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## **Poděkování**

Na tomto místě bych rád poděkoval Doc. Ing. Aleši Tomkovi, CSc. za cenné rady, věcné připomínky a vstřícnost při konzultacích a vypracování diplomové práce.

# Investment Decision Making in Development Projects

## **Annotation**

The aim of this thesis is to provide the reader with problems in the preparation and implementation of development projects. The first chapter of this thesis deals with the historical development of residential housing in Czechoslovakia and in the Czech Republic. Another chapter deals with the way the financial crisis has affected the property market and what current situation is in the market. The next chapter describes the structure of a development company. The main part of this thesis is to describe the various parts of the development project and the problems that may occur during the preparation and implementation of the project. The conclusions of this section are further subjected to examination in to a case study that charts the progress of an ongoing development of a residential project Marina Island at the Vltava Riverbank. The conclusions of both parts of this thesis are complemented by a commentary. The outcome of this work is the knowledge that evaluates the greatest risks in preparing and implementing of development projects. For such cases there are recommended solutions to avoid possible failures of projects.

## **Anotace**

Cílem této práce je seznámit čtenáře s problematikou při přípravě a realizaci developerských projektů. První kapitola této práce se zabývá historických vývojem rezidenčního bydlení v Československu a následně v České Republice. Další kapitola popisuje, jakým způsobem se projevila finanční krize na trhu s nemovitostí a v jaké situaci se trh nyní nachází. V další kapitole je popsána struktura developerských společností. Hlavní částí této práce je vymezení a popsání jednotlivých částí developerského projektu a problémů, které mohou v jeho přípravě a realizaci nastat. Závěry z této části jsou následně podrobeny případové studii, která mapuje průběh probíhajícího developerského projektu Marina Island na břehu Vltavy. Závěry z obou částí této práce jsou doplněny komentářem. Výstupem této práce jsou poznatky, které hodnotí největší rizika při přípravě a realizaci developerských projektů. Pro tyto případy jsou doporučeny způsoby, jak předejít případným neúspěchům projektů.

## **Key words**

Real estate development, development company, project management, Investment decisioning, property land development, project financing, general contractor tender, marketing, sales strategy

## **Klíčová slova**

Vývoj trhu s nemovitostmi, developerská firma, projektové řízení, investiční rozhodování, proces nákupu parcely, projektové financování, výběrové řízení na generálního dodavatele, marketing, strategie prodeje

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## Introduction

The topic of dealing with issues of the construction of development projects is already interesting for the reason that every development project is unique and it always depends on the developer - whether it is interested to acquire new knowledge of the implemented project and so enhance the company's own best practices to a higher level.

Czech residential real estate sector has undergone a huge transformation in the last 30 years. The first part of this thesis represents the rise of the real estate market in the former Czechoslovakia and maps its evolution to the present. Especially in recent years, the market has changed significantly. It was primarily the global financial crisis, whose impact has also affected the construction sector. The volume of production of initiated real estate development projects in 2011 came to almost half of the in 2008 and development companies have faced a major existential decision whether to carry out projects with an uncertain future, or to temporarily reduce their activities. Problem with the decline of housing construction is discussed in the next chapter, which will show what changes have occurred in the market and if the market managed to return to the original figures from the period before crisis.

What actually covers the concept of development activity and what is the structure of the present real estate market is described in the next chapter. Each developer also works in a different way, in the next subsection is therefore described the structure of the developer company, its various departments and functions of the department, which ensures optimal operation of the company in every step of the formation of a development project.

The aim of this thesis is particularly the detailed description of the process of real estate development project. As mentioned in the introduction, each development project is unique as well as situations that may arise during its preparation, construction and operation. The objective is therefore to describe the general rules, which may play a role in investment decisioning on project implementation.

These findings will be subsequently confronted with a case study of an existing development project. The case study focuses on the implementation of a unique development project Marina Island at the Vltava riverbank. The method of initiating this project and the progress of its implementation will be closely examined. Finally, it will be evaluated whether the decision on implementation in its given form was a good solution, or whether the preparation of the project resulted in an unexpected error, which would expose the project's success to a significant danger.

## 1 Objectives

Clarification of processes at each stage of the development project and aim to highlight the occurrence of problems during project preparation and construction. The accurate incidence of these problems is shown in the case study. Furthermore, there are proposed solutions for such cases.

## 2 Hypotheses

At the beginning of the thesis there were identified fundamental challenges (problems) in the implementation of development projects. For that reason, I have summarized these challenges in the next few hypotheses. These hypotheses are closely linked with a description of processes within development projects. Recommendations for solutions to these challenges are described in the subchapters of the case study. These hypotheses are also associated with the decision whether to carry out the project and eventually with its preparation, sales strategy, marketing and construction.

### H.1. Search for best solutions

**The development project of required standard and location will only be successful, if the potential of the place and the intended target purchaser is fully exploited. Corollary is that only the optimal design of a development project may lead to the desired profits. Development opportunities must therefore be assessed by selected criteria and business tools which are based on the corporate Best Practice.**

### H.2. Project team

**Overall quality of project's realizational team is essential in all phases of project. However, it is not only about the quality of a team within the development company, but also appropriately selected architectural and engineering office and experienced general contractor. The price should not in any case be the main criterion for their selection.**

### H.3. Sales strategy

**This hypothesis is saying that well-adjusted sales price corresponding to the adequacy of standards of the project is the critical factor for success of the project. It is related to the first hypothesis.**

### H.4. Marketing strategy

**The success of sales of housing units is largely dependent on well-chosen marketing strategy.**

### 3 Property Development Sector

The topic of residential housing and the entire property development sector is interesting, among other things, on the grounds that during the last few decades it has undergone a major transformation. The way to reach new customers is getting more complex and requires increasingly sophisticated ways of dealing with projects in accordance with the technical, functional and environmental requirements.

#### 3.1 History of real estate in Czech Republic

The concept of residential housing on the Czech territory appeared for the first time in the period after the establishment of the Czechoslovakia. Residents had moved to the cities and the demand for this type of housing had been growing ever since. Demand was constantly growing and peaked in 1928, when it was built almost 100,000 housing units. The Great Depression in the United States, however, fell on the whole of Europe, and the number of new housing units in the coming years decreased. Since 1931, demand grew again and until 1938 the market could be considered as relatively stable. Munich Agreement in 1938 and the following loss of territory and the establishment of the Protectorate caused that the real estate market in Czechoslovakia basically stopped. A new housing crisis followed almost immediately. Loss of territory and forced relocation of the population brought an immediate shortage of housing. The situation during the war and its consequences additionally worsened. In the postwar years in 1945 and 46 the situation was partly mitigated through expulsion of the german population of the Sudeten territory. However, the situation in the cities, where there was a postwar babyboom, did not improve. In 1948 there is a political coup and begins the era of communist one-party rule. Until the Velvet Revolution, the state is based on a centrally planned economy. At this time, the real estate market is also almost non-existent.

Demand for new housing was controlled during the whole 50 year one-party rule as well as the planning of construction of new housing units. Only after 1989, the residential housing sector could start to develop according to market mechanisms. An important milestone for the development was firstly the restitution of housing units and entire houses and also the privatization of state assets. The the production of new housing units after 1991 plummeted. This decline was caused by extreme inflation which is why there was a sudden increase in the price of construction materials.

By giving access to international trade, the market could also start using previously unknown materials and building techniques, which were nonetheless very costly. The situation began to gradually improve only after 1993. The selection and quality of the offered properties rose sharply compared to the prerevolutionary period and logically there was an increase in housing prices and related services (the emergence of Realtors). Many people began to understand the benefits of owning a home over renting housing and the market kept growing.

The chart can be seen that in 2012 the construction, compared to the strongest of 2008 decreased by almost 50%. According to the latest information from the 2015 housing construction is growing again. For comparison, the production compared to 2014 increased by 8.3%. Yet production in 2015 compared with the peak in 2007, is still at almost half of what it was.

### 3.2 Current market situation

As mentioned above, construction in the Czech Republic has undergone radical changes in the last 10 years. According to data from the Ministry of Industry and Trade, construction accounts for about 7% of the production throughout the Czech economy, employing more than 8% of the total number of employed persons, and is able to absorb a considerable proportion of the workforce with lower or different qualifications.

In 2008, the market was at the top, property developers managed to sell projects for large sums and there were no indications that the situation should soon change completely. Developers therefore launched a number of new projects and often poorly take into account the risk, which for some of them became fatal. Effects of the crisis in the construction sector were noticeable about a year to two-year delay compared to the majority of the market. This was due to the specific environment of the construction sector, when already planned or initiated projects could not simply cancel. This was a consequence of the specific environment of the construction sector, when already planned or initiated projects could not had been simply canceled.

According to the latest study by the Ministry of Trade and Industry: *"Construction output in 2014 after five years of decline had increased. Significant share of this segment had a civil engineering construction, which benefited from rising state expenditures."*<sup>1</sup>

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<sup>1</sup> STAVEBNICTVÍ ČESKÉ REPUBLIKY 2015 [online]. Prague: MPO 2016, [cit. 2016-11-05]. Available at: <http://www.mpo.cz/cz/stavebnictvi-a-suroviny/informace-z-odvetvi/stavebnictvi-ceske-republiky-2015--172456/>

The growth of the construction had been largely influenced by the state, that announced a record number of public procurement. Another factor was the EU funds, which had to be exhausted by the end of the period. Interestingly enough, despite the gradual stabilization of the construction sector, the production volume is still nothing compared to the record year 2008. As can be seen from the chart below. At first glance on production in 2016 it may seem that the construction industry experienced a further decline. The truth is, however, only partial, because the total production was largely influenced by a major slump in the road construction sector, where the state did not announce enough public procurement. Other construction sectors, with minor exceptions, grew steadily.<sup>2</sup>

### Production index for construction in the Czech Republic

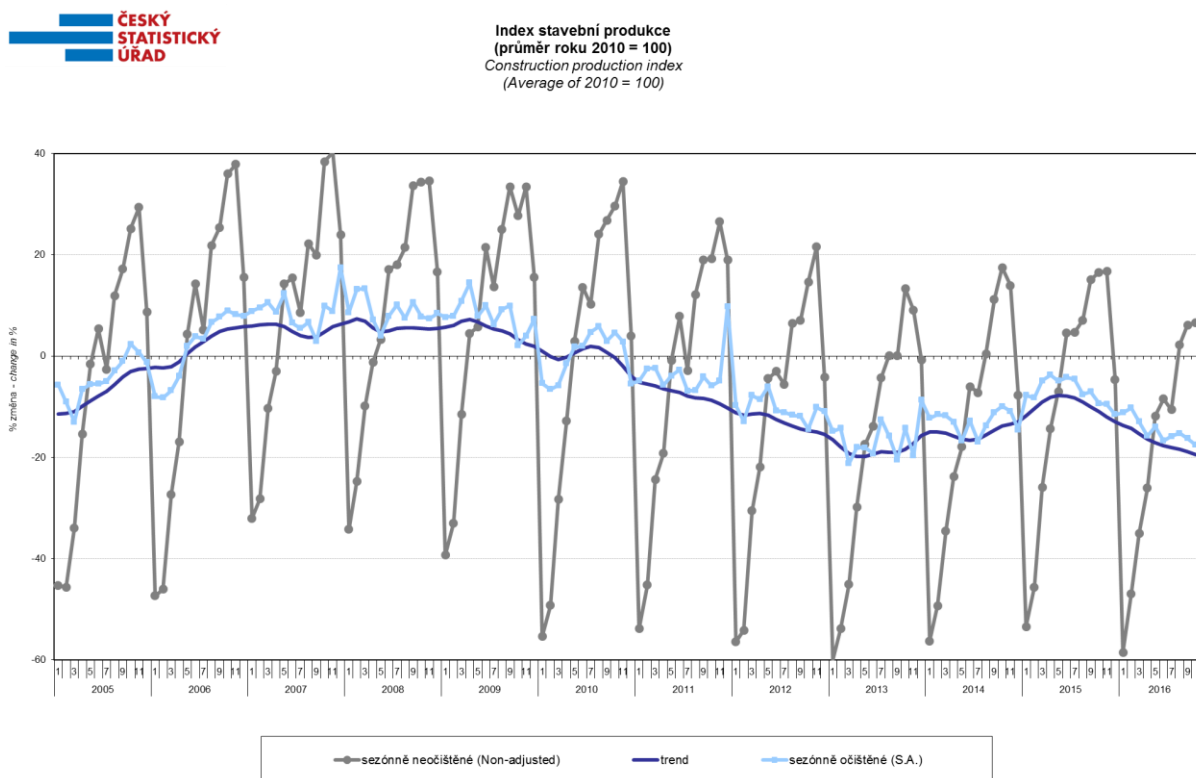


Chart 1: Production index for construction in the Czech Republic. Source: czso.cz

#### 3.2.1 Market data

Housing construction sector had an essential contribution on the gradual improvement of the situation in the whole construction. The breakthrough came in 2014, when the market for residential units rose more than 10%. As can be seen from the chart below (Chart 2.), until

<sup>2</sup> STAVEBNICTVÍ ČESKÉ REPUBLIKY 2015 [online]. Prague: MPO 2016, [cit. 2016-11-05]. Available at: <http://www.mpo.cz/cz/stavebnictvi-a-suroviny/informace-z-odvetvi/stavebnictvi-ceske-republiky-2015--172456/>



2013, the number of newly started projects sharply fell. Despite the dramatic improvement in the situation, the number of newly started projects in 2014 was about 44% lower than it was in 2008.

## Number of New and Completed Residential Units in Czech Republic

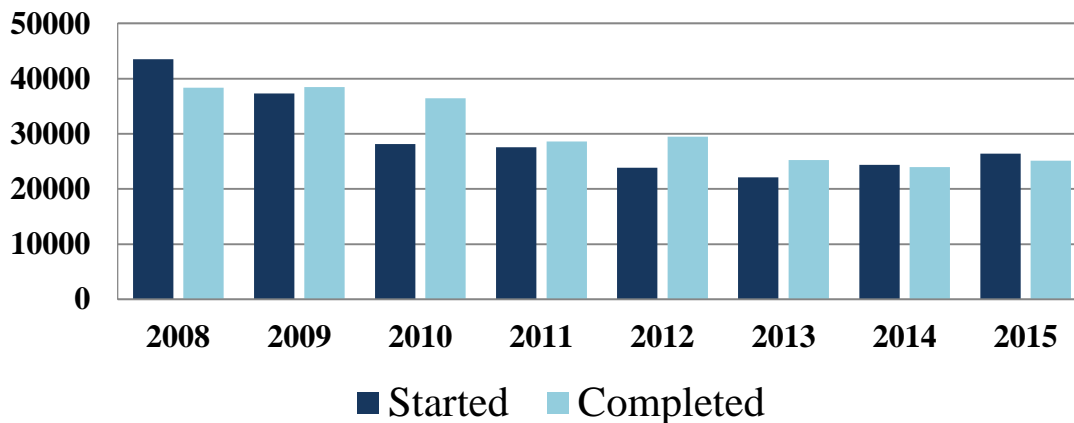


Chart 2: Number of New and Completed Residential Units in Czech Republic. Source: [www.czso.cz](http://www.czso.cz).  
Processed by Author

Even more interesting data can be read from the chart that maps out the situation with residential units in Prague (chart 3). In 2008, which was the strongest in the history of the Czech Republic, began the construction of nearly 7,000 housing units, and in 2009, when the crisis was already well underway, started the construction of almost 6,000 units. At that time, however, the developers knew that the situation is likely to worsen. Most of these projects have yet been at such stage that could not stop production. Real contrast is to see only in 2010 when, during a single year, production decreased by significant 55%.

In Prague, due to the high market power (compared to the rest of the Republic), the situation began to improve somewhat earlier and the market has grown slightly since 2013.

## Number of New and Completed Residential Units in Prague

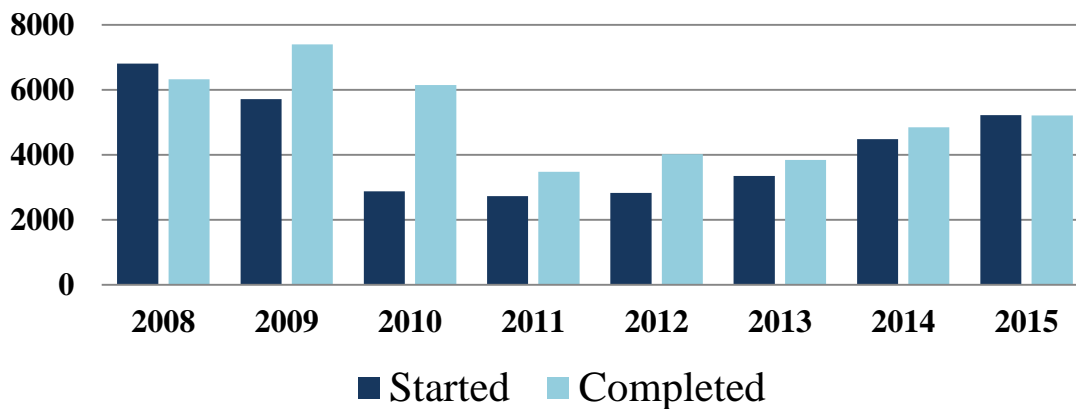


Chart 3: Number of New and Completed Residential Units in Prague. Source:www.czso.cz. Processed by Author

### 3.3 The structure of real estate development market

#### 3.3.1 Real estate development

Development activities are one of the most complex operations, which employs a large number of companies and professionals. Basically, the main goal of developers is a purchase of real estate assets (land, properties) and create payback. When speaking about development projects, it is a medium to long-term return, depending on the type of project.

Development company can be defined as: „Companies, respectively projects aiming to complete construction of residential and commercial real estate. Activity of development companies primarily includes identification of suitable areas, ensuring the creation of the project, obtaining all necessary permits, creation of utilities, own construction and sale of the property. Development companies often also mediate financing for clients of real estate purchases, often are involved in leasing and property management after completion of construction (especially for commercial real estate). Due to a combination of construction activity and speculative purchases of real estate of development companies, the results strongly dependent on real estate prices.“<sup>3</sup>

<sup>3</sup>Česká Národní Banka.[online]. Praha, 2016 [cit. 2016-11-12]. Available at: [https://www.cnb.cz/cs/financni\\_stabilita/zpravy\\_fs/fs\\_2008-2009/FS\\_2008-2009\\_slovnicek.pdf](https://www.cnb.cz/cs/financni_stabilita/zpravy_fs/fs_2008-2009/FS_2008-2009_slovnicek.pdf). Translated from the original by author

### 3.3.2 Sectors and authorities involved

Out of company parties, who are involved in development projects can be divided according to the different steps in the preparation of development projects. Among the parties are:

- Land property sector – Owners of land
- Design sector – Architectural studios, designers, structural engineers, geotechnical engineers, financial experts and cost engineers
- Legal sector – Public authorities, engineering consultants, neighbours, community groups
- Construction sector – Construction companies and contractors, project managers and supervising engineers
- Capital sector – Banks and financial institutions, capital investors, appraisers

*„Each project is embedded in a surrounding comprising numerous and various stakeholders. Project and surroundings strongly influence each other. The „project environment“ is the ambience where the project is formulated, evaluated and executed and which directly or indirectly affects the project. These external impacts can be of physical, ecological, sociological, psychological, cultural, political, economical, financial, legal, contractual, organisational, technological and esthetical nature.*

*In Figure 2 different aspects and views are presented, which possibly have to be considered in a project. The intersection of the different views is the only available space to move in observing all of the important stakeholders interests.*

*Stakeholders are persons or groups of persons which are engaged in the project, interested in the project procedure or concerned by the impacts of a project. Mostly they have a well-founded interest in the project result and in the project success for the environment. “<sup>4</sup>*

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<sup>4</sup> Principles of Project Management. München, 2014. Lectures. Technische Universität München. Vedoucí práce Univ.-Prof.-Dr.-Ing- Josef Zimmermann.

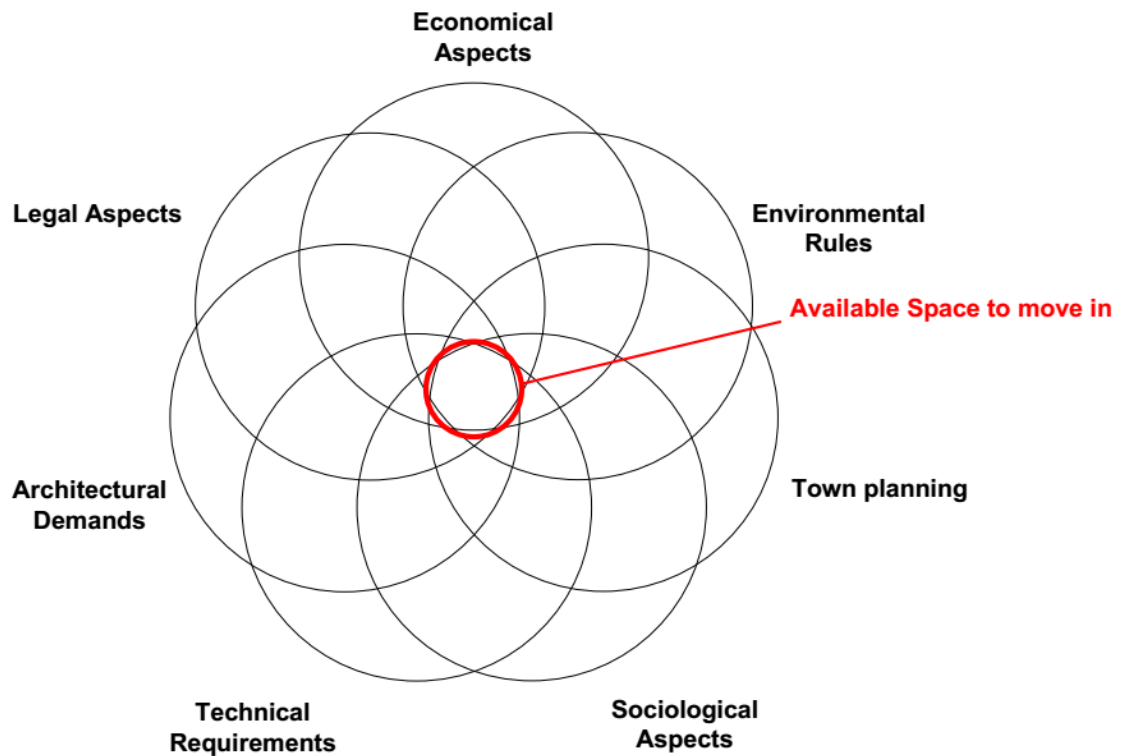


Figure 1: Aspects of project, Source: Principles of Project Management. München, 2014. Lectures. Technische Universität München. Vedoucí práce Univ.-Prof.-Dr.-Ing- Josef Zimmermann.

### 3.4 Organizational structure of development company

The basis for any well-functioning company are its know-how in the form of procedures (Best Practice) and especially the team of professionals. Larger development companies have their structure divided into several divisions or departments. These department can be divided as follows.

#### 3.4.1 Department of acquisitions

The purpose of this department is to identify and analyze new financial opportunities. The aim of these activities is to find new land and if possible, acquire it under the best conditions. Given the importance of the acquisitions, mostly the top management of the company make a purchasing decision. Other participants is usually the financial management, which examines the opportunities and feasibility of the project. As a rule, the top construction management of the company examines opportunities from a technical perspective. For large development companies, acquisition department may be divided by regions. Each region is then represented by a manager for acquisition opportunities. During that initial stage, the

manager himself carries out an economic and technical analysis and only after fulfillment of predetermined parameters passes the project to upper management for further examination.

### **3.4.2 Department of asset management**

Managers of the company oversee the portfolio of companies real estate assets. The main goal is to examine the market conditions and to maximize the profit of rents. The portfolio may contain unsold housing units from previously realized residential projects or housing units intended for rent investment. Another customary assets are both commercial spaces and offices. Some of the greater development companies may also dispose of hotel complexes. Analysts of the asset department rate the conditions of properties and its maintenance. The analyst is responsible for bookkeeping and prepares the reports on financial conditions and cashflow. Based on this information he is able to forecast the annual budget.

### **3.4.3 Department of project management**

Project management of the company proceeds on several levels. The highest project management participates in the management of the new acquisitions. After acquiring the land is a new project assigned to a project manager. Project Manager participates on the project from its beginning to its completion.

### **3.4.4 Department of development**

Covers all company's strategies of future and present development. It provides the market monitoring and evaluations. The task of this department is to negotiate the terms of a land acquisition. This negotiation is preceded by a thorough feasibility study for the intended project.

### **3.4.5 Department of finance**

Chief Financial Officer as the leading figure is responsible for all financial activities that are covered by the company. For the existing projects it mostly includes accounting procedures, financial reports on projects, check on compliance with the project's budget. For future activities it includes all of the analysis on financial feasibility of proposed projects. Furthermore a research and the resulting market forecast of market development of real estate.

### 3.4.6 Department of property (facility) management

Definition of property management can be interpreted as: *"The process of managing property that is available for lease by maintaining and handling all the day-to-day activities that are centered around the piece of real estate. Property management may involve seeking out tenants to occupy the space, collecting monthly rental payment, maintaining the property, and upkeep of the grounds. Apartment complexes are handled by some type of property management company."*<sup>5</sup>

Basically, the head of of company's property management oversees the management of all its facilities. He is responsible for fulfillment of the budget plan. The managers establish budgets for their properties, monitor operational efficiency and they are responsible for the maintenance and good technical conditions of the facility. They also maintain the contacts with tenants and negotiate with potential clients and prepare annual budgets.

Usually, there are lease administrators and facility managers, who work directly in the building. The administrators support the managers with data on rental rates, lease administration, facility planning and financial reporting. Facility managers control the property on a daily basis. They deal with everyday building maintenance and supervise the reparations.

Larger developers usually have their own leasing agents. These agents monitor the property market and find tenants and negotiate the conditions of lease contracts.

### 3.4.7 Department of accounting and controlling

This department oversees company's budgeting and accounting activities relating to every project and trusteeship.

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<sup>5</sup> *Businessdictionary* [online]. Prague, 2016 [cit. 2016-10-11]. Available at: <http://www.businessdictionary.com/definition/property-management.html>

## 4 Reality Investment Strategy – Approaches of a New Project

Knowing the way how to predict the future development trends and requirements in residential housing is a fundamental aspect of a thriving developer and each project. These trends must be assessed at each time when it comes to an investment decision.

### 4.1 Development phases

As mentioned above, development activity is a long term process. For most of the real estate development projects the whole process of project implementation lasts several years. Thus, it is necessary to divide the project into the different but also related phases. Each of these phases is concluded with a decision whether the project is feasible and thus begins the next phase of the project, or whether it is necessary to restate the phase and come up with a better solution. It is also possible that management concludes that the project is has to be completely reworked or that it is not feasible in any form.

### 4.2 Reasons for a phase separation

Nowadays, large amount of literature tries to properly define each phase of the investment project. An interesting separation can be the one from Boucher: „*Market analysis, Site selection and acquisition, Planning and engineering, financing, construction, marketing,*“<sup>6</sup> or the one from Bulloch and Sullivan: „*Market & Competition, Physical & Design, Legal & Political, Financial and Project Managemen.t.*“<sup>7</sup> This Thesis will operate with the traditional division into pre-investment, investment and operation, which is typical for development projects. To obtain the knowledge of different phases therefore each of them contains a further partial operations.

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<sup>6</sup> BOUCHER, M. Thomas, 1993. *The proces od Residential Real Estate Development*. University of Florida.

<sup>7</sup> Bulloch, B., & Sullivan, J. , 2010. *Information - The key to the real estate development process*. Cornell Real Estate Review, 8,78-87

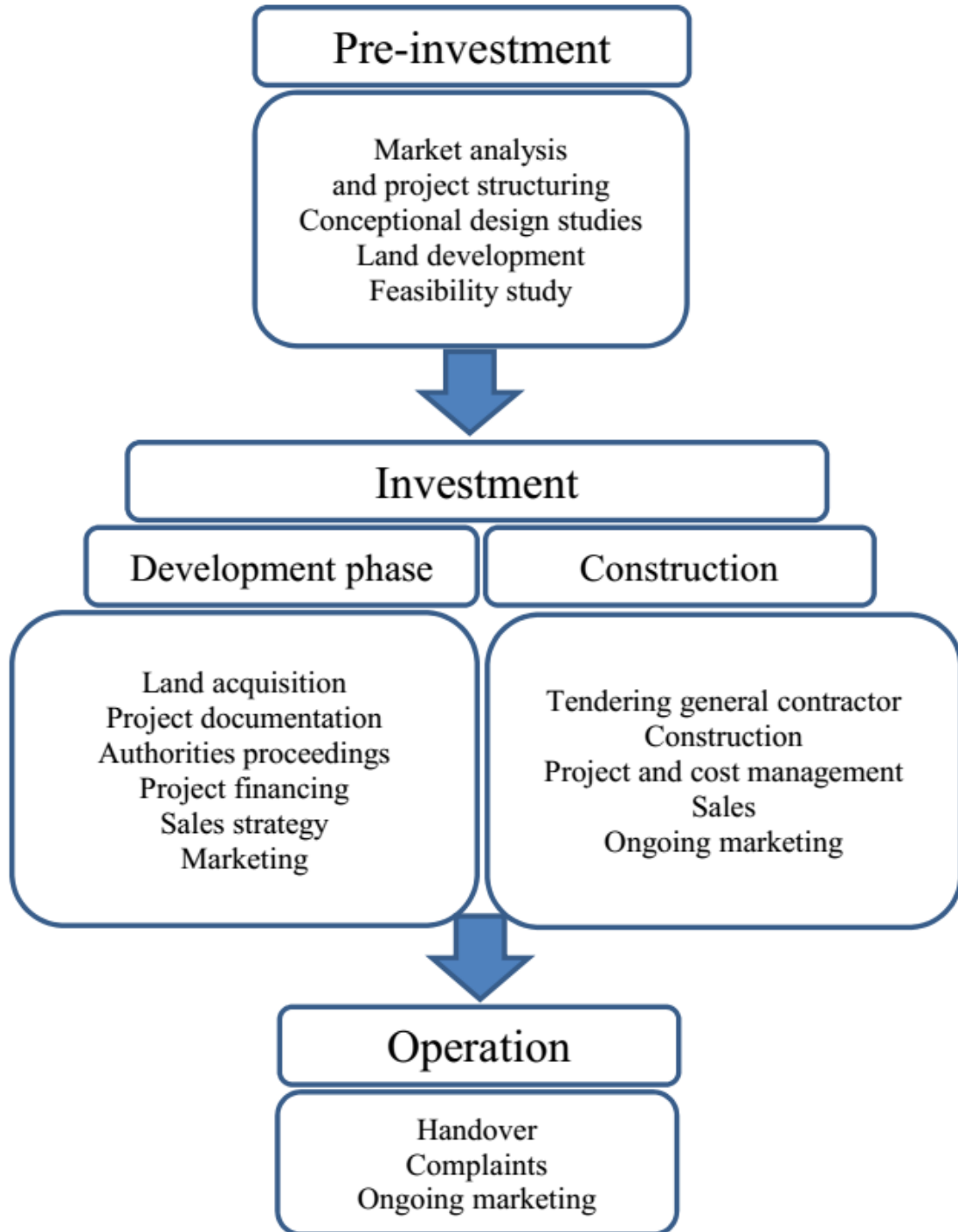


Figure 2: Development Project Phases Source: Author



## 5 Pre-investment

Each phase of the project is greatly important for the overall success of the project. Pre-investment phase should nonetheless pay close attention, because the success or failure of the project will crucially depend on information and knowledge based on pre-project analysis. These are mainly technical-technological analysis, market research and marketing analysis, as well as on the findings of the financial and economic nature. Another factors are well-defined and reflected risks when dealing with administrative authorities and simultaneously taking into account risks on the market and the risk of the project itself. Costs incurred in processing such analyzes are high, but the developer through them to avoid much larger losses that are caused by poorly estimated project. Such costs are called Sunk Costs. These costs are incurred, without an a priori knowing if the project will be realized. Therefore, these costs are not included in the decision process of project implementation. Once all the analysis are completed, the developer will decide the fate of the project.

### 5.1 Market analysis and project structuring

Before a developer can come to any decision, it is necessary to analyze the market. For activities such as the construction of residential housing, the companies can not only rely on decisions based on general facts and current trends. Mostly because of the fact, that development projects are very complex and extremely costly and time-consuming. Development companies therefore need all possible an available data and future predictions, in order to assess potential opportunities and risks of the project. The term market analysis, in essence, can one imagine as a pre-feasibility study. This kind of study is an intermediate step before the actual feasibility study, which serves as the basis for the final decision and implementation or rejection of the project. A comprehensive feasibility study is also very time consuming and requires considerable costs. Given that it is suitable, especially for development projects, process pre-feasibility study.

#### 5.1.1 Factors affecting project

The structure and content of pre-feasibility and feasibility studies of the project are similar. The difference lies in the detail of information and depth of analysis and scanning options. Detailed examination of the existing variants of the project should already be present in the pre-feasibility study. If this step is left to the very feasibility study, very likely will significantly increase the cost and delay of a potential project. „*The goal of any market study*

is to find the point where supply and demand intersect to supply the right quantity of a good at the right price. Since the world is complex and dynamic, no economist can ever identify that exact point. A market analyst accumulates information on as many factors as possible to make an educated guess’’<sup>8</sup>

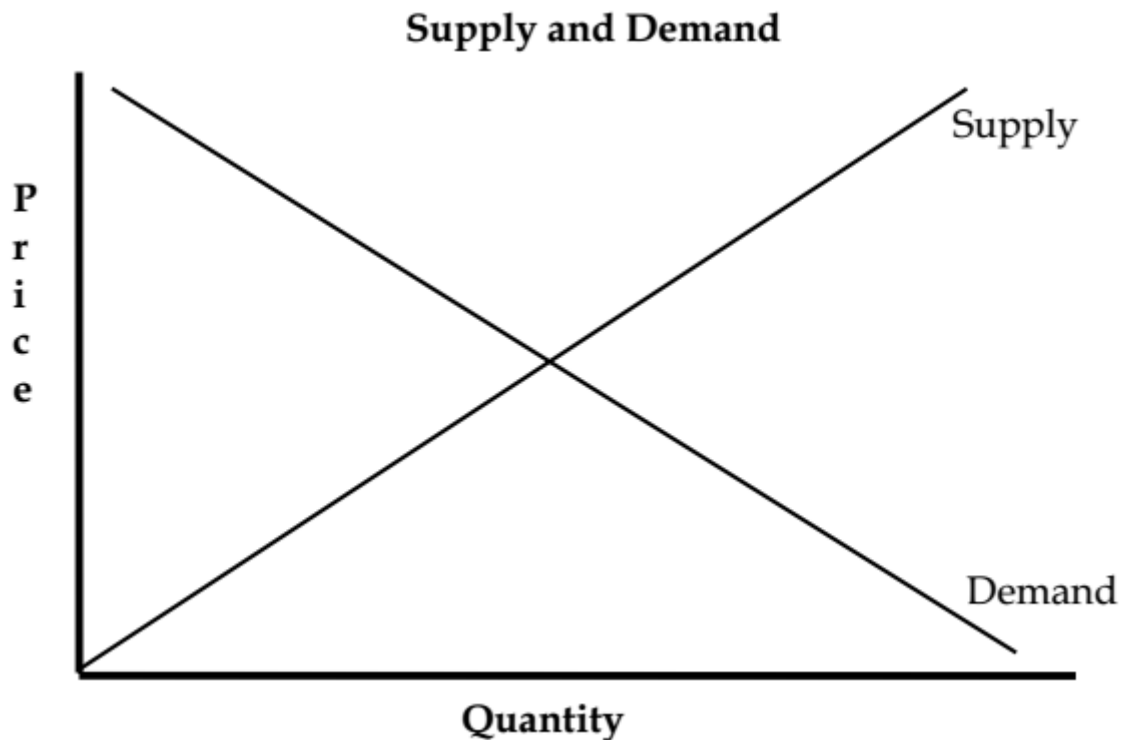


Chart 4: Supply and Demand. Source: NOVAK, R. LEE. *Market and Feasibility Studies: a How - To Guide*. May 1996

The study will examine in particular the following factors:

- Market area
- Market **demands**
- Housing **supply** from our competition

The result of this preliminary study is usually a decision on processing feasibility study if the project is feasible under the given conditions, or the decision to permanently stop further work on the project or about the need to revise the intended project.

<sup>8</sup> NOVAK, R. LEE. *Market and Feasibility Studies: a How - To Guide*. May 1996

### 5.1.1.1 Market area

*„The first step in market analysis is to define the market area. This will be the geographical area from which potential customers can be attracted. Within this geographical area the market can be further defined using demographic and socioeconomic factors to find an available market "niche" that can be exploited.“<sup>9</sup>*

### 5.1.1.2 Market demands

*„Factors influencing this demand are employment levels, population, income, family size, household characteristics, tastes and preferences, transportation access, and whether the community is growing or shrinking.“<sup>10</sup>* These demands can be influenced by a developer by selecting the suitable land for intended type of project.

### 5.1.1.3 Housing supply from our competition

Comparing the project to other projects from the competition on the market and the implementation of the so-called benchmarking. This means that the project is multicriterion compared with other projects and the developer gets an idea of what are the strengths and weaknesses of the project.

## 5.2 Conceptual design studies

Following the market analysis, there have to be defined clear requirements for architectural office, which will process conceptual design study. Investor proposes the required parameters for functionality and design options and architectural office processes these proposals for the needs of a feasibility study.

## 5.3 Property land development

As mentioned above, the project phases are separated into pre-investment, investment and operational phases. Property land development can be commonly categorized into pre-investment phase.

Property land development category includes all activities relating to the selection of suitable land, examination of its ownership structure, profitability of the purchase of land and its readiness for actual construction.

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<sup>9</sup> BOUCHER, M. Thomas, 1993. *The process of Residential Real Estate Development*. University of Florida.

<sup>10</sup> BARRETT, G. Vincent and John P. Blair. *How to Conduct and Analyze Real Estate Market and Feasibility Studies*, Van Nostrand Reinhold, New York, 1982.

This might be especially a few basic ways of land acquisition. The first way is to search the site for specific type of project that the investor has already prepared. In this case, the investor has a clear idea of what he seeks for. Another way is speculative land purchase. Nowadays it is increasingly common for the developer to purchase a land as a form of speculation. This form of a purchase is called as „Land looking for a use“ where a developer searches for suitable and profitable project for particular location. This process must always operate within the restrictions of Planning permit and Construction permit. When it is miscalculated, developer can lose big money, or the time before actual construction begins can easily stretch to 10 years. The developer also must have sufficient equity.

Some developers are therefore focused mainly on projects with already obtained zoning decisions and building permits, the price of such land is usually several times higher. At the same time, however, the investor significantly reduces the risk of delaying the project. Offers to sell these types of land with building permission are now rather unique. It is mainly caused by a lengthy process of obtaining a building permit from the Building Authority. Therefore, the prices for these lands are nowadays extremely overpriced, which significantly increases the cost and the total cost of the project and it is not certain that the resulting project will be profitable. According to the Czech Statistical Office, in the period January-September 2016 Prague began to build 862 new flats, which was compared to the previous year by 71.6 percent less.

This fact refers to a recent World Bank study. For its needs a study called Doing Business is annually processed. This 2016 edition of the study compares a total of 190 countries in terms of the length of the approval for new projects. In the category of the length of time of approval of building permits, the Czech Republic ranked with up to 247 days to 161. Place in the ranking. With total number of processes needed placed even at an alarming 169th place.

Economy	Procedures (number)	Time (days) ▲	Cost (% of warehouse value)	Building quality control index (0-15)
Zimbabwe		10.0	238.0	25.4
Russian Federation 🇷🇺		13.7	239.3	1.4
Tajikistan		27.0	242.0	2.1
Lebanon		18.0	244.0	4.9
China		22.0	244.3	7.0
Czech Republic		21.0	247.0	0.3
Canada		12.0	249.0	1.3
Uruguay		21.0	251.0	1.1
Trinidad and Tobago		16.0	253.0	0.1
Pakistan - Karachi 🇵🇰		15.0	260.0	9.1
Russian Federation - Saint Petersburg 🇷🇺		13.0	262.0	1.2
Pakistan 🇵🇰		15.0	264.2	7.0

Table 1: Comparison on building permit period, Source:  
<http://www.doingbusiness.org/data/exploretopics/dealing-with-construction-permits>

### 5.3.1 Search for a land

Finding a suitable land for a new development project is a crucial part of the whole project. Knowing what to buy, when to buy it and how to buy it makes the difference for the successful developer. There are several ways to find a way for a suited plot. First possibility is to find a real estate agent (so-called Broker), who can be very helpful for a developer. These brokers can take care for the entire process of land acquisition, which begins by searching for suitable land and continues to negotiate with owner the conditions of sale and representing investor. However, some land owners simply refuse to work with brokers, because they don't like to be bothered by brokers. For this purpose, the developer can hire a private researcher, with whom the owner might be willing to communicate. These researchers cannot mediate deals between the two parties, unless they have a licence to do so. The real purpose of a researcher is to explore and find the prospective properties. After that, the developer can directly communicate with the property owner.

Some developers usually have their own resources for finding potential properties and they. The advantage of this procedure is that the developer focuses only on the potential properties, in which it has a serious interest. The developer can also constantly monitor how individual negotiations proceed. Experienced and large developers mostly combine all abovementioned approaches to cover major part of the market. Any of these methods might be effective.<sup>11</sup>

<sup>11</sup> WOODSON, R. Dodge. Be a successful residential land developer. New York: McGraw-Hill, c2000. ISBN 0071341609.

### 5.3.1.1 *Direct contact with land owners*

Development companies nowadays receives a large number of offers to sell the land. Part of high-quality proposal should be attached photo from the cadastre with clearly marked land for sale, as well it should be noted right at the beginning whether the land has already resolved zoning or building permits. The final price for the land is based on these facts. In many cases the landowner handles the initial study with informations for the potencial land use and permissible degree of soil consumption. All these factors facilitate investors decision about buying the land.

### 5.3.2 **Appraisers involvement**

Appraisers are among the often overlooked group of experts who can be used in the search of suitable land. They are able, already during the first analysis, to estimate what could be the value of the completed project. This kind of information can accelerate and facilitate decision-making on the land. Appraisers are useful not only during the initial stage of selecting the land, but as well to define the basic challenges that can (most likely will) have an economic impact on the planned project. For example, if the investor need quick and professional opinion on the size and specifics of the market for residential housing in a certain district, it is advisable to hire an appraiser who specializes in this area. It is therefore advisable to consult the idea of buying land with the appraiser. The appraiser can thus support the investor, that the purchase decision is economically meaningful.

### 5.3.3 **Due dilligence study**

Investor can usually arrange to have some sort of complex legal, technical and environmental studies, also called due diligence. This study discusses the current status of utilities, compares the plan with the intended project, examines the ownership and history, as well as restitution claims. If this study detects no restrictions and no other difficulties, the investor may proceed to the acquisition phase.

## 5.4 **Feasibility study**

Most of successful developers rely on both their sence of prediction (good feel and instinct) and feasibility studies to confirm the prediction or to refute it. Feasibility study builds on the results of a market analysis.

Feasibility study (analysis) can be defined as: „*Feasibility analysis is a generic term (that) groups a variety of predevelopment studies by generalists and specialists in a*

*systematic philosophy of inquiry to determine facts that are reliable, assumptions about the future that are consistent with past experiences, and tactics (that) will minimize the variance between objectives and variations.* <sup>12</sup>

#### 5.4.1 Drafts for feasibility study

The outcome of the feasibility study is the basis for responsible management of the company, leading to investment decisions. This study may also be used as an informative basis for banking institutions, whether to provide a loan on project funding. High quality and comprehensive study should provide all the technical, environmental, financial and other economic information. Feasibility study is divided into the following steps:

- Summary of conclusions of the original market analysis
- Detailed market analysis
- Alternative solutions for project
- Location of the project and the impact on the environment
- Legal regulation of the territory (regulatory feasibility)
- Technological procedures, organization and construction schedule
- Human Resources
- Marketing strategy of project
- Risk analysis

According to Sieber is the guide divided into categories:

- *„Content*
- *Introductory information*
- *A brief evaluation of the project*
- *Brief description of the project and its phases*
- *Analysis of the market, demand estimation, marketing strategy and marketing mix*
- *Management of the project and human resources management*
- *Technical and technological project*
- *Impact of the project on the environment*
- *Security Asset*

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<sup>12</sup> Graaskamp, *Fundamentals of Real Estate Development*, p. 13. [online], 2016 [cit. 2016-10-24]. Available at: [http://morris.marginalq.com/GREM\\_RE720\\_MoreFiles/Urban%20Econ%20Graaskamp%20ULI.PDF](http://morris.marginalq.com/GREM_RE720_MoreFiles/Urban%20Econ%20Graaskamp%20ULI.PDF)

- *Management of working capital (current assets)*
- *Financial plan and project analysis*
- *Evaluation of the effectiveness and sustainability of the project*
- *Analysis and Risk Management (sensitivity analysis)*
- *Project Schedule*
- *Final summary evaluation of the project*<sup>13</sup>

Whether the study is prepared by any division, the output should always highlight any shortcomings that may concern both technical and economic efficiency. Based on these suggestions, the project is altered and all of the analyse phases are revised.

#### 5.4.2 Financial analysis

Financial analysis is the heart of the feasibility study. The results of this analysis are the most important for a final decision, whether the project is feasible. The output of financial analysis are both expected financial revenues and costs of variant project solutions. It assesses the economic efficiency of examined project by using several methods or different approaches. Furthermore, it includes optimal sources of project financing. Time factor influence has always be taken into account as well as clearly defined and assessed risks (in accordance with the selected option).

Financial-economic analysis is a continuation and completion of two previous studies and they are very closely linked. It respects their conclusions and context and tries to act as a feedback to their results. If this study proves that some decisions from previous studies are not very effective, it is necessary to return to these points and rework them in a comprehensive conclusion, so as to create harmony among all studies.

At the first sight it would seem that the financial plan can be made only on the basis of the proposed project and after working out documents in the investment phase. In this case it is faulty reasoning. After checking such a financial plan, or at least a rough outline, a finance specialist reaches the conclusion that, for example, technical and technological solutions and applied technologies are poorly designed or adjusted, and the overall result is not satisfactory. In this case, the management must go a few steps back and look, where is the source of

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<sup>13</sup> *Methodological guide on feasibility study [online]. ČR: Ministry for Regional Development, 2004, 2004(1.4) [cit. 2016-12-08]. Dostupné z: <http://www.strukturalni-fondy.cz/getmedia/c4772855-8ffc-4036-97fc-2d7caa1ad86e/1136372156-zpracov-n-studie-proveditelnosti>*



inefficiency in the proposed variant solutions and modify it so that the consequences of partial decision are satisfactorily demonstrated to the proposed financial plan.

## 6 Investment

Upon completion of all studies and analyzes the investor makes decisions on project implementation. In the event that execution is approved, the project moves to investment phase. For better orientation and clarity within this thesis, the investment phase is described in more detail and is divided in the stage of development and construction.

### 6.1 Development phase

Within the development phase, the purchase of land for the project is being solved, architectural office is assigned to develop a complete project documentation and the investor negotiates with banks to secure project financing. Investor also hires an engineering company for the obtaining of all necessary permissions and statements from authorities. Another approach is to hire an advertising agency to handle marketing strategy and to develop an own sales strategy.

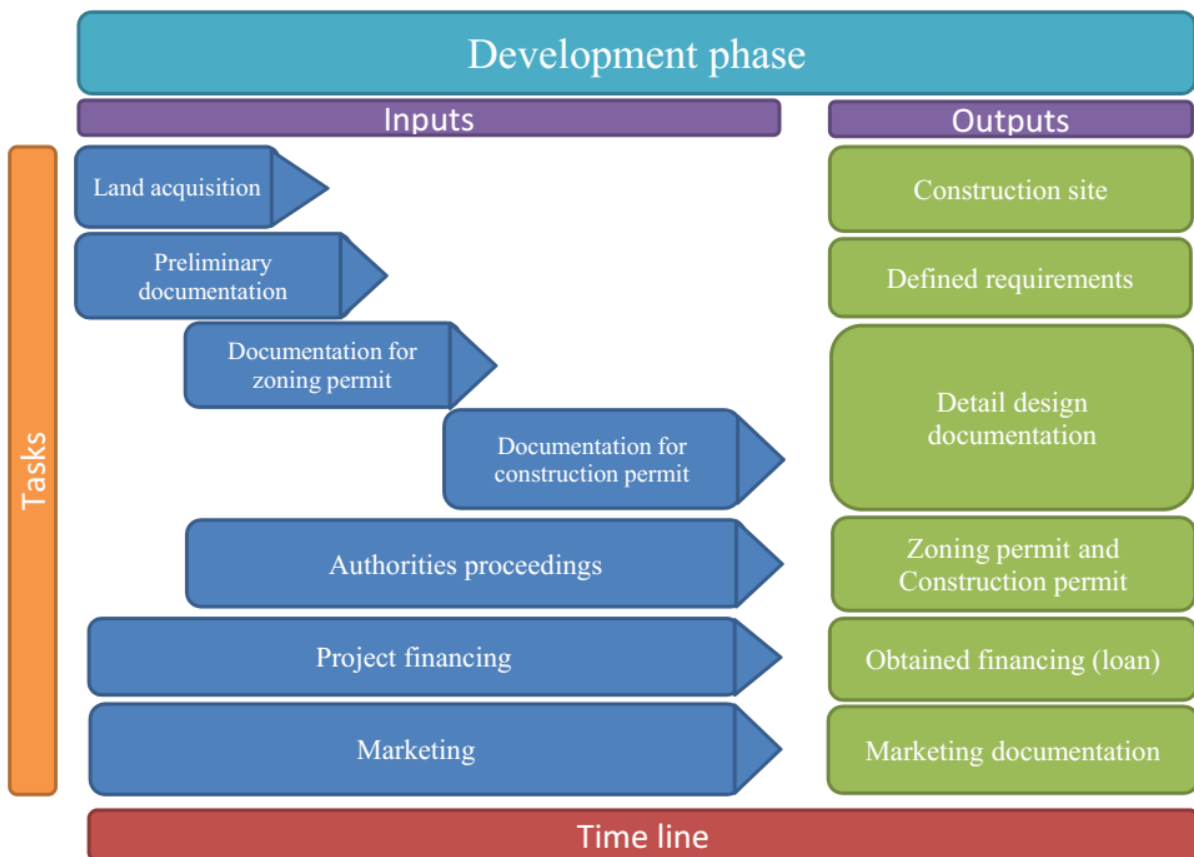


Figure 3: Development phase of a project. Source: Author

### 6.1.1 Land acquisition

If the developer is convinced about the suitability of the site and the land for its project, so comes the land acquisition. Due to the fact that the purchase of land is extremely risky factor throughout the project, since the commencement of actual construction is still a long way to go. The developer therefore attempts to negotiate with the landowner over possible alternatives so-called contingency contracts. The subject is the incorporation of risk conditions in the purchase agreement. According to Dodge Woodson: „*A familiar one (contingency) is that a sale is a subject to a purchaser obtaining financing to buy a property.*“ and that „*buyer doesn't have to enter into purchase agreement to gain control and an insurable interest in real property. An option, for example, can give a developer control of property without making a full commitment to purchase the real estate.*“<sup>14</sup> For that reason there are several methods included in purchase procedure:

#### 6.1.1.1 Contingency contracts

These types of contracts are the most common in land purchasing process. Developers can secure the property (land) while their researches on the properties are done. These contracts are sometimes limited to preconcerted period of time. One of the typical contingencies is **Zoning** contingency, that allows developer to confirm current zoning requirements. If the seller is „generous“ to developer, the contingency might include time to see if the zoning rules can be changed. Although, this might be a process for at least next couple of months. Another contingencies might be based upon environmental studies or utilities, where the developer needs to examine what type of installations are available to a parcel.<sup>15</sup>

#### 6.1.1.2 Options

„Options are often used by developers. By using them, developers can control large amounts of land with very little money.“<sup>16</sup> The way the options work are quite simple, when the seller makes an agreement with developer on a certain amount of money, the property is locked up for this developer for a period of time agreed in the settlement. The seller keeps the money and when a developer decides to purchase the land, the money is applied to the final

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<sup>14</sup> WOODSON, R. Dodge. Be a successful residential land developer. New York: McGraw-Hill, c2000. ISBN 0071341609.

<sup>15</sup> WOODSON, R. Dodge. Be a successful residential land developer. New York: McGraw-Hill, c2000. ISBN 0071341609.

<sup>16</sup> WOODSON, R. Dodge. Be a successful residential land developer. New York: McGraw-Hill, c2000. ISBN 0071341609.

price. On the other hand, when a developer declines to buy the land, the option money forfeit to the seller.

### 6.1.2 Preliminary documentation

Upon completion of all development analysis is the next step in defining the project. The basis for the Preliminary documentation is a clear definition of the project.. Therefore it defines the objectives and scope of the project, clarifies the individual context of previous analysis and describes reasons for the creation of the project. The aim of this document is to specify every information requested. Another objective of this document is to at least define areas for which there is not sufficient information at this stage of a project. These areas will be assessed in detail during the preparation of the project documentation. Based on the Preliminary documentation there is a launched tender for an architectural studio and basis for more accurate processing of project costs. The final approach is to determine, whether the project is feasible.

#### 6.1.2.1 EIA study

A separate part of the preliminary project documentation, the environmental impact assesment (EIA). „*Environmental assessment is a procedure that ensures that the environmental implications of decisions are taken into account before the decisions are made. The common principle of both Directives is to ensure that plans, programmes and projects likely to have significant effects on the environment are made subject to an environmental assessment, prior to their approval or authorisation. Consultation with the public is a key feature of environmental assessment procedures.*

*The Directives on Environmental Assessment aim to provide a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation of projects, plans and programmes with a view to reduce their environmental impact. They ensure public participation in decision-making and thereby strengthen the quality of decisions.* “<sup>17</sup>

It must be borne in mind that this study is usually very time consuming (often more than 12 months) and for its processing developers use the experience of expert companies.

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<sup>17</sup> Ec.europa.eu. [online], 2016 [cit. 2016-11-10]. Available at: [http://ec.europa.eu/environment/eia/index\\_en.htm](http://ec.europa.eu/environment/eia/index_en.htm)

### 6.1.3 Documentation for zoning permit

This type of documentation is sometimes also called Basic Design Package (BDP) or Planning Permit Documentation.

According to The Ministry for Regional Development and a Decree no. 499/2006 Sb. as amended no.62 / 2013 Sb. on documentation of buildings, documentation for planning permit must provide in particular informations:

- Identification information about the construction, the applicant, documentation processors
- A summary of the technical report (description of the area, the conclusions of completed surveys, possibilities for connection of infrastructure, floodplains, etc.)
- The description of the building and its purpose
- Impact of construction on the environment
- Organization of construction
- Complete drawings
- Statements of the authorities concerned and the owners of the surrounding infrastructure<sup>18</sup>

The output is approved documentation of the zoning permit. The next step for overall approval of the project is to prepare documentation for building permits.

### 6.1.4 Documentation for building permit

This documentation is basically an extension of the documentation for the zoning permit. It expands to include detailed documentation of buildings. It includes the following:

- The architectural and structural design of buildings
- Technical reports
- The drawings
- Constructional part
- Structural assessments
- Fire safety solutions
- Documentation of sub-professions

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<sup>18</sup> Decree on building documentation no. 499/2006 Sb.: amended 62/2013 Sb. In: . Prague: Ministry for Regional Development, 2013. Available at: [http://www.mupe.cz/assets/File.ashx?id\\_org=11891&id\\_dokumenty=5460](http://www.mupe.cz/assets/File.ashx?id_org=11891&id_dokumenty=5460)

The outcome of this proceeding is obtaining a building permit from the Building Authority. The last step before the very construction phase is a detailed design documentation.

### **6.1.5 Detailed design documentation**

Ideally, the detailed documentation is processed prior to the commencement of construction works. Detail design documentation can also be a part of contract with general contractor, where the contractor is responsible for the correctness of documentation and itemized budget, which is forcing the contractor to perform any additional work that the project has been approved for.

Unless actual performance documentation is not supplied by the general contractor, it is important to structure a detailed itemized budget, so there is no aggregation. This in turn can cause problems during the very construction, where different requirements occur and there is nothing to be based on in the original budget.

### **6.1.6 Authorities proceedings**

In the preparation of the development project there is the high number of participants in its all processes. Given this fact, it is important to clarify the all possibly involved authorities. Furthermore, the investor needs to know what is required from these authorities, how long the process might take and how these authorities can affect the timing of the project.

During the planning and construction permit proceedings, the developer comes into a contact with authorities of various departments. Developer must always collaborate with the Building Authority. It is common that developer must also collaborate with authorities such as department of transport, department of Environment and Care of Monuments department and others that are expressed to the building during the various phases of the project. Another key department with the cadastral register, which is closely linked with the development of each new project. At this office it is to be discussed of the ownership structure of the land, then the land subdivision and finally the enrollment of, completed construction in the registry. For residential buildings, the developer submits a declaration of ownership. Afterwards, the apartment building is divided into apartments in the cadastral office and arises a new community of owners.

### 6.1.7 Project financing

Typical developer is unable to develop most of its projects on its own. For this purpose, in the financial market there are several ways to secure projects financing. Funding for the project can be defined as an activity engaged in obtaining financial resources and their optimal distribution.

Funding for the project can be divided into the financing by corporate equity or by outside capital. Financing of investment projects by banking institutions falls within its own sector, primarily because the investments are often in the line of hundreds of millions of crowns. Banks therefore have their own procedures by which they decide on the financing of the development project. Usually banks prepare their own extensive analysis and require detailed information about the submitted project.

As for the developer who wants to cooperate with the bank for the first time, so for these clients, the bank ascertains detailed information about its current activities and its history. For each new project, the bank also decides based on several key criteria, they are mainly:

- The history and experience of the development company and the partners involved in the project (general contractor, design studio, etc.).
- The project itself and its market potential (location, number of housing units, target clientele)
- Absence of legal disputes and restitution for land on which to build the project (if there is such a risk, it increases the risk of the project from the perspective of banks)
- the number of sold housing units - if the project sells well at the corresponding (high) prices, this is the best evidence of the eligibility of the project

Then there are the standard requirements of banks for financing development:

- A predetermined proportion of investors' own funds invested before the first drawdown of the loan
- Cost control during the construction by the manager of the bank
- Property insurance during construction and after its completion

It is common that a development company sets up, for every project, a new subordinate company. Purpose of this company is its net history. Thus, if the project is

financed with the help of the bank, then the investor is not a direct borrower, but all transaction proceed through the project company.

The contract on use of financial funds habitually provides considerable limitations, which are pre-defined in the contract. These, inter alia, include who can approve disbursement of funds of the respective loan. Often it depends primarily on project managers, whose job is then controlled by bank cost managers. These controlers usually control the reality on site. Project manager, however, has not completely free rein. His approval must be based on agreed project timetable and project budget. If there are significant changes in the project (changes in structure, different use of the finished project), the bank must approve these changes.

There are also cases of funding through the so-called syndicated loan. It is a loan, which is divided among several banks. Individual banks have different shares of stakes investment, the higher the share, the higher the potential return, but so is the risk.

#### 6.1.7.1.1 Real estate collateral

For the bank, it is very important that the commitment from investor is secured in the event of project failure. Most of the development projects is provided for "non-recourse" basis. This means that the loan is secured by the financed project (the land and existing real estate). Thus, most important requirement to ensure development financing is a lien in favor of the financing banks on land and buildings on the land. Drawdown of the loan is usually conditional on the registration of the lien on the property.

#### 6.1.7.2 *Nonbank sources of funding*

As a rule, banks do not extend credit to the entire project, but only on its part. So if the developer convince the bank that the project does not provide a dangerously high risk, the bank is, ideally, willing to give up 70 percent of the funds. For particularly large projects where budgets range from hundreds of millions of crowns, funding secured by the bank itself may not be enough, because the developer must have a very high equity. In such a case comes to the number of non-bank financing sources.

#### 6.1.7.3 *Investment funds*

Private investors are nowadays very often entering into development projects. It is common that foreign investment funds are willing to cover up to an additional 70% of the costs that would otherwise have to cover the investor. Therefore, if for example the investment costs of CZK 100 mil., the bank provides a loan of CZK 70 mil. The private



investor covers up to another CZK 21 mil. of the remaining CZK 30 mil. The disadvantage for the investor is the required rate of revenue from these funds. While banks require approximately 3-7% return, private investors often require up to 20%. Everything depends on the potential and risk of the project.

#### **6.1.7.4 Contractor loan**

The developer then repays the loan (including the predetermined interest) in one or more installments after the completion of the project. The loan may be provided either straighten out the supplier's own resources, or as refinancing through bank loans, which are specifically agreed by the contractor.

#### **6.1.8 Sales strategy**

Preparation of sales of development project is a set of activities from the decision to implement a project to the own launch of sales. Investor comes up with a business policy of the project, which defines activities such as:

- Business project documentation (documentation for clients)
- Processed pricing policy and strategy for future development
- Processed business plan
- Ensured client service
- Ensured communication channels (further informations in section 6.1.9)

Developer creates the pricing policy based on the overall business sales strategy. The input data for pricing are especially:

- Market research and competition analysis
- Material, technical and technological standard of the project
- own experience

Further, the developer must provide a system of client changes. For these purposes, the developer often provide external company that deals with client changes. If the developer decides to provide client changes itself, it must be ensured:

- Showrooms
- pricing of required changes
- contracts with clients

- organization of supplies of required changes to the construction and communication with the general contractor

### 6.1.9 Marketing

Product marketing has the same basis as within the construction sector, but also for example in the services sector. The common denominator is to satisfy customer needs. Targeted and effective marketing must begin to be formulated immediately after the approval on the project realization. It is necessary to constantly monitor the market situation and continuously adjust the current marketing strategy.

#### 6.1.9.1 Marketingový mix

*„It was in the late 1940s when the term “marketing mix” first emerged. Marketer E. Jerome McCarthy came up with the first of the theories for marketing mixes.”<sup>19</sup>* The mix is based on four groups known as the 4P's. These represent Price, Product, Place and Promotion. The basis of 4P's is same for every product, but the individual requirements differ in accordance to specific field.

#### 6.1.9.2 Marketingový mix of 4P's in real estate development

Marketing mix compiled in a case of residential real estate development is focused on the owners or users of flats, whether they use them to solve their own housing situation or as an investment. If the rules of marketing 4P's are applied, the real estate can be divided according to various criteria such as:

- Price - compliance with the declared price of the product (flat), discount policy, loan terms, payment terms
- Product - Variability of units, quality and related standards and prestige of interior furnishings, design, united facilities of residential housing, warranties
- Place - Location, amenities, transportation, genius loci, sustainability etc.
- Promotion - advertising, public relations, sponsorship, interactive marketing, open days, showroom apartment and others

The above mentioned criteria have to be taken into account throughout the whole period of marketing and sales activities.

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<sup>19</sup> Marketingmix [online]. 2016[cit. 2016-12-20]. Available at: <http://marketingmix.co.uk/definition-marketing-mix/>

### 6.1.9.3 *Creating marketing according to the phases of project preparation*

Content, design and marketing strength can be divided into the stages of the project. So, according to phases after receiving the zoning permit, the building permit, then during the building and not least the ongoing marketing after project completion.

- Marketing **after obtaining zoning permit** is specific in that it involves the processing of initial market analysis, which does not yet provide with the promotion of the product itself (housing units). Marketing department of development company also defines the target clientele for which the project will be determined. The development company also begins to design a strong identity of the project (project name, logo, promotional materials and websites).
- Targeted marketing activity starts in the moment when the developer **obtains a building permit**. Developer launches website of the project and creates a projects model. Information on the project must include in particular the pricing, standards, disposition of residential units and a variety of visualization. Other communication channels are used in addition to the website. Currently, the most recent distribution is by the media type. Among those are classified the print advertising, digital advertising, Out of Home format (billboards), radio, television.

## 6.2 Construction Phase

Construction of a development project can be defined as a set of activities beginning with the signing of an agreement with a general contractor, whose object is to implement a development project for a given price at a given time and in the required quality.

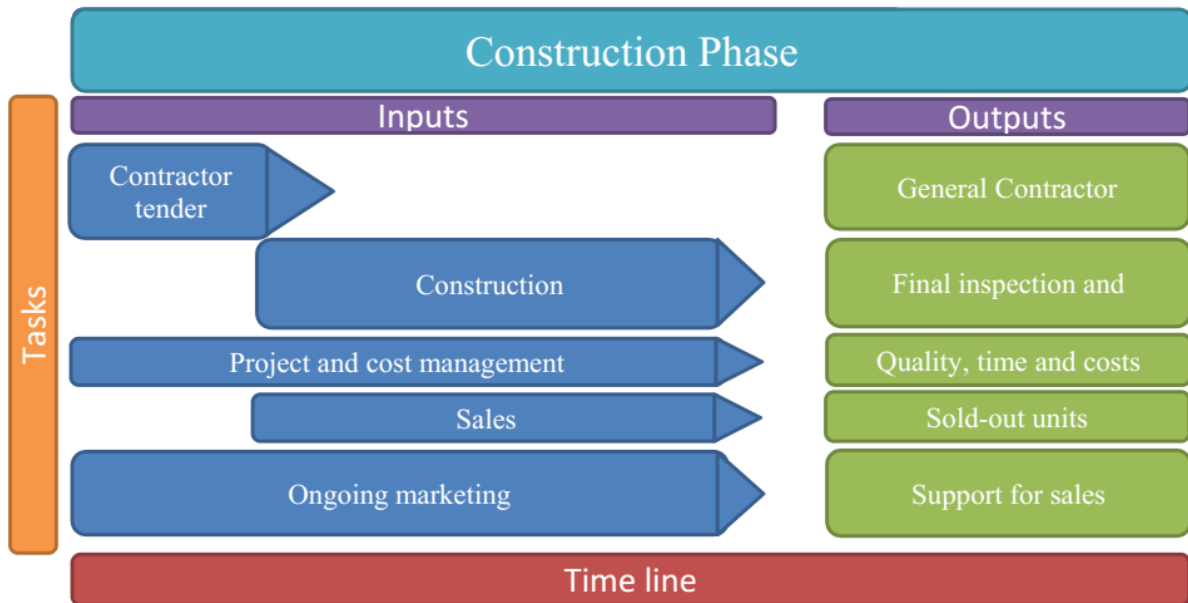


Figure 4: Construction phase of a project; Source:Author

### 6.2.1 Tendering general contractor

A simple definition of tendering process can be: „ *the process of choosing the best or cheapest company to supply goods or do a job by asking several companies to make offers for supplying the goods or doing the work* “<sup>20</sup>

Standard tendering process should especially fulfil these two objectives:

- Contractor offers a realistic price for the project, matching investor’s estimation
- Contracor fully understands the requirements of proposed project and investors’ requirements

Types of tendering processes:

<sup>20</sup> Tendering process definition [online]. [cit. 2017-01-04]. Available at: <http://dictionary.cambridge.org/dictionary/english/tendering>

- *Open Tender*

Developers will issue a call for tender on its website or the special pages for tenders. The contractor must demonstrate their experience, financial ability and determination that are needed for the project implementation. This method is often used for smaller projects.

- *Selective Tender:*

In such a process is invited only a limited number contractors. To this tender there are invited mainly contractors with whom the investor had worked in the past or contractors who have a good reputation in the market or specialize in certain works.

#### *6.2.1.1 Tenders Submission and Opening of the Tender:*

Participants submit their offers. The opening of tender frequently happens at a predetermined time and date. These informations are mentioned in the tender document.

#### *6.2.1.2 Award of the contract:*

Normally is the winner of the contract based on the lowest bid, but sometimes there are other criteria such as a shorter time of construction, the quality of the offer, initial discounts, contractor loans.

The investor subsequently contacts the contractor of the winning bid and begin to deal with the agreement conditions.

### **6.2.2 Construction**

After the agreement with general contractor is signed, the next step is to hand over the site to a contractor. Construction of the project ends at the moment when it obtains a final building approval. Then is the finished work handed over back to the investor. These managing tools should be followed during the construction phase.

- Clearly defined and understandable construction agreement
- Contract with architects and designers on the follow-up project activities
- Project schedule
- Itemized project budget
- White Paper of the project
- Planned costs and revenues
- Project cashflow
- The financial plan for the project

### 6.2.3 Project and cost management

Schedule update of the project is performed by the project manager on the part of the general contractor and also by the project manager of an developer. Plan costs and revenues can be changed during the project. Chief project manager of an investor is responsible for providing current data to the financial management of the company.

Project management is responsible for compliance with the approved construction parameters and for the implementation of the agreed changes during construction. Furthermore, in compliance with the quality of work of the project. The project manager also regularly participates in the construction inspection days with the general contractor. Other participants may include representatives of engineering firms and architectural firms.

Throughout the building there is a large number of changes, it is therefore essential that investor consult these changes with both the general contractor and the architectural office. The top management of the investor subsequently approves these changes.

The Finance Department of the development company is responsible for the financial management of the project. Data for inspection and evaluation are received from the project manager, sales department and by using informations from financial institutions (Current informations on provided loans). Processing, updating and evaluation plan of costs, revenues and cash flow of the project is for the entire duration of the project carried out by an information system.

In order to successfully complete the project, it is necessary to provide the following documents:

- Final building approval
- Protocol on takeover of construction
- Protocol on removing flaws and shortcomings of works
- House number of the project
- Geometric construction plan
- Documents proving the correct results of prescribed tests, instructions for use of the facilities and flats
- Operating Rules of campus
- Fire Regulations of campus and for single objects
- Schedule of maintenance of the project
- The finished passportisation of units

- Contract with the media providers
- Contract with facility management company
- Secured property insurance

#### 6.2.4 Sales

Sale of residential units during the project construction are secured through the following processes:

- Management of brokers activities
- Update of units sold and possible adjustment of prices according to the market situation
- Management, control and update of schedule, budget and cash-flow
- System of registration for technical inspections and subsequent finite takeovers of flats to the clients
- Preparation and signing of purchase agreements
- Inserting the the property in the cadastre

#### 6.2.5 Ongoing marketing

Marketing activity is maximized during the project construction. Besides the use of marketing channels the developer can use another highly effective ways to communicate with customers. These are mainly:

- Laying the foundation stone of the project for the participating journalists and potencial costumers
- Open days for clients directly at construction site
- Showroom flat at the site of the project
- Guided tours of dwellings under construction
- Housewarming party of the finished project

### 6.3 Operation

In the period after completion of the development project the developer starts with handover of residential units to owners and starts the process of complaints procedure with clients. The project is also handed over to the management of the contracted facility company. If there are some residential units still unsold, sales and marketing departments tagret their activities and adjust the strategies to sell these remaining units.

### 6.3.1 Handover

For development projects, where the customer is a final investor, there is a process of transfer of housing units through technical handover to the owner of the housing units. Participants in this process are developer, a representative of the construction company and the owner of the residential units. As part of the handover, flaws and shortcomings of the works are written down. Contractor then has 30 days to remove them. Furthermore, it is agreed the final handover of the apartment in the presence of the same participants. If flaws and shortcomings are eliminated, the owner will take over the housing unit and warranty period begins and lasts according to the purchase agreement. If flaws and shortcomings are still present, the whole process is repeated until the client is satisfied with the quality of the performed works. The purchase of residential units also result in the membership of the owners of housing units.

### 6.3.2 Complaints

For resolving complaints and after-sales customer service, clients are redirected to complaints department and asset management department. For that reason developer creates a system that is govern by following activities:

- Receiving complaint and its registration in system
- Writing a protocol, which evaluates the legitimacy of the claim and proposed solutions
- In the event of unrepairable problem is suggested another solution to the situation - for example Discount
- After removing flaws or providing discounts, the validity of the warranty period continues until its expiration

### 6.3.3 Ongoing sales and marketing

The form of marketing in the time after final building approval of the project depends on the status of sold-out of the project. If the project is not sold out the expected way, it is necessary to adjust the marketing strategy, possibly intensify it. Using effective marketing is to inform customers that the project is suitable for immediate occupancy. Another option is to reduce the price of unsold units. In this case, it is generally less attractive units, or a bad setting of pricing policy during the launch of of the project.



## 6.4 Conclusion

This part of thesis has described the historical development of real estate development in Czechoslovakia and the Czech Republic, its current status and has also described of how the developers companies operate. The next section has described the overall progress of development projects. Different phases of real estate development projects have been analyzed with the aim of achieving optimal conditions for its preparation, construction and completion. These findings are further subjected to examination in a development project in the following case study.

## 7 Case study

### Investment Analysis of Residential Development Project Marina Island

This case study follows the theoretical part, which has described the various steps of the development project. The aim of this case study is to describe the progress of an existing development project Marina Island on bank of the Vltava in Holešovice. As a part of the case study there are described several investment decisions, which arose during the project.



Figure 5: Visualisation of Marina Island project. Source: <http://www.marinaisland.cz/cs/>

#### 7.1 Project Investors – Daramis and Lighthouse Group

The first of these companies currently belongs among the largest players in the field of residential housing in Prague. It focuses primarily on projects with higher standards and accessible and attractive locations. Currently, the company has seven residential projects with more than 1,800 new apartments in implementation.

Company Lighthouse fame through the implementation of a development project Prague Marina in Holešovice and also, for example, high-rise building Lighthouse Tower. Marina Island project could be described as the flagship of Daramis and Lighthouse Group.

## 7.2 Introduction

The main subject of Marina Island development project is the construction of 344 units of luxury apartments with the view of the river. This project is divided into two stages, where the subject of the first stage are three residential buildings, where two of them have 10 and one 12 storeys. The second phase includes additional two residential buildings. The project includes a 2-storey underground garage, a new road in the direction of Holešovice, complete connection of water supply, hot-water and sanitation. Among the biggest points of interest of this project is undoubtedly the flood protection system, to be able to protect all residential units up to a massive flood (flood in 2002). The extent of such flood protection in the private sector within Prague is unprecedented.

During the processing of the thesis is the project at the stage prior to the final building approval of the first phase, where the second stage is scheduled for spring 2017. The author of this this thesis works as a site manager for an investor of the project. Given the importance of the pre-investment phase, the author decided to draw from internal materials which were provided by the investor.

Progression of phases of a development project Marina Island is not fundamentally different from the information provided in the first part of this work. These phases are:

- Pre-investment
- Investment
- Operation

## 7.3 Pre-Investment

Commencement of each project is formulated in different ways. As stated in section 5.3 of finding suitable land, this procedure can be divided into two categories. The first of these is that the investor has in mind a clear idea of what the intended project would like. Then, for such a project we are looking for a suitable location based on specified parameters and requirements. Project Marina Island and basically the entire current developer sector primarily comes within the second category, called Site looking for and use.

### 7.3.1 Property land development

Opening procedure in this case, was an offer for sale of land at the site of the peninsula in Holešovice. The offer was submitted by the company České Přístavy, which owns most of the land of the original Holešovice port (figure 7).

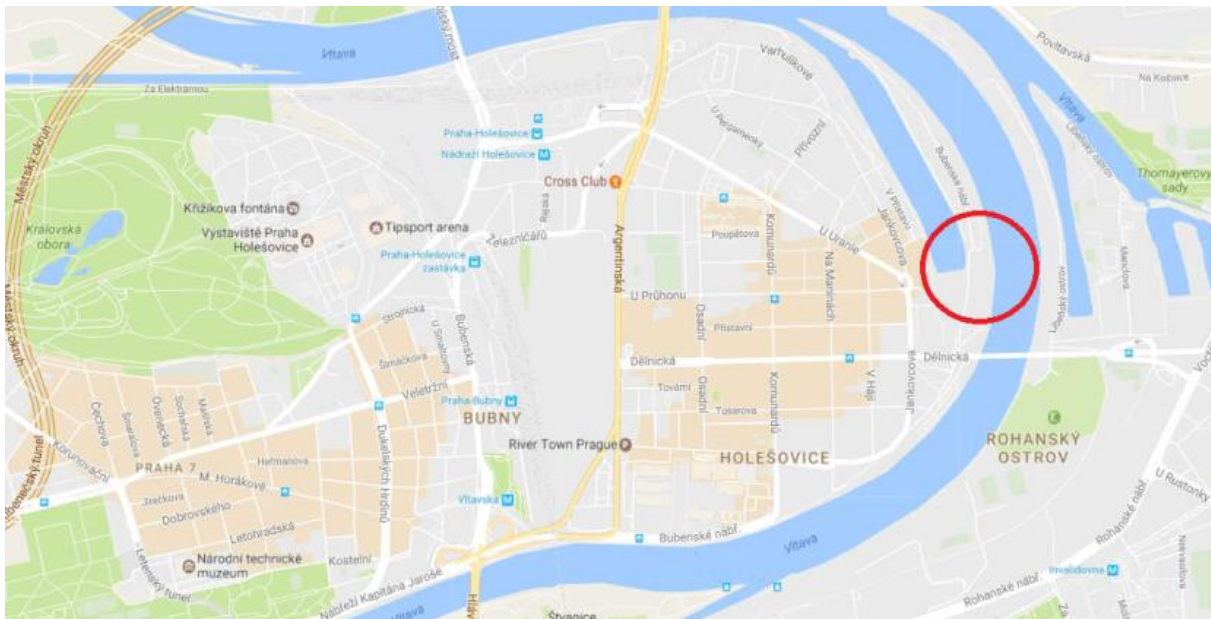


Figure 6: The map of Holešovice district. Source: <https://maps.google.cz/>

In the case of land in Holešovice port the investor sensed the potential for an interesting project, and for that reason there was a preliminary agreement between the investor and the owner of the land. Subsequently the term sheet was drafted and stated that it was conditional to an obtained building permit. This form of agreement is beneficial for both parties. The investor has the great advantage that the money for the purchase of land may not be addressed until the moment when it receives the building permit and when it is almost certain that it will implement the project. The seller in this case carries a higher risk when there is no guarantee that the investor will ever obtain the necessary permits to begin construction. On the other hand, if the seller is willing to bear such risks and the will be subsequently implemented, as in this case, then the sellers income is much higher than if it had wanted to sell the land without any permission. The important information in the written agreement was an agreement on the price for the land. The final price should be dependent on the prices of apartments for sale - namely 15% of the sales floor area of the project. More information about the sale of land come in chapter 7.4.7.

### 7.3.2 Conceptual design

When there is already a preliminary agreement between the seller of a land and investor, it has to be prepared an initial architectural study. Proper selection of an architectural office is often the determining factor of the successful and smooth progress for the entire development project. For this reason alone, the price should not be the main criteria of

selection, but especially references and in the best case a previous successful cooperation. The investor was aware of this fact, and therefore the internationally renowned Israeli architectural firm Safdie Architects was awarded of the task of processing the variant solution study.

With the preparation of the study also helped Czech architectural firm AED architects. This studio was selected based on a previous successful experience. Elaboration of studies must fulfill all the conditions for it to be an essential basis for an investor for the development of documentation for building permit. The feasibility of the project is also based on the selected study.

During the preparatory studies were analyzed competition in the area. The data that are obtained through the finished architectural study and analysis of the neighborhood is subsequently used in the Preliminary study, which investigates financial indicators of the project, which is another important parameter to answer the questions about project feasibility.

### **7.3.3 Selection of appropriate option**

Based on the processed variant studies and market analysis, the developer decided that the basis for the success of the project shall be to maximize the potential of the location, which combines the privacy, beautiful view of the river and provides access to the city center, which gives space to create a luxury residential buildings with many innovative technical solutions for the corresponding price.

### **7.3.4 Market analysis and project structuring**

As mentioned previously, after creating a variant of architectural studies and selecting the appropriate option the investor acquires the basic outlines of a possible project under which it formed the Preliminary business plan.

The CFO is responsible for creating the Preliminary business plan. Other key figures about the feasibility of the project were the professional opinion of the Chief Engineer of the company, who provided information about the indicative costs of construction and thus the cost per m<sup>2</sup> of sales floor area. Department of Development further conducts a feasibility study whose outcome is both opinion on the feasibility of the project and the estimated cost of sales floor area of housing units, parking spaces and cellars. The CFO then uses that information to the Preliminary study, the output of which is a rough estimate of the Net Profit and ROE. If these values correspond to the ideas of the Top management of the company, it is most likely that the project is approved.

Business plan - preliminary			Marina Island		10-Jun-07	
	CZK / EURO	27,5		CZK	EURO	czk/m2 net
<b>Purchase</b>						
Acquisition costs	CZK / net sqm	15,00%	1 975 000 000	296 250 000		9 875
Purchase expenses						
<b>Total acquisition costs</b>	<b>C1</b>			<b>296 250 000</b>	<b>10 772 727</b>	9 875
<b>Construction</b>		CZK/m2	Net floor area			
New construction	Flats	30 000	30 000	900 000 000		30 000
	Balconies					
Infrastructure/vynucené investice		30 000	1500	45 000 000		
Lansc. & Ext.works				0		
<b>Total construction costs</b>	<b>C2</b>			<b>945 000 000</b>	<b>34 363 636</b>	30 000
<b>Other costs</b>	<b>OC</b>					
Design / Architects	Arch.	3,5%	% of C2	33 075 000		1 103
	Consult.		Lump sum	0		
Management fee		1,5%	% of C2	14 175 000		473
<b>Total other costs</b>	<b>C3</b>			<b>47 250 000</b>	<b>1 718 182</b>	1 575
<b>Marketing &amp; Advertisement costs</b>	<b>MC</b>					
Advertisement		2,0%	% of SR	39 500 000		1 317
Agents fee		1,5%	% of SR	29 625 000		988
<b>Total marketing &amp; advertisement costs</b>	<b>C4</b>			<b>69 125 000</b>	<b>2 513 636</b>	2 304
<b>Financing</b>	<b>FC</b>					
Land loan Interest		3,2%				0
Construction loan interest		2,8%		35 930 866		1 198
Commitment fee		0,7%		7 186 173		240
Flat fee		0,5%		5 132 981		171
<b>Total financial costs</b>	<b>C5</b>			<b>48 250 020</b>	<b>1 754 546</b>	1 608
<b>Advisers</b>	<b>AC</b>					
Lawyers		0,8%	% of C2	7 087 500		236
Accountants	mths x price			450 000		15
<b>Total advisers costs C6</b>	<b>C6</b>			<b>7 537 500</b>	<b>274 091</b>	251
<b>Contingency</b>	<b>CY</b>					
Contingency		5,0%	% of Investment	55 858 126		1 862
<b>Total contingency C7</b>	<b>C7</b>			<b>55 858 126</b>	<b>2 031 205</b>	1 862
<b>Total investment</b>				<b>1 466 565 963</b>	<b>53 428 023</b>	48 886
<b>Revenues</b>	<b>Price / m2 or unit</b>	<b>Units</b>	<b>Net floor area</b>	<b>Income</b>	<b>Income</b>	
	<b>Excl. VAT</b>		<b>m2</b>	<b>CZK</b>	<b>EURO</b>	
Apartments	60 000	350	30 000	1 800 000 000	65 454 545	
Parking	400 000	350		140 000 000	5 090 909	
Outside parking				0	0	
Storage	100 000	350		35 000 000	1 272 727	
			<b>30 000</b>			

Table 2: Preliminary study. Source: Internal resources of Daramis

<b>Business plan - preliminary</b>		<b>Marina Island</b>			<b>10-Jun-07</b>
Sales revenues	SR			1 975 000 000	71 818 182
Gross Income				1 975 000 000	71 818 182
Gross Profit (Before tax)				508 434 037	18 488 510
Income Tax		19,0%		-96 602 467	-3 512 817
Net Profit (After Tax)				411 831 570	14 975 693
Return on Equity ROE					28,08%
					94%

<b>Structure of financing</b>					
Equity		30%		439 969 789	
Bank loan		70%		1 026 596 174	

Table 3: Preliminary study. Source: internal resources of Daramis

The purpose of this table is to determine a rough estimate of the Net Profit and Return on Equity. Among the input data in this case is usually the price of the acquisition of land. As mentioned in the previous chapter, an agreement on the sale of land investor is designed to be 15% of the total sales floor area of the project. The results reveal that it is the expected amount of about 280 million CZK (data obtained on the basis of calculated income from sales).

Based on the chosen option, the project Marina Island began to be conceived as a form of luxury living with all the advantages of the location. From this fact also should not only depend on the final price but also the cost of construction. For housing units in standard quality is usually calculated costs at around CZK 25,000 per m<sup>2</sup> of sales floor area (excluding VAT). This price usually already counts in the price of acquisition of land. At Marina Island project, which is calculated with a higher standard of used materials. Therefore has been counted with an approximate price of CZK 30,000 per m<sup>2</sup> of sales floor area (excluding 15% of the cost of acquiring the land and VAT).

Furthermore, there must be credited infrastructure costs. On the territory of the peninsula former Holešovice port the infrastructure was totally unsatisfactory. Among the estimated costs must be credited an expense for all networks and a new complying communication. These costs were estimated at about CZK 30,000 per m<sup>2</sup>. On the territory of the peninsula must be constructed new sewerage, water supply and hot water from the heating plants. Furthermore, the electrical wiring. Therefore, the estimated costs are so high.

Other costs include costs for design/architects which are considered as percentage of total construction costs. It is usually 3 to 5% depending on the type of project. Under the

managerial costs can be imagined costs for the entire management of the investor. In the case of the company Daramis these costs are divided between the Chief Financial Officer, Chief Project Manager, all the assistants and technical supervision of construction. For smaller projects, these costs are calculated at around 3 percent. Other costs are costs for the marketing and advertisement and agents fee arrangements. These are approximately 2 and 1.5%.

Among the important costs are those for financing a project. If the developer is confident about the success of their project and is able to convince the conservative banking institutions, then the banks are willing to provide a loan amounting to approximately 70% of all costs. Cost of that provided capital is calculated approximately 3% of the amount loaned. Very important fact is also the time of drawdown of the loan and the repayment period. Interesting is the type of expense called Commitment fee, which means that by signing the agreement on financing of project. The bank institution charges a immediate fee of 0.7% of all construction costs, which represents nearly CZK 7 million. Another interesting fee is a Flat Fee. The fee of 0.5% is substantially a booking fee to the bank. On the example Island Marina project it means that the investor does not receive the entire loan amount at once, but with the ongoing construction the bank finances the work periodically, which is covered by a bank loan. The bank still has to have the money prepared for the whole period of the project, for which it charges this fee. Another necessary expense is relating to legal services and accountants. Legal services are at 0.8% and expenses for accounts are based on the initiation of the financing to repay the loan. The final cost is the risk contingency. In Daramis they mostly rely on risk contingency of 5% of all costs.

After the estimation for all costs associated with the project, there must be determined an adequate price per m<sup>2</sup> of sales floor area. These data are detected by the development department of company. The data are derived partly from pricing maps, which are obtained from the company for price maps that chart the actual transactions of sales of residential units in the desired area and time. In addition to maps, the pricing estimations are based on according to experience from previous projects and according to the parameters of a specific project. At Marina Island project it has been considered the price of CZK 60,000 CZK per m<sup>2</sup> of sales floor area (without VAT). Other revenue represents parking spaces and storages. After counting all considered income, the developer got the indicative income of CZK 1,975,000,000. After deducting costs and taxes it came out to a net profit of about CZK 411 million., which represents more than 28% of net profit and RoE shows a very high 94%.

Among the important decisions indicators of Daramis belongs especially an indicator of Net Profit. Based on the experience of the finance department, if Net Income is generally



higher than 20%, it makes sense to consider the implementation of the project. Otherwise, the project in the form of initiatives must be either revised or abolished. Preliminary study further suggests that the investor must have equity in the amount of over CZK 400 mil. Forms of financing of the project Marina Island are further examined in a chapter 7.4.8. In the case of a project Marina Island it was reached the decision that it makes sense to implement the project in the chosen form. On this decision agreed CFO, the company's main project manager and the head of development department.

At this point, top project manager and his team take charge of a project. This will be a part of the project from its further preparation to its very completion.

#### **7.4 Investment - development phase**

Following the decision to implement the project, the investor begins to deal with the tedious process of obtaining all necessary permits. If everything goes well, the result will be a building permit. If the investor is patient and has experienced project team, architectural and engineering office and has sufficient equity, this process can ideally take a little over two years. Usually however, it is much more. In the case of a project Marina Island, this process lasted, due to the uniqueness and complexity of the project preparation, more than four years.

For complete design documentation and project engineering there was a contract signed with AED architectural company that already participated in the project when preparing architectural studies. This step can be described as a good choice, since architectural company had an overview of the intended project and knew every context. The subject of the contract between the investor and architectural firms AED contents amongst others:

- Engineering and design
- Documentation for planning procedure and building permit
- Documentation tender for general contractor
- Detailed project documentation
- As Built documentation
- Data for final approval
- Supervision of construction
- Collaboration with architectural company Safdie Architects

#### 7.4.1 Environmental Impact Assessment (EIA)

Before assessing the zoning procedure the intended project must undergo EIA studies. A study was assigned to the engineering company K+K in 2007 and was submitted for consideration at the beginning of 2008. As part of this study was the initial description of the project, further details on the project inputs (land, water, air, noise) and the outputs the of intended project, which influence these factors. This assessment shall be accompanied by following opinion:

- Compliance with the planning documentation of Prague 7
- Statement on EVL and PO (Sites of European importance and bird area)
- Statement of PVS (Prague Water Management Company)
- Statement of company working with flood model

Expert opinion on the assessment of the environmental impact was published in September 2008. It has stated that the intention is **acceptable**.

#### 7.4.2 Planning permit documentation

The works on the design documentation for zoning permit took place during the year 2007-2008. General requisites of these documents are described in chapter 6.1.3. When preparing the project Marina Island it had to be transposed large amount of documentation related to the project. Especially:

- Architectural parts
- Power connections of construction site
- Fire protection
- Technology of construction
- Principles of construction organization
- Acoustic studies
- Dispersion studies
- Insolation Studies
- Waste management
- Dendrologie felling
- The concept of greenery

This documentation was fully completed in December 2008 and submitted for review. The documentation for the zoning project contained a visualization in the following form.



Figure 7: Visualization for Zoning Permit. Source: Internal resources of Daramis

Zoning proceedings were subsequently discussed on March 10, 2009. In June 2009 a zoning permit was granted, which came into force in August 2009. At this point, it began to run a 2-year deadline for filing an application for a building permit.

### 7.4.3 Building permit documentation

Works on a documentation for building permit were initiated even before getting a grant for zoning permit. The subject of this document was a detailed documentation of the construction and receipt of all binding opinions from the authorities. To get an idea there were 66 binding opinions from the authorities and institutions. The documentation consisted mainly of the following documents:

- Detailed architectural and construction drawings
- Statics of buildings
- Fire safety design of buildings
- Detailed Technical equipment of buildings
- Traffic Solutions and utilities
- Landscaping and terrain modifications
- Campus lighting
- Information System of campus



Figure 8: Visualization for Building Permit: Source: Internal resources of Daramis

After processing all the necessary documents for building permit procedure it was filed an application for a building permit on the day of January 20, 2010. On 17 February 2010 the building permission proceedings have been launched, and on 16 March 2010 it was followed by a hearing on the construction site. None of the parties or sides of the institutions concerned made no comments. However, the investor, according to building office, did not supply all the required documents, which were subsequently substantiated of the day July 19, 2010. The building permit was granted on August 24, 2010. In the statutory period, however, one of the parties appealed against this decision and the building authority had to re-evaluate the whole thing. The dismissal of the appeal on the basis of its illegitimacy occurred on February 16, 2011, when it also could not further appeal against this decision.

#### **7.4.4 Impact of a financial crisis**

The financial crisis was felt in full at the time of obtaining building permits, which also fell heavily on residential construction sector. Investor faced a major investment decision, whether to start construction of the project Marina Island and assume that the crisis will soon end or suspend the project. After further analysis of the market and the involvement of common sense, it was decided to postpone the project for an indefinite period. Reason was

the the fact that the market for luxury real estate has basically stopped, which represented a huge risk.

The first hint that the situation could start to improve came during the year in 2012, which is shown in section 3.2.1. Investor therefore concluded that the situation in the next two years it to stabilize. Investor has requested an extension of the building permit on 17 December 2012, which was granted.

Since the granting of the original building permit it expired nearly two years. During this time the investor came to the conclusion that it will partially revise the project to such an extent without having to start a new zoning and building procedure. There was only a reworking of the access road and related flood protection. The procedure for authorization of the water work, which was to pass on the adjusted flood protection, began on June 7, 2013. Environmental Department of the City of Prague, found that substantiated documentation is not complete and had to be supplemented by additional information. After proving the required documents the procedure resumed on November 12, 2013. The parties did not find any objections and the building permit was granted on 6 January 2014. At this moment ended the process of authorities proceedings and preparations for the start of construction could finally begin.

#### **7.4.5 Tendering general contractor**

The Prague market with residential development projects in 2014 was on the rise again. The flats were sold at prices that were very close to those before the crisis. The investor therefore faced another important investment decision, namely, whether it is better to prepare a tender for general contractor and the construction will be postponed for another 6 months, or if the investor finds a way to agree on a contract with proven supplier of previous projects.

Investor concluded that will be wise to use the second variant and will try to come to terms with this contractor. This contractor was the Austrian construction company PORR. This company has in the past successfully implemented the project of commercial and office center Galerie Harfa, which was also carried out by the current investor. Architectural company AED hence prepared a bill of quantities, which was the basis for the the resulting price. After the submission of the first bid from the contractor, there was another meeting at which resulted to another decrease in the final price by 2,8%. An important basis for future conflicts was a very detailed white paper that defined situations that might arise in the project and how it would be solved. Investor was also aware that the final cost of the project will with

almost 100% certainty increase as the bill of quantities contained a large amount of aggregated items, and some items were missing completely.

Investor estimated duration of construction work starting the period from 1 November 2014 until 25 January 2018 and any proposal to shorten the construction period by the contractor was welcomed. The company PORR as part of a bid attached a timetable of mandatory completion date to November 17, 2017, thereby the resulting construction time shortened by more than two months.

The total price offer, which was subsequently awarded along with a budget annexed to the contract of work is shown below. The contract with the general contractor was signed on 24 October 2014.

### Price offer provided by PORR

<b>Nabídková cena z 29.09.2014</b>					<b>845 973 437</b>
	Nákladová cena	VRN	Cena včetně VRN	Marže	Odbytová cena
Odpočet ceny elektroinstalace	-54 404 820	6,49%	-57 937 753	8,38%	-62 792 937
Přípočet nové ceny elektroinstalace	39 913 507	6,49%	42 505 405	8,38%	46 067 358
<b>Celková cena po úpravě elektroinstalace</b>					<b>829 247 859</b>
Generální sleva				2,80%	-23 218 940
<b>Cena po slevě</b>					<b>806 028 919</b>
<b>Dodatečné položky:</b>					
Realizační projektová dokumentace		6,49%		8,38%	0
Dodávka zařizovacích předmětů	17 814 000	6,49%	18 970 803	8,38%	20 560 557
Mobilní protipovodňové zábrany		6,49%		8,38%	10 000 000
Snížení ceny oken		6,49%		8,38%	-1 000 000
Sadové úpravy + závlahy		6,49%		8,38%	4 000 000
Zvýšení standartu dveří a žaluzií		6,49%		8,38%	14 000 000
Oplocení, brány, branky		6,49%		8,38%	1 500 000
Mobiliář, pergoly		6,49%		8,38%	800 000
Informační systém		6,49%		8,38%	500 000
Dětské hřiště		6,49%		8,38%	500 000
Parkové osvětlení		6,49%		8,38%	500 000
Mezonet 9.NP					1 400 000
<b>Celkem dodatečné položky</b>	<b>17 814 000</b>		<b>18 970 803</b>		<b>52 760 557</b>
<b>Nabídková cena 12.09.2014</b>					<b>858 789 475</b>

Figure 9: Price offer from PORR. Source: Internal resources of Daramis

#### 7.4.6 Project management

As already mentioned, the project team took over the project after the decision on the implementation of the project. During the construction one of the main task of the project

team was to meet deadlines of construction of the project, then to monitor the costs and eventually to approve the additional costs or to negotiating new technical solutions and problems with the general contractor and control of the progress and quality of work performed. It was essential that the composition of the project team throughout the project did not change. If there would be frequent personnel changes within the team, it could jeopardize all the criteria for the success of the project.

#### **7.4.7 Land acquisition**

Agreement on the sale of land between the investor and the owner of the land was signed in December 2013. The transaction price was expressed as 15% of the price of all residential units, parking spaces and cellars that had been intended for sale. The basis for the determination of land price was a pricing sheet of residential units that had already been created for the purposes of sales strategy. Within the amendments to the contract, however, the seller could get additional bonuses. For example, if the prices would rise, the seller gets another 15% of the difference between the new and original price, or if the housing unit would not be sold and be only leased, the seller gets 15% of the agreed rent.

The total amount for the sale of the land was divided into four installments. The first two installments should had been paid before the end of 2014. The third installment is repayable in 2019 and the last, the highest installment is repayable in 2023. The advantage is that the first two installments correspond to only about 15% of the sales price. Most of price for land, therefore, can be paid only after the completion of the project. České Přístavy a.s. also holds a lien on the housing units in the amount of the unpaid amount of the purchase price of the land at the time of deleting the lien of financing bank.

#### **7.4.8 Financing**

Funding for the project with a total budget of over CZK 1 billion is not possible through investor's own resources. The aim of this chapter is to show the sources of financing of the project Marina Island.

##### **7.4.8.1 Foreign investor**

In the chapter on financing development projects, it is stated that the banking institution enters into the financing of the project first at the moment, when the investor has invested their equity. For this reason it is necessary to have sufficient equity in the initial phases of the project. However, the expenditures on a complete documentation, engineering

and project management are very costly by itself. For this reason, it was necessary to secure external financing for the project from a private investor. In this case, it was the Luxembourg Investment Group, which provided a loan to cover the costs associated with designing works to complete documentation. Furthermore, the cost associated with the first installment for the land. The rate of interest on the loan was reasonable 4% per annum. Since the beginning of the proposed project in 2006 until June 30, 2014 it was drawn down the amount of nearly CZK 100 mil.:

### **PM Riverbank - loans 30.6.14**

Account	Name	Final balance	Classification
365200	Loan Alliance (8.369.202,16 CZK)	-8 369 202,16	Shareholders loan
365201	Interest-loan Alliance (8.369.202,16 CZK)	-180 012,23	Shareholders loan
365202	Loan Alliance (6.000.000,00 CZK)	-6 000 000,00	Shareholders loan
365203	Interest-loan Alliance (6.000.000,00 CZK)	-41 515,00	Shareholders loan
365204	Loan Alliance (32.000.000,00 CZK)	-32 000 000,00	Shareholders loan
365205	Interest-loan Alliance (32.000.000,00 CZK)	-178 684,44	Shareholders loan
479200	Loan Alliance	-5 158 720,00	Shareholders loan
479210	Interest Alliance	-2 058 331,03	Shareholders loan
479300	Loan Alliance-assignment of loan LHH	-29 132 861,03	Shareholders loan
479310	Interest Alliance-assignment of loan LHH	-11 671 769,75	Shareholders loan
		<b>-94 791 095,64</b>	

Table 1: Investment funds loan. Source: Internal resources of Daramis

#### **7.4.8.2 Bank financing**

For the actual construction financing it was necessary that the bank would enter into the project and its financing would be involved. There had been negotiating with several banking institutions. Their offers were very similar, differing mainly in the total amount of the financial provided, and then a different Rate of Interest.

From the submitted offers, the best offer came from Raiffeisenbank SpA, with which it was on October 23.2014 signed a contract with a possible drawdown in the total amount CZK 975,936,000. Among the requirements was one requirement of a minimum equity of the project.

**“Project Equity”** means a minimum amount of CZK 487,930,000 (to be) provided by the Borrower as its equity participation in the Project Total Costs from its own monetary funds

Figure 10: excerpt of a Bank Loan Agreement. Source: Internal resources of Daramis



Another indicator was banks Interest Margin, which was dependent on several factors. The loan was to distribute a total of three packages (tranches). For the first Tranche A was the initial interest margin at 3.7% per annum. For Tranche B and C, the margin fell to 3.5%, assuming the fact that the Tranche runs smoothly and meets all of the goals, which were also included in the contract.

Further important parameter for the level margin was the percentage of housing units sold. If an investor would be able to sell 40% of the units of the first stage, it would reduce the interest margin of tranche A at 3.25%, if they could sell even 50% of the units, margin would be reduced to a final 3.00%. These same conditions were also used for tranche B. These conditions were also to apply for Tranche C during the second phase of the project.

**Tranche A Interest Margin.** The initial Interest Margin in relation to **Tranche A** shall amount to **3.70 % p.a.**

Figure 11: Excerpt of a bank loan agreement. Source: Internal resources of Daramis

Total volume for the Tranche A was CZK 75 milion, for tranche B CZK 380 milion and for tranche C CZK 520 milion.

As explained in Chapter 7.3.4 of Market Analysis, as a part of the bank loan there is several charges. The first is a flat fee, which in a case of this loan amounted to 0.5% of the total. Another charge was the commitment fee, which was also 0.5%.

#### *7.4.8.3 Contractor loan*

Another way of project financing is a loan from the general contractor. The advantage of this loan is that the loan is interest free and the repayable first at the moment after the handover of finished construction. The investor, however, declined to disclose the amount of the loan as part of this thesis.

#### *7.4.8.4 Retainage (zádržné)*

In a project where there are construction cost amounting to about CZK 850 mil. is retaining 10% of each invoice until the completion of the project a good way for a positive investors cashflow.

### 7.4.9 Marketing strategy

The formation of the marketing strategy began only after the renewed building permit in 2013. As already mentioned in Chapter 7.4.4., the financial crisis has halted all preparatory work on the project.

Reached marketing agency was tasked to prepare a strategy based on the project site. In practice, this is called Place Branding. By using place branding the project was provided with identity based on the history and original purpose of the site.

In the case of Marina Island Project there was founded marketing strategy based on the original legacy of Holešovice port and on housing options, which combines history with a new modern project in the absolute near of the center.

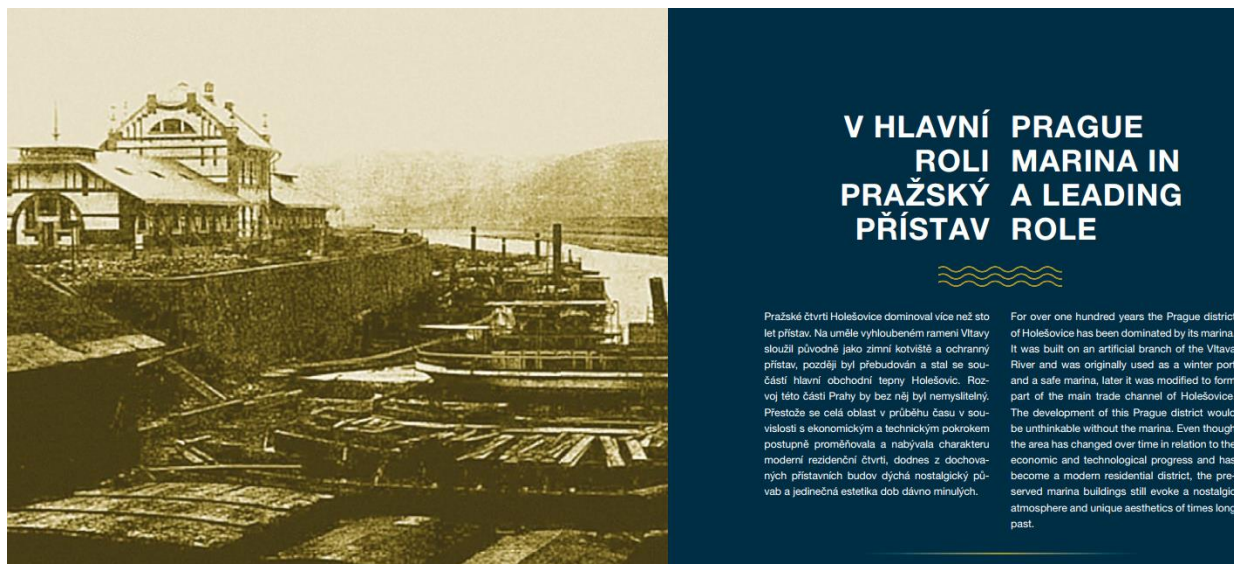


Figure 12: Marketing strategy based on History of Holešovice port. Source: Internal resources of Daramis

Another aim was to highlight the opportunities offered by the project location in direct proximity to the river.



Figure 13: Project visualisation. Source: <http://www.marinaisland.cz/cs/>

Part of the assignment for the marketing of the project were:

- Project logo
- Project website
- Banners with reference to the website
- Creation of documents for billboards and other posters
- Model of the project Marina Island
- Brochures
- Catalogs of Standards

Architectural office AED cooperated with marketing agency and created marketing documentation of housing units, parkings and storage and marketing visualization of the project.

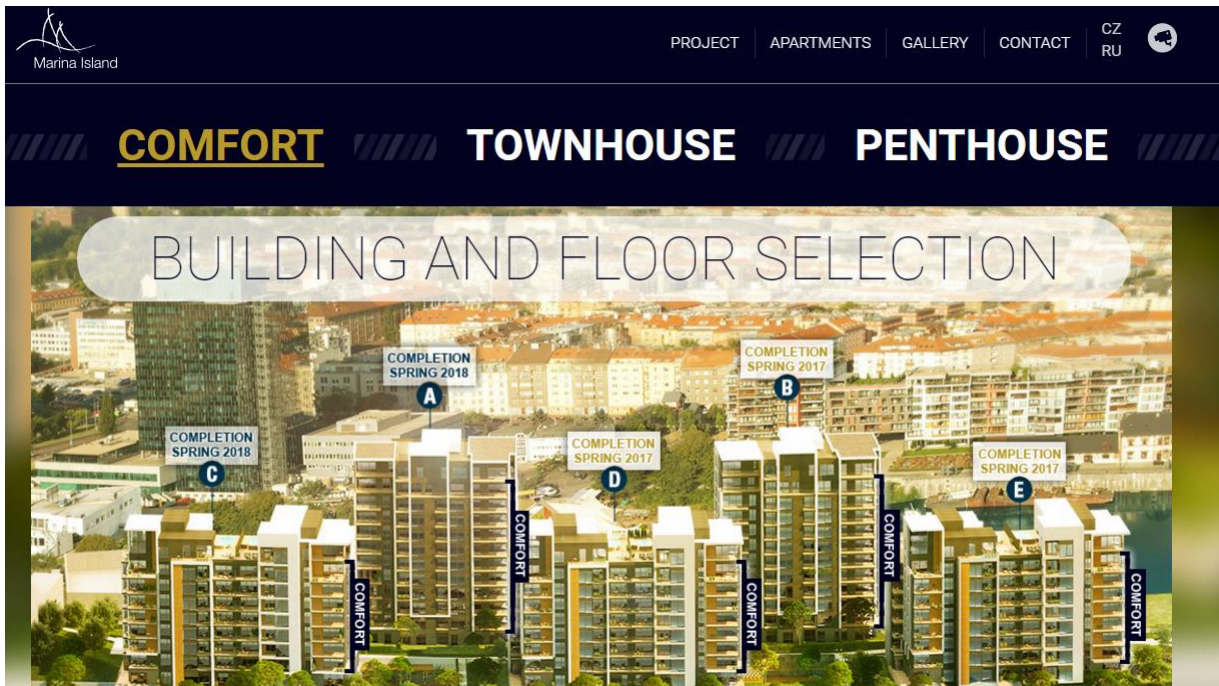


Figure 14: Project websites. Source: <http://www.marinaisland.cz/cs/>

#### 7.4.10 Sales strategy

The basis for pricing of the project was an initial Comparable analysis, comparing projects in Prague 7 and Prague 8 with a riverview. By comparison came in the project Vltava in Karlín and project Dock near Palmovka. Part of comparing criteria was the degree of sales of those projects, the price per m<sup>2</sup> of sales floor area and representation of flats by number of rooms in the projects. Other projects with a similar target group were to be compared as well. The result of this analysis was that the average price of flats in the appropriate standards vary from about CZK 50,000 and only exceptionally to CZK 110,000. The average price amounted to CZK 67,200 thousand. Based on further analysis of competition, comparing new projects with a similar focus to target customer it was determined that the price of housing units will in Marina Island project range from CZK 56,000 to CZK 84,000 depending on the standard of unit (all prices are without VAT and per m<sup>2</sup> of sales floor area).

Project name	Developer	Total number of flats	Sold Flats	%	Price for m <sup>2</sup>		
					Min	Max	φ
Jubileum House	Property Solutions s.r.o.	106	87	82,1%	40 740	68 706	54 362
Central Park Praha	CEE Property	527	488	92,6%	49 798	83 306	64 240
Rezidence Vltava	Horizon Holding	105	60	57,1%	51 272	92 870	72 888
Rezidence Sacre Coeur II	Satpo	85	54	63,5%	61 181	113 464	84 073
<b>Marina Island</b>	<b>Daramis Group</b>	<b>341</b>	<b>0</b>	<b>0,0%</b>	<b>56 548</b>	<b>84 148</b>	<b>67 726</b>
Dock	Crestyl	61	17	27,9%	71 964	99 639	86 341
Rezidence Výhledová	CTR group	15	6	40,0%	80 955	138 742	110 167
Rezidence Garden Towers	Central Group	198	78	39,4%	32 714	65 100	49 721

Table 4: Comparison Analysis. Source: Internal resources of Daramis

There were designed three types of housing standards in the project Marina Island. These are the types:

- Comfort
- Townhouse
- Penthouse

Type Comfort offers a „basic“ standard of living in the project, the type Townhouse, which cleverly solves the issue of the ground floor apartments, that are typically sold most difficult in projects. Investor added the extra value of these flats by interconnected living spaces and basement with parking private garage of the apartment via a private stairway, and added a large terrace with swimming pool and private garden. This step has changed to flats premium units with even more premium price of around CZK 20 million CZK.



Figure 15: Visualisation of Townhouse apartment. Source: <http://www.marinaisland.cz/cs/>

The highest standard of living in the project offers the roof penthouses that extend over two floors and have a floor space of over 300 m<sup>2</sup>, private pool and several terraces. The price of these units is above the threshold of CZK 30 million

## 7.5 Investment – construction phase

An original agreement with the general contractor was signed on 24 October 2014. Department of Construction and department for Zonning Planning Authority of Prague 7 were also informed about the start of the construction process.

### 7.5.1 Project construction

Following this, on 31 October 2014 the construction site was handed over to the contractor and the construction works could finally launch. The indicator of the progress of

construction and compliance with contractual schedule milestones was the time schedule provided by general contractor (table 5).

In section 7.4.4 it was noted that the project documentation for construction did not exist at the moment of commencement of construction. Likewise static documentation for monolithic structures. Elaboration of this document was part of a contract with general contractor. Construction progress was therefore dependent on continuous process of documentation. Quite commonly, there were situations where the work carried out on a certain floor, but documentation on another floor has not yet been completed. The question in this case, was as much a result of the ongoing elaboration of project documentation will increase the total cost of construction and how it may affect the construction schedule set.



### 7.5.2 Marketing process

Marketing activities during the project were a ceremonial laying of the foundation stone for the participation of journalists and the general public, which included a viewing platform and a cruise along the Vltava. At the beginning of 2016, there was opened a showroom flat of the project.



Figure 16: Showroom Flat. Source: <http://www.marinaisland.cz/cs/>

### 7.5.3 Sales process

Sales of housing units were initiated immediately after the handover of the site to the general contractor. Pricing method, of the project is described in the following paragraphs.

Sales of housing units was started in November 2014. Immediately after the launch, the investor can ascertain whether the selected pricing policy is right or a wrong step. If it turned out that the interest of the public is high, but it does not correspond to the sales, it would be a situation of overconfident price by an investor and the period of uncertainty whether the market prices will rise at a pace to reach the level of prices charged by the investor. But if the investor would not be willing to wait, then there would have to be a discount in the prices, which does not bode well for the prestige of the project and future marketing.

The opposite case is that the housing units sell very well and are sold out soon after the start of construction. On the one hand, the investor may be glad that there is an extreme



interest in the project, and thus the project gets a very good condition in the bank on financing. On the other hand, the investor may have set the price too low and impoverish the greater profits.

In the event of commencement of sales of the project Marina Island the optimal situation arose when it was recorded reasonably strong interest from the public, which adequately matched the sale of residential units. It might be said that investor managed to correctly predict the market environment and adapt to the corresponding prices of projects.

The detailed chart 5 presents the interest from clients(Leads) and sold units.

## Number of Interested Parties and Sold Units Phase n.1

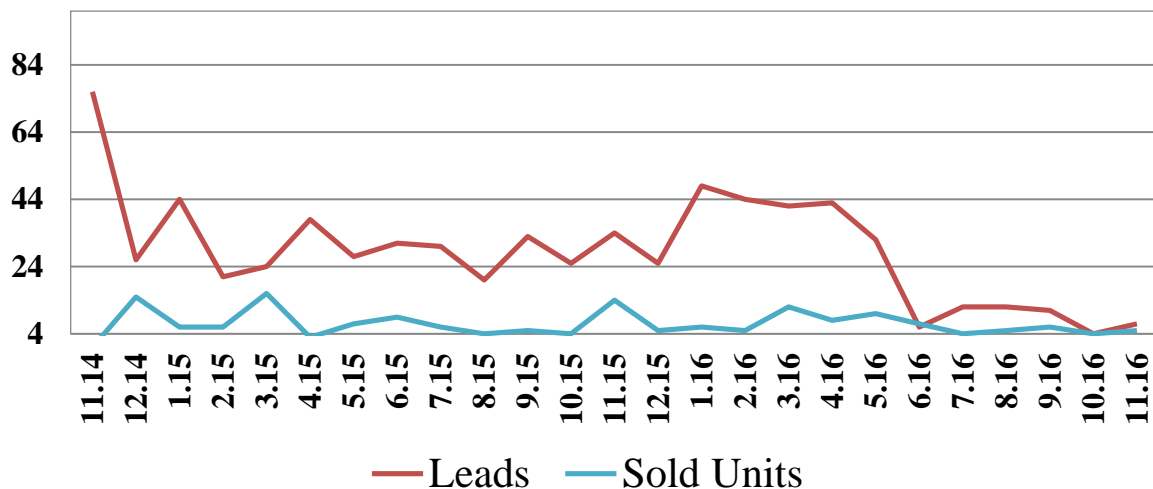


Chart 5: Number of Interested Parties and Sold Units Phase n.1. Source: Internal resources of Daramis. Processed by Author

Date	2014-11-01	2014-12-01	2015-01-01	2015-02-01	2015-03-01	2015-04-01	2015-05-01	2015-06-01	2015-07-01	2015-08-01	2015-09-01	2015-10-01	2015-11-01	2015-12-01
Leady	79	26	44	21	24	38	27	31	30	20	33	25	34	25
Prodané OP	0	15	6	6	16	3	7	9	6	4	5	4	14	5

Table 6: Sale 11.2014-12.2015. Source: Internal resources of Daramis

In this chart it can be seen that during the first month of There was almost 80 customers actively interested in the project and by the end of next month there was closed 15 reservation contract worth in excess of CZK 100 milion. The average price per m<sup>2</sup> of housing units after all discounts (discount for investor flats, employee discounts, quantity discounts, etc.) moved to the threshold of CZK 62,500.

During the sale of the first phase of the project was a total of 200 of offered flats sale, of which first entered the sales objects B and E, that offered a total area of 11,490 m<sup>2</sup>. Given the expectations of good sales of housing units and through constant monitoring of the market, which since 2014 has grown constantly and gradually increasing prices of other projects of competition, it was decided to increase the prices of housing units of the project Marina Island. Since April 2015 the prices of housing units rose on average by about 10%. In the chart 6 it is also clearly seen that this influenced sales of units in April and the sales plummeted. In subsequent months, however, sales volumes continued to rise as in the period before the price rises. Price increase could hence be evaluated as a good step. Total to 12.2016 the investor was able to sell 184 residential units, representing 92% sold out.

Sale of the second phase of the project Marina Island, which contains a total of 141 of housing units, were officially launched in April 2016. Along with the start of sales were again increased prices of housing units on average another 10%.

## Number of Interested Parties and Sold Units Phase n.2

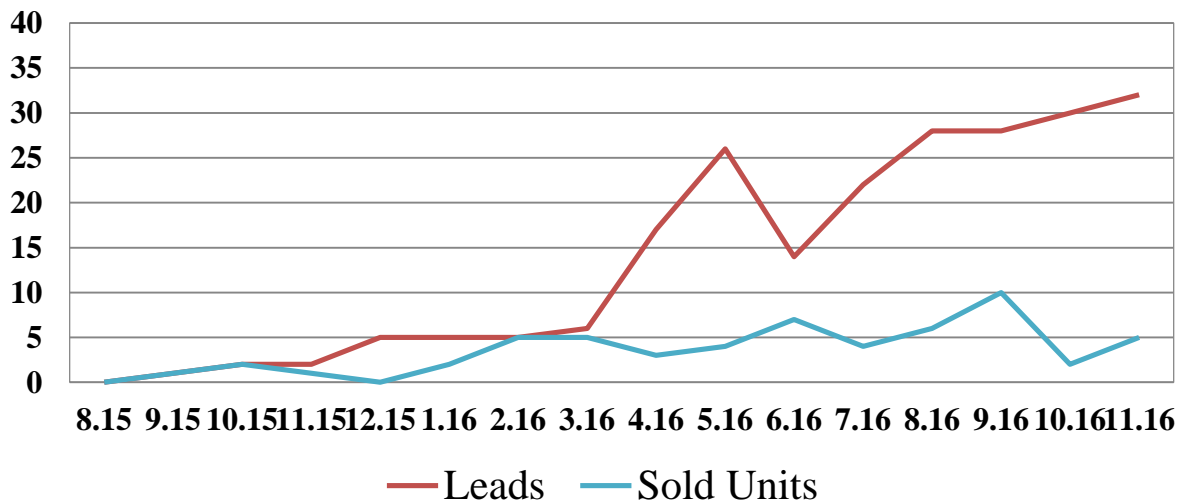


Chart 6: Number of Interested Parties and Sold Units Phase n.2. Source: internal resources of Daramis. Processed by Author

Date	2015-08-01	2015-09-01	2015-10-01	2015-11-01	2015-12-01	2016-01-01	2016-02-01	2016-03-01	2016-04-01	2016-05-01	2016-06-01	2016-07-01	2016-08-01	2016-09-01	2016-10-01	2016-11-01
Leady	0	1	2	2	5	5	5	6	17	26	14	22	28	28	30	32
Prodané OP	0	1	2	1	0	2	5	5	3	4	7	4	6	10	2	5

Table 7: Sales 8.2015-11.2016. Source: Internal resources of Daramis

As Chart X clearly shows, even this price increase did not translate into sales, and it went a good pace, when from April 2016 to November the investor was able to sell a total of 41 of housing units, representing approximately 30% of all the units of the second phase.

### 7.5.3.1 Sales Brokerage - Phase 1

Within the company's internal system is to determine what is the composition of buyers of housing units. The data in the chart 7 proves that in the early months is the greatest ratio between long-term clients of Daramis (blue color). In the coming months, this ratio gradually decreases and a predominant influence of marketing showed, where the largest number of clients contacted the company via the website (red color) and also by using Outdoor Marketing (azure blue).

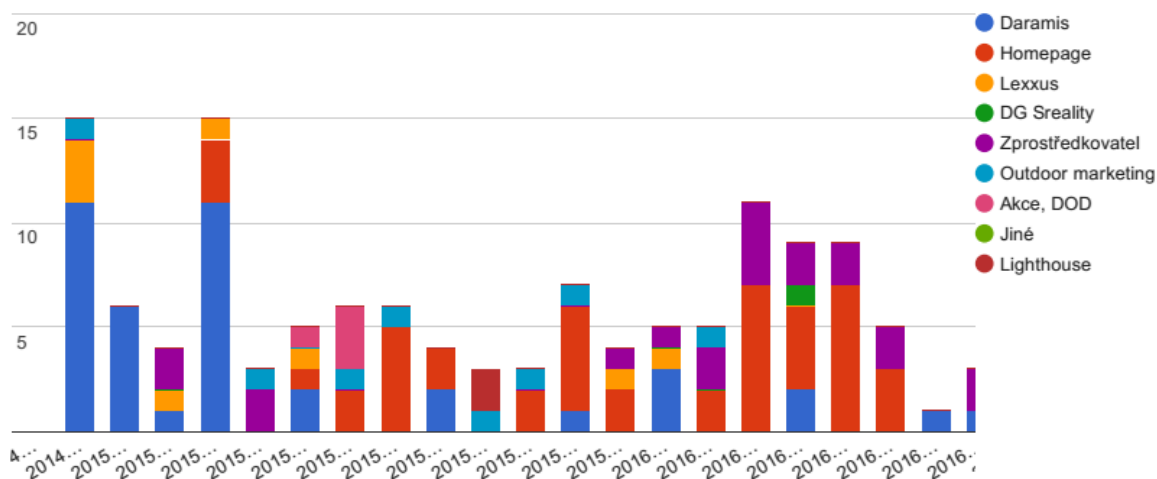


Chart 7: Sales Brokerage. Source: internal resources of Daramis

The following pie chart shows the ratio of how the end customers are approached. The largest share of customers is through the website of the project, of which a high proportion is reached by already mentioned marketing, then by long-term customers of Daramis (in this share are also counted investor flats from the developer). Another significant share is the work of brokers. These are primarily private real estate agents who offer apartments in the project within their own channel.

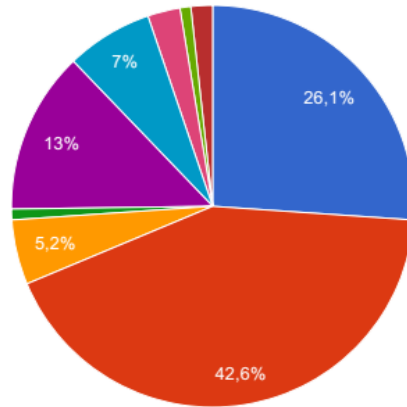


Chart 8: Sources of Sale. Source: internal resources of Daramis

### 7.5.3.2 Sales Brokerage - Phase 2

In the second phase of the project the chart 9 shows that since the beginning of sales in April 2016 there were sold flats again via internal contacts of an investor (blue color) and to the overall sales significantly contributed both brokers and the project's website. On sale it is also nearly 10% participated Outdoor marketing (billboards, wallprints in shopping centers etc.). This confirms the strength of marketing as a means of sales. In comparison with the first phase there is a larger proportion of sales by brokers.

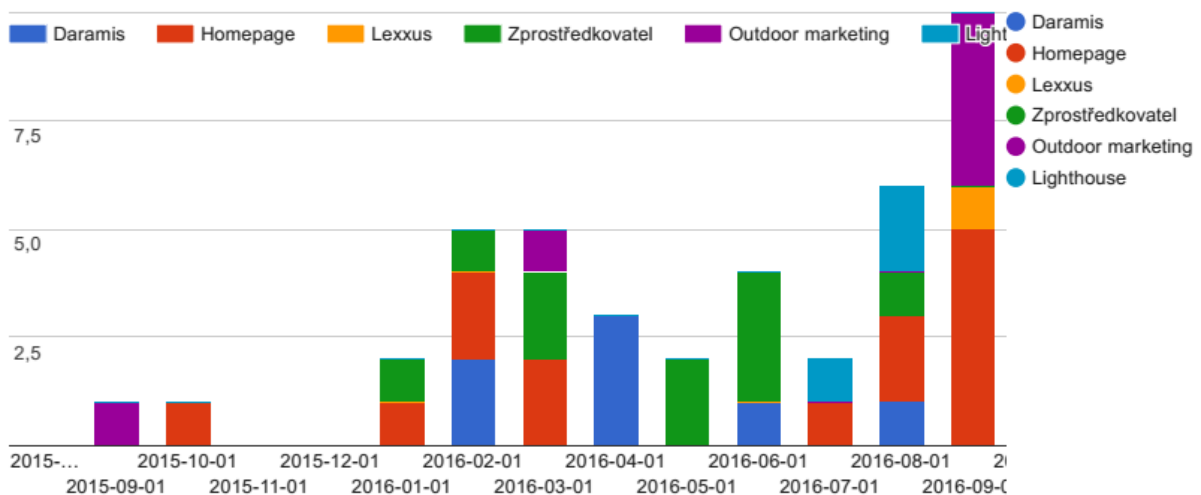


Chart 9: Sales Brokerage. Source: internal resources of Daramis

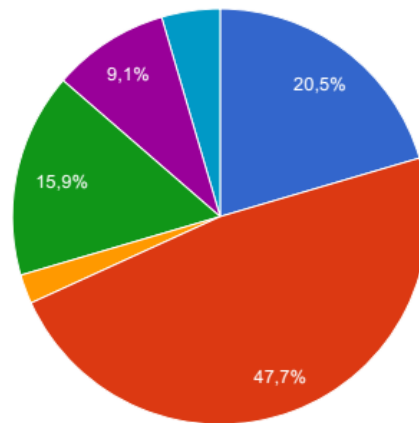


Chart 10: Sources of Sale. Source: internal resources of Daramis



<b>Documentation &amp; architects</b>									
<b>Management fees (DHL+LHS)</b>									
Sales and marketing costs									
<b>Marketing</b>									
<b>Agents fees</b>									
Operating costs									
<b>Lawyers</b>									
<b>Audit &amp; Accounting</b>									
<b>Project monitor bank</b>									
Financing costs									
<b>Bank loan interest</b>									
<b>Commitment fee</b>									
<b>Arrangement fee</b>									
Contingency									
Total project costs									
Profit before tax									
ROI									

Table 8: Budget monitoring. Source: internal resources of Daramis

The author of this work had the data from previous table available. In chapter 7.5.1, the question arose whether the risk to start the construction in the form without detailed documentation for construction can eventually pay off. This decision on the one hand, could significantly increase costs, but on the other hand could these cost be compensated in the price of housing, which at that time in the market was high and no one could predict whether these prices will stay in the future.

According to the data the processor of this thesis had available it can be clearly said that the investor made a good investment decision when it decided to start immediate construction. Compared to the expected revenues from sales at the beginning of the project, the estimated revenue, thanks to rising prices have increased substantially. The difference amounted to about + 20%. If compared the planned and actual costs of construction, there is a difference of about + 16%. This would normally be a very high number, but given the circumstances this can be described as acceptable.

## 7.6 Case study conclusion

Case study mapped the progress of the project Marina Island and pointed to the often tedious process of obtaining all necessary permits to implement the project and then to the unpredictability of the construction market. As part of the project Marina Island were also several major investment decisions that influenced the further course of the project and decided on its success. From these findings can in future be drawn in the selection and preparation of other residential projects.



## 8 Reflections

### 8.1 Hypotheses – evaluation

#### H.1. Search for Best Solutions

The development project of required standard and location will only be successful, if the potential of the place and the intended target purchaser is fully exploited. Corollary is that only the optimal design of a development project may lead to the desired profits.

#### **This hypothesis cannot be rejected**

Hypothesis has been proven in chapter 7.3.3, in which it is mentioned that:

*Based on the processed variant studies and market analysis, the developer decided that the basis for the success of the project shall be to maximize the potential of the location, which combines the privacy, beautiful view of the river and provides access to the city center, which gives space to create a luxury residential buildings with many innovative technical solutions for the corresponding price.*

#### H.2. The Project Team

Overall quality of project's realization team is essential in all phases of project. However, it is not only about the quality of a team within the development company, but also appropriately selected architectural and engineering office and experienced general contractor.

#### **This hypothesis cannot be rejected**

Hypothesis has been proven in chapter 7.3.2, in which it is mentioned that:

*Proper selection of an architectural office is often the determining factor of the successful and smooth progress for the entire development project. For this reason alone, the price should not be the main criteria of selection, but especially references and in the best case a previous successful cooperation.*

And also in chapter 7.4.6:

*It was essential that the composition of the project team throughout the project did not change. If there would be frequent personnel changes within the team, it could jeopardize all the criteria for the success of the project.*

#### H.3. Sales strategy

Only well-adjusted sales price corresponding to the adequacy of the project is the critical factor for success of the project.

#### **This hypothesis cannot be rejected**

Hypothesis has been proven in chapter 7.5.3, in which it is mentioned that:

*In the event of commencement of sales of the project Marina Island the optimal situation arose when it was recorded reasonably strong interest from the public, which adequately matched the the sale of residential units. It might be said that investor managed to correctly predict the market environment and adapt to the corresponding prices of projects.*

#### **H.4. Marketing strategy**

The success of sales of housing units is largely dependent on well-chosen marketing strategy.

##### **This hypothesis cannot be rejected**

Hypothesis has been proven in chapter 7.5.3.1, in which it is mentioned that:

*In the coming months, this ratio gradually decreases and a predominant influence of marketing showed, where the largest number of clients contacted the company via the website (red color) and also by using Outdoor Marketing (azure blue).*

And also in chapter 7.5.3.2:

*to the overall sales significantly contributed both brokers and the project's website. On sale it is also by nearly 10% participated Outdoor marketing (billboards, wallprints in shopping centers etc.). This confirms the strength of marketing as a means of sales.*

## 9 Summary

As described in the chapters of the theoretical part and as it was confirmed in the case study, throughout the development project it is essential to properly evaluate the important decisions that affect the success of the project. Anticipating problems is crucial, because if the wrong evaluated decision resolves in the next phase of the project, the losses will be unavoidable. Within the case study of the project Marina Island, there were several key decisions, due to which the project can be described as successful.

In the initial phase the project mainly dealt with the conditions under which the project is feasible. The main advantages of the project Marina Island, in comparison with the competition, were primarily direct river views, a privacy of the peninsula of the project and access to downtown. All these factors have helped to implement an exclusive project.

Investment in services of renowned architectural company Safdie has paid off, and with its help the investor was able to come up with a suggestion that linked the potential of a site of Holešovice port with high demands of target customers. Besides the already mentioned benefits of the site, there were designed additional features to enhance the attractiveness and build up a competitive advantage. These included, for example, a private pier of the project to park boats, fitness studio and a private car wash.

Another major decision came at a time after obtaining a building permit in 2010, when it simultaneously began to feel the impact of the financial crisis on the construction industry. Even though everything was prepared to start construction, the decision was made to postpone the project for an indefinite period.

In 2013, the market situation started to slowly improve and there was another key decisions to extend the building permit and start construction as soon as possible and use the improved market situation.

For this reason tender process for the general contractor was skipped and negotiations moved straight to the proven and reliable contractor. The situation was favorable to the investor because the construction market was still recovering from the crisis and hence it was possible to negotiate very favorable terms with the contractor. However, the risk was that the bill of quantities was only quickly prepared and therefore lacked sufficiently detailed specification of items, which would make the project considerably more expensive.

Another problem was, at the time, the lack of detailed project documentation, which was another factor that could significantly increase the cost of the project. Despite the known

risks, the investor decided to perform the project in the given form. This decision proved to be correct because the anticipated revenue during project increased by about 20%, while expenses rose by nearly 16%.

This thesis has proven the truth of how much the development projects are unpredictable and how important it is to devote enough time to prepare them properly.

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