

AR3A010 Research plan

The gap in the market



INDEX

1. Introduction	04
1.1 Personal motivation HA Lab	
1.2 Context of research	
1.2.1 Vacancy of Vroom en Dreesmann	
1.2.2 Faded glory of department stores	
1.2.3 Decline of the physical store	
1.2.4 The circularity gap	
2. Goal of research	10
2.1 Problem statement	
2.1.1 Changing retail landscape	
2.1.2 The retail life cycle	
2.1.3 Life cycle of building layers	
2.1.4 Take - Make - Waste	
2.1.5 The circularity gap	
2.2 Research aims	
2.2.1 Collective research aim	
2.2.2 Individual research aim	
2.3 Research questions	
2.4 Location choice	
3. Process of research	20
3.1 Methodology Spatial Building typology	
3.2 Methodology Individual research	
3.1.1 Literature research	
3.1.2 Historical research	
3.1.3 Program research	
3.1.4 Casestudies	
3.1.5 Scenario thinking	

4. Reflection 26

4.1 Heritage & Architecture - Vacant Heritage

4.2 Relevance Spatial Building Typology

4.3 Relevance individual research

5. Bibliography 30

5.1 Referencelist

1.INTRODUCTION

1.1 Personal motivation HA Lab

For my graduation subject I first started looking for a fascination or a problem in society that moves me internally to investigate and tackle. The master architecture aroused a personal fascination in the search for the physical store of the future. This studio will be an extension and continuation of my own research that I started during a Ornamatics Course (Form studies). I researched the role and values of physical department stores in this digital age, with the monumental Bijenkorf in The Hague as a case study. Due to the changed retail landscape, prestigious department stores seem to have been reduced to an empty shell: a monumental facade that envelops a contrasting minimalist space, in which the major brands sell their products to customers. In addition, there has been a transition in recent decades from physical stores with social interaction to an individual and digital environment where everything can be bought with a few mouse clicks. The role of the physical store and the architecture as a mediator between the customer and the product is therefore increasingly in the background. These changing retail strategies, social habits and behavioral patterns require a change of the individual building, the spatial layout and the accompanying program. Besides, the relationship between retail and the public space of the city have my interest.

For my History thesis in MSc2 I researched the shifts in the main markets in the city center of Zwolle. In this research, I have mapped the influence of various economic developments on the urban fabric of Zwolle for the period 1200-1700 on the basis of archive and literature research. Interesting in particular is the influence of various economic activities on urban development interventions and the development of various centers and focal points in the city center. A relevant conclusion from this research is that economic activities are inextricably linked to the public space of the city.

One major relevant social issue that I would like to involve in my graduation is the consuming and non-sustainable lifestyle that we adopt in the Netherlands and which is encouraged by society itself. At the moment, we as a society are faced with the challenge of actively thinking about our consumption behavior in relation to our responsibility to the earth. Various spatial adjustments in the built environment also fit in with this. As an future architect I feel responsibility to be part of the solution. It seems interesting to me to investigate whether an old retail building (an icon of consumption) can be actively used to encourage people to live more sustainably and be part of the transition towards a sustainable society.



Image
 Vacant Vroom
 & Dreesmann
 department store in
 Leiden
 Source:

1.2 Context research

1.2.1 Vacancy of Vroom & Dreesman

In this graduation studio, the vacant buildings of the former V&D are the central topic. V&D started in 1889 as Magazijn de Zon, when brothers-in-law Willem Vroom and Anton Dreesmann set up a shop with a variety of products were sold at competitive prices. Due to growing popularity of this retail

concept, the brothers-in-law opened the very first department store in the Netherlands in 1912: Vroom & Dreesmann. During the twentieth century this retail chain for the middle segment experienced strong growth, becoming the largest department store group in the country.

From the emergence of the Internet in the early 1990s, V&D fell into decline. Finally, after several deferments of payment, the V&D was officially declared bankrupt in

December 2015. This ended a long history of the department store in the Dutch inner cities. The bankruptcy left almost 350,000 square meters of retail space vacant and created a gap in the heart of the city in about 60 inner cities. Most of these vacant V&D buildings are considered as monumental heritage because of their historical and social value for the city.

1.2.2 Faded glory of department stores

Throughout history one can notice recurring waves of change in the retail industry, each after a period of about 50 years. Each wave of change in the retail industry does not eliminate what preceded it, but it changes the urban fabric as well as the retail landscape and redefines consumer expectations.

The historical era of department stores followed after a period in which the economy of cities consisted mainly of small shops. From 1800 the Grand Magasin made an advance in France, introducing a modern type of retail: the department store. The rise of these temples of consumption mid-19th century was due to various technological innovations, industrialization and the invention of the train and railway. Department stores over time represented an image of economic and technological innovation, of trend sets and social revolutions. They defined a lifestyle while providing the necessities and luxuries

that the lifestyle brought (Miller, 1981). These department stores were also closely linked to everyday life and formed a spatial extension of the public space in the end of the 19th century.

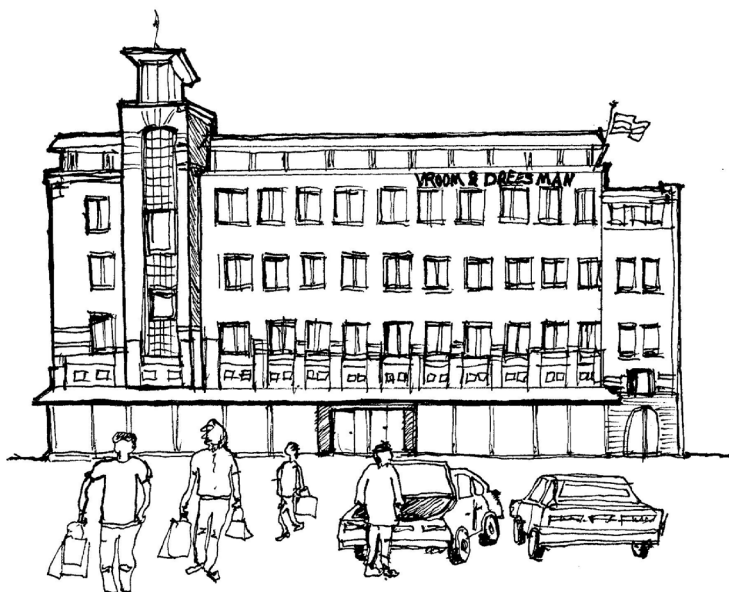
In the mid-20th century, stimulation of the consumer society, the rise of the car and the expansion of cities created sub-urban shopping centers with specialty shops. The shopping centers were a formidable competitor for the department stores that were mainly located in the inner cities of the Netherlands (Miller, 1981). The latest development in the retail industry is the digitization of shopping, where the customer can buy products from home with a few mouse clicks. Department stores were unwieldy and could no longer keep up with the rapid changes in the retail landscape. The failure of the department store concept was once again confirmed with the failed takeover of V&D by the Hudson Bay. It could be argued that the concept of the large department store is over for good.

Au Bon Marché



Image

Own illustration of
The Bon Marche as a
representation of the
middle class in 1850



Image

Own illustration
of the Vroom &
Dreesmann in
Leiden as icon of the
consumption society

1.2.3 Decline of stores in the city centre

The threats which the V&D department stores faced also apply to other physical stores in Dutch city centers. Physical stores became less relevant due to the growth of internet purchases and a new shopping behavior. According to vacancy rates approximately 3 million square meters of retail space was empty in the Netherlands in 2015 (De Jonge, 2017).

Despite the demise of the department store concept and the growing retail vacancy, the importance of shopping in society has only grown. In today's society, shopping has become part of our lifestyle, a social activity, suitable for relaxation and identity-making. Moreover, shopping is seen as the medium through which the market economy keeps a grip on our spaces, buildings, cities, activities and lives (Chung, 2001: 129). Shopping became the defining activity of public life. The demand for physical stores in the city center will persist in the future, but must be reinvented to meet the changes in society. It is a paradox that shopping is not just something that threatens to destroy or fragment the city, but has also been put forward as something that can enrich city life (Karrhölml, 2012: 5-7). The reinvention of the physical store and its spatial consequences for public space could be crucial parts for the rediscovery and revitalization of this city center. But the role

and spatial design of the physical store are fundamentally changing.

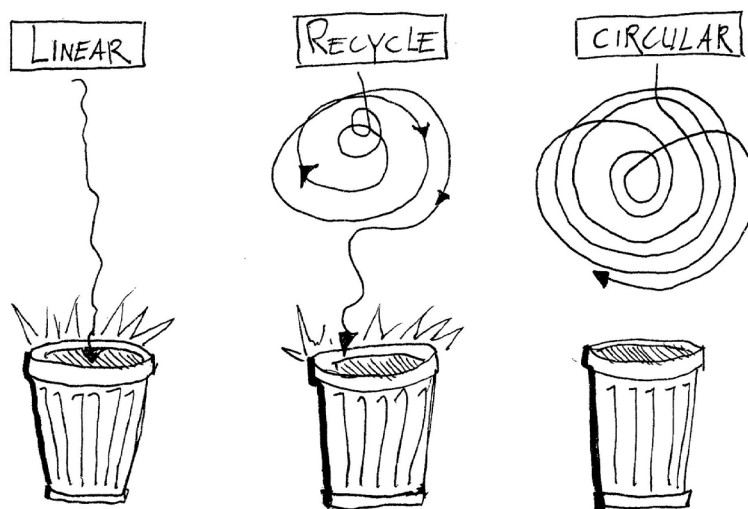
1.2.4 Circular transition

Parallel to the decline of the department store, there is a fourth industrial innovation going on in society: the rise of the circular economy. In a society where the demand for raw materials continues to increase, while the available supply is shrinking, we are forced to think about our economic activities in relation to the environment. The current linear economy is based on make - use - waste: production with cheap and simple raw materials and resulting in a throwaway culture. Our overconsumption is considered the foundation of today's market economy, but also the greatest threat to our planet. By way of illustration, at the moment the ecological footprint of an average resident of the Netherlands has grown to 4.4 hectares while only 1.8 hectares are available per person. As a result, we deplete the earth and its resources, polluting it with wasteful consumption.

The alternative to this way of consuming is the circular economy. An economy that is designed in a way that takes into account both the temporality of our needs and the permanent consequences of our actions. Therefore we should design in such a way that there is no waste and our products and

Illustration

Own illustration of
the difference between
linear, recycle and
circular economy



buildings function as a resource depot. Then those resources can be reused when our needs change (Rau, 2017). The Dutch government recently set the common goal of being fully circular as a society by 2050. This means a business in which there is no waste and

raw materials are used over and over again (Rijksoverheid, 2016). In addition to this stated goal, the big question remains how we can realize and accelerate the transition to a circular economy.

2. GOAL OF RESEARCH

Everything is temporary, only the consequences are permanent.

Thomas Rau - 2017

2.1 Problem statement

2.1.1 Changing retail landscape

Cities have traditionally been a marketplace and a meeting center due to the concentration of supply and demand in the cultural, social and economic fields. But drastic changes in the retail landscape threaten these traditional functions of the city center.

From the first half of the 19th century to the end of the 20th century department stores are important places in the shopping centers of the city. These stores were innovative market leaders in household products and middle-class clothing. With the rise of suburbanization, shopping centers appeared on the outskirts of the city and a fragmented shopping landscape emerged in the 20th century. Department stores were no longer practical places in retail. With the increasing suburbanization and decline of department stores, the importance of the city center also declined. At the beginning of the 21st century, department stores and other physical stores began to be challenged by the increasing importance of digitalization. Consumers are increasingly buying online and physical shops in city centers are less visited.

The problem is that with the rise of the internet, the obviousness of going to a physical store to buy products has disappeared. Vacancy in the inner cities and declining revenues from

shops are indicators of this changing retail landscape (Molenaar, 2013). The vacancy V&D of department stores and physical shops has major consequences for the quality of life in the city center. The concepts of shopping in the department store and the physical store seem outdated and with that the vacant stores are at the end of the functional cycle.

2.1.2 The retail life cycle

Severe changes in the retail landscape have to do with the subjection of shopping to a life cycle, in which functions and trends depend on time (Davidson, 2002). Shopping is continually being reinvented to keep up with changes in society (Chung, 2001). In the Retail Life Cycle innovations, social trends and needs elicit a change or adjustment in the market model, which then has an effect on the immediate environment.

The demise of the V&D department store, the rise of the internet shopping part of the Retail Life Cycle. Major changes in retail and associated functions will therefore be a recurring phenomenon. This temporary nature of shopping is a problem for the rigid store architecture.

2.1.3 Life cycle of building layers

The temporality of shopping is a problem for retail architecture, in this case the department store. The department store was

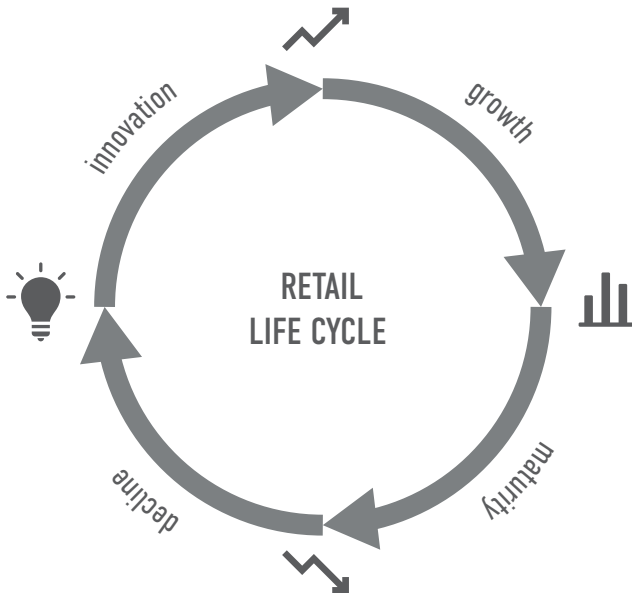


Figure
Own illustration of The Retail Life Cycle based on theory of Davidson et al. (2002)

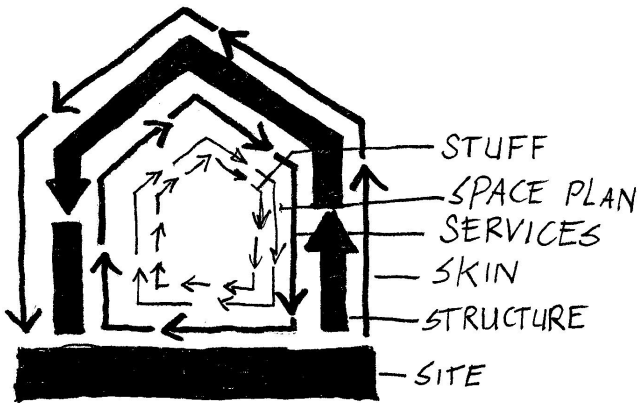


Figure
Own illustration based on Brand (1994) which represents the different rates of that pre-defined layers of the building go through

At its most noble, architecture is an embodiment of civic values.

Norman Foster - 2014

built at the time to meet a certain need of society. over time, social needs have changed and a mismatch has arisen between these needs and the building. But with the end of the department store's Retail Life Cycle, it doesn't mean the physical building is at the end of the cycle.

Brand (1994) made a distinction between different rates of change that building layers undergo. It also links a life cycle of change, depending on the social and technical lifespan, which can vary from a day to eternity. This layermodel shows that the speed of the Retail Life Cycle often does not correspond to the lifecycles of certain layers and building materials in the building. The question is whether these very prominent buildings in the city with a specific composition of layers can meet the future needs in the field of retail.

2.1.4 Take - make - waste economy

Despite the disappearance of the department store concept and the growing vacancy of physical stores, the importance of shopping in society has only grown. Shopping in today's consumer society has become a part of our lifestyle, a social activity, suitable for relaxation and identity building (Kärrholm, 2012).

The growing importance of shopping and the speed of change in the industry are driving a greater demand for materials. The linearly organized model is based on

uniqueness, requiring a constant flow of materials. This is called the make-take-waste economy (Rau, 2017: 156). The way of consuming and building in consumer society strongly contrasts with our consciousness of temporality. Due to our polluting and linear way of consuming in today's society, we do not take generations into account. The consequences of our temporary consumption behavior are permanent, but are passed on to the future.

2.1.5 Circularity gap

The alternative for this linear way of consuming and building is the circular economy. This circular economy is gaining in popularity and commitment, but it is currently only theoretical. The stated goal of making the Dutch economy circular until 2050 is not yet in sight. According to the latest research, only 9% of our global economy is circular (Wit et al., 2019). A transition from the make - take - waste economy to a circular and renewable market model is essential to be able to meet the needs of our future generations. The remaining question is how you can accelerate and facilitate the transition towards a circular economy.

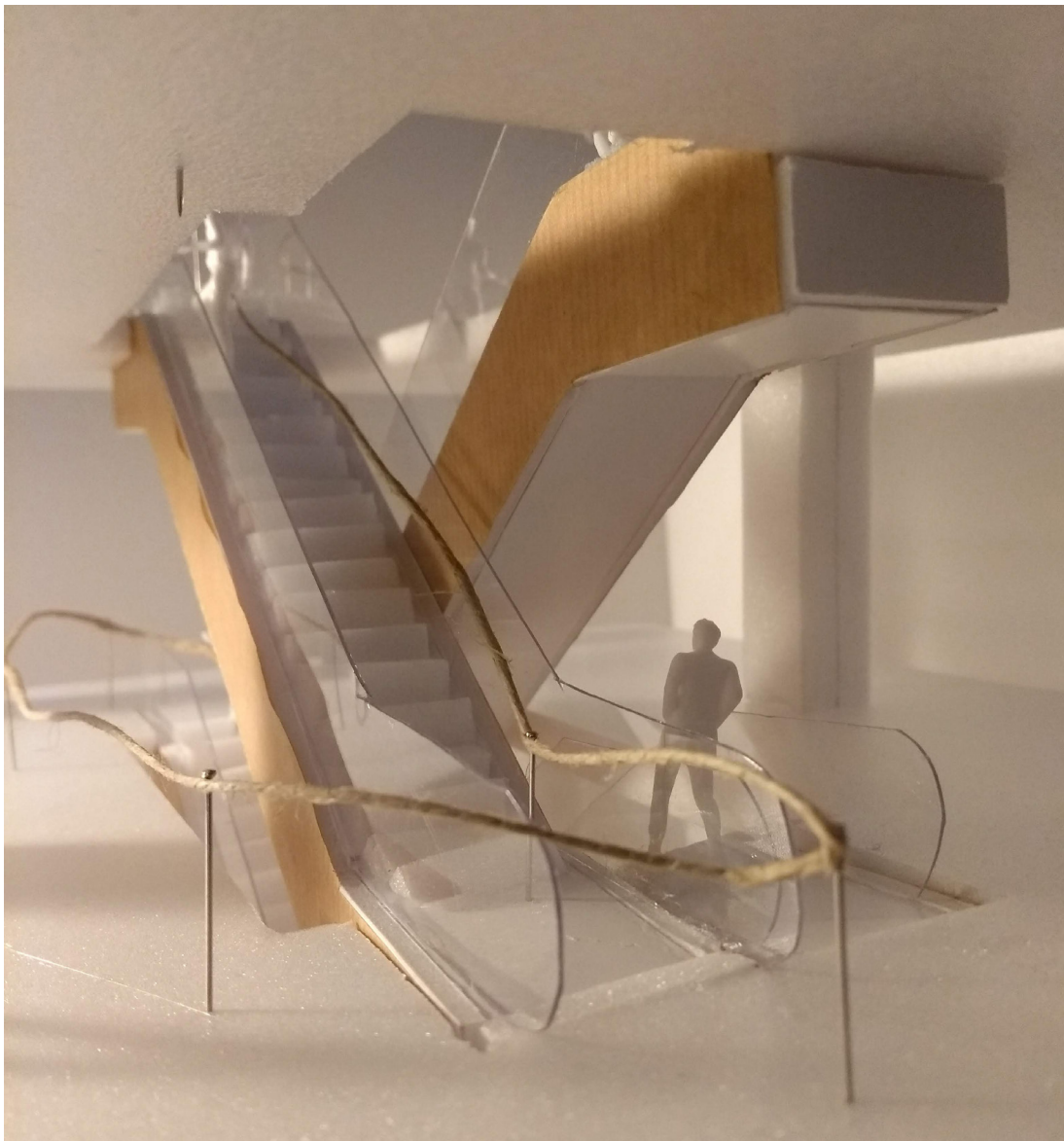


Image
Scale model of specific
interior V&D Den
Bosch.

2.2 Research aims

The research consists of a collective research with fellow students into the Spatial building typology and individual research.

2.1.1 Collective research aim

Traditional research methods for typologies in architecture are based on function. But the users or the function of a building change over time. The space of a building is independent of time. For a redesign of the V&D department store with a new function, it is necessary to classify the spatial properties of the department store. After the analysis of different department stores on different spatial aspects and scale sizes, a Spatial Building Typology can be developed for the V&D department store. The collective research will provide input for the individual research.

2.1.2 Individual research aim

The goal of my individual research is a sustainable strategy for retail architecture with regard to temporality in the Retail Life Cycle. The transition to a circular economy is often seen as a major challenge and requires major changes in revenue models, production chains, construction methods and design principles. That is why it is interesting to

investigate whether the transition to a circular economy can also offer a solution for an ever-changing retail landscape. This research can thus contribute to an acceleration of the intended transition.

The case study of the V&D department stores is extremely interesting, because both the concept of the physical store and the future role of the local city center can be rediscovered. Yet it is not my job as an investigative architect to come up with a completely new retail concept or economic model.

Therefore, I mainly want to look at how I can translate the social value of the historical department store into a contemporary meaning for society and its spatial translation for retail architecture. Through research and design, my goal is to make the historic department stores resilient as a facilitator for future social needs.

The former functions of the department store as a trendsetter in consumption, market leader and center of innovation can be revived through sustainable adaptive re-use. As mentioned earlier, the former department store has been both a representation and physical place of innovations and changes in society throughout history. In addition, the department store was a trendsetter in the way people consume and live. The concept of shopping in a department store is dated, but

the physical building can be both a place and a representation for upcoming innovations and societal changes. That is why it seems interesting to me to also investigate the former V&D department stores that could serve as a facilitator for a transition to a more local and circular economy in the future. The department store concept can be passed on to the new generations by reviving this social value.

The title “The gap in the market” therefore represents a threefold meaning of my research. First of all, it refers to the history of department stores and their significance for society. It also reflects the current situation in which the vacancy of the monumental V&D department stores has created a functional gap in the heart of the city. Finally, it can mean the possibility of giving these vacant buildings an innovative function that has an impact for the entire city and thus creates a gap in the market.



Illustration
Own illustration of the
linear economy

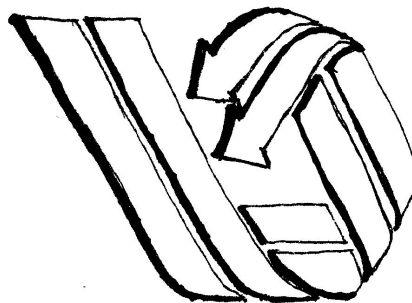


Illustration
Own new logo of
intended circular
development in V&D

2.3 Research questions

2.3.1 The Spatial Building Typology

During the first semester of the Vacant heritage - Spatial Building Typology we conduct collective research into the Spatial Building Typology of former department store buildings. Various V&D buildings in the Netherlands are analyzed on four different scale levels with analytical drawings. Traditional research methods into typologies in architecture almost always start from typologies based on functions. As the function and uses of the original buildings are changing today, a different approach is needed to investigate building typologies. Instead of the functions, space is central. Research into similarities and differences in the spatial characteristics of a collection of buildings, which were originally realized for one specific function (group), yields a series of spatial properties that can give direction to the possibilities for redesign (Zijlstra,2020). The research question in this collective research is as followed:

What is the Spatial Building Typology of V&D department stores?

2.3.2 Individual research

As a result of my defined problem statement

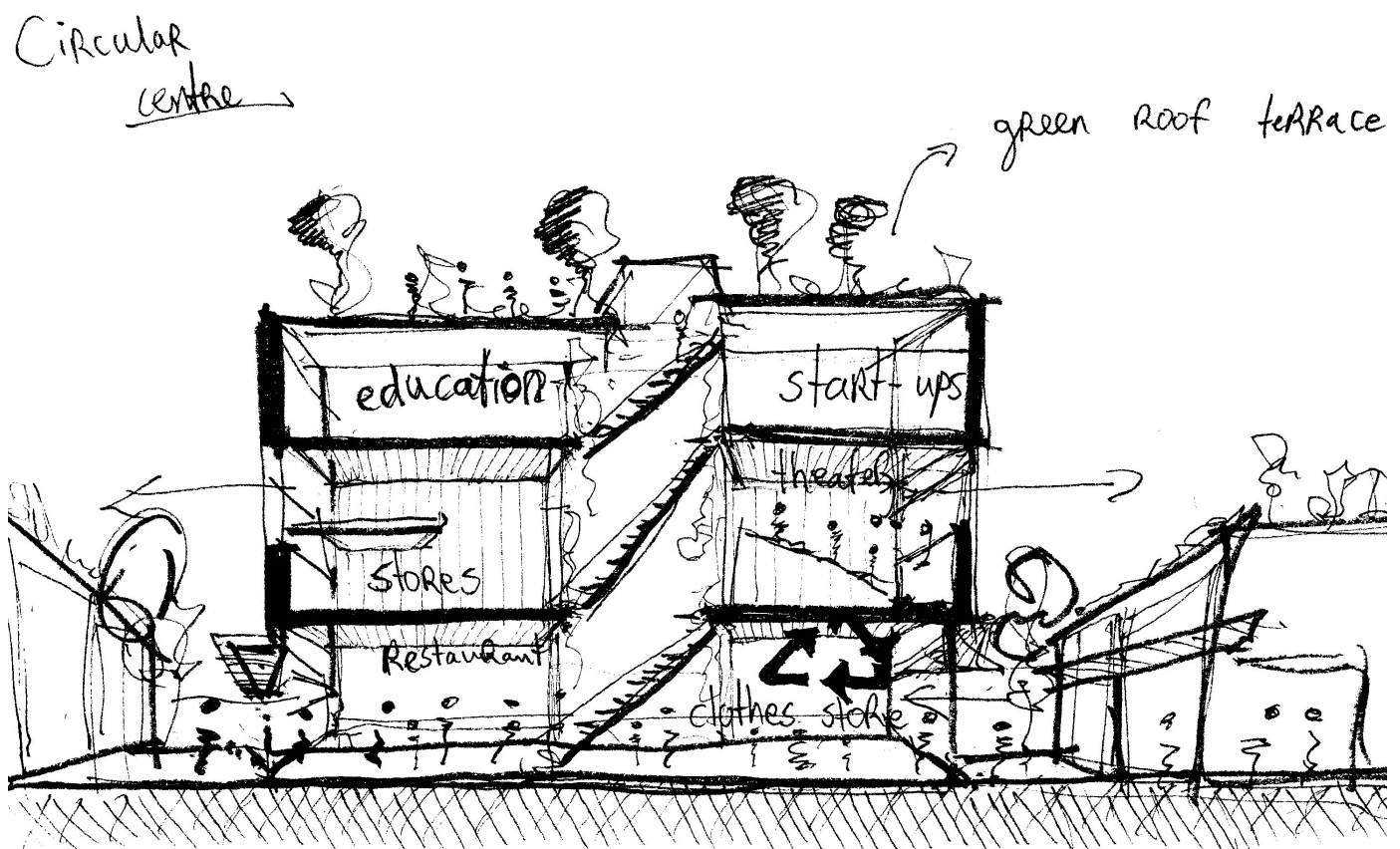
and research goal my proposed research question is stated. To answer the research questions also sub questions are added.

How can the adaptive re-use of a V&D department store facilitate and accelerate the transition towards a circular economy?

To answer the main question, the following sub-questions serve as support:

1. Can the transition to a circular economy offer solutions for retail architecture to deal with the temporary nature of the Retail Life Cycle? (Theoretical framework)
2. Which social values and historic needs with regard to shopping does the Retail life cycle of the V&D department store reflect?
3. Which criteria impose social values and needs in the new Retail Life Cycle on the shop of the future?
4. Which circular solutions can be implemented to the adaptive re-use strategy of the V&D department store, taking into account the spatial characteristics? (Link with collective research)
5. What are the possible spatial consequences of circular solutions for the monumental V&D department store?

Image below
5-minute sketch of
first design idea for
the intended circular
development in the
V&D



2.4 Location choice

The choice of location is based on the representation of temporality of economic activity in the urban fabric. Based on the historical development of the urban block, I ultimately chose the V&D in Leiden as a case study.

The V&D is located on the Aalmarkt, a place in the heart of the center that has always been of economic importance to the city of Leiden. In addition, this location represents a number of expired retail life cycles.

In the Middle Ages, the urban block of this V&D provided space for the Waag building, a weighing point for market goods at a central point in the elongated markets along the Rhine. From the 19th century and throughout the 20th century, the markets gave way to the emergence of shops on the small lots. Several innovations at the beginning of the 20th century and the growth of the middle class led to the emergence of the department store concept in the Netherlands. Ultimately, the V&D department store was built in 1937 on its current location. The era of the V&D department stores lasted until the bankruptcy in 2016. Recently, the area of the Aalmarkt has been upgraded by the transformation and redevelopment of the Catherinasteeg.

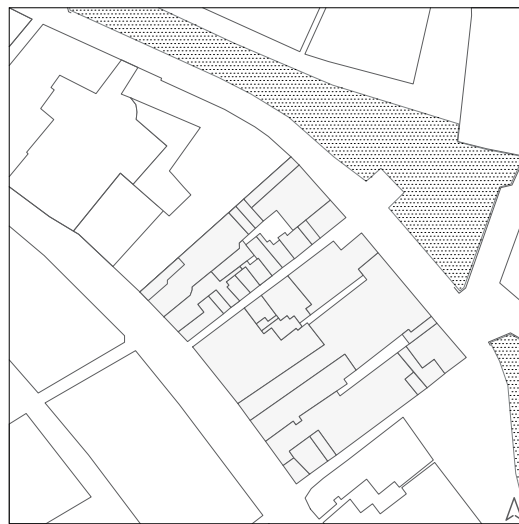
Various physical stores enhance the economic importance of this area.

Tangible consequences of all retail life cycles

are still present in the building block of Leiden in the form of architecture. These retail buildings with different dates create an interesting historical layering in the building block and already give the visitor a sense of transience. Ultimately, the V&D in Leiden was chosen as a case study in the search for the facilitator of a sustainable Retail Life Cycle.



> 1850



> 1950



> 2020



Illustrations

Own drawings for
SBT research.

Historical
development of the
Leiden urban block of
the V&D department
store

Image below right

Historic picture of the
Waag building next to
the V&D department
store

Source: Erfgoed
Leiden en omstreken

3. PROCESS OF RESEARCH

The only way to convince people is to prove that it is possible.

Gunter Pauli, about the blue economy - 2017

The methodology of this research is based on literature by Groat and Wang (2013) and colleges from Havik (2020). The methodology is divided into the methods for the collective SBT research, focused on theoretical research on the V&D locations. The methods for facilitating the circular economy in the department store consist of a combination of theoretical research with research into scenarios for adaptive reuse.

3.1 Methods Spatial Building Typology

The collective group work will develop a building typology based on space in four steps. First of all, the spatial characteristics of the V&D department store will be analyzed and classified for 8 different locations on 4 scale levels. The four scales are classified as City Center, Urban Block, Building object, Facade and roof. For each scale level there are 4 spatial aspects that will be analyzed. The locations are examined and made comparable for each aspect via reduction drawings, re-drawing and mapping according to the "Hausmann method" (Jallon & Napolitano, 2017). At the location level and at the aspect level, the drawings form the basis for the Location Document (Loc Doc step 1) and the conclusions on the spatial typological aspects per aspect (step 2). In step 3, diagrams are generated with the options for redesign

per location at aspect level and in step 4 the elaborated solutions are translated into diagrams so, data can be compared during the whole process (Zijlstra, 2020).

3.2 Methods individual research

The individual research methods have been chosen to form the basis for design.

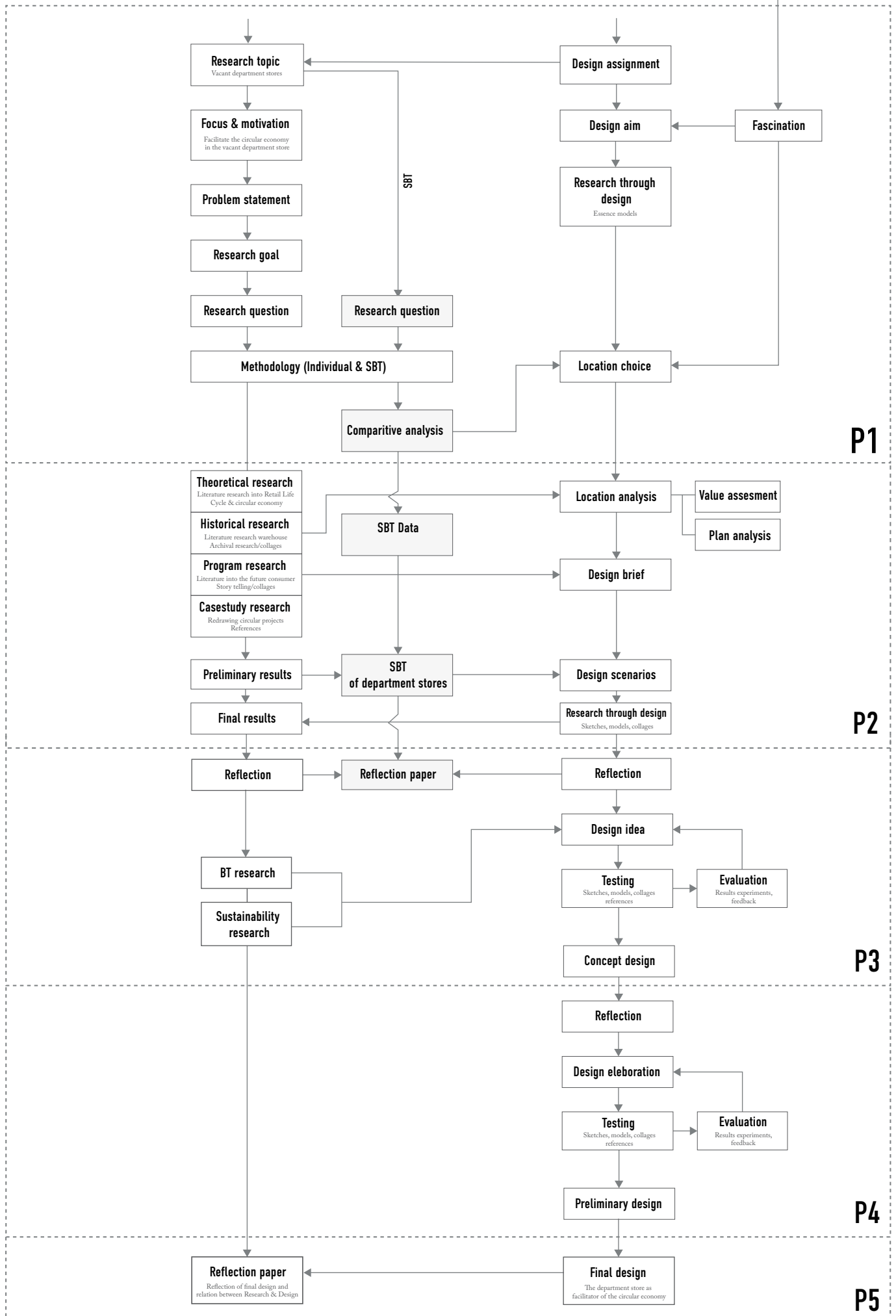
3.2.1 Subquestion 1 - Literature research

The first sub-question forms the theoretical framework of the individual research. This theoretical framework discusses the most important concepts for the research, establishes relationships between theoretical concepts and forms a basis for the design assignment.

First of all, the Retail Life Cycle, the temporary nature of shopping and its consequences for retail architecture will be highlighted by means of literature research with literature by, Brand (1994), Chung (2001), Davidson (2002), Herman (2001), Molenaar (2009) and Vernet & De Wit (2007). In addition, it will be discussed how the transition to a circular economy can offer a solution for dealing with the temporary nature of the Retail Life Cycle in retail architecture with literature by Cheshire (2016), Pauli (2010), Rau (2017) and De Wit. (2019).

RESEARCH

DESIGN



3.2.2 Subquestion 2 - Historic research

One cannot look into the future without first exploring the past. In addition, architecture is an expression of values and reflects the way we live and shop. The vacant monumental V&D department stores are a representation of former social values and arise from the needs of society.

Chapter 2 will therefore consist of historical research into the meaning and values of shopping, in relation to the department store and the Retail Life Cycle of department store chain Vroom and Dreesmann. This historical research charts the innovations and temporary needs of society, and their reflection on the department store, from 1850 to the current situation.

In this historic analysis I make use of literature from Beekun (2018), Chung (2001), Crossick (1999), Hondelink (2016) and Miller (1981). In addition to the literature, it is relevant to analyze historical exterior and interior photographs of V&D from archives to discover the architectural and social characteristics of Dutch department store shopping on one location. The idea is to combine these pictures into a collage, based on the collage techniques of Richard Hamilton. He succeeded in capturing the characteristics of an era into one collage.

The selfmade collages allow to interpret the history of the department store retail

space, the social significance of shopping and its influence on the department store architecture. Hamilton succeeds to

The conclusion of this historical research is a synthesis of theoretical description for each phase of the Retail Life cycle of the V&D, combined with a visual collage. The historical research can be used in the value assessment and analysis of the chosen location.



Image
Collage Richard
Hamilton - Just what
makes today's home so
different, so appealing.
Source: TATE,2020

3.2.3 Sub question 3 - Program research

In addition to awareness of the temporary nature of our needs, it is important to find out about the new temporary needs. What exactly does the start of this new Retail Life Cycle for the V&D department stores look like? And what does expect the customer from the physical store?

Chapter 3 will therefore address the third sub-question by looking for the future shopping needs of society, based on the Retail Life Cycle (Davidson, 2002). Literature by Kärholm (2012), Molenaar (2009), Pine (2011) and Yarrow (2014) provides a picture of the future consumer and his temporary needs. These results can also be visualized by means of collage techniques, or visual story telling.

Based on these needs, programmatic criteria are created for the store of the future. The criteria obtained form a basis for finding suitable circular solutions.

3.2.4 Sub question 4 - Case studies

Chapter 4 examines the possibilities for the circular economy and its spatial consequences for retail architecture through case studies. Relevant information will be extracted from reference projects by redrawing projects, with a focus on sustainable solutions. The case studies are selected on a number of criteria

(have yet to be drawn up). These case studies provide a toolbox with circular solutions for heritage buildings.

On the basis of the set programmatic criteria for the store of the future (chapter 3), location analysis and the spatial characteristics of the department store (SBT research), it will be discussed which solutions are applicable at the chosen location.

3.2.4 Sub question 5 - Scenarios

This chapter emphasizes the interaction between Research and Design. Sub-question 5 deals with the spatial consequences of chosen circular solutions. A number of theoretical scenarios are investigated on the basis of the circular solutions found. These scenarios consist of programmatic, sustainable and spatial requirements and form the basis for the design options. Subsequently, the spatial consequences of the best scenarios are investigated by means of Research through design. The design conclusions of these design studies are fed back to my individual research. This method will result in a strategy concerning the implementation of the circular economy in the adaptive re-use of the V&D department store.

Images

Possible circular case-studies

Top left - Circl, by the ArchitectenCie

Top right - The Green House Cepezed



Image below

Example of Research through design result.

Testing different scenarios by collages, sketches, models etc.
Source: Pinterest, 2020

4. REFLECTION

4.1 Heritage & Architecture - Vacant heritage

In the wider context, transformation of cities and buildings is one of the main themes in architecture today. Within the field of heritage, the Vacant Heritage studio investigates the problem of obsolete buildings, in particular the department stores. The research contributes to the broader question of Vacant Heritage: can you find indicators for building typologies that will become obsolete and are there general concepts for revitalisation? The challenge is to understand the effect this Vacant Heritage has on the use and perception of the city and let this guide you in designing for adaptive reuse.

block of four different V&D locations. This rooflandscape is analyzed by the characteristic 'configuration' in the scale 'urban block'. After comparison, one can unravel the different historic layers for each V&D. Or conclude that the scale of the V&D is building dominant over the other small plots and what this means for the place in the city.

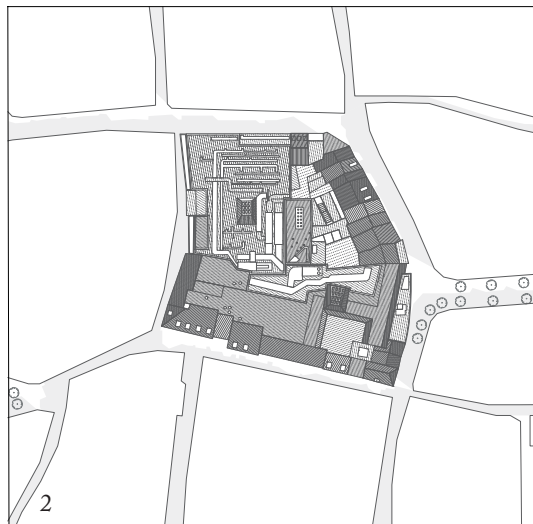
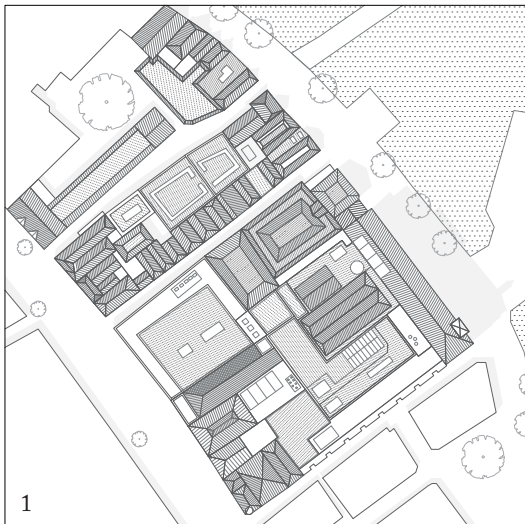
In addition, the essence of buildings will be spatially emphasized by means of models. Research through design and comparative analysis tell the essence of a building and are the base for adaptive re-use. What values of the building and the department store function do I want to pass on to future generations and keep? And what can be changed?

4.2 Collective research - SBT

The collective group research to the Spatial Building Typology will develop a building typology based on the space of department stores in four steps. This research allows us to classify the spaces of the department stores according to different spatial aspects and scale levels. Providing insight into and understanding the spatial properties can be used in the design of a building with a different function.

To illustrate, the figures on the right are drawings of roof landscape of the urban

Figures
Rooflandscape schemes
of four locations:
1. Leiden
2. Maastricht
3. Alkmaar
4. Haarlem



4.3 Relevance individual research

The most important goal of my research is to develop a strategy with which heritage retail properties can contribute to the transition to a circular economy. An economy that is designed in a way that takes into account the transience of our current needs as well as the permanent consequences of our actions. This goal is relevant because the transition to a circular economy in the Netherlands is necessary for the transmission of the earth to future generations.

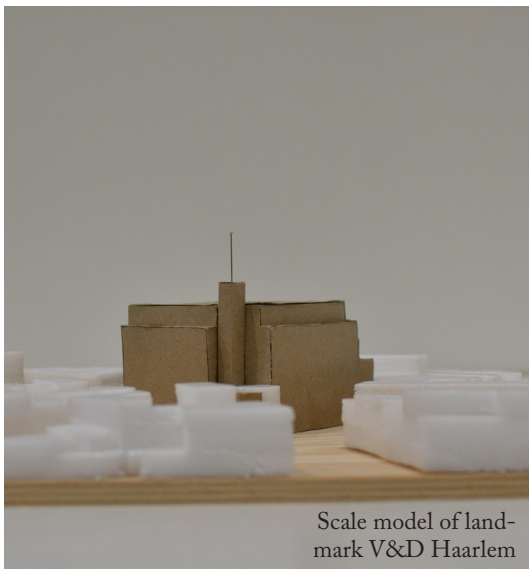
Aware of our transience, I realize that heritage buildings are not only carriers of historical and social values, but are also actual material depots with different life cycles. In addition, the monumental buildings must be made sustainable for the future in a sustainable way. When our needs change in the future, the building would have to be adapted again. The circular economy can therefore offer a solution for the transience of retail architecture.

But at the moment, the goal of the government to be circular as a society by 2050 is still far from in sight. The current economy is only 9% circular. Moreover, circular construction is still in its infancy. The transition to a fully circular economy requires an awareness of temporality and an increase in scale. Through this research I want to contribute to the transition to a circular economy, in which

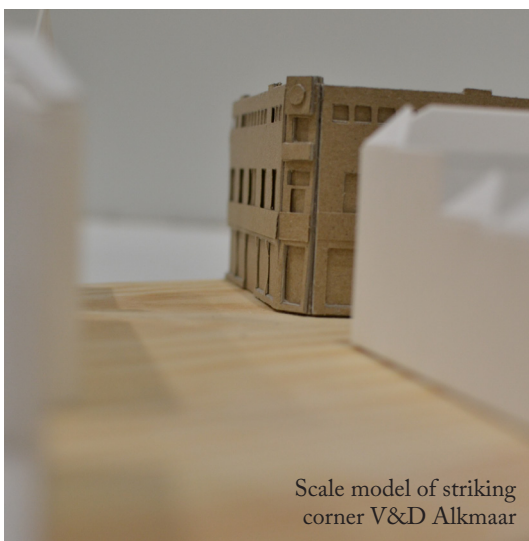
the monumental V&D buildings can play a crucial role. Close the gap towards circularity.

4.4 Relationship between SBT and individual research

As mentioned earlier, the Spatial Building Typology is looking for a typology based on space instead of function. The space always remains the same, but the functions change several times over time. The characteristics of the space can provide direction for adaptive reuse. It is precisely in the aspect of time and the recurring cycle that the connection with my individual research lies. The development of a typology of the department store building, based on space, can be reused when society's needs change again.



Scale model of landmark
V&D Haarlem



Scale model of striking
corner V&D Alkmaar



Scale model of specific
interior V&D Den
Bosch

5. BIBLIOGRAPHY

5.1 References

Beekun, R. van, & Kuijt, J. (2018). *Architect jan kuilt wzn. 1884-1944 : bouwen voor vroom & dreesmann*. Stokerkade cultuurhistorische uitgeverij.

Brand, S. (1994). *How Buildings Learn. What happens after they're built*. New York:Viking.

Cheshire, D. (2016). *Building revolutions : applying the circular economy to the built environment*. RIBA Publishing. <https://learning-oreilly-com.tudelft.idm.oclc.org/library/view/building-revolutions/9781000701555/xhtml/Ch06.xhtml#ht0033>.

Chung, C. J., Inaba, J., Koolhaas, R., Leong, S. T., Cha, T.-wook, Harvard University. Graduate School of Design, & Harvard Project on the City. (2001). *Harvard design school guide to shopping* (Ser. Project on the city, 2). Taschen.

Crossick, G. (Ed.), Jaumain, S. (Ed.). (1999). *Cathedrals of Consumption*. London: Routledge, <https://doi.org/10.4324/9780429026249>

Davidson, W. R., Bates, A. D., & Bass, S. J. (2002). *The retail life cycle. Retailing: The evolution and development of retailing*, 55(6), 89-96.

Foster, N. (2019, 8 mei). "Architecture is an expression of values". The European. <https://www.theeuropean.de/en/norman-foster/9114-the-role-of-architecture-in-todays-society>

Koehler, M. (2003). *Re-mall* (MSc Thesis). Retrieved from: TU Delft library

Ministerie van Infrastructuur en Waterstaat. (2019, 22 augustus). Noodzaak van circulaire economie. Circulaire economie | Rijksoverheid.nl. <https://www.rijksoverheid.nl/onderwerpen/circulaire-economie/noodzaak-van-circulaire-economie>

Kärholm, M. (2012). *Retailising space : Architecture, retail and the territorialisation of public space*. ProQuest Ebook Central <https://ebookcentral-proquest-com.tudelft.idm.oclc.org>

Kuipers, M.C., De Jonge, W. (2017). *Designing from heritage. Strategies for conservation and conversion*. Repository TU Delft <http://resolver.tudelft.nl/uuid:dd8fdf31-67f2-47e1-bd9c-d22c4498d277>

Miller, M. B. (1981). *The bon marche : Bourgeois culture and the department store, 1869-1920*. ProQuest Ebook Central <https://>

ebookcentral-proquest-com.tudelft.idm.oclc.org

Molenaar, C. (2009). *Het nieuwe winkelen : shoppen, internet of beide*. Pearson Education Benelux.

Molenaar, C. (2011). *Het einde van winkels? de strijd om de klant : waarom het niet meer vanzelfsprekend is om naar een winkel te gaan!* Academic Service.

Pauli, G. (2010). *The blue economy : 10 years, 100 innovations, 100 million jobs*. Paradigm Publications.

Pine, B. J., & Gilmore, J. H. (2011). *The experience economy* (Updated). Harvard Business Review Press.

Rau, T., & Oberhuber, S. (2017). *Material matters. Hoe wij onze relatie met de aarde kunnen veranderen*. Bertram+ de Leeuw Uitgevers BV.

Vernet, D., & Wit, L. de. (2007). *Boutiques and other retail spaces : the architecture of seduction* (Ser. Interior architecture). Routledge.

Venturi, R., Scott Brown, D., & Izenour, S. (1996). *Learning from las vegas : the forgot-*

ten symbolism of architectural form. MIT Press.

Wang, D., & Groat, L. N. (2013). *Architectural research methods*. ProQuest Ebook Central <https://ebookcentral-proquest-com.tudelft.idm.oclc.org>

Wit, M., Verstraeten-Jochimsen, J. J., Hoogzaad, J., & Kubbinga, B. B. (2019). *The circularity gap report 2019: closing the circularity gap in a 9% world*.

Yarrow, K. (2014). *Decoding the new consumer mind : how and why we shop and buy* (First). Jossey-Bass, A Wiley Brand. <https://learning-oreilly-com.tudelft.idm.oclc.org/library/view/decoding-the-new/9781118647684/>