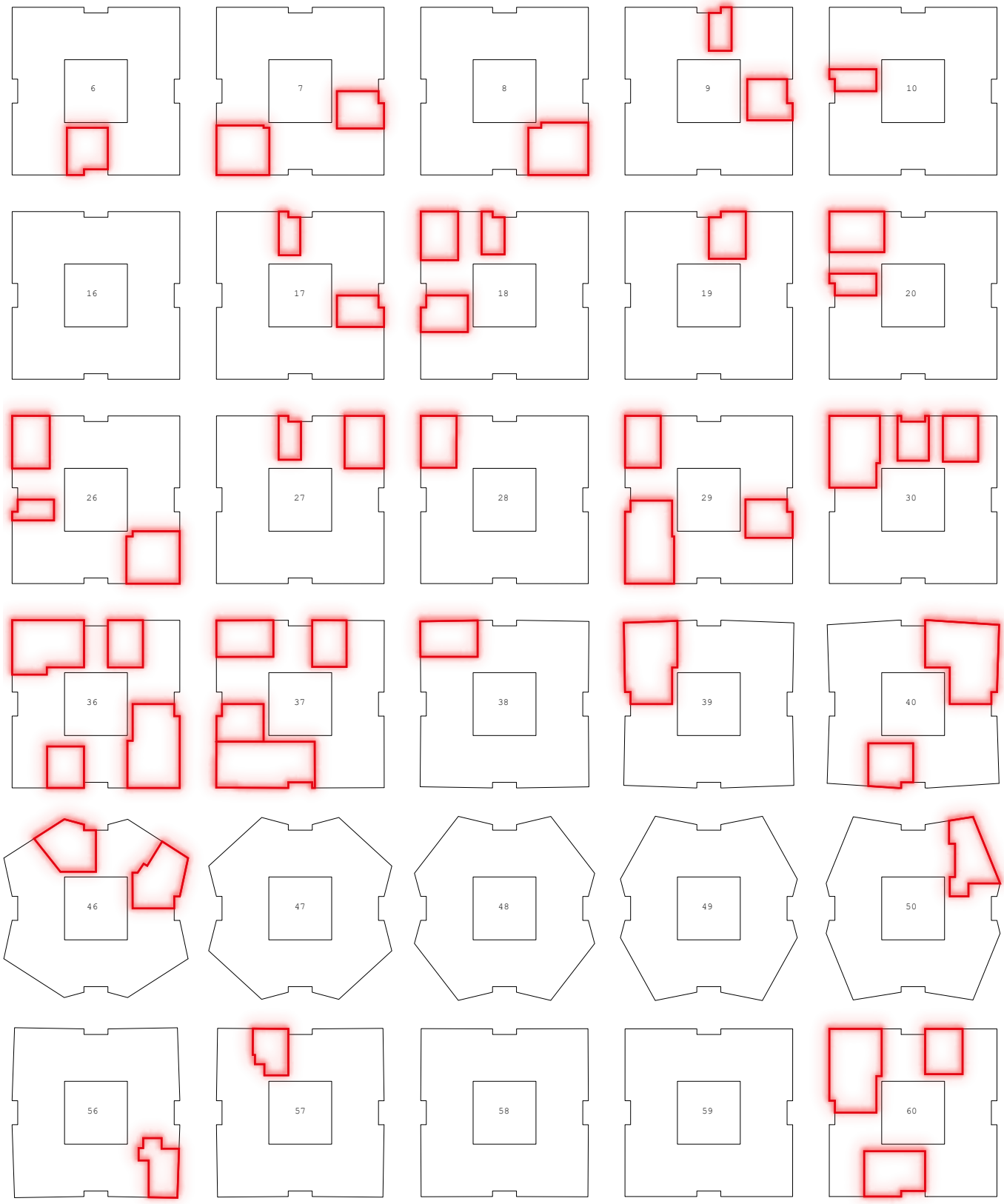

MARKET ARCHITECTURE

HOW CAN ARCHITECTURE BE DESIGNED TO MAXIMIZE MARKET VALUE?

Stina Tegnér
Master's Thesis 2026 Chalmers University of Technology
Department of Architecture and Civil Engineering

Examiner: Daniel Norell
Supervisor: Naima Callenberg

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ABSTRACT

This thesis investigates the relationship between architecture, money and value, and explores how architecture operates within the market.

In order to build something, capital is required. Buildings are seen not only as shelter but as investment objects expected to generate financial return. Housing is a commodity on a market and the value is not necessarily defined by the quality of the building but by market mechanism such as supply and demand.

The aim of this master thesis is to investigate how architecture in the form of housing acts as a commodity on a market and to speculate on how the market affects and influences architectural design. This project speculates about what happens when architecture is designed primarily to maximize economic value on a market.

The main research question is: How can architecture be designed to maximize market value?

According to the theory of supply and demand, the value in a market is set by the market mechanisms of supply and demand. In a free market, the price moves towards the equilibrium point.

The method is based on letting the market guide the design. To enable this, data about the housing market is collected, analysed and translated into architecture. The method is based on treating the data literally, where it not only describes reality but is also used to shape it.

Through a series of investigations, the thesis analyses supply and demand in the housing market of Gothenburg and explores where demand is located and what architectural attributes that are linked to high market value.

The findings are translated into architectural design through a speculative design project. The design is located in a context identified through the investigations and incorporates architectural attributes linked to high market value.

The aim of the design is not necessarily to develop a realistic proposal, but rather to speculate on the consequences of allowing market logic to guide architectural design. In this sense, the project also points towards and sometimes exaggerates the potentially absurd outcomes of such a logic.

KEYWORDS
Market, Supply & Demand, Capital, Economic value, User value, Exchange value

TABLE OF CONTENTS

CHAPTER 1
INTRODUCTION

"The desire of food is limited in every man by the narrow capacity of the human stomach; but the desire of the conveniences and ornaments of building, dress, equipage, and household furniture, seems to have no limit or certain boundary."

— Adam Smith, *The Wealth of Nations* (1776/2012), p. 170

BACKGROUND

This is my last project as an architecture student. Throughout the education, we have learned about architectural qualities. When designing housing, the focus has been on creating qualities for the resident. I took a 3.5 year break before my master thesis, doing an internship and then working as an architect and this made me aware of how other parameters than housing qualities often compete with, and sometimes outweigh, architectural values and housing qualities.

Architecture is not only shaped by an isolated design process. In reality, many external factors influence architecture beyond the work of the architect. Housing and architecture are part of a market driven by demand, profit, and efficiency.

AIM

The aim of this master thesis is to investigate and speculate about how architecture in the form of housing acts as a commodity on a market and how the market affects and influences the design and architecture.

This project speculates about what happens when architecture is designed primarily to maximise economic value on a market.

RESEARCH QUESTION:

How can architecture be designed to maximize market value?

In this thesis, to maximize market value refers to the use of architecture as a means of generating or increasing economic value on the housing market in Gothenburg.

The aim of chapter 03. Investigations is to find a location and architectural attributes that can be used to maximize market value. These findings are then translated into architectural design in chapter 04. "Translation into design" and presented/staged in chapter 05. "The prospect".

RELEVANCE FOR SUSTAINABLE DEVELOPMENT, DELIMITATIONS

The main definition of value in this master thesis is economic value on a market. There are other values that are (more?) important and these may be discussed in part, but they are not in focus.

I am aware that there are other values than economic values. I am also aware that economic value does not necessarily create conditions for ecological and social values.

The project integrates a sustainability perspective through speculating about what will happen when ecological and social sustainability are only taken into account when it increases economic value on a market.

The aim of the design is not necessarily to develop a realistic proposal, but rather to speculate on the consequences of allowing market logic to guide architectural design. In this sense, the project also points towards and sometimes exaggerates the potentially absurd outcomes of such a logic.

METHODS AND TOOLS

The method is based on letting the market guide the design. To enable this, data about the housing market is collected, analysed and translated into architecture. The method is based on treating the data literally, where it not only describes reality but is also used to shape it.

The work involves interpreting the data relatively literally and translating it into spatial and material decisions. The materialized reality is thus adapted to the data, rather than the other way around. This also includes a conscious over interpretation, where the data is allowed to drive the design further than is realistic.

When data is missing, this is marked as N/D, and what is not visible in the data is treated as if it does not exist. The method thus involves a selective view of reality, where only what is measurable or registered is allowed to influence the design.

To answer the research questions and investigate how architecture can be used to maximize market value, the method is inspired by methods used in economics and economic theory. Within economics, value is often understood as something that can be measured and quantified. Measurability is therefore an important method in this thesis. The method consists of retrieving/collecting relevant quantitative data which is then visualized and materialized through design.

The data is crucial to the method and the thesis. Different datasets related to the housing market in Gothenburg are collected and processed in order to identify spatial patterns of demand and architectural attributes associated with high economic value.

The thesis is divided into three main parts, **investigations**, **translation into design** and **prospect**. Three investigations investigates the housing market in different ways and are then translated to design. This design is communicated as a prospect. The prospect is a housing proposal based on the findings from the investigations. The role of the prospect is to express an market logic in an imagined spatial form.

Method for the investigations

Each investigations follows a similar structure consisting of three steps:

- Retrieve data

Relevant data related to the housing market is collected from different sources such as housing platforms and public datasets.

- Visualize data

The collected data is visualized through diagrams, maps, or other graphical representations in order to show patterns and relationships.

- Materialize data

The visualised data is translated into physical form/volume to speculate on how the data could manifest itself within the built environment. The materialization is an action based on the visualization.

The investigations are chronological to the process of developing this thesis. Each investigation ends with a new question that arises from the findings which creates a demand for a new investigation. Each investigation builds upon the previous one, gradually narrowing the focus towards identifying specific locations and architectural attributes that can be used in the final design proposal.

Method for the translation intro design and the prospect

The three investigations form the basis for the design proposal called “the prospect”. In the investigations, data is materialized and it is the materialized data that is combined and processed to create the prospect. These investigations address different aspects and are not put together as equal parts, but form a structure where some of the findings function as a framework and others form the content. The findings from investigation 3 takes a more prominent role in the actual design and the other investigations primarily defines the context and conditions.

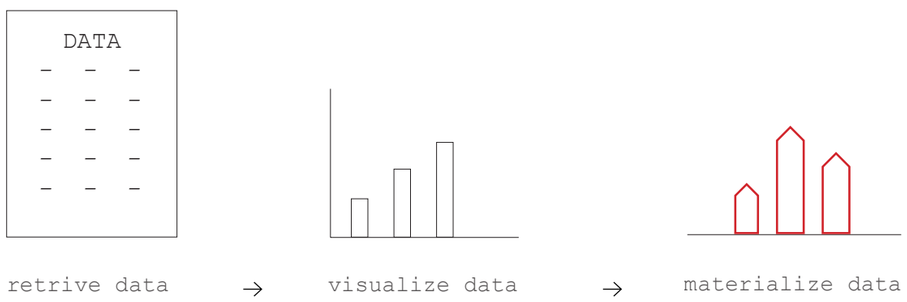
The design work itself can be understood as a process where the results from the investigations are integrated at different levels: the findings from investigation 2 is the location of the prospect where the findings from investigation 3 can be implemented. The findings from investigation 1 take a less prominent role but create a reference point against which the design of the prospect can be reflected and discussed.

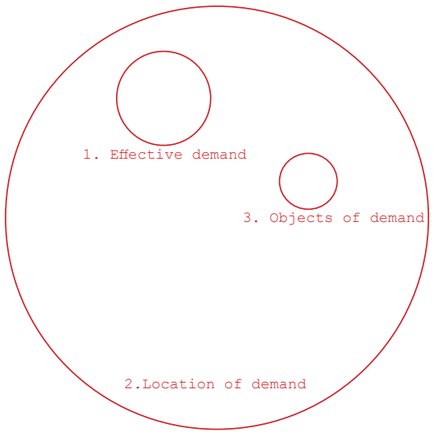
The findings are combined to create a home containing all the findings from the investigations, this is presented as an axonometric drawing on page 58-59. The design is then presented/staged as a fictional housing advertisement. inte chapter 05. The prospect.

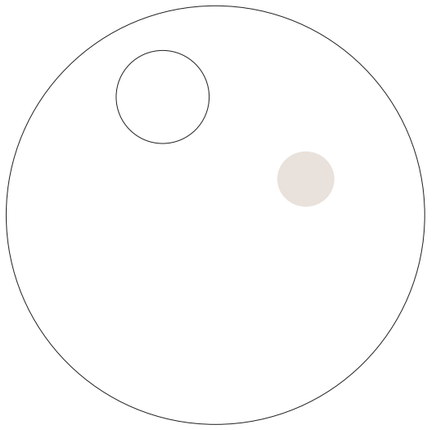
Tools and software

The tools and software used in investigations are choosed to be suitable for data analysis, mainly excel and QGIS analysis tools and Rhino/Grasshopper (for modeling data) and to some extent Python code and the word processing program spaCy. The drawings are done in Rhino and processed in Illustrator/Photoshop.

The main software for the prospect is Rhino, the renderings are made with Rhino render and then processed with Photoshop and an AI program to get realistic materials and lighting like a housing advertisement. AI is not used to generate volume or modify the drawing but only for lighting and to enhance materials.

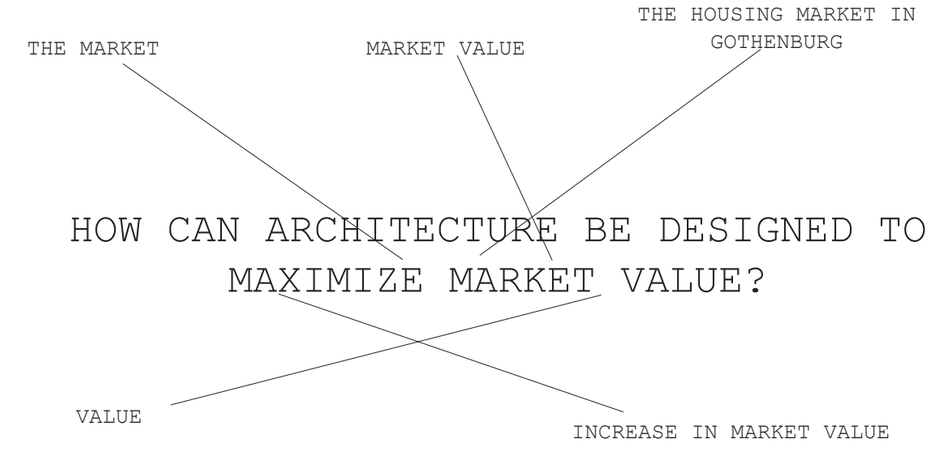






THE INVESTIGATIONS → TRANSLATION INTO DESIGN → THE PROSPECT

CHAPTER 2
THEORY



INTRODUCTION TO THE CHAPTER

To answer the thesis question the content of this chapter will include theories about value, the market and how architecture act as a commodity on a market, it will also explain how the housing market works in Gothenburg.

THE MARKET

SUPPLY AND DEMAND

Demand is what consumers in a market can demand, it depends on several factors, what income they have, how much they think they need the product and what alternatives there are to the product, the price of the alternatives, personal preferences, and the price of the product. If all these factors are to be analyzed simultaneously, it becomes too complicated, and a simplified assumption is usually made where only the price of the good affects demand. This is because the price is relatively easy to change (Eklund, 2013).

The most likely relationship between price and quantity demanded is that consumers demand less of a good when the price rises and more when the price falls. Fewer people can demand the good at a high price and more at a low price. The demand curve slopes downward because consumers demand a larger quantity when the price is lower.

(If the curve is flat, it means that the price elasticity of demand is high, i.e. the quantity demanded decreases quickly when the price changes. If the curve is steep, the price elasticity is low, it means that demand is not particularly price sensitive).

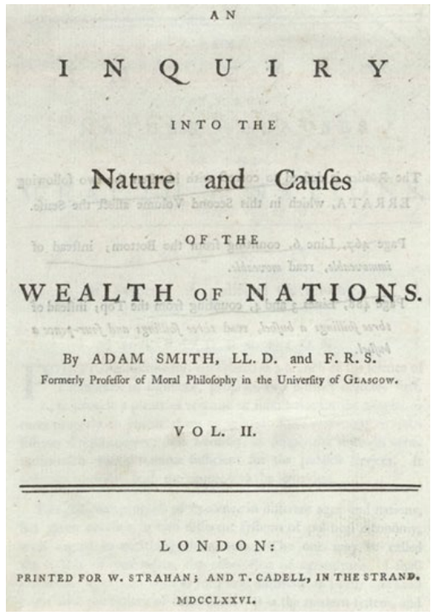
Supply is also affected by several factors, costs of manufacturing the product, how much profit they want to generate, what prices they can charge, etc. Here too, a simplified assumption is usually made where it is the price that affects the supply.

EFFECTIVE DEMAND VS ABSOLUTE DEMAND

Adam Smith writes in the The Wealth of Nations that there is a difference between *effective demand* and *absolute demand*. The people who are effective demanders are those who have the means, i.e. sufficient purchasing power, to participate in the market at the current price level. Absolute demanders are those who would like the good but who do not have the means to demand it at the current price (Smith, 1776/2012).

The book The Wealth of Nations was published in 1776 and Adam Smith chooses an analogy that may not be entirely understandable in today's time and context, that even a poor person demands (absolute demand) a six-horse wagon. The poor person may wish he had one but he lacks the purchasing power to buy it, the commodity can never be sold for the low price that this person could have paid, for example.

In our time and context a more suitable analogy could be a study done by Boverket which states that 7/10 people in Sweden would want to live in a villa (Villaägarna 2023). This is an example of the absolute demand and not the same thing as how many people that have effective demand and can pay the price required to buy a villa on the market today. Another analogy could be asking people if the would like to live in a castle, many people would probably want it, but that does not mean that they can afford it and are effective buyers.


AN

INQUIRY

INTO THE

Nature and Cauſes

OF THE

WEALTH OF NATIONS.

By ADAM SMITH, LL. D. and F. R. S.

Formerly Profeſſor of Moral Philoſophy in the Univerſity of Glasgow.

VOL. II.

LONDON:

PRINTED FOR W. STRAHAN; AND T. CADELL, IN THE STRAND.

MDCCLXXVI.

Adam Smith, Public domain, via Wikimedia Commons

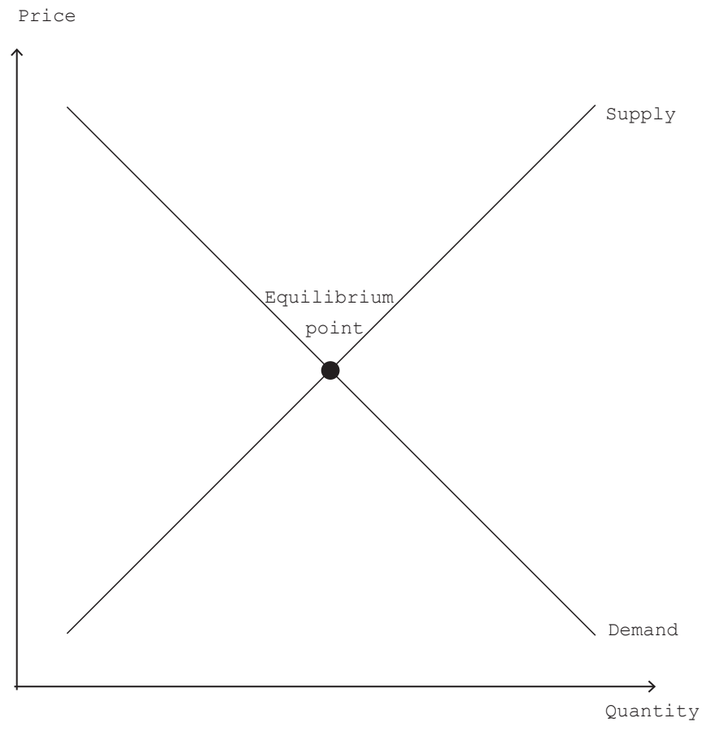
Equilibrium

When you put together the supply and demand curves, you see that the curves intersect at a specific point. This is the point where supply and demand are equal, which means that the market is in equilibrium which means that all goods that are produced are in demand. This is called the *equilibrium price* or *equilibrium point*.

Eklund (2013) writes that a *free market* of its own accord seeks equilibrium. As soon as the price deviates from the equilibrium price, the economy begins an adjustment towards equilibrium.

If there is a surplus of supply, there is a surplus of the good, this triggers an adjustment, producers are forced to lower the price in order to get rid of their goods. When the price falls, at the same time, consumers' demand for the good increases. More consumers can afford to buy the good. The process continues until producers and consumers encounter each other and supply and demand meet at the equilibrium price again.

If there is a surplus of demand, higher demand than supply, the price will be pushed up and cause consumers to reduce their quantity demanded.



VALUE

ABOUT VALUE

Mariana Mazzucato (2018) argues that the concept of value today is not discussed properly. It is seen as something subjective, in the eyes of the beholder. Mazzucatu writes that modern economics often see value and price as the same thing. She criticizes the idea that value is simply determined through supply and demand and that value is not necessarily defined by the quality of the commodity, a buildings value on the market is not defined by the quality of the building.

CREATING VALUE VS EXTRACTING VALUE

Mazzucato also argues that an increase in market price does not have to mean that a new value has been created. A building can increase its market price without any changes or improvement in architectural quality or function. According to the theory of supply and demand, if more people want something and the demand is rising, the market price tend to rise. When housing increases in price, it is not necessarily a real value that has been created in an economic sense, it is capital gain due to the concept of supply and demand (limited supply and increased demand). According to Mazzucato, a higher price does not necessarily mean that something has improved. The price increase can instead come from scarcity, speculation or demand in the market.

Adam Smith (1776/2012) writes that there are two types of labour, productive work and unproductive labour. Productive labour is work that increases the value of the object on which it is spent. The object or commodity is, so to speak, a certain mass of stored and saved labour power that can be used at another time if necessary. Examples of productive labour are, for example, industrial work and manufacturing, agricultural work and crafts. Unproductive labour is work that may be important but does not increase value, for example, government officials, doctors, musicians, etc.

Smith's theory can be connected to the market value of buildings, where increasing prices do not necessarily mean that the building itself has improved. The increase in value may instead come from speculation, scarcity, or demand in the market rather than from new productive value being created.

THE ROLE OF ARCHITECTURE IN THE CREATION OF ECONOMIC VALUE

Cervenka, A. writes in his book "Fuskbygget: Så knäckte bostadsmarknaden Sverige och världen" about how property has become a crucial part of the global economy. Until 1973, the world's currencies were tied to a fixed value in gold. This system, known as Bretton Woods, was abolished, and a new stable asset was needed to anchor the value of money. According to Cervenka, property became this new anchor. Since 1973, property values have increased, and now real estate is described as the most valuable asset in the world. A majority of global capital flowing through the buying and selling of property (Cervenka, A).

"Architecture does not simply follow the dictates of political economy, it rather contributes to it" (Honsa, J). The economy both influence and is influenced by architecture. Richard Rogers, who is known for having designed the Centre Pompodou in Paris, meant that economics influences architecture, he famously said that the aesthetic principle of our times is "form follows profit" (Rogers, 2013, as cited in Martin & Wilson, 2024, p. 485).

Financialization of properties

Matthew Soules (2024) writes that built property sits at the very heart of the complex global financial systems. Financialization means that more profit is made through finance and investments instead of through production and trade. This financialization means that buildings have become investments and financial assets. While real estate was previously seen as something local and place-bound, an illiquid asset that cannot be easily or quickly turned into cash, it is today a liquid asset that can be bought and sold within global markets. Shifts in finance, law, buisiness, technology and physical form has transformed real estate to a liquidity asset.

According to Soules, the aggregated and growing amount of worldwide capital in the form of pension funds, mutual funds and insurance funds forms " a giant pool of money", is an important driver of this financialisation of buildings. Real estate has become a place where this money can go. Soules refers to the statement of Rem Koolhaas, "In the free market, architecture= real estate".

Buildings functions as physical objects to store wealth, this makes buildings mutating and changing its form and scale to absorb capital.

This function is not new, but Soules writes that it is relative recent that buildings have become the centre of the vast and complex financial systems. Today, the buildings are a primary medium of finance.

The consequence of this financialisation leads to four primary design strategies:
1. simplifying space
2. maximizing the number of assets
3. facilitating remote ownership
4. adding superficial complexity to compensate for the negative consequences of the first three strategies

The first three strategies makes paradoxically both that the built assets liquidity increase, but at the same time, it damages their appeal. To increase the appeal and compensate for what is lost, the fourth strategy is added, the adding of conditions that seem complex. Soules writes that examples of this can be magnificent views, complex geometries and recreational leisure spaces.

The building Karlatornet, which is presented later in this chapter, has facilities including a dog spa, hotel-gym, cinema room and roof terass (Karlastaden, n.d).

Example of a magnificent view. View from a bathroom on the 73rd floor of Karlatornet. Photograph by the author.

The ideology of the skyscraper

The architectural form is shaped by economic conditions and profit calculations. According to Merwood-Salisbury (2013), the first tall buildings constructed in Chicago was a consequence of the rise of property prices that began to accelerate. When property prices rose, the building developers had to build taller to fit more sq m to generate more income per land area. The form of the skyscraper was -the height depended on what was economically profitable, 1889 the most profitable was 16 stories, and this thus became the new norm (beyond this height the additional requirements for elevators and foundations cost more and meant less profit).

Bortolotti (2022) writes that architecture always has been used as a representation of power. Since the Roman Empire, there are at least three elements which has been used to represent power: the tower, the fort and the palace. Architecture tells the story of those who created it, and can be used to seduce, impress and intimidate. Tall towers

MARKET VALUE

USER VALUE VS EXCHANGE VALUE (“BYTESVÄRDE VS “BRUKSVÄRDE”)
There is a difference between a products user value and exchange value (Marx, K). User value is the value for the user, for example the resident in a building. The exchange value is the value the product has in exchange for something else, for example what the building cost at a market. The value for the user can be high even though the exchange value is low, and vice versa.

In Sweden today, the terms user value and the exchange value are used in different types of housing markets.

In the market for privately owned housing, it is the exchange value that indicates the value of a home. The economic value is determined by supply and demand, sellers and buyers are meeting in a market and the price is higher if there is high demand and lower if there is low demand.

In the market for rental properties, a form of user value principle, called “bruksvärdeshyra” is used to set and determine the rent. The user value is about the properties of the object, the rental apartment, rather than the demand for the object.

The user value principle means that the properties of an object (apartment) weigh more heavily than the location of the object. The value here is the practical value the apartment has from the tenant´s point of view, for example this could be if the apartment has access to an elevator and laundry room (Hyresgästföreingen, n.d).

This means that two apartments with similar properties can have the same rent, even though they have completely different locations in the city. An apartment with a very attractive central location can have the same rent as one that is in an unattractive location on the outskirts of the city.

In the market of privately owned housing, the person who can pay the most for the apartment gets to buy it. Since the rental market has its rents set by using the user value principle, the rent level is not affected by the demand for the apartment (the number of people applying for the apartment). When many people apply for the same apartment, another criteria are used to determine who gets the apartment. In municipal owned housing queues, the applicant with the most days in the queue wins the apartment. The queue days here act as capital, time is the capital.

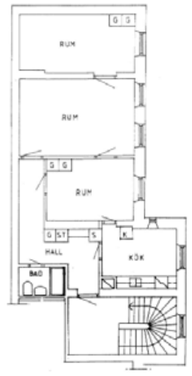
Presumptive rent “Presumtionshyra” is a relatively new way of determining the rent. This way was introduced in 2006 and the aim was to strenghten incentives for building new rental apartments. This is only allowed to be used for new apartments, and does not affect the rent set by the user value principle.

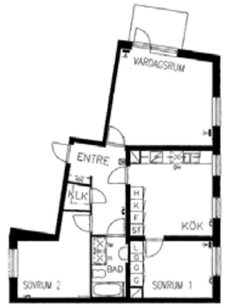
The concept of presumtive rent means that the property owner can set the rent to what it costs to build the apartment. Since construction costs have increased a lot in recent years, the rents set by presumtive rent has also increased (Hyresgästföreningen, n.d).

The floor plans on the right page show examples of how different objects on the rental market have different rent setting principles. The apartments on Viktoriagatan and Julaftonsgatan have rents set using the user value principle, and have similar rents, even though they are in completely different locations in the city.

The apartment on Litteraturgatan is a new apartment building where the rent is set based on the presumed rent, which means that it is significantly higher and the number of applicants is much lower than for apartments with user value rents. All three apartments are owned by municipal housing companies.

In the example below, the demand for the apartments with low rents (determined with the user value principle) is much higher than the demand for the apartment with higher rent (set by the principle of presumptive rent). This can of course depend on other factors such as supply, or attractiveness of different areas in the city.





ADRESS	Viktoriagatan 20B	Litteraturgatan 118	Julaftonsgatan 42
NUMBER OF ROOMS	3 room	3 room	3 room
SIZE	78.3 sqm	74 sqm	78 sqm
RENT PER MONTH	9341 sek	14 214 sek	8795 sek
NUMBER OF APPLICANTS	426 people/applicants	9 people/applicants	118 people/applicants
LANDLORD	Bostadsbolaget	Poseidon	Poseidon
APPROX YEARS IN QUEUE TO GET THE APARTMENT	13 years, 2 months	4 years, 6 months	8 years, 7 months

Location of the apartments. Map retrived from Lantmäteriet.

THE HOUSING MARKET IN GOTHENBURG

TYPOLOGIES
There are three main types of housing typologies in Sweden:
Villas/single family houses
Apartments in apartment buildings
Special housing

Most of the housing is in the group of apartment buildings, which accounts for about 53% of all housing in the country. Single family housing make up another 41% of the housing stock. The rest of the housing consists of special housing, such as student housing and senior housing, etc.

HOUSING TYPES
In Sweden there are four main types of housing:
Private housing/ownership properties (äganderätt)
Tenant owned housing (bostadsrätt)
Rental housing (hyresrätt)
Special housing (specialbostad)

There are approximately 5.3 million homes in Sweden in 2025 (Hurvibor, n.d). There are approximately as many rental properties as ownership properties (see pie chart below).

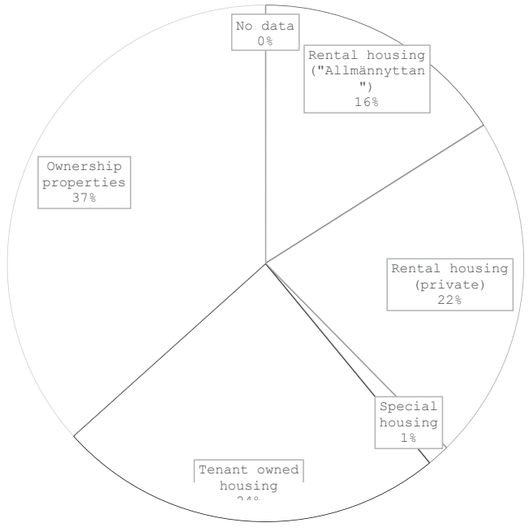
Ownership means that you own your own home. The most common is that you own a small house (villa). Since 2009 it has also been possible to build new apartment buildings with apartments in the form of ownership (this is not common but exists, for example in Karlatornet in Gothenburg).

Tenant owned housing means that you are a member and own a part of a tenant-owned housing association, which owns a property with an apartment where each member has their own apartment. A tenant-owned housing is sold on the open housing market (but the buyer must be approved by the association) (Boverket, n.d) .

Rental housing means that you rent an apartment from a landlord, who owns one or more properties with rental apartments. The landlords can be private companies, but can also be companies owned by the municipality, municipal housing companies, called “Allmännyttan”. In Gothenburg, approximately 25% of the people lives in apartments owned by municipal housing companies, this is more than national average.

THE MARKETS
Both private housing/ownership properties and tenant owned housing are sold on the open market where the person who pays the most gets the home (supply and demand). The biggest marketplace for this kind of housing is Booli.se (Booli, n.d).

To get a rental apartment, the most common way is to get it through a housing queue, the largest queue that mediates the most housing in Gothenburg is the municipally owned Boplats Väst, apartments from municipally owned housing are advertised here, but private landlords also publish their apartments here. To get an apartment through the municipal housing queue, the apartment goes to the person applying for the apartment who has the most queue days, that is, who has been in the queue the longest. There are also private queues, such as Homeq, where they do not only go through queue days, but the landlord can choose among the applicants who they want to rent to, for example based on income (Hyresgästföreningen, n.d).



Housings types 2025 %. Pie chart made using data from SCB/hurvibor, n.d.

THE HOUSING MARKET AND POLITICS

POLITICAL PROPOSALS ABOUT MARKET RENT
Today, it is the user value principle that controls the rent level in rental apartments. Some political parties want the rents to instead be tied to market values (”marknadshyra”, ”trygghetshyra”, ”jämviktshyra”), which for most rental objects would mean a significant increase in rent (Timbro, n.d).

Building rental apartments is seen as economically unprofitable because the price/rent is regulated and the manufacturer of the product is not allowed to charge a market rent (Timbro, n.d). It is worth mentioning, however, that new apartment buildings has presumtionshyra, wich in many cases is as high as the market rent would be (källa).

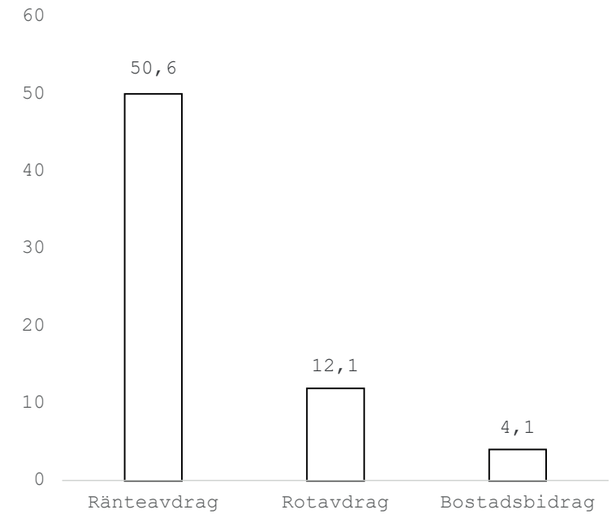
GOVERNMENT SUPPORT AND SUBSIDES
There are three main types of government support and subsidies to the housing sector (hurvibor, n.d).

“Ränteavdrag” means interest deduction and it is a deduction you can make if you have a loan on your home. It means that you get back some of the money you have paid in taxes, in this way the government subsidiez the loans by making it cheaper to borrow money. When interest rates rises nationally (or globally), the government´s costs for this subsidy also rises. Between 2022-2024, the interest rates increased which meant that the cost for this subsidy rose from 25 billion to 50 billion.

“Rotavdrag” is also a deduction that those who own their home can use to renovate or rebuild their home. It is possible to make a 30% deduction on the labour cost, this means that the government makes it cheaper to hire craftsmen and renovate.

“Bostadsbidrag” is a subsity that you can receive regardless of whether you live in rental housing or if you own your home. However, it is most common to receive it if you live in rental housing. In recent years, fewer and fewer people recive this subsidy and in 2024 it was less than a tenth of the governments cost for the interest deduction.

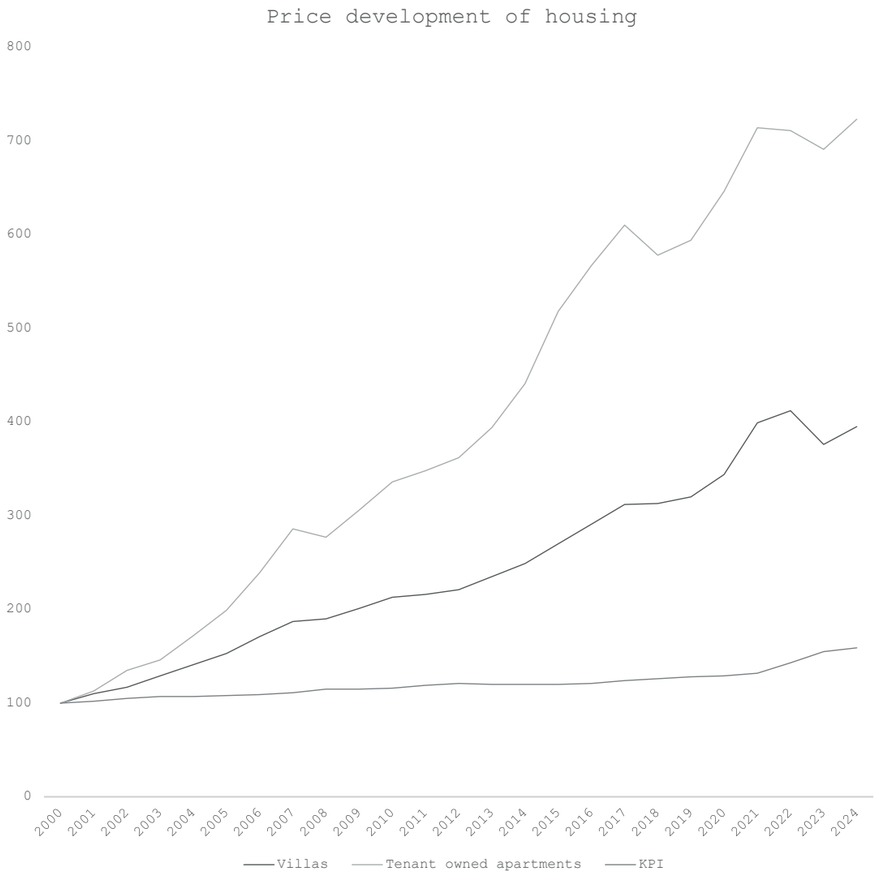
Most of the support goes to owner-occupied housing in the form of interest deductions and “Rotavdrag” while a smaller portion went to “Bostadsbidrag”.



Government Subsidies to the Housing Sector, 2024. SEK Billions. (Hurvibor, n.d)

INCREASE IN VALUE

The price development of tenant owned housing since 1996 has increased in Sweden over the past 30 years. From 1996 it has increased from 4,997 SEK/sq m to 44,894 SEK/sq m in 2025 (Mäklarstatistik, 2026)



1 KR TO 1 000 000 000 KR

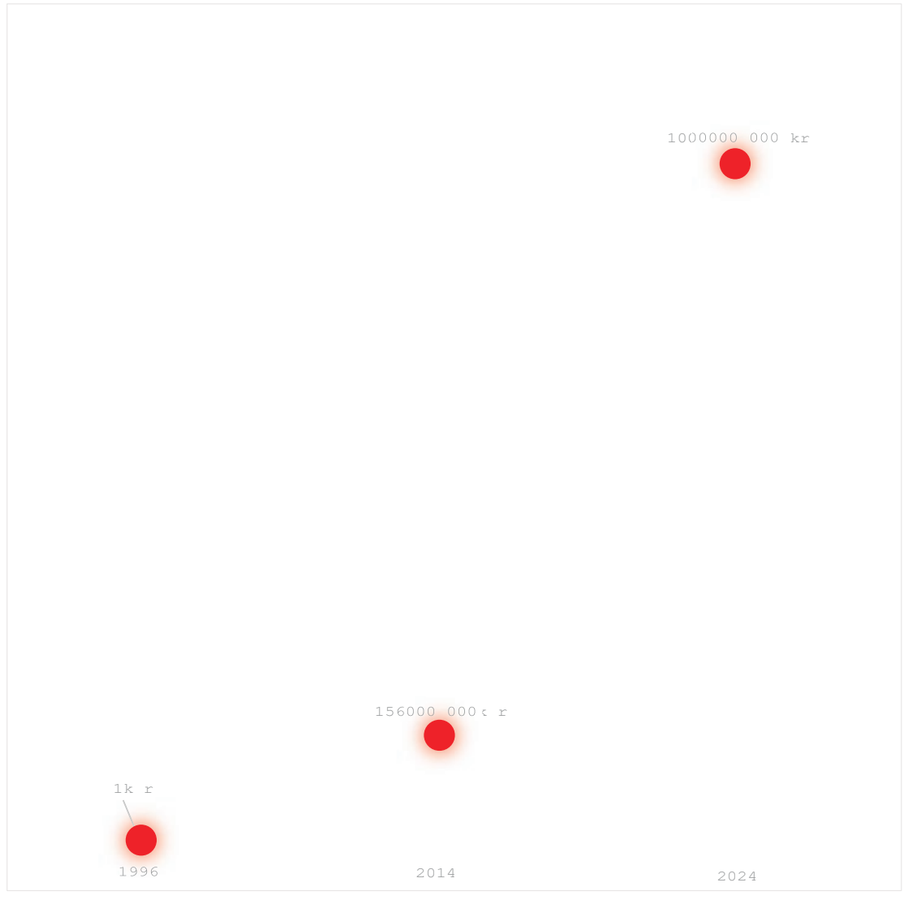
Example Karlastaden, a story about an increase in value.

Göteborg is a city with a history linked its harbour and shipyard. The state-owned shipbuilding company Svenska Varv AB owned a large part of the land on the northen side of Göta Älv. In 1996 they sold their entire property to a company owned by the municipality for **1 SEK** (Älvstranden, 2023).

In 2014, a part of this land was sold to a private company owned by Serneke Group for **156 million SEK** (see contract of sale). Serneke Group developed the property and 2019 they started the construction of Karlatornet, the tower was finished in 2024. Karlatornet is the highest building in the nordic countries, 246 meters, containing 74 floors and 611 apartments. The building is designed by SOM (Skidmore, Owings and Merill) architects, who are famous for designing for example the Burj Khalifa in Dubai. Serneke also developed the property close to Karlatornet, called "Karlastaden", containing detailed development plans ("detaljplaner") for several buildings, the highest 43 floors (Karlastaden, n.d)

In 2024, Karlastaden was sold to another company owned by the municipality (AB Framtiden) for **1 billion SEK** (Karlastaden, 2024). AB Framtiden is the company that owns all of "Allmännyttan" in Gothenburg, i.e. the rental apartments owned by the municipality.

The increase in economic value has been made possible not only by the architecture itself, but also by the way in which the property is valued. The original price of 1 kr was set symbolically, it was not a price set by a free market. The property sold for 156 million SEK had a price based on a market value. The market value was not only based on the land area but on the detailed development plan ("detaljplan") which included the building rights for Karlatornet. Karlastaden has yet to be built, but the detailed development plan acts as a promise of future value. In this sense, architecture becomes not only a physical structure, but also a financial projection of future economic potential.



CONSLUSION OF CHAPTER 02. THEORY

According to the theory of supply and demand, the price on a free market will move towards the equilibrium point. This is done by either changing the price or the supply to meet the demand.

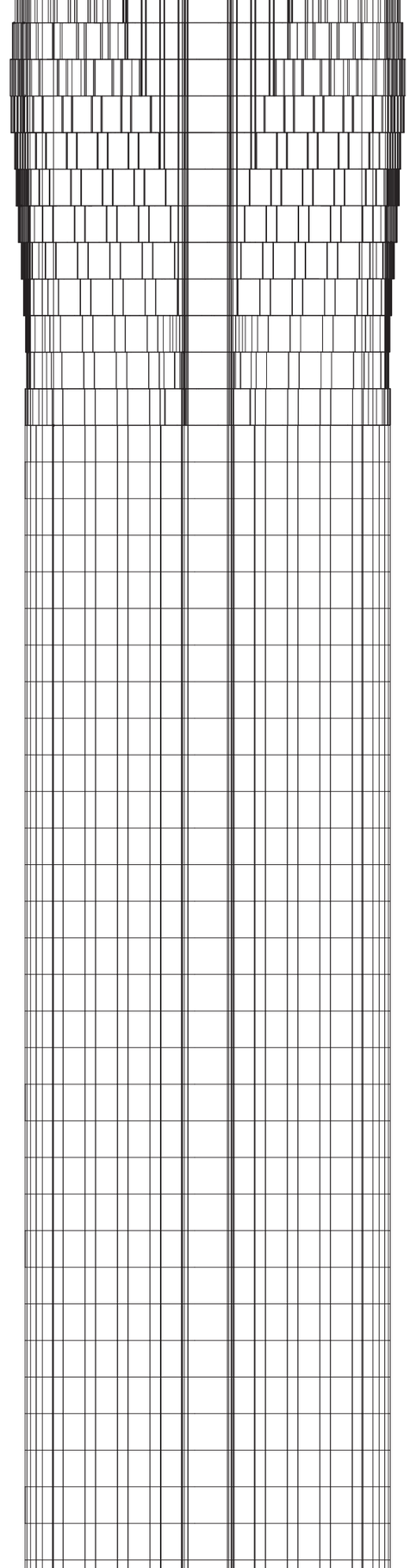
Economic value on a market is the definition of value in this thesis.

There are two different types of housing markets in Gothenburg, the owned housing market is the real market in the classical sense. There is also a rental market but it is so regulated that the monetary price is not based on market logic in terms of supply and demand.

Government subsidies are primarily for owned housing, so it is would be justified to use owned housing to maximize market value. The rental market is so regulated that market value cannot yet be maximized, this could perhaps be possible in the future, if the political proposal for market rent is introduced.

The value of housing has increased significantly over the last 30 years. Karlastaden has been identified as a place with a large increase in value and it is therefore interesting as a starting point for examining effective demand.

CHAPTER 3
INVESTIGATIONS



In this following chapter, four investigations will be presented, which aims to investigate the theory within the context of the housing market in Gothenburg.

These investigations consists of:
1. Effective demand
2. Location of demand
3. Objects of demand

The investigations are chronological to the process of developing this thesis. Each investigation ends with a new question that arises from the findings which creates a demand for a new investigation. Each investigation builds upon the previous one, gradually narrowing the focus towards identifying specific locations and architectural attributes that can be used in the final design proposal.

The starting point for the investigations is the building ”Karlatornet”, which has been identified in the background as a place with a great increase in value where architecture has played a major role.

INVESTIGATION 1

EFFECTIVE DEMAND

AIM
The aim of this investigation is to investigate and visualize the supply and effective demand for apartments in Karlatornet.

BACKGROUND/ABOUT THE DATA
Karlatornet was built 2019-2024 and there are many apartments for sale in the building, but there are no public accessible record of how many. Some of the apartments has never been sold and never lived in.

METHOD
The data has been retrieved by manually writing down every apartment in Karlatornet for sale from Booli.se (21 january 2026).

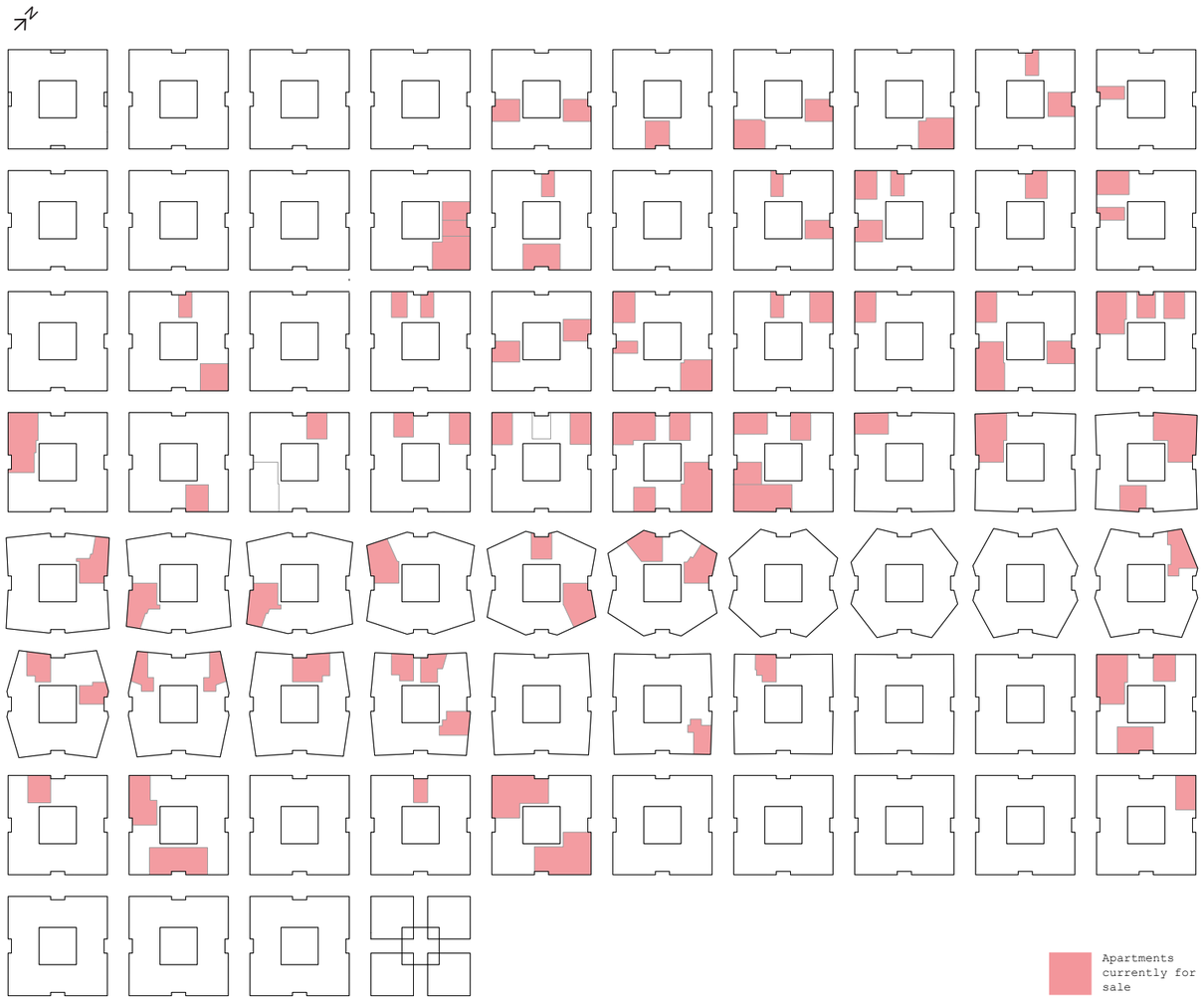
The data/inventory contains the number of apartments that are currently unsold, the asking price for each apartment, sq m, number of rooms, floor, and number of days the apartment has been unsold. A calculation based on the retrieved data has been made. Some assumptions has been made due to lack of official data about the building efficiency factor (BOA/BTA factor).

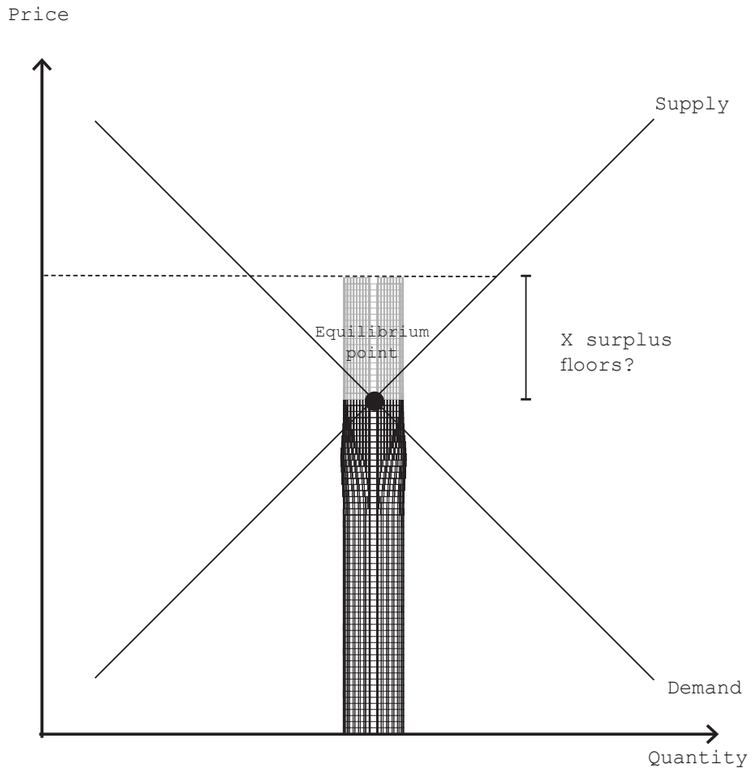
To visualize the data, all apartments for sale has been mapped out on the floorplan of the building to visualize where in the tower the apartments are located. a bar chart is created based on the inventory. A bar chart showing the building as a staple has been created based on the findings which shows the relative area of the apartments for sale v.s the total area of all the apartments in the building.

To materialize the data, the total sq m of the apartments for sale has been subtracted from the building which leaves the tower lower than it is today.

Floor	Apartment ID	Asking price	Days unsold	Sqm	Nember of rooms
4	1401	5 495 000,00 kr		183	49 2
5	1513	3 095 000,00 kr		153	48 2
5	1509	2 795 000,00 kr		19	48 2
6	1601	3 390 000,00 kr		906	48,5 2
7	1712	4 900 000,00 kr		1712	73,5 3
7	1709	3 490 000,00 kr		875	48 2
8	1810	5 100 000,00 kr		318	73,5 3
9	1905	2 175 000,00 kr		750	24 1
9	1905	2 150 000,00 kr		275	24 1
9	1909	2 995 000,00 kr		108	48 2
10	2005	2 120 000,00 kr		253	24 1
14	2408	3 950 000,00 kr		966	48 2
14	-	5 995 000,00 kr		27	73,5 3
15	2511	-	618	78,5	3
15	2505	2 095 000,00 kr		44	26 1
16	2601	3 615 000,00 kr		958	48,5 2
16		-	370	32,5	1
16	2608	3 395 000,00 kr		302	48,5 2
16	2602	3 890 000,00 kr		105	55 2
17	-	2 195 000,00 kr		49	25 1
17	2709	3 545 000,00 kr		34	48,5 2
18	2802	4 300 000,00 kr		1202	55 2
18	2804	2 350 000,00 kr		N/D (ca 2 y)	25 1
18	2813	3 895 000,00 kr		N/D (ca 1 y)	48,5 2
18	2803	2 495 000,00 kr		45	32,5 1
19	2910	-	481	77	3
19	-	3 295 000,00 kr		157	48,5 2
20	3005	2 295 000,00 kr		846	25 1
20	3007	3 880 000,00 kr		107	55 2
22	3205	2 675 000,00 kr		478	25 1
22	3210	5 850 000,00 kr		274	77 3
22	3213	3 695 000,00 kr		6	48,5 2
24	3406	2 595 000,00 kr		68	32,5 1
24	3405	2 345 000,00 kr		55	25 1
25	3513	3 795 000,00 kr		265	49 2
25	3508	3 995 000,00 kr		129	49,5 2
26	3602	3 995 000,00 kr		722	55 2
26	3604	2 395 000,00 kr		99	26 1
26	3610	5 895 000,00 kr		19	79 3
27	3707	-	1106	55	2
27	3704	2 595 000,00 kr		119	26 1
28	3802	7 395 000,00 kr		430	92,5 3
29	3911	7 295 000,00 kr		274	102,5 4
29	3901	3 995 000,00 kr		251	49 2
30	4003	3 545 000,00 kr		236	45,5 2
30	4006	7 295 000,00 kr		132	92,5 3
30	4005	3 295 000,00 kr		126	45,5 2
30	N/D	3 195 000,00 kr		52	38 1
31	4103	3 595 000,00 kr		209	46 2
31	4104	2 785 000,00 kr		111	38 1
32	4209	4 395 000,00 kr		8	48,5 2
33	4305	3 595 000,00 kr		510	45,5 2
33	4311	7 395 000,00 kr		2	102,5 4
34	4406		N/D	634	92,5 3
34	4409	4 150 000,00 kr		24	48,5 2
35	4504	2 995 000,00 kr		83	38 1
36	4603	3 495 000,00 kr		369	46,2 2
36	4605	3 475 000,00 kr		366	46,5 2
36	4608	8 795 000,00 kr		350	104 4
36	4602	8 595 000,00 kr		277	94,5 3
36	N/D	4 490 000,00 kr		245	49 2
37	4606		N/D	N/D (ca 2 y)	94,5 3
37	4705	3 695 000,00 kr		88	47,5 2
37	4710	8 195 000,00 kr		55	90 3
37	4707	4 800 000,00 kr		19	48,5 2
39	4904	3 295 000,00 kr		253	50 2
39	4901	9 495 000,00 kr		98	108,5 4
40	5004	4 175 000,00 kr		691	50 2
40	5008	6 900 000,00 kr		645	66,5 2
40	5005		N/D	N/D (384-430)	110 4
41	5104	7 695 000,00 kr		277	93 3
42	5208	9 615 000,00 kr		796	92 3
43	5308	9 495 000,00 kr		237	91,5 3
44	5401	4 860 000,00 kr		486	108,5 4
45	5503	3 495 000,00 kr		253	38,5 2
45	5506	10 295 000,00 kr		119	123 4
46	5604	8 025 000,00 kr		483	98 3
46	N/D	9 980 000,00 kr		213	99 3
50	N/D	4 895 000,00 kr		31	55 2
51	6103		N/D	784	55 2
51	6106	5 125 000,00 kr		253	53 2
52	6202	5 650 000,00 kr		352	52,2 2
52	6208		N/D	267	52,5 2
53	N/D	6 295 000,00 kr		147	86 3
54	6403	5 600 000,00 kr		353	52 2
54	N/D		N/D	289	52 2
54	6401	5 995 000,00 kr		271	52 2
56	6608	6 490 000,00 kr		812	54,5 2
57	6702	4 895 000,00 kr		384	46,5 2
60	7003	4 745 000,00 kr		277	50,5 2
60	7001	12 175 000,00 kr		139	105,5 4
60	7007	10 595 000,00 kr		111	85,5 3
61	7103	5 095 000,00 kr		637	50,5 2
62	7201	12 695 000,00 kr		705	105,5 4
62	7206	5 495 000,00 kr		100	50 2
62	7207	10 095 000,00 kr		49	85,5 3
64	7403	4 795 000,00 kr		461	30 1
65	7503	21 350 000,00 kr		196	184,4 5
65	7501	18 995 000,00 kr		145	178,5 5
70	8006	8 975 000,00 kr		541	55 2

TOTAL unsold 486 470 000,00 kr





SUPPLY AND DEMAND

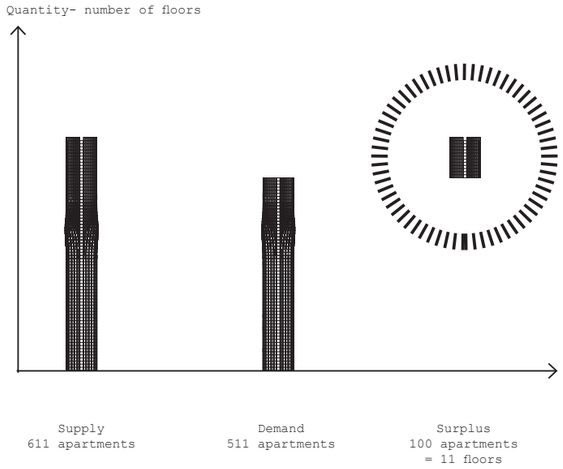
The illustration on the left page shows all 74 floors in Karlatornet. The red areas correspond to the apartments that are currently for sale according to the data retrieved from Booli. which floor and how they are oriented geographically and relative to each other.

There are 100 apartments for sale in the tower and the illustration shows that they are spread out on different floors and in different directions. It is worth noting that the top floors do not appear to have any apartments for sale at the moment (no red area). In 10 of the apartments in the data, there is no information about the location of the apartments. Therefore, only 90 apartments are showed in the illustration on the left page.

Apartments in a building are a commodity in a market and, as is the case with other commodities in a free market, the theory of supply and demand can be applied.

Supply and demand can be explained through a classic economic model, see above. At the point where supply and demand meet, the price of the commodity is optimal i.e. “equilibrium point”. If supply is greater than demand, there is a surplus of goods/apartments.

The supply of apartments in Karlatornet is greater than the demand because there are unsold apartments in the building. If supply and demand do not match, there are two choices, either change the price or the supply (or both). The following pages speculate about what would happen if you change the supply (i.e. the number of apartments/ the shape of the building) so that supply matches demand.



-486 MILLION SEK/-11 FLOORS

The calculations are based on the raw data retrieved from Booli (see page 20). Some assumptions have had to be made due to the lack of reliable data regarding building efficiency factor (BOA/BTA).

According to the calculations there are a total of 100 apartments which are for sale, with a total asking price of 469 million SEK. 10 of the unsold apartments has a unknown asking price which makes the total price of the apartments for sale possible higher.

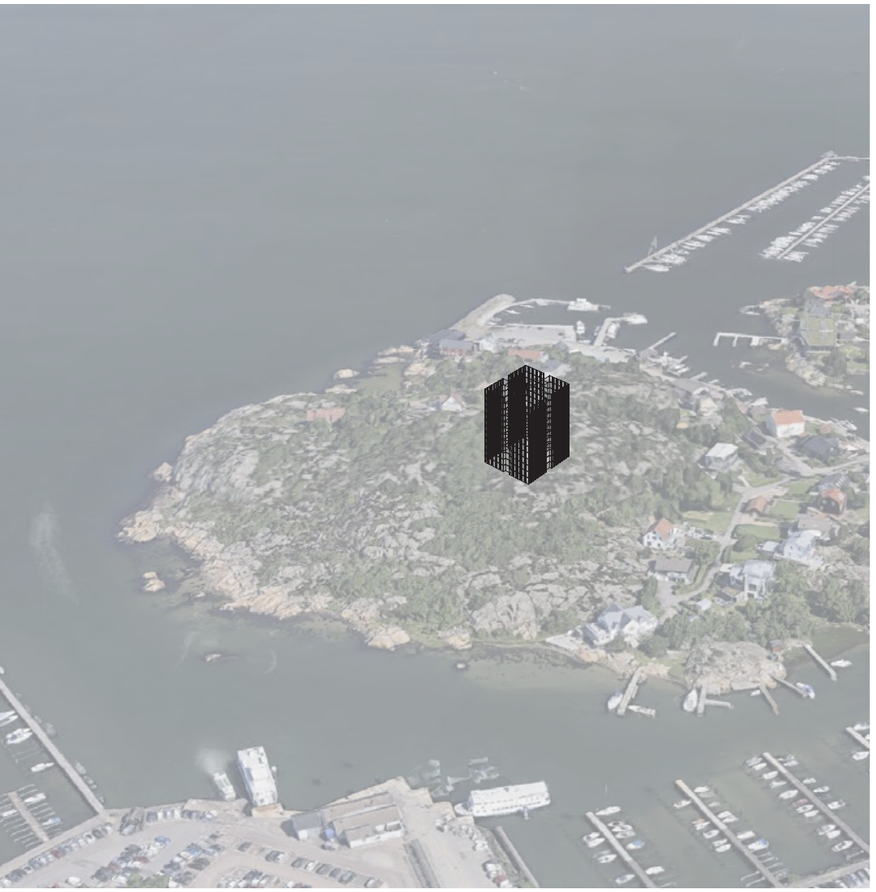
The total sqm of the apartments for sale is 6172 sqm (BOA) when converted to BTA (factor 0.75 BOA/BTA) it is approximately 8229 sqm (BTA) which corresponds to approximately 11 floors.

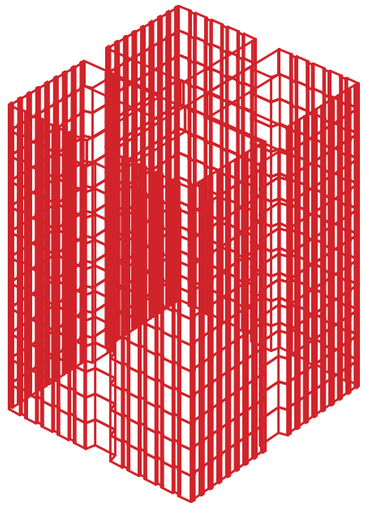
The avarage number of days the apartment has been unsold are 388 days. It is worth noting that Karlatornet was completed in 2024. Some apartments have never been sold and some have been sold but are back on the market.

THE NEW HEIGHT OF KARLATORNET

According to the theory of supply and demand, if the supply of apartments in Karlatornet is too high based on demand, then either the price or the supply must be adjusted, to match demand. The number of apartments in demand is 63 floors (74-11) which would mean that the natural height of Karlatornet is 63 floors.

The illustration on the right symbolizes the invisible hand that lifts away the surplus to bring the market into equilibrium (the hand is illustrated by the hand of God from The Creation of Adam by Michelangelo).





HIGHER SUPPLY THAN (EFFECTIVE) DEMAND

In Karlatornet there is higher supply than effective demand. The fact that the supply is too large in Karlatornet does not mean that there is no demand elsewhere in the city.

A possible solution to match the supply with the demand would be to remove and change the location of the surplus floors. To move the top 11 floors to a location with higher demand.

The two illustrations show that the part of Karlatornet that is for sale and corresponds to the surplus has been moved to Angholmen in Långedrag, opposite the Saltholmen ferry stop. The main part of the tower, 63 of floors, remains in its original location on Hisingen.

CONCLUSION

The conclusion is that supply and demand are not matched in Karlatornet right now. The effective demand is 511 apartments which means that there is a surplus of 100 apartments which corresponds to approximately 11 floors in the tower.

Using the theory of supply and demand, so that the market is in equilibrium, the supply is modified by modifying the shape of the tower. 11 floors are subtracted and removed from the height and stand here symbolically waiting to be given a new place in the city.

NEW QUESTION

This is an example of a lack of effective demand. Is it possible to find a place that has the ultimate demand in the city?

INVESTIGATION 2

LOCATION OF DEMAND

AIM

The aim is to find the centroid of demand, the centre of gravity based on housing sales in Göteborg. The aim is to find a location with potential for housing development, a place with ultimate demand.

BACKGROUND/ABOUT THE DATA

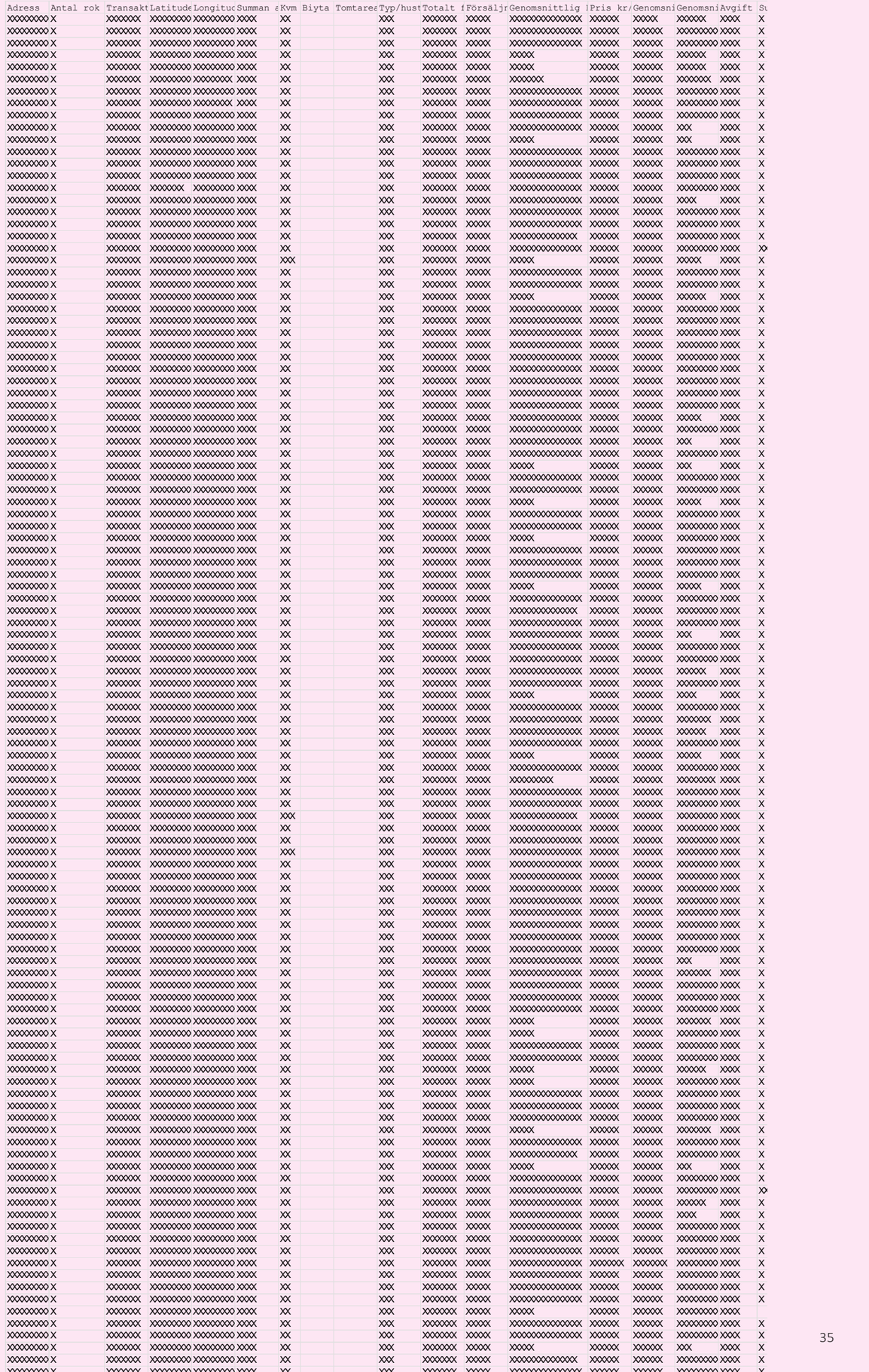
The data used for this investigation is originally/based on data from Booli but compiled by a company specializing in market analysis (Evidens).

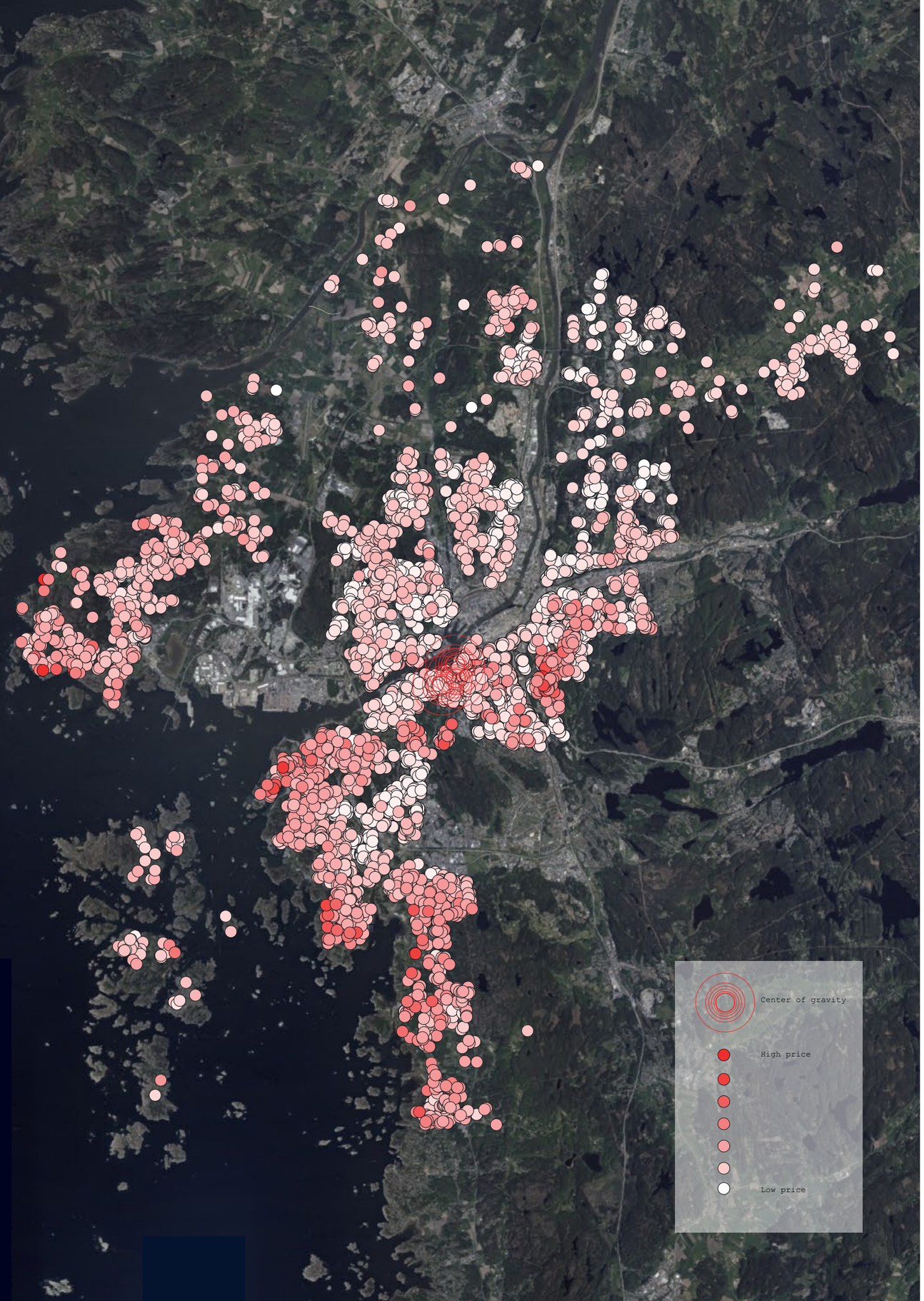
METHOD

The data was retrieved from Booli/Evidens and contains every sold object (both apartments and villas) that has been registered at Booli between 2024-01-01 and 2026-01-01.

To visualize the data, the excel file was georeferenced using QGIS. This creates a map with every mediated/sold object of housing represented as a dot on a map.

To materialize the data and find the centre of gravity based on the data, the data was processed using an analysis tool in QGIS (the algorithmic “Mean coordinates”). To translate the data into a location/physical place 3 different mean coordinates are calculated, slightly different depending on which parameters are weighted and based on this/from these a location was identified.





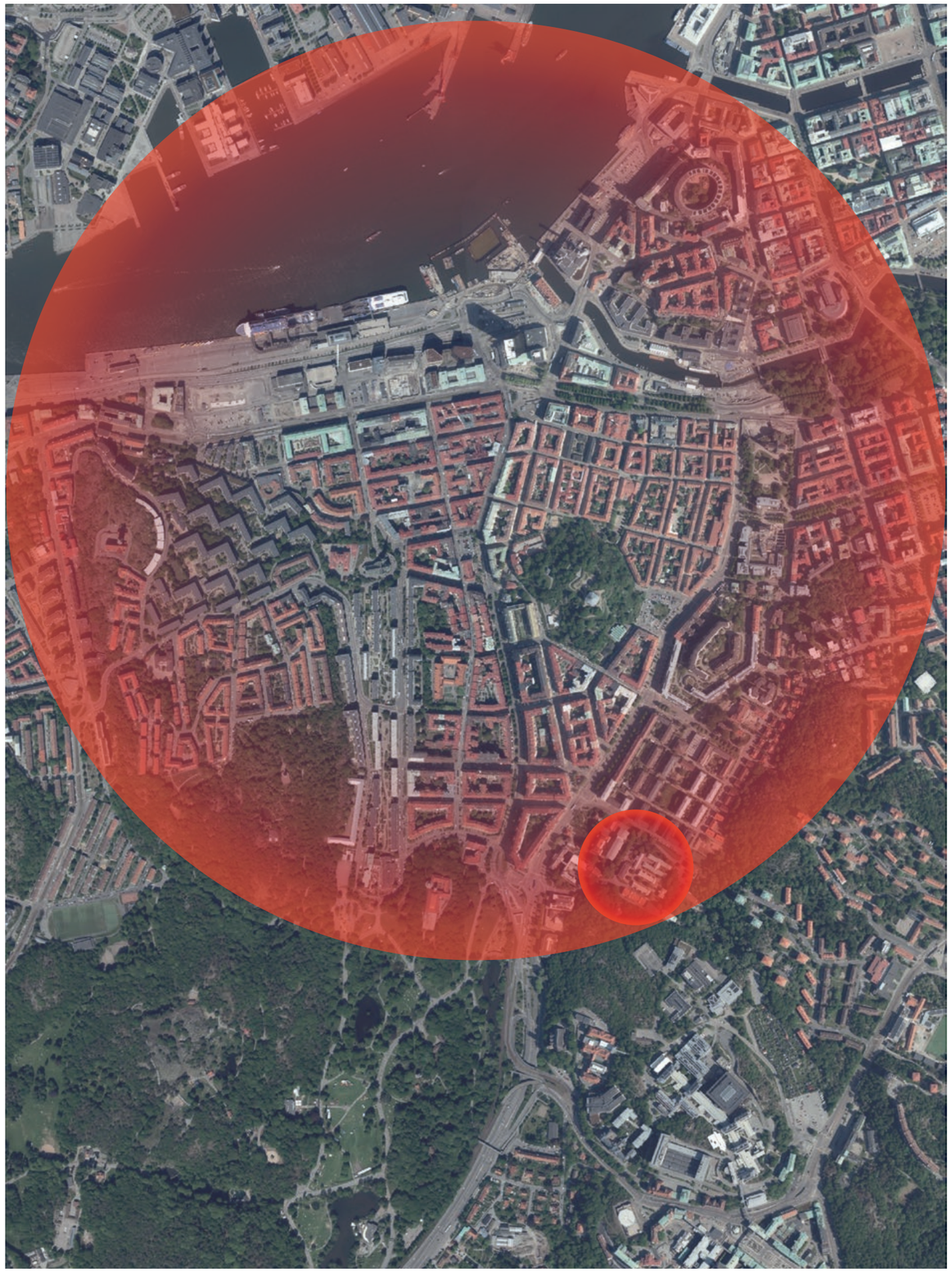
The map on the right shows every home sold as a dot on the map. The redder the dot the higher the final price. The map shows that the highest prices are found in the western parts of the city, the areas closest to the sea, such as Torslanda, Långedrag, Hovås but also the south-eastern central parts such as Örgryte. What the map shows are final prices and not square meter prices. This means that the areas with large homes also probably have high final prices.
The boundary is the municipal border, neighboring municipalities such as Mölndal and Partille are not included.

The map also shows the areas in the city that consist of buildings that are not private housing/tenant owned housing, some are industrial areas, such as the Volvo area, and some areas instead have a lot of rental apartments. Along Göta Älv to the north there is a lot of buildings that are not homes.

All points are added to calculate the center of gravity and the points are weighted so that homes with a higher price are given a slightly heavier weight than those with a lower price. This creates 3 points that end up relatively close to each other.

The center of gravity is tilted to the west because there are fewer dots in the eastern part of the city and more sales, i.e. denser dots in the western parts. The center of gravity is affected by the fact that there are many sales at a high price to the west but the center still end up quite centrally in the city.

The center of gravity is located south of the Göta Älv, the calculated centers of gravity are presented in more detail on the next page.

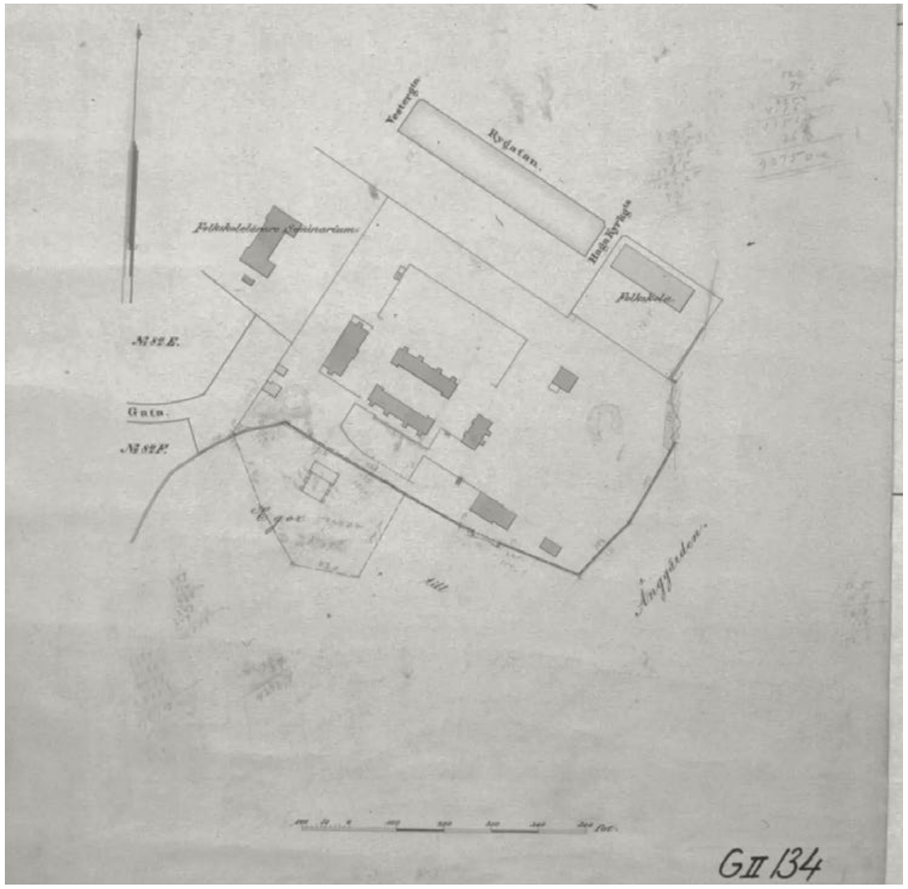


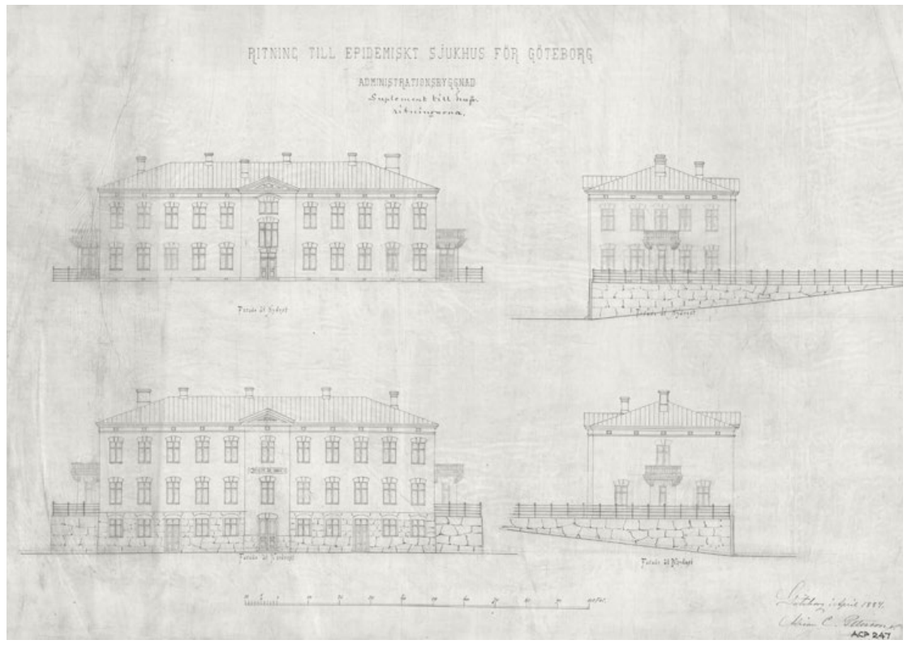
The centre of gravity is located in Linnéstaden in Gothenburg. Within this identified circle, a search for a site with potential for residential development was conducted. A key selection criterion was that the site should not already have a residential function, as this enables an investigation of how a conversion to housing could maximise the site's market value.

This is how the area of Konstepidemin was selected.

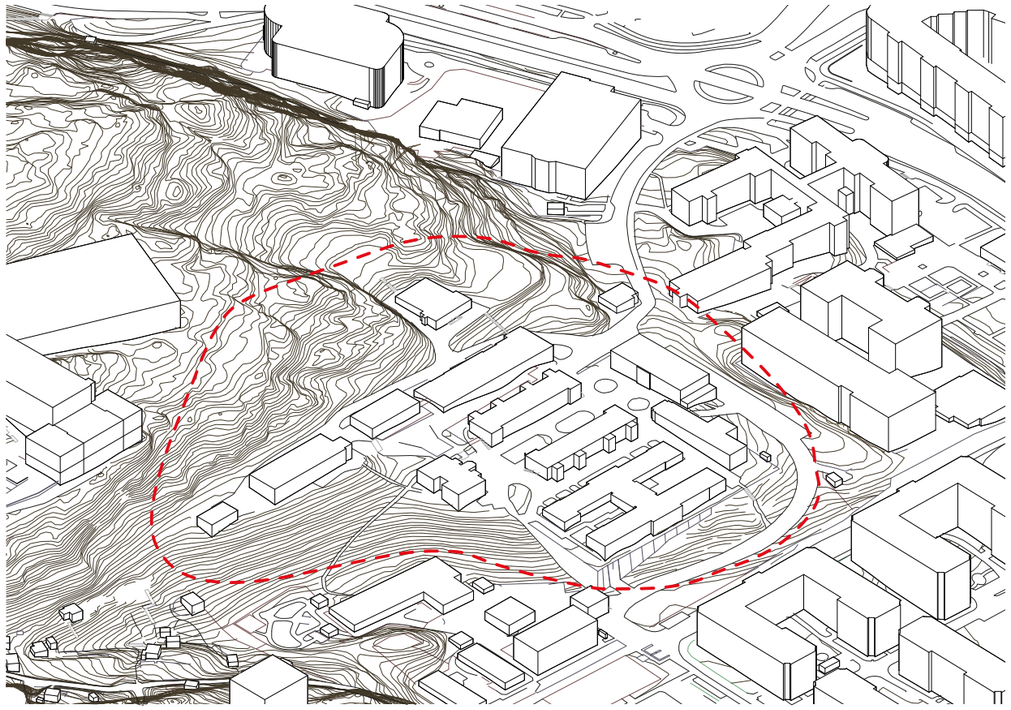
"Konstepidemin" translates to "epidemic of arts" and is an area located in Linnéstaden, within the identified red circle. The buildings were built in 1886 as an epidemic hospital on the outskirts of the city. Since then, the city has grown and the site is today part of central Gothenburg. In the 1980s, the old hospital was converted into a place for art. Here artists have studios and misicans have music studios and there are galleries and activities and events open to the public, such as open studios that the public can visit.

The buildings are owned by the municipal property company Higab.





Original site map for the Epidemic hospital and original blue print of the main building. Arkivbildare Byggnadsnämnden. Stadsmätningsavdelningen.



CONCLUSION
Based on the centre of gravities and the analyzed area, the location identified in this investigation is Konstepidemin in Linnéstaden in central Gothenburg.

NEW QUESTION:
Besides location, what architectural attributes contribute to high economic value?

INVESTIGATION 3

OBJECT OF DEMAND

AIM

The aim of this investigation is to visualize architectural attributes linked to high market value, at the housing market in Gothenburg.

BACKGROUND/ABOUT THE DATA

Booli is a marketplace for housing where you can find real estate listings, their asking price and property descriptions can be found.

METHOD

The data was retrieved manually by collecting information from property listings on Booli.se. The 100 property listings with the highest asking price was selected and collected in an excel-file containing asking price and the descriptive text from the real estate ads. The data collection was conducted on February 25-26 2026.

To identify the most common words and architectural attributes, the Python library SpaCy was used. Nouns were extracted from the descriptive text and counted in order to determine their frequency (how often they appeared in the descriptive text from the real estate ads). The average asking price associated with each word was then calculated. The result was an output of 2476 nouns.

Frequency= in how many ads the attribute appears
Price= Average asking price of the ads where the attribute appears.

Generic nouns (such as room, window etc.) were then manually excluded in order to isolate more specific architectural attributes.

The attributes was then manually merged, so that differens words meaning the same thing was joined, for exemple wine room and wine storage.

The nouns/attributes were then divided into three categories: objects, rooms and materials.

Each attribute was then assigned a score based on frequency and price according to the formula:

frequency x (price^2)= points/score

The formula is a deliberate and somewhat arbitrary balance intended to create a "reasonable" level of absurdity.

To visualize the data, the nouns with the highest score was selected and based on this a diagram was created in which the x-axis represents frequency and the y-axis represents the average asking price. The visualized attributes are examples, drawn from the images and plans found in the real estate ads.

To materialize the data, the example attributes are rescaled based on the score, the higher the score the larger the size.

(The architectural attributes are drawn from the images from the real estate ads that include the attributes in their descriptive text.)

(The words were also lemmatized using SpaCy, lemmatization means that words that have different endings are merged into the same word.)

(The detailed code will be found in appendix)

The words are retrieved in swedish and are translated when they are materialized.

word	frequency	price
1700-tal	1	8995000
1800-tal	1	8995000
1800-talshus	1	9975000
1920-talshus	1	10500000
1930-tal	1	8350000
20-talshus	1	8995000
3:ans	1	8950000
30-tal	1	8350000
30-talsvåning	1	8350000
3-4	1	8850000
40-tal	1	11000000
43:e	1	9495000
access	2	12575000
accessoar	1	8950000
adress	9	12016111,11
affär	4	10373750
affärscentrum	2	11750000
a-hus	2	14567500
aktivitet	3	14660000
all	1	10800000
allé	2	14372500
alléerna	1	9975000
allums	1	10800000
amalienborg	1	8300000
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anläng	2	10295000
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avgift	8	9926250
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avkall	1	9450000
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bonu	2	11150000
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designälskar	1	9975000
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duplexlägenhet	1	8595000
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experimenthusen	1	8450000
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familjeliv	5	11169000
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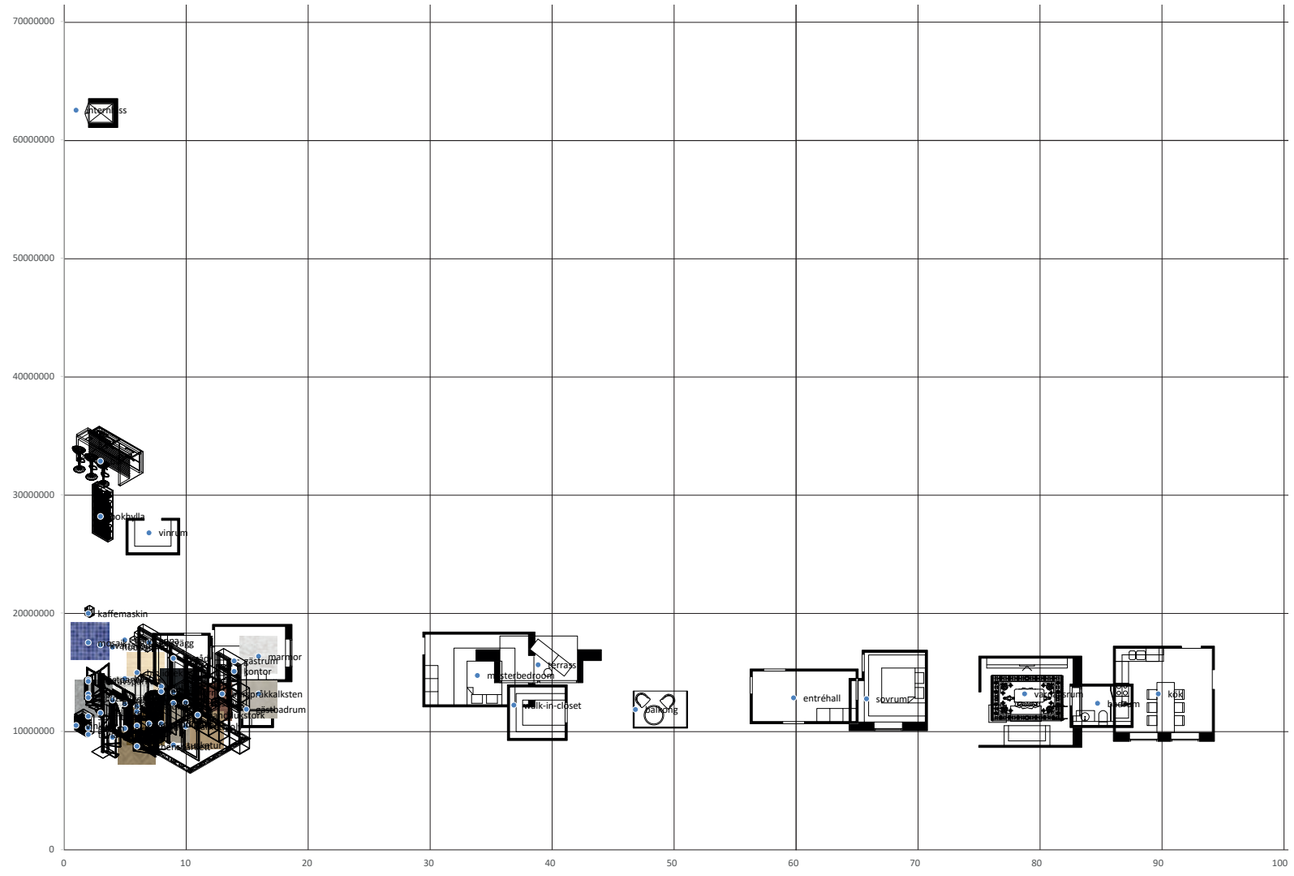
fasad	12	13797916,67
fasadbelysning	1	19750000
fasaderna	1	9875000
fasadkulör	2	14567500
fastighet	19	17951315,79
fastighetens	1	17995000
fastighetsförme	1	26800000
fastighetsmäkla	3	9071666,667
favorit	1	18595000
femrummar	1	18595000

COLLECTION OF EXAMPLE ATTRIBUTES

PRICE



FREQUENCY

DESCRIPTION

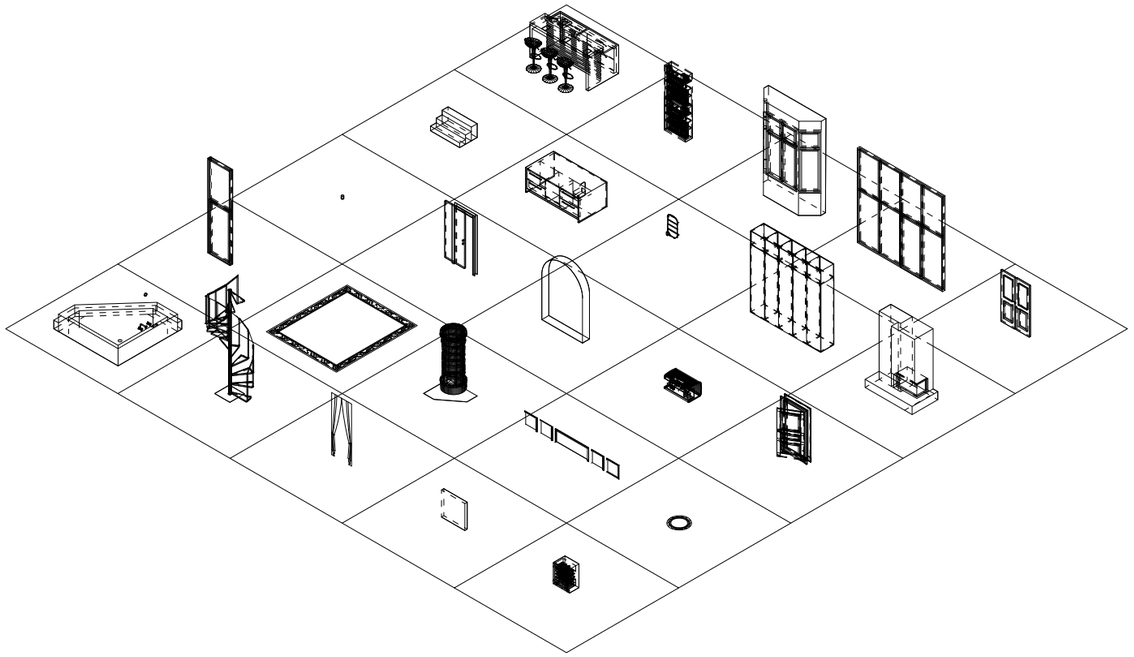
This scatter plot visualizes the frequency and price linked to words in the analysed data.

The internal elevator is linked to a high price but is a word that is not used often. Kitchen, bathroom and living room are the most common words but not linked to the highest prices.

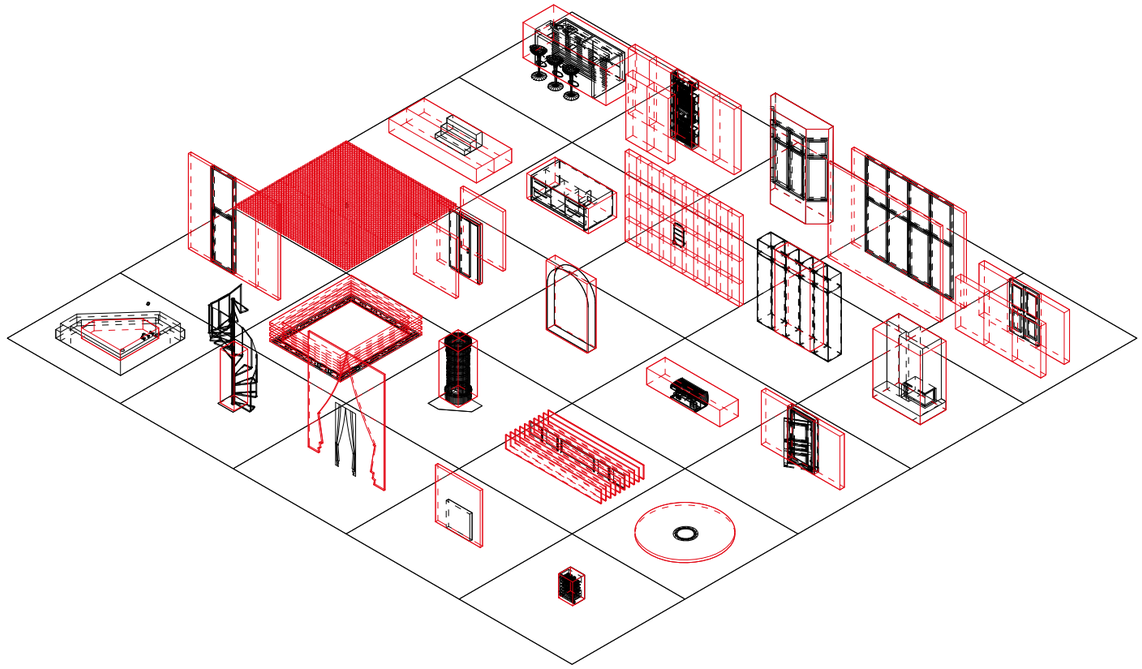
The attributes presented are drawn from examples found in the data from the real estate listings.

The attributes have been divided into 3 categories:
- Objects
- Rooms
- Materials

OBJECTS



Attribute	Frequency	Medium price	Points
bar	3	32 833 333 kr	3234
bookshelf	3	28 166 667 kr	2380
bay window	13	13 168 077 kr	2254
glass wall	7	17 502 857 kr	2144
double door	9	13 311 111 kr	1595
half staircase	5	17 720 000 kr	1570
kitchen island	10	12 437 000 kr	1547
fireplace	8	13 361 875 kr	1428
towel rack	11	11 384 091 kr	1426
wardrobe wall	9	12 385 556 kr	1381
spotlights	8	10 648 750 kr	907
sliding doors	6	12 111 667 kr	880
arch	6	11 675 000 kr	818
coffee machine	2	19 975 000 kr	798
mirror door	7	10 635 000 kr	792
glass door	5	12 320 000 kr	759
stucco	9	8 844 444 kr	704
tile stove	6	10 466 667 kr	657
wall paneling	2	14 372 500 kr	413
ceiling rosette	4	9 498 750 kr	361
jacuzzi	2	12 850 000 kr	330
spiral staircase	2	11 272 500 kr	254
curtain	2	10 295 000 kr	212
painting	2	9 735 000 kr	190
wine fridge	1	10 500 000 kr	110



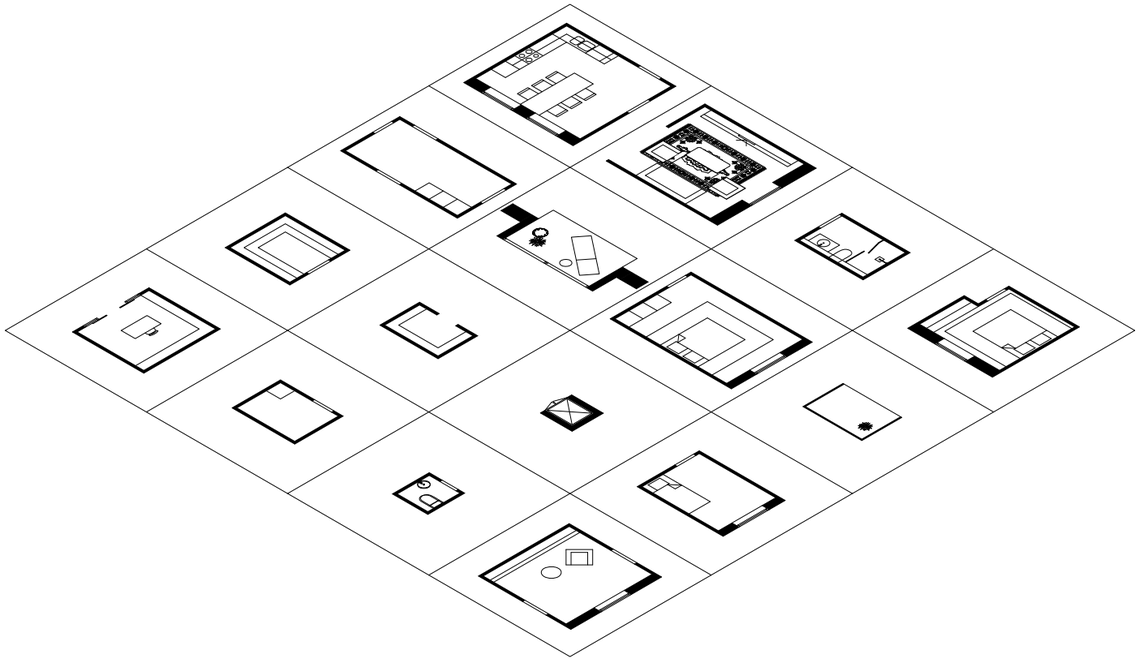
DESCRIPTION

The black objects are example objects found from the real estate ads (original size).

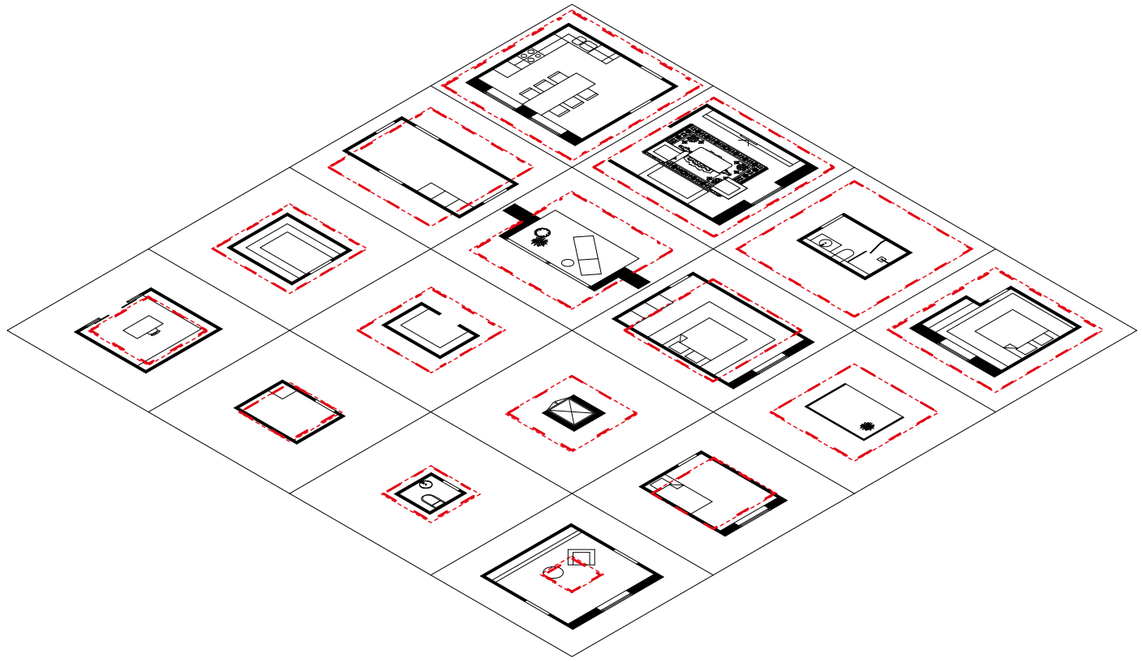
The red objects shows the new size (m3) of the objects based on the score. Some are modified in scale (bigger/smaller) and some are modified in number of objects (more/fewer). What happens after the objects get a new size based on their score is that some objects get a new size (larger or smaller) and that some get a different number (more or fewer).

The size of the objects is not in relation to the original size of the object/does not take into account the original size of the example object but is only based on the score which means that some objects change a lot relative to their example object. For example, the towel rack needs to take up a m3 of 2.63 m3 (the same as the size of the fireplace) but since the towel warmer is so much smaller in its original size, it needs to be repeated 40 times to get to the same size as the fireplace.

ROOMS



Attribute	Frequency	Medium price	Points
kitchen	90	13 160 056 kr	15587
living room	79	13 164 241 kr	13690
bathroom	85	12 363 529 kr	12993
bedroom	66	12 748 258 kr	10726
entrance hall	60	12 824 917 kr	9869
terrace	39	15 623 077 kr	9519
master bedroom	34	14 717 647 kr	7365
balcony	47	11 840 957 kr	6590
walk-in-closet	37	12 219 054 kr	5524
wine room	7	26 773 571 kr	5018
internal elevato	1	62 500 000 kr	3906
guest room	14	15 947 143 kr	3560
office	14	15 072 500 kr	3181
storage room	9	16 172 222 kr	2354
guest bathroom	15	11 865 667 kr	2112
library	6	14 965 833 kr	1344



DESCRIPTION

The black drawings are example rooms drawn from the real estate ads.

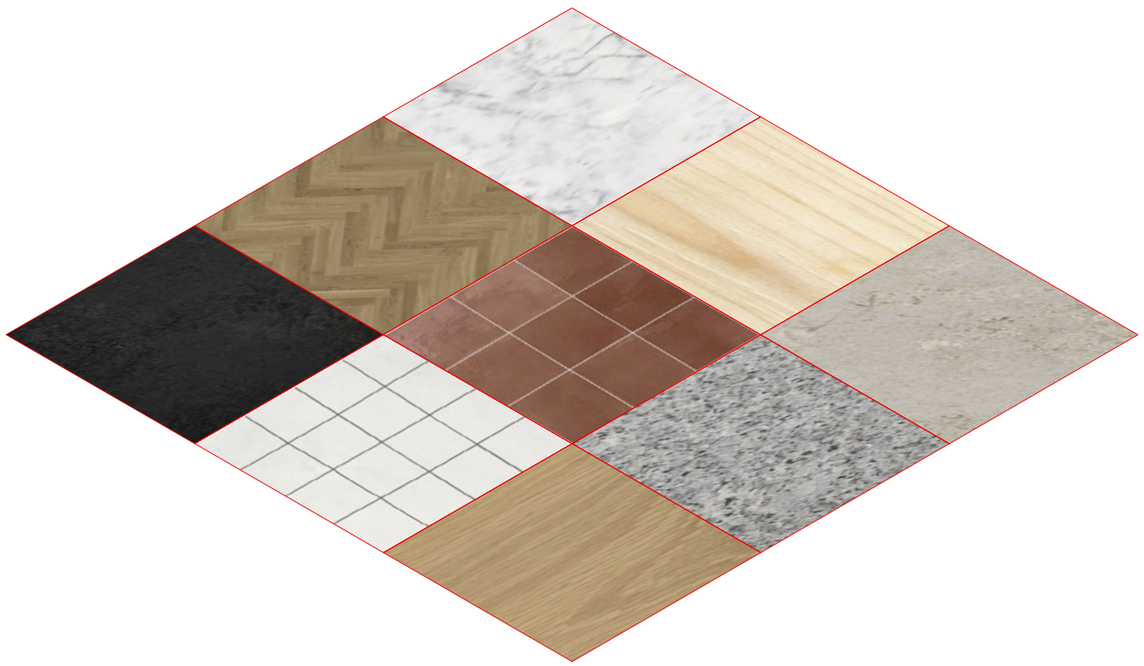
The dashed red line marks the new size of the room (m2) based on the score. The size is calculated based on an apartment with a total area of 220 sq m and each room’s score is relative to the other rooms’ scores.

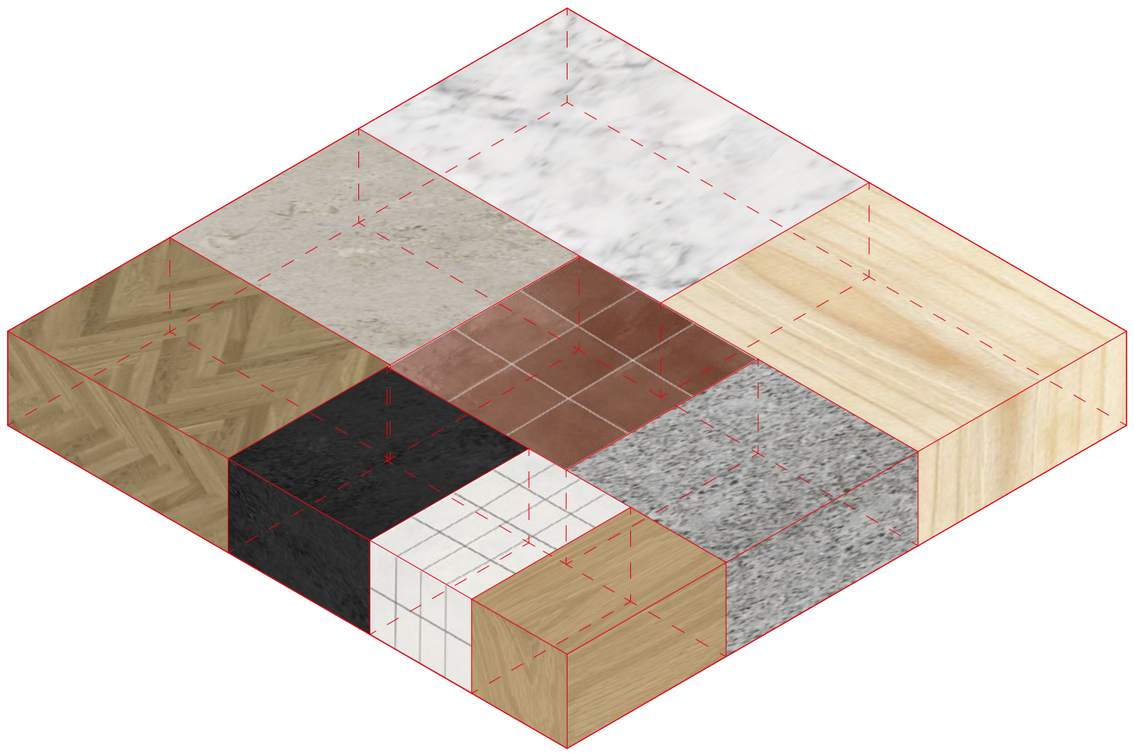
What happens is that the rooms get a new size based on their score (relative score?). The bathroom increases from x sq m to 24.7 sq m. This is because the word bathroom has both a high frequency and a high medium asking price, which means that this room gets the 3 highest score of all rooms and thus becomes the third largest room.

The bedroom becomes 20.4 sq m and is larger than the master bedroom because the word bedroom is so much more common (higher frequency) than the word master bedroom. The master bedroom has a higher medium asking price, but since the frequency is so much higher, bedroom still gets a higher score and becomes larger than the master bedroom.

The internal elevator increases and becomes much larger than their original example room. The library shrinks and becomes much smaller than the example room and is the smallest room at 2.6 sq m.

MATERIALS





Attribute	Frequency	Medium price	Points
marble	16	16 340 000 kr	4272
limestone	16	13 167 188 kr	2774
cast iron	8	13 787 500 kr	1521
tiles	10	10 537 500 kr	1110
quartz composite	3	17 306 667 kr	899
wood	16	15 145 625 kr	3670
parquet	23	10 267 174 kr	2425
oak	7	12 345 714 kr	1067
stone	18	10 761 111 kr	2084
clinker	19	10 911 579 kr	2262

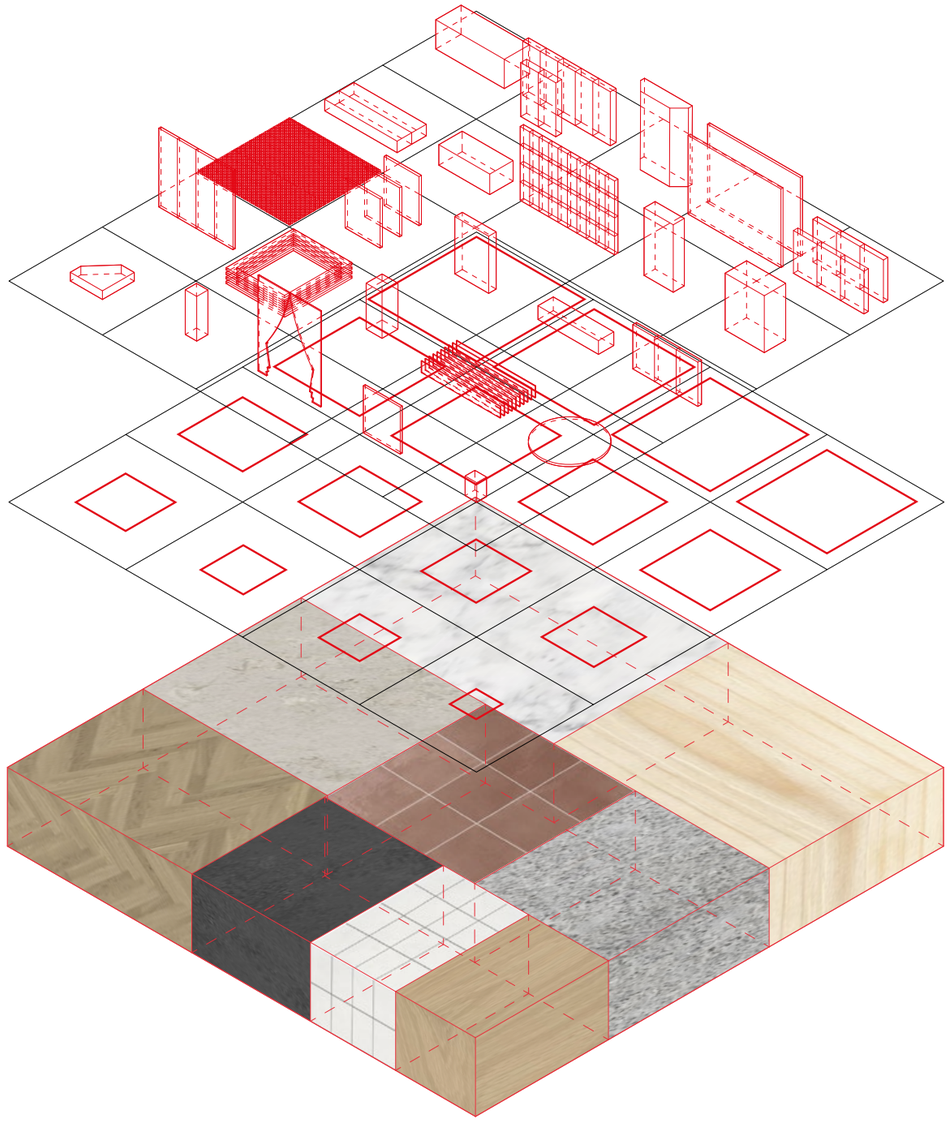
DESCRIPTION

The diagram shows the size (m3) the respective materials take up of an area as percentage how much space each material takes up.

The materials that take up the largest proportion of the volume are marble, wood and limestone.

The size is based on the scoring. The rooms, objects and materials are allowed to take up more space the higher the score they have. The score depends on the average price and the frequency of advertisements on the marketplace.

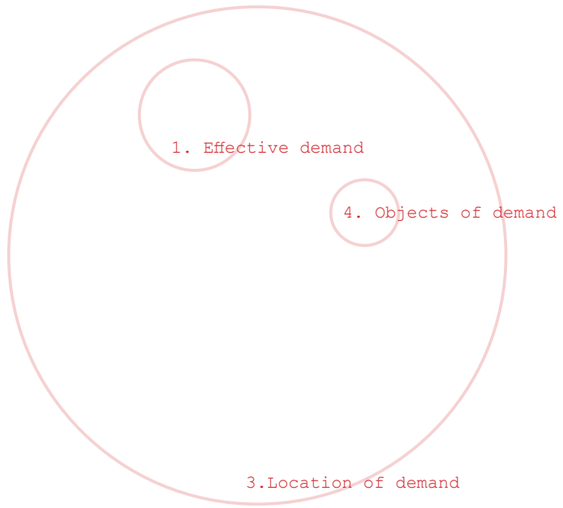
The data/score controls the size/area of the rooms, the volume of the objects, and the surface area/m3 of the materials.

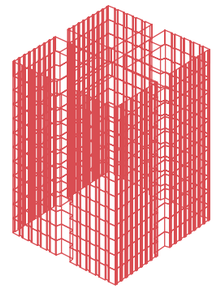


CONCLUSION

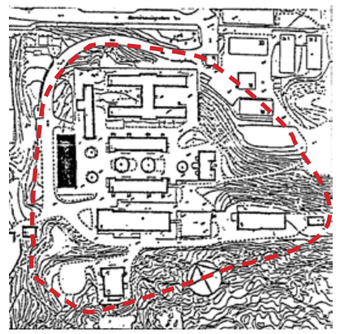
The conclusion is a toolbox of rooms, objects and materials that are linked to high prices and can be used to create a housing with high economic value.

CHAPTER 4
TRANSLATION INTO DESIGN

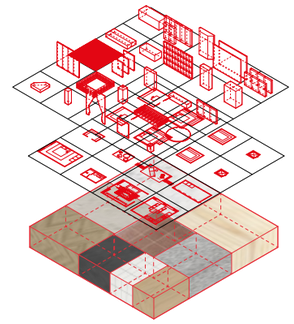




1. Effective demand



2.Location



3. Objects of demand

CONCLUSIONS OF INVESTIGATIONS

Investigation 1 shows that an surplus in effective demand is 11 floors of Karlatornet.
Investigation 2 identifies Konstepidemin in Gothenburg as a localized place with potentially strong demand.
Investigation 3 results in a toolbox of objects, rooms and materials that are in demand and has a high market value.

NEW QUESTION

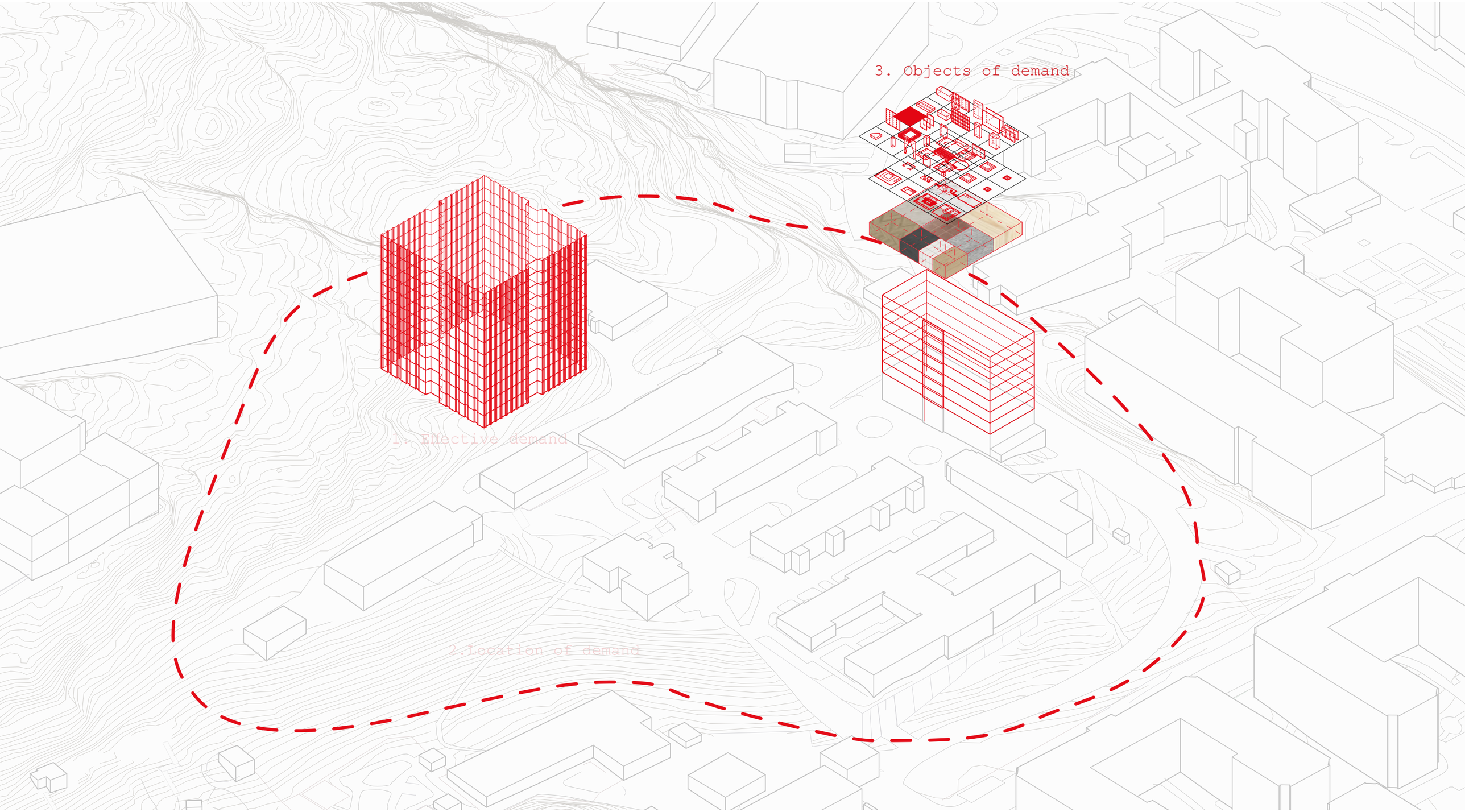
How can the findings from the investigations be translated into design?

TRANSLATION INTO DESIGN

The role of the design is to speculate about what happens when architecture is designed primarily to maximise economic value on a market.

The design builds on the findings from the investigations and the findings from the background/theory. The result is that the 11 floors from Karlatornet are placed on a hill within the identified area of Konstepidemin. The main building at Konstepidemin-nen is raised by 6 floors and in the new extension the objects of demand are used to create an apartment. The apartment is the focus of this chapter.

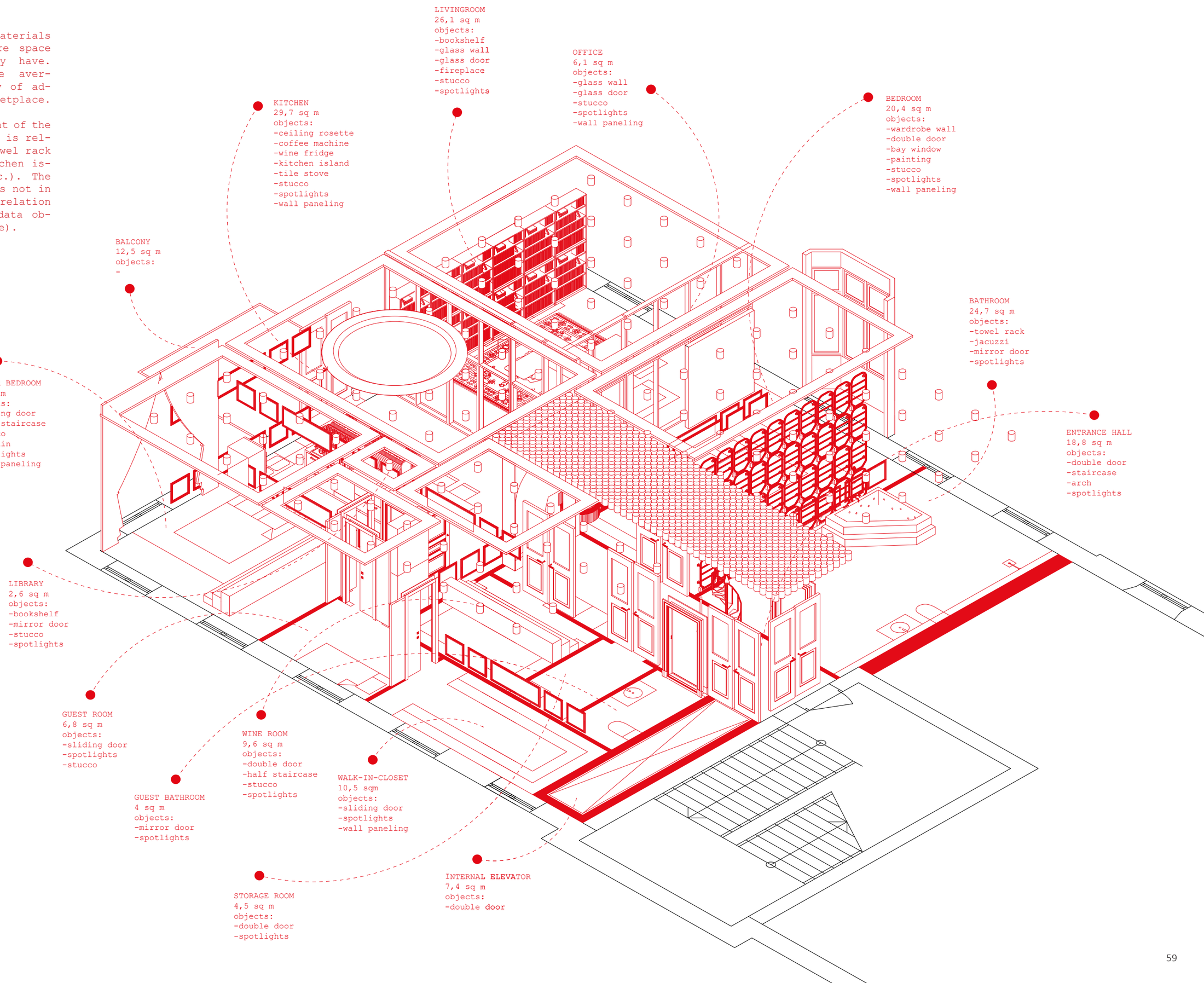
COMBINED RESULTS

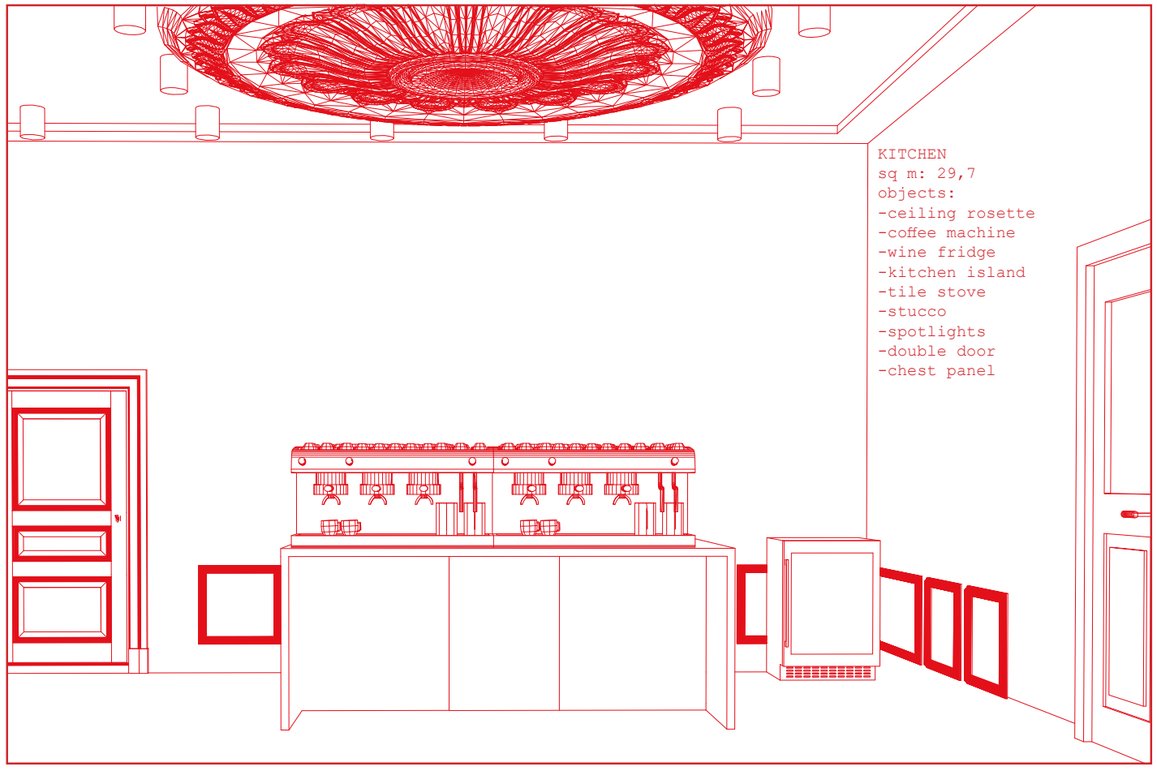


THE APARTMENT

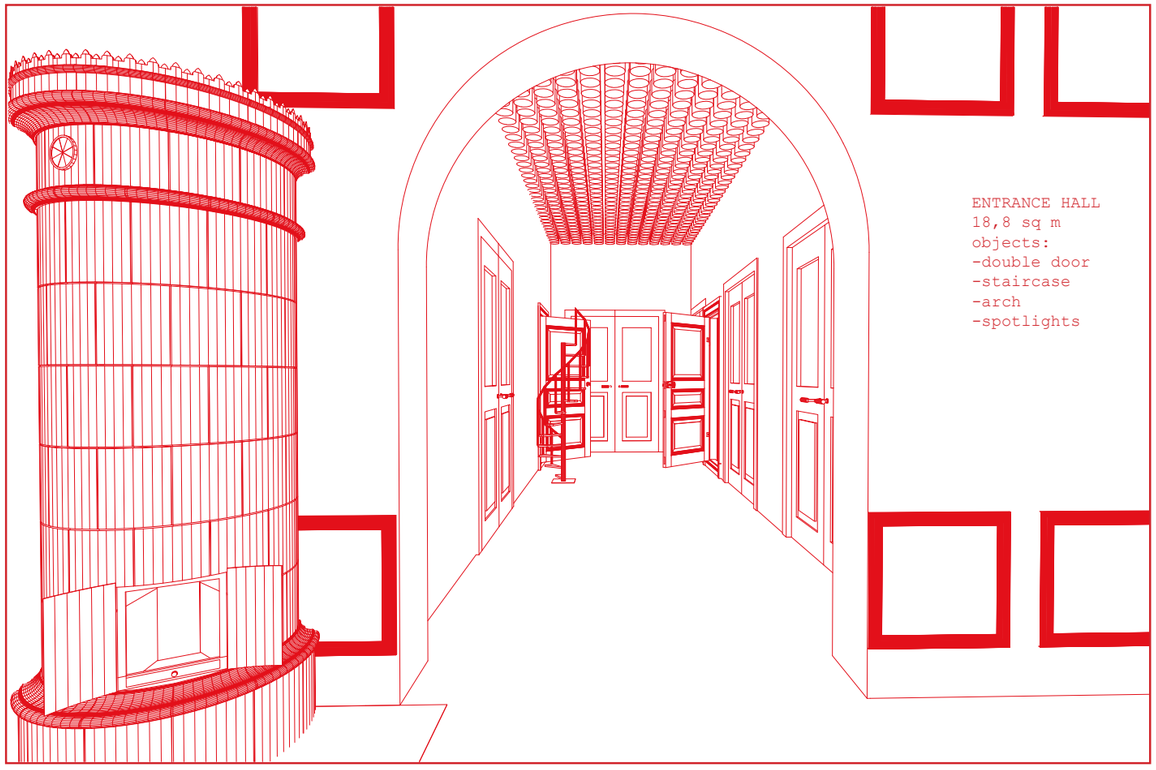
The rooms, objects and materials are allowed to take up more space the higher the score they have. The score depends on the average price and the frequency of advertisements on the marketplace.

The organization and placement of the rooms, objects and materials is relatively logical (e.g. the towel rack is in the bathroom, the kitchen island is in the kitchen etc.). The absurdity is that the size is not in relation to function but in relation to the market value (/the data obtained about the market value).



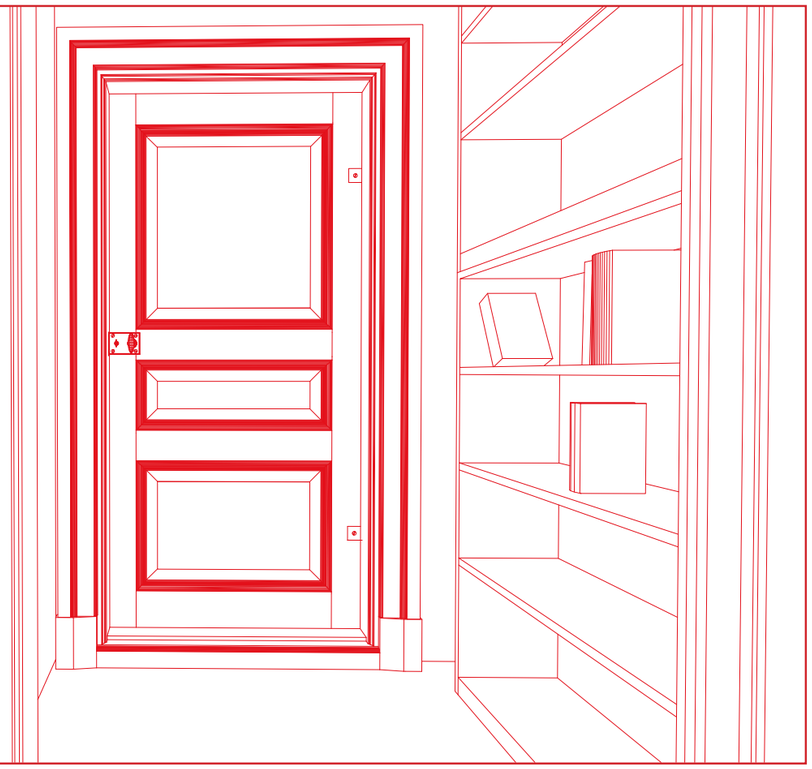


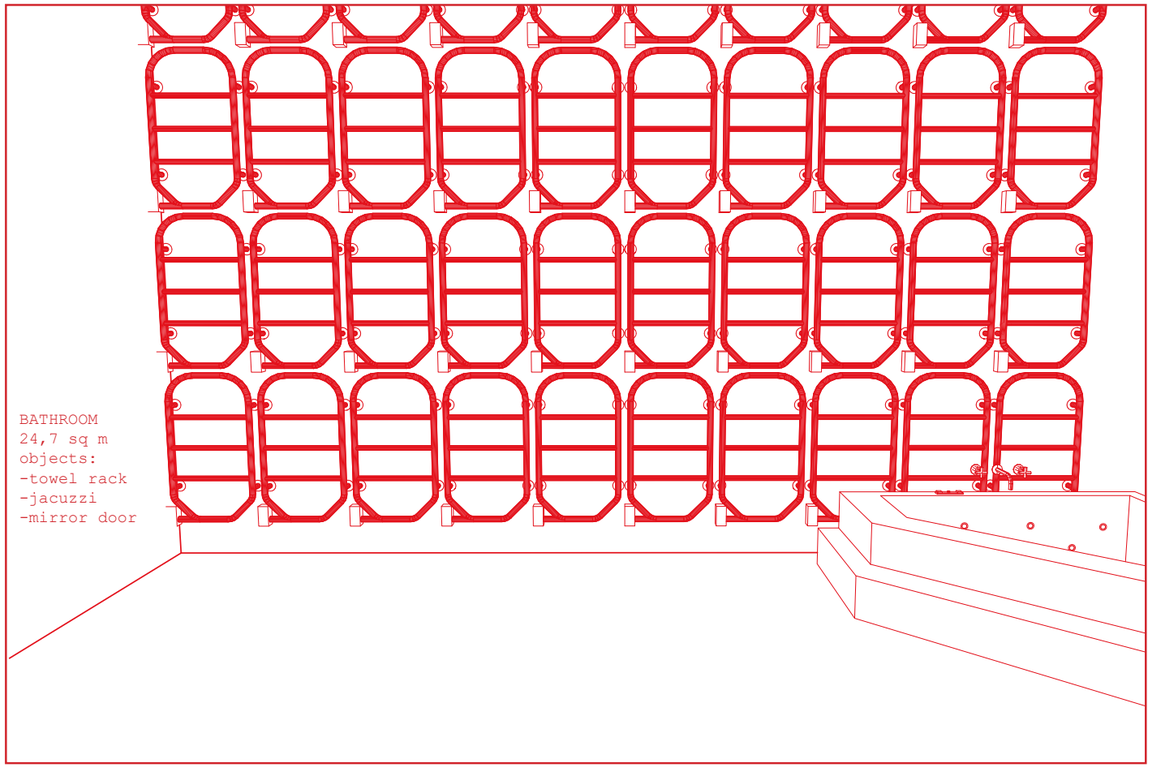
KITCHEN
sq m: 29,7
objects:
-ceiling rosette
-coffee machine
-wine fridge
-kitchen island
-tile stove
-stucco
-spotlights
-double door
-chest panel



ENTRANCE HALL
18,8 sq m
objects:
-double door
-staircase
-arch
-spotlights

LIBRARY
2,6 sq m
objects:
-bookshelf
-mirror door
-spotlights
-stucco





BATHROOM
24,7 sq m
objects:
-towel rack
-jacuzzi
-mirror door

CHAPTER 5
THE PROSPECT

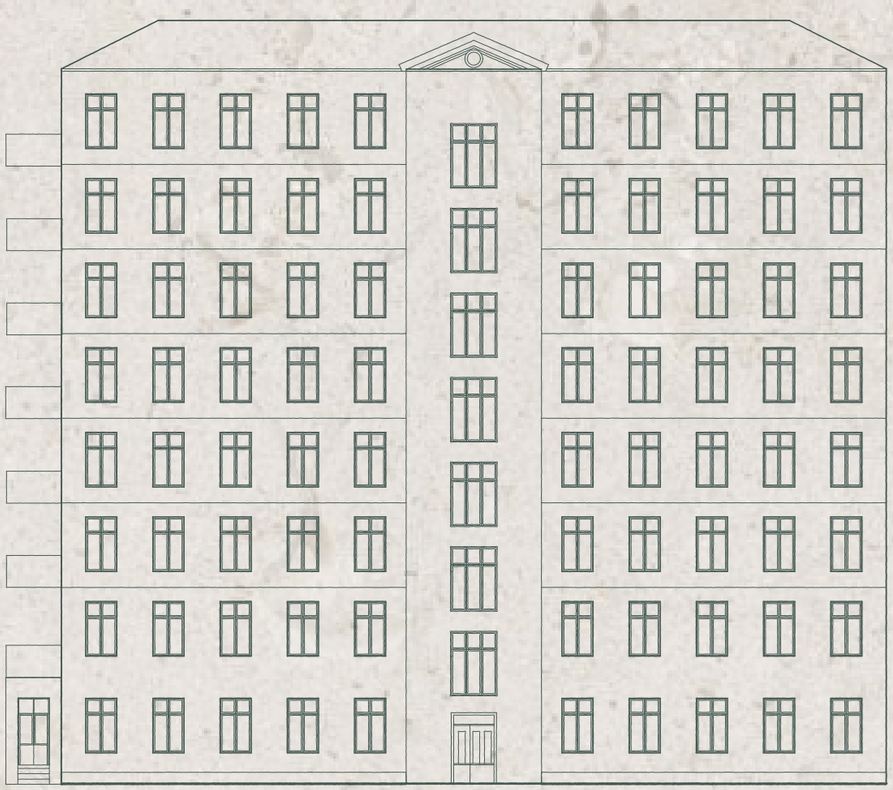
INTRODUCTION
The role of the prospect is to speculate about what happens when architecture is designed primarily to maximise economic value on a market.

The following pages are a fictive housing ad from the fictive realator EQ Properties (Equilibrium properties).

BRF
KONSTEPIDEMIN

CARL-ERIK HAMMARÉNS BACKE 23

A NEW CHAPTER



Originally built as an epidemic hospital on the outskirts of the city, these buildings carry a rich and layered history. After years of silence and a period as a creative hub, the property now enters a new phase.

Today, it is being transformed into a residential oasis where historic architecture meets modern living. Located in Linnéstaden, one of the city's most attractive and sought-after areas, you live close to both vibrant city life and the calm of nature, with Slottskogen and Änggården just moments away.

KITCHEN
The kitchen is a magnificent and vibrant gathering place, where materials such as marble, oak and limestone meet in a harmony. At the kitchen island, friends gather over a glass of wine from the wine fridge, while the coffee machine simmers in the background. The balcony invites you to a morning espresso in the sun. The ceiling rosette is the cherry on top.

FLOOR PLAN

WELCOME TO YOUR NEW HOME

A generous floor plan where each room has its own distinct character and function. The entrance hall with spiral staircase sets an architectural tone and leads on to the kitchen and living room in an open, social sequence with beautiful sight lines through glass sections and arches. The kitchen with the kitchen island and balcony forms the home's natural gathering point, while the living room and office are tied together in an elegant whole around the bookshelves and the fireplace. The library serves as a quiet passage to the more private part of the home, where the master bedroom and guest room are located separately. The floor plan is enhanced by level differences, half staircases and good storage, spacious and harmonious with both social and peaceful zones.

LIBRARY

The library serves as a quiet passage to the more private part of the home, where the master bedroom and guest room are located separately.

BATHTOOM
The bathroom offers a luxurious and relaxing environment, here you can warm up in the jacuzzi after a long day, surrounded by sophisticated tones and carefully selected details. The towel racks contributes to the comfort and the marble walls creates the feeling of a private spaa.

MATERIALS AND DETAILS

The apartment has exclusive and high-quality materials where each room has its own identity. Marble and limestone creates a timeless feeling, and oak, wood and parquet add warmth to the social areas. The details in cast iron add character, and elements of tile, clinker and stone tie the whole together. The combination creates an elegant balance between classic and modern, where the materials age beautifully over time.


Marble

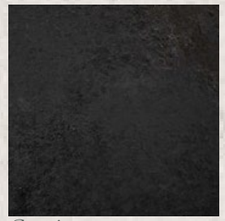

Wood


Limestone

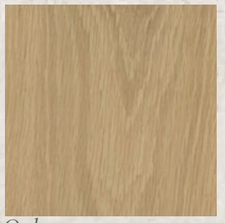

Parquet


Clinker


Stone


Cast iron


Tiles


Oak

ENTRANCE HALL
In the entrance hall you are greeted by a welcoming and elegant atmosphere. The spiral staircase in cast iron interacts with limestone floors, while recessed spotlights provide a soft light over the walls. The archway towards the kitchen creates a natural movement through the home, this is place where you hang up your outerwear and immediately feel the peace and quality of the home.


Carl-Erik Hammaréns Backe 23

CHAPTER 6
DISCUSSION

INTRO

To answer the thesis question of how architecture can be designed to maximize market value, I have first used data to investigate the market through the investigations 1, 2, 3 and 4. The findings are then translated to design and presented as an apartment prospect.

The role of the project is to discuss the relationship between architecture and the market and to speculate about what happens when architecture is designed primarily to maximize value on a market.

With this project I wanted to play with the notion of value and to test and play with my role as an architect. What result do I get if I only try to respond to “what the market wants”...?

My role in this project has become more of an assembler, assembling different objects, rooms and materials together.

I think this can also reflect real architectural practice. Some architectural work allows for freedom and creativity, while other projects are highly controlled, where the goal is simply to include as many valuable elements as possible. Certain things considered more valuable for the developer and are prioritized, sometimes at the expense of other qualities.

When I have worked as an architect, I have often been very bound to economic factors, for example trying to fit in as many apartments as possible into building, at the expense of courtyard space and green space.

As housing increasingly becomes a financial object with high economic value, the economic logic also becomes more important. Since there is potential to make profit, people will try to maximize that value.

When a buildning is a financial object, the most important thing is that it signals high value on a market, but the user value does not have to be high. This is what my project explores, it contains attributes to signal high market value, but the iser value is not in focus. This can be observed in the apartment in chapter 05. For example, the kitchen contains attributes that signal high market value, like a wine fridge and an oversized ceiling rosette, but is not focused on the user value, so there is no good placement for the dining table. The library is so small that it only becomes a passage between the kitchen and bedrooms.

This is also why other values are not taken into account, for example the cultural values that exist on Konstepidemin today. They are not visible as market values in the data, and therefore they do not exist in this project.

ABOUT THE DATA

Overall, the selection of data has had a large impact on the results. Where the data is obtained from and what delimitations are made affect the results.

When data is missing, this is marked as N/D, and what is not visible in the data is treated as if it does not exist. The method thus involves a selective view of reality, where only what is measurable or registered is allowed to influence the design.

Not everything is visible in the data. What is not visible in the data, such as white plaster walls, means that the plaster walls are not visible in the design, which creates a slight absurdity.

ABOUT THE MARKET

The conclusion of investigation 1 is not realistic, according to the data, most of the higher floors (which according to investigation 1 will be removed) are not for sale (according to the data retrieved) and the commodity bought by the consumers is an apartment at a high level, with a good view. It is not realistic that they would want to move down from floor 67 to, for example, floor 8. But since this is an architectural speculation, it is the supply, i.e. the shape of the building, that is manipulated, instead of the price (to achieve the equilibrium point). If I were to discuss a more logically and reasonable consequence, it would be that the prices of the apartments are too high. The fact that 100 apartments are for sale, with an average of 388 days on the market, is remarkable and indicated that supply and demand does not match. The data on which investigation 1 is based on was obtained on January 21 2026. At the time of writing this discussion, it is May 6 and a quick look on Booli shows that there are currently 118 apartments for sale in the tower today. Supply and demand still do not match each other.

The reliability of the data can be questioned as one can wonder if there are agendas to what data som that are official, for example the number of days the apartment has been for sale is often hidden. Apartments can also be up for sale, not sold, taken off the market, and then put up again. This to hide the fact that they have been not sold for a long time.

The most expensive apartment for sale in Karlatornet right now is one of the four penthouses, with an asking price of 62 million SEK. This apartment does not appear in the data from investigation 1 (retrieved in January) but appears in the data from investigation 3 (retrieved in February). This could of course be an error on my part since the data was retrieved manually so I may have missed it, but it could also be because it was taken down and then put up on the ad site Booli again.

In investigation 3 the words used are based on data containing the average asking price of homes that are for sale now. As investigation 1 showed, the asking price it not necessarily the same thing as the market price. If a commodity haven’t found a buyer on the market for the asking price, the asking price is presumably higher that the market price.

According to the theory of supply and demand, if supply is higher than demand, you have two choices, either to lower the price or the supply to achieve equilibrium in the market. Since this is an architectural project, I have speculated on changing the supply (i.e. height) but in reality the most reasonable thing is to lower the price. What would happen to the market and society when housing falls in value is something I do not have sufficient knowledge in economics to speculate on but it would have been interesting.

ABOUT VALUE

The design shows a proposal for how a home can be designed to maximize market value.

The aim of the prospect is to make visible what types of features are rewarded and valued in architecture when it’s just primarily about creating architecture with a high market value.

Some things are absurd, such as the 40 towel racks, but some things can be recognized from real housing advertisements. The absurdity is something that is controlled by the formula: frequency x (price^2) and the formula therefore acts as a kind of design strategy. Another formula could have created a greater absurdity where objects take up an even larger or smaller part of the room. The formula was tested to get a balanced reasonable absurdity.

The absurdity also lies in the fact that the design, by exploiting the place, ignores the values that already exist in the place, such as the cultural values. Cultural values are not as easy to measure and are therefore easier to ignore.

THE MARKET AND POLITICS

The concept of a “free” market is an ideal. As mentioned on page 14, Eklund (2013) writes that the price on a free market naturally will move towards the equilibrium price. The investigations about supply and demand assumes that the market is free which is not really true when the state steps in and manipulates the market through subsidies for owned housing (see page 21).

THE ROLE OF THE ARCHITECT

During our education to become architects, we are trained to understand (consciously or unconsciously) what is considered beautiful or ugly, and what is trendy and desirable in our current time. Of course, this is not the only part of our role; we also learn about other things, for example function and materials. But part of the profession is also about creating persuasive images. This is mainly what my thesis investigates.

Often, the way housing is designed, which materials and objects are included, and how the images are presented are based on experience and intuition. In this project, I have instead allowed data to guide the design process, although in some aspects it looks similar to a real project?

Naturally, my background as an architect also affects the project, including my own experiences and ideas about how housing should be designed. I can also imagine that my preconceived ideas of what creates maximum market value in housing have influenced the outcome.

CONCLUSION

The pursuit of maximizing the value of housing affects architecture, and what the prospect shows is a possible exaggeration where function is secondary to the object and where the role of the architecture is a means of achieving high market value.

I am not saying that this thesis shows something revolutionary and new, but this is an input to the debate that I think can be discussed more. This is an exaggeration of the absurdity that already exists. Value is not necessarily defined by the quality of the commodity, a buildings value on the market is not defined by the quality of the building.

When a building/housing is a financial object, the most important thing is that it signals value on a market, but the user value doesn't have to be high. That's what my project does, it contains attributes to signal high market value, but the user value is not in focus.

Of course, value is a complex concept. Architecture can be designed with great care and has the possibility to transform low valued objects into something that is desired and can be highly valued, without including attributes that signals high value.

And the opposite can also be true. Karlatornet is an example of a building that contains many of the attributes that signals high value, and Karlatornet is highly valued in the sense that the asking price of the apartments are high. However, it is evidently not selling the apartments at those high asking prices. When I checked last week, there were still 118 apartment for sale in the tower. The market has not yet found its equilibrium.

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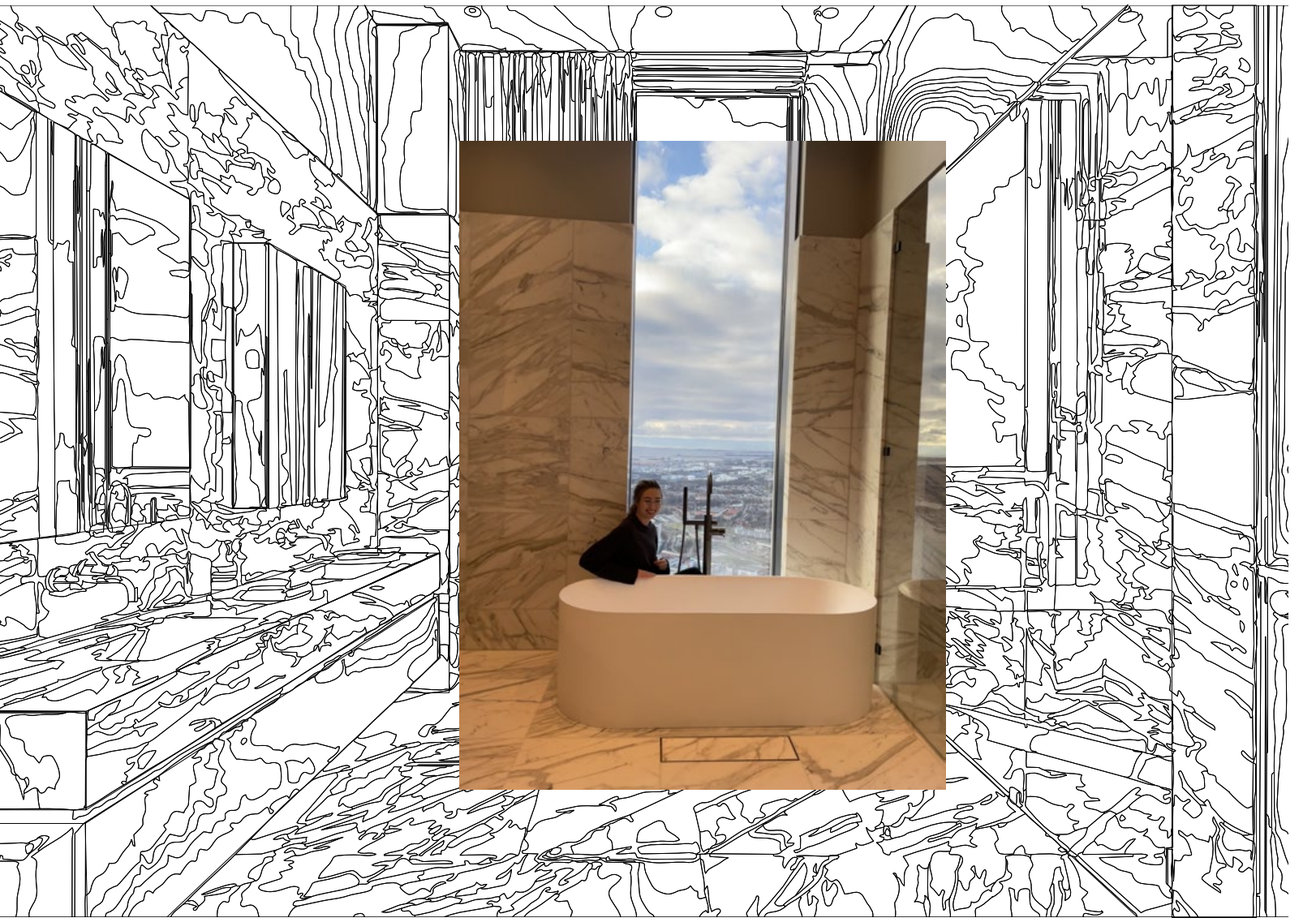
AI APPENDIX

The AI tool Visoid was used to enhance material and lightning in the renderings/illustrations on page 71-77. The model for the renderings was created in Rhino and then rendered with Rhino render and the tool Visoid AI has been used to enhance material and natural lighting to make the renderings more natural and to resemble renderings/illustrations from real estate materials and housing advertisements. The prompt that has been used is the same as the broker text that is written in the prospect under each visualization.

No ideas were generated by AI.

STUDENT BACKGROUND



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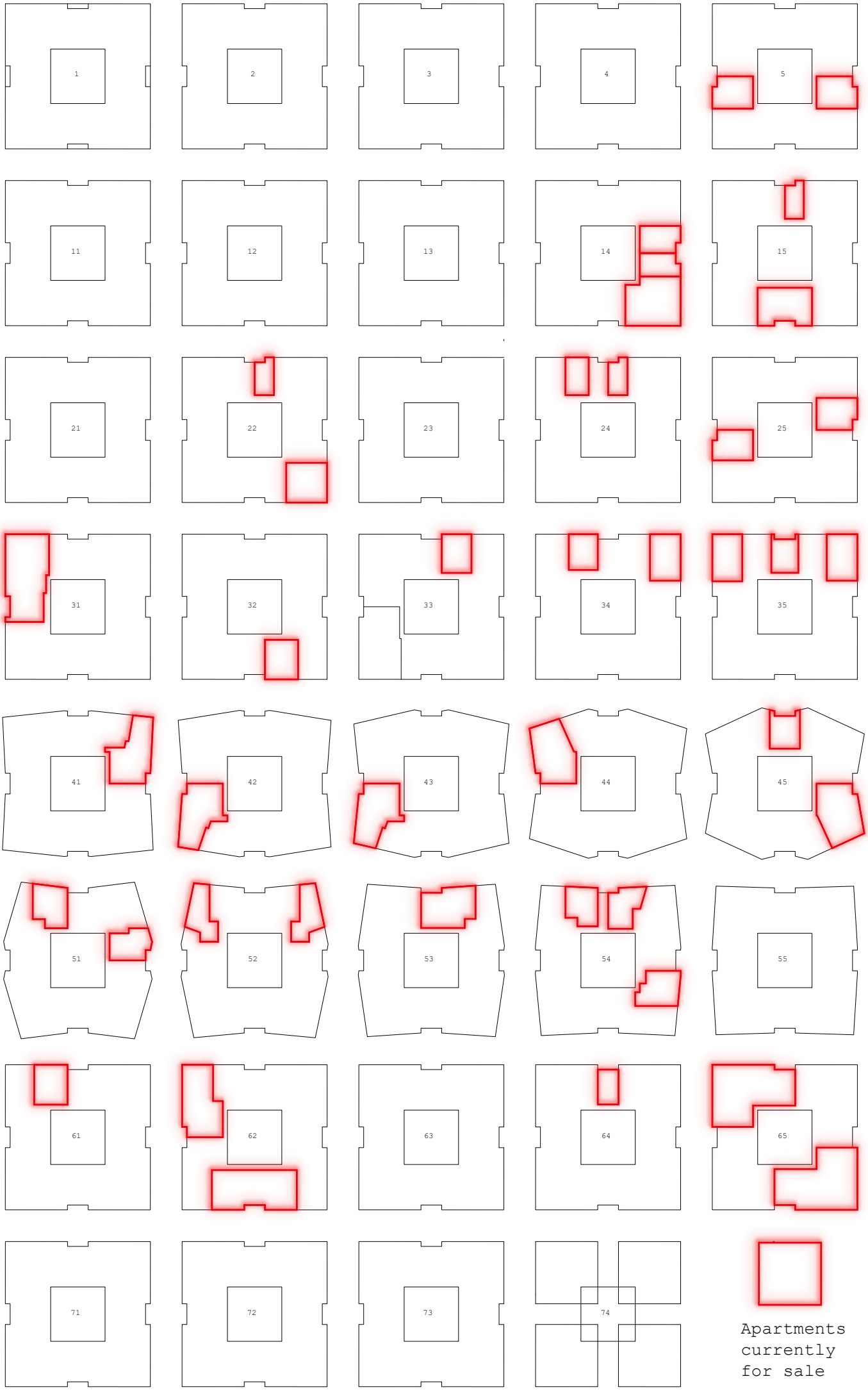
Architect/ assistant project developer [redacted]	2022-2025
Internship [redacted]	2022
Selling cheese Hilda Nilsson ost	2019-
BSc. Architecture Chalmers School of Architecture	2018-2021

APPENDIX

INVESTIGATION 3 CODE

```
import pandas as pd
df = pd.read_csv(
    r"C:/Users/stina/Booli statistik/booli_statistik_3.csv",
    sep=";",
    engine="python"
)

df.head()
df["Attribute"] = df["Attribute"].str.replace("\n", " ", regex=Fal-
se)
df["Price"] = pd.to_numeric(df["Price"], errors="coerce")
df[["Price", "Attribute"]].head()
import spacy
nlp = spacy.load("sv_core_news_sm")
def clean_lemma(word):
    word = word.lower().strip()
    if word.endswith("mm"):
        word = word[:-1]
    return word
rows = []
for index, row in df.iterrows():
    doc = nlp(str(row["Attribute"]))
    unique_words = set()
    for token in doc:
        if token.pos_ == "NOUN" and not token.is_stop and len(to-
ken.text) > 2:
            lemma = token.lemma_.lower()

            if len(lemma) < 3 or lemma == "-pron-":
                lemma = token.text.lower()
            lemma = clean_lemma(lemma)
            unique_words.add(lemma)
    # lägg till orden (1 gång per annons)
    for word in unique_words:
        rows.append({
            "ID": row["ID"],
            "Price": row["Price"],
            "ord": word
        })
nouns_df = pd.DataFrame(rows)

freq_price = nouns_df.groupby("ord").agg(
    frekvens=("ID","nunique"),    # antal annonser ordet finns i
    snittpris=("Price","mean")    # medelpris för dessa annonser
).sort_values(by="frekvens", ascending=False)

nouns_df.shape

nouns_df.head(20)

nouns_df.tail(20)

freq_price = nouns_df.groupby("ord").agg(
frekvens=("ID","nunique"),
snittpris=("Price","mean")
).sort_values(by="frekvens", ascending=False)

freq_price.head(20)


import matplotlib.pyplot as plt

plt.figure(figsize=(10,6))
plt.scatter(freq_price["frekvens"], freq_price["snittpris"])
plt.xlabel("Frekvens")
plt.ylabel("Snittpris")
plt.title("Arkitektoniska ord: frekvens vs snittpris")
plt.show()

freq_price.reset_index().to_excel("freq_price_6april3.xlsx", index-
=False, engine="openpyxl")
```



Apartments currently for sale