RESEARCH

Living in Retail
De Ontwerpgids Meegroeiwonen is samengesteld door de vzw Enter, met steun van en in samenwerking met de Vlaamse Overheid - het Departement RWO - afdeling Woonbeleid.

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PREFACE

Dear reader,

In order to complete the Master Architecture, Urbanism and Building Services at Delft University of Technology a graduation research has to be conducted. This thesis is the result of my graduation project concerning the increase of vacancy in retail in Dutch historical inner cities, solved by a transformation of retail into living. I took the challenge to determine the problem of the increase of vacancy in retail in historical inner cities in the Netherlands by searching for possibilities to transform existing retail into living for the purpose of minimizing the decrease in urban quality in shopping streets.

Alongside knowledge of the retail market and possibilities I also learned a lot about myself. Working on a graduation project, and especially in Explorelab, I had to work more precise and I was responsible for my own success. Despite a period of stress and setbacks, the graduation period was the most educational period of my whole master studies at the Delft University of Technology.

During my graduation project I was supported by many people and I would like to use this preface to show them my gratitude. Acknowledgement goes to my first mentor L. Meijers, who guided my whole graduation process through a combination of her critical opinion and enthusiasm. Next I thank Y. Cuperus for his interest and honest attitude. The smallest detail is not remained undiscussed. Third I like to thank J. Heintz for his critical and sharp look on the graduation report.

I would like to invite you for reading my thesis.

Delft, April 2014
Monique Witlox
Abstract
5.1 Introduction

The demand for retail space is decreasing. This is caused by several developments. First, a change occurred in consumer confidences. This means that shopping has become leisure instead of purchasing goods. Competition between shopping areas is growing rapidly and therefore quality and experience will be crucial to the functioning of a shopping area. Secondly, buying products over the internet is a growing phenomenon. As a result, both the number of shop visits and the number of purchases decreases. Besides, the population is aging and generally older people spend less than consumers in the working phase of their lives. In addition, the problem of aging population is in many cases connected with a shrinking in population and households are getting smaller.

Another cause of the increase of vacancy is the increase of the number of square meters per store. As a result of scaling, the floor area of retail units in inner cities fits less well with the requirements of some retailers. Besides, consumers are willing to make larger distances to go shopping in an attractive environment and they are becoming more demanding; they want to get anywhere easily by car, free parking and the choice from a wide range of products.

Regionally, there are large differences in retail vacancy. Secondary and tertiary shopping areas often reach only a limited part of consumers, due to the fact that this part of the city is not connected optimally to the pedestrian routes. Vacancy affects multiple actors; government, companies, project developers, town and shopping manager and of course the visitors. Already many initiatives has been made for trying to solve the vacancy in retail.

1.1.1 Categorizing retail

All stores included within the research are classified according to different aspects: Floor levels; floor area; shop front; Depth; Length/width rate; Available since; construction year; entrance; access; daylight; location.

Most of the stores have only a single floor, the ground floor (284 stores). 101 stores have both a ground floor as a basement. Retail stores with a total floor space equal or larger than 50 m² and less than 100 m² are most frequent with an amount of 169. If we look at the division per 10 m² we see that stores with a total floor space equal or larger than 70 m² and less than 80 m² are most frequent (40 stores), closely followed by stores equal or larger than 60 m² and less than 70 m² and, stores equal or larger than 50 m² and less than 60 m². If we look at how much each total floor area have a single floor; Stores with one single floor and with a total floor area equal or larger than 60 m² and less than 70 m² and stores equal or larger than 100 m² and less than 110 m² are most frequent with both an amount of
24 stores. The group equal to or larger than 5 metres and less than 6 metres is the most common group talking about the width of the shop front with an amount of 98 stores. The middle entrance is most frequently (125), closely following by the side entrance (123).

Retail stores located in a B1 segment are most frequent with an amount of 135, closely followed by 112 stores located in the A2 segment. Surprisingly, the third in line are stores located in an A1 segment with an amount of 81 stores. This result does definitely not correspond to the facts and speculations that are described in literature. The explanation that can be given is that this study is limited to historical inner cities and so do not represent the entire Dutch retail market. Though, it can be noted that the difference between the number of stores in the A segment with the number of properties in the C segment is of such magnitude that the explanation of limitation of the research cannot be the only reason. Because the research region is limited to historic city centres, it is logical that most of the properties are constructed before the year of 1906, 152 stores to be exact. In most cases, the dwelling which is located on top of the store, can be accessed via a private entrance from outside (271 stores). In certain cases, 57 in total, the upper house can only be reached through a stairs within the store.

All the above mentioned aspects are used to describe the categories. All properties can be divided into the following categories. Classification within these categories can be made within the shape of the property; square; wide or narrow.

**Extern**

The category ‘extern’ includes properties with an external access to the upper floors. This means two entrance doors are present in the front façade or in the open porch.

**Intern**

The second category that emerged from the research is the category ‘intern’. A big difference compared to the first category ‘extern’ is that the access to the upper floors is organized internally. This means that if one wants to enter the upper floors, one enters first the retail space before reaching the rising point which leads them to the upper floors.

**Double daylight**

There are also retail properties on the retail market with a presence of two times daylight. There are, in addition to the division in proportions, three possible options within this category: daylight from the front façade and the opposite back side,
daylight from front and around the corner (property on a corner) and daylight from the front façade and through an inner garden.

**Basement**

The above-mentioned categories all represent retail spaces which consists of one floor layer, the ground floor. Although there are also retail spaces which use more than one floor layer, the ground floor and the basement.

**Split level**

The final category includes stores with the presence of a split-level. In order to get more into detail, the ‘split-level’ category thus covers shops that exist of a single floor level on the front space of the entire retail space and consists of two useful layers at the rear side of the space.

The most common categories are properties which consists of a narrow retail space. Here, examples could be found for each category mentioned above.

### 1.1.1 Restrictions

Transforming retail into living means a change in several financial aspects. The moment when transformation is financially interesting, is getting closer. In many approach roads this moment will be reached by falling shop rents and an increasing retail vacancy rate. It is important that property owners will get the insight when it is interesting to make apartments in their stores. The involvement of communities and funders is hereby required. Transformation from retail to living requires a substantial investment, but given then a stable rental income with limited risks.

A retail property cannot be transformed in every situation. A zoning plan for example describes what may happen with properties in a given municipality. The increasing vacancy at B and C locations forces to develop a vision and a flexible zoning; retail functions are simply no longer self-evident everywhere. It is important that municipalities clearly choose particular retail areas and allow and even encourage transformation elsewhere. This prevents that the conversion of a store to a home becomes a process of several years or it only gets on stream after year of vacancy. Moreover, the addition of a living function contributes to the desire many municipalities' more livability. Besides restrictions for transformation from retail into living, there are restrictions that may affect the design, for example the protected cityscape. Historical city centres are often part of the ‘protected cityscape’. A protected cityscape is a group of objects and buildings is protected by the government. The protected cityscape brings along limitations on changing the front façade. Separate rules apply.
1.1.1 Target groups
Single households are a target group which is attracted for living in retail. This has already been proven in practice: living above shops is especially popular with young couples who have no children and elderly whose children have left the home. Not only singles and couples are attracted for living in an inner city, a quarter of all families with children (especially in the age of 40-55 years) focus on the urban environment. It are the features of a city which makes living in an inner city attractive and appealing to this group of households.

1.1.1 Case studies
There are already several practical examples of retail into living and similarities can be found and extracted.

**Double entrance**

The first group of case studies can be divided into the properties with two entrances at the façade on the ground floor. It cannot be seen from the façade that an inside transformation took place. In some cases, the whole staircase is removed and replaced by another function.

**Facade change**

Surprisingly, relatively many façade changes occurred. In one case the front facade used to be an historical store façade with an entrance located in the middle. There was no private access to the upper floors, guessing this should be inside during this time. During transformation, the façade changed into a façade with two entrance doors, probably one for the store and one for the upper levels. A second type of façade change is shown by the total removal of the façade and replacement of a façade with two windows and one entrance door. Only from the top of the entrance door, the original storefront can be recognized. The rest of the façade is filled in with brickwork, matching the brickwork used at the upper levels.

**Inner garden**

In some cases an inner garden is created during transformation from retail into living. Here, all functions has been shifted by the removal of the retail function and some place came free to create an inner garden at the back of the property. Because of this inner garden, more opportunities are created for living.
**Split level**

A split-level is an example of how privacy can be unconsciousness created. Therefore, when passers-by are looking inside, they watch against the edge of the floor. In addition, there is also created a kind of transition area by the presence of the split-level.

**Entrance hall behind façade**

The retail space is often replaced by a living area, for example to read a book or to have some dinner. In several cases, an entrance hall is created directly located behind the façade, which connects the living area behind with the outdoor street.

**Privacy**

The privacy at the front façade is a subject which can be treated separately. First of all, the window film is a popular way of increasing privacy for the inhabitants. The advantage of more privacy for the owner, also create a drawback, namely that also the owner cannot look through the window anymore, unless he or she or stand on a chair. It is both placed on eye level for the passers-by as well as for the owner, unless off course the floor level varies. A second common principle to create more privacy is the use of curtains, which can be, for the entire street, a thorn in the eye, because they are often closed. Objects in front of the façade are unconsciousness placed objects with the effect that it creates more privacy. For example bicycles are stalled, which encounters filled space in front of the façade and blocks a part of the view from outside to inside. Plants and benches are placed to create some greenery and to sit, but also creates more privacy. Passers-by feel that something different is happening with the results that they pass by with a more insecure feeling about looking inside. Objects behind the façade are used in order to focus the attention of the passers-by on something else instead of inwards. These objects may be located both on the windowsill and behind the window.
5.1 **Recommendations**

In order to provide the complete answer to the predetermined research question, the design need to be added to this thesis. This is in fact part of the whole project. Without design, the project is not completed. During research, all sub questions are answered, except for the one related to the design:

*What steps has to be taken in order to transform retail into living?*

If this question can be answered, the ability is created to answer the main research question:

*What are the possibilities for transformation of existing retail into living in order to minimize the decline in urban quality in Dutch historical inner cities?*
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PART 1

Introduction
INTRODUCTION

1.1 Motive

The coming years, the vacancy rate in Dutch shopping streets will rise up to 9 to 10 per cent (Nederlandse Publieke Omroep, 2013). Currently, 6.5 per cent of the 220,000 retail properties is vacant, according to new estimates from market researcher Locatus. “Until 2020, about 7,000 stores extra will become vacant,” said Gert-Jan Slob of Locatus.

In many Dutch inner cities vacancy is currently large. It is expected that retail space in urban areas will shrink significantly in the next years (Smit, 2013). A total of two million square metres shall vanish, according to an analysis of consultancy Booz & Company. The decline means that 17 per cent of the total retail space disappears.

Locatus, a market leader in terms of retail details in the Benelux, expect for the coming years that the vacancy rate in the Dutch retail will reach up to 9 to 10 per cent (Nederlandse Publieke Omroep, 2013). In April 2013, 6.5 per cent of 220,000 stores is empty. “Until 2020, about 7,000 stores will be added to the vacancy”, said Gert-Jan Slob of Locatus.

Vacancy is not only caused by the economic crisis and low consumer confidence (Roots Beleidsadvies, 2013). The demand for retail space is decreasing due to structural changes in the population development and the increase of internet spending. Booz foresees a sharp reduction in the number of clothing stores, because people often buy clothes online. Entrepreneurs in retail feel the increase in pressure. Their profits decline because customers often negotiate the price. Due to sales decline, retailers also miss the sales bonuses from manufacturers. Through the disappearance of stores it is expected that more residents will return back to the inner cities, where even comes more space for entertainments and hospitality.
1.2 Relevance & Disciplines

This report is written in order to complete the Master track Architecture of Delft University of Technology. Its scientific relevance is in developing theories, concepts and knowledge to improve our understanding of the retail market, in particular the possibilities for transformation of retail properties. Its social relevance comes from the contribution to develop knowledge and tools for transformation in order to minimize the decrease in urban quality in inner cities. Both the scientific as well as the social relevance are outlined below.

Scientific Relevance

In the academic field some literature has been published concerning vacant retail and many general advices are discussed. But a detailed report, based on the possibilities for transformation of existing retail for the purpose of minimizing the decrease in urban quality in existing shopping streets in Dutch historical inner cities, is still missing in literature. An effort is made to provide more insight on this subject. It is an attempt to fill the previously mentioned gap between the vacancy and urban quality. Several types of research are combined with each other: literature review (retail), interviews, using data from the Funda retail database (physical factors) and own observations (case studies).

Social Relevance

Within this research, different locations are included, elaborated in a total of nine Dutch historical inner cities. These cities are used to gain more insight in the current retail market. The graduation project is also relevant to society for lots of parties, from the retailers to the municipality. They gain more insight into determining factors of existing retail and what actions could be made to attack vacancy in retail in Dutch inner cities. Because of this information they can easier take action. The research is also relevant for retailers and developers of retail in general, so they can get a clearer picture of the various factors that affect the quality of life in shopping streets.
1.3 Starting point

In order to start with the graduation project, one needs to know what is happening in the current retail market. Facts and figures are shortly described in order to give a picture of the current developments in the retail market. The place where vacancy in particular establishes is treated and causes and consequences are defined and specified.

1.3.1 Vacancy rates

To create an image of the current vacancy rate in retail in the Netherlands, various reports are consulted. The report ‘Gebiedsontwikkeling en commerciële vastgoedmarkten; een institutionele analyse van het (over)aanbod van winkels en kantoren’ written by PBL & ASRE is used as a basis for writing this part.

Figure 2.1 shows the development of vacancy of stores. Until 2010 the vacancy rate is below 6 per cent (PBL and ASRE, 2013). After that, the vacancy rate rises rapidly and in 2013 the vacancy has risen to a percentage of 7.8 per cent. About a third of the vacancy is initial or frictional vacancy, the other part consists of extended vacancies and structural vacancy.

The number of square meters per store increased substantially in recent decades, from less than 50 square meters per store in 1968 to more than 270 square meters in 2013. This is of course, to a large extent, related to the chain formation which has occurred in the retail. The need to a larger scale can also be seen in the vacancy figures. Abandoned buildings are smaller than the average buildings in use. It is still not clear what online sales and other developments in retail mean for the size of stores and thereby the demand for retail space.

1.3.2 Causes

Developments retail demand

Vacancy is not only caused by the economic crisis and low consumer confidence. The demand for retail space is decreasing due to structural changes in the population development and the increase of internet spending. In this chapter the developments in retail demand are shortly described.

Change of consumer preferences

In the first place, shifts have occurred in consumer confidences (Evers et al., 2011). Inner cities primarily attract consumers which are aimed at recreational shopping, the so-called fun-shopping; the activity itself is often more important than the
purchase. The experience of the shopping area plays a major role. Shopping itself has become leisure (Kooijman, 2012). Experience is the new standard for retail (IVBN Visie op de winkelmarkt, 2012). An attractive physical shop environment is of increasing importance and shopping will be more than ever needed to reflect the needs of consumers. Competition between shopping areas is growing rapidly and quality and experience will be crucial to the functioning of a shopping area.

**Growth of internet shopping**
In recent years, buying products over the internet is a growing phenomenon (Has-senpflug & Tegeder, 2004; (N.L.L. Latten, 2012, HBD Hoofdbedrijfschap Detail-handel, 2011)). Not only sales take place through the internet, the internet is also used as a way to obtain information about products. The consequence of this trend is that both the number of shop visits and the number of purchases decreases. The influence of the internet and social networking is already at a high level and is expected to increase (Seinpost adviesbureau bv., 2012).

**Aging population**
Aging population is becoming more common in the Netherlands. The number of older people keeps increasing. It is expected that 23 per cent of the population will be elderly in 2030 (Seinpost adviesbureau bv., 2012, DTNP; Droogh Trommelen en Partners, 2013). Compared to this, there is a shrinking number of workers and the birth rate is decreasing. Older people generally spend less than consumers in the working phase of their lives. Aging population also strikes among independent retailers. These struggle to transfer or to sell their business, partly due to the lesser prospects for traditional retail.

**Household size**
Besides the aging of population, household sizes are becoming smaller (Centraal Bureau voor de Statistiek, 2013, N.L.L. Latten, 2012). In 2009, an average household had 2.23 persons, while in 2050 a number of 2.06 persons in one household is expected.

**Shrinkage**
The problem of the aging population is in many cases connected with a shrinkage in population (N.L.L. Latten, 2012). A decline in population becomes in more and more regions an irreversible process. It can lead to major restructuring assignments. Due to shrinkage, the vacancy will even increase more (IVBN Visie op de winkelmarkt, 2012).
1.3.3 Developments retail supply

Vacancy is not only caused by changes in the retail demand, but also by changes in the supply of retail. Scaling of retail and the growth of internet shopping are two examples. The developments in retail supply are outlined below.

Scaling

In the recent decades, the number of square meters per store increased substantially, from less than 50 square meters to more than 270 square meters in 2013, which means a fivefold increase in forty years of time (PBL and ASRE, 2013). Scaling has led to an increase in the number of square meters of floor space per store, in contrast, the number of stores hardly increased (N.L.L. Latten, 2012). Since 2003, the increase in retail floor area surpasses the growth of population significantly. As a result of scaling, the floor area of retail units in (historical) inner cities fits less well with the requirements of some retailers (Evers et al., 2011, HBD Hoofdbedrijfschap Detailhandel, 2011, Kooijman, 2012). As a result, stores that are traditionally located in the inner city are been moved with an increasing extent to new store locations (Atzema et al., 2012).

Dominance of auto mobility

Over the years, consumers have become more mobile (N.L.L. Latten, 2012, Evers et al., 2011). Besides, Oppewal (Oppewal, 1995) concluded that the size and distance has a great influence on the choice of a shopping centre. In addition, Kolpron (Hoofdbedrijfschap Detailhandel, 2001) concludes that consumers are willing to make larger distances to go shopping in an attractive environment. At the same time, consumers become more demanding: they want to get anywhere easily by car, free parking and the choice from a wide range of products (NAI Uitgevers, 2005). Therefore, the competition in the retail sector increased significantly. Because of this, inner cities will become less attractive due to its mostly difficult accessibility and parking problems (Atzema et al., 2012, NEPROM; Vereniging van Nederlandse Projectontwikkeling Maatschappijen, 2005).

Spatial differences

Regionally, there are large differences in retail vacancy (Raven and Rindertsma, 2012). For example, the average retail vacancy rate is more than double than the vacancy rate in Utrecht (NVM Business, 2012, Raven and Rindertsma, 2012). In successful central shopping areas, such as in Amstelveen and Putten, vacancy is almost absent. On the other hand, there are municipalities that even protrude far above the average vacancy rate, examples of these are: the centre of Echt (21 per cent), the centre of Schiedam (20 per cent) and the centre of Geleen (18 per cent) (N.L.L. Latten, 2012). Unlike offices, the vacancy of stores occurs in the classic
shrinking regions such as Zeeland, the southern part of Limburg and North East Groningen (PBL and ASRE, 2013).

Also notable is the relatively high vacancy rate in a great part of Flevoland (NVM Business, 2012). Retail vacancy is much more explicitly linked to declining population than vacant offices. Of the four major cities, the city of Utrecht did it by far the best; the direct available number of square meters of retail space took off. Secondary and tertiary shopping areas often reach only a limited part of consumers, due to the fact that this part of the city is not connected optimally to the pedestrian routes of consumers. As a result, secondary and tertiary shopping areas cannot take full advantage of the attractiveness of the area for fun-shoppers, and the targeted consumer is hampered by the poor accessibility and parking problems in that area.

As good as the main shopping streets still practice, so difficult goes the occupation of retail space in the approach roads (PBL and ASRE, 2013, NVM Business, 2012). These are the so-called secondary and tertiary shopping areas in inner cities, such as leading- and ring roads. Recent research by NVM Business shows that the vacancy rate in inner cities is growing rapidly (Atzema et al., 2012). Especially cities between 50.000 and 100.000 people are suffering from vacancy. The vacancy rate is the largest in the weak run-centres. This has several reasons: First, these areas lend themselves less for recreational shopping (fun shopping), which shopping has become more and more. Second, the shop units in those areas do not fulfil with the needs of the retailers in terms of size, they want more and larger stores. Besides the streets leading to the city centre, small shopping centres in villages and neighbourhood and the first generations ‘living boulevards’ will also be the first that encounter the vacancy (Evers et al., 2011, Atzema et al., 2012).

1.3.4 Actors

Vacancy affects multiple actors (Bressers, 2011).

Government

The policy of retail, hospitality and inner city of the local government has a direct impact on functioning of the town. Car-free shopping for example, has negative effects for the supply of retail but can have positive effects on passers flow. The municipality will also experience problems: entrepreneurs will partly deem the municipality as responsible if a particular shopping area is not functioning. Moreover, there is the chance of corruption and crime in a street with a high level of vacancy.
In an inner city many different types of businesses take place. A division can be made in public-oriented enterprises (retail and hospitality) and non-public-oriented companies (offices). Both the public-oriented and non-oriented companies have multiple strategies in the areas of staff, marketing as well as the location. Some companies choose explicitly a location in the downtown because for example the large number of passers-by, close to similar businesses or a suitable property. One can imagine what will happen when vacancy occurs. For retailers, the biggest threat is a downward spiral of visitors and consumer spending in the shopping area. In case of a high rate of vacancy there is a possibility that the consumers will lose the image of shopping, causing even fewer consumers within the area. As a result of a decrease in the number of consumers, the profit of the entrepreneurs continue to decline and even more entrepreneurs will leave or go bankrupt, which leads to an even higher degree of vacancy.

Property owners
Property owners determine the content and quality of their property. The owner are responsible through investments for the maintenance of the buildings, the look of the facade and thus the appearance of the inner city. An attractive centre that attracts large visitor numbers, has commercial value and provides an appreciation of the property. For a property owner vacancy means no rental income and a possible drop in the value of its property.

Project developers
Project developers design and build new retail in inner cities. Newly completed projects are often quickly filled and the national chains jostle to take place. Because of the high land prices in inner cities, developers are forced to rent properties out to large retail chains to gain their exploitation. As a result, it is more difficult for local entrepreneurs to integrate and the unilateral offer of inner cities will be strengthened.

Town & Shopping manager
Downtown Management is a structural partnership of public and private parties in a town to strengthen the attraction and thus the economic functioning of the centre(BRO, 2010). A city manager functions as the contact for government, businesses and property owners and coordinates activities to increase the attractiveness of the city centre for consumers and residents. A shopping street manager has the same objective, but only at the level of the shopping street in an inner city.
1.3.5 Consequences

Shopping areas are the business cards of cities, villages and neighbourhoods. A decrease in shops lead to a deterioration of the image of the entire area. Particularly in areas where the living environment is already weak, the presence of shops significantly determines the quality of life. Disappearance of shops and sometime entire downtown areas also have large spatial implications (DTNP; Droogh Trommelen en Partners, 2013). To an increasing extent, properties become vacant without the detection of a new filling. The consequence will be structural vacancy. This leads to degeneration and sometimes unsafe social situations of central areas.

1.3.6 Current initiatives

Already many initiatives has been made for trying to solve the vacancy in retail. From initiatives to facilities with a different function to window dressing for increasing the quality of life in shopping streets. In the following chapter current initiatives are shortly described.

Temporary entrepreneurship (pop-up)

Established trademarks use often pop-up stores as a temporary outlet or to test new products (Seinpost adviesbureau bv., 2012). Such shops appear unannounced and remain short. The city of Rotterdam wants to address the retail vacancy by allowing temporarily catering, the so called pop-up hospitality (De Ondernemer, 2012a, Seinpost adviesbureau bv., 2012). Also, entrepreneurs can place unlicensed small terraces. That is mentioned in the hospitality note 2012-2016. Alderman Hamit Karakus from urban economics would bring more live in the centre of the city, primarily for the evening. Then the town gets empty and only the lighting of the shop windows suggest some life. Cities such as Nijmegen, Rotterdam and Hilversum use vacant premises as a stage for (creative) entrepreneurship within the concept of ‘Interim’ (Seinpost adviesbureau bv., 2012): a conscious search for activities and entrepreneurs which can make a contribution to the economic functioning of the area. Young entrepreneurs get help to develop sustainable business plans. This initiative also contributes structurally to the business activities.

Merging properties

The usability of vacant stores can also be increased by smart merging of the properties (Seinpost adviesbureau bv., 2012). A characteristic of historic city centres is the limited size of retail premises. These do not always meet the requirements of the modern retailer. The city Leiden can be seen as an example, it tackles the problem by combining too small commercial premises to form a large retail store. A similar approach is carried out by the Noorderboulevard in Rotterdam, where the
vacancy rate is above average (Seinpost adviesbureau bv., 2012). The retail properties are difficult to rent out by the limited size. Fragmented ownership is present. Again, the solution lies in the merging of properties to create more possibilities. Owners received an EU grant for linking the buildings, but this did not solve the problem of fragmented ownership.

**Window dressing**

Another solution applied increasingly is Window Dressing Design: covering the storefront through a 3D impression of the store. Window Dressing camouflages vacancy (Seinpost adviesbureau bv., 2012). Companies as Windowdressing and Raamstijl specialize in the stickering of empty storefronts in an attractive way. There is also a company named Etaligent which places digital displays that can be rented for advertisements or for a presentation of the available property. In this way the vacant shop looks more attractive and possibilities for the future tenant are visualized. In addition, window dressing is also be used for premises which are subjected to a renovation/restoration (De Ondernemer, 2012b). These are often an eyesore for landlords and the nearby competition. ‘Previously, there was a bare, tatty cladding for vacant retail spaces or retail spaces during renovation. Now you can already make shoppers enthusiastic and give a glimpse of how the store will look after construction’, says Eva van Vette of Window Dressing. Through a qr code on the window, one can go with their mobile phone to a website where they can virtually walk through the new space. The big difference is off course, that you walk around in a building that does not exist yet.

1.3.7 **Living above retail**

The rate of the residential function in city centres has been weak for a long time (Bressers, 2011). In most policy documents, the residential function was not specified. In recent years, living above retail has been stimulated in many cities (Bressers, 2011). Especially in approach roads living above shops is often present, particularly in university towns and regions with a tight housing market. Advantages of Living above Retail are shortly described below.

By restoring the original residential function, the security and vibrancy of the core shopping are increases (Wonen boven Winkels Nederland, 2013). Inner city inhabitants help to keep the city liveable, especially after closing of shops (Bressers, 2011). As an example, The Hague is working on a city centre that is not only lively and attractive during the day but also at night (Ministerie van VROM, 2005). Currently in the evenings, the shopping streets are often silent and deserted. Living in the shopping streets can change this. With the renovation of buildings, making the upper floors habitable and realizing access routes, the vibrancy and viability of the
city centre is expected to increase. Living above retail also strengthen the security and social control in the city centre (Bressers, 2011). Stated by Joost Laurense, head Realization/Redevelopment VastNed Retail: “The value of properties will certainly not decrease and it benefits to the social control as well as the appearance of the facades.” (Ministerie van VROM, 2005). Facades and historic buildings may be retained, which contributes to the social cohesion in a city and prevents possible decay of buildings (Wonen boven Winkels Nederland, 2013). Moreover, it contributes to the qualitative housing supply (Ministerie van VROM, 2005); it delivers particular housing for starters, students, active senior and single households, the specific target groups for whom an housing shortage exists. This prevents the social and economic erosion and supports the economic incubator function of the city centre.
PART 2

Research design
RESEARCH DESIGN

2.1 Introduction

In order to conduct the required research for the thesis, a research framework is drawn up. This framework is outlined in this chapter. The research method is outlined and the problem is stated by means of the thesis objective and the main research question. In order to structure the process the main research question is divided in several sub questions. Next to a literature review some field research is undertaken, to get insight in the practice of the positioning of Dutch inner cities. The case studies to be explored are presented at the end of the chapter.

2.2 Problem Statement

In this paragraph the objective is formulated. In order to reach this objective, the main research question needs to be answered. In this chapter both objective and main research question are outlined.

Vacant retail in inner cities often determines the functioning of the shopping area. The Netherlands notices a progressive increase of the vacancy in retail and because of the fact that the vacancy is often brought under attention for the last years, one is starting to realize the need to address the increasing vacancy. However, they do not know in what ways this could be tackled. Already many initiatives are on the market, but without permanent results, the vacancy is coming back.

2.2.1 Objective

In response to the above sketched situation, the following objective is stated. With this research a tool is provided to fully utilize the potential of vacant retail in Dutch historical inner cities for the purpose of transformation into living. The following objective is formulated below.

*Outlining the possibilities for transformation of existing retail into living in order to minimize the decline in urban quality in Dutch historical inner cities*

In addition, with this exercise a connection is established between Real Estate & Housing and Architecture. Theory is taken into practice (categorizing retail) and practice is taken into theory (case studies).
Main research question

The main research question is the question which will be answered eventually. This is self-evident depending on the objective of the investigation. The following research question can be formulated as follows.

*What are the possibilities for transformation of existing retail into living in order to minimize the decline in urban quality in Dutch historical inner cities?*

2.3 Research questions

The main question (What are the possibilities for transformation of existing retail into living in order to minimize the decline in urban quality in Dutch historical inner cities?) is divided in several sub questions. These questions ensure that all the required information is gathered and structure the research process.

A retail property cannot be transformed in every situation. It is of great importance to know what limitations are present. By giving an answer to this question, different constraints will emerge. The question can be raised whether there are already examples of advices of municipalities which could possibly soften these barriers. Besides restrictions for transformation from retail to living, restrictions will rise that may affect the design, for example the protected cityscape. And because various restrictions are going to be discussed, it is interesting to look at the financial feasibility of a change of function.

*What restrictions may rise when transforming a retail property into living?*

When transforming retail into a residential function, target groups can be described which are attracted for living in inner cities. Transforming retail into living also means a change in several financial aspects.

*Which target groups are suited for living in retail?*

After drawing up a theory framework, the categorization of retail can be considered. Here, the following sub research question can be described. First, classification aspects are described to give an image of the most important values of stores, followed by the general results of every aspect.

*What can be seen as classification aspects, the most important values of stores in order to classify retail premises?*

Before all retail properties are grouped into categories, general results are processed. Hereby, every classification aspect is drawn. Results range from the number of shops with only a single floor level to the number of shops who have a side entrance. Striking results will be highlighted.
**Which general results of the categorization can be extracted?**

After entering all the data from all stores and describing the general results, similarities can be found and categories can be extracted. In a scheme all categories are shown and explained by examples.

**How can the categories be extracted?**

In vacant retail, some properties are more common than others. Here the question will be answered which properties are most common in vacant retail in historical inner cities in the Netherlands. For every category examples are shown to clarify the several categories.

**What are the most common categories?**

Already many retail properties are transformed into housing, so why not using these practical examples to collect usable information for the report and for the purpose of designing? Therefore the next sub question is:

**What can we learn from practice?**

The last sub question is related to the design. It is expressed as a framing question because the objective of this question is to find new solutions for existing problems. Due to a combination of theory and practice a package of information is created. Two designs are used to serve as examples of how retail can be transformed into living. All possibilities and restrictions will be discussed per category.

**What steps has to be taken in order to transform retail into living?**
2.4 Scope and limitations

A common pitfall is that the problem is turned into a too wide research. In this chapter is described what factors may or may not apply within this research. The used selection criteria are discussed to acquire this sample.

Building types

City centre

Only retail properties with a location in the city centre are included in the research.

Historic buildings

The preference for the study is devoted to historic buildings. This does not mean that only original properties are involved in the research, but also historic buildings which have been subjected to a renewal, for example the renewal of the front façade. Units in modern shopping malls or under apartment buildings are therefore not taken into account. When the apartments were created through the merging of several buildings, the retail store below is included.

Single house width parcels

Only single house width parcels are included within this research, because this gives a basis to all stores in the Netherlands. Although there are many shops merged together, the single house width parcels always remains the basis and can be used as a good start up for the research.

Cities

In order to collect data about retail in the Netherlands, cities are selected for the use as a sample and representation for the Netherlands. To be able to select these cities, selection criteria are composed. The selection criteria and the chosen cities are shortly introduced below.

Aim of the city samples is to get insight in the current retail. All the cities are selected on the basis of multiple terms and conditions.

Central shopping areas

The most famous typology is the central and supportive shopping areas (Locatus, 2013). This
typology is primarily motivated by the post-war planning. The main shopping areas are dependent on the size of the municipality and the regional layout. The structure has grown historically. Central shopping areas mostly share recreational shopping (Evers, 2011).

Historical city centre
Historical city centres are most famous of its preserved buildings. Despite the high value of these inner cities, the flexibility of the properties is limited by strict rules. Historical city centres are most attracted for this research, because of these limitations and original characteristics.

Using the selection criteria discussed in the previous subparagraph, nine cities are selected for the purpose of categorizing retail. The nine cities are shortly introduced below. The actual categorizing of retail can be found in chapter 4 – Categorizing retail.

Arnhem
Arnhem is seen as the seventh shopping city of the Netherlands and the centre has been named ´Best Downtown 2007-2009 of the Netherlands´ (Tourist Information Arnhem, 2013). There are several shops located in the city centre, from large department stores as Vroom & Dreesman to small specialty shops in the back streets. The well-known department stores and also a selection of specialty shops fill the main streets. The stately canals surround the centre.

Delft
Delft has an historic city centre, developed itself into an industrial city in the nineteenth century and presents itself today, with the presence of a Technical University and research institutes TNO and Deltares, as a knowledge city (Delft, 2013). Different areas both in the centre as outside of the centre has its own character.

Leiden
Leiden has the oldest university in the Netherlands. In addition, the city is known for its rich history and the old city centre, with canals, monumental buildings and courtyards. Leiden, with over a thousand shops and restaurant in the city centre, is foremost a shopping city. Many shops are located in the city. The Haarlemmerstraat can be seen as the main shopping street. Other shopping streets are the Breestraat and Doezastraat.
**Maastricht**
The city centre of Maastricht has a wide range of shops with relatively, besides the usual chain stores, large specialist stores and exclusive shops. The Maastricht core shopping centre attracts many visitors from the surrounding region, but also from other parts of the Netherlands, Belgium and Germany.

**Nijmegen**
The centre forms the city centre together with the ‘Benedenstad’. The district is also called Upper Town. The centre houses the shopping district, entertainments and a large part of the cultural facilities of Nijmegen.

**‘s Hertogenbosch**
The medieval city centre of ‘s Hertogenbosch is one of the oldest and most complete of the Netherlands. The city is the largest walled area of the country.

**Schiedam**
Schiedam is located between Rotterdam and Vlaardingen, originally along the river the Schie and later the Nieuwe Maas. The city is best known for its gin, the old town with canals and the highest windmills in the world.

**Utrecht**
Utrecht was one on the first cities in the Netherlands with city rights and has a long history and an important historical centre. Characteristic are the yards and the Cathedral of Utrecht. The city hosts three universities.

**Zwolle**
The city centre of Zwolle is a car-free area in the old city centre. The area is bordered by the former city walls and moats. It is a neighbourhood where nowadays especially shopping is located.
2.5 Important definitions

Retail
The official definition of retail is “the sale of goods to ultimate consumers, usually in small quantities (opposed to wholesale)” (Dictionary, 2013). Retail can be translated in Dutch into ‘detailhandel’. The only difference is that retail is actually not the provision of services. Retail is an abbreviation of retail premises.

Retail property
According to ‘Genootschap Onze Taal’: Shop (‘corner’) had already in 1300 the meaning which is currently the most ordinary: ‘space where goods are sold’. A shop, according to Van Dale (2005), was originally a corner where one exposed his merchandise. The meaning of a shop changed via ‘corner’, ‘shed’, ‘room’ and ‘workshop’ to ‘selling place’ (Genootschap Onze Taal, 2013).

In the seventeenth century sales areas on the ground floor of a house were already called a shop or ‘Winckel’, which originally means ‘corner’ (Meijers, 2010). Etymologically the early meaning of a ‘shop’ refers to the corner where merchandise was drafted. One possible explanation is related to the corners of streets, where many shops were located. It is also conceivable that the word refers to the angle formed by the buttresses and walls of large churches; places where market stalls were located.

Vacancy
Vacancy can be defined as a retail building without any economic activity, which, at the time of visit for rent/sale, it is leased/sold, ripe for demolition or where a renovation takes place (Locatus, 2013).

Location typologies
Each store is fixed on a shopping area (Evers, 2011, Locatus, 2013). A shopping area is only called as a shopping area if at least five retail stores are concentrated. All concentrations are individually defined by Locatus. On main level, three categories are described. These categories can be further sub-divided into the following sub categories. Shopping areas than cannot be classified into one of these categories will fall under the category of ‘dispersed shops’.

Central shopping areas
The most famous typology is the central and supportive shopping areas (Locatus, 2013). This typology is primarily motivated by the post-war planning. The main shopping areas are dependent on the size of the municipality and the regional layout. The structure has grown historically. Central shopping areas mostly share
recreational shopping (Evers, 2011). The category ‘central shopping areas’ can be divided into four sub categories: Inner cities: more than 400 stores; Main shopping areas: 100-400 stores; Supportive large: 50-100 stores; Supportive small: 5-50 stores.

Supportive shopping areas

Supportive shopping areas have a diverse range which corresponds with its use, daily products (Evers, 2011). Examples of supportive shopping areas are neighborhood- or community centres. Within the category ‘supportive shopping areas’ the following four shopping areas can be described: District centres: more than 50 stores; District centres large: 25-50 stores; District centres small: less than 25 stores; Neighbourhood centres: 5-9 stores.

Other

The category ‘other’ can be divided into large-scale concentrations and specific shopping areas: large-scale concentrations: more than 5 stores with a minimum average floor area of 500 m2; Specific shopping areas.

Dispersed shops

Points of sale that cannot be classified into one of the categories mentioned above are defined in the category of “dispersed shops”

Location qualification

Retail location in central shopping areas are classified as A, B or C locations based on the crowd index. This format is also referred to passers-by class (Raven and Rindertsma, 2012, N.L.L. Latten, 2012, Locatus, 2003). Location segments originated from passers counts on several points. The location with most of the passers-by is used as the best segment (A), the other segments are based on percentages.

A1 location: 75 – 100 %
A2 location: 50 – 750 %
B1 location: 25 – 50 %
B2 location: 10 – 25 %
C location: 5 – 10 %
**Urban quality**

The term quality of life means “the extent to which the environment is in line with the conditions and requirements that are made by humans” (DTNP; Droogh Trommelen en Partners, 2013). Quality of life is thus a concept whereby the conditions and needs vary by type of population. The demands for quality of life also varies by type of area.

There are different interpretations of quality of life (M. van Dorst, 2002). In this report quality of life is focussed on the relationship between human beings and their environment. Here, quality of life is thus not used to expose the uninhabitable but to understand the qualities of a well-functioning neighbourhood, quarter or other residential districts.

**Environmental characteristics**

Viability as a collective term gives a list of environmental characteristics (both social and physical aspects) which are suspected to have a relationship with how residents value their environment (M. van Dorst, 2002). The most interesting environmental characteristics are expended below.

**Liveliness and attractiveness**

Vacant and abandoned properties have a major influence on the liveliness and attractiveness of the area. It can be seen as a domino effect: properties get vacant and will decay, the liveliness and attractiveness decreases and sooner or later other properties shall follow.

**Crime and vandalism**

Vacancy means desolation and more chances for crime and vandalism.

**Social security**

The social security of the area can be bases on several aspects, of which vacancy can be mentioned as an example. Vacancy means, as mentioned in the previous characteristic, less social security. In case there is less social control, crime and vandalism get more chances.

**Number of relocations**

By relocations, relocations within the retail market can also be a reference. The amount of relocations depends on the vitality of the area. The more relocations, the lower the quality of life, because or (1) these owners are still looking for another location or (2) the location does not work for their business. When transforming vacant retail in living spaces, more people are on the street in the evenings and the social control will increase.
Presence, quality and proximity of facilities
In an existing shopping street, stores naturally take in a prominent place. When vacancy occurs the relationship between shops and other functions (for example living) decreases. In case other function are going to prevail in the street – so more vacancies – the domino effect will again occur: The remaining stores leave earlier because of the low quality of life in the street. Other environmental characteristics with a lesser extent of application for the report are Parking, Greenery, Housing and population density, Street refuse, traffic noise and soil pollution, Homeowner-ship rate, Average disposable income and income development and Demographics.

Additional environmental characteristics
As an addition to the report, the previous listed environmental characteristics can be expanded with the living comfort and privacy. These are both focussed on living.

Living comfort
The comfort of living is a subjective concept that is experienced by everyone in its own way. Living comfort goes beyond the comfort of the home itself, the environment can be an important factor.

Privacy
The environmental characteristic privacy can determine the height of the value of viability of the property. When transforming an existing retail property into living and locate the living space directly after the front façade, the privacy level between public and private is low. Privacy can also determine the quality of life in shopping streets. The higher the privacy of the resident, the lower the quality of life. This is because passers-by feel encumbered to look inside. This aspect will be addressed later in the report.
2.6 Research method

To achieve the objectives, a number of steps are taken. In the diagram below, these steps are visualized. Each step will be briefly explained in the scheme.

**Theory**

In the phase of analysis, literature and exploratory interviews are used to obtain new insight within the subject. The background of the problem of vacant retail is outlined by describing the development of vacancy rates, causes and consequences. Besides, a chapter is devoted to transformation of existing retail. Current initiatives to solve the problem of decreasing livability in shopping streets due to vacancy are treated and the transformation of retail into living is discussed. Here, aspects as target groups, restrictions and financial feasibility are described.

**Analysis**

Furthermore, vacant retail stores of nine historical inner cities in the Netherlands had been studied. The categories are classified according to different aspects, both spatial and architectural. To clearly describe the different categories of retail, the basis of the context will be defined and characterized. In several schemes, all results are processed and findings may be drawn. In addition, most common categories are extracted.

**Practice**

To get more insight in retail categories and transformation, a number of practical examples of retail into living are selected. Case studies are also used to collect usable information for the purpose of designing. The case studies consist of both an inventory of data from history as a visit to the building. All the case studies are examples of transformed retail into living. First, the situation of the retail before transformation is described. It will be zoomed out to city level to identify what developments have taken place which may have influenced the transformation. Secondly, it is investigated which changes took place within the space of retail during transformation, especially zoomed in on change in function and new use of the original retail space. Visits are made to get deeper into the case.

**Design**

Insight in vacancy and retail is obtained by the analysis. Due to a combination of theory and practice a package of information is created. Two designs are used to serve as examples of how retail can be transformed into living. All possibilities and restric-
In the end the report is closed by the conclusions and recommendations.

**2.7 Case studies**

**Scope**
In order to limit the number of decisions, Delft is chosen as the city where the case studies take place. Delft is chosen because lots of transformed retail spaces into living are present.

The approach of the case studies will not sociological but spatially architectural. This means that there is not looked at how the residents move and live in their house, but rather how the spaces are divided and classified in relation to the whole. In addition, some questions are asked and pictures are taken on behalf of the report.

**Selection**
First, case studies are selected on the basis of criteria. The selection criteria are described below.

**Archive**
Secondly, the archive of Delft is examined to obtain more information about the property. Here, both online image database as the building archive are treated to see if correct information is available for the purpose of using in this research.

**Visit**
A visit to the building is made to view the actual situation. This moment is also used to have a short interview with the current residents about their way of life and how the inner space is used.

**Analysis**
On the basis of all information obtained through research in the archives and a visit to the relevant property, an analysis is made to describe the historical and current situation of the building and to outline the transformation of the property.

**Conclusion**
When the case studies are completed, the outcomes are compared by means of a short analysis. In the end the case studies are closed by conclusions and recommendations.
Not all selected case studies offer the opportunity to visit. When this is the case, the information of the archive is conducted and used as only source for the analysis.

**Selection criteria**

In the empirical part of the research, a number of cases are analysed. For the selection of the cases the diversity of the cases is taken into account. This means that cases are chosen which differ in concept and design. This allows to create concrete conclusions which can be considered in further research. There are a number of selection criteria to distinguish the choice of the cases. They are shortly described below.

**Retail property**

Formerly, the house must have been a retail property. This can be indicated by the presence of the original storefronts. Another way to find out if the property has been actually a store is to look in the archives of Delft. Here, several old pictures can be found.

**External access to upper floors**

For the investigation, it is interesting to look at properties where the ground floor functions separate from the floors above. Often this can be derived from the layout of the front façade In case the upper floor functions separately from the ground floor, and external entrance is present in the shop front. This means there is an existence of a total of two entrances in the front façade.

**Influence of living**

The influence of the house must be clearly reflected in the streets. This means that properties that use the front space as an exhibition space, office, artist studio or comparable to those, are less relevant for research. The case studies should forward information about both the internal layout and transformation of the space, but also the use of the front area of the property.

**Interview**

In order to obtain more information about the use of space by the residents, questions are asked during visit.

First, for the use of the house, it is interesting to know how many people live in the property. Secondly, many residents know how the transformation happened and what kind of shop was situated in their house. Therefore it is interested to hear and collect information from the current residents.
By a change in function from store to home, other values are adopted, for example the privacy level between public and private. When transforming a retail store into living, more privacy is desired. Because every historic town is dealing with a protected cityscape, the frontage should retain its original shape. It is therefore of interest to look during visit at what agents are used to obtain more privacy when needed.

**Selected case studies**

Using the selection criteria discussed in the previous subparagraph, several properties are selected to use as case study. The case studies range from shops consisting of one space (a retail function) and stores with attached housing. All cases are shortly described below and further investigated in chapter …
PART 3

Categorizing retail
CATEGORIZING RETAIL

3.1 Categorizing aspects

To categorize all retail stores, all vacant stores in the aforementioned cities has been studied. Funda, an organization which presents the supply of real estate on the internet, has been used in order to collect all the data. The categories are classified according to different aspects.

Floor levels
This section indicates the number of levels the store exists. In case of a living space on the second floor, this is not counted. The possibilities of floor levels are shortly described below.

Single floor
The first floor includes only the total floor area of the retail space on the ground floor. Basements and split-levels are not taken into account.

Basement
In case a basement is present, the total number of square meters includes the amount of floor space of the ground floor as well as the floor area of the basement. The basement is accessible through the ground floor.

Split-level
In some cases a split-level is present. This has an open access with the retail space located in the front part of the property.

Storage
The storage space is mentioned separate, but it could in principle be combined with the floor space on the ground floor.

Floor area
The floor area is about the total floor surface. In case of the floor area is spread out over several floors, such as a basement or split-level, this is processed. The amount of floor space is expressed in square meters.

Shop front
The width of the store is of big importance because of the amount of daylight and alternatives allowing for transformation. From 3 meters, each meter can be seen as
a separate group, for example >=4 m - <5 m or >=9 m - <10 m. In case the retail store is located on a corner, the length of shop front does not indicate anything about the shape of the property.

**Depth (m)**
The depth of the store can be calculated by splitting the total floor area of the ground floor (plus storage on ground floor) with the shop front (width). This only works in case the store has no extreme shapes.

\[
\text{Total floor area (m}^2) / \text{Shop front (m)}
\]

**Length/width rate (%)**
The width/depth ratio indicates the shape of the store, for example oblong or square. The smaller this value, the narrower the store. Any segmentation of the inner space is not taken into account.

\[
\frac{\text{Width (m)}}{\text{Depth (m)}} * 100\%
\]

**Available since**
The aspect of the number of months that the property is put on the retail market as vacant is included in this study because it indicates the position of the property on the market.

**Construction year**
The construction year indicates the year that the store has been built. The construction year is important to take into account because it gives information about style and condition. Similarities can be found when properties are constructed during the same period of time.

**Entrance**
The entrance refers to the location of the entrance of the store. This information is of importance because the location of the entrance may partly determine the internal capabilities of living. Therefore, the position of the entrance also controls to change an internal access to the upper floors to an external access. This aspect will be appointed later. A division is made into two categories: the entrance in line with the street and the deepened entrance. All possibilities of locations of the entrance are shortly described below.

**In line with street**
The position of the entrance in line with the street means that the entrance is located directly on the public area. Three options of an entrance in line with the road
An entrance on the side can be either on the left or right side. Both belong to the same group, only mirrored

**Central**

The central entrance occurs when the entrance of the store is located in the middle of the façade. A central entrance can either be single or double

**Corner**

An entrance on the corner of a store only occurs in cases when the store is located on a corner

Deepened

Besides a beautiful storefront and window, retailers used the deepened entrance to improve their competitiveness (Lenferink, 2010). A deepened entrance meant more glass area and more display space. Three options of an deepened entrance are described below.

**Side**

The deepened side entrance is similar to the above-mentioned side entrance, only here the entrance is deepened

**Central**

The deepened central entrance is similar to the previous mentioned central entrance, only here the entrance is deepened

**Open porch**

The open porch is a clear trend in the architecture of storefronts, which fronts often got a deep inlet to create more display space and lead shoppers inside through the windows. An open porch often can be translated into an outside hallway with two entrances; one for the store and one for the home upstairs

**Access**

In many cases dwellings are located on top of the store. There are two ways in which the dwelling can be reached: extern and intern. They are both shortly treated below.

**Extern**

In most cases the dwelling located on top of the store can be accessed via a private entrance from outside. This entrance has an own front door directly connected to the street.
In certain cases, the upper house can only be reached through a stairs within the store. When the store would be transformed into a dwelling, this will not be the ideal base, because within this research it is not desirable to combine both spaces.

**Daylight**

The amount of daylight per store is treated as the amount of daylight partly determines the possibilities for transformation of a store to a home. This aspect can be divided into two groups; single daylight and double daylight.

**Single**

Single daylight means that daylight only comes in from one side. This is always through the shop front which faces the street. Logically, the above-mentioned width of the store front is of importance for the amount of daylight. The wider the store, the more daylight, the more opportunities for transformation and inner organization.

**Double**

Double daylight can be divided into three categories. First, a retail property with double daylight can be translated into an inner space with daylight from the opposite sides; the front and back façade. Secondly, a property with double daylight can also mean retail property with its location on a corner, wherein daylight openings are provided on both sides. The third option of a double daylight is daylight from the front façade plus daylight through an inner garden.

**Location qualification**

Retail location in central shopping areas are classified as A, B or C locations based on the crowd index. This format is also referred to passers-by class (Raven and Rindertsma, 2012). Location segments originated from passers counts on several points. The location with most of the passers-by is used as the best segment (A), the other segments are based on percentages.

**A1**

75 – 100 %

An A location is an shopping area with the highest number of passers. Bolt (2003) says that most of the floor space is occupied by the textile and footwear industry and the site is located in the immediate area of highlights (Bolt, 2003). The street is largely determined by the large chain stores who settle in these places. Due to the high number of visitors, the highest rents are request-
ed. These areas generally have a low vacancy rate

**A2**

50 – 75 %
The A2 segment is a location with a lower number of passers but it is connected to the A1 area. Comparable with the A1 segment, most of the floor space is taken up by the textile and footwear industry (Bolt, 2003). The branch and franchise companies still manifest themselves in this segment, while the large-scale rural crowd pullers are missing. Although the A2 area has less passers than the A1 area, it is still popular among entrepreneurs (N.L.L. Latten, 2012)

**B1**

25 – 50 %
The major difference between an A and B shopping area is that in the B1 segment branch and franchise companies have no longer any dominance (Bolt, 2003, Locatus, 2003, N.L.L. Latten, 2012). They are generally low-traffic shopping streets or they are located at squares. More than half of the companies is in hands of the self-employed, and often other facilities as restaurants, services and counter functions are present

**B2**

10 – 25 %
Facilities other than shops frequently occur in the B2 shopping area, an high number of food stores are located. Unlike the previous segments, much traffic is present and the streets are actually very broad in scope. Discounters, of which the subsidiary companies are present in the A segment, can often be found in the B2 segment. Common stores are brown and white goods, antiques and art business

**C**

5 – 10 %
The C segment is the lowest segment. The streets are characterized by many functions and do not belong to the main shopping centre. If there still exist any chain organization in this segment, these are often supermarkets. Market rents are rather tended to decline than go along the inflation
3.2 **Legend**

Floor plans and section of the retail properties are used to clarify the categories. Colours are used to divide spaces into functions. All functions are shortly described below.

- **Retail**
  With the function 'retail', spaces are defined as shop. Here goods are displayed and sold.

- **Circulation**
  The circulation space can be described as a space intended for the achievement of a different space. The circulation space includes (entrance) hallways and areas where one can move vertically (stairs).

- **Storage**
  Often a storage space is present within the property.

- **Sanitary**
  Sanitary spaces are shown by the blue colour. Sanitary spaces includes toilets, bathrooms and spaces for washbasins.

- **Kitchen**
  Kitchen areas are indicated by the pink colour. The kitchen is covered by the group 'living areas', a space in which people stay for feature characteristic activities.

- **Living**
  The living area is also covered by the group 'living areas'. Living included spaces as living room, dining room and bedroom.

- **Outdoor**
  The outdoor space includes inner gardens and outdoor spaces.
3.3 General results

Before all categories are grouped, general results are processed. Hereby, every aspect which is discussed in the chapter Categorizing Aspects, is drawn. Results range from the number of shops with only a single floor level to the number of shops who have a side entrance. Striking results will be highlighted.

Floor levels
As can be seen in figure 3.50, most of the stores have only a single floor, the ground floor (284 stores). 101 stores have both a ground floor as a basement.

Total floor space
Retail stores with a total floor space equal or larger than 50 m² and less than 100 m² are most frequent with an amount of 169. If we look at the division per 10 m² we see that stores with a total floor space equal or larger than 70 m² and less than 80 m² are most frequent (40 stores), closely followed by stores equal or larger than 60 m² and less than 70 m², stores equal or larger than 50 m² and less than 60 m², stores equal or larger than 100 m² and less than 110 m², respectively 39, 35 and 29 stores.
Total floor space and single floor level

After concluding this, it is interesting to see how much each total floor area have a single floor level. The conclusion is as follows: Stores with one single floor and with a total floor area equal or larger than 60 m² and less than 70 m² and stores equal or larger than 100 m² and less than 110 m² are most frequent with both an amount of 24 stores. These shops have still a different width and depth ratio.
**Shop front**

If we look at the width of the shop front, we can conclude that the group equal to or larger than 5 metres and less than 6 metres is the most common with a value of 98 stores. Secondly, stores with a shop front equal to or larger than 4 metres and less than 5 metres with an amount of 77 properties. Stores with a shop front equal to or larger than 3 metres and less than 4 metres and stores with a shop front equal to or larger than 6 metres and less than 7 metres have almost a similar amount, namely 56 and 51 stores.

![Figure 3.3 Total floor space - division per 10 m²](image)

**Entrance**

As it can be concluded from figure … the middle entrance is most frequently (124) if we talk about the position of the entrance. Comparable with the side entrance, the difference is only 3 stores. The side entrance can be divided into an left and right entrance, respectively 69 and 52 stores.

![Figure 3.3 Total floor space - division per 10 m²](image)
Site segmentation

Retail stores located in a B1 segment are most frequent with an amount of 135, closely followed by 112 stores located in the A2 segment. Surprisingly, the third in line are stores located in an A1 segment with an amount of 81 stores. This result does definitely not correspond to the facts and speculations that are described in literature. The explanation that can be given is that this study is limited to historical inner cities and so do not represent the entire Dutch retail market. Though, it can be noted that the difference between the number of stores in the A segment with the number of properties in the C segment is of such magnitude that the explanation of limitation of the research cannot be the only reason.

Construction year

Because the research region is limited to historic city centres, it is logical that most of the properties are constructed before the year of 1906, 152 stores to be exact. 87 stores have a construction year from 1906 until 1930.
Access upper floors

In most cases, the dwelling which is located on top of the store, can be accessed via a private entrance from outside (271 stores). In certain cases, 57 in total, the upper house can only be reached through a stairs within the store.

![Figure 3.3 Total floor space - division per 1U m²](image)

3.4 General categories

After entering all the data from all stores and describing the general results, similarities can be found and categories can be extracted. In this chapter is described which properties are most common in vacant retail in historical inner cities in the Netherlands. First, a scheme is presented for comparison of the different categories and its characteristics. Secondly, all categories are separated and treated individually. Here, examples of retail properties are shown to clarify the several categories. In the following scheme, categories in retail in Dutch historical inner cities are given.
3.5 Extern

The category ‘extern’ includes properties with an external access to the upper floors. This means two entrance doors are present in the front façade or in the open porch. Classification within this category can be made within the shape of the property.

**Extern square**

The property on the Kolk 12 is located in Delft and used as a case study within this research. The building shows perfectly the proportions of a relative square space with an external entrance to the upper floors. During transformation, this entrance is removed. This will be described extensively in chapter 6 – Case studies.

**Extern wide**

The retail space at number 4 at the Bakkerstraat in Utrecht is an example of the External Wide category. In the floor plan is shown clearly that the retail space consists of originally two retail spaces. Daylight comes in from one side and the entrance to the upper floors is external.

**Extern narrow**

An example that can be given to indicate the type Extern Narrow is a retail space on the Hertogstraat 119 in Nijmegen. Only one entrance door is situated at the façade, which gives access through an open porch to both the entrance of the shop and the entrance to the upper floors. The proportions of this property is narrow with daylight from only one side.
The second category that emerged from the research is the category ‘intern’. A big difference compared to the first category ‘extern’ is that the access to the upper floors is organized internally. This means that if one wants to enter the upper floors, one enters first the retail space before reaching the rising point which leads them to the upper floors. Examples of properties are given to clarify the category.

**Intern square**

The internal square category represents square shaped retail properties with an internal access to the upper floors.

**Intern wide**

An example of the wide type with an internal access to the upper floors is a property at the Peperstraat 7 in Delft. This, again, is a combined retail space of two spaces. The internal access is located in the back of the retail store.

A second example is located on the Tweede Walstraat 98 in Nijmegen. Here, a spiral staircase within the retail space brings you to the upper floors.

**Intern narrow**

A property in Arnhem with the address Bakkerstraat 23 is shown as a practical example of the intern narrow type. Here, the internal stair is located on the left side in the middle part of the retail area.
There are also retail properties on the retail market with a presence of two times daylight. There are, in addition to the division in proportions, three possible options within this category: daylight from the front façade and the opposite back side, daylight from front and around the corner (property on a corner) and daylight from the front façade and through an inner garden.

**Double daylight square**

An example which is given for the type ‘Double daylight – Square’ is a store located on the Markt 16 in Delft. In the floor plan is clearly shown that an external entrance provides access to the upper floors. Daylight comes both from the front façade as the back façade.

**Double daylight wide**

A second example to clarify the other option of two times daylight is a property in Utrecht, Biltstraat 1. Here, the retail store is located on a corner with both on the cornered facades openings to provide the space from daylight.

The wide – double daylight category represents wide shaped properties with double daylight. Double daylight can have more options, daylight from the front façade and the opposite back side, daylight from front and around the corner (property on a corner) and daylight from the front façade and through an inner garden.
To also give an example of the third option for two times daylight, the property on the Nieuwstad 49 in Arnhem is included in this research. Within this retail space, daylight is provided through daylight openings in the front façade and by the presence of a small inner garden on the left side. This courtyard is equipped with daylight openings in order to bring some extra light into the space.

### 3.8 Basement

The above-mentioned categories all represent retail spaces which consists of one floor layer, the ground floor. Although there are also retail spaces which use more than one floor layer, the ground floor and the basement. In this chapter several examples are given to clarify this category.

**Basement square**  
The first example of a store with ground floor and basement is a shop located on the Hertogstraat in Nijmegen at number 77. As you can see in the floor plans, the basement is just below the ground floor and has the same dimensions. The basement can be accessed via an internal staircase on the right side of the retail space, directly located under the external stairs to the upper floors.
The final category includes stores with the presence of a split-level. In order to get more into detail, the ‘split-level’ category thus covers shops that exist of a single floor level on the front space of the entire retail space and consists of two useful layers at the rear side of the space.

3.9 Split level

An example that can be given to clarify the ‘basement – narrow’ type is the retail space at the Koningstraat 9 in Nijmegen. Here, the basement is situated in the front part of the property and can be reached by an internal staircase on the right side. A small floor height difference of the ground floor takes place in the rear part of the store. This can be achieved by some steps. Because of this lower part of the floor, this part of the property is not included at the basement space.
The first division in this category can be made into ‘split-level – square’. An example is shown by the property at the Nieuwe Markt in Zwolle, number 28. The part of the ground floor under the second floor is lowered in order to create usable space. The access to the upper floors is internal at the right side.

Secondly, the wide property with a split level can be extracted. This category represents premises with a wide shape and the presence of a split level.

A narrow retail space with split-level is the property on the Lange Hezelstraat 46 in Nijmegen. This space receives daylight from two sides, the front façade and side façade. The front space of the retail property consists of a high ceiling of around 3,70 metres. Through an internal stairs on the right side, the second level (split-level) can be reached. Here, daylight openings on the right side provides the space of daylight.
PART 4

Living in Retail
LIVING IN RETAIL

4.1 Introduction

Although already many initiatives have been taken into account to prevent or combat vacancy and the fact that living in retail is appointed in literature, the knowledge of possibilities for living in retail still remains at a global level. This chapter covers all aspects that are involved when dealing with this kind of transformation.

Living above or in the former shop creates opportunities for owners, investors and municipalities, including its financial implications, think Kamps and Boeve (K. Bijserterveld, 2013). Kamps: “Among singles and couples between 18 and 35 years the demand for apartments in the city centre increases with the rising rents as a result.

4.2 Financial feasibility

Transforming retail into living means a change in several financial aspects. First of all, some literature is summarized. Secondly, an calculation example is made for the transformation of two retail stores into two apartments. Conclusions are written at the end of the chapter.

The moment when transformation is financially interesting, is getting closer. In many approach roads this moment will be reached by falling shop rents and an increasing retail vacancy rate. It is important that property owners will get the insight when it is interesting to make apartments in their stores. The involvement of communities and funders is hereby required.

From a real estate perspective, living in the city is less desirable because leased retail costs three to four times more than homes (Bressers, 2011). The rental profit of a shop is by far the highest (Seinpost adviesbureau bv., 2012). In a rented condition, the investment value of a store is the highest of all functions. However, this value decreases when vacancy increases. When this is the case, other functions such as catering, health care and housing will become more interesting, even when an additional investment is required.

Two calculation examples are shown in the figure. A transformation is also interesting for independent contractors with their own shop, if they terminate their store and there is no prospect of good rental perspectives. Metrum believes that a conversion of a retail property into a living area is financially interesting, especially when owners settle for a lower but more certain return (Metrum; Gebiedsontwikke-
“A transformation of retail into living is a possibility which lead to higher returns to the property owner in the long term”, concludes S. van Aarle in an interview with the ‘Living above Retail’ association (S. van Aarle, 2013). The transformation from retail to living requires an investment, but provides a very stable rental income (Metrum; Gebiedsontwikkeling/vastgoedeconomie, 2013).

**Gross initial yield**

To make clear the financial perspective, the ‘Gross initial yield’ (GIY) methodology can be used (Seinpost adviesbureau bv., 2012). The GIY can be used to determine the value of real estate, taking into account the quality of location, property, risk and return. The higher the BAR where the investor counts with, the lower its expectations of the value development of the property. A1 retail locations have the lowest BAR (5,5 – 6%), peripheral locations the highest (7 – 8,5%). The investment value of other functions varies.

Metrum, an consultancy with focus on integrated services within area development and real estate economics, considered the transformation from retail to living financially (Metrum; Gebiedsontwikkeling/vastgoedeconomie, 2013).

The figures above show the cumulative result and the investment value in case a store with an upper vacant floor is converted into two apartments, compared with the situation when nothing happens. The retail property has a floor area of 80 m² and has two different rent levels:

- A store of € 160 / m² per year and a BAR of 8%;
- A store of € 225 / m² per year and a BAR of 7,65%.
After transformation, the apartments of 80 m² have a rent of €560/month with a BAR of 6%. It is assumed that the conversion of two stores into two apartments requests an investment of €80,000.

It is clear that the investment is not recovered quickly. In this case the transformation into living provides direct additional investment value, if the store rent is not too high.

<table>
<thead>
<tr>
<th></th>
<th>Rent</th>
<th>BAR (%)</th>
<th>€ a year</th>
<th>Value</th>
</tr>
</thead>
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<tr>
<td>2 stores of 80 m²</td>
<td>€ 160/m²/year</td>
<td>8</td>
<td>€12,800</td>
<td>€160,000</td>
</tr>
<tr>
<td></td>
<td>€ 225/m²/year</td>
<td>7.65</td>
<td>€18,000</td>
<td>€235,294</td>
</tr>
<tr>
<td>2 apartments of 80 m²</td>
<td>€ 560/month</td>
<td>6</td>
<td>€6,720</td>
<td>€112,000</td>
</tr>
<tr>
<td></td>
<td>€ 560/month</td>
<td>6</td>
<td>€6,720</td>
<td>€112,000</td>
</tr>
</tbody>
</table>

The financiers (banks) have an important role in this process. They are often not in favour for large investments or a change in function, as it affects the value of their collateral for the short term. However, it is important that they make funding available to ensure the long-term returns and the investment value. Doing nothing means that the risk of the financier is increasing: the risk that a loan is not repaid in the future is much larger. The recent government policy to link the rent with the WOZ value can provide an incentive for realizing apartments in downtown areas. Since the property value (WOZ) in city centres is higher than non-urban areas, an higher rent can be asked.

Transformation requires a substantial investment, but given then a stable rental income with limited risks (K. Bijsterveld, 2013). For the owners writing off is the key. In time, you get lower but more stable returns.
4.3 Transformation restrictions

A retail property cannot be transformed in every situation. In this chapter, several limitations are defined, such as the zoning plan as well as the protected cityscape. On each aspect, examples of solutions or recommendations will be named for trying to tackle the problem.

Zoning plan

A zoning plan describes what may happen with properties in a given municipality. The increasing vacancy at B and C locations forces to develop a vision and a flexible zoning; retail functions are simply no longer self-evident everywhere (S. van Aarle, 2013). Municipalities would do well to fully facilitate the transformation of stores to residents in order to counter vacancy and impoverishment (Metrum; Gebiedsontwikkeling/vastgoedeconomie, 2013). It is important that municipalities clearly choose particular retail areas and allow and even encourage transformation elsewhere. They should lay it down in their policy, central vision and zoning plan. This prevents that the conversion of a store to a home becomes a process of several years or it only gets on stream after year of vacancy. Moreover, the addition of a living function contributes to the desire many municipalities’ more livability.

4.4 Design restrictions

Besides restrictions for transformation from retail to living, restrictions that may affect the design can be appointed. They are described below.

Protected cityscape

Historical city centres are often part of the ‘protected cityscape’ (Wikipedia, 2013). A protected cityscape is a group of objects and buildings is protected by the government. This means that the government gives a certain amount of money to the municipality to maintain the historic character of the old town. This scheme is introduced to protect the original appearance of a district. The government implies this to encourage the municipality to preserve and renovate or restore older houses.

The protected cityscape brings along limitations on changing the front façade. Separate rules apply (Rijksoverheid, 2013). Thus, a plan for a protected cityscape is much more detailed than a regular zoning plan. Within a conservation area not every property is a monument. For construction, alteration or demolition of buildings in a protected cityscape different rules apply than in case of normal construction plans in areas without protected designation. A designation to protected
cityscape does not mean that the place is 'locked' (Rijksdienst voor het Cultureel Erfgoed, 2011). However, one needs to take into account the particular aspects for further developments. Once an area is designated, the municipality introduces a zoning plan which includes cultural significance preservation.

Houses that are within a conservation area often provide higher (maintenance) costs for the landlord (Monumenten, 2013). The costs incurred because the lessor is bound to specific requirements and guidelines. Therefore, the owner must have done demonstrable investments for the conservation of historic values and the building must have been built before 1945.

4.5 Target groups

When converting retail into living, it is interesting to know what households are attracted for living in inner cities and what households fits best in existing retail. Many institutions already discussed this subject, these will be consulted for this section. The target groups which are suitable for living in retail can be explored in different ways. In this research, reports that discuss this topic are consulted and practice is used. Namely in practice target groups are given for similar project, for example the Living above Retail.

In the ‘WoON research 2009’ of the Ministry of VROM to the housing needs appears that there is already a shortage of nearly 160,000 homes in urban centres (Wonen boven Winkels Nederland, 2009). Research shows that many different target groups are interested in living in the city. (Bouwfonds Ontwikkeling, 2010). For several target groups there is an increasing demand for living, especially apartments, in city centres within recent years (Metrum; Gebiedsontwikkeling/ vastgoed economie, 2013, Wonen boven Winkels Nederland, 2013). Many of them, especially starters, students and elderly, would like to live in the inner city where they can easily come into contact with other people and where they can find many cultural facilities (Wonen boven Winkels Nederland, 2009). The target groups can be divided into the following categories:

**Single households**

Especially the younger (18-30 years) and older (55-plus) two-person households prefer living in an urban context (Onderzoeksintituut OTB, 2009). This has already been proven in practice: living above shops is especially popular with young couples who have no children and elderly whose children have left the home. More than half of the young, small households want a house with 4-5 rooms. The older, small households (1-2 persons 65+) differ front
the younger households, that 22 per cent would certainly like to have an owner-occupied resident. Furthermore more elderly (over 60%) are looking for an apartment with less (3) rooms.

Families

Not only singles and couples are attracted for living in an inner city, a quarter of all families with children (especially in the age of 40-55 years) focus on the urban environment (Onderzoeksintituut OTB, 2009). Families with children are especially looking for a spacious, ground-based owner occupied house with a garden. It therefore does not differ from the families with children who prefer to live in a non-urban area. It are the features of a city which makes living in an inner city attractive and appealing to this group of households (Onderzoeksintituut OTB, 2009). For this purpose, compared to a family with non-urban preferences, they are satisfied with less space in the resident.
CASE STUDIES

5.1 Introduction

To get more insight in retail categories and transformation, a number of practical examples of retail into living are selected. Case studies are also used to collect usable information for the purpose of designing. The case studies consist of both an inventory of data from history as a visit to the building.

All the case studies are examples of transformed retail into living. First, the situation of the retail before transformation is described. It will be zoomed out to city level to identify what developments have taken place which may have influenced the transformation. Secondly, it is investigated which changes took place within the space of retail during transformation, especially zoomed in on change in function and new use of the original retail space. Visits are made to get deeper into the case.

5.2 Structure of the case studies

The case studies are all described in the same way. This is shortly described below.

General information First, general information is provided about the property and about the size of household. The amount of square meters of the footprint is given as well as the total amount of square meters of the current resident. In addition, the zoning plan is added to give information about the division of functions.

Retail The situation in which the building was in use as a shop is described in this section. The layout and internal organization of the space is discussed. Access to the upper floors will also be shortly described.

Transformation The transformation of the store to living can be seen as the most important part of the case studies. It is expected that lots of information is collected about the ways in which spaces are transformed and how the premises are currently in use.
Living

The transformation of the store to living can be seen as the most important part of the case studies. It is expected that lots of information is collected about the ways in which spaces are transformed and how the premises are currently in use.

Privacy

The ways in which privacy is created will be described in this part of the case studies. This is of importance for the research because practical examples are given how dwellers obtain more privacy behind the existing front façade.

Conclusion

After describing all different aspect of the cases, conclusion can be extracted.

5.3 Zoning plan

For all case studies, the zoning plan is included. This namely gives information about the use and function of the property.
The zoning plan that is used for this report is the zoning plan ‘Binnenstad 2012’. This plan is adopted by the City Council at the 27th of June 2013. The planning area is bordered to the west by the Wateringsevest, the Phoenixstraat and the Westvest. On the south, east and north the border is formed by the middle of the Rhine-Schie canal.

**Legend**

To be able to read the zoning plan, the following legend is added to this chapter. The destinations that occur in the case studies will be extensively described further in the report.

- **Agricultural**
- **Office**
- **Agricultural with values**
- **Social**
- **Industry**
- **Nature**
- **Industrial**
- **Other**
- **Forest**
- **Recreational**
- **Centre**
- **Sports**
- **Culture and recreation**
- **Garden**
- **Retail**
- **Traffic**
- **Services**
- **Water**
- **Mixed use**
- **Living**
- **Green**
- **Living area**
- **Catering**

**Living**

Properties that are designated for ‘living’ designated are intended for: Living and in liaison with homebound exercises of professional and small business activities; associated facilities.
**Mixed use**

In case a property is assigned to the function mixed use, the following conditions may apply: Living and in liaison with homebound exercises of professional and small business activities; services; office; business; cultural facilities; social services; secondary hospitality; associated facilities; indoor bicycle parking.
5.4 Case studies; Living in Retail
Case study I

For the research and further investigation it is better not name the address of this case study. This is due to the fact that the owner did not believe his property has been a retail store and according to his opinion a visit was therefore not appropriate. Although the owner was not interested, relevant drawings and pictures are found in archives and used for explaining the transformation of this property.

General information

<table>
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<tr>
<td>Construction year</td>
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<td>Footprint</td>
<td>86.7 m²</td>
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<td>Adults</td>
<td>Unknown</td>
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<tr>
<td>Children</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

Retail

In this case there is clearly evidence of a selling place at home. The entrance is situated in the middle. One enters directly into the store. The store is connected though double doors to a living space behind. Here, extra daylight is gathered by windows on the other side of the property. From this living space, the second living space or staircase can be reached. The staircase leads you to the floor below, which is also divided into several rooms. The entrance to the upper floors is external located on the left side.

Transformation

The transformation took place in two phases. It is clearly shown in the floor plans that an hallway is created during the first transformation phase. Within this entrance space, a new toilet is placed. The separation by doors between the original retail space and the living space experienced a break through and is used as one living area. The space behind changed function from a living area to the kitchen and a new bathroom is created on the right side of the property. Small changes took place at the external entrance to the upper floors – a change of the position of the stairs and the addition of two daylight openings.

In comparison with the previous transformation, no dramatic changes took place. The toilet in the entrance hall is removed and replaced next to the bathroom. As a result, the entrance hall became larger. In the floor plans we can see a major change in the vertical circulation on the right side of the property. Still, functions did not change of the surrounding spaces. Again, small changes took place at the external entrance of the upper floors.
Living

First, the entrance hall is entered through the middle entrance in the façade. Using the double door in the second wall, the living space can be accessed. This space is used as an living space. The kitchen is located at the back of the property, which finds its way through the stairs. A part of the living space – especially the bedrooms – is located on the floor below. The upper floors are still used separate from the original retail space.

Privacy is created by adding the second façade during the first transformation. Another way how the internal privacy is increased, is by art objects in front of the window. They can only be seen from outside when the curtains are in the open position.

The main changes, interesting for this research, we can find in the front part of the property. Here you can see that there has been a movement of walls to shrink the retail space, which is now in use as an entrance hall.
Case study II

The property chosen for case study II is a building which has originally a retail space in the front part of the whole. An external entrance gives access to the upper floors.

General information

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<td>Footprint</td>
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<td>237 m²</td>
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<td>Adults</td>
<td>2</td>
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<tr>
<td>Children</td>
<td>0</td>
</tr>
</tbody>
</table>

Retail

When retail was still present in the building, the retail space functioned as a selling place at home. Before the retail space was transformed, a printing company settled in the property. Hence, the space in front of the building was in use as a little office space. Previously, a butcher was located within the space. The entrance to the shop is located on the right side of the property. While entering the property, one comes up in a small hall, where after the retail space can be reached. On the left side of the space a storage room is situated which was used when the building was in use by the butchery to keep cool the meat. Previously there was an outside between the front part and the rear part. In the rear, two houses are merged into a living area. The entrance of the living space is in the back of the store, on the left side. Here, a hallway leads you to the toilet, kitchen and living room. The living space consists of two floor levels – the ground floor and an upper floor. Bedrooms and a bathroom a located on the second floor. The whole property consists of a total of three floor levels. The upper floors can be accessed via the external stairs on the left side of the building. The top floor is less deep than the other floors, thus a balcony is created.

Transformation

The original shopping area is only used for reading and relaxation. An inner wall is introduced to create storage for books. At the end of the space, an area is designed as an office space. The upper floors can still be accessed via the external entrance.

The residents does not experience any interruption from the large shop front, they actually think it is nice to look to passers-by. In order to create some privacy they hung stained glass windows on two sides of the window. When they need more privacy, they just close the curtains.
**Living**

No major changes took place during transformation. Notable is the removal of the front space. Through this transformation, the original retail space has increased in size and is directly facing the street.
Case study III

The case study located at the Kolk 12 in Delft is included in this research because it relatively has a small footprint and an external access to the upper floors is present.

General information

<table>
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<th>Information</th>
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<td>Construction year</td>
<td>1550</td>
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<tr>
<td>Footprint</td>
<td>38 m²</td>
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<tr>
<td>Total floor area</td>
<td>149 m²</td>
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<tr>
<td>Adults</td>
<td>2</td>
</tr>
<tr>
<td>Children</td>
<td>0</td>
</tr>
</tbody>
</table>

Retail

The retail space has a total floor area of 31,0 m². The space can be accessed via a middle entrance. The upper floors can be reached by an external stairs within the right side of the property.

Transformation

The transformation of this case study took place in a different way than expected. Unfortunately, it cannot always be seen from the façade that the whole property is turned into one resident. Here, the external access to the upper floors is removed and replaced by an inner spiral stairs through which one can reach the upper floors. By removing the staircase, the space is absorbed by the original space. Now there is also a presence of two entrances for one resident. A new division is made in order to create a new bathroom and sauna. The rear part of the floor is raised so that the basement is better useful. Because of the fact that the floor is raised, a new space is unconsciously created just behind the front façade. This space is in use as wardrobe and storage.

Living

The first floor can be entered by the middle entrance. Here, a space is created for storage and a wardrobe. Through the stairs, the raised floor can be reached, which is in use as a little office space. Next to this, two separate rooms are created including a bathroom and sauna. Underneath the raised floor, a small basement is present. The external entrance to the upper floors is removed and replaced by a spiral stairs within the original retail space. This means that both first floor and upper floors are connected. The original entrance door which is located on the right side, is not in use anymore, but is still present. Through the stairs, the kitchen on the second floor can be accessed. The kitchen and dining area takes up the whole
second floor space, even as the bedroom and bathroom takes up the third floor. On the top floor, the fourth floor, a space is created for relaxation.

Privacy
Privacy is reached by the owners through horizontal blinds. They can be closed when more privacy is desired, but in most cases blinds are open.
**Case study IV**

A good example of a case study which represents properties whereby the internal organization of the building cannot be read from the façade is a property at the Verwersdijk 88.

**General information**

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<td>Adults</td>
<td>2</td>
</tr>
<tr>
<td>Children</td>
<td>2</td>
</tr>
</tbody>
</table>

**Retail**

As we can see in the floor plan, the original retail space covered the whole space on the first floor of the property. The entrance of the store was located within the porch on the right side. The presence of an inner garden created more daylight to the space. In the back of the property – behind the patio – a pigeon cultivation was present. Besides, there used to be a courtyard in the back. The other door, the door which is perpendicular to the road, functioned as the entrance to the living area on the upper floors, which is connected with a stairs.

**Transformation**

It is clearly important to note that a rigorous transformation has taken place. First of all, the upper floors are connected with the floor area located on the first floor when the store was changed to a home. This means that the whole property is in use for one resident. The staircase on the left side of the property is removed and replaced within the original retail space. The space where the stairs was located became a storage room for the bicycles of the household. Important to note is the fact that, before the current owners settled down in their resident, an open kitchen was present in the original retail space. This is removed during the last transformation.

**Living**

Today, the house is occupied by a household of four people, two adults and two young children. The current owners have not transformed the space. This is done by previous residents. The entrance of the house is located at the same place as the entrance of the store, in the porch on the right side. One enters first into a hallway. This hallway is closed off from the rest of the space by windows with a double door.
The living space next to the hall can be seen as a residual space. It has no specific function and is sometimes used for work or for reading. In this room there is also the stairs which connects the first floor with the upper floors. On the ground floor there is a patio, which provides plenty of natural light. The patio marks the end of the original store. Next to the patio a corridor is located which leads you to the master bedroom and bathroom. The master bedroom is situated on a small garden, connected by a big window with double doors.

Through the rotated stairs, the living room on the second floor – located at the front of the house can be reached. The kitchen is located at the rear of the house on the first floor. This can be reached through a corridor that runs next to the patio. Here a modern kitchen and dining table are present. A second stairs leads you to the second floor, where two bedrooms for the children are situated. In between the two room is a small bathroom. The second floor has a sloping roof. In the kitchen there is a staircase leading to the roof terrace, which is located on the second floor.

Privacy
There are no curtains in the hall at the side of the street. This is due to the fact that the owner does not suffer from the people passing by, and by the fact that the owner did not have any preference for precautionary measures, such as curtains or blinds.
Case study V

The Oude Delft 178 is included in the case studies because a large change took place on the façade. This is shown in the pictures below. The original store is no longer recognizable as a store.

General information

<table>
<thead>
<tr>
<th>Address</th>
<th>Oude Delft 178</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction year</td>
<td>1700</td>
</tr>
<tr>
<td>Footprint</td>
<td>124,1 m²</td>
</tr>
<tr>
<td>Total floor area</td>
<td>102 m²</td>
</tr>
<tr>
<td>Adults</td>
<td>Unknown</td>
</tr>
<tr>
<td>Children</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

Retail

Unfortunately nothing is known about the period the property was in use as a retail store. Only from the old pictures can be seen that the front façade consisted of two entrances door, which probably one of them functioned as the entrance for the upper levels.

Transformation

As already mentioned in the introduction of this case study and as it can be seen from the pictures above, a major change took place at the façade. Here, the whole shop front with its two entrances on both sides are removed and replaced by two windows and a new front door. The rest space in and around the windows is filled in with brickwork, matching the brickwork from the upper floors. The new windows also match with the windows above. The top of the door is a small reminder of the original store front.

Living

As can be seen from existing drawing of the house, the entrance is located on the right side of the property. Through the entrance door the study area is reached first. This is in direct connection with the kitchen behind, but also through a long corridor to the living room which is located at the rear part of the property. The dining room is located in between the kitchen and the living room. At the rear a spacious garden is present, which is directly connected with the living room. A small storage building is located in the garden for the purpose storage the tools needed for the garden. Via the internal stairs the upper floors can be reached. They are part of the ground floor and consists of bedrooms and a bathrooms.
Privacy
In this case it is clear to see that privacy is created through a change of the whole façade. The big store front window is replaced by two small windows. Because of this major change, passers-by notice that this property is in use as a house.
Case study VI

The Oude Delft 224 is chosen to use as case study because during transformation the whole façade changed. Therefore, the original retail store is not recognizable anymore.

General information

<table>
<thead>
<tr>
<th>Address</th>
<th>Oude Delft 224</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction year</td>
<td>1760</td>
</tr>
<tr>
<td>Footprint</td>
<td>167.7 m²</td>
</tr>
<tr>
<td>Total floor area</td>
<td>172 m²</td>
</tr>
<tr>
<td>Adults</td>
<td>Unknown</td>
</tr>
<tr>
<td>Children</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

Retail

By using drawings from the time the building still consisted of a store, it can be seen that the store is only located in the front part of the property. One enters through the side entrance which is deepened. Here you have the choice of two entrances, one that leads you directly into the store, the other which can reach the living room through a long corridor. Through this corridor also the back of the property is accessible. In addition, the staircase which provides access to the upper floors can also be reached by the same corridor. The shop is attached to a conservatory, which also is connected to a courtyard. A small living room and kitchen are located on the right back side of the property.

The upper floor is divided into two houses. The front part is a separate home. On the first floor this is a living room, kitchen and bedroom, on the second floor bedrooms and a bathroom. At the rear of the building the bedroom is located which is associated with the living area on the ground floor.

Transformation

During a transformation of the store in 1989, the façade changed. In this time the total façade is removed and a new façade is created with two windows and a new entrance door. The entrance has remained on the same side. This gives access to a corridor that leads you to the entrance of the store and the living quarters in the back. The garden has been preserved. The upper floors are accessed via an internal staircase, only these parts are now merged into one house, belonging to the ground floor.

A drawing from 1998 shows a transformation. In this case the shop disappeared and has been replaces by an office space. The office is directly connected to the
hallway and conservatory. The garden is no longer present. Here a part of the greenhouse and a shed is located. The first floor also includes offices and the second floor is divided into living quarters.

**Living**
The living space is in this case study surprisingly not located in the room that used to be a shop. This again proves that there are other things that can happen behind the façade than we think.

**Privacy**
Privacy is created in a similar way as the case study mentioned before. Though the major façade change and the application of two relatively small windows the privacy level is raised.
Case study VII

The twelfth case study is chosen because the façade changed during time. This can be seen from the pictures below. Different than other case studies with a façade change during transformation, is that this facades changed only in shape and not in function. It still remained façade for a retail store.

General information

<table>
<thead>
<tr>
<th>Address</th>
<th>Voorstraat 50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction year</td>
<td>1749</td>
</tr>
<tr>
<td>Footprint</td>
<td>63,4 m²</td>
</tr>
<tr>
<td>Total floor area</td>
<td>130 m²</td>
</tr>
<tr>
<td>Adults</td>
<td>Unknown</td>
</tr>
<tr>
<td>Children</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

Transformation

As can be seen from the pictures and from the floor plans, the façade changed during transformation. First, the façade consisted only out of one entrance door located in the middle of the façade. During transformation, the façade got two entrances, one for the store and want that belonged to the external access to reach the upper floors above the shop.
Case study VIII

A property at the Oude Delft number 176 in Delft is chosen to include within this research because during transformation an inner garden is created. Other features of this case study will be outlined below.

General information

<table>
<thead>
<tr>
<th>Address</th>
<th>Oude Delft 176</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction year</td>
<td>1800</td>
</tr>
<tr>
<td>Footprint</td>
<td>83,4 m²</td>
</tr>
<tr>
<td>Total floor area</td>
<td>184 m²</td>
</tr>
<tr>
<td>Adults</td>
<td>Unknown</td>
</tr>
<tr>
<td>Children</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

Retail

When the property was still in use as a retail space, the retail space functioned as a selling place at home. Here, the retail space was located in the front part of the building, connected to a living space behind. The living space consisted out of a kitchen in the rear part of the ground floor, a storage room, the living room, a toilet and an hallway including a stairs which leaded to the upper floors. Here, the upper floors were connected to the ground floor and was in use as one resident plus retail space. The retail space used to be a store for bicycle and motor trade.

Transformation

During transformation, the inner organization remained quite similar but the functions shifted. The retail space was replaced by the living room, the living room replaced by the kitchen and the original kitchen space replaced by an inner garden. The hallway, toilet and staircase changed but stayed on the same position. The inner garden offers more daylight into the living spaces.

Living

After passing the entrance door, which is located in the middle of the facade, one comes directly in the living space. From the living quarters the kitchen and hallway can be reached. The kitchen is connected to an inner garden, which provides more daylight into the space. A small storage room is located next to the inner garden. A toilet can be accessed via the hallway, even as the stairs which leads you to the upper floors.
Privacy

To increase the amount of privacy at the front part of the ground floor, curtains are placed. In addition, there are also objects placed in front of the facade to increase the boundary between public and private.
Case study IX

The case study at the Voorstraat 48 is chosen because two interesting transformations took place during time. First, the space was in use as a resident. In 1969, the function changed from living to retail and one retail space was created. In 2008, the property changed again and the living function came back.

General information

<table>
<thead>
<tr>
<th>Adress</th>
<th>Voorstraat 48</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction year</td>
<td>1790</td>
</tr>
<tr>
<td>Footprint</td>
<td>70,8 m2</td>
</tr>
<tr>
<td>Total floor area</td>
<td>153 m2</td>
</tr>
<tr>
<td>Adults</td>
<td>Unknown</td>
</tr>
<tr>
<td>Children</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

Retail

On the floor plan of 1969, the situation of the retail store is sketched. Here one can see that the store existed only out of one space. A toilet was present against the right wall. The upper floors could be reached by an external stairs located on the right side of the property.

Transformation

The transformed can be separated into two phases. A major transformation took place in 1969. Not only the internal organization changed, also the external performance. It is clearly shown in the floor plans that the entrance door of the property is removed and replaced on the other side of the façade. In addition, the internal access to the upper floors moved outward. The internal organization of walls and separation of spaces is removed, causing the emerge of a large retail space. The existing toilet is removed and replaced against the stairs.

At the following transformation the internal organization of the building came back, but not in the original position. It is clearly shown in the floor plans that the ground floor emerged with the upper floors, because of the internal entrance to above. The kitchen is situated at the front of the property, separated from the street by an entrance area. The kitchen area is lifted to create a boundary between both functions. From the kitchen and dining space, the living room can be accessed. This function is directly connected to outside by the introduction of an inner garden at the rear.

Living

Through the entrance on the right side of the façade, one first enters the entrance hall, in which to options are given: going to the upper levels by stairs or taking the
door on the right to the living spaces. Here, once again a sort of entrance hall is created. A little stairs leads one to the kitchen, located on the raised part of the floor. The kitchen gives access to both the stairs to the upper levels and the living room behind. The living room is connected with the inner garden, located at the rear part of the ground floor. Here, daylight openings are created to gain more daylight in the living room.

Privacy
A part of the privacy is created by the lifted floor at the kitchen area. As a result a boundary is created between public and private. Expected to be unconscious, more privacy is acquired by the installation of craft bits of the children against the inner side of the façade. A bench is places in front of the façade in order to create, perhaps unconsciously, a clearer separation between public and private.
Case study X

Voorstraat 38 is chosen to use as case study because there is a split-level. On the old picture is shown that the property used to be a passage. The question rises if this property have even been a retail property, but the façade has all the characteristics for a retail store. The transformation of the building into an house meant the addition of a floor level, the so-called split-level.

General information

<table>
<thead>
<tr>
<th>Adress</th>
<th>Voorstraat 38</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction year</td>
<td>1883</td>
</tr>
<tr>
<td>Footprint</td>
<td>217,1 m²</td>
</tr>
<tr>
<td>Total floor area</td>
<td>203 m²</td>
</tr>
<tr>
<td>Adults</td>
<td>Unknown</td>
</tr>
<tr>
<td>Children</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

Retail

In the archive no information could be found about what was situated in the Voorstraat 38. In floor plans, the whole complex was one property, later divided into several.

Transformation

The results of transformation are already mentioned above.

Living

The entrance of the property is located on the right side of the façade. We can see in the floor plans that, after entering the property through the entrance door, a small and narrow entrance hall is entered. This entrance hall is created by the floor of the split-level and gives access to the upper floor with a little stairs. From this level, one can choose either to go to the bedrooms at the basement/ground floor or go to the living area on the second level of the property. Two bedrooms are located on the side of the façade. Here, daylight is created by daylight openings below the floor of the split level. One bedroom, the master bedroom, is located at the rear part of the building. On the second floor, which can be accessed through a staircase on split-level, a kitchen and living space are present. People can also go outside to the terrace located at the back of the property.

Privacy

Privacy is unconsciousness created through the split-level. Therefore, when passers-by are looking inside, they watch against the edge of the floor. In addition, there is also created a kind of transition area by the presence of the split-level.
Case studies; Privacy
For the purpose of designing, some case studies are done to collect information about in what ways privacy can be increased. Several properties are chosen to explain the examples. The information is read from the use of the space in front of the façade, the space behind the façade and the façade itself.

Window film
Window film is primarily focussed to interfere the view from outside to inside. By applying window film, the privacy is increased. In addition, the risk of burglary is reduced because it is difficult to see what's inside. Different kinds of window film are one the market:
- The matt films to use as a privacy barrier. In the pictures below they are applied. These films show plenty of light, but is opaque from both sides
- The light barrier films are available in many colours and opaque from both sides. The accept little light transmission
- Mirror films: prevents exposure, but dwellers can freely look outside

Curtains
Curtains are used in many cases in order to obtain more privacy from the street. This is also nominated in several case studies presented in the previous chapter. When more privacy is needed, the curtains are closed, with the negative effect that less natural light comes in and that one cannot look anymore from inside to outside.

Objects in front of façade
In many cases, objects are applied in front of the façade to indicate a clearer separation between public and private. For example, this can be done by placing a bench in front of the façade of by situating plants. As
Objects behind façade

It was also noticed that many residents place objects behind the façade in order to focus the attention of the passers-by on something else instead of inwards. These objects may be located both on the windowsill and behind the window. Examples are plants or artworks on the windowsill or stained glass or paintings against the window. Below some practical examples are shown.

5.1 Conclusions

To get more insight in retail categories and transformation, a number of practical examples of retail into living are described. The case studies are also used to collect usable information of the purpose of designing. The case studies consist of both an inventory of data from history as a visit to the building.

Internal organization

After analyzing all case studies, similarities can be found and extracted. All case studies have shown different ways of transformation, for example changing the whole façade or connecting the ground floor with the upper floors. The groups are shortly described below.

Double entrance

The first group of case studies can be divided into the properties with two entrances at the façade on the ground floor. Two of the four case studies kept the two entrances (Anonymous and Kolk 11), but the other two did not (Kolk 12 and Verwersdijk 88). Here, the owners connected the upper floors with the ground floor, creating one living area in the entire property. Kolk 12 removed and replaced the whole staircase, while Verwersdijk 88 kept the space of the original staircase and transformed the use of it to a storage room for bicycles. Those case studies show that it cannot be seen from the façade that this kind of transformation took place, a visit and the archives was needed to come to this conclusion.

Façade change

Then surprisingly, relatively many façade changes occurred, this is for example the
case at the Voorstraat 50. It used to be an historical store façade with an entrance located in the middle. There was no private access to the upper floors, guessing this should be inside during this time. During transformation, the façade changed into a façade with two entrance doors, probably one for the store and one for the upper levels. A second example can be shown by the Oude Delft 224. The façade during retail is totally removed and replaces by a façade with two windows and one entrance door. Only from the top of the entrance door, the original storefront can be recognized, it is just what shortened. The rest of the façade is filled in with brickwork, matching the brickwork used at the upper levels. An almost similar façade change happened at the Oude Delft 178. Here, also the entire original storefront is removed and replaced by a new façade with two window frames and one entrance door. The entrance door still has its top detail originating from the storefront.

Inner garden
In some cases it can be extracted that an inner garden is created during transformation from retail into living, for example the property at the Oude Delft 176. Here, all functions has been shifted by the removal of the retail function and some place came free to create an inner garden at the back of the property. Because of this inner garden, more opportunities are created for living. A similar case is the Voorstraat 48, where almost the whole internal organization changed and an inner garden is implemented at the back of the property. This created more daylight for the living space.

Split level
A nice example of split-level can be shown by the Voorstraat 38. Here, the living spaces are located from the split-level to the top, and the sleeping area is located in the bottom part of the property. Through to this split-level, privacy is unconsciousness created. Therefore, when passers-by are looking inside, they watch against the edge of the floor. In addition, there is also created a kind of transition area by the presence of the split-level.

Entrance hall behind façade
If we look at the movement of function after transformation from retail into living, we often can see that the retail function is replaced with a living area, for example to read a book or to have some dinner. In some cases, for example Anonymous, an entrance hall is created directly located behind the façade, which connects the living area behind with the outdoor. A similar case study is the Verwersdijk, where also an entrance area is created. At the Kolk 11, we can see that, by raising the back part of the ground floor, a sort of entrance hall is created, similar to what happened with the property at Voorstraat 48.
Privacy

For the purpose of designing, some case studies are done to collect information about in what ways privacy can be increased. Several properties are chosen to explain the examples. The information is read from the use of the space in front of the façade, the space behind the façade and the façade itself. From all case studies done to find out ways to increase privacy, some solutions come forward.

First of all, the window film is a popular way of increasing privacy for the inhabitants. The advantage of more privacy for the owner, also create a drawback, namely that also the owner cannot look through the window anymore, unless he or she or stand on a chair. It is both placed on eye level for the passers-by as well as for the owner, unless of course the floor level varies.

A second common principle to create more privacy is the use of curtains, which can be, for the entire street, a thorn in the eye, because they are often closed. Objects in front of the façade are unconsciousness placed objects with the effect that it creates more privacy. For example bicycles are stalled, which encounters
PART 1

Conclusions
### 5.1 Introduction

The demand for retail space is decreasing. This is caused by several developments. First, a change occurred in consumer confidences. This means that shopping has become leisure instead of purchasing goods. Competition between shopping areas is growing rapidly and therefore quality and experience will be crucial to the functioning of a shopping area. Secondly, buying products over the internet is a growing phenomenon. As a result, both the number of shop visits and the number of purchases decreases. Besides, the population is aging and generally older people spend less than consumers in the working phase of their lives. In addition, the problem of aging population is in many cases connected with a shrinking in population and households are getting smaller.

Another cause of the increase of vacancy is the increase of the number of square meters per store. As a result of scaling, the floor area of retail units in inner cities fits less well with the requirements of some retailers. Besides, consumers are willing to make larger distances to go shopping in an attractive environment and they are becoming more demanding; they want to get anywhere easily by car, free parking and the choice from a wide range of products.

Regionally, there are large differences in retail vacancy. Secondary and tertiary shopping areas often reach only a limited part of consumers, due to the fact that this part of the city is not connected optimally to the pedestrian routes. Vacancy affects multiple actors; government, companies, project developers, town and shopping manager and of course the visitors. Already many initiatives has been made for trying to solve the vacancy in retail.

### 1.1.1 Categorizing retail

All stores included within the research are classified according to different aspects: Floor levels; floor area; shop front; Depth; Length/width rate; Available since; construction year; entrance; access; daylight; location.

Most of the stores have only a single floor, the ground floor (284 stores). 101 stores have both a ground floor as a basement. Retail stores with a total floor space equal or larger than 50 m² and less than 100 m² are most frequent with an amount of 169. If we look at the division per 10 m² we see that stores with a total floor space equal or larger than 70 m² and less than 80 m² are most frequent (40 stores), closely followed by stores equal or larger than 60 m² and less than 70 m² and, stores equal or larger than 50 m² and less than 60 m². If we look at how much each total floor area have a single floor; Stores with one single floor and with a total floor area equal or larger than 60 m² and less than 70 m² and stores equal or larger than 100 m² and less than 110 m² are most frequent with both an amount of
24 stores. The group equal to or larger than 5 metres and less than 6 metres is the most common group talking about the width of the shop front with an amount of 98 stores. The middle entrance is most frequently (125), closely following by the side entrance (123).

Retail stores located in a B1 segment are most frequent with an amount of 135, closely followed by 112 stores located in the A2 segment. Surprisingly, the third in line are stores located in an A1 segment with an amount of 81 stores. This result does definitely not correspond to the facts and speculations that are described in literature. The explanation that can be given is that this study is limited to historical inner cities and so do not represent the entire Dutch retail market. Though, it can be noted that the difference between the number of stores in the A segment with the number of properties in the C segment is of such magnitude that the explanation of limitation of the research cannot be the only reason. Because the research region is limited to historic city centres, it is logical that most of the properties are constructed before the year of 1906, 152 stores to be exact. In most cases, the dwelling which is located on top of the store, can be accessed via a private entrance from outside (271 stores). In certain cases, 57 in total, the upper house can only be reached through a stairs within the store.

All the above mentioned aspects are used to describe the categories. All properties can be divided into the following categories. Classification within these categories can be made within the shape of the property; square; wide or narrow.

**Extern**

The category ‘extern’ includes properties with an external access to the upper floors. This means two entrance doors are present in the front façade or in the open porch.

**Intern**

The second category that emerged from the research is the category ‘intern’. A big difference compared to the first category ‘extern’ is that the access to the upper floors is organized internally. This means that if one wants to enter the upper floors, one enters first the retail space before reaching the rising point which leads them to the upper floors.

**Double daylight**

There are also retail properties on the retail market with a presence of two times daylight. There are, in addition to the division in proportions, three possible options within this category: daylight from the front façade and the opposite back side,
daylight from front and around the corner (property on a corner) and daylight from the front façade and through an inner garden.

**Basement**

The above-mentioned categories all represent retail spaces which consists of one floor layer, the ground floor. Although there are also retail spaces which use more than one floor layer, the ground floor and the basement.

**Split level**

The final category includes stores with the presence of a split-level. In order to get more into detail, the ‘split-level’ category thus covers shops that exist of a single floor level on the front space of the entire retail space and consists of two useful layers at the rear side of the space.

The most common categories are properties which consists of a narrow retail space. Here, examples could be found for each category mentioned above.

### 1.1.1 Restrictions

Transforming retail into living means a change in several financial aspects. The moment when transformation is financially interesting, is getting closer. In many approach roads this moment will be reached by falling shop rents and an increasing retail vacancy rate. It is important that property owners will get the insight when it is interesting to make apartments in their stores. The involvement of communities and funders is hereby required. Transformation from retail to living requires a substantial investment, but given then a stable rental income with limited risks.

A retail property cannot be transformed in every situation. A zoning plan for example describes what may happen with properties in a given municipality. The increasing vacancy at B and C locations forces to develop a vision and a flexible zoning; retail functions are simply no longer self-evident everywhere. It is important that municipalities clearly choose particular retail areas and allow and even encourage transformation elsewhere. This prevents that the conversion of a store to a home becomes a process of several years or it only gets on stream after year of vacancy. Moreover, the addition of a living function contributes to the desire many municipalities’ more livability. Besides restrictions for transformation from retail into living, there are restrictions that may affect the design, for example the protected cityscape. Historical city centres are often part of the ‘protected cityscape’. A protected cityscape is a group of objects and buildings is protected by the government. The protected cityscape brings along limitations on changing the front façade. Separate rules apply.
1.1.1 Target groups

Single households are a target group which is attracted for living in retail. This has already been proven in practice: living above shops is especially popular with young couples who have no children and elderly whose children have left the home. Not only singles and couples are attracted for living in an inner city, a quarter of all families with children (especially in the age of 40-55 years) focus on the urban environment. It are the features of a city which makes living in an inner city attractive and appealing to this group of households.

1.1.1 Case studies

There are already several practical examples of retail into living and similarities can be found and extracted.

*Double entrance*

The first group of case studies can be divided into the properties with two entrances at the façade on the ground floor. It cannot be seen from the façade that an inside transformation took place. In some cases, the whole staircase is removed and replaced by another function.

*Facade change*

Surprisingly, relatively many façade changes occurred. In one case the front façade used to be an historical store façade with an entrance located in the middle. There was no private access to the upper floors, guessing this should be inside during this time. During transformation, the façade changed into a façade with two entrance doors, probably one for the store and one for the upper levels. A second type of façade change is shown by the total removal of the façade and replacement of a façade with two windows and one entrance door. Only from the top of the entrance door, the original storefront can be recognized. The rest of the façade is filled in with brickwork, matching the brickwork used at the upper levels.

*Inner garden*

In some cases an inner garden is created during transformation from retail into living. Here, all functions has been shifted by the removal of the retail function and some place came free to create an inner garden at the back of the property. Because of this inner garden, more opportunities are created for living.
**Split level**

A split-level is an example of how privacy can be unconsciousness created. Therefore, when passers-by are looking inside, they watch against the edge of the floor. In addition, there is also created a kind of transition area by the presence of the split-level.

**Entrance hall behind facade**

The retail space is often replaced by a living area, for example to read a book or to have some dinner. In several cases, an entrance hall is created directly located behind the façade, which connects the living area behind with the outdoor street.

**Privacy**

The privacy at the front façade is a subject which can be treated separately. First of all, the window film is a popular way of increasing privacy for the inhabitants. The advantage of more privacy for the owner, also create a drawback, namely that also the owner cannot look through the window anymore, unless he or she or stand on a chair. It is both placed on eye level for the passers-by as well as for the owner, unless off course the floor level varies. A second common principle to create more privacy is the use of curtains, which can be, for the entire street, a thorn in the eye, because they are often closed. Objects in front of the façade are unconsciousness placed objects with the effect that it creates more privacy. For example bicycles are stalled, which encounters filled space in front of the façade and blocks a part of the view from outside to inside. Plants and benches are placed to create some greenery and to sit, but also creates more privacy. Passers-by feel that something different is happening with the results that they pass by with a more insecure feeling about looking inside. Objects behind the façade are used in order to focus the attention of the passers-by on something else instead of inwards. These objects may be located both on the windowsill and behind the window.
5.1 **Recommendations**

In order to provide the complete answer to the predetermined research question, the design need to be added to this thesis. This is in fact part of the whole project. Without design, the project is not completed. During research, all sub questions are answered, except for the one related to the design:

*What steps has to be taken in order to transform retail into living?*

If this question can be answered, the ability is created to answer the main research question:

*What are the possibilities for transformation of existing retail into living in order to minimize the decline in urban quality in Dutch historical inner cities?*
PART 1

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5.1 References

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