Suez Canal Engineering Energy and Environmental Science Journal
Faculty of Engineering – Suez Canal University
2025, Vol. 3, NO. 1, Pages 65–74

Enhancing the Role of Architect in the Real Estate Development Process

Fatma H. Abd El-Aziz[1*], Usama A. Nassar[1], Faysal M. Abou El-azm[1], Mohamed A. Bagha[2]

[1] Architecture and Urban Planning Department, Faculty of Engineering, Suez Canal University, Ismailia, Egypt
[2] Business Administration, Faculty of Commerce, Suez Canal University, Ismailia, Egypt

**Corresponding author: Fatma H. Abd El-Aziz, Email address: FatmaHassan@eng.suez.edu.eg*
DOI: 10.21608/sceee.2025.343384.1053

Article Info:

Article History:
Received: 10\12\2024
Accepted: 10\01\2025
Published: 30\01\2025

DOI: 10.21608/sceee.2025.343384.1053

Abstract

The real estate development process is a multi-disciplinary endeavor, encompassing a broader scope of building design and implementation. This complex process includes several specifications, with architecture being one of the key components. The architect has limited contribution in the decision making process of the real estate development process related to the construction and engineering sector. This research encompasses literature review relative to the current contribution of the architect in the real estate development process and the targeted contribution. Architects play a crucial role in real estate development, and their influence can be expanded. With additional knowledge of investment and finance, architects can become pivotal players in the real estate industry, helping investors maximize their returns in addition to providing the suitable spaces for the end users. There is a significant relationship between architecture and real estate development. Architects should recognize their potential to be highly influential in this process. This research aims to analyze both the architectural and business processes involved in real estate development to highlight their interconnections. Furthermore, it seeks to clarify the pillars of the real estate development process and the components of architectural design, demonstrating how they relate to one another. This understanding will help assess the extent to which architects can influence the real estate development process.

Keywords: *architecture; real estate development; business process; design process*

Suez Canal Engineering, Energy and Environmental Science Journal (2025), Vol. 3, No.1.

1. Introduction

The broader scope of the building industry is real estate development. Real estate development takes place by the developers (the client) who aspire to convert buildings into properties that provide income and profit. Architects play a crucial role in converting the developer's vision into reality via designing and planning the development project. Architects are responsible for proposing sustainable design solutions and detailed drawings that meet the developer's requirements, and ensuring that the design meets building codes, regulations, and design specifications. That is the

traditional role of architects in the real estate development process as shown in figure 1 with lack insight into the business aspect of development. Architects can play an important role in guiding the developer through being involved in the stages of the real estate development process with additional knowledge about the pillars of real estate development. Architects can influence real estate value through their designs and contribute to creating a successful, long-lasting investment project. They should also ensure that the design is financially feasible and adheres to the developer's budget. This research is an attempt to define the real estate development process in a way that facilitates the link between architecture and real estate development.

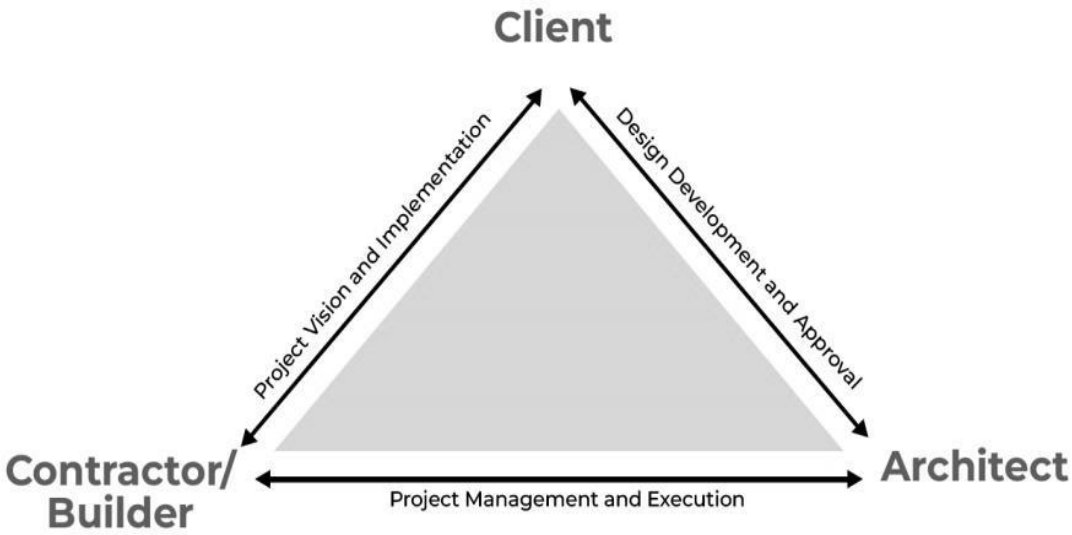


Figure 1: Role of architect in the construction industry
Source: TEL Constructions (2024). The Power of Collaboration: Architect, Contractor, and Client Partnerships, Retrieved from https://telconstructions.co.uk/the-power-of-collaboration-architect-contractor-and-client-partnerships/

2. The Relation between Architecture and Real Estate Development

The relation between architecture and real estate development is studied in the literature review to know how to design valuable properties with higher opportunities for real estate investment.

Mazikana, T.M. (2022), with a master thesis entitled assessing the effects of architectural design on commercial real estate value case of Harare central business district, discussed that the significance of the contribution that outstanding architectural design can make to the entire market value of a piece of real estate is growing. Jonasson, A.H. & Prick, C. (2018) studied the investment decision process of property uses in development projects in the master thesis the investment decision process of real estate owners. Jones, M.C. (2015), in his master thesis [Design + Development] Architectural agency through real estate development, explored the relationship between real estate development and architecture to understand how to achieve design integrity and financial robustness. Funari, S.D. (2013), in his master thesis the architect as developer, discussed that by architects playing the role of both designer and developer leads to a more sustainable, meaningful and beautiful architecture.

Royo, D.P., Ponce, A.L., & Martinez, F.G. (2022), towards the real estate project: the architect in the new paradigm of real estate investment, discussed that the architect plays a key role in the investment strategy taking into account what both society and the investors need, and thus participates in all phases of the process. Navickas,V., Skripkiūnas, T., Tanas, J., & Trojanek, M. (2020), the influence of architecture on real estate market value: a methodological framework, discussed the areas of influence of architectural variables on the market value of a property. Rong, H.H., Yang, J., Kang, M., & Chegut, A. (2020), The value of design in real estate asset pricing, suggested that there is a significant economic impact of some architectural form interventions. Bovsunovskaya, M. (2019), the influence of architectural decisions on improving the economic efficiency of development projects, discussed that architectural decisions can be taken into account by developers in housing projects in order to increase economic efficiency. Fadaeia, S., Iuloa, L.D. &Yoshidab, J. (2015), architecture: a missing piece in real estate studies of sustainable houses, discussed that architectural decisions can have a positive impact on the price of sustainable homes. Pinder, J., Schmidt III, R., Gibb, A., & Saker, J. (2011), exploring the business case for more adaptable buildings: lessons from case studies, discussed the costs and benefits of designing more adaptable buildings.

Then, in this research, the relation between architecture and real estate development is studied according to the process and main ingredients of each term in order to know the similarities between architecture and real estate development and discuss how the role of architect can be more influential.

2.1. Real Estate Development

Real estate development is the improvement of land or buildings through the development process, in which land, buildings, finance and marketing resources, administrative controls, and management are required to create and operate an environment in which people live, work and play over many years. Real estate development is a complex process which involves different stakeholders and limited resources in order to accommodate an activity within a parcel of land and adapt to the context in which it takes place. The real estate development process is a business process in which the developer aspires to add value by combining activities, material, information, sources and means in a defined organizational structure. Figure 2 shows the business process which takes place as the real estate development process evolves.

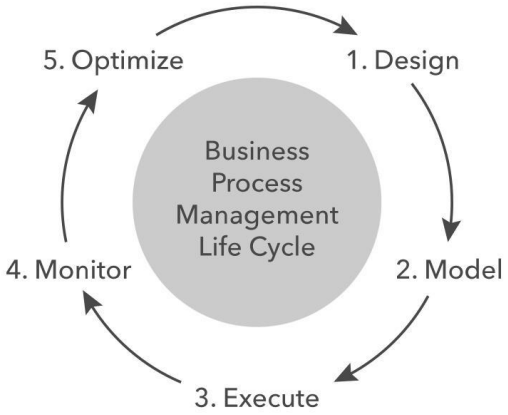


Figure 2: Business process

Source: Lucid software Inc. (2024). All About Business Process Mapping, Flow Charts and Diagrams, Retrieved from https://www.lucidchart.com/pages/business-process-mapping

2.1.1. Pillars of the Real Estate Development Process

The real estate development process has many phases. Its phases can be arranged in many ways. Peca, S. (2009) divided it into study phase, feasibility phase, preconstruction phase, construction phase, initial occupancy and investment phase. Byrne, (1984) saw that the real estate development process is three parts acquisition, production, and disposal. Wilkinson, & Reed (2008) divided it into initiation, evaluation, acquisition, design and costing, permission, commitment, implementation and let/manage/ dispose. It is important to keep in mind that the development process is not sequential, and stages can overlap and be revisited throughout the process as the project evolves. So, it is better to study the real estate development process as pillars as shown in figure 3 so that it is easier to find the relation between architecture and real estate development and therefore realize that the role of architect can expand in the process of real estate development.

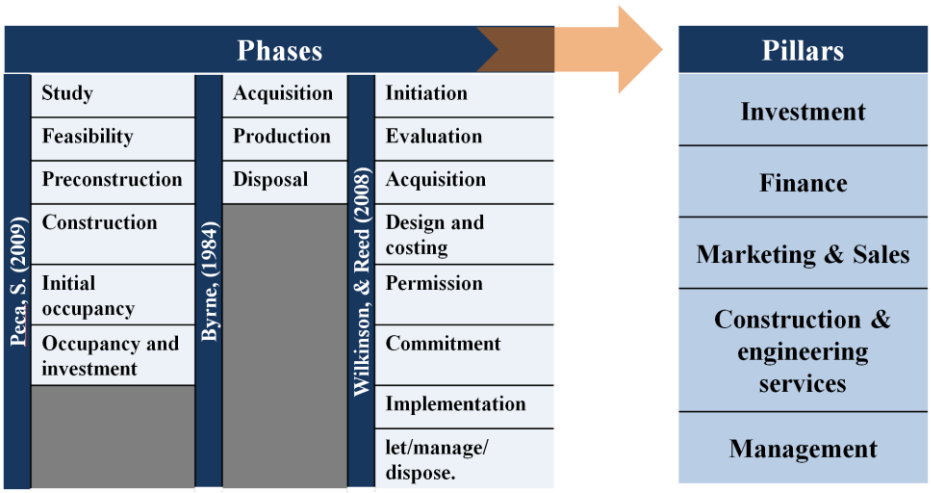


Figure 3: Studying real estate development as pillars instead of phases
Source: The authors

A. Investment

Real estate development is an investment project. Any investment aims to gain a return on that investment or increase in the investment value. This return is the motivating force and the principal reward in the investment. In order to maximize the return on investment over a given time frame, the real estate developer seeks to utilize his property in the highest and best possible way. The competitive forces in the market where the property is located determine the highest and best use.

B. Finance

Finance is one of the key pillars of real estate development. Since real estate development is regarded as a costly endeavor, the developer must pay for it in order to maximize its value. Financial feasibility, as indicated by financial ratios, is determined by the relationship between cost and value as well as the availability of financial resources. The financial statements contain the financial information required to examine financial feasibility. Figure 4 determines the components of the financial feasibility study.

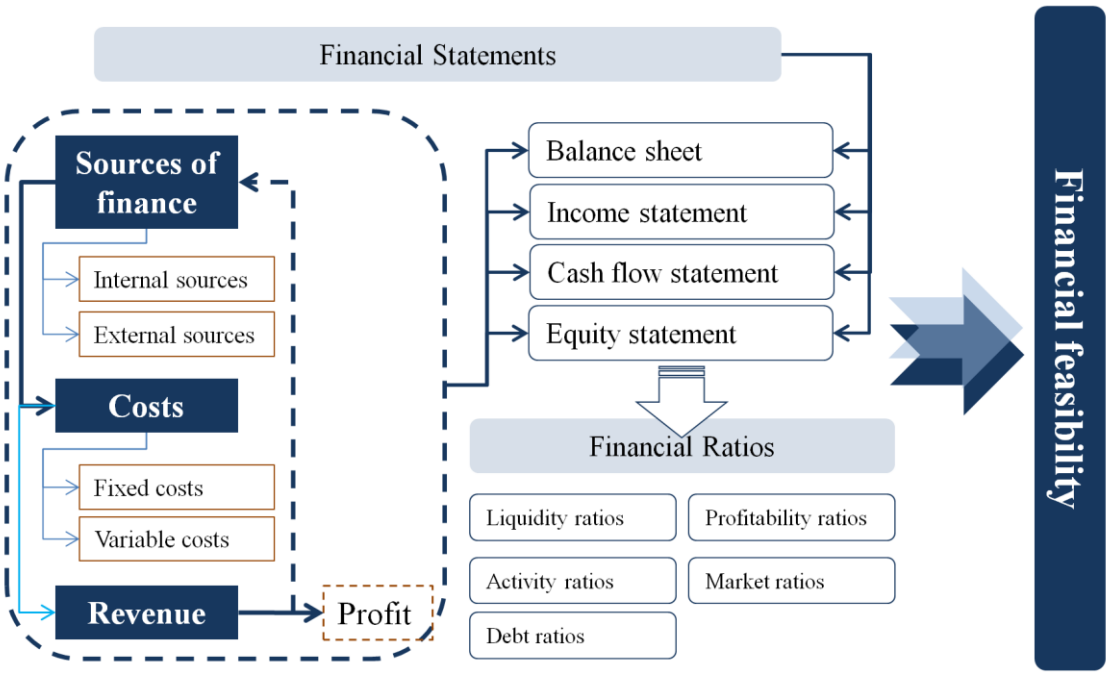


Figure 4: Components of the financial feasibility study
Source: The authors

C. Marketing & Sales

Units produced by real estate development represent the supply that ought to satisfy the users' needs as stated in the demand. Combining supply and demand creates the real estate market, which allows two or more parties to meet and carry out transactions that transfer ownership and rights of space based on the conditions of the parties' contracts. These transactions can take place locally, regionally, or globally. It is necessary to carry out a market feasibility study to make sure that the supply matches the demand. Market feasibility study is divided into three parts; market analysis, utility, and marketing process as illustrated in figure 5. Real estate market analysis seeks to identify the most promising and lucrative real estate market segments over the long run. It also attempts to ascertain the viability of the real estate development project. These details help make decisions about the project's physical development and presentation, including budgets, schedules, media, positioning, and pricing. The project usefulness to customers is termed as utility and it aims to convince the customers to make a purchase. The project and the market segment are then subject to the marketing process. The marketing process is a series of steps that starts with a well-conceived project that responds to market demand (market looking for a project) rather than the other way around (a project looking for a market).

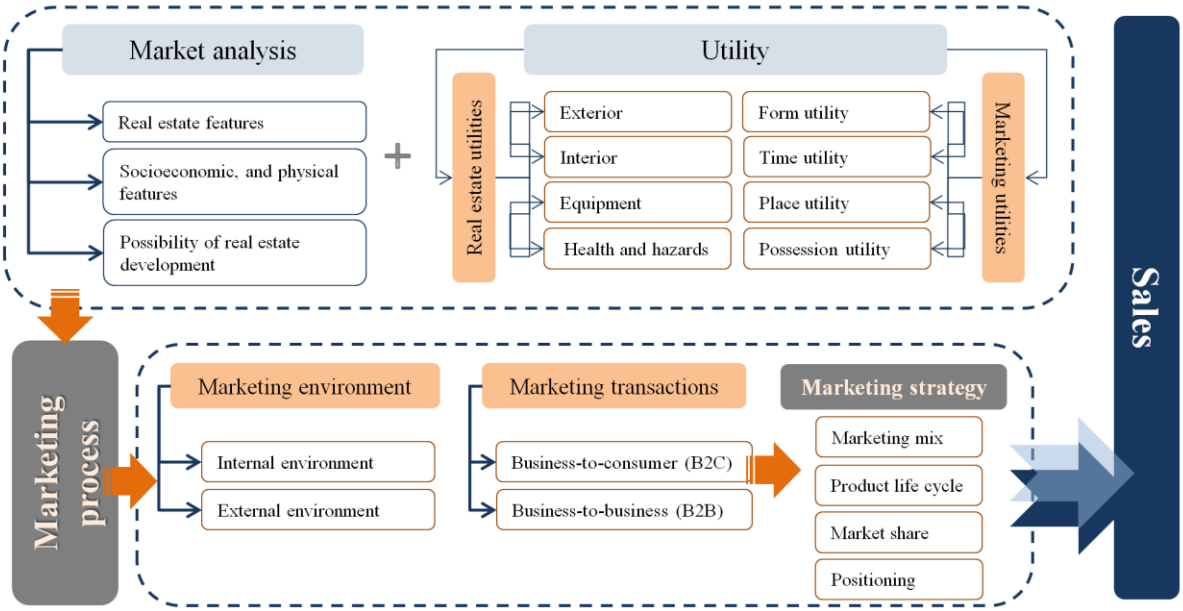


Figure 5: Components of the marketing feasibility study
Source: The authors

D. Construction & Engineering Services

Before starting the design and construction process, technical feasibility study should be conducted, the part which concerns the clients' needs and should achieve their satisfaction. Technical feasibility is the evaluation of a project's ability to be carried out successfully with the technology that is currently available. To ascertain whether the suggested project can be developed, implemented, and maintained within the constraints and resources available, it entails a thorough evaluation of its technical requirements, constraints, and capabilities. This feasibility study, as illustrated in figure 6, evaluates the project site size, important access points, topography, geotechnical data, risks, existing buildings or structures on the site, other environmental aspects, etc. The consultants must then determine whether materials, labor, resources, and other project-related practical requirements are available after these factors have been evaluated. After confirming the feasibility of the project, the design and implementation process begins.

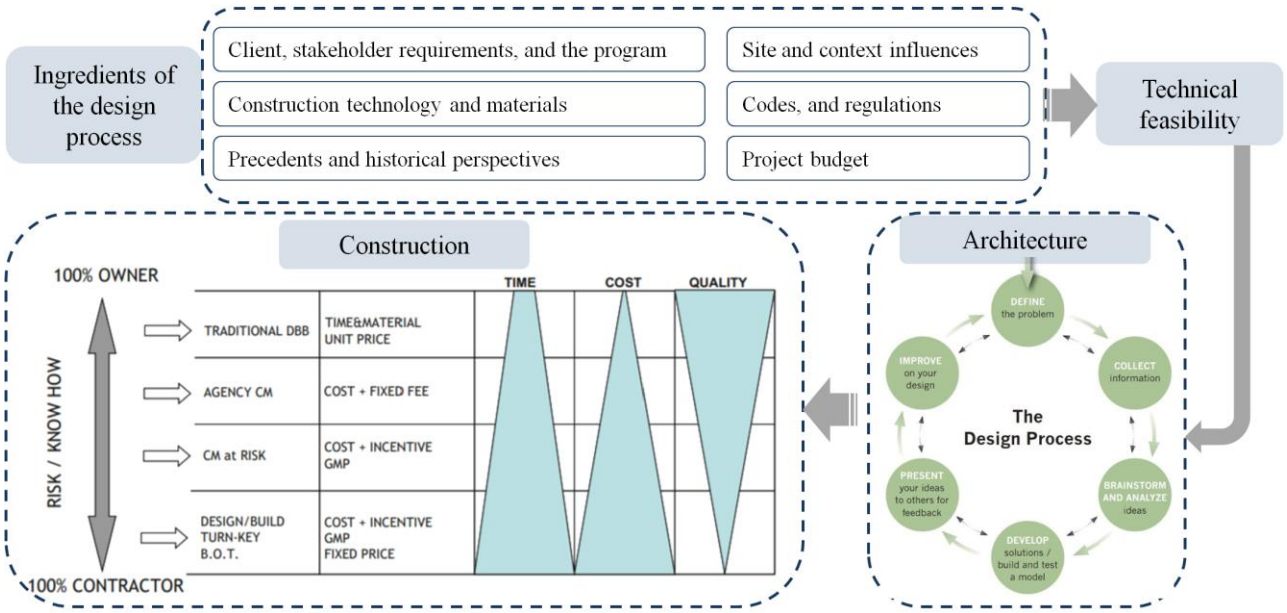


Figure 6: Components of the technical feasibility study
Source: The authors

E. Management

In order to effectively accomplish its objectives, management entails planning, organizing, leading, and controlling the firm's resources. Real estate management is a real estate specialization. It begins with an off-plan project or a constructed project. Preserving or raising the real estate market value is the primary goal of real estate management, along with maintaining the building in good condition that matches the users' needs. There are three main levels of real estate management: object level, portfolio level, and corporate level. Each level concerns the investment orientation, and the usage orientation as illustrated in figure 7.

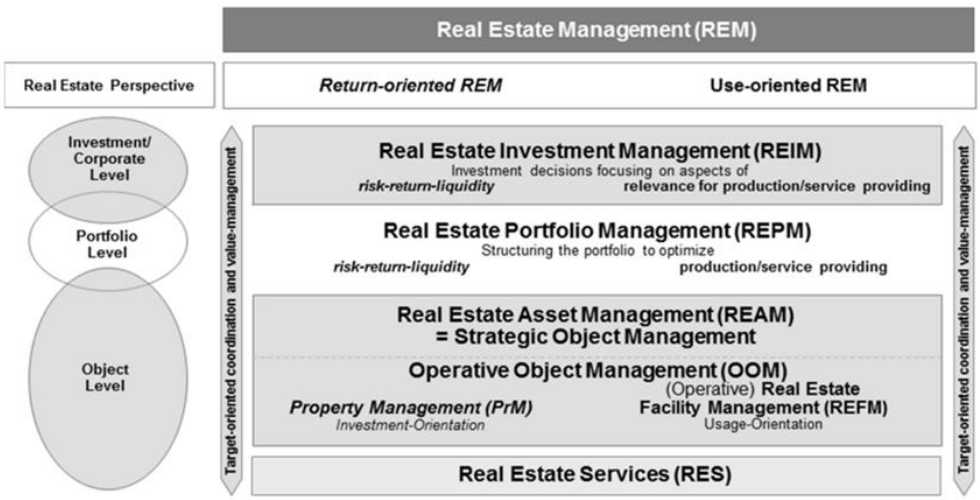


Figure 7: Real estate management
Source: Muczynski, A. (2015). An Integrated Approach to Real Estate (Portfolio) Management. Real Estate Management and Valuation, 23(2), 5-16.

2.2. Architecture

Design is a thorough approach to problem-solving that begins with the project's conception and continues through the last phases of construction. Designing a project requires thorough investigation and unadulterated intuition. Together with the program, location, and idea, this talent or intuition will produce outstanding architecture and give each project its own distinct character. Figure 8 describes the design process.

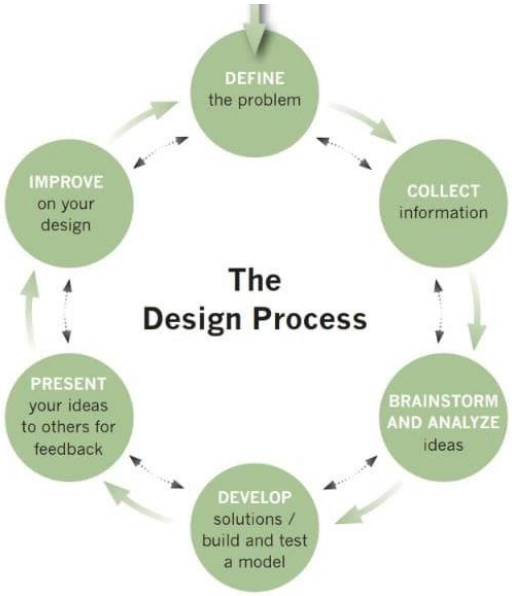


Figure 8: The design process

Source: Pressman, A. (2012). Designing architecture: the elements of process. Oxon, UK: Routledge.

The conditions of the project should influence the design process. These conditions are specific to every project. By examining the project circumstances, a number of opportunities and challenges are revealed, giving the design process a strong basis. There are six groups of project ingredients that should be studied: program, construction technology and materials, site and context influences, project budget, project perspectives and precedents, and codes and regulations as shown in table 1.

Table 1. Ingredients of the design process. Source: Pressman, A. (2012). Designing architecture: the elements of process. Oxon, UK: Routledge.

Project ingredient	Description
Client, stakeholder requirements, and the program	• Functional requirements, activities, and organizational relationships • User needs and preferences • Future needs for expansion, conversion, and phasing capabilities • Budgetary factors and limits, construction quality, and schedule • Aesthetics and image • Response to surrounding context
Construction technology and materials	Selecting a suitable structure system Selecting material according to: • Alignment with architectural goals and concept • Suitability for the function • Cost • Availability of material and its life cycle • Availability of skilled labor • Relation to context and region • Response to climate • Maintenance requirements
Site and context influences	Investigation of the physical and non-physical aspects of the context • Physical context analysis such as: ecology, geology, climate, transport, surrounding landmarks, sensory insults, sensory delights…etc. • Non-physical context analysis such as: culture, history, traditions…etc.
Project budget	Project budget includes • Construction costs • Non-construction or soft costs • Operational costs over the life cycle of the building.
Precedents and historical perspectives	Precedents can be categorized according to: • Building type • Context: site, climate, and other environmental conditions

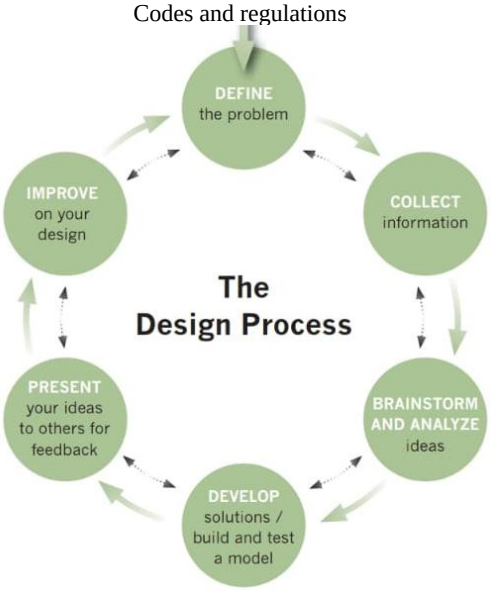
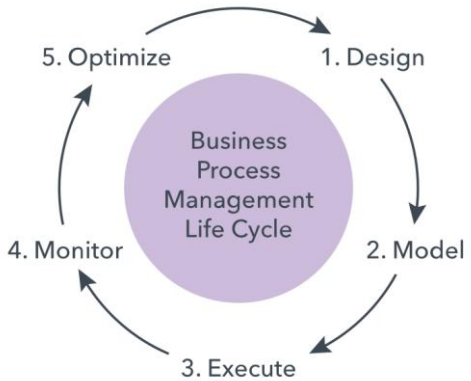
Project ingredient	Description
	• Massing (size and scale) and volumetric geometry • Plan and section configuration: spatial composition and proportions • Interior spatial character: light, color, texture, ornament • Façade composition and character • Construction materials, finishes, and details of assembly • Construction cost • Structure system and details • Mechanical systems and other environmental control strategies • Energy conservation and sustainability • Landscape composition
Codes and regulations	Building codes are produced by national organizations and adopted by local municipalities. They determine how buildings are constructed, and they include: • Requirements for structural, mechanical (HVAC and plumbing), electrical, water and sewer, and other building systems, components, and assemblies. • Regulations about height, density, mass, area…etc. • Fire protection includes emergency exits, and accessibility. • Codes that control design and construction of building types such as hospitals and schools. • Zoning ordinances, produced by local municipalities, direct land use. • Adequate natural light and air movement for building inhabitants.

3. Conclusion

The results of this research are concluded into three primary categories. The first is that architecture is a subset of the real estate development process and the architect is a key player in this process, his role can be expanded by comprehending the fundamentals of real estate development.

The second conclusion focuses on identifying the parallels between architecture and real estate development. The similarities are clarified in table 2, demonstrating that the mentality managing the design process is similar to the mentality managing the business process in addition to the similarities between the ingredients of architecture and the pillars of the real estate development.

Table 2. Similarities between architecture and real estate development in the process and ingredients. Source: The authors

	Architecture	Real estate development
Ingredients	Client, stakeholder requirements, and the program	Management
	Construction technology and materials	Construction & engineering services
	Site and context influences	Marketing
	Project budget	Finance
	Precedents and historical perspectives	Construction & engineering services
	Codes and regulations	Construction & engineering services
Process		

	Architecture	Real estate development
	The mentality that manages the design process is similar to the mentality that manages the business process	

The third conclusion of this research is that the role of architect can be more influential on the real estate development process. By dividing the real estate development process into five main pillars, the architect can participate in the decision making process in order to achieve the goals of developers and end users. Table 3 illustrates the targeted involvement of architect in the real estate development process

Table 3. Targeted involvement of architect in the real estate development process. Source: The authors.

Real estate development process	Architect
Investment	Any real estate developer is driven by the double-bottom line mentality (financial gain plus social impact) or the bottom line (fiscal performance). The improvement of buildings or land is the primary factor that results in a financial return; therefore, the developer's ability to obtain a profit is largely dependent on the architect's skillful design, which achieves the highest and best use of land.
Finance	The architect is aware of the project budget (costs) that controls his design but this awareness should be extended to include the revenue and profit to guarantee the project's profitability for the developer.
Marketing & Sales	Since the architect is the most knowledgeable about the project, he is the most qualified person to promote it and highlight its benefits.
Management	The best person to understand the technical aspects of the project is the architect, so he is the best person to understand how it functions and how to keep it useful.

4. References

TEL Constructions (2024). The Power of Collaboration: Architect, Contractor, and Client Partnerships, Retrieved from https://telconstructions.co.uk/the-power-of-collaboration-architect-contractor-and-client-partnerships/

Lucid software Inc. (2024). All About Business Process Mapping, Flow Charts and Diagrams, Retrieved from https://www.lucidchart.com/pages/business-process-mapping

Muczynski, A. (2015). An Integrated Approach to Real Estate (Portfolio) Management. Real Estate Management and Valuation, 23(2), 5-16.

Pressman, A. (2012). Designing architecture: the elements of process. Oxon, UK: Routledge.

IE University (n.d.). The rise of the architect as developer: Why this may be a future trend in real estate? Retrieved from https://www.ie.edu/uncover-ie/the-rise-of-the-architect-as-developer-why-this-may-be-a-future-trend-in-real-estate/

Rethinking the future (2022). Role of Architect in Real Estate Industry, Retrieved from https://www.re-thinkingthefuture.com/architectural-community/a3837-role-of-architect-in-real-estate-industry/#google_vignette

Gondaliya, H. (2020). Architectural Agency Through Real Estate Development (master thesis). University of Massachusetts Amherst, Retrieved from https://core.ac.uk/download/pdf/334980453.pdf

Bwire, S. (2024). Understanding the Role of Architecture in Real Estate Development, Retrieved from https://realestateblogpost.com/understanding-the-role-of-architecture-in-real-estate-development

Baillie, J. (2024). Role of Architect in Property Development, Retrieved from https://silveroakcapital.hashnode.dev/role-of-architect-in-property-development

Peca, S. (2009). Real estate development and investment: a comprehensive approach. New jersey, USA: John Wiley & Sons.

Gitman, L.J. & Zutter, C.J. (2012). Principles of managerial finance (13th edition). USA: Pearson.

ISBN 978-0-13-611946-3

Atrill, P. (2020). Financial management for decision makers (9th edition). Harlow, UK: Pearson.

Farrall, C. & Lindsley, M. (2008). Professional English in use marketing. Cambridge.

Dibb, S. & Simkin, L. (2004). Marketing briefs: a revision and study guide (2nd edition). Oxford: Elsevier.

Albrecht, M.G., Green, M., & Hoffman, L. (2023). Principles of marketing. Rice University: OpenStax.

Wilkinson, S., & Reed, R. (2008). Property development (fifth edition). Oxon, UK: Routledge.

Resurgent India (2023). Technical Feasibility: Definition, (Process & Best Practices), Retrieved from https://www.resurgentindia.com/technical-feasibility-definition-process-best-practices

GHP (2022). 5 Main Aspects of a Feasibility Study in Construction, Retrieved from https://ghp.biz/5-main-aspects-of-a-feasibility-study-in-construction/