If one of the independent sections of a real estate subject to condominium ownership is sold, other flat owners do not have the right to purchase first (right of pre-emption), unless there is a contrary provision in the contract.

Rights in Common Areas Each flat owner has shared ownership rights over common areas. The shared ownership share of the flat owner is exactly in proportion to the land share. The shared ownership share in common areas is inextricably linked to the ownership in the independent section. Although flat owners have the right to use places such as coal sheds, garages, terraces and laundry rooms in proportion to their land share, flat owners can also decide on

the concrete size and form of the right to use common areas by mutual agreement. In addition, due to its nature, every floor owner has the opportunity to use places such as elevators and roofs equally, regardless of their land share.

Obligations of the flat owner;

Payment Obligations: The Law imposes certain payment obligations on flat owners.

Obligation to Participate in Expenses: Each flat owner is obliged to participate in the insurance premiums of the main real estate, the maintenance, protection and repair expenses of all common areas, expenses such as manager's salary, doorman, heater, gardener fees, operating expenses of common facilities and the advance to be collected for expenses. In accordance with the 20th article of Law No. 634, these expenses will be covered equally by the caretaker, heater, gardener and guard expenses and the advance to be collected for them, and other expenses will be borne by each flat owner in proportion to his/her land share.

Compensation Payment Obligation: Compensation payment obligation arises either from the damage caused to other flat owners by violating the condominium rules or from the damage suffered by third parties due to the real estate. The flat owner who causes such damage is obliged to pay compensation to the other flat owner or owners.

a. Management Plan In Law No. 634, The management plan regulates the management style, purpose and form of use, the remuneration to be received by managers and auditors, and other issues related to management. The management plan is like a contract that binds all flat owners. It was written as.

b. Board of Flat Owners The board of flat owners, as the name suggests, consists of all flat owners. If an independent section has more than one owner, one of these owners who will give power of attorney is appointed as a representative in the flat owners' board. The flat owners' board must meet once a year.

c. Manager It is stated that flat owners can give the management of the main real estate to a person of their choice or to a board of three people. The duties of the manager are specified in the management plan.

5.2.5. Municipality Law and Relevant Regulations

As stated in the law, the Municipality is defined as a public legal entity with administrative and financial autonomy, established to meet the common and local needs of the residents of the town and whose decision-making body is elected by the voters.

Municipality: It is a public legal entity with administrative and financial autonomy, established to meet the local and common needs of the residents of the town and whose decision-making body is elected by the voters. The municipality's immovable properties that are allocated for public service or open to public use and do not generate income, as well as their construction and use, are exempt from all taxes, duties, fees, participation and contribution fees, except value added tax and special consumption tax.

Purpose of inspection: Inspection of municipalities; In order to help prevent errors in activities and transactions, to guide the development of employees and the municipal organization, and to make management and control systems valid, reliable and consistent; To analyze, compare and measure the processes and results of services impartially according to legislation, pre-determined goals and objectives, performance criteria and quality standards; to evaluate based on evidence, to report the results obtained and to announce them to the relevant people.

Scope and types of audit: Internal and external audits are carried out in municipalities. Auditing includes legality, financial and performance auditing of business and transactions. Internal and external auditing is carried out in accordance with the provisions of the Public Financial Management and Control Law No. 5018. In addition, the municipality's administrative transactions, other than financial transactions, are audited by the Ministry of Internal Affairs in terms of legality and integrity of the administration. Organizations and businesses affiliated with municipalities are also inspected according to the above principles. The results of the audit are announced to the public and presented to the parliament.

Municipalities, by the decision of the city council, for urban transformation and development areas.

Creating residential areas, industrial areas, commercial areas, technology parks, public service areas, recreation areas and all kinds of social facilities, • Reconstructing and restoring aging city parts,

It can implement urban transformation and development projects in order to take measures against earthquake risk for protecting the historical and cultural texture of the city.. However, in order for urban transformation and development project areas to be declared and implemented in places owned or used by the public, a decision in this direction must be taken by the President upon the request of the relevant municipality and the proposal of the Ministry of Environment and Urbanization.

Metropolitan municipalities are authorized for practices related to zoning operations and evacuation of buildings in the field of urban transformation.

5.2.6. Metropolitan Municipality Law

The duties, powers and responsibilities of the metropolitan municipality are as follows:

a) To prepare the strategic plan, annual targets, investment programs and budget of the metropolitan municipality by taking the opinions of the district municipalities.

b) To prepare, have prepared, and approve and implement master zoning plans at every scale between 1/5,000 and 1/25,000 within the boundaries of the metropolitan municipality, provided that they are in accordance with the environmental plan; To approve, either as they are or with modifications, the implementation zoning plans to be prepared by the municipalities within the metropolitan municipalities in accordance with the master plan, the changes to be made in these plans, parceling plans and zoning improvement plans and to supervise their implementation; To prepare or have prepared the implementation zoning plans and subdivision plans of the district municipalities that have not prepared the implementation zoning plans and subdivision plans within one year from the date of entry into force of the master zoning plan.

5.2.7. Expropriation Law

Expropriation methods of public institutions are purchasing, full or expropriation, easement with expropriation, emergency expropriation, exchange etc. (Ödük and Büyükkaracıgan, 2023).

According to this Law, the basic conditions of expropriation can be listed as follows:

a. For expropriation, there must be immovable properties, resources or easement rights belonging to real and private law legal entities.

b. The essence of the expropriation process must be public interest and public service purposes.

c. There is no need to obtain the consent of the property owners for expropriation.

d. The expropriation process must be carried out in accordance with the law from beginning to end and expropriation must be carried out by the competent public administrations.

e. The expropriation fee is paid in cash and in advance. However, payment can be made in installments in cases specified in the legislation. If payment is made in installments, the highest interest rate applied to government debts is applied to delayed installments.

f. The expropriation process cannot be started without sufficient funds being provided by the administration.

g. Although public administrations are authorized to expropriate, expropriation can also be carried out on behalf of real and private law public legal entities within the framework of the authority clearly defined in special laws.

h. Expropriation can only be carried out by the responsible/authorized public administration. ix. The subject of the expropriation process consists of privately owned immovable properties, resources or easement rights, and transferring the ownership of the movable property to the public is not within the scope of expropriation.

Stages of expropriation process; According to the Expropriation Law, expropriation transactions can be carried out by public legal entities, public institutions and organizations, and real and private law legal entities for whose benefit the right and authority to expropriate is granted. The stages of expropriation procedures can be listed as follows: Preparation of a project for public service, taking a public interest decision, making or having the administration make an expropriation plan, determining the owners and addresses of parcels to be expropriated, placing an "expropriation annotation (administrative annotation)" on the immovable properties subject to expropriation by the land registry office, Formation of the valuation commission and preparation of the valuation report by the commission,

Formation of the conciliation commission, Notification of the invitation letter to the real estate owner for a meeting with the conciliation commission, Conducting bargaining negotiations for expropriation through purchase, Agreement transactions as a result of the bargaining meeting and preparation of the dispute report in case of disagreement, Dispute In case of expropriation, opening an action for determination and registration of the expropriation fee, paying the finalized price and registering the immovable property in the name of the administration or canceling it from the title deed.

The authorities that can make public interest decisions are listed as follows:

Within the scope of Article 7 of Law No. 2942, an administrative annotation is given by the expropriating administration in the "declarations" column of the land registry stating that expropriation will be carried out. The purpose of placing the administrative annotation is to inform the owner and third parties that the administration has started the expropriation work and to ensure that the title deed information of the immovable properties is recorded. To ensure that the land registry office is informed of any possible changes.

Expropriation methods can be listed as Purchasing method, Full expropriation, Partial expropriation, Easement establishment, Expropriation through barter and Urgent expropriation.

Expropriation methods:

a-Purchase method; The principle has been introduced that administrations should primarily apply the purchasing procedure in expropriation transactions regarding immovable properties registered in the title deed. It is done by paying the price in cash by the administration that carries out the expropriation in exchange for the expropriated real estate.

b-Full expropriation; In the literature, the expropriation of an entire property is called full expropriation.

c-Partial expropriation; In practice, the whole of a real estate may be needed for public benefit, or a portion of it may be needed, or an easement right may be established on the parcel. According to Article 12 of Law No. 2942, three different situations may arise regarding the possible value change in the remaining parts of the parcels, some of which have been expropriated.

d- Establishment of easement right; According to the legislation, it is possible to expropriate the ownership of the real estate partially or completely,

and it is also possible to establish easement rights on the real estate. Instead of expropriating the ownership of the real estate, easement can be established through expropriation on a certain section, height, depth or resource of the real estate, if it is sufficient for the purpose.

e-Expropriation through barter; One of the real estate acquisition methods that the administration can use in the expropriation process is the granting of immovable properties instead of the expropriated immovable properties or the practice of barter. However, in the expropriation process by barter, the immovable properties that are not allocated to the public service of the administration are given instead of cash as the expropriation fee.

f- Urgent expropriation; The urgent expropriation procedure provides the opportunity to seize the land, continue public services in a short time and without interruption, and carry out the expropriation process simultaneously, if waiting for the completion of the administrative and judicial stages of the expropriation process causes problems. It is possible to carry out urgent expropriation in cases of homeland defense where the National Defense Obligation Law No. 3634 will be applied, in cases where the President will decide on urgency, and in extraordinary situations foreseen by special laws.

The owner of the immovable property subject to expropriation may file an annulment lawsuit against the expropriation in the administrative judiciary, and a lawsuit for correction in the judicial judiciary against material errors. The administration may unilaterally give up expropriation partially or completely at any stage of expropriation.

Confiscation without expropriation, seizure or confiscation without expropriation is a tort and is not subject to any legal rules and procedures. No processing facility is required. It is the administration's voluntary or involuntary occupation of privately owned real estate, without resorting to expropriation, and its allocation to a public service and a permanent facility on it. In order to talk about the existence of actual reaching out; (i) the seizure must be for the purpose of allocating it to a public service and must be permanent, (ii) the intervention must prevent the owner of the immovable property from using his property right as he wishes, and (iii) the plaintiff must be the title deed owner in the property and compensation cases of the immovable property.

5.2.8. Land Registry Law and Relevant Legislation

In the registration of real estate, if the real estate belongs to the State, the highest official in the place where it is located, if it belongs to a private administration, the governor, if it belongs to a foundation, the foundation manager or officer, if it belongs to the municipality, the mayor, if it belongs to the village, the headman, and if it belongs to other legal entities established by special law, their legal representatives. They are authorized. In land registry transactions of legal entities, it is mandatory to submit a document obtained from the highest civil authority of the place where their headquarters or branches are located, stating that they are allowed to dispose of real estate according to their statutes and that their representatives are authorized to carry out the registration work.

It is clear that there is no land acquisition in the name of private property through land filling, and structures and facilities that are not permitted by law cannot be built in these places. It should be noted that these lands are under the jurisdiction and disposal of the state, cannot be subject to private ownership, and will be left only for public purposes and the construction and operation of facilities that must be on the coast due to their nature.

Real estate sales promise contract and construction contract in return for land share; Real estate sales valley contracts and construction contracts in return for land share, prepared by notaries, can also be annotated in the land registry if one of the parties wishes. If no sale is made within five years from the annotation or if the easement right is not established and registered in the land registry, this annotation will be canceled *ex officio* by the land registry director or land registry officers. Although annotation issues are among the issues that need to be taken into consideration in practice, an expired annotation on the land (immovable sale promise annotation) will be invalid at the end of 5 years in accordance with the relevant article of the law.

5.2.9. Cadastral Law

The places within the administrative borders of the central district of each province and other districts affiliated with that province constitute cadastral regions. Cadastral work area; Each neighborhood within the municipal boundaries and each village outside these boundaries is a separate study area. The study areas for which cadastral survey will begin are announced 15 days in

advance in the regional center, in the study area, and in neighboring villages, neighborhoods and municipalities by usual means. It is determined by a report that the announcement was made. Since this announcement has been made, the local civil authority, local cadastral and civil courts, land registry office, finance institution, foundations administration, special provincial administration, and if relevant, the local units of the forest administration and other public institutions and organizations are informed. In the information letter, if there are immovable properties within the borders of the village or neighborhood whose cadastre will be started, it is requested to send information, documents and maps regarding them to be evaluated during the delimitation and determination.

Objection to cadastral determination: For forest parcels, from the date the cadastral reports are drawn up to the date the report stating that there are no forest parcels left to be measured in the study area. can be objected to.

Finalization of the cadastral reports: After the 30-day suspension announcement period has expired, the limitations and determinations regarding the cadastral records for which no lawsuit has been filed within the announcement period, the start and end dates of the suspension announcement in the blank date section of the relevant column on the back page of the cadastral minutes, and the end of the suspension announcement in the blank section under this column. It is finalized and approved by the cadastral director by writing the date of the following day.

5.2.10. Law and Implementation Regulations on Building Inspection

The productions carried out during the construction process are controlled by independent inspection organizations, authors and relevant administrations, with the aim of preventing productions contrary to legal regulations. Within the scope of zoning legislation, there are many laws and regulations that need to be informed during the construction phase. The most important of these Law No. 4708 on Building Inspection, Building Inspection Implementation Procedures and Principles Regulation and Building Inspection Implementation Regulation. Building inspection implementation regulations have been put into effect to provide solutions to the problems encountered in practice.

This law regulates the procedures and principles regarding building inspection and providing project and building inspection in order to build quality buildings according to the zoning plan in order to ensure the safety of life and property.

One of the prerequisites for creating living environments in cities that are healthy, have a high quality of life and are compatible with national and international living standards is that building inspection is carried out and this inspection is defined and decided by laws and regulations.

Building inspection organizations are obliged to fulfill the following duties:

1- To give a letter of undertaking to the relevant administration stating that it has undertaken the construction inspection, to sign the relevant part of the building license, and to notify the Ministry of information regarding this building within seven days from the date of issuance of the building permit.

2- To supervise the construction of the building in accordance with the license and its annexes and the legislation.

3- To check the compliance of the materials used in construction works and the manufacturing with the project, technical specifications and standards, and to document the results, and to carry out experiments on materials and manufacturing.

4- To give a copy of the documents regarding all inspection services performed to the relevant administration, and to notify the relevant administration and provincial industry and/or trade directorates with a report if they determine that the materials and manufacturing used in the building are against the technical specifications and standards during their inspections.

5- To notify the relevant administration within three business days in case of any application contrary to the license and its annexes.

6- To have tests regarding soil, materials and manufacturing carried out in laboratories in accordance with specifications and standards.

Responsibilities of building inspection organizations and tasks that cannot be done;

1- In the implementation of this law, building inspection organizations assume the technical liability stipulated in accordance with the zoning legislation towards the relevant administration.

2- Building inspection organizations, auditor architects and engineers, project designers, laboratory officers and building contractors, together with the building owner and the relevant administration due to the building damage caused by the building being built in violation of the license and annexes, science, art and health rules, incomplete, faulty and defective. They are liable to the extent of their faults.

3- After obtaining a building permit, the person who makes unauthorized renovations is responsible for any structural damage that may arise from major renovations carried out without permission from the relevant administration.

4- The building inspection organization is not responsible for damages arising from landslides, avalanches, rockfalls and floods that occur outside the parcel and cause damage to the structure, despite the written warning of the building owner.

5- Managers, partners, auditor architects and engineers of building inspection organizations, project designers, laboratory officers and building contractors; is responsible for any structural damage resulting from the implementation of this Law.

6- The building inspection organization cannot engage in any other commercial activities other than inspection activities. The auditor architects and engineers of this organization are prohibited from engaging in any other professional or commercial activities related to construction works during the audit activity.

Suspension of the inspection activity and cancellation of the permit.
Building inspection organizations,

1- Those who are understood to have not fulfilled their audit duties in accordance with the principles stipulated in this Law,

2- Those who have a negative record three times in the last 3 years

3- Those who engage in other commercial activities and work in a building inspection organization, and those who are determined to have violated the provisions of notifying the Ministry of their resignation. The inspection activity is suspended by the Ministry for up to one year upon the proposal of the building inspection commission and the certificate is temporarily withdrawn.

5.2.11. Law and Implementation Regulation on The Transformation of Areas Under Disaster Risk

The Ministry may ask the owners or their legal representatives to identify risky structures by giving time. If it is not done within the given period, the determinations are made or made to be made by the Ministry or the Administration. The Ministry may also ask the Administration to identify risky structures in the areas it has determined, by giving time. Owners or their legal representatives may object to risky building determinations made by the Ministry or the Administration within fifteen days. These objections are examined and decided by technical committees formed by the universities, upon the request of the Ministry, with the participation of four faculty members of the relevant professional discipline and three people from the Ministry.

Risky structures are notified to the relevant land registry office by the Ministry or Administration within ten business days from the date of detection, to be stated in the declarations section of the land registry. Owners of real and personal rights are informed by the relevant land registry office about the indications entered in the land registry. Upon the request of the Ministry; The immovable properties that are privately owned by the Treasury in risky areas and reserve building areas, including the areas within the scope of the Law on Execution of Consumption for the Settlement Needs of the Ministry of National Defense and the Authorization for the Sale of No longer Needed Real Estate Used by this Ministry and the Law on Military Restricted Zones and Security Zones; a. Those allocated to public administrations, by the decision of the President, b. Those that are not allocated to public administrations are allocated to the Ministry, after taking the opinion of the relevant public administration, or can be transferred to TOKİ and the Administration free of charge upon the request of the Ministry.

Detection of risky area Risky area:

- 1- Coordinated delimitation map including the size of the area and the implementation zoning plan, if any,
- 2- List of public immovable properties in the area,
- 3- Satellite image or orthophoto map of the area,
- 4- Geoscientific survey report if it is desired to be determined as a risky area due to the ground structure,

5- Other information and documents requested by the Ministry according to the characteristics of the area are determined by the Ministry based on the file prepared to contain it and by taking the opinion of the Disaster and Emergency Management Presidency and submitted to the President as a proposal.

By the Ministry;

1- In places where public order or security is disrupted in a way that stops or interrupts normal life;

a- Insufficient planning or infrastructure services,

b- There is a construction that violates the zoning legislation,

c- In case of damage to the infrastructure or superstructure and one or more of the reasons exist together,

2- In areas where at least 65% of the total number of buildings are in violation of the zoning legislation or were built without a building permit but subsequently received a building and occupancy permit, the areas determined by taking into account the integrity of the application are submitted to the President as a proposal to be determined as risky areas.

TOKİ or the Administration may request risky area determination from the Ministry based on the file containing information and documents regarding risky area determination.

Risky buildings are determined according to the Principles for Identification of Risky Buildings.

1- Building owners are requested to evacuate and demolish risky buildings within a period of not less than sixty days.

2- Demolition permit; Upon the application of one or more of the building owners or their representatives, the building to be demolished is evacuated and electricity, water and natural gas services are turned off, and the documents obtained from the relevant institutions and organizations are submitted and the static technical responsible is determined as the demolition responsible, within six business days, without the consent of the owners.

3- It is checked on site whether the risky buildings have been demolished within this period given in paragraph (a), and if the risky buildings have not been demolished by their owners, a notification is made stating that the building will be demolished by the administrative authorities and an additional period of less than thirty days is given.

In order to evaluate the objections against risky building determinations, a sufficient number of technical committees are formed in places deemed necessary by the Ministry, depending on the need.

5.2.12. Legislation Regarding Real Estate Leases

A rental agreement is a contract in which the lessor undertakes to leave the use of something or benefit from it along with use to the lessee, and the lessee undertakes to pay the agreed rental fee in return.

Tenant's Debts;

a. Obligation to pay the rent: The tenant is obliged to pay the rent. In case of default, the period given to the tenant is at least ten days, and for residential and roofed workplace rentals, at least thirty days. This period starts from the day following the date of written notification to the tenant.

b. Obligation to use with care and respect neighbors: In case the tenant violates this obligation, the lessor gives a written warning in residential and roofed workplace rents, giving at least thirty days to correct the violation, otherwise he will terminate the contract.

c. Obligation to pay cleaning and maintenance expenses: The tenant is obliged to pay the cleaning and maintenance expenses necessary for the ordinary use of the leased property. In this regard, it will be essential to take action by taking into account local customs.

d. Obligation to notify the lessor about defects: The tenant is obliged to notify the lessor without delay about the defects that he is not obliged to repair; Otherwise, he/she is responsible for the damage resulting from this.

e. Obligation to endure the elimination of defects and display of the leased property: The tenant is obliged to bear the efforts to eliminate the defects of the leased property or prevent damages.

Termination of the Contract occurs in several ways.

a- expiration of time

b- Termination notice in indefinite-term rental agreements

c- In real estate and movable building leases, each Party may terminate the lease agreement for a real estate for the end of the lease period determined by local custom or, in the absence of such a custom, for the end of the six-month lease period, by complying with a three-month termination notice period.

In real estate leases, the lessor has the right of lien on the movables in the leased property that are used to furnish or use the leased property, as security for the outstanding one-year and the current six-month rent.

General provisions regarding residential and roofed workplace leases and termination of the contract:

By notification: In residential and roofed workplace rentals, unless the tenant gives notice at least fifteen days before the end of the fixed-term contracts, the contract is deemed to be extended for one year with the same conditions.

Through litigation: the lawsuit is based on the reasons arising from the lessor, the needs of the new owner and the reasons arising from the tenant. Their scope is briefly explained below:

1- For reasons arising from the lessor: The lessor has the right to request the termination of the contract due to needs, reconstruction and zoning reasons. The lessor signs the lease;

a- If he/she is obliged to use the rented property due to housing or workplace needs for himself/herself, his/her spouse, descendants, superiors or other persons he/she is obliged to look after by law,

b- If the leased property needs to be substantially repaired, expanded or replaced for the purpose of reconstruction or development and it is impossible to use the leased property during these works, at the end of the period in fixed-term contracts, in indefinite-term contracts, from the date to be determined in accordance with the general provisions regarding the lease, the termination period and the periods foreseen for termination notice. may be terminated by filing a lawsuit within one month from

2- Requirement of the new owner: If the person who subsequently acquires the leased property is obliged to use it for himself, his spouse, his descendants, his ancestors or other persons he is obliged to look after by law, due to the need for housing or workplace, provided that he notifies the tenant in writing of the situation within one month starting from the date of acquisition, He can terminate the lease by filing a lawsuit after six months.

3- For reasons arising from the tenant: If the tenant has not vacated the leased property despite having undertaken to vacate the leased property on a certain date in writing against the lessor after the delivery of the leased property,

the lessor may terminate the lease agreement by applying for enforcement or filing a lawsuit within one month starting from this date.

Renting of public real estate; Article 1 of the State Procurement Law states that the rental works of the departments included in the general budget, annexed budget administrations, special administrations and municipalities will be carried out in accordance with the provisions of this Law. Article 53 of the law states that “All tenders are concluded with a contract. The contract is signed by the delivery manager on behalf of the administration. It is not mandatory to conclude a contract in special cases specified in this Law. For this reason, it is a necessity to prepare a contract in rental transactions carried out in accordance with this Law.

5.2.13. Property Tax Law

The term building in the law covers all fixed construction, both on land and on water, regardless of the material of which it is made. In the implementation of this law, the building accessories specified in the Tax Procedure Law are also taken into consideration together with the building. Floating docks, other floating structures, tents, mobile homes that can be attached to transport vehicles and the like are not considered buildings. According to Tax Procedure Law; The land that is integral to the buildings within the municipal borders and the buildings within the village and neighborhood community in places where there is no municipal establishment, and the land used together with the buildings allocated to commerce and arts wherever they are, is considered as the land that complements the building in determining the tax value. The courtyard, garden and similar land that surrounds the building and forms a unity with the building in terms of its use will be considered integral to the building, whereas the garden and similar land that can be used separately from the building and does not constitute unity with the building will be valued as parcel or land. The taxpayer of the building tax is the owner of the building, the usufruct owner, if any, or if neither of them are present, those who dispose of the building as the owner of the building, and they pay the resulting tax. Those who own a building in shared ownership are liable in proportion to their shares. In joint ownership, the owners are jointly and severally liable for taxes.

Beginning and Ending of Building Tax Liability; The beginning and ending of building tax liability differ from land and parcel taxes. Liability of building tax according to the legislation; In case of reasons that change the tax value, the date on which these changes occur, If there is an increase or decrease in the value of the buildings in a city, town or village exceeding 25% due to any reason, the date of the assessment based on this situation, Every four years In the case of appraisal transactions, the date on which the appraisal is made and the date on which the exemption ends starts from the following budget year. The liability for buildings that burn, collapse, become completely unusable or gain exemption conditions while being subject to tax ends as of the installment following the date on which these events occur. Taxes for buildings whose occupancy and use are prohibited based on the authority granted by law are not collected upon the taxpayers notifying the tax office of the situation or upon the tax office's ex officio determination, starting from the installments that come after the dates when these events occur, as long as these situations continue.

Lands and parcels located within the borders of Türkiye are subject to Land Tax in accordance with the provisions of this law. Land parceled out by the municipality within the municipal borders is considered as land. The decision of the President determines which of the unparcelled lands located within or outside the municipal borders will be considered as land according to this law. Unless otherwise provided, the term land in other articles of this law also includes land.

Land Tax is paid by the owner of the land, the usufruct holder, if any, or otherwise, those who save the land, such as the owner of the land. Those who own a land in shared ownership are liable in proportion to their shares. In joint ownership, the owners are jointly and severally liable for taxes. Land Taxes paid by people who do not dispose of the land for the land whose ownership is in dispute are rejected and refunded to those involved in the dispute, provided that they apply within one year from the date of decision, if the dispute ends against the payer.

5.2.14. Taxation of Real Estate Purchase, Sale and Construction Profits

Taxation of purchase, sale and construction profits of real estate is generally regulated in the following laws. These are;

- Income Tax Law,
- Corporate Tax Law
- It is the Value Added Tax Law.

The Income Tax Law regulates tax transactions for real persons, and the Corporate Tax Law regulates tax transactions for corporations. In this section, a summary of the taxation of real estate purchase-sale and construction profits in all three laws is presented below.

a- Income tax Income of real persons is subject to income tax. Income is the net amount of earnings and income earned by a real person within a calendar year. The basic elements of income tax are clearly listed in the legislation as follows:

Earnings and revenues included in income are as follows: Commercial earnings, Agricultural earnings, Wages, Self-employment earnings, Real estate capital revenues, Movable capital revenues, Other earnings and revenues. Unless otherwise provided in this Law, the above-mentioned earnings and revenues are taken into consideration with their real and net amounts in determining the income.

Liability of Income Tax;

Full Liability; The following natural persons are taxed on all of their earnings and revenues earned within and outside Türkiye:

Profits obtained from the purchase, sale and construction of real estate are subject to tax in two ways, depending on their nature. These are;

- a- Commercial income,
- b- Other earnings and revenues.

Commercial Earnings: Profits arising from all kinds of commercial and industrial activities are commercial earnings. In the implementation of this law, the following earnings are considered commercial earnings. Profits obtained from these businesses of those who are constantly engaged in the purchase, sale and construction of real estate, and from the parceling of the land purchased or acquired by barter within 5 years from the date of acquisition and its partial or complete sale within this period or in the following years.

b- Corporate tax law: Subject of Tax and Taxpayers The profits of the institutions listed below are subject to corporate tax:

Full liability: Among the institutions listed in Article 1 of the Law, those whose legal or business headquarters are in Türkiye are taxed on all of their earnings both inside and outside Türkiye.

Narrow liability: Among the institutions listed in Article 1 of the Law, those whose legal and business centers are not both in Türkiye are taxed only on the earnings they earn in Türkiye.

5.2.15. Taxation of Profits Obtained From Renting Real Estate

Taxation of profits obtained from renting real estate is generally regulated in the laws listed below. These; These are the Income Tax Law, Corporate Tax Law and Value Added Tax Law. The Income Tax Law regulates tax transactions for real persons, and the Corporate Tax Law regulates tax transactions for corporations. Income of real persons is subject to income tax. Income is the net amount of earnings and income earned by a real person within a calendar year.

Exceptions regarding the rental of real estate; A certain amount of revenue obtained within a calendar year from renting out buildings as residences is exempt from Income Tax. If revenue is obtained above the exemption limit but is not declared or is declared incompletely, this exception cannot be used. Those who are obliged to declare their commercial, agricultural or professional income with an annual declaration and those who have earned revenue above the exemption limit, whether declared separately or together, Those whose total gross amounts of (i) wages, (ii) movable capital income, (iii) real estate capital income and (iv) other earnings and income exceed the amount included in the third bracket of the tariff written in Article 103 for wage income, do not benefit from this exception. The exemption for rental income is only valid for rental income from residences. This exception cannot be applied to income obtained from renting a workplace.

Real Estate Capital Income: The integral parts and accessories of real estate, which are rented separately, as well as all installations, fixtures and furnishings. Rights registered as real estate. If the income listed above is obtained by commercial enterprises, it must be included in commercial income.

5.2.16. Regulation on Occupational Health and Safety in Construction Works

The purpose of this regulation is to determine the minimum occupational health and safety conditions to be taken in construction works. In the regulation; It includes provisions such as obligations of employers, responsibilities of the project manager and employers, appointment of health and safety coordinators, health and safety plan and notification.

General principles during the project preparation phase: The employer or the project manager should take into account the principles of risk protection at various stages of the design and preparation of the project, especially in the following cases:

a- When making decisions regarding architectural, technical and organizational issues in order to plan the different elements and stages of the construction work that occur simultaneously or one after the other.

b- When calculating the time required to complete the job or job stages, taking into account the criteria in the relevant professional discipline.

Duties of health and safety coordinators during the project preparation phase

a- It coordinates the fulfillment of the obligations in this Regulation.

b- Prepares or ensures the preparation of the health and safety plan.

c- Prepares a health and safety file containing health and safety information to be taken into account during successive or subsequent works during the project. It is ensured that the same file contains the information needed to safely carry out all kinds of construction work such as cleaning, maintenance, renovation, renovation and demolition works after the project is completed.

Duties of health and safety coordinators during the project implementation phase

1- Health and safety coordinators, during the project implementation phase;

2- Coordinates the implementation of risk protection principles.

6. NEW APPROACHES and TRENDS in REAL ESTATE DEVELOPMENT

There are two important criteria in real estate development projects. The first of these is to develop a project that will obtain maximum benefit in the area where the project will be carried out; The second is to develop the concept of the project directly related to the sale of the project. Correct planning stages are needed for any real estate project development process to be successful. The planning stages taken into account when preparing a real estate project from scratch are also applied in the same way for the development of an existing project. Each of the project development and planning steps within the process must be implemented meticulously and each stage must be controlled.

Preparing a successful project in the real estate sector requires completing many stages with dedication. Project steps may vary depending on the current structure of the project. The return of the project, profitability, costs and all other necessary elements are determined through the real estate project development and planning stages.

The results obtained with correct analysis will increase the efficiency of the projects. It is necessary to establish a good balance between land efficiency and concept efficiency. The fact that the project offers a different and innovative living concept is of great importance when considering purchasing. It is important to combine the living space concept with any historical region or city, to highlight the power of nature or to develop the concept with details that can really attract people's attention.

Especially mega projects such as Galataport Istanbul, Istanbul Financial Center, Tersane Istanbul (Haliçport) and Peninsula Izmir, which have been recently completed or are under construction; While increasing national and regional economic activity, it also increases the value of nearby projects.

E-commerce, which is a type of commerce where services and products are brought together with consumers through online channels, has become more popular, especially after the pandemic. The increase in e-commerce demand has led to an increase in the number and volume of specialized real estate areas such as warehouses, data centers, logistics and distribution centers in the value chain. Today, E-commerce companies occupy a high potential industrial real estate area at every stage of the supply chain and in different locations.

Türkiye, one of the world's most popular holiday destinations, is a pioneer in the tourism industry with the help of strong real estate and construction sectors. This power also holds great opportunities for international luxury hotel chains. Considering the country's health infrastructure and depth of human resources, health tourism stands out as a high-potential investment area in terms of the real estate opportunities it offers.

Türkiye is one of the most popular holiday destinations in the world. Strong real estate and construction sectors also contribute greatly to Türkiye's power in this field. This power also offers great opportunities for international luxury hotel chains. Considering the country's health infrastructure and depth of human resources, health tourism stands out as a high-potential investment area in terms of the real estate opportunities it offers.

The Turkish economy exhibited a V-shaped recovery in manufacturing. With increasing exports, the need for industrial facilities also increases. As a result, it creates new real estate investment opportunities in industrial regions in Türkiye. In addition, with the increasing competition in the knowledge economy and industry, the private sector and state-supported interface institutions are making major investments in the field of regional development. These featured institutions create new real estate opportunities that will increase in value in the medium-long term.

Incentive in real estate service exports means that our sector can receive support for activities such as promotion, advertising, marketing, organization and participation in international markets. The sector will grow when incentives are given to companies that are competent in real estate sales to foreigners and have the potential to appeal to large markets. In order to direct the incentives that can be given to intermediary institutions that provide real estate sales services abroad in the most efficient way, training and certification procedures are required for the companies.

In recent years, interest in mixed projects including commercial areas and shopping malls has been increasing. Because the presence of functions such as offices, residences and hotels in the same environment makes the lives of project residents easier. In fact, the modernized, convenient and compressed model of the old "neighbourhood culture" is taking its place in mixed projects. However, it should not be forgotten that, with the restrictions brought by the Pandemic, while the demand for traditional offices decreased, a new working

order in which flexible and remote working models were adopted was implemented. It is thought that managers will need less office space in the next 5 years. In the coming years, harmonizing the real estate strategy with the hybrid working strategy will accelerate.

In the past, when you left home in the neighborhood, you could shop from shopkeepers and find whatever you were looking for in a short time. In mixed projects, the advantage of experiencing a small neighborhood culture within the project and benefiting from different functions together in a short time is offered. The shopping mall located in a mixed project should be compatible with the general concept of the project.

Correctly determining what customers expect from purchasing real estate is necessary for the design of successful projects. A newly designed project must fully meet the characteristics of the real estate that customers want to own. To achieve this, comprehensive studies should be carried out regarding customer expectations.

It is important to balance supply and demand in the real estate sector. In order for a real estate to reach the supply-demand price balance at the most optimal value, the right buyers and sellers must meet in the market. In conclusion; Market expectations should always be taken into account during the project development process. It is clear that projects that ignore market expectations will not be permanent. In real estate development projects, presenting concepts that will not strain purchasing power in the most efficient and interesting ways will add value to the project.

In Türkiye, GYODER members introduced the Public Private Partnership (PPP) model to solve the affordable rental problem of middle-income citizens. In the model that eliminates the cost of land and offers the opportunity to rent for 49 years, a household with an average income of 40 thousand TL will allocate 30 to 50 percent of its earnings for rent.

Taking action against exorbitant price increases, Real Estate Investment Partnership Association (GYODER) announced the 'GYODER New Housing Model' developed in public-private cooperation to solve the problem of accessible rental housing. Affordable housing will be produced for middle-income people in the model, which eliminates the cost of land with public land support and enables long-term tenancy such as 49 years.

This model reduces rents by half by reducing the cost of land to zero. While houses are produced on the lands that will be put into use with the public and private sector cooperation model, the ownership of the lands remains with the state. Rents are removed from the control of landlords and given to the equitable control of the state and the management of corporate companies. In this way, the surrounding settlements will become cheaper with low rent figures.

The land permit, zoning and licensing process determined by the public (20 years or more) will be prepared.

- The private sector will bid for the land.
- The transferee will establish a Special Purpose Company (SPV) for the project.
- The rental fee will be determined and the rental will be made by the company in charge.
- Rent fees will be determined by the state.
- Lease agreements can be 3 years or longer if desired.

- At the end of the contract period, the ownership rights of the houses will be transferred to the state.

- A special purpose company will find financing, design, construction and repair will be carried out.
- Production will decrease by 50 percent because the public allocates land.
- It will not exceed 1/3 of the household income.
- There will be a long-term lease of 49 years.
- Financing will be provided through the issuance of securities based on rental income.
- The title deeds of the houses will be given to the tenants.

Developing real estate often requires a process that spans years and consists of a series of steps along the way. Due to the complexity of this process, risks are many and it is not uncommon to encounter unforeseen obstacles along the way. This makes it vital that anyone considering joining has a comprehensive and in-depth understanding of how to navigate the stages of development to one day secure the satisfying returns on investment (ROI) sought.

Before starting housing projects with million-dollar turnover, market research must be carried out, which will cost a very small amount in addition to the turnover. Correct planning stages are needed for any real estate project development process to be successful. The planning stages taken into account when preparing a real estate project from scratch are also applied in the same way for the development of an existing project. Each of the project development and planning steps within the process must be implemented meticulously and each stage must be controlled. Even the slightest mistake made in the planning processes in the real estate sector can lead to the project being inefficient, contrary to expectations. For this reason, project development and planning stages should be checked back and rechecked periodically.

Preparing a successful project in the real estate sector requires completing many stages with dedication. Project steps may vary depending on the current structure of the project. The return of the project, profitability, costs and all other necessary elements are determined through the real estate project development and planning stages.

The results obtained with correct analysis will increase the efficiency of the projects. It is necessary to establish a good balance between land efficiency and concept efficiency. The fact that the project offers a different and innovative living concept is of great importance when considering purchasing. It is important to combine the living space concept with any historical region or city, to highlight the power of nature or to develop the concept with details that can really attract people's attention.

Since the important thing in real estate development projects is to develop a project with high saleability, it is necessary to examine the target audience. After determining the target audience, the analysis will find answers to the questions of what the audience's needs are, what kind of place they want to live in, what kind of housing they prefer and what their ability to pay is.

In fact, the modernized, convenient and compressed model of the old "neighbourhood culture" is taking its place in mixed projects. According to the latest research, mixed-use assets, improved transport links, and greater use of technology and smart mobility solutions are essential to the economic growth and real estate investment potential of European cities.

6.1. Purpose-Fit Properties

COVID-19 was observed in many patients with symptoms especially fever, cough and shortness of breath. There were many deaths (Büyükkaracıgan and Ödük, 2022). It has affected all phases of life as well as the real estate development industry.

In order to overcome this difficulty, designing flexible real estate is on the agenda. In this way, it is ensured that the uses offered by the real estate can be changed in order to be useful over time. Its transformation regarding environmental sustainability and social impact is taken into consideration.

Renewal or update of existing stock includes restructuring or complete change of use to meet the changing needs of similar types of users, that is, adaptation to new use. Development projects carried out for this purpose are not carried out only to counter the threat of obsolescence. They are also designed to obtain the main assets of the adaptation or improvement of an existing building for new use.

Especially in the 2020-2023 period, most of the offices were converted into residences. While the most frequent change in retail was towards mixed use, the change towards housing followed. While these trends are expected to continue to a large extent in the next five years, the share of logistics in the retail field is also increasing.

From this perspective, two types of development are particularly on the agenda. The first are small apartments for people with low budgets. Studio type apartments have been trending in the last 5 years. The second type is villas with gardens rather than residential complexes for wealthy people. Secure houses with gardens are very popular.

6.2. Business Environment Approach

The increase in interest rates due to rising inflation dragged the whole world into recession and caused a decrease in the growth rate of the real estate development sector. There are negative situations such as increasing unemployment rates in the world, energy crisis, and supply difficulties. Concerns about inflation, interest rates and economic growth in Europe and around the world have increased significantly compared to last year.

Here, investors invest especially in housing and logistics buildings because they find them safer. However, with the expansion of the production sector, the demand for industrial buildings also increases.

The biggest problem at this point is the increase in construction costs due to the density in supply chains. Macroeconomic problems in the world and disasters resulting from climate changes also cause environmental and social problems. For this reason, it is thought that land will be the new investment trend in real estate.

6.3. Environmental, Social and Governance Impact (ESG)

For a long time, the real estate sector has been projects carried out solely for profit purposes and investments where social and environmental sensitivity is at a minimum. However, especially with the COVID-19 pandemic, this trend has begun to reverse. Awareness of the environmental and social impacts of the real estate sector is increasing day by day among developers. The main reason for this is; It is the demand from users of real estate products. Users now establish an emotional bond with the places they live in and see these places as a means of social status.

Certification systems have been developed by developed countries by introducing certain standards regarding sustainable buildings. Green buildings, which are certified as buildings that respect nature, are ecologically comfortable and reduce energy consumption, have created a new sector. An internationally accepted certification system not only adds value to a new project, but also guides project developers on how to achieve sustainability goals.

Green building evaluation systems and certification programs play an important role in revealing the environmental impacts of buildings objectively and concretely. Green building evaluation systems are divided into two groups: life cycle assessment (LCA) methods and criteria-based certification programs. LCA methods are generally used in the design phase of buildings for purposes such as material and product selection and evaluation of service system options. LCA is a 'cradle-to-grave' approach to evaluating the environmental performance of products and services.

Criteria-based evaluation and certification programs have come to the fore and become widespread because they subject structures to a more

comprehensive and objective evaluation, are easy to implement, and the results are concrete and easy to understand.

New trend in real estate projects; Issues such as energy and water consumption, waste management, net zero carbon, air quality, ecology, interaction with the immediate environment, use of local materials in construction, and reducing raw material transportation trips have become important. The type of real estate that responds to these sensitivities is green buildings. Green buildings; It provides a sustainable income stream by providing high sales returns and higher demand. In addition, it reduces energy consumption and therefore operating costs. Therefore, green buildings are assets with much lower risk and higher value than standard buildings. It is thought that green building development projects will come to the fore in the coming years. Thus, low carbon regulations can be an important opportunity area for emerging markets.

In the new era, real estate investors and users are looking for security, access to clean water and air, access to green areas and social and cultural facilities, well-being and health of living, working and visitors, access to education and employment opportunities, lively and safe public spaces/neighbourhoods, protection of tenant rights. They attach more importance to issues such as housing and satisfaction, housing opportunities and affordable rents, support for local businesses, participation in planning, and inclusion/diversity in terms of spatial, social and business life. In this case, it emphasizes the necessity of planning building types that are sensitive to the social environment.

Issues such as how the value of virtual lands will be formed, how rental income will be generated, what are the factors that will affect the value of virtual real estate, which virtual lands will be valued, which Metaverse environments can be purchased, etc. are topics that are wondered by investors. It is expected that a cooperation agreement will be signed with real estate companies. In this way, the buying and selling of land in the digital world will soon be possible by companies operating in the real estate sector in the real world. Thanks to Metaverse, which is expected to create a big change in the real estate market, houses for sale will be able to be visited in 3D, regardless of time and place. On the other hand, the number of people buying and selling land in the virtual world is expected to increase in the coming years.

6.4. Using Technological Innovations in Real Estate Development

The use of new technologies provides successful results in real estate development in terms of efficiency, sustainability and overall project results. Building Information Modeling, one of such innovations, facilitates the design and construction process of development projects. Virtual Reality and 3D Modeling allow developers, architects and clients to visualize projects before they are built, making it easier to identify potential problems and make adjustments early in the process. These are:

Improved communication: Clients can better understand the context of the project. Provides vision and more accurate feedback.

Reduced costs: Identifying and addressing problems early can save you money on building and construction costs.

Faster decision making: With a clear visual presentation, stakeholders can make informed decisions faster.

New technology building materials also contribute to both building safety and building aesthetics. In addition, advances in construction materials, such as self-healing concrete and energy-efficient insulation, contribute to the development of more sustainable and durable structures. In addition, site management with active management becomes important. It is important to bring housing and public buildings, which are of great importance to people in terms of social, security, economic and shelter, to certain standards. The purpose of this is to establish active management that enables the people living in it to continue their lives at a certain level of welfare and security (Ödük, 2022).

Smart technology refers to devices and systems that are connected to the internet and can be controlled remotely. These devices use sensors, cameras, and other technologies to collect and provide insights that can be used to optimize data. This technology is successful in terms of energy use, increasing security and comfort. Smart thermostats, smart lighting systems that can be controlled with a smartphone or voice commands, smart locks, smart security systems that use cameras and sensors, and smart devices that can be controlled remotely and provide real-time data about energy use are used in buildings. Smart buildings, an example of the new trend in real estate development, are equipped with this technology. With smart structures:

Increased energy efficiency: Smart technology can help reduce energy use by optimizing heating, cooling and lighting systems.

Enhanced security: Smart security systems can make homes safer by providing real-time alerts and video footage of potential intruders.

Enhanced comfort: Smart thermostats and lighting systems can be customized to meet individual homeowners' preferences, creating a more comfortable living environment.

Higher property values: Homes with smart technology features are more attractive to buyers and can command higher prices in the market.

Another use of technology is the use of drones for site analysis, monitoring and marketing. This technology also helps developers in selecting project land, monitoring site management, and promoting properties to potential buyers. Another technology, virtual and augmented reality tools, are transforming property marketing and sales by providing immersive, interactive experiences for potential buyers even before construction is completed (Wang et al., 2018).

In addition, information technologies and expert systems are used in the design, construction, marketing and management of real estate development projects. Deep integration of robotic process automation, artificial intelligence and process mining technologies is turning into an important factor for efficiency. In response to accelerated decision-making processes, digital information overload, and flexible working models, converged technologies that automatically analyze and execute processes are emerging. Their use creates the right conditions for data-driven business development.

6.5. Mixed-Use Real Estate Development

Mixed-use real estate development refers to the integration of various property types, such as residential, commercial and industrial spaces, into a single development project. This approach to real estate development has gained popularity in recent years due to its potential to create sustainable, vibrant and diverse communities. Mixed-use developments often include a combination of housing, office spaces, retail, and recreational facilities that can contribute to a higher quality of life for residents and increased economic activity in the area.

One of the key benefits of mixed-use development is the efficient use of land and resources, as it promotes compact urban form and reduces the need for extensive infrastructure. Additionally, mixed-use developments can foster social interaction and a sense of community by providing a variety of amenities and services in the immediate area. However, planning and execution of mixed-use projects can be complex as they require the collaboration of various stakeholders, including developers, architects, engineers and local authorities. Additionally, financing mixed-use developments can be difficult due to the different nature of the property types involved and the potential risks associated with market fluctuations.

In recent years, interest in mixed projects including commercial areas and shopping malls has been increasing. Because the presence of functions such as offices, residences and hotels in the same environment makes the lives of project residents easier.

6.6. Real Estate 4.0

While technological developments in the world change with increasing acceleration day by day, they also affect the real estate sector, as seen in many sectors under the influence of technology. In the third industrial revolution, based on computers and automation, designed by humans but providing less human physical input, new factory styles, close-quarter housing for only needed senior workers, the concept of electronic homes and the emergence of different family structures, as well as the emergence of traditional manual labor It has led to consequences such as abandonment of labor. In the fourth industrial revolution, where cyber-physical systems and autonomous production emerged, the production system, whose meaning and value changed with the concept of "smartness", state-of-the-art transportation systems, high-rise, multi-day buildings that communicate not only with the central management unit but also with each other through sensors and fiber network infrastructure. The ultimate point in production and consumption has been reached with its multi-functional complex smart buildings, where you can work, go to school, shop, go to the cinema, do sports, travel, do recreation activities and spend your free time without even leaving the area.

Although one of the most basic features of the real estate sector is the mutual relationship based on the interaction between the customer and the real

estate agent, technological developments in today's conditions have managed to carry this relationship to all kinds of environments. These features, inspired by the basic components and technological tools of Industry 4.0; Real Estate 4.0 refers to a digital transformation in which every sub-sector and activity of the real estate market is controlled through artificial intelligence, digitization and automation systems.

Among the main features of Real Estate 4.0: Big data analytics, Virtual reality, Blockchain technology, Internet of things, Artificial intelligence, 3D visualization is located. It is inevitable to see the positive impact of Real Estate 4.0 in different processes such as digitalization in the real estate field, especially the research, visibility, examination, evaluation and acquisition of a real estate that is planned to be acquired.

Real Estate 4.0 increases the awareness of investment opportunities in the real estate market. Transformation is achieved in the housing market with Real Estate 4.0. A real estate database is created - which creates an infrastructure demand that requires big data.

Property transactions are automated – digitalization brings with it the demand for automation.

Property management is secured and digitized – ensuring transparency in property management. With Real Estate 4.0, transparency is ensured in real estate management. Real Estate 4.0 presents a tactical opportunity for users and developers in the industry. In the digitalization process of Real Estate 4.0, real estate equipment offers great opportunities. One of the important advantages of Real Estate 4.0 is achieved by combining automation systems and infrastructure with a common language.

With Industry 4.0, the last link of the industrial revolutions, many concepts such as big data, internet of things, artificial intelligence, augmented reality, machine learning, 3D printing, cloud systems and blockchain technologies have gained a great place in the language of human beings, from young to old. In this age of digital industrial revolution, it has become inevitable for people, time and space to transform in the context of "smartness". Industrial revolutions have caused radical changes in the field of real estate, as in every field.

Digitalization in real estate and property management has played a facilitating role in adapting to the changing conditions of the age, providing

benefits for the stakeholders of the sector in many ways. Real estate has been moved to the fourth and even fifth dimension through residences that can be viewed without leaving, smart buildings that can be controlled with a single button, properties that can be accessed from any system remotely, equipment that gives the feeling of being inside through virtual tours, and software that provides real-time access to all types of real estate.

7. CONCLUSION

Real estate development projects are gradually growing and gaining a complex dimension in order to keep up with the rapid changes in social, political, environmental financial conditions and technology and to meet the expectations of the public. Depending on the size of the investments, real estate development projects are important in changing the physical, social and economic structures of cities.

The success of a real estate development project depends on meeting many criteria. These criteria can be listed as follows; location, planning, market timing and determination of correct marketing targets, current financing power and financing structure, harmonization of construction costs and planned program, good governance, a healthy economy, the art of compromise, quality services.

At the same time, success in real estate development; It depends on parties that have variable relationships with each other, such as the owner, designer, local government, contractor, consultant and users. Therefore, these processes are interconnected and technologically complex (Antoniou et al. 2013).

In real estate development projects, the project idea should first be developed by designing the start and end time. The feasibility of the project should be determined by taking into account research and analysis to measure the achievability of the project goal within the specified period. Additionally, you should create your budget according to the limited resources in the project.

Goals in projects must be feasible. Studying the project environment and demographic structure well and approaching the problem realistically ensures the success of the project. The envisaged activities should benefit the subject and purpose of the project. In order to achieve the intended result, activities must be determined correctly throughout the project. There must be sufficient human resources, infrastructure and financial resources to sustain activities.

The most basic starting point for creating a project idea is to master the project field, follow current events, examine the latest research, and follow technological developments related to the field of study. Regional and sectoral needs should be determined by conducting research in the field of study. In particular, market research is possible in the simplest and fastest way possible by analyzing the demand for the type of project to be developed with regional

real estate consultants. In addition, the market conditions, economic situation, supply and demand indicators of the region are taken into account.

First of all, the project objectives and requirements must be explained for project area selection. For this, eco-restoration, public space and facilities, affordable housing, business expansion or relocation should be explored.

In determining the location selection criteria, the aim should be to select the best suitable and ideal land. Land factors here are size and cost, access, physical constraints, land use regulations, contextual factors, transportation, market or service area, political environment, and hazards. Contextual factors are service area, physical conditions, access to public services (energy, water), waste treatment, access to services (police, hospital, schools, access to transportation to recreation areas, visibility / visual quality).

Developers should also carefully investigate condition of the product and service supply process currently works in the construction industry . The process is initiated by needs and demands in the construction industry, as in many areas. Conditions are determined to meet this need and the search for expertise appropriate to the need begins. Evaluation and market research are carried out. After the supplier with the expertise in question is evaluated and selected, the ordering process begins, the contract is signed and production begins. A ready-made product can also be purchased for project development activities. Along with production, the logistics of the service or product is included in the system.

The use of technology in activities provides advantages such as efficiency. However, due to the growing technologies, sometimes there may be inefficiency depending on the users. The following points should not be forgotten here. First of all, courage is the most important and indispensable capital of an investor. An investor who does not know how to take rational risks can never increase his money or expand his capital in the investment markets. An investor who does not follow new decisions, new projects, the actions of governments and private enterprises, that is, does not chase and care about trends in the economy, loses the most value in this field. Measures such as the establishment of a private bank related to real estate and rights and the diversification of securitization-based products will stimulate the sector. Like a good researcher, the investor follows the real developments should investe in the regions.

Marketing timing and setting the right marketing targets are extremely important. Many projects that could be successful may fail due to incorrect timing. Unexpected events such as high inflation and crises, rising interest rates, and investors' inability to adapt to the competitive environment directly affect the outcome of the development. All successful developments; They have a marketing program in which their goals, objectives and target audiences are determined and plans are made to reach this audience. Few developers wait for their customers to find them.

After market research, a marketing plan is prepared that includes the number of properties to be produced according to the needs of the defined market, what requirements and how much they will cost in order to achieve the determined targets. Doing the right projects at the right time is one of the most important factors in achieving success.

Current financial strength and financing structure many projects take longer than planned due to lack of financing. Many developers lose their projects due to financing problems. In order for the project to be successful, it is extremely important to consider that there may be extra expenses and potential crises in the planning. A good financing package includes the profile of the development project. The lower cost of borrowing allows the developer to make more profit. The most important factor in reducing possible risks is the financing structure.

Market expectations should always be taken into account during the project development process. It is clear that projects that ignore market expectations will not be permanent. In real estate development projects, presenting concepts that will not strain purchasing power in the most efficient and interesting ways adds value to the project.

The transformation process in cities and the effects of large-scale interventions on space and life have reached the level of trauma. Not creating interaction environments between the 'affected', that is, those living and working in the area, and the influencers, that is, the project developers, and not operating participatory processes in the project processes, create major problems, and the size of the resulting effects and reactions is gradually increasing.

Considering that urban transformation is not real estate development, 'social impact-sensitive' project development approaches that include social and

economic dimensions should be brought to the agenda, the impacts that the projects will cause should be investigated in advance, possible negative impacts should be identified, and strategies and new tools should be developed to reduce these impacts.

As a result of the study, the leading new trends in real estate development projects in the coming period will be the development of innovative use cases for commercial buildings along with smart residences. In addition, high-performance infrastructures are a critical success criterion for the marketability of buildings and meeting increasing usage requirements. For this reason, investments in building infrastructure are becoming more important. The use of artificial intelligence in development projects enables smart buildings to become more efficient in terms of energy use. Blockchain; With its decentralized, transparent and irreversible functionality, it can revolutionize data exchange in the real estate sector and provide the necessary management of large-scale environmental and social data sets.

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ISBN: 978-625-367-448-9