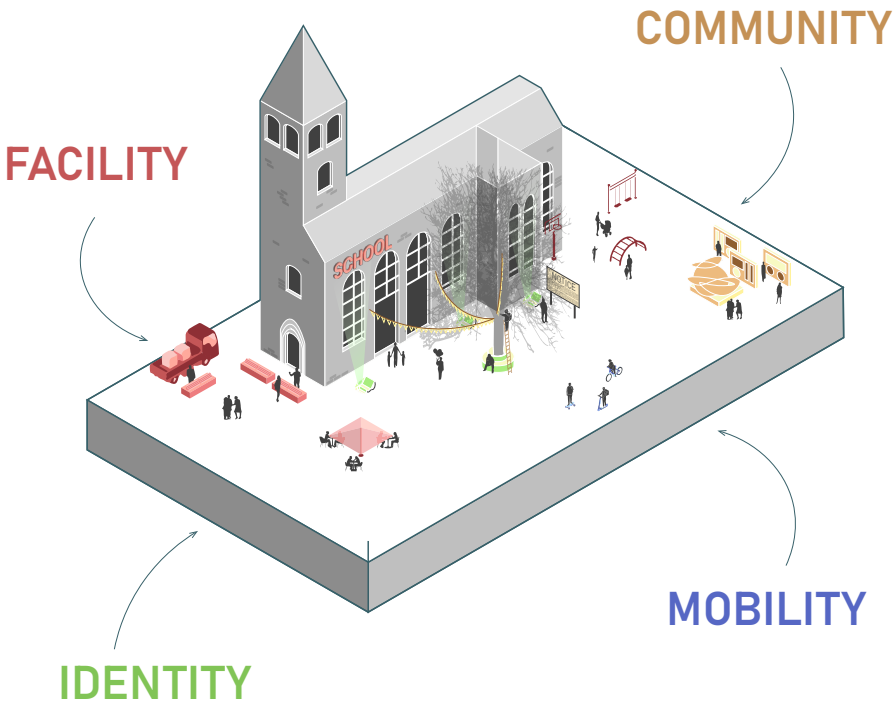
RELIGIOUS HERITAGE
AS PLACEMAKER FOR RURAL CORES

A TOOLBOX WITH URBAN DESIGN IMPLICATIONS FOR REVITALIZATION OF RURAL SHRINKAGE REGIONS IN THE NETHERLANDS BY ADDRESSING VACANT CHURCH HERITAGE AND THE SURROUNDING VILLAGE CORE



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Abstract - One in five municipalities in the Netherlands is prognosed to experience population decline by 2050. Especially rural settlements will have difficulty facilitating this shrinkage and the negative effects involved. With a depriving variety of available facilities and an increase in vacancy, local communities are on the border of falling apart. At the same time, an increasing number of churches are left vacated and out of service while religious participation declines. This graduation project aims to revitalize the heart of villages with the church at the center to increase the livability and social cohesion. Connecting the local community with the heritage of churches and their role in society again. With a toolbox filled with design interventions as a final product and the implementation of this toolbox on three different project locations throughout the Netherlands, this thesis provides a first step to a beckoning new perspective on the identity of rural cores.

Key words - Population Decline, Rural Cores, Vacant Churches, Toolbox, Design, Mixed-Methods

PREFACE

Welcome to this P5 graduation report. I kindly invite you to the story of religious heritage and their wonderful history, and an ever-growing stress on livability in rural regions in the Netherlands, where I believe religious heritage can be deployed as the perfect place maker. This report has been established as part of the graduation project 'Religious Heritage – A placemaker for rural cores' as part of the Urbanism graduation lab studio. This report is adjoined to the P5-presentation presented on 1 November.

In the past year I have committed to finding out all there is to know about rural shrinkage in the Netherlands, the decline of the Church and the increase of vacancy in religious heritage, and social cohesion in small settlements. These findings I present to you, together with an ambition and mission statement. The result is twofold. A toolbox built from a set of design implications based on the research results, and the design for three distinctive project locations: the core and central religious heritage of Haghorst, North-Brabant; Scharendijke, Zeeland, and Leuth, Gelderland. The complete toolbox can be found in a stand-alone booklet in addition to this report.

I would like to thank my tutors, dr. ir. S. C. van der Spek and dr. ir. G. A. Verschuure-Stuip, for their role in supporting me through this graduation process and stimulating my research and design towards innovative ideas and the delegate dr. ir. D. van den Heuvel for participating in my graduation examinations. I would also like to thank the Cultural Heritage Agency (RCE) for their help in providing me with interviews and all data on vacant religious heritage, as well as the municipalities of the three project locations – respectively Hilvarenbeek, Schouwen-Duiveland, and Berg en Dal – for their part in the interviews conducted.

Hopefully this report and the accompanying presentation can form an inspiration on how to tackle rural core development in shrinkage regions and provide a reference for future projects.
Thank you for reading!

With kind regards,
Joëll ten Hove

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01
INTRODUCTION

In this introductory chapter two key problems will be described: on the one hand rural shrinkage, and on the other a leading vacancy in church heritage. Following the personal motivation for these themes, the general context will be explained by shedding a light on both of these issues. After that, this chapter ends with the research statement, defining the problem and problem field, stating the research questions and shedding light on the relevance of this study to the academic field.

1.1 Personal Motivation

1.2 Setting the Scene
A shrinking population in rural Netherlands
An increased vacancy in religious heritage
Case studies

1.3 Research Statement
Problem Statement
Research Question
Sub-research Questions
Defining the Problem Field
Research Aim
Relevance

1.4 Theoretical Framework

Standdaarbuiten - North-Brabant

1.1 PERSONAL MOTIVATION

At the end of 2020 I was asked by the Roman-Catholic congregation '*Charitas*' to create an atlas on the history of religious buildings– churches and monasteries – in the town Roosendaal. At the time we were involved in the redevelopment of one of their former monasteries and in order to capture the essence of the religious past of this building we needed to understand the full history of religious interaction in this town. Roosendaal has a very rich Roman-Catholic past with numerous congregations involved in healthcare and education, lively parishes, and strong religious communities.

With no previous religious upbringing, I dove into a whole new world, with stories of spiritual quests, built on social engagement and civil participation. Accompanying centrally throughout the story these stone giants in the form of churches and monasteries, which held a major part of the urban structure of Roosendaal. However, through the years most of the congregations and parishes in Roosendaal were discarded or moved out of town, their buildings left vacant as a result.

Most of the religious heritage was demolished, to make space for generic apartment buildings, office structures, and large parking lots. Only a few buildings of this vast pool of religious heritage in Roosendaal has been meaningfully repurposed and redeveloped. And these buildings now all serve as a new core for the area, as a healthcare center, as schools, and as a neighborhood center. Contributing to the community.

This got me thinking. How could we repurpose our vacant religious heritage – of which there is an increasing availability – in a meaningful way, in line with the ideals of that what those buildings represented and were aimed to provide: a basis for a cohesive social environment.

There are a lot of examples of famous redevelopment projects of religious heritage. From the bookstore in the Dominicanenkerk in Maastricht to the temporary skatepark in the Jozefkerk in Arnhem. Each became a tourist attraction and in a large city, with a large population, there is always some available function to be found for these former churches.

However, this changes when we consider villages and more rural settlements. Most of the villages in the Netherlands have at the heart of the village a church building. And with a decline in religious participation in the Netherlands, these buildings are also increasingly abandoned and left vacant. Large tourist attractions are not an option and in order to create a sensible business case for the redevelopment, most of them are repurposed to apartment buildings or offices. But in the past the church has always been centrally placed in these local communities. The place where the entire village population practices religion, where the population was safe from outside threats, and where the community got together. With these buildings left vacant or redeveloped to apartment buildings, they no longer serve the public good like they used to do.

This brought me to the quest on how we can repurpose these core locations in villages. With a new function for the church building and a new heart for the village. Increasing livability and providing a new place to strengthen the local community and offer public facilities. All to ease the negative effects of rural shrinkage, an increasing problem for the Dutch countryside.

1.2 SETTING THE SCENE

A shrinking population in rural Netherlands

"*How to tackle population decline in Europe's regions?*". This was the headliner of a news article published by the European Parliament early May 2021 (European Parliament, 2021). With a fear of an increasing gap between population development in urban and in rural areas, the European Parliamentarians adopted the demographic challenges of shrinkage to be a top priority for the European Union (EU) in the coming years.

And it is a valid cause of concern. While the EU will continue to grow for the coming four years, a steady and lasting decline in population is prognosed after 2026. By the end of the century, the population in the European Union will have declined by almost 7% (Eurostat, 2020).

Research done by Eurostat (2021a) shows overall it is expected the urban regions in the EU will continue to grow slightly, with two-thirds of the countries prognosed to experience growing cities. But the predominantly rural regions, and intermediate (not fully rural, but not urban either) regions are projected to decrease heavily in almost all countries. A trend which is also true for the Netherlands, as can be seen in Figure 1.1.

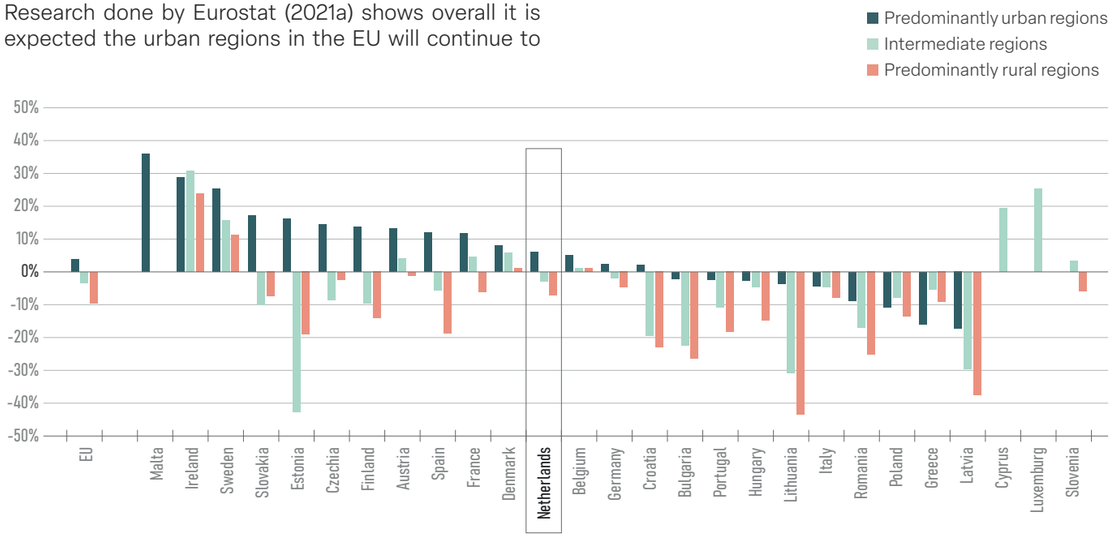


Figure 1.1: Population projection: urban and rural growth and decline . Based on Eurostat (2021a).

One in five municipalities in the Netherlads is prognosed to experience shrinkage by 2050 (PBL & CBS, 2019). The urbanized municipalities in the Randstad-region and surrounding the larger cities are safe from shrinkage, but the more rural regions in the periphery of the Netherlands, away from the Randstad towards the border of the country, will have to deal with a population decline. The decline is especially concentrated in the regions around Delfzijl in Groningen, Twente in Overijssel, the Achterhoek in Gelderland, Zeeuws-Vlaanderen in Zeeland, and large parts of Limburg and Friesland (see Figure 1.2).

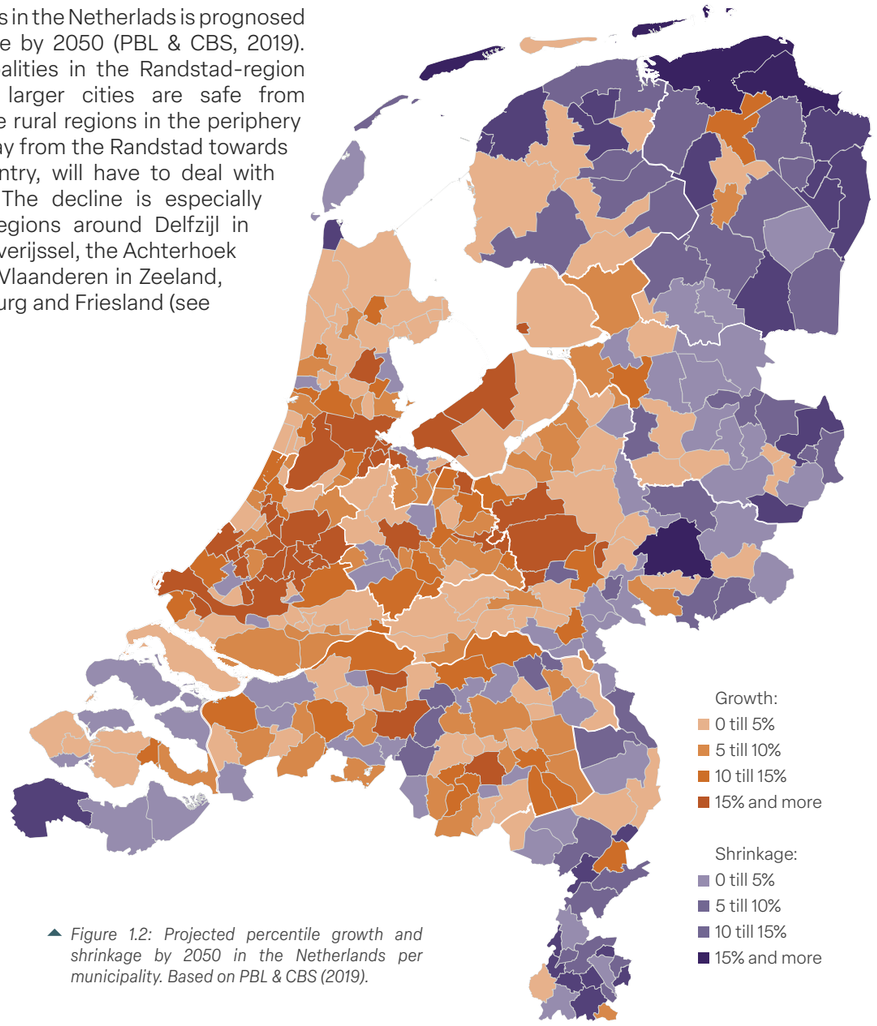


Figure 1.2: Projected percentile growth and shrinkage by 2050 in the Netherlands per municipality. Based on PBL & CBS (2019).

Shrinkage, and in this case especially rural shrinkage, is anything but a new phenomenon. Throughout the centuries there has almost always been a migration flow from rural regions to more urban regions in the Netherlands. People have moved for many varied reasons. For instance, during the Eighty Years' War in the sixteenth and seventeenth century, farmers moved from the countryside to cities to find protection within the city walls. Later in the mid nineteenth century, during the industrialization in the Netherlands, people moved to industrial hubs in search of labor in factories. And in the past century, people have predominantly moved to the city or suburbs for a larger availability of work and (public) facilities.

However, the projected urban growth and rural shrinkage in the Netherlands by the mid twenty-first century is seriously extensive and will prove to be problematic if not approached with the right plans and visions. Not only in visions on how the housing-crisis in the urban areas needs to be solved, but also on how the countryside can adapt to facilitate a changing demographic with a negative migratory flow.

The threat of shrinkage is seen as a major threat to rural municipalities in the periphery of the Netherlands, but it can also be taken as an opportunity to stimulate cultural and economic transformation in these areas.

Rural regions were formerly mostly agricultural production regions. With rural places in a submissive position to urban locations: the countryside provides what feeds the city. An increase in the population of a city and an economic boom leads to an uptorn in agricultural development in the surrounding countryside (Asbeek Brusse et al., 20020). Nowadays, functions focusing on a broader spectrum of consumption have started to take place (Heins & van Dam, 2003). The countryside now consists increasingly of clusters focused on consumerism. Where cultural goods are used to attract the consuming city population, resulting in an increase of tourism and a growing 'heritage industry' (Asbeek Brusse et al., 2002). With the opportunity that rural regions are experienced as idyllic and natural and cultural heritage is romanticized.

This completes the first key issue this thesis focuses on: creating a sustainable future for villages in the Netherlands, which deal with population shrinkage and the negative effects resulting from this and are looking to strengthening the local community, while also employing the opportunity of creating a new attraction to outside visitors.

An increased vacancy in religious heritage

The second key issue deals with the decline of religious participation in the Netherlands, which results in an increasing number of church buildings without a function and left vacant.

The Netherlands is rich in religious heritage. With a total of more than 7.000 church buildings, the Netherlands has one of the highest church-densities in Western Europe compared with the population-number as can be seen in Figure 1.3. If all church buildings were spread out equally through the Netherlands, you would never have to walk further than 1.250 meters to the nearest church.

Country	Population	Churches	Density
Belgium	11.2 mln	5.372	2.1
Denmark	5.8 mln	2.450	2.3
Germany	83.2 mln	49.267	1.7
Netherlands	**17 mln**	**7.132**	**2.4**
United Kingdom	66.4 mln	49.211	1.4
Sweden	10.3 mln	3.500	2.3

Figure 1.3: Density of churches in the Netherlands and neighboring countries. Based on RCE et al. (2021).

However, with a decline in religious affiliation and less people visiting churches, the number of churches in religious use is fast declining. It is not that long ago that religion held a dominant position in the everyday life of people. Halfway through the nineteenth century, almost the entire Dutch population was part of a religious denomination. 55% of the population was Dutch Reformed, 38% Roman-Catholic, 1% Reformed, and 6% were part of other denominations (CBS, 2019).

This started to change going into the twentieth century. Around the start of the twentieth century, the Dutch Reformed denomination started to decline, followed by the Roman-Catholic decline halfway through the 1960s.

In 2018 only 48% of the Dutch population still affiliated with a religious denomination; primarily Roman-Catholic. Yet the number of people regularly visiting a church service is for all denominations really low. With less than five percent per denomination still regularly visiting church. (CBS, 2019)

It is no wonder that municipalities are working on visions how to address the increasing vacancy of religious heritage. In cooperation with the national government in the form of subsidies, almost 70% of of the municipalities of the Netherlands are working on a *Kerkenvisie* – a strategic vision on the future of church buildings in a municipality. These structural visions are made by the municipalities in collaboration with the church communities in the municipality, local history circles, and overarching organizations on the future of religious heritage (RCE et al., 2021).

With 40% of religious heritage marked as a national or municipal monument and with a sensitivity to the spiritual, cultural, and local interests at play, a new function for this heritage needs to be thought out. Unfortunately, these structural church visions focus predominantly on the concern of which church will remain in function and which will not. They offer little to no vision on the future of the buildings that are to be left vacant in search of a new function. In this, collaboration with local residents is often surpassed.

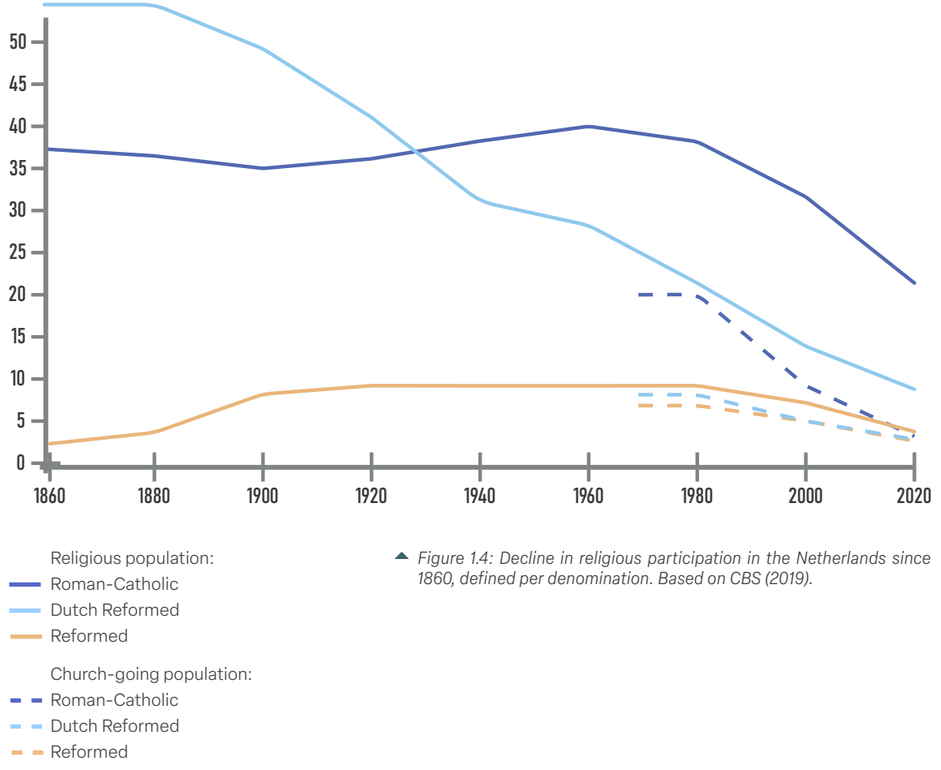


Figure 1.4: Decline in religious participation in the Netherlands since 1860, defined per denomination. Based on CBS (2019).

Figure 1.5: Research on new / secondary usage of church floor space. (Own render in collaboration with Urban Breezz, 2022).

In the past years, one in five churches in the Netherlands has already been redeveloped. A staggering 1.555 buildings in total. Especially a large number of formerly Protestant churches have been redeveloped. Most of these redeveloped churches have transformed to a cultural or social function, a residential function, or an office function. With a more limited number of churches that are redeveloped to an educational function, a retail or hospitality function, or a function focusing on healthcare (See Figure 1.6). Currently, there are almost 300 church buildings vacant or in transition to a new function.

It is expected that by 2050 the total amount of churches in religious use will have declined by 50%, resulting in an additional 2.500-3.000 church buildings to become vacant in search of a new function. (RCE et al., 2021)

This increasing number of churches looking for a new function can also be seen as an opportunity. A lot of the churches which will become vacant are in fact village-churches, centrally positioned at the core of villages. With the rising concerns on facilitating rural shrinkage, perhaps a new image can be drawn on how we redevelop this religious heritage. Keeping in mind the tangible and intangible heritage of churches, these central locations in rural cores can provide a beckoning perspective where the former values of the Church are reimagined and where church heritage can prove to ease the concerning negative effects of shrinkage.

Function	Total	Percentage	Denomination
Religious	5.282	74.1	25% Roman-Catholic; 40% Protestant; 5% Other
Redeveloped	1.555	21.8 (100)	
Cultural & Social	603	8.5 (39)	25% Roman-Catholic; 70% Protestant; 5% Other
Residential	468	6.6 (30)	
Office/business	166	2.3 (11)	
Hospitality, tourism, recreation	102	1.4 (7)	
Healthcare	73	1.0 (5)	
Retail	52	0.7 (3)	
Education	48	0.7 (3)	
Other	43	0.6 (3)	
In transition/vacant	295	4.1	
TOTAL	7.132	7.132	

Figure 1.6: Houses of worship - function and denomination. Based on platform Toekomst Religieus Erfgoed (2021).

Case studies

There are already interesting projects in villages with churches which have been redeveloped in the Netherlands with a function true to the *Genius Loci* – the spirit or atmosphere of a place – of the church. In short, three redevelopment projects will be portrayed here, to provide a source of inspiration and a preview on what is to come.

Figure 1.7: The Reformed church in Scharendijke, one of the project locations. Vacancy generally leads to a lack of maintenance: in just fifteen years the entrance and the facade of this building are overgrown. Not only damaging the building itself, but also an unpleasent sight in the streetscape of the village. Finding a suitable new purpose for vacant churches does not only positively affect the building itself but also the local community, in much more than just a new local facility to engage with.

The first project is the Adrianus church in the village of Esbeek. Esbeek is a village with 855 inhabitants in the municipality of Hilvarenbeek, Noord-Brabant (AlleCijfers, 2022). Their main church, the Roman-Catholic Adrianus church – a national monument –, has been left vacant since 2013. The municipality started a project with the goal of realizing a '*Samenwijs*'-accommodation in every rural core within the municipality, a broader school where a kindergarten, day-care, and elementary school are combined. It soon became the core of local renewal plans, and everyone wanted to be involved. The redevelopment of the church and the surrounding public space has led to attracting a new and younger public to the village and many new initiatives are started around this local hotspot. Recently, Esbeek received the European Village Renewal Award by an international jury. Of the total of 26 competitors, eight received a 'gold medal'. Esbeek was the only project which started as a citizens' initiative. (Coöperatie Esbeek, 2018)

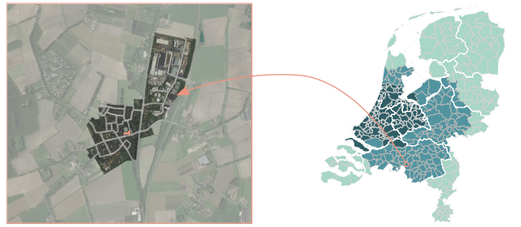


Figure 1.9: Position of Esbeek in the Netherlands.

Figure 1.10: Esbeek. (RCE, 2019).

Figure 1.8: School in church, Esbeek. (Brabants Dagblad, 2019).

Figure 1.11: Parents gather outside, Esbeek. (Brabants Dagblad, 2019).

Figure 1.12: Position of Boekelo in the Netherlands.

The second project is the Marcellinus church in Boekelo, in the municipality of Enschede, Overijssel, with a population of around 2.500 (AlleCijfers, 2022). While plans were underway to develop a new funeral home and morgue, the news got out that the Marcellinus church was to be withdrawn from services. The plans were changed around, and the now vacant church was chosen to be the location for the new funeral home. However, the new mourning function in the former church was also to be combined with several social functions. Activities such as concerts, lectures, workshops, and music rehearsals now also take place. Even monthly religious services are again held in the church, because of the extensive interest in the location. The church now offers the village of Boekelo a wide spectrum of facilities and has become a beating heart again. (KCWO, 2018)

Figure 1.13: Redeveloped Marcellinus Church Boekelo. (CS Audiovisueel, 2019)

Figure 1.14: Dance performance in Marcellinus Church Boekelo. (InspirationBoekelo, 2019)

The final project is the Protestant church in Bovensmilde. Bovensmilde is a village in the municipality Midden-Drenthe, in Drenthe, and has significantly declined in population in the past eight years – with 7% to a total of 3.261 inhabitants (AlleCijfers, 2022). Twelve years ago, the local church was closed and left vacant. However, with financial support of the Drentse Landschap foundation the building was renovated and is now again in service of the Church community. Now it is also open for private usage – meetings, birthday parties, performances. The church has restrengthened social ties and brought the local community as a whole together. (Protestantse Gemeente Bovensmilde, 2021; Het Drentse Landschap, 2020)

These examples are focused on the redevelopment of the building itself. This thesis will further expand on the surroundings of the church and the connection between village and church as a whole. In the next chapters a more in-depth exploration on the influence of the Church on social participation and cohesion in local communities will be done.

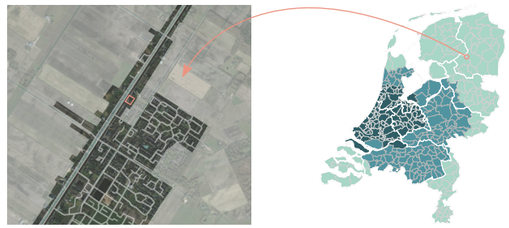


Figure 1.16: Position of Bovensmilde in the Netherlands.

Figure 1.15: Gathering in Marcellinus Church Boekelo. (Van Assendelft, 2019)

Figure 1.17: Church Bovensmilde. (CultuurPodium, 2019)

1.3 RESEARCH STATEMENT

Problem Statement

As mentioned in this introduction chapter, this thesis approaches two key issues. On the one hand there is the problem of increasing rural shrinkage in the Netherlands, and on the other hand and increasing vacancy of religious heritage.

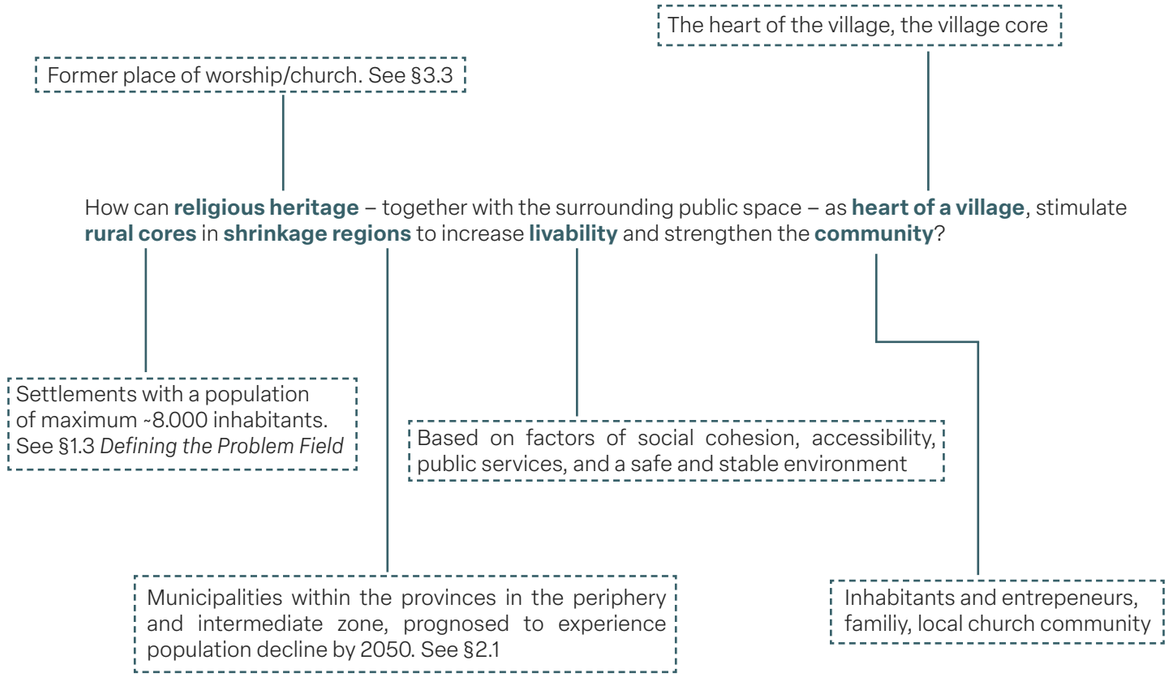
By 2050, one in five municipalities in the Netherlands is projected to deal with population decline. The dominant areas prone to shrinkage are located in the periphery of the Netherlands, with some municipalities in the intermediate zone (PBL, 2019). These regions are mostly the rural parts of the Netherlands. Villages especially deal with population decline. Shrinkage leads to more vacancy, function depletion, and facilities departing in the tangible spectrum. Which in turn leads to intangible complications, like a decrease in social interaction, decreased social cohesion, a more limited sense of placeness pride and identity, and as a result a weakened community.

At the same time, the Church has been in steady recession in the Netherlands since the mid-late twentieth century. With a decline in the number of churchgoers and an increasingly diversifying number of denominations, Church communities consist of increasing fewer members. Depillarization, individualization, modernization, and secularization add to this decline. Parishes (Roman-Catholic) and Church communities (Protestant) are fused and accompanying that, usually one or more churches are left abandoned of service, with combined usage of one church in service – leading to an increase of vacant religious heritage.

The role of religious buildings in shaping the identity and strengthening the community of towns in the past centuries has been of significant impact. This is especially noticeable with village-churches. Positioned centrally, with a relatively small community surrounding, these churches have always acted as the heart of the village. However, also these village-churches are left out of service and in need of a new prospect.

Research Question

The main research question of this thesis aims to combine the two key problems of shrinkage in the rural parts of the Netherlands and the vacancy of religious heritage – focusing on churches – and to create a new opportunity and interest for future spatial planning visions for villages in the Netherlands.



Sub-Research Questions

In order to answer the main research question, a set of sub-research questions are put forward. These sub-research questions relate to the more in-depth analysis and the usage of different methods. They aim to enclose the framework and the scope of this thesis. And they guard that the resulting product is coherent and contributing to the problem field.

The sub-research questions are separated in three sections. The first section focuses on the rural shrinkage in the Netherlands. The second section focuses on the increasing vacancy of religious heritage and the function of the church in a local community. The third section aims to combine the first two sections in design implications where analysis and design are interwoven in a circular fashion.

Each section is marked with a letter-number-combination relating to the methods used in answering these questions. Further explanation on the sub-questions and the methods used can be found in §4.2: 'Methods'.

SQ1: *How and where does shrinkage occur in the Netherlands?*

SQ2: *What are the effects of shrinkage and how are these effects perceived by inhabitants and policy makers (municipality/provincial government) of shrinkage regions?*

M-D1
M-I2 M-D2
M-I3 M-D3

SQ3: *What is – and was – the role of the Church and of churches in different denominations in identity and community shaping?*

SQ4: *What is the range of church heritage available (in service, redeveloped, vacant) in the Netherlands and what is the match between vacant village-churches and shrinkage regions?*

SQ5*: How do municipalities, by using* Kerkenvisies*, envision and show the future of church heritage?*

M-I1 M-D1
M-I2 M-D3
M-I3 M-D4

SQ6: *How can these threats and opportunities be translated into a structured overview of design implications?*

SQ7: *How can these design implications be applied to case studies?*

M-I3
M-I4

Defining the Problem Field

Within the limited capacity of this master thesis and due to the broad scope of both the subject of shrinkage as well as the subject of religious heritage, the problem field needs to be properly framed. The following considerations have been made with the goal to create a new perspective for village-churches in shrinkage areas in the Netherlands.

The location of this master thesis focusses on the Netherlands, and in particular the provinces in the periphery of the Netherlands, away from the Randstad. The provinces under investigation are Friesland; Gelderland; Groningen; Limburg; North-Brabant; Overijssel, and Zeeland. In accordance with the definition of the Randstad and the intermediate zone and periphery of the Netherlands by De Groot et al. (2011), which will be further explained later in this thesis, the regions within these provinces under investigation are all part of the periphery and the intermediate zone in the Netherlands.

In these provinces, this thesis focuses on municipalities with a projected shrinkage in population. While predominantly rural regions in the Netherlands are all together absent (Haartsen et al., 2003), this study focuses on settlements defined as village based on the total number of inhabitants. The SCP (2013) mentions that small villages are settlements with a maximum population of ~4.000 inhabitants. Large villages are defined as settlements having a population of ~4.000-13.000 inhabitants. In this research the focus will be on small to medium sized villages. Settlements with a maximum population of ~8.000 (double the definition of a small village) has been introduced as defining the village standard in this research.

There is also a lot of religious heritage available in the Netherlands. One in five churches has already undergone some form of redevelopment and is no longer used for religious services. In the coming thirty years, by 2050, almost a quarter of all church buildings will be taken out of religious service (RCE, 2021). With currently a total of 7.132 places of worship, it is impossible to take all into account. Therefore, this thesis will focus on the currently vacant church buildings in the Netherlands.

Finally, this research focuses on the redevelopment of the church as well as the redevelopment of the core of villages in order to counter the negative effects of population shrinkage. It is therefore that the centrality of the church building itself is also important. Here, the church is to be positioned as part of the heart of the village and the church is originally the first and/or most dominant church built (or rebuilt on the same site) in the village.

As a result, the focus of this thesis will be on vacant churches positioned centrally in villages which hold a maximum population of ~ 8.000 inhabitants, within regions of (projected) shrinkage are taken into account. This currently evidently leads to 24 church buildings in the Netherlands, all part of the Roman-Catholic and Protestant (Dutch Reformed & Reformed) denominations. Other denominations will therefore not be taken into account.

The number of vacant churches in the Netherlands constantly changes and also the demographics on which regions in the Netherlands will have to deal with shrinkage are altered every few years. Therefore, this thesis is only a snapshot of the current situation and is liable for change in the future.

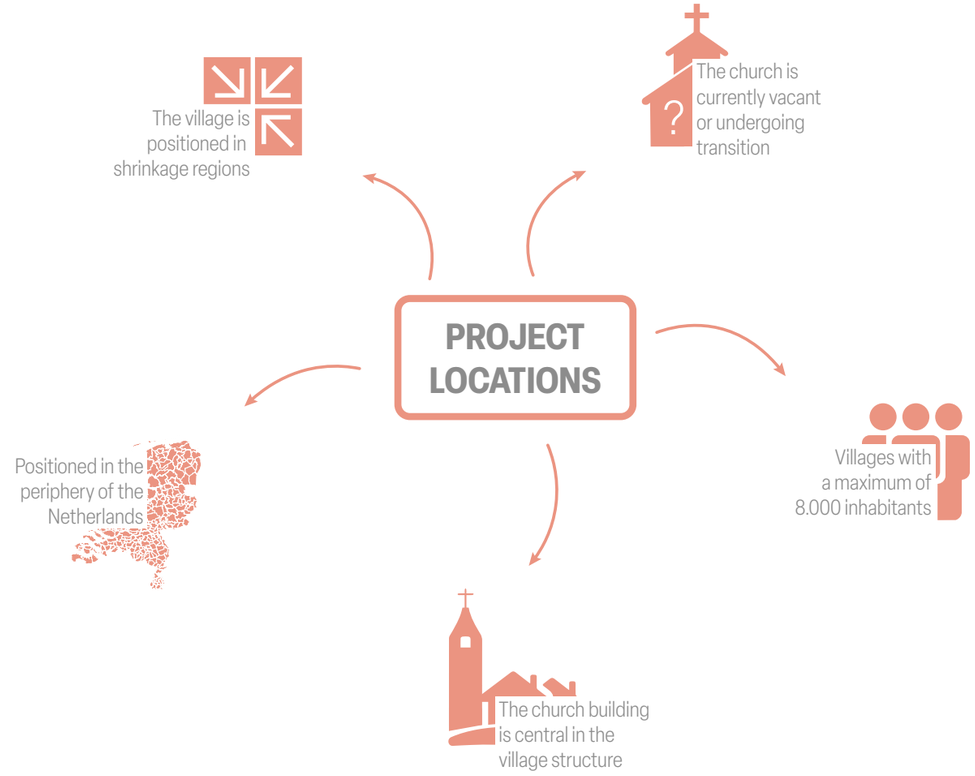


Figure 1.18: Framework of the conditions of the project locations taken into consideration.

Research Aim

Through the use of literature, spatial, historic and data analysis on both national and local scale, as well as interviews and fieldwork, this research aims to shine light on the problems resulting from rural shrinkage as well as the role of church buildings within rural communities.

Based on the defined problems and opportunities, design is used as a way to research desirable scenarios and create a comprehensive study on the impact and possibilities in redevelopment projects of the core of villages. Where the former social, symbolic, and functional attributes and values of church buildings are reinvented in a contemporary way.

This all is put together in a structured and accessible way in the form of a toolbox with design possibilities as well as the implication of these distinctive design possibilities to a threefold representative project locations.

The goal is to not only deliver a thesis which embodies all that has been taught during the past years of this Urbanism master track and apply these techniques to this specific field. The goal is also to create a lively example of how we, as a society, can rethink the usage of religious heritage. Where this thesis can form as an inspiration and reference for others.

Relevance

The **scientific relevance** of this thesis leads to the way the two key problems are combined. There is a lot of literature available on both the subject of Church decline and an increase of vacancy in religious heritage, as well as the effects of rural shrinkage on the Netherlands. However, the spatial combination of shrinkage regions and vacancy in religious heritage has not been looked at from this perspective before and may provide an interesting new view on the subject.

The available literature predominantly focuses on the non-spatial problems of religious heritage and barely sheds a light on the possibilities for redevelopment of religious heritage in a spatial way which coincides with the former values of this heritage. This is also true for adapting to rural shrinkage in the Netherlands, which is dominantly tackled by looking at the non-spatial implications, without linking place and time. The structure is set mostly in top-down vision, without considering the perspective of bottom-up development in synergy with local community.

The **societal relevance** of this thesis relates to the urgency of the two key problems at hand. Shrinkage is an inevitable phenomenon has a lasting impact on the livability of regions which have to deal with this problem. At the same time, a growing availability of religious heritage and lacking vision on how to deal with this heritage leads to vacancy. This thesis therefore deals with providing a better livable environment as well as retaining and strengthening both tangible and intangible heritage.

This thesis also offers an interesting approach to the topic of redeveloping religious heritage. The past years a focus has been put by the Cultural Heritage Agency (part of the Ministry of Education, Culture and Science) to stimulate municipalities to work on a structural vision on how to deal with their religious heritage called a '*Kerkenvisie*'. In this strategic vision the municipality and church boards work together to take position on which religious heritage will be kept in religious service and which heritage will not and what could be an alternative use for the buildings left out of service. However, the approach is decided by a dedicated team set up by the municipality and the church boards and offers little participation by local residents. The approach of this thesis is the other way around: this thesis starts off with societal problems in these rural settlements and the public perception on these problems and work from there on how the church heritage can fulfill in facilitating solutions, just like churches have been doing through the past centuries. The aim is to truly reconcile churches and the local community again.

The thesis links to two of the Sustainable Development Goals (SDG's) set by the United Nations. Goal 8 and Goal 11. Goal 8 promotes sustained, inclusive, and sustainable economic growth, and full and productive employment and decent work for all. And Goal 11 aims to make cities and human settlements inclusive, safe, resilient, and sustainable. (UN, 2015)

Figure 1.19: The 17 Goals of Sustainable Development - UN (2015).

Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable.

1.4 THEORETICAL FRAMEWORK

The theory focuses on the two key problems at hand, which together lead to the assignment of this graduation project.

First, the causes of shrinkage in the Netherlands are explored. Here the first sub-question (SQ1) is partially answered.

Then, the effects of shrinkage are elucidated in an attempt to answer the second sub-question (SQ2).

Finally, a closer look is taken at the role of the Church in social cohesion, finalizing on the story of religious history in the introductory chapter and answering the third sub-question (SQ3).

To the right, the theoretical framework is put forward. Here the distinct aspects involving rural shrinkage and the decline of the church are formulated and the different literature sources and their dependencies are put in context.

An introduction to both the theme of shrinkage in the rural parts of the Netherlands and an increase in vacancy in religious heritage has already been given in §1.1: 'Setting the scene'.

Further expansion on these themes will be done in Chapter 2: 'Shrinkage in rural Netherlands' and Chapter 3: 'Religious heritage in the Netherlands'.

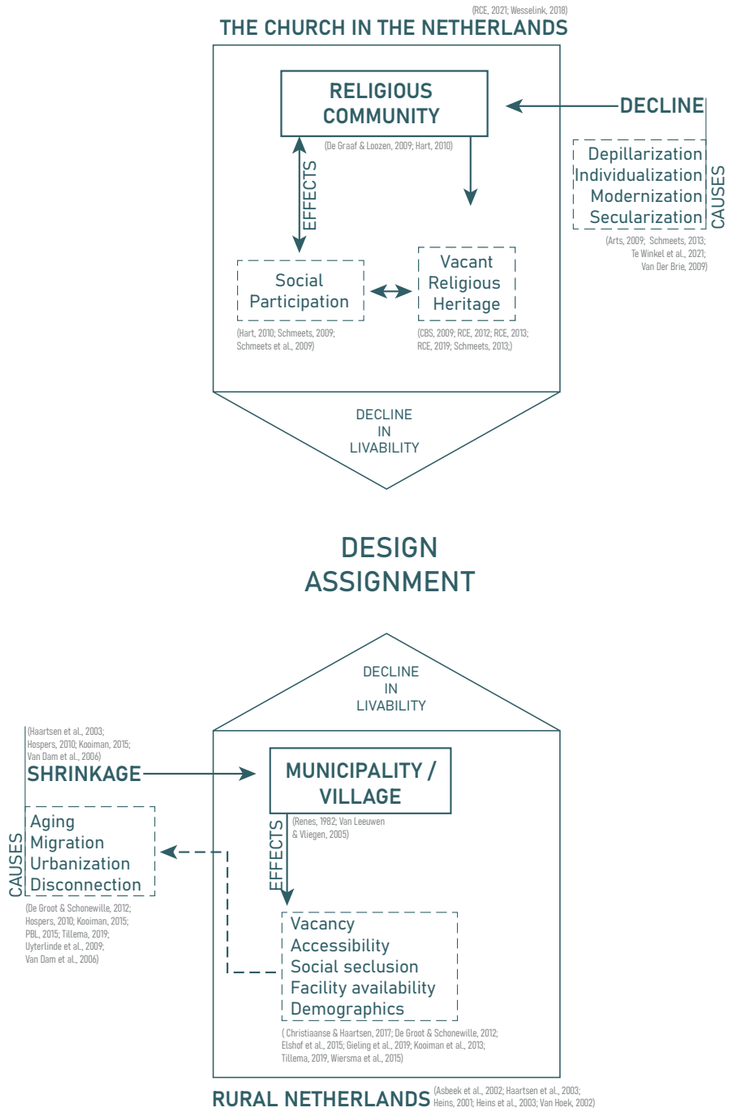


Figure 1.20: Theoretical Framework.

02

SHRINKAGE IN RURAL NETHERLANDS

In this chapter shrinkage in the rural parts of the Netherlands is further explored. First, the rurality of the Netherlands is defined. After that, the causes of shrinkage in the Netherlands are explained. The chapter concludes with the effects of shrinkage on rural living, based on four themes which will further form the common thread throughout this thesis: facility, mobility, identity, and community. This chapter is a combination of a literature study and spatial analysis based on GIS-data. The literature on shrinkage is made spatially with GIS-data portraying the locations which are influenced by the effects. The text and maps are supplemented with schematic figures on the conclusive findings of the literature for a comprehensive and clear understanding of the literature.

2.1 Rurality of the Netherlands

2.2 Defining the village

2.3 Causes of rural shrinkage

2.4 Effects on the Dutch countryside
Facility and mobility
Identity and community
Reflection

2.1 RURALITY OF THE NETHERLANDS

In this chapter the focus will be on the rural development of the Netherlands, what is denoted as 'rural' exactly, the causes of rural shrinkage and their effects on the countryside. First, what exactly do we define as rural? There is quite some debate on the definition of rural, and on the matter that the Netherlands might not have any true rural regions at all. Eurostat (2018b) defines in their report on the competence of urban and rural regions in Europe three types of urbanity/rurality: predominantly urban regions; intermediate regions, and predominantly rural regions. Within these types and their parameters, the Netherlands - divided by Corop-regions - is seen as a mix between predominantly urban regions and intermediate regions, with only Zeeuws-Vlaanderen in Zeeland defined as a predominantly rural region. Not a surprise, compared to the other countries in Europe the Netherlands has one of the highest population densities and limited large-scale nature. The Netherlands ranks 5th overall in European population density and ranks 1st in density for European countries with a population larger than 1.000.000. (Whelan, 2020)

However, a different study, Eurostat (2018a) defines population density and urbanity/rurality in Europe within the parameters of Cities, Towns and Suburbs, and Rural Areas, based on a population grid. Here, the rural areas are defined as areas where more than 50% of the population live in rural grid cells. With this characterization, detailed on the scale of municipalities, large parts of Drenthe, Groningen, and Zeeland are defined as rural areas, as well as parts in Friesland, Gelderland, Limburg, Noord-Brabant, and Overijssel.
On a neighborhood-scale, almost 60% of the Netherlands was defined as a rural neighborhood in 1993 (CBS, 2009). This declined by 15% in thirty years. But still more than 40% of neighborhoods is considered a rural neighborhood (AlleCijfers, 2022). In contrast, while almost 50% of the municipalities in the Netherlands were considered rural in 1993 (CBS, 2009), this drastically changed to around 20% of the current municipalities being considered rural (AlleCijfers, 2022). This is due to many smaller rural municipalities that have been combined to form larger municipalities. A reason for us to consider analysis on a neighborhood-scale instead of a municipality-scale, for a municipality-scale provides an inaccurate depiction of the size of actual demographics on this matter.

In a broad sense, the rurality of the Netherlands can be defined as a separation between the Randstad; an intermediate zone, and the periphery of the Netherlands. As De Groot et al. (2011, p.16) proclaim: the cities in the West - in South-Holland, Utrecht, and North-Holland - are part of the Randstad area. With parts of North-Holland, Gelderland, and North-Brabant as part of the intermediate zone. The provinces Drenthe, Friesland, Groningen, Limburg, and Zeeland, as well as parts of North-Holland, Flevoland, and Gelderland are part of the periphery of the Netherlands (See Figure 2.1).

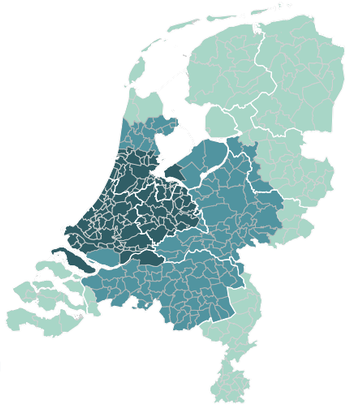


Figure 2.1: Macro-zoning of the Netherlands into the Randstad, intermediate zone, and national periphery. Based on De Groot et al. (2011).

2.2 DEFINING THE VILLAGE

In the Netherlands there used to be a clear distinction between what was considered city, what was considered town, and what was considered a village. The definition was derived from obtaining '*Stadsrechten*': Town Privileges. However, since some towns grew significantly while never officially obtaining town privileges and other settlements remained small while they did obtain town privileges, this method of defining cities is now obsolete. In that case we would not define The Hague, with a population of over 500.000 as a city, while the hamlet Staverden, with a population of 30 people, would be considered a city.

Officially, the government now distinguishes settlements only on different scales and no longer defines cities and villages. The scales used are the municipality, district, and neighborhood. Denotation of settlements can still be done on population count. The Dorpenmonitor (Village Monitor, Steenbekkers & Vermeij, 2013) defines small villages as settlements with a population of up to 4.000 inhabitants and large villages as settlements with a population of 4.000 up to 13.000 inhabitants.

Nowadays, the distinction between village and city is quite obscure. The structure of rural and urban is strongly interwoven and on large-scale villages are strung together as larger agglomerations. Asbeek Brusse et al. (2002) underlines this based on three aspects: the physical space, the social space, and the symbological space.

The physical space between city and village was clearly divided between urban and rural. With limited speed of traffic movement in the past, the transition between the two was recognizable. With the expansion of cities into suburban climates and the introduction of high velocity motorized transport, the distinction and the time of transition are diminished to ten-minute car drives, and rurality is experienced in increase of distance to the nearest highway.

The social space between city and village originates in a separation between agricultural functions supporting town functions, as previously mentioned in the introduction chapter. In the past fifty years, the functional processes of cities have grown outside of the original borders of city and countryside. With cultural differences and the representation of identity having become less spatially bounded with the growing influence of globalization and digitalization.

The strongest distinction between city and village is still present in the symbological space. In a survey done by Heins (2001), she notes that almost all the participants have a clear image of the countryside. Often affiliated with positive factors as greenspace, quietness, nature, and safety. Heins describes the romanticization of the countryside as rural idyll, a glorification and inflation of rural characteristics which contributes to a clear distinction between what is perceived as urban and what is perceived as rural. In a later study done by Heins, in collaboration with Van Dam (2003) the image of the countryside is seen by participants in their survey as the morphological qualities of rurality, and less by the social-cultural and functional aspects like agricultural concentration. In addition, the countryside is recognized by city-inhabitants part of the survey as a space for experience and consuming.

Heins and van Dam (2003) also noted that there is an explicit difference between rural and countryside. For

rurality of living can also be achieved in sub-urban settings and does not always need to be positioned in the countryside. The trend for rural living in sub-urban locations has been set since the 1970s, when large suburban expansions based on 'living rural' were introduced in the Netherlands.

As much as cities have developed over the past century, especially since the reconstruction period and the decades thereafter in the mid to late twentieth century as part of an urbanization trend, villages have in most cases dealt with a more limited spatial expansion and population increase. Often, the historical spatial layout of villages is still recognizable. These layouts are defined by how the villages were originated and developed: along the edges of agricultural fields, or surrounding a central village green, or along a water embankment-structure, or surrounding a central church (Renes, 1982; Barends et al. 2010; Renes, 2010). These structures can tell us a lot about the history of a place. The past can form a source of inspiration for changes in the future. Which components define the structure of a settlement exactly? And what is to be kept, reinforced, and underlined? And what can be given a new form for the future to continue? In Figure 2.3 distinct types of village structures are (visually) explained. These distinctions are also used in the analysis to define different villages and village types.

Figure 2.2: The village of Scharendijke in Zeeland, one of the project locations, can be classified as a dike-settlement. An old aerial photo (circa 1965) shows the small village core to the near the sea embankment and the street perpendicular to the dike leading to the later expansions of the village. (Scharendijke.info, 2022)

	Settlement type	Description	
Main typologies	'Kruisdorp' **Crossed settlement**	Setup around a **crossroad** (1)	(1)
	'Lintdorp' **Linear settlement**	Setup along a **line** like a road, canal, or railway (2)	(2)
	'Ringdorp' **Rundling settlement**	Setup concentrated around a **central point** (3)	(3)
Specialized typologies	'Brinkdorp' or 'esdorp' **Brink settlement**	Setup around a **village green** close to higher agriculture fields (4)	(4)
	'Dijkdorp' **Dike settlement** (often linear)	Setup along the length of a **dike** (5)	(5)
	'Kerkdorp' **Church settlement** (often rundling)	Setup around a central positioned **church** (6)	(6)
	'Voorstraatdorp' **Mainstreet settlement** (often rundling)	Setup along a mainstreet which is **right-angled to a dike** (7)	(7)
	'Ontginningsdorp' **Reclamation settlement** (often linear)	Setup as rural core for inhabitants of recently **reclaimed land**	
	'Terpdorp' or 'wierdedorp' **Mound settlement**	Setup on a heightened **mound** (against floods) (8)	(8)
	'Veenkolonie' **Peat colony** (often linear)	Reclamation settlement specifically for **peat** farmers in moorlands	

Figure 2.3: Types of settlement structures found in villages in the Netherlands.

2.3 CAUSES OF RURAL SHRINKAGE

As has been mentioned in the introduction chapter, population decline is anything but a new phenomenon. Broadly, population decline – or shrinkage – is a result of two main factors: a negative birth-death ratio and/or a negative migration ratio. A negative birth-death ratio is achieved when in an area more people pass away than new babies are born. A negative migration ratio is simply the result of more people moving away from a certain area than that there are people moving in.

Growth and shrinkage are part of one another. Together they form an organic rhythmic process. Since the industrial revolution, shrinkage was not something urban planners and designers had to deal with. There was constant growth and population boom meant that urban regions have grown significantly. While rural regions have seen significant less growth, the stop of urban growth was first experienced in the changing demographics of industrial cities in the 1970s. Industrial cities such as Detroit, Manchester, and Duisburg hit a hard crisis and diminishing population numbers. And for the first time the term urban decline was used (Hospers, 2010).

On the contrary, rural decline has always been part of demographic development throughout time. People move from the countryside to the city in search for jobs, education, and facilities. In the Netherlands, all the four largest cities had to deal with urban decline during the 60s and 70s. While moving from rural to urban was still the trend, people started living in dedicated suburban growth cores (Kooiman, 2015). Before, the city could be described as an escalator: especially young people moved form the countryside to the city to enjoy higher levels of education and facilities, and they moved out of the city once they finished their education (De Jong et al., 2015). In the final quarter of the previous century the function of the city as an escalator changed to the city functioning as a sponge: people move to the city and stay in suburban areas near urban growth cores surrounding the large cities. (Van Middelkoop et al., 2015)

Currently, mostly the regions near the border of the Netherlands, and further away from the Randstad and the major cities of the Netherlands, deal with population shrinkage. The problem transformed in the past decades from a local problem to a regional problem and the Dutch government now considers rural shrinkage as a structural problem to deal with (Kooiman, 2015).

There are two types of migration to consider: local migration and regional migration. Local migration leads to no difference on the migratory balance of a municipality, regional migration does, and therefore can lead to shrinkage. Local migration occurs when residences are no longer suited to the changing composition of a family or a changing needs and requirements. People move, but they move within their own municipality, to find a more suitable living place. Migration over longer distances has deeper economic causes like work and education availability (Fielding, 2012). Especially the youth move away from rural regions to find better education and afterwards they do not return, finding a stronger connection with their new living place and more suitable facilitations. Leading to an aging population and a ‘brain drain’ in rural regions. (Kooiman en Latten, 2013; Latten en Kooiman, 2011; Hospers, 2010). One of the reasons for youth not returning to their rural origins is a lower availability of entertainment facilities.

As can be seen in Figure 2.4, the average distance to the nearest location dedicated to entertainment (music podium, theatres, cinemas) is often further than twenty kilometers distanced from people’s home in rural regions.

The white areas are parts where the average distance to entertainment facilities is the lowest; the darker the color the further away locations are. The cities in the Netherlands are clearly visible as white areas, whereas the countryside turns deep blue in large parts in Friesland, Groningen and Drenthe, as well as the eastern parts of Gelderland. Interestingly, Zeeland has relatively good access to entertainment facilities. Possibly due to the focus on tourism attraction in the region.

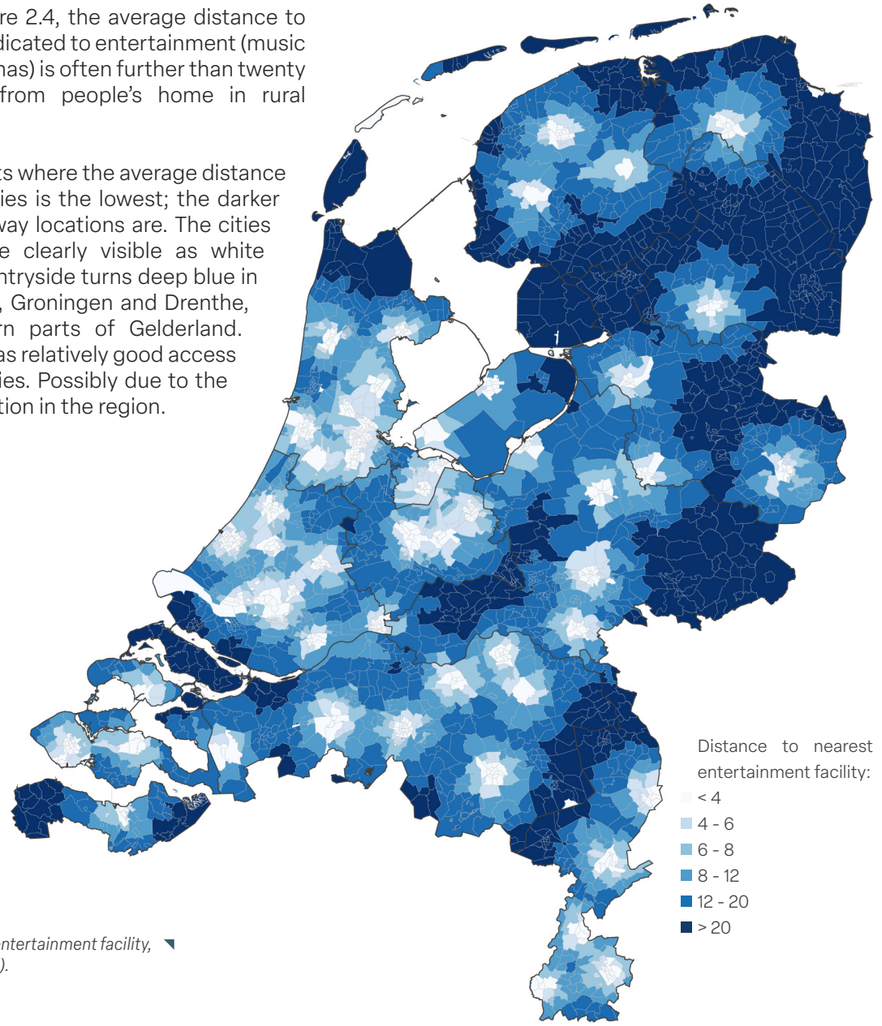


Figure 2.4: Distance to nearest entertainment facility, based on Kadaster & CBS (2020).

Another reason for starters not returning to the countryside are lower employment possibilities. As can be seen in Figure 2.5, mostly rural parts of the Netherlands have a lower availability in businesses. The center of the Netherlands also has the most registered businesses. The further away from the center, the less businesses are established in the area. The Provinces of Zeeland, Limburg, Friesland, Drenthe, as well as large parts of Overijssel have the lowest availability of different businesses. A low number of established businesses in an area can lead to a business-field diversity scarcity. Not all professions are represented, and it is difficult to find a job in distinct work-fields.

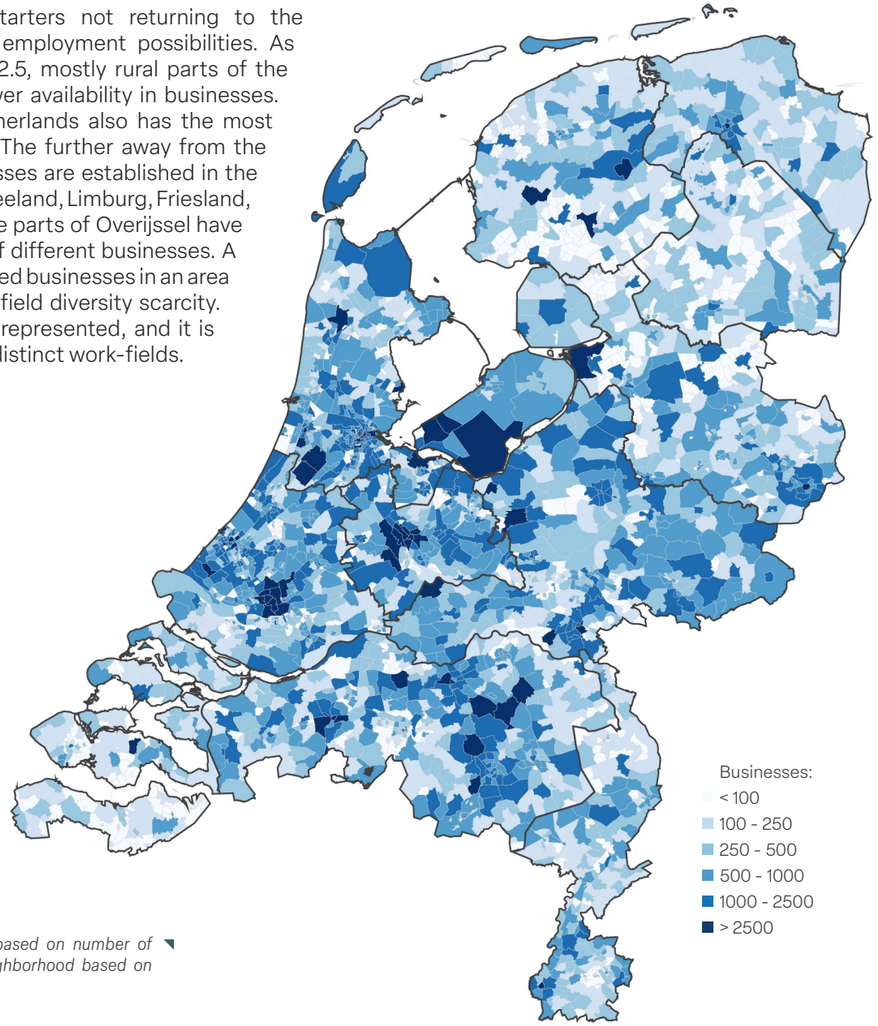


Figure 2.5: Business density based on number of registered businesses per neighborhood based on Kadaster & CBS (2020).

Finally, there is a probable reason to non-returning migration that it is difficult to find a suitable and affordable home in rural regions. The rural housing market is more focused on family and elderly homes and has less available starter housing. The more senior population in the countryside also holds more wealth, leading to a rising in prices in the housing market. (Haartsen et al., 2003; De Groot & Schonewille, 2012)

Rural shrinkage can be seen as a downward spiral. Shrinkage leads to further shrinkage. This is also portrayed by Hospers (2010) in a diagram on the interaction of migration flows between municipalities (see Figure 2.6). A municipality with population shrinkage deals with a negative migratory balance and a negative birth-death balance. Leading to a decline in tax income and impairment of municipal spending. With people migrating and limited budget on infrastructure and facilitating functions, shrinkage leads to a decreased labor force and a negative business climate. Companies move away and fewer new businesses settle in the region. This in turn leads to a decline in population by people in search for new work and education opportunities with more facility availability elsewhere. (Hospers, 2010)

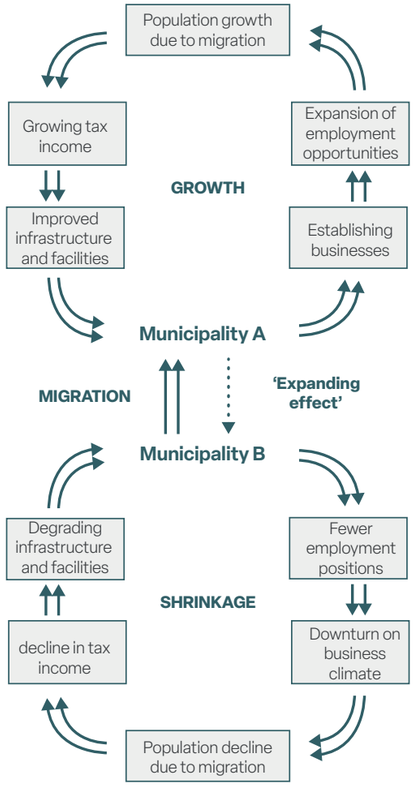


Figure 2.6: The downward spiral of municipal shrinkage and growth between two municipalities (Hospers, 2010).

2.4 EFFECTS ON DUTCH COUNTRYSIDE

Rural shrinkage regions in the Netherlands have been noted to have more negative demographic statistics compared to urban areas. There is a social-economic disadvantage compared to regions with a positive migration ratio and compared to the Dutch average social-economic status. The differences in income between urban and rural are growing and the percentage of population with a high education level is lower. Also, the labor participation of women is lower and the ratio between employed and unemployed citizens is developing negatively. These differences have always been a part of the contrast between rural and urban, but the inequality has been growing in the past decades. (Kooiman et al., 2013)

The rural parts of the Netherlands also must deal with the phenomenon of aging more than urban regions. As can be seen in Figure 2.7, large parts of Zeeland, Limburg, Gelderland, Drenthe, and Groningen have a high percentage of the population with an age of 65 and above. Often subsiding more than a quarter of the population. This percentage is bound to increase over the coming years. In contrast, there is a very limited percentage of the population aged between 0 and 15 (average of 14%) and an age between 15 and 25 (11%).

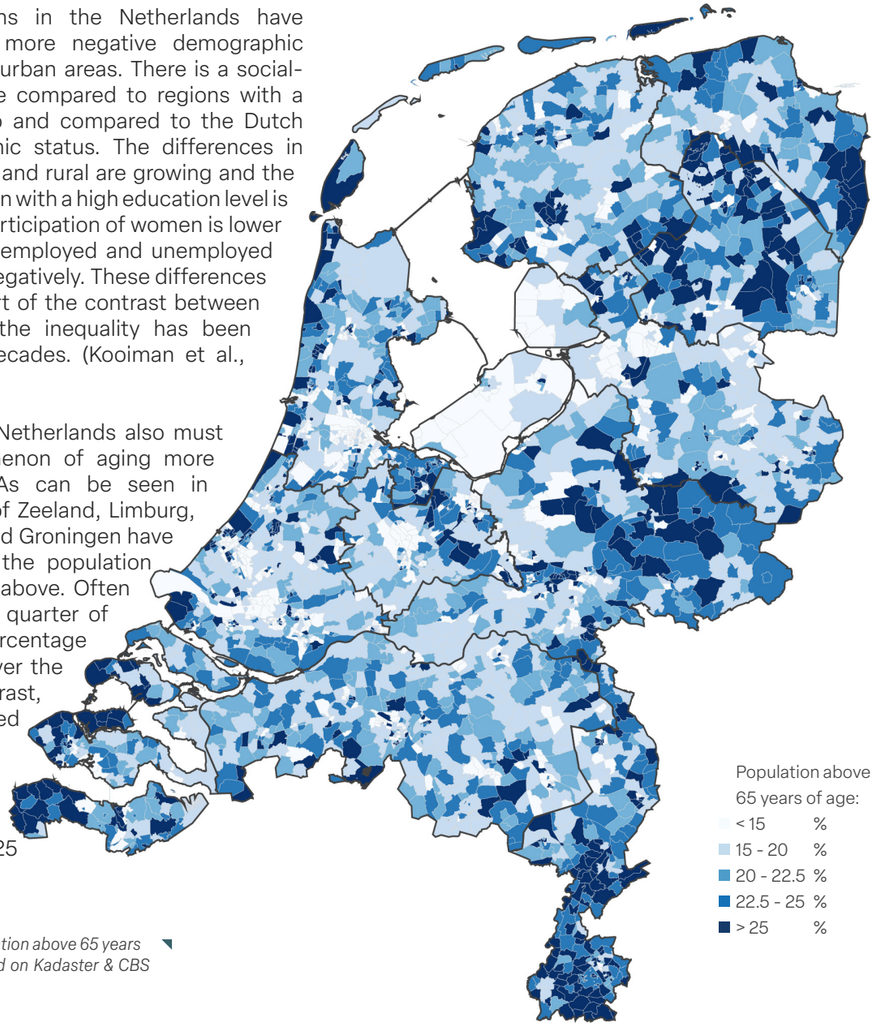


Figure 2.7: Percentage of population above 65 years of age per neighborhood, based on Kadaster & CBS (2020).

Overall, the effects of shrinkage have been categorized along four main themes: Facility, Mobility, Identity, and Community.

The first theme, Facility, focuses on the reduced availability of functions, the increased vacancy in housing and businesses, and the withdrawn (social) facilities such as education and healthcare. This theme is closely linked to the theme of Mobility. Less facility availability close-by results in a larger mobility challenge over longer distances.

The theme of Mobility focuses on this inquiry and the dependency on motorized transport as well as the need for public transport.

The third theme, Identity, focuses on the representation of the village. Here, the attention is on what characterizes a village and how this has changed in the past years. The identity of the village is of importance both outwards, focusing on tourism, as inwards, focusing on the local community.

This brings the final theme: Community. This theme is, as mentioned, closely related to the theme of Identity and puts a spotlight on the lessened social cohesion as an effect of shrinkage.

The four themes are strongly interwoven with one another and are described in the next section combined in two sets of two. The themes of Facility and Mobility are combined and are both tangible themes. They both relate to the direct effects of shrinkage in the built environment. The second two themes, Identity and Community, are intangible themes and relate to the perception of people on the effects of shrinkage.

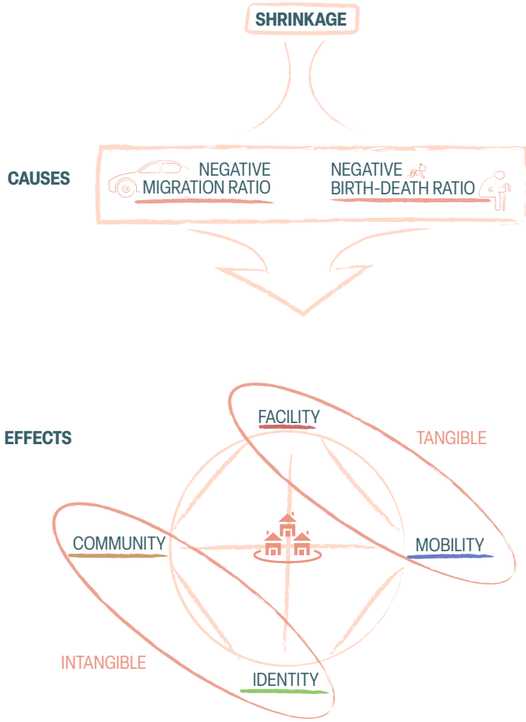


Figure 2.8: The main causes of shrinkage - a negative migration ratio and a negative birth-death ratio - lead to both tangible and intangible effects, defined along the four themes: Facility, Mobility, Identity, and Community.

Facility and mobility

One of the leading effects of shrinkage is an increase of vacancy in buildings. This goes for residential buildings as well as wider related functions. With a local population in decline, a natural reaction is a decline in support base for local retail and facilities. Shops and supermarkets move away from smaller villages and concentrate on locations with a higher client base in the proximity. Primary and secondary schools are merged and disappear from villages. Industries chose to settle elsewhere in search of a larger workforce availability. Population shrinkage also affects the finances of local governmental institutions and municipalities, resulting in limited funding for social facilities and a decline in availability (Tillema, 2019). As a result, the distances to the nearest facilities and retail functions, and the distance to work transcend a walkable, or cyclable, distance and car and public transport dependency increase. The average number of cars per household differs between the Randstad area and the periphery. On average, residents in the Randstad area have 1,2 cars per household, while in the countryside of the Netherlands this rises to 1,5 to 2 cars per household (Kadaster & CBS, 2020). The Netherlands in general has a high average number of cars per household. The car dominant streetscape is also in villages a regular sight.

▲ *Figure2.9: The main street in the village of Standdaarbuiten, North Brabant, is dedicated to parking space for cars. This space used to be available for market stalls. Street view by GoogleMaps (2021).*

Next, let's take a look at education and healthcare availability. A study done by Elshof et al. (2015) on the effects of local primary schools closing and immigration flows in that area shows a higher outward flow of families with younger children in regions where the availability of primary schools is reduced. When it no longer is an option to reach a primary school within a short amount of time, bringing children to school breaks with the daily work-related obligations. Place dependency, as a behavioral actor, is one of the main elements of the meaning of place in these situations. (Christiaanse & Haartsen, 2017). The number of primary schools available within the reach of five kilometers is in especially Zeeland and Drenthe often just one or fewer on average (see Figure 2.10). For secondary schools this availability is even more limited (Figure 2.11). Students in rural regions have to travel more than five kilometers to the nearest secondary school. It is not illogical that these distances are present in the countryside. There are less students to fill secondary schools and they are often positioned in larger towns. However, it does pose some problems. For instance, in Zeeland, where there are places with the nearest secondary school on another island. Busses don't come-by often enough or are out of sync with the school hours system and when the weather takes a turn for the worst the pressure on public transport becomes problematic: it regularly happens that not all students can take the bus because it is already full. These situations lead to students missing school hours.

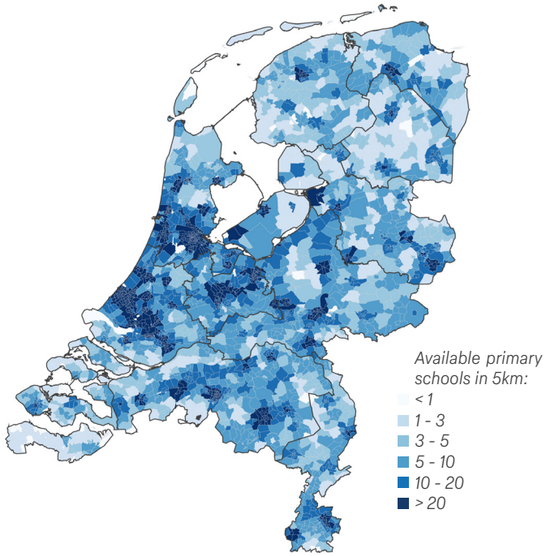


Figure 2.10: The number of available primary schools within a distance of 5km, based on Kadaster & CBS (2020). ◥

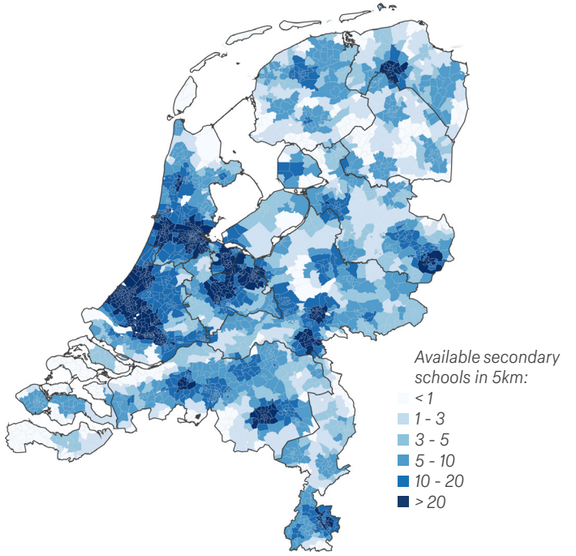
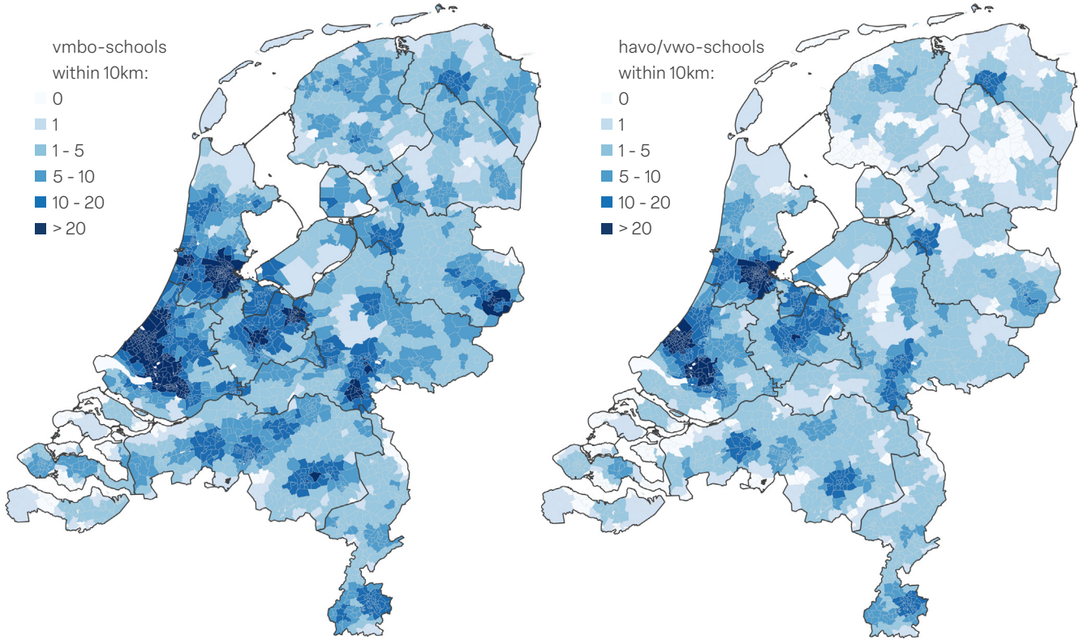


Figure 2.11: The number of available secondary schools within a distance of 5km, based on Kadaster & CBS (2020). ◥

Another problem lies with the difference in availability between vmbo and havo/vwo schools. While the availability of secondary schools in rural regions itself is already limited, the availability of higher secondary education is especially constrained. There is little choice in secondary schools at the level of havo/vwo in a reachable proximity, forcing students to choose a vmbo-education level because of travel times. This influences the education inequality between rural and urban regions – where there is a higher availability of both vmbo and havo/vwo schools.

Figure 2.12: The number of available vmbo-schools within a distance of 10km, based on Kadaster & CBS (2020).

Figure 2.13: The number of available havo/vwo-schools within a distance of 10km, based on Kadaster & CBS (2020).



Healthcare wise, especially the Randstad region is represented positively in availability. As well as the provinces of North-Brabant, Gelderland, and Overijssel. The average distance to the closest general practitioner is limited and the reachable number of general practitioners within five kilometers is generally between one and three for rural regions (compared to more than ten for the Randstad region, with numbers exceedingly over twenty for city areas). As can be seen in Figure 2.14, Zeeland, Friesland, and Groningen have a more limited availability of healthcare institutions in rural regions and it can require inhabitants to drive over 30 kilometers to the nearest hospital.

Concluding the remarks on the themes of facility and mobility, the car dependency and quality and quantity of public transport are discussed. In these rural regions with longer average distances to education, and healthcare institutions and a higher motorized transport dependency, mobility issues rise.

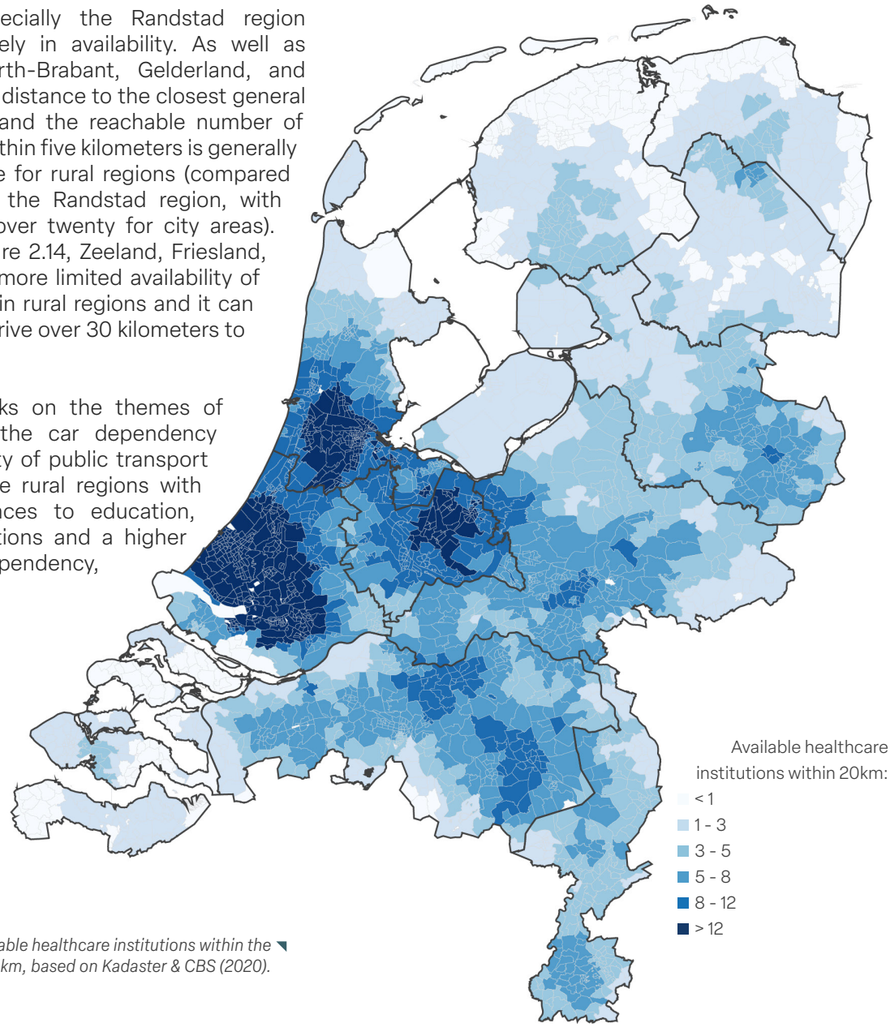


Figure 2.14: The number of available healthcare institutions within the reach of 20km, based on Kadaster & CBS (2020).

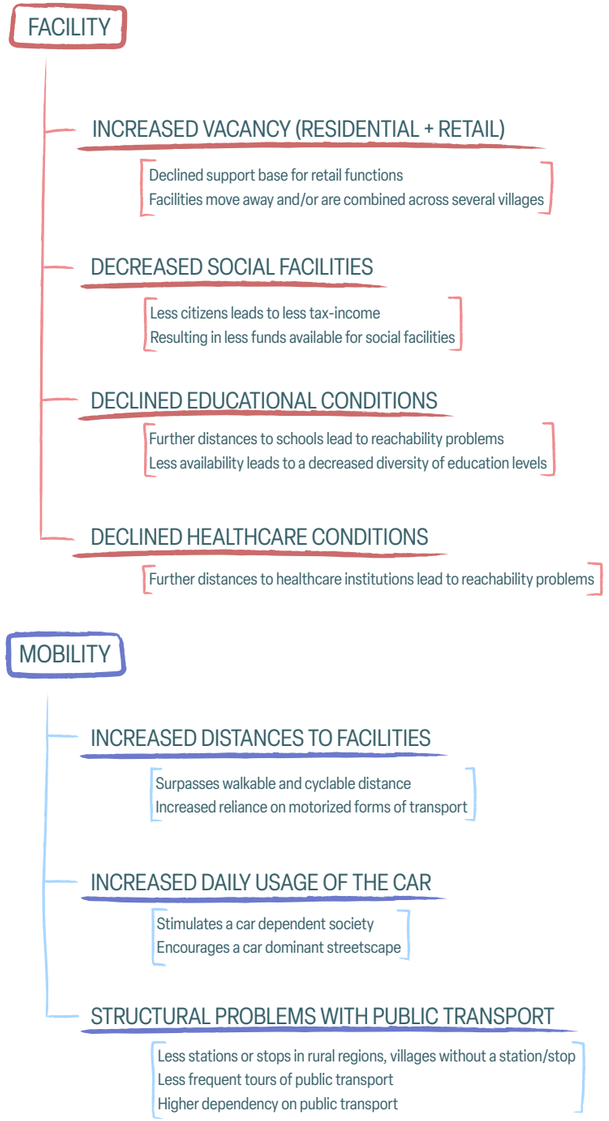


Figure 2.15: The effects of shrinkage on the themes Facility and Mobility summarized schematically.

Tillema (2019) confronts the national government on their focus on traffic and transport policies in urban areas, while the mobility problems in rural regions are becoming increasingly severe. With the inability to reach retail, entertainment, and social facilities by foot or by bike, residents are fully reliant on motorized transport. The quality of transport here is becoming increasingly important. Accessibility of facilities should not only be measured in distance, but also in the quality of transport (Hine & Kamruzzaman, 2012).

Wiersema et al. (2015) define two types of car-dependency: incidental usage and daily usage. Incidental usage relates to using the car for short term visits and infrequent usage where routine tasks are not fulfilled by car. In daily usage, the car fulfills in daily commute tasks in home-work transportation and providing in life necessities. In rural regions, the car dependency is strongly shifting towards a dominant need for daily usage.

With an increased demand for motorized transportation, not only private transport but also public transport demand increases. However, the availability of public transport is in decline in rural regions. Due to a lower demand, regional busses arrive less frequent – often only once per hour or once per two hours. Local public transport initiatives such as a dial-up bus or hub-taxi are quite an expensive alternative (Tillema, 2019). This forms a problem for people who are less mobile, such as elderly, and people who do not own a form of motorized transport and have less wealth available, such as youth and people with a lower social-economic status. Leaving them vulnerable when more local facilities close down. (Christiaanse & Haartsen, 2017)

Identity and community

The affiliation with local identity and community are principal factors for rural society. The social orientation of residents living in rural areas is more inwardly focused. Inhabitants in villages often know a lot of the people living in the same settlement and a large part of the social structure is built upon local interactions between residents. The social place attachment is also stronger in rural regions compared to urban regions. The more remote the location is, the stronger the social place attachment (Gieling et al. 2019). Christiaanse & Haartsen (2017) describe the meaning of place as a combination of the functional, social, symbolic, and economic realms. Dependent on person and place, aside from place dependency, the meaning of a place is constructed, based on the place identity (cognition) and place attachment (emotion). It becomes a goal to stimulate this place identity.

The presence of a local supermarket or café has been found to contribute positively on social place attachment (Gieling et al., 2019). Not only because of the functional availability, but also because of the identity of place. That a village should at least have access to a supermarket to identify as a village (Christiaanse & haartsen, 2017). A village without a supermarket would be denoted by the Dutch word 'gehucht' and resembles a hamlet without official settlement name (De Groot & Schonewille, 2012).

In this, a core principle of villages is the evident possibility to come together as a community at regular facilities. Local initiatives to save the last supermarket and café in a village can be seen across the Netherlands. The fact that in some villages the local supermarket and café remain, even after loss of cliental and are kept open can even be interpreted as a consequence, rather

than a condition, of social place attachment (Gielings et al., 2019). Preservation of old, and also creation of new places to meet, strenghtens the community.

Another actor on the identity of a village is the outside influence of visitors. As mentioned before, Heins (2001) describes the perception of the village and rural living by people as idyllic and a romanticization of the realistic domain. The increase of tourism leads to new forms of income from recreational and cultural functions. However, with a decreased rural population, expansion on these functions becomes difficult. Creating an attractive 'postcard' inviting visitors, the village community has to work together as local initiatives join established functions to enhance the identity of the place.

On a micro level, neighborhood bonding is the most distinctive and valuable component in creating social cohesion (Bovenhoff & Meier, 2015). Neighborhood bonding is built by creating the possibility to physically meet other people. Both in a voluntary way: places where people choose to meet like local community centers and at a sports club, and in an involuntary way: places where people accidentally meet others without meeting people being the main activity, like a supermarket or shop. A primary school for instance contributes to the bonding of social groups consisting of residents with school-aged children. Often acting as a bridge between several separate social groups (Gielint et al., 2019).

Local population shrinkage, with an increased migration ratio, leads to an increase in vacancy. This results in less social cohesion: not only do social groups fall apart because people move away, but also the newcomers have difficulties adjusting to the already settled social environment they move into (De Groot & Schonewille, 2012). To increase social cohesion and offer chances to incorporate into existing bonds, 'natural' meeting places are required. Bovenhoff & Meier (2015) define four required characteristics of these meeting places: 1) they are positioned on neutral grounds; 2) visitors to these places are of diverse social-economic status; 3) social interaction is not necessarily the main activity; 4) the place needs to be well accessible. These characteristics are similar to what places like supermarkets, cafés and community centers offer. Hospers (2010) notes that livability in that sense shouldn't reply on population numbers, but on the quality of our living environment and the possibility to come together and meet one another. Unfortunately, especially supermarkets and cafés and restaurants are in decline in rural regions due to shrinkage.

The major assignment is not so much in countering facilities being closed, but more in facilitating the emotional 'loss' of place and create new social space and activity to restrengthen local social cohesion (Christiaanse & Haartsen, 2017). In that perspective, De Groot & Schoneville (2012) also argue that the local population should be given control in how these places are defined. While inhabitants are unaware of the exact figures on shrinkage, they are the ones who best have the view on the effects of shrinkage on their daily lives. Bottom-up approaches with local initiatives leading to new social interactive environments strengthen the local communities and create cohesion leading to a stronger place identity.

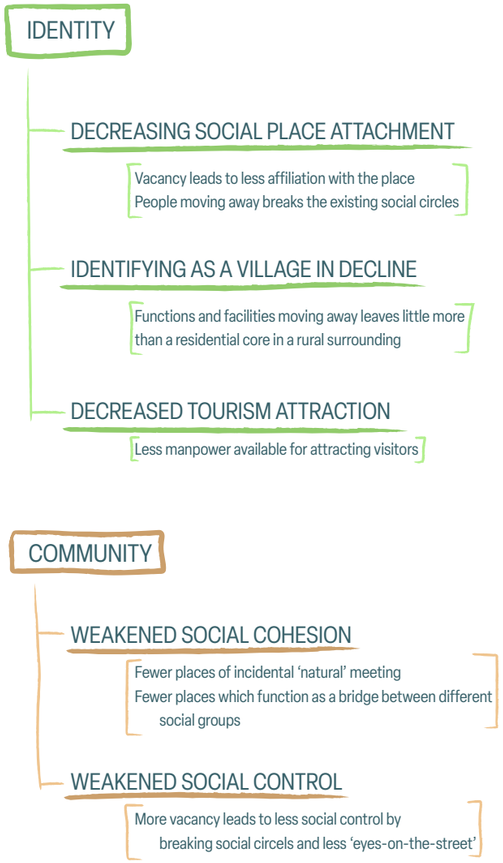


Figure 2.16: The effects of shrinkage on the themes Identity and Community summarized schematically.

Reflection

The literature on the subject of livability in rural regions in the Netherlands is extensive. The four themes that are derived from the literature: Facility, Mobility, Identity, and Community, are only a grasp of the total problem. Matters such as sustainability and ecology are not taken into consideration in this thesis, for the framework would become too large to work with. These matters still find their way into the four themes slightly – for instance through the addition of greenspace to strengthen the identity of a village, while also supporting the ecological environment.

The four themes are therefore decided on based on literature that focuses on the effects of shrinkage itself. The literature on both the themes Facility and Mobility are very data driven. These themes are also the two tangible themes: they can be physically measured. This also reflects in the way the literature approaches these themes. It is interesting to note that, while there is a wide set of issues bounded to shrinkage within these two themes, not every village has to deal with all these issues. The distinctive issues are very location driven.

Villages in the north of the Netherlands, as well as Zeeland, deal with problems such as long distances to education and healthcare facilities. While the province Gelderland has an aging population to deal with. Each village has its own unique set of causes and effects regarding shrinkage. This is also why an approach to each individual location needs to tailored and customized to fit the needs of that location.

The literature on the themes Identity and Community are more focused on the intangible. In contrast to the literature on Facility and Mobility, which is very static and explanatory, the literature on Identity and Community can be described as a call for change and manifests in guiding towards countering the negative effects of shrinkage. This literature also involves the perception and opinions of local inhabitants and has a more emotional driven narrative.

Overall, the four themes are heavily intertwined, and issues derived from the effects of shrinkage can seldom be fully applied to a single theme. For instance, a decrease of local functions, such as a supermarket moving away from a village, fits the theme Facility. At the same time, this event also pushes a newly increased distance and time to the nearest supermarket and a higher car-dependency, fitting the theme Mobility. The lack of a local supermarket in the village also negatively influences the identity of the village and might decrease place attachment – part of the theme Identity – and leads to less (unplanned/involuntary) social interaction where the local inhabitants meet each other on a daily basis, underlining the theme Community.

This is why, in finding a suitable counter to the negative effects of shrinkage, it is important to keep a holistic view on the specific needs of a location. Minor changes can lead to large scale implications and a combination of answers might be needed to provide adequate pressure against all four of the themes.

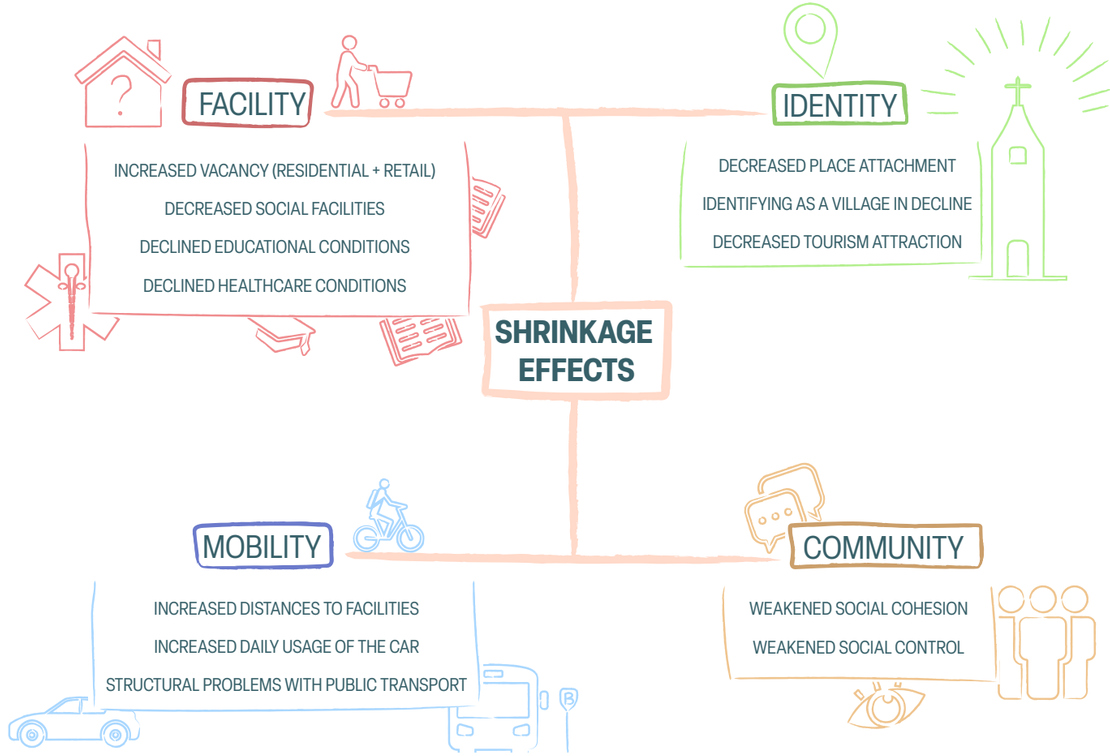


Figure 2.17: A conclusive schematic on the effects of shrinkage and the four themes Facility, Mobility, Identity, and Community.

03

RELIGIOUS HERITAGE IN THE NETHERLANDS

The third chapter focuses on religious developments in the Netherlands, the functions of the church building and the increasing number of vacant religious heritage. The chapter finalizes in a statement on the Kerkenvisie and the result of a set of interviews conducted on this subject. The chapter is based on a literature study as well as historic analysis complemented with spatial data from QGis and the results from the interviews.

3.1 Religious developments

3.2 Religious participation in the Netherlands

3.3 Church as more than a house of worship

3.4 Heritage and vacancy

3.5 The Kerkenvisie as an answer
A set of interviews on the Kerkenvisie

Woldendorp - Groningen

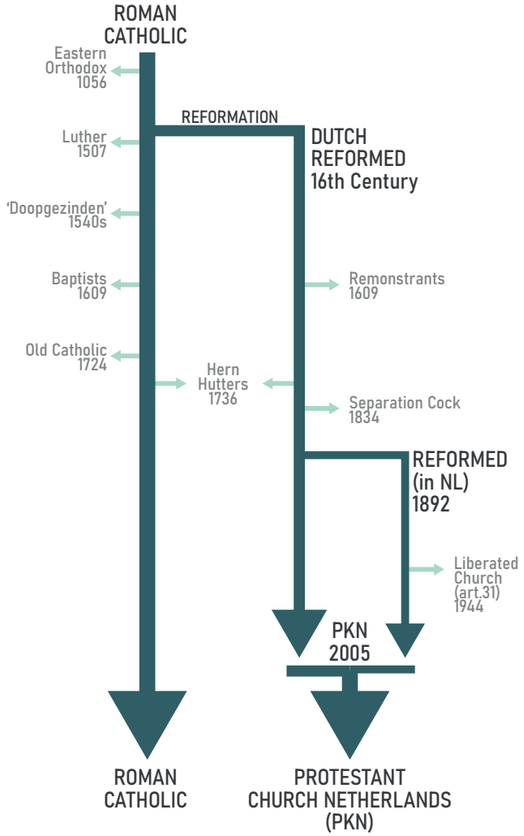
3.1 RELIGIOUS DEVELOPMENTS

Let us start off with a very brief history on Christianity to set the scene. Christianity first emerged as a religion in the first century BCE in the Roman Province of Judea – modern Israel. It was not until the start of the fourth century CE that Christianity finally was allowed to be practiced as a religion. It was the Roman emperor Theodosius I who, in 380, recognized Christianity as the Roman Empire's state religion.

During the Reformation era in the sixteenth century, the Christian Church in Western Europe split between Roman-Catholicism and Protestantism, which held numerous denominations (see Figure 3.1). In the Netherlands, this resulted in oppression of the Roman-Catholics, who were forced out of their regular churches and held their services in clandestine churches. It was not until the first half of the nineteenth century that religious freedom in the Netherlands was acknowledged again. This period marks the start of the growth period of Dutch religious participation.

The Church pillarized in the late nineteenth century. Each denomination, and especially the Roman-Catholic denomination, set up their own social institutions and organizations. From education to healthcare, influencing the life of citizens in many ways.

The start of the twentieth century marked the decline of religious participation in the Netherlands for Protestantism, while this period up to the 1960s marks the high times in Roman-Catholic participation. However, after the 1960s – with the Second Vatican Council (1962-1965) often marked as a turning point – the Roman-Catholic Church also fell in decline (Wesselink, 2018). Since then, religious participation in the Netherlands has been in descent. The Secularization



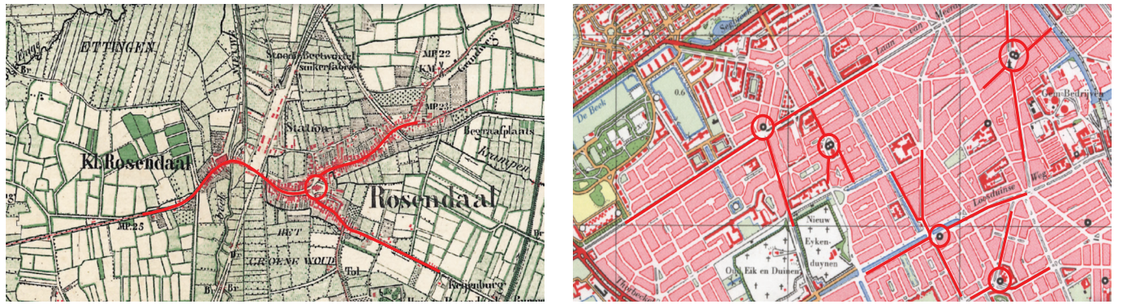
▲ *Figure 3.1: Denomination-tree of the Roman-Catholic and Protestant Church in the Netherlands.*

of the Church in the Netherlands is unique in the sense that in no other country the decline in religious participation is as noticeable as in the Netherlands. (Van der Bie, 2009)

In urban regions in the Netherlands the religious participation is the lowest. However, a slight increase is noticeable. The opposite is true for the rural parts of the Netherlands. Here, the current level of religious participation is a bit higher but declining strongly (Arts, 2009; Te Winkel, 2021). In the past decennia an increase is noticeable of religious affiliation with new Christian denominations, separating from Roman-Catholic and Protestant origins. This increase in diversity is a result of the processes of modernization, secularization, individualization, institutional differences, as well as the influence of international migrations. (Van der Bie, 2009) With a strongly declined affiliation with Christianity and an increase in diverse denominations, a key challenge for different denominations is to work together to ensure a future for Christianity in the Netherlands (Wesselink, 2018).

In the Netherlands, there are a total of 7.132 houses of worship. 95% of these are churches affiliated with Christianity. Most of the Christian churches find their origins in the twentieth century. During the expansions of the reconstruction period, from 1950 onwards, up to the late twentieth century, a total of 4.135 churches were built.

Most of these churches are positioned in suburban expansion of the large cities in the Netherlands and part of dedicated growth areas. Dutch urban planning strategies in this period incorporated church buildings to be centrally positioned as neighborhood cores in expansion plans. Most churches in the center of cities as part of the downtown area, as well as churches in villages, find their origins in the eighteenth century.



▲ *Figure 3.2: From the gradual formation of the town of Roosendaal (left, 1875)to the city expansion neighborhood Segbroek in the west of The Hauge (right, 1975): throughout the centuries and across the country, the church holds a central position in the heart of the urban structure. Based on Kadaster (2015).*

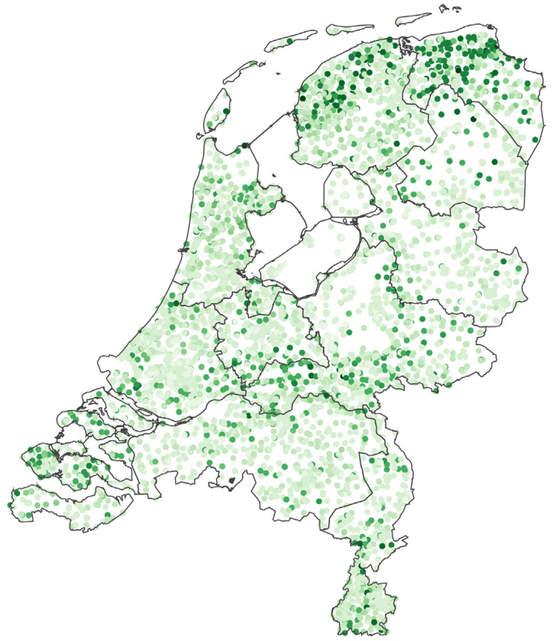
The year of construction of churches in the Netherlands can be seen in Figure 3.3. There are clear regions where a lot of older churches can be found. The oldest church buildings which are still standing can be found clustered in the north of Friesland and Groningen as well as in the south of Limburg. These churches date back as far as the early eleventh century. Often positioned on top of a '*wierde*', a mound, villages developed around these elevated churches which were safe from flooding.

During the fourteenth century up and until the sixteenth century, churches were predominantly built along the river delta centrally in the Netherlands. Stretching from Nijmegen west towards Rotterdam and north towards Zwolle. During this period most of the towns along the Rhine, Meuse, Waal, and IJssel came into existence.

During the seventeenth till nineteenth centuries, an increase in church development is noted in what we now define as the Randstad region. This can be connected to the population boom in the Golden Age (1588-1672), in which the towns in Holland saw their wealth and population grow significantly.

Finally, as mentioned, during the twentieth and twenty-first centuries, churches were built throughout the Netherlands in newly expanded towns and cities. Resulting in a fully covered country with one of the highest church densities in the world.

There are currently still 5.282 church buildings used for religious services. Generally, most of these buildings can be denoted to the two main religious movements: the Roman-Catholic Church and the Protestant Church – which consists of the Reformed Church (*Gereformeerde Kerk*) and the Dutch Reformed Church

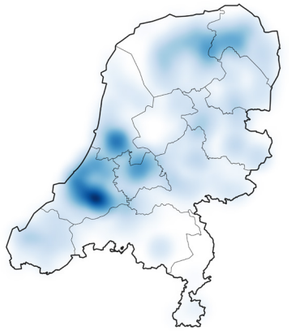


▲ *Figure 3.3: churches in Netherlands gradiented on their year of construction, based on RCE (2021).*

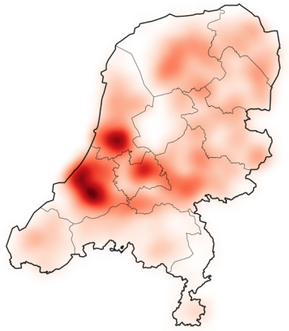
(*Hervormde Kerk*). The Roman-Catholic Church has most of their sphere of influence in the southern regions of the Netherlands, in North-Brabant and Limburg. Also, the area where the Rhine River transforms into the Nederrijn and the Waal has a predominantly Roman-Catholic affiliation. The northern and western parts of the Netherlands are mostly divided between the Reformed and Dutch Reformed Church. The separation between the Roman-Catholic South and the Protestant West and North is a lasting result of the Eighty Year's War in the Netherlands, when the southern provinces and Belgium were occupied by Roman-Catholic Spain and large number of Protestants fled north.

Centrally through the country, from Zeeland towards Overijssel, there is a strip called the Bible Belt where relatively many Reformed and Dutch Reformed people live.. The Bible Belt is often regarded as the heart of religion in the Netherlands; however, Roman-Catholic religious participation is higher than Protestant participation.

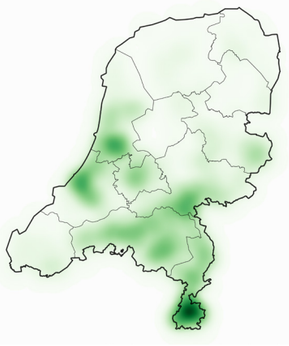
So, the true heart of Christian religion in the Netherlands is positioned in the southern provinces of North-Brabant and Limburg. The decline in religious participation in the south as well as in the Bible Belt is noticeable and the definition of a pre-dominantly religious Bible Belt is no longer true, the overall religious participation in these areas is shrinking below 10% of the population living in the area.



◀ *Figure 3.4: Reformed affiliation in the Netherlands based on RCE (2021).*



◀ *Figure 3.5: Dutch Reformed affiliation in the Netherlands based on RCE (2021).*



◀ *Figure 3.6: Roman-Catholic affiliation in the Netherlands, based on RCE (2021).*

3.2 RELIGIOUS PARTICIPATION IN THE NETHERLANDS

Compared to other social organizations, the religious denominations and their organizations have a long lasting and extensive history. The role of the Church within society is more than one of mere spiritual support. The Church has often functioned as a platform for broader social engagement. Religious affiliation is seen as a principal factor for social participation of a population because of the broad scale of (social) topics the Church is involved with. Unpaid forms of social service and voluntary work, as well as activities focused on education and societal and social skill enhancement create a broader social awareness and stimulate expressing concern for the wellbeing of others (Hart, 2010).

Strengthening local communities comes for a large part down to stimulating social cohesion. That intangible presence is what binds people together. The pillars that define social cohesion are social participation, social trust, and maintenance of the social dominion. Social participation is the extend to which people actively participate in social groups connected to their community. Social trust is twofold: inwards, towards the other members of the community and outwards towards overarching structures, such as the government, and other social groups. Maintenance of the social dominion reflects on the circular communication between members of the social group as well as the maintenance of shared space. (De Groot & Schonewille, 2012; Schmeets, 2013; Schmeets et al., 2009) Characteristics which are repeatedly found within religious communities.

People who affiliate with a religious denomination are more involved with their local communities, both religious and social (Schmeets et al., 2009) A study in Sweden by Wallman Lundåsen (2021) on religious participation and civic engagement shows that religious services attendance is positively correlated with the willingness to volunteer for a civil society organization.

This is emphasized as well by Schmeets et al. (2009). They note that religious participants in general act in voluntary work more often, also outside of the Church influence. Religious followers are more frequently taking up voluntary positions in healthcare, hobby gatherings, sports clubs, and neighborhood associations. Acting in voluntary work is an important contribution to stimulation of local cohesion. It even leads to stronger engagement in the neighborhood by non-religious inhabitants. As Schmeets (2009) remarks: (voluntary) neighborhood participation is stronger in neighborhoods with a higher percentage of population with a religious background and surpasses the participation of religious people alone.

Activities acted out from within the Church also contribute to the stimulation of social cohesion. Especially during the pillarization of society in the Netherlands, the Church has held the position of not only providing services, but also having a share in different associations and clubs. From music and dance associations to study and sport associations: during the first half of the twentieth century many were affiliated with the local parish or church community. Celebrations and get togethers were often held in the church and the priest or pastor brought the community together as part of his ‘flock’. This also has negative effects, as the social control by the Church, in the form of the priest or pastor visiting members at home to talk about their faith and personal engagements is recalled as unwanted and a breach of privacy. (Wesselink, 2018)

In general, it can be noted that those who go to church more often are more likely to participate in social and civil organizations and engage more often in voluntary work. And even though religious participation has been declining in the past decades, the Church can still be seen as a bastion of social collaboration in an individualizing society. (Schmeets, 2013)

The worth of the voluntary work for a town is immense. The municipality of Rotterdam has asked the Verwey-Jonker Institute (van den Toorn et al., 2020) to perform a calculation on the net worth of all the unpaid social work performed by religious organizations within the municipality. If the municipality and its inhabitants would have had to pay for all the voluntary work that was performed, the total sum would be between 195 and 220 million euros per year. A welcome relief of burdens.

On the other hand, all the voluntary work also has a downside. Because much of the work performed within the religious circles, there is no certainty for quantity and quality assurance of the work. Communication and planning take a long time because of the part-time nature of the voluntary work, and it is difficult to comment on the work performed, because it remains voluntary, and nobody is forced to assure the quality. Also, not all the voluntary work is done out of selflessness. Regularly, people hold on to voluntary positions to be sure that they are able to influence the order of business and have a say in the plans of the organization. These are factors to keep in mind when praising the voluntary workforce of religious participants.

3.3 CHURCH AS MORE THAN A HOUSE OF WORSHIP

Van Dijk and De Blaauw (2017) describe the church building based on three pillars and the indispensable interaction between the three: functionality, symbology, and sacrality. The functionality of the church building involves the space and place. It involves the the building itself. The space inside is used as a function where religious communities can come together; the space outside is used as a reference to all who come upon it. The symbology of the church reflects the building as a source to something other than itself. Its status surpasses form and links to religion as a whole. The third pillar, the sacrality of the church building, refers to the seclusion of the building from the surrounding world and the exclusive devotion to God. Wesselink (2018) adds to this the function of the church buildings as a sanctuary of sacredness much grander than religious affiliation. A final place for peace and contemplation: a non-economic space within a society controlled by the economy. The church in that sense is not only seen as a place of worship, but also as a place of escape. Separated from the dominant drivers of contemporary ideals. A fourth pillar could be constructed from this definition, where the space and place of the church building enables the user in their spiritual or emotional quest.

The functions of the church building are nowadays limited to religious services and sometimes confined secondary uses. Throughout the centuries, church buildings held a much broader set of functions. This changed from the Enlightenment era onwards. A slow transformation ensued in the separation between religion and politics and between religion and society (Stassen & Van der Helm, 2017). Originally, the functions of the church building were quite extensive.

The church has always been inseparable from the life of people. For religious communities, all important life events were celebrated and commemorated in the church. From birth to growing up to marriage to death. Special festivities to celebrate the stages of life and to celebrate social happenings took place in and around the building. Aside from being a landmark in the stages of life, the church building also functions as a landmark in the (urban) landscape. The church building itself is most often centrally positioned in the urban structure. Centrally in city centers, as the core of expansion neighborhoods, and as the heart of villages. Especially the relationship between church and village is interesting. The church was not only the center of all activities in a village, but also an important landmark. Before we had any accurate and widely available maps, travelers found their way through the landscape from village to village. Identifying each village in the distance by the different church towers rising on the horizon. (IVN Drenthe, 2020)

The church building and surrounding grounds offered the place to many different functions. The parish or church community originally also functioned as the local governing organization. As an administration of justice, the clergy held court for lower tier disputes or crimes, which were held within God's eyesight: inside the church or directly in front of it. If a town had access to a water well, this well was often the property of the Church and maintained by the clergy.

Early forms of education and poor relief were also organized by the church community, in the church. This evidently led to the large-scale social institutions directed by the Church in the late nineteenth century. The building itself functioned also as a sanctuary to

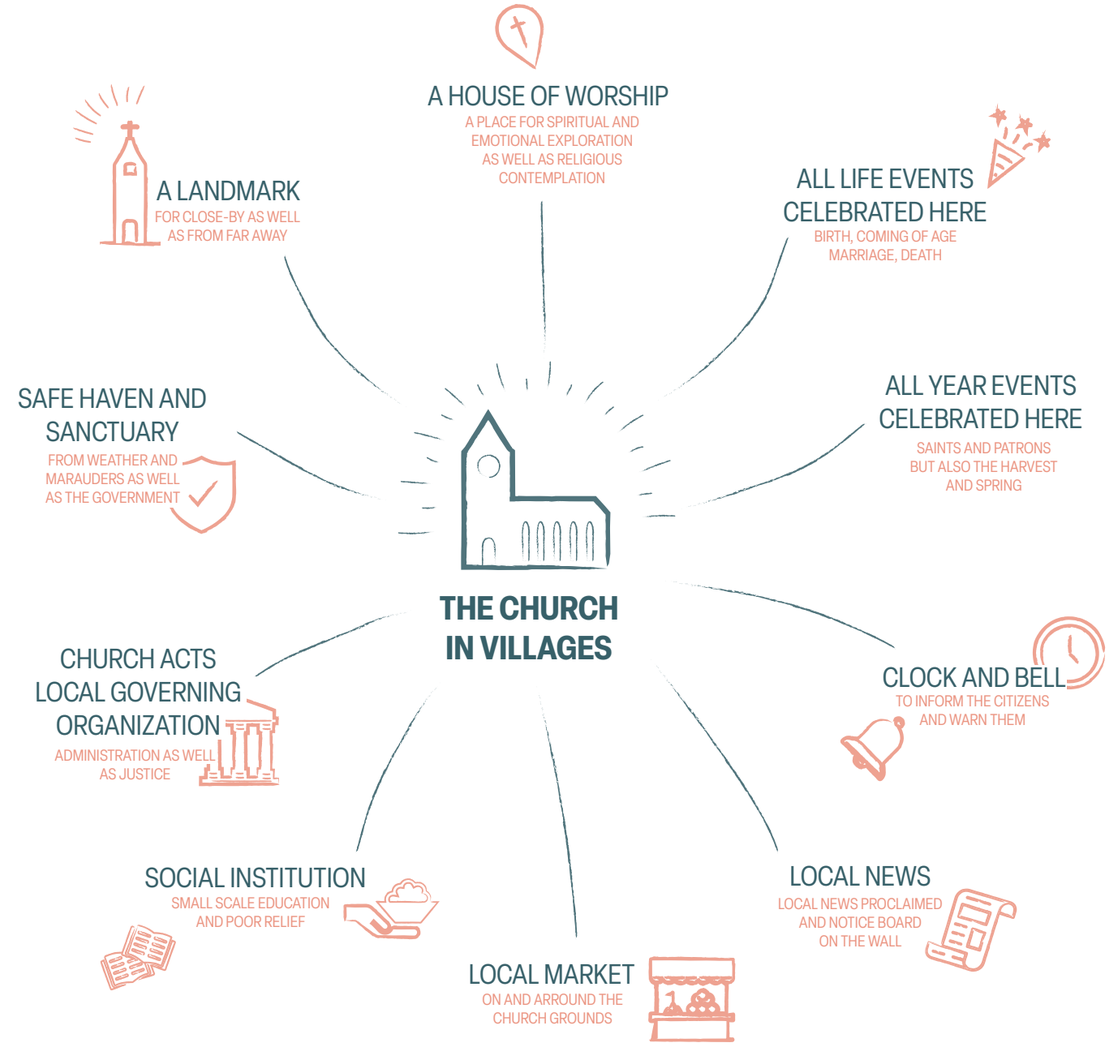


Figure 3.7: The different functions of the village church throughout the centuries. The church was much more than just a house of worship.

weary travelers. When there'd be no place to sleep, the church building was used as a place to rest your head. (IVN Drenthe, 2020)

The building itself and the activities surrounding it also functioned as the foundation of the local community. In the church, the local news was spread. A noticeboard often hangs on the wall besides the entrance, where people could put up requests or demands for sales, products, activities, etc. Many villages held a yearly village market (once a year a village market was allowed freely, for more frequent markets the village would have to possess a market-license). This market was held on the grounds surrounding the church and village square. If the weather was bad, the market could be held inside the church.

Finally, the church building was also a sanctuary in times of danger. During thunderous weather, or when razing plunderers came visiting, the church building would provide relative safety for the local population and their farm animals alike. Positioned centrally, with a bell to alert the local populace, and a tower for lookout and as landmark, the church was a safe and recognizable place to get to. The building was also quite defendable. It was often the only stone building in a settlement and raised on a slightly raised mound, with small windows and a tower.

As Van Dijk and De Blaauw (2017, p.30) rightfully note:

"*The question on what makes a church a church is not easily answered. The language of form from the past needs to be translated to our modern views and standards. The church of the future should at least be a building that has care and attention of the spirituality of people and society*" (freely translated from Dutch).

She here refers to the Latin origin of the word spirituality – *spiritualitas*. The definition translates to '*to be set in motion*'; '*to be a living person*' and '*to be driven*'. The much broader connection between person and church throughout history surpasses the religious affiliation and connects and strengthens the community as a whole.

3.4 HERITAGE AND VACANCY

The Netherlands holds a high number of houses of worship. The total of 7.132 has been mentioned already. With the decline of religious affiliation and fewer people participating in church services, a growing number of churches become vacant. Currently, of the 7.132 houses of worship in the Netherlands almost three quarters is still in use for religious services (5.282). The other quarter is either currently vacant, in transition to a new function, or has already been redeveloped to incorporate some function other than religious use.

There is a lot to say on whether vacant church buildings should be transformed to incorporate different functions or not, but the consensus is that the values of the building, for the community as well as for the urban structure, is too high that the building should not be demolished. Many of the church buildings in the Netherlands also hold a monumental status, either municipal or national.

Figure 3.8 shows the churches that have thus far been redeveloped in the Netherlands. In total, 1.555 houses of worship have already found a new life. In the redevelopment game of religious heritage, the city of Amsterdam and its surroundings lead the pack. A majority of church buildings in this area have been redeveloped to serve a new function as residences, cultural and social centers, offices, or as tourism attractions. The provinces of Zeeland and Friesland also have a notable portion of religious heritage redeveloped. Predominantly village-churches have found a new residential function. Higher religious participation rates in the Bible Belt lead to visibly less redeveloped religious heritage, due to most of the churches still being in service.

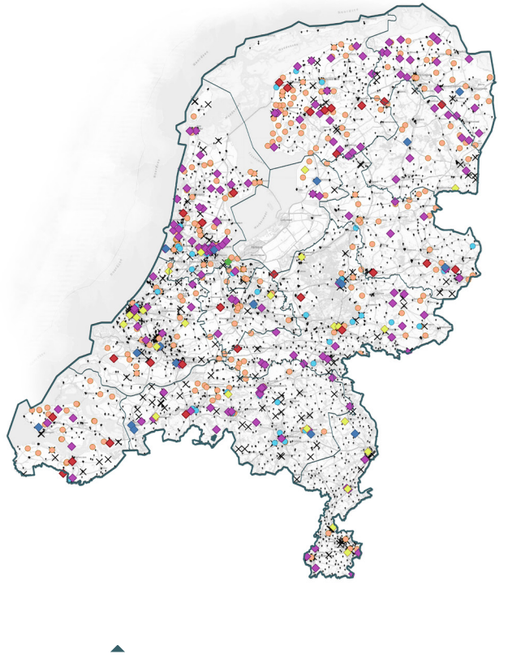


Figure 3.8: Redeveloped churches in the Netherlands with their present function, based on RCE (2021).

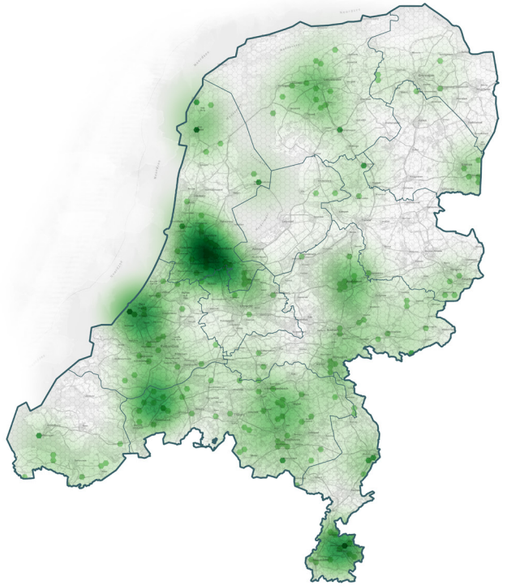


Figure 3.9: Point clouds based on density of vacant churches in the Netherlands based on RCE (2021).

There are currently also 295 churches in the Netherlands that are vacant or in transition to a new function. Figure 3.9 shows the density in the form of point clouds of vacant religious heritage in the Netherlands. Aside from the major cities, a relatively high number of vacant churches can be found in the provinces of North-Brabant and Limburg, as well as the central and eastern parts of Gelderland. Predominantly, these areas have a stronger Roman-Catholic affiliation.

The reason why a lot of Roman-Catholic heritage is now left in a vacant state is threefold. First, the Roman-Catholic Faith held the highest religious participation in the Netherlands in the past century, so there are a lot more Roman-Catholic churches compared to church buildings of other denominations. The Roman-Catholic decline also set in later, since the later part of the previous century, so these church buildings are just now becoming available as parishes are combined and buildings are left without services.

Thirdly, whereas the Protestant Church allows for secondary functions in church buildings, The Roman-Catholic churches are sanctified and the building itself is also deemed sacred and to be fully devoted to religious service. This means that secondary functions aside form religious services are prohibited and it makes the transition from in-service to a new function a hard switchover, instead of a fluent changeover. This leads to less temporary (side) usage of the building and results in more and longer periods of vacancy for these churches.

3.5 THE KERKENVISIE AS AN ANSWER

In helping municipalities and church communities with a vision on the future of their religious heritage, the Cultural Heritage Agency (RCE [*Rijksdienst Cultureel Erfgoed*]) subsidizes municipalities to set up a structural and strategic vision on the future of their churches. This Kerkenvisie helps a great deal in the communication between stakeholders involved and aims to provide support and a smoother transition for the buildings in the future. There are 240 municipalities in the Netherlands who are currently working on, or have already finished, a Kerkenvisie. Together, these municipalities are responsible for 5.389 houses of worship - 76% of the total of 7.132 houses of worship in the Netherlands.

First off, The Kerkenvisie aims to provide a clearer view on the quantity and quality of religious buildings in a municipality. The start of the Kerkenvisie usually kicks off with a sort of passport for the churches. A summary on the history of the buildings; side-buildings; their architects; interesting features; monumental status, and denomination.

Secondly, the Kerkenvisie aims to provide a clearer view on the organizational structures and interwoven interests of the churches in the municipality. Which stakeholders are involved and how are the different parishes and church communities affiliated with the church buildings in the municipality?

Thirdly, the Kerkenvisie aims to provide a perspective on the future of the churches. In the sense that the municipality, together with the parishes and church communities, tries to map out the future of the church buildings and the prospect of which buildings might be closed for religious services and which buildings are to be kept in service. Here, the goal is to also provide space for ideas, emotions and initiatives for church communities and social engagement with the local population (Bos et al., 2021).

The subject of churches and which buildings are liable to be closed for religious service in the (near) future is a very sensitive subject. With a lot of emotionally and spiritually loaded concerns. The Kerkenvisie can provide a clear guidance in this process. For instance, to sustain the church community and make better use of the building, a secondary function can be sought. Protestant churches, as previously mentioned, are more easily available for multifunctional use. The building itself is not deemed sacred. But there is also the matter of stakeholders involved.

Protestant churches are in ownership by the church community, whereas Roman-Catholic churches are in ownership by the Vatican and directed by the diocese. Stakeholders involved at higher levels in the hierarchy may differ in their views on a new future compared to the local consensus. As overarching organizations, the Protestant Church of the Netherlands (PKN) is more lenient for new possibilities with combined usage of religious heritage. The same goes for the Roman-Catholic Diocese of s' Hertogenbosch.

In contrast, the Roman-Catholic diocese of Utrecht holds a more conservative position, where secondary functions in church buildings are unwanted and more influence put forward by the civil government (also through the Kerkenvisies) is undesirable (Te Winkel, 2021). In the end the church communities and parishes themselves are of foremost importance and the church buildings are subordinate to this. Conservation or discontinuation of church buildings and their religious functions will always remain in service of the church community itself, not the other way around.

A set of interviews on the kerkenvisie

In order to better understand the way municipalities use the Kerkenvisie as a tool and the impact of the Kerkenvisie on the local structures, a series of interviews are held with municipalities currently working on a structural vision on their religious heritage. These findings are here put forward.

These findings overlap and also conflict with the above-mentioned introduction to the Kerkenvisie as it is presented by the Cultural Heritage Agency and are a personal note on the Kerkenvisie:

- Even though all municipalities interviewed are working on a Kerkenvisie, none of them have presented a final version yet. This is also because of delays due to Covid-19;

- It differs per municipality what the approach to the Kerkenvisie exactly is; in some municipalities the Kerkenvisie is part of an overall structural heritage vision, in other municipalities it is a standalone guidance document. There is no overarching structure;

- The Kerkenvisie is a document constructed by workers of the municipality, often combined with a specialist on these subjects – *COUP Group* is often mentioned – in collaboration with (local) heritage organizations and platforms and representatives of the parishes and/or church communities;

- All involved municipalities foresee a mediocre vision of the future for religious heritage in service and support the necessity for a structured document on this matter;

- It differs per church how willing the support for the Kerkenvisie is; some parishes and church communities welcome the prospect of knowing what's to come and have a more progressive view, others prefer a more conservative stance without civic interference;

- Working on the Kerkenvisie has strengthened collaborations between local parishes and church communities, who are now sitting at the same table, working on the same perspective;

- Collaboration with local stakeholders such as the people living near the church and local entrepreneurs are mentioned to be of importance, but in most cases have not been invited to work together on the Kerkenvisie;

- Local initiatives and possibilities are therefore not taken into account in the Kerkenvisie;

- The Kerkenvisie does not so much provide a view on the future of the buildings and possible new usage, this is outside of the scope of the Kerkenvisie. The municipalities use the Kerkenvisie more as a passport of what churches there currently are and a vision on which parishes and church communities will grow/decline/fuse and which buildings will remain in religious use so that the parishes and church communities can anticipate accordingly;

- The Kerkenvisie is also quite a difficult tool for municipalities, while they can not influence the usage of buildings because they hold no ownership on the ground, the Kerkenvisie does force a multi-year plan (over multiple municipal elections) on how these buildings and their usage should be approached and while it aims to offer stability it also provides rigidity in municipal steering.

In general, it can be noted that the Kerkenvisie is for the time being a quite formal top-down approach to deep societal problem and offers perspective but can't provide further support other than the strategy itself. It is up to municipalities to further fill the needs of the communities, where the Kerkenvisie can be a steppingstone to further conversation. The Kerkenvisies-project is also still young. In a recent evaluative study done by the Cultural Heritage Agency (RCE, 2021) in the form of a survey for church owners, they found out that only 13.5% of the 104 respondents has actually implemented a strategy based on the Kerkenvisie. 14.7% has finalized the strategy but not yet used it and 18.9% are currently working on a Kerkenvisie-strategy. 41.7% of the respondents have not started or are just beginning to start to work on a Kerkenvisie strategy.

The Kerkenvisie is not so much a strategic plan on the future of the churches in the municipality, but more a collection and inventory of what is currently present and which of these buildings are likely to become out of service in a certain time frame. It offers little perspective on the future of these buildings after they are put out of religious service.

The interviewed municipalities responded on this note that such a strategic plan is a step further, after creation of the current form of Kerkenvisie. This conflicts with how the Cultural Heritage Agency views the usage of the Kerkenvisie. It will take a long time until the current Kerkenvisies are finished, let alone the creation of an exploration of what can become of these churches after they are put out of service. In the meantime, an ever-increasing number of churches are left vacant, waiting for a new future.

04
METHODOLOGY

In this fourth chapter the methodology of the graduation project is further defined. First, the Conceptual Framework is explained. Then, the methods used in researching and analyzing the project's key elements are explained. With the methodological framework and the timeline as a structured plan, the expected outcomes are named. The chapter finalizes with the conclusion and discussion as well as ethical considerations.

4.1 Conceptual framework

4.2 Methods

4.3 Methodological framework

4.4 Expected outcomes

4.5 Ethical considerations

4.6 Discussion & conclusion
Discussion
Conclusion

Heeswijk-Dinther - North-Brabant

4.1 CONCEPTUAL FRAMEWORK

The Conceptual Framework shows a visual representation of the three elements the toolbox, and the final design work with. The three elements are the church heritage, the village heart, and the livability in the village.

First off, the church heritage. Central in this thesis is the increasing vacancy of church heritage, especially in villages in the rural parts of the Netherlands. In search of a new function for these buildings that have played such an important part in the history of our society and functioned as the foundation of our communities, the connection with the village heart and the local inhabitants needs to be established again.

Secondly, the village heart. A place where most of the local activities happen and the place where the local functions and facilities, such as a small supermarket and a primary school, are positioned. This place in the village is the core and acts as the location for most of the social interaction in the village. Most of the time, the core of the village is also the place where you find the village church.

Thirdly, the livability in the village. With the increasing challenge of shrinkage in the rural parts of the Netherlands, the livability in villages is threatened. Shrinkage leads to an increase in vacancy, facilities and functions moving out of the village, an increased reliance on motorized transport, and the fracture of social groups, leaving a weakened community.

This thesis aims to provide new means to counter the negative effects of shrinkage, by redeveloping the village core and the village church in order to increase the livability.

This is portrayed by the interaction between a toolbox with design elements and the application of these design elements to several project locations: the interaction between the toolbox and design.

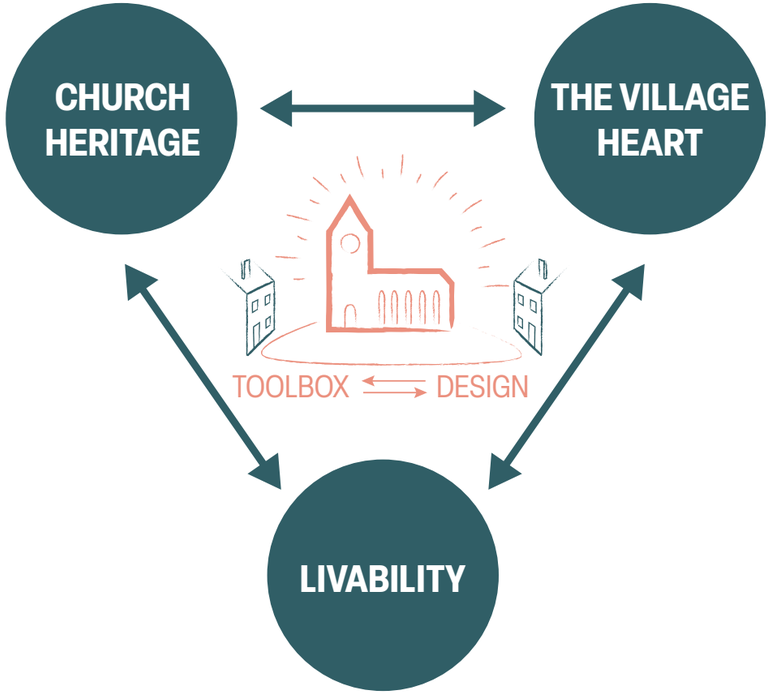


Figure 4.1: Conceptual Framework.

4.2 METHODS

In researching and answering the main research question, a series of different research methods will be used. The sub-research questions are designed to provoke the use of a variety of methods and aim to cover all aspects of the research statement. The sub-research questions are therefore closely linked with the different methods used and each require a different approach of using a mix of methods. The methods are divided into two groups: deductive methods and inductive methods (marked with the letter '*D*' for deductive or the letter '*I*' for inductive, as well as a corresponding color for a clear distinction). Deductive methods aim to derive at a conclusion by reasoning and build upon available knowledge on the subject, where the facts of the conclusion are guaranteed by the facts of the knowledge used. The deductive methods can be both qualitative as well as quantitative. Inductive methods are founded on the aspect of probability and are based on observations. The inductive methods are qualitative.

Figure 4.2: Methods.

DEDUCTIVE

M-D1: Research by Literature

Research by literature is a qualitative method. On both the subjects of rural shrinkage as religious heritage there is a large quantity of literature available. The literature forms the backbone of all other research and analysis methods, and it provides the basis for the key findings.

Sources for the literature are derived from WorldCat Library Catalog; Elsevier; TU Delft Architecture Library, and research platforms by other Dutch universities as well as research platforms provided by the Dutch government.

M-D2: Data Analysis

The data analysis is a quantitative method. The findings from the literature can be tested and proven against the defined data acquired on the subject relevant to this study.

Sources for the data are derived from research and data platforms provided by the Dutch government (CBS, PBL, RCE).

M-D3: Spatial Analysis

The spatial analysis is a quantitative method. With the spatial analysis, the dimension of location is added. Differences based on place can be derived and compared.

Sources for the data are derived from GIS databases provided by the Dutch government, as well as OpenStreetMap, and RCE datasets.

M-D4: Historic Analysis

The historic analysis is a combination of quantitative and qualitative methods. Using the term 'historic analysis' as a shared denominator, data and timelines on growth and shrinkage patterns through the ages on specific locations will be looked at, as well as looking at the more qualitative 'soft' side of history – the experiences and stories accompanying these patterns.

Sources for the data are derived from literature as well as TopoTijdreis.

INDUCTIVE

M-I1: Research by Fieldwork

Fieldwork is arguably one of the most important methods. Being a qualitative method, fieldwork provides with observations and findings on the 3D real-life environment. As opposed to the on-paper methods previously mentioned.

Research techniques are based on the introductory intensive courses at the start of the academic year.

M-I2: Research by Interview

Interviews are also a qualitative method. Interviews are a closed way of conversation and interviews with different stakeholders are comparable reciprocally and they are comparable with the deductive findings.

Research techniques are based on the introductory intensive courses at the start of the academic year.

M-I3: Research by Conversation

Research by conversation is, just like the research by interview, a qualitative method. In contrast to the more scripted and structured research by interview, research by conversation is more open and non-directive. Although no hard data can be gathered by these open conversations, they provide excellent guidance in finding the right sources and methods for other aspects of the research.

Research techniques are based on the introductory intensive courses at the start of the academic year.

M-I4: Research by Design

Finally, research by design. As a qualitative method, research by design aims to combine all the findings of the previous methods and provide a beckoning design perspective as result.

Research techniques are based on the past years of experience during studying at the department of Urbanism.

4.3 METHODOLOGICAL FRAMEWORK

The methodological framework discusses the different methods used, how they relate to the problem statement and research questions, as well as the overall dependency of all elements involved.

The framework is built on four stages: Define, Acquire, State, and Toolbox and Design. The first stage – Define – provides definition to the thesis. This includes the problem statement, research questions and motivation. The second stage – Acquire – focusses on collecting data and building the foundation upon which the final design will be reliant. The third stage – State – can be seen as the connection between research and design. It is the conclusion of the define and acquire stages, as well as the beginning of the design assignment.

The final stage - Toolbox and Design - translates the findings thus far into design implications which are grouped together in the toolbox and tests these implications on three project locations.

In this thesis, the deductive research methods are used intertwined and form the basis for further inductive methods. This way, the deductive research forms the foundation from which to develop upon. The deductive research delivers both in results for the key findings as well as indicators for the common points of issue which will be further researched in the inductive research methods. This way, the inductive research builds upon the deductive research, yet the deductive basis will remain intact and not cast aside by new inductive findings. To provide the deductive research with the right orientation, open conversations with experts are held.

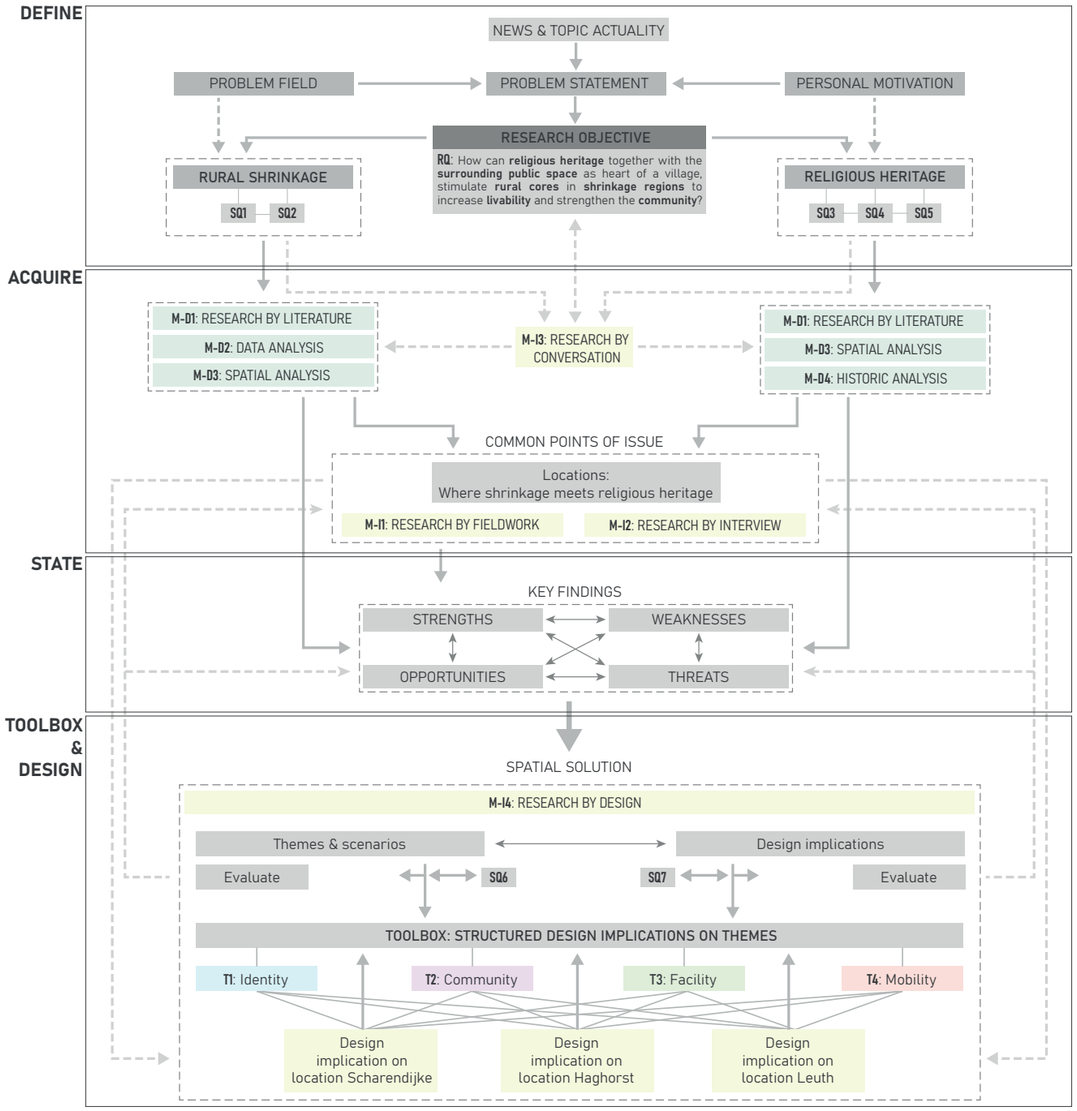


Figure 4.3: Methodological Framework.

4.4 EXPECTED OUTCOMES

This thesis will provide a better understanding of the synthesis of rural shrinkage and vacant religious heritage in a spatial sense. It will also offer a series of possible design interventions on the local scale on rural cores and surrounding the church heritage on the threats and opportunities found in the theoretical and practical research.

The result will be two-fold. A comparison between the findings in the literature and the results of interviews forms the basis for the design implications. The design implications are to be structured in the form of a toolbox, which is tested on different case studies as a reference.

This thesis will prove to be useful for several target groups. First off, this thesis connects the theoretical and practical background on rural shrinkage and in the connection with vacant religious heritage it holds academic value. Secondly, the toolbox can be used as a reference and as an inspiration in future structural development visions for rural municipalities as well as open the conversation on how we should deal with our religious heritage in the future.

In that sense, may this thesis provide a solid guidance for creating a beckoning perspective for the future of religious heritage and rural cores alike, where oppositions are transformed into collaborations.

4.5 ETHICAL CONSIDERATIONS

Within the spectrum of ethical considerations, three main concerns have been voiced: the validity of the research, the righteous handling of participants, and transparency of the research.

First off, it is important to safeguard the validity of the research as well as the right methods used for the research. The methods – as described in §4.2 – fit the purpose of the research, are not mutually exclusive, yet appreciate some form of individual necessity. A definition and source of each of the methods is given in this same paragraph. The risks involved with using certain methods are described in the conclusion & discussion section of the methodology in §4.6.

Due to the involvement of participants through interviews and open conversations, it is important to safeguard the righteous handling of participants. The privacy and anonymity of participants is to be guaranteed and before involvement, the participants will be brought up to level with the full length of their involvement, as well as the purpose and expected outcomes of the research. The participants will have to sign a form of consent before taking part in this research. In this consent form they can option on several privacy related questions. None of the names of participants will be made public without explicit permission of the participant. The data gathered through the participation trajectory, as well as the consent form, will be added in the appendix. However, this data will not be shared in the online publication of this thesis, nor will it be made accessible for anybody without consent of the author.

The involvement of participants leads to subjective results on matters. It is therefore necessary to safeguard the inclusive sampling of participants. Light will have to be shed on both sides of the story. With a lot of different stakeholders, each with their own vision on or experiences with redevelopment of vacant religious heritage and the problems of shrinkage, and the still sensitive topic of redeveloping houses of worship, transparency in the research and analysis of this thesis as well as the involvement of participants is of importance.

4.6 DISCUSSION & CONCLUSION

Discussion

This discussion paragraph focusses on the limitations of this research, the risks implied with using the methods chosen and the role of design within the scope of this project.

There is an extensive range of sources to be found on the effects of rural shrinkage. The author has tried to find the main theories on the matter, the core principles of shrinkage were described in the mid-eighties and a lot of these sources are nowadays out of date. Even sources describing shrinkage in the Netherlands in the past twenty years provide us with a different view, since there has been an increase of people moving to the rural parts of the Netherlands due to the Covid-19 pandemic and the digitalization of working remotely. It is unsure how these recent developments will unfold in the future, and in this thesis the choice is made to take the broad context of shrinkage instead of focusing on the more recent developments.

Also, one of the main data sources, the CBS, usually publishes data over the course of 5 year time-spans. The newest reports were due to come in late 2021 (on 2015-2020). However, mostly due to Covid-19, many of these reports have not been published yet, making the most recent data available from 2016, on 2010-2015.

Due to the limited capacity of the thesis project, the religious heritage focused on is the central village-church in regions of shrinkage. The concepts described in this thesis could very well be applied to different forms of religious heritage. Further research would have to be done on this matter.

When using data and spatial analysis methods, results can easily be skewed by displaying generalization or custom differentiation. Therefore, the spatial data used in the thesis is as local as possible, to offer the most precise spatial results. The same goes for data processing, where care is taken not to entangle correlation of data with causation.

The redevelopment of houses of worship is a sensitive topic, due to its religious nature and emotional connections as well as the many stakeholders involved. The focus of this thesis is on design implications that could strengthen the core values of church heritage. Visual design can often escape the loaded burden put on these kinds of subjects, for it tries to provide the best perspective for all involved. Design in this thesis aims not to provoke any stakeholders, but to bring them together with a set of inspiring implications that offer a new perspective on redeveloping church heritage in villages and to function as an inspiration and reference for further debate on the subject.

The methods used for analyzing the problems of rural shrinkage and religious heritage vacancy – spatial analysis, data analysis, and literature analysis – are subjective to the results of the interviews and the fieldwork and only form the foundation of the research by design instead of formulating the entire structure. This is because this thesis not just aims to find a new solution for vacant churches, but to truly reconcile community and church together again and the role of the designer is to design to the wishes of the user. Here, the interviews and conversations held with the users and stakeholders involved are decisive in the design process. The intent is not to create universal solutions for these locations, but to offer an inclusive solution to local problems and bring the heart of the village back alive as the center of all local activity.

Conclusion

To conclude, the goal of this thesis is to create a toolbox of design implications, which are then tested on a set of different case studies in line with the four themes: Identity, Community, Facility, and Mobility. The toolbox provides an answer to the strengths, weaknesses, opportunities, and threats on the mix-match of the subjects of rural shrinkage in the Netherlands and an (upcoming) vacancy in church heritage. In order to achieve this, four distinct stages of research and design have been defined: Define, Acquire, State, and Design. These four stages finalize in the final stage with the creation of the Toolbox.

To arrive at the design, eight different research methods are used, which consist of both quantitative and qualitative methods. The theoretical side – derived from literature, spatial analysis, data analysis, and historic analysis – is tested practically with interviews and fieldwork. Emphasize is on the interviews, leading to a better unstanding of and a practical testing to the Kerkenvisie.

05
VISION AND AMBITION

In the previous chapters the problems caused by rural shrinkage and the demographic differences between city and country as well as the obstacles these portray are described. Also, the increase in vacancy in religious heritage is explained, just as the values of religious participation and the effect on social cohesion. This chapter aims to provide a vision on how these issues and elements can be combined in a beckoning perspective where the livability of villages in the Netherlands can be increased by redefining the usage of religious heritage and the core of villages.

5.1 A new heart in villages
- *Strengths*
- *Weaknesses*
- *Threats*
- *Opportunities*

5.2 Religious heritage redefined

5.3 Stakeholders and targeted audiences
- *Church*
- *Government*
- *Heritage specialists*
- *Local stakeholders*
- *Development management*
- *Targeted audiences*

5.4 Method of design

5.5 Defining the project locations

5.1 A NEW HEART IN VILLAGES

Based on the information put forward in the chapter on shrinkage in the rural parts of the Netherlands, a SWOT-analysis is made. In the SWOT-analysis, the strengths, weaknesses, opportunities, and threats on villages in the Netherlands are plotted. The strengths and weaknesses reflect on villages themselves and their inside influence. They are defined on a local scale and can be altered. The opportunities and threats are part of outside factors influencing the (demographic) developments in villages. These are on a much broader scale and cannot be altered by design.

In this thesis the goal is not so much to counter rural shrinkage as it is to facilitate it. The cycle between rural shrinkage and urban growth is a long-term phenomenon and will not likely be altered. However, the negative effects caused by rural shrinkage can be appropriated and countered. The ambition is to stimulate the lively village life and strengthen the livability of the place.

Strengths

The strengths of rural life come down to the more relaxed environment the countryside offers compared to urban regions. A more abundant availability of green space and a lower population density offer a quiet and rustic environment to live in. These are important to retain and strengthen where possible. The rural life also offers a safe environment, with low crime rates and with fewer accidents. The social control in villages is stronger. With a limited population number, inhabitants know a lot of their neighbors and are active in local activities, beneficial to the social cohesion of the village. Also, villages often have altered little since their origin and the original spatial structure, with old agricultural heritage and formerly important buildings which the village was built around – such as a river with water mills and a water lock, or an old factory where most of the inhabitants worked –still present. The attractive elements which define the rural life, both tangible and intangible, should be safeguarded and can be used to form a beacon to strengthen the identity of place.

The aim is to create a village core which does not negate these strengths and uses them as a basis from which to build upon. The qualities of rural life are central in this vision, where the characteristics of the village are reinforced.

Weaknesses

There are also downsides to living in a village. The weaknesses of rural towns are for a large part the result of shrinkage and the remoteness of place. There are limited functions available. Often there are just a few small shops, if any. For groceries at the supermarket a visit to a nearby larger settlement is often needed. Many villages don't have access to a nearby high school and also primary schools are moving away from villages. Healthcare options are limited, with no nearby general practitioner in the village and the nearest hospital at over a 30min drive. The streetscape is dominated by cars, while public transport options are limited.

The aim is to facilitate more local functions in villages again, but on a smaller scale. A small supermarket with the basic day-to-day needs, or a café that double-functions as a bakery or post office. Local initiatives can be stimulated by offering the space for development and in a village, there is no need for large-scale projects with strict opening-hours and far-reaching attraction: an ad hoc solution to local demand with temporary mixed-use of space, to bring local businesses back. Also, the surroundings need to be adjusted to accommodate local initiative.

The main street, where the car leads the hierarchy, acts as a barrier in a walkable environment which defines the village. Parking takes up much of the useful space at the core of a village. Meanwhile, many villages don't have access to good public transport options, with some villages not having a bus stop at all. The goal is to create a less car dependent environment with space for outdoor village activities and a walkable surrounding where people feel safe. This also adds to creating a stimulating and safe environment for children, attracting younger families, and rejuvenating the local primary school – an important element for creating social cohesion.

Threats

There are several threats influencing rural life. While these threats cannot be deflected, they can be taken into account in envisioning a strengthened village core. The major threat is part of the core of this thesis: rural population shrinkage. With a negative birth-death ratio and a negative migration ratio, shrinkage leads to an increase in vacancy and a decrease of social cohesion. Also, negative demographic developments such as the growing difference in wealth between rural and urban, a lower education level, less labor participation and stronger population aging in rural regions are a threat if not considered. However, they can also prove to be an opportunity if managed appropriately.

Opportunities

There are several developments which can form an opportunity to increasing the livability of villages. First off, aging. An aging population doesn't necessarily have to be a dreadful prospect. Nowadays, elderly are in much better health, more active, and more vitalized. Due to better working circumstances and healthcare, older people play a more active role in society than ever before. However, our public space should be designed to this accordingly. With an eye for accessibility and places to rest and entertain, the elderly can be a target group which makes public space an active and enjoyable place to be. There is an opportunity to combine new healthcare options with accommodation of a more elderly focused living environment.

Also, a decreased labor participation can offer possibilities when looking for local initiatives. In rural parts of the Netherlands the labor participation in general is lower, but especially labor participation by women is limited. However, this does not mean they play a reduced role in society. In villages especially, initiatives by local communities are done via neighborhood committees and social organizations. A lower labor-participation can mean a more substantial part of the population is available for voluntary work in such positions.

In general, the aim is to increase livability in villages by redefining the core of the village to bring inhabitants together and increase social cohesion; to promote local functions and offer (social) facilities; to limit motorized transport dominance in the streetscape; to offer space for local initiatives; to create a synergy between local interests and regional interests; to build on tourism, and to strengthen the identity of the village as a whole.

An interesting final opportunity in this, is an increased vacancy of religious heritage. At the heart of the village, religious heritage can prove to be the front-runner in redeveloping the core.

Figure 5.1: SWOT-analysis conclusion on the strengths, weaknesses, opportunities, and threats of life in villages.

5.2 RELIGIOUS HERITAGE REDEFINED

In this thesis, the focus is especially on the redevelopment of churches and their surrounding public space at the heart of villages. There are currently almost three hundred churches vacant in the Netherlands and in the coming twenty to thirty years another tenfold will become vacant. Quite a few of them are village churches. These churches are the perfect location to start off a transition of village cores to stimulate livability.

The church already has a special place in many of the village citizens' hearts. They remember the building from when it was still in service, as they went to church themselves or know many who did. The church building also often holds a central position in the village, with the village square next to it and near any local shops. The building itself is spacious and often the right size for the village – since it was built with the size of the community in mind. The church building also is the perfect identifier for visitors: recognizable by its tower and shape and indicating the center of local activity.

The former role of the church, broader than its spiritual role, can become a part of its future again: as the cornerstone of the local community. Herein, redevelopment of the church building goes beyond finding a solution for the vacant space. It emphasizes on the public accessibility of the place and the shared usage of the space. The transition of the village core towards a more livable environment starts with the redevelopment of the church building as an initiator for further initiatives that can grow surrounding the concept.

5.3 STAKEHOLDERS AND TARGETED AUDIENCES

Just like any other redevelopment project, the redevelopment of village cores and religious heritage holds a series of stakeholders involved. Unique for the redevelopment of churches is the ownership of the building which differs per denomination. To agree on new plans for church buildings a lot of different stakeholders are involved. Not only the Church itself has influence, but also the municipality and even the Cultural Heritage Agency through devising the monumental status of the building. In this section the different stakeholders and their interests are put forward.

Generally speaking, the heritage itself is owned by the religious denomination and future plans are influenced by the municipality and the Cultural Heritage Agency through the Kerkenvisie and monumental status, which in turn are advised by (local) heritage specialists.

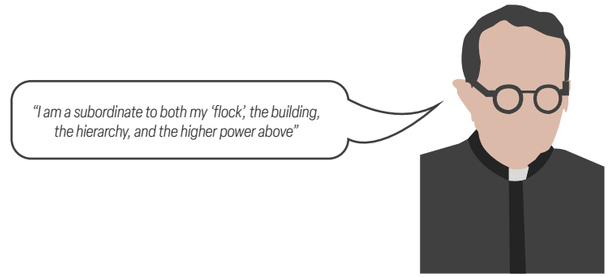
The redevelopment of the village core is initiated by the municipality with possible provincial or national support in the form of subsidies. Involved stakeholders include the local residents and local entrepreneurs.

In the end both the heritage itself and the redevelopment of the village core deal with the development itself. Whereas ownership, development, financing, and management are held and executed by different stakeholders involved.

Church

The stakeholders involved differ per denomination. Overall, these are the church board, the church-goers, and the church organization (regional/national). The ownership of the church building in the Protestant denominations is held by the church-goers themselves. They are represented by the church board and advised by the Protestant Church of the Netherlands (*PKN*). They are free to choose the future of their building themselves and since the church building is not sacred, the building is often open for secondary functions.

For the Catholic Church, the ownership of the building is held by the Church itself. The church-goers are represented by a church board and the priest, but any plans on the building and its usage have to be agreed upon with the diocese the church belongs to and the ruling bishop. Since the church building is sacred for the Catholic Church, secondary functions are not as easily harbored. Elements in the church building are often locked in with a perpetual clause. So even when ownership of the building is transferred to a third party, the diocese holds influence in the future use of the building through the perpetual clause on elements in the church which also dictate the usage of the building the elements are part of.



Government

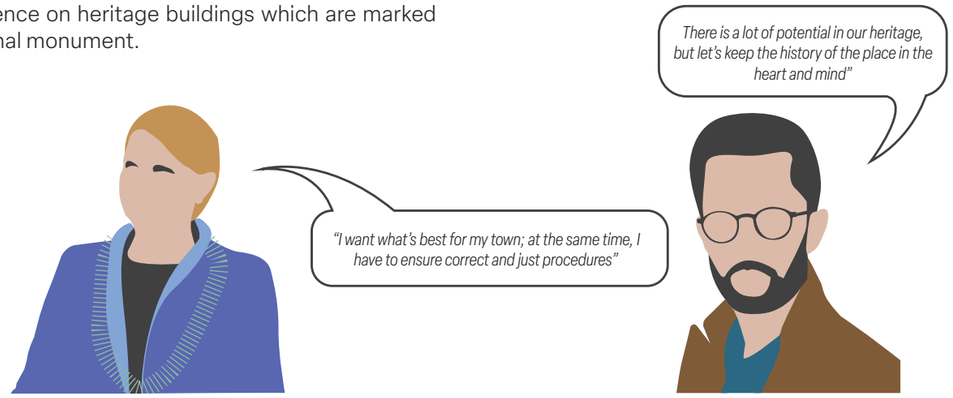
The municipality is involved with the future of church buildings through the construction of the Kerkenvisie and the (to be implemented) Environment and Planning Act (*Omgevingswet*). They can also assist churches through subsidies and hold sway over heritage buildings through assigning the status of municipal monument to the building. In the redevelopment of the village core itself, the municipality is one of the key stakeholders. Ownership of the public space is held by the municipality and the municipality is the initiator for change.

The provincial government is possibly involved in the redevelopment of the village core and the church building through subsidies providing financial support if the project is deemed important enough to provide aid on a provincial level.

The national government is also involved through subsidies for the development project, providing financial support; however, these are rare to attract. The national government is further involved through the Cultural Heritage Agency. They subsidize the drafting and implementation of the Kerkenvisie and hold influence on heritage buildings which are marked as a national monument.

Heritage specialists

Redevelopment of heritage requires good knowledge of the building and the history. Therefore, heritage specialists are often involved in these redevelopment projects. The Cultural Heritage Agency can also be marked as a heritage specialist, since they have a lot of basis information on the different church buildings in municipalities. Furthermore, differing per province, there are government-funded organizations advising on heritage development. Also, the local history group (*Heemkundekring*) has a lot of information on the history of the building as well as the surroundings. These advisors and specialists can offer an important foundation of information from which (re)development can ensue.

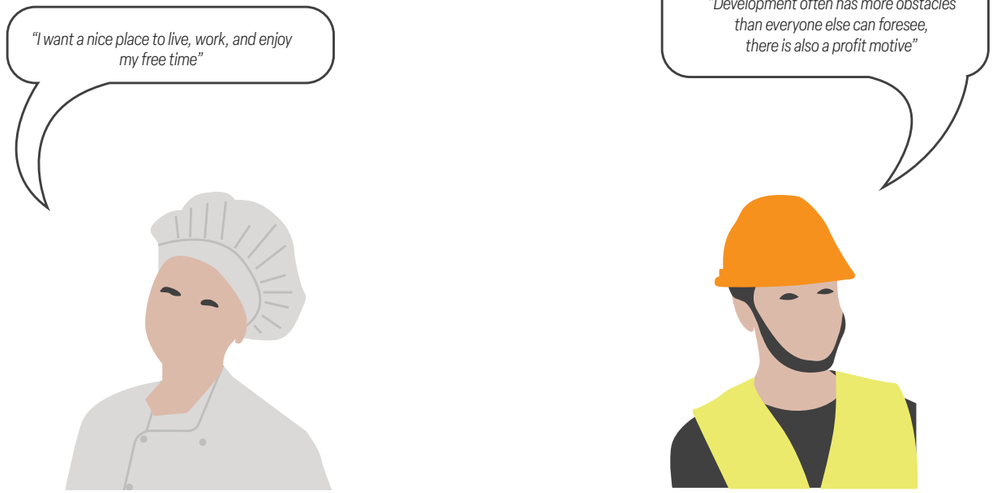


Local stakeholders

The local stakeholders are the residents, local entrepreneurs, and the future users of the area/building. They understand their needs best and are the ones which undergo the direct effects of the transformation of the area. They are often involved as part of other stakeholder groups as well, being part of the church community or in the village council. Successful redevelopment makes space for local initiatives put forward by this group of stakeholders and participation in the process is key for creating a place which is welcomed by all.

Development management

The final group of stakeholders are the external parties involved with the (re)development: the owners of buildings or plots that are part of the development plans, the enquired developer and design specialists, financers involved, and future management of the area/buildings. These parties are often not locally established and need to involve themselves with the other stakeholder groups in order to find the best possible scenario and create a perspective carried by all stakeholders involved.



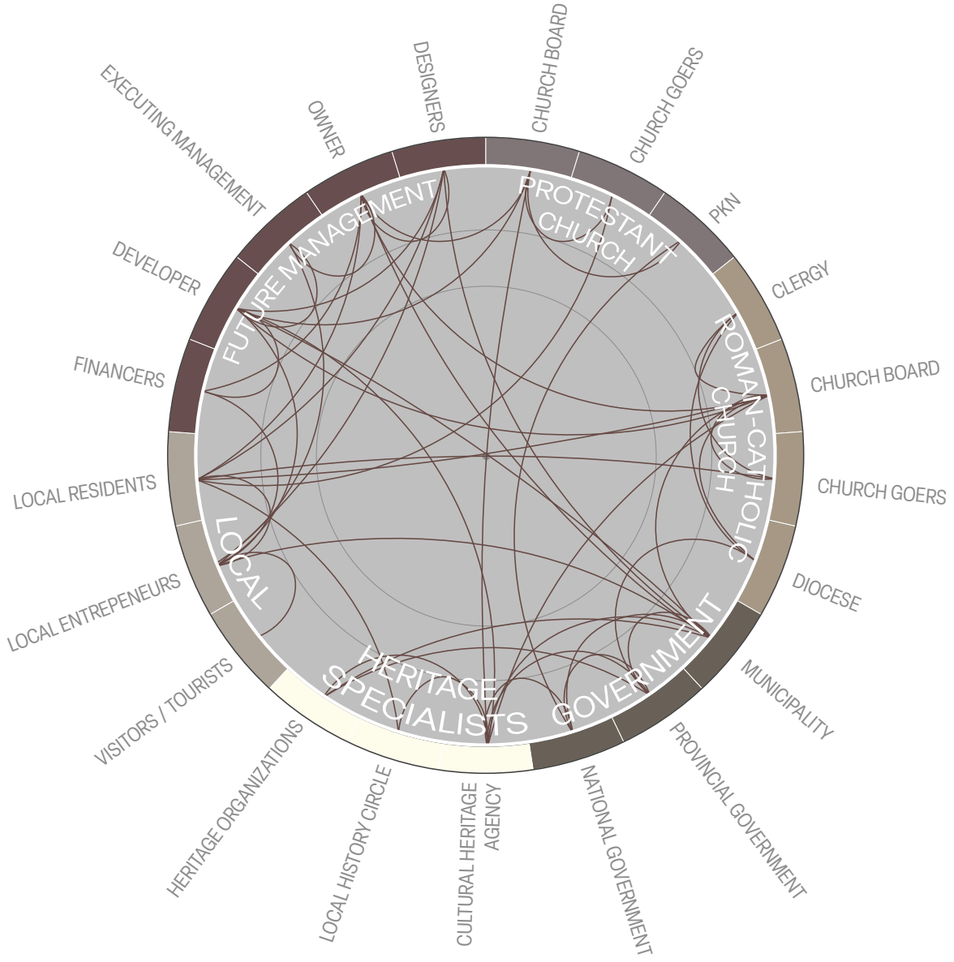


Figure 5.2: Stakeholders involved in the redevelopment of the village core and church heritage. The 21 stakeholders are divided in six groups: the Protestant Church; the Roman-Catholic Church; the Government; Heritage Specialists; Local Stakeholders, and Future Management .

Targeted audiences

This thesis aims to provide an inspiration for future (re) development projects where the village church heritage is redeveloped, along with the surrounding public space of the village core. The toolbox along with the design implications can form a reference for designers and developers, as well as a tool for municipalities in communication with local stakeholders, and an inspiration for church organizations in offering possibilities which are in line with the ideology of the people involved and the heritage of the place.

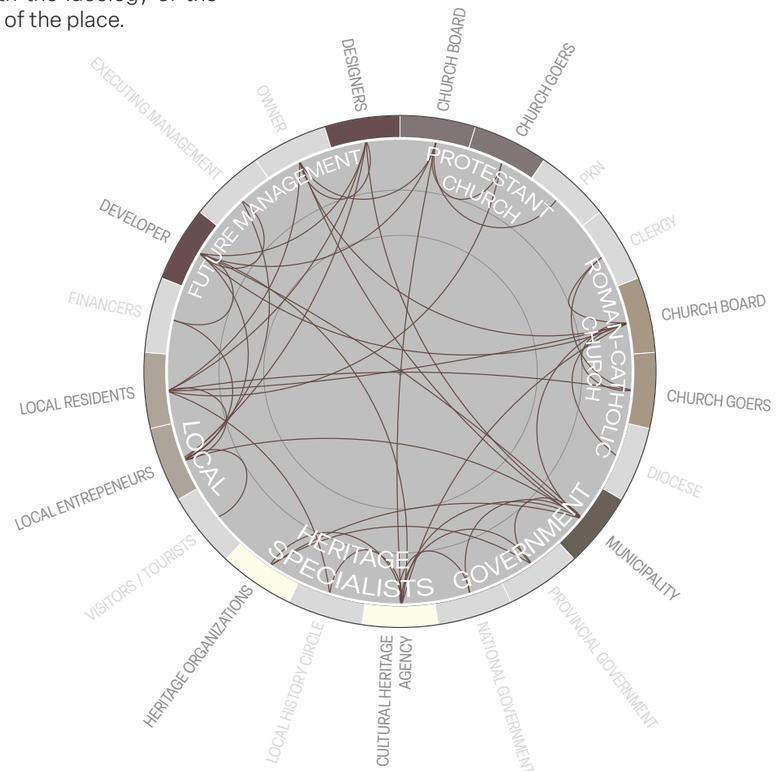


Figure 5.3: Stakeholders that might benefit from viewing the results this thesis presents.

5.4 METHOD OF DESIGN

There are a lot of differences between different development projects of village cores. Villages have different sizes, have a different financial feasibility, and deal with different problems. The same goes for church buildings. There is a lot of difference in size of the church, the plot, and additional buildings. Also, there is a big difference in how churches can be redeveloped according to monumental status and the denomination they belong to. Therefore, the choice was made to focus on a set of different project locations instead of one project location.

To demonstrate the differences and to offer a more exhaustive view on (re)development. The design project itself is focused on three locations. These locations are representative for all the current villages in shrinkage regions with vacant religious heritage (see next section). These are supported by a basis built as a toolbox of different design interventions. This toolbox offers a more generic view on the possible design interventions and their effects. The toolbox can be used as an inspiration and as a workshop tool to view different options.

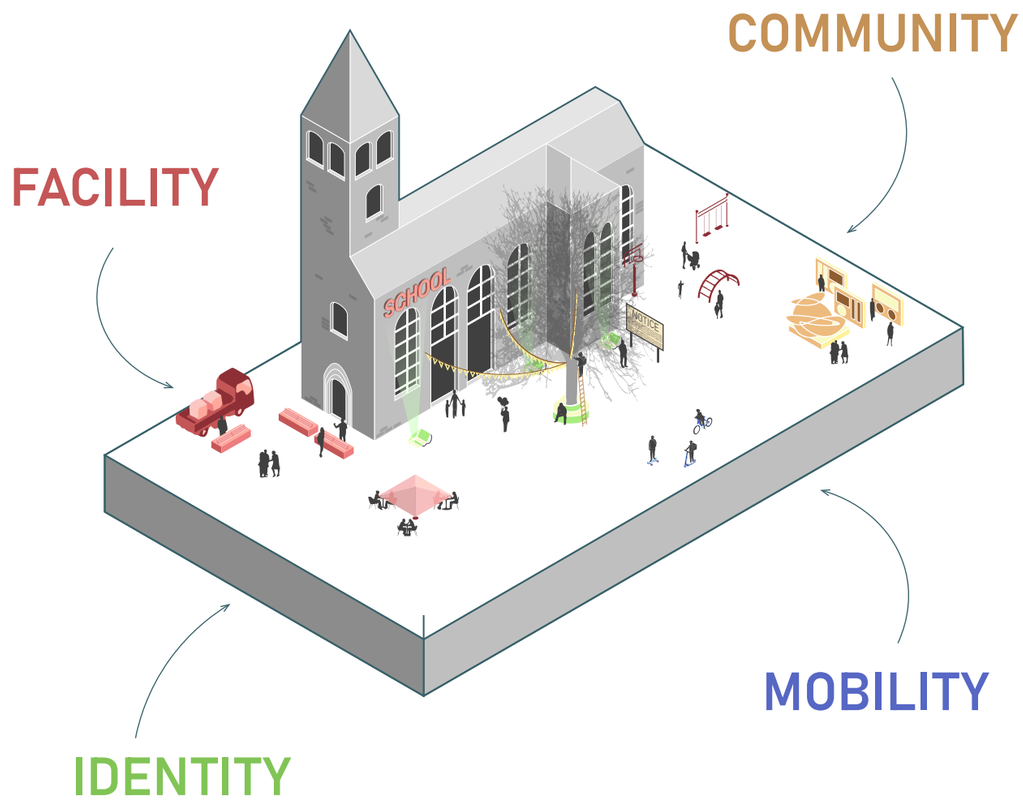


Figure 5.4: The toolbox covers all four of the themes presented in chapter two: Facility, Mobility, Community, and Identity.

5.5 DEFINING THE PROJECT LOCATIONS

As mentioned in the introduction chapter, there are almost three hundred churches in the Netherlands which are currently vacant. This thesis specifically focuses on vacant churches positioned in the heart of villages in shrinkage regions. An analysis of the currently vacant churches in the Netherlands is done to find these village churches. The following criteria define the framework of this analysis:

- The church building is positioned in the intermediate zone or periphery zone of the Netherlands, away from the Randstad. The focus is on seven of the twelve provinces: Drenthe, Friesland, Gelderland, Groningen, North-Brabant, Overijssel, and Zeeland;
- The church is positioned in a village. The definition of village is set at a settlement with a maximum population of 8.000 inhabitants;
- The church is positioned centrally in the village and functions – or used to function – as the main church of the village;
- The church is built before the reconstruction period or built on the same location as a previously built church which was constructed before the reconstruction period. All villages within the scope of this analysis find their origins before the twentieth century;
- The church – and the village – is positioned in a shrinkage region.

With these criteria, 24 churches in the Netherlands have been identified. These villages have been chosen as locations of interest and are further compared with each other. Three representing locations of the 24 have been chosen as project locations on which the elements of the toolbox will be tested. Further analysis will be focused on the general 24 locations.

Although these 24 locations are positioned all throughout the Netherlands, they have a lot in common: their population count, spatial layout and urban structure, as well as the issues due to shrinkage, put forward in the theory in the chapter on the rural Netherlands. In this section, the similarities and the differences of the 24 locations on the subjects of population count, accessibility and reachability of facilities, as well as the spatial urban layout of the villages are discussed.

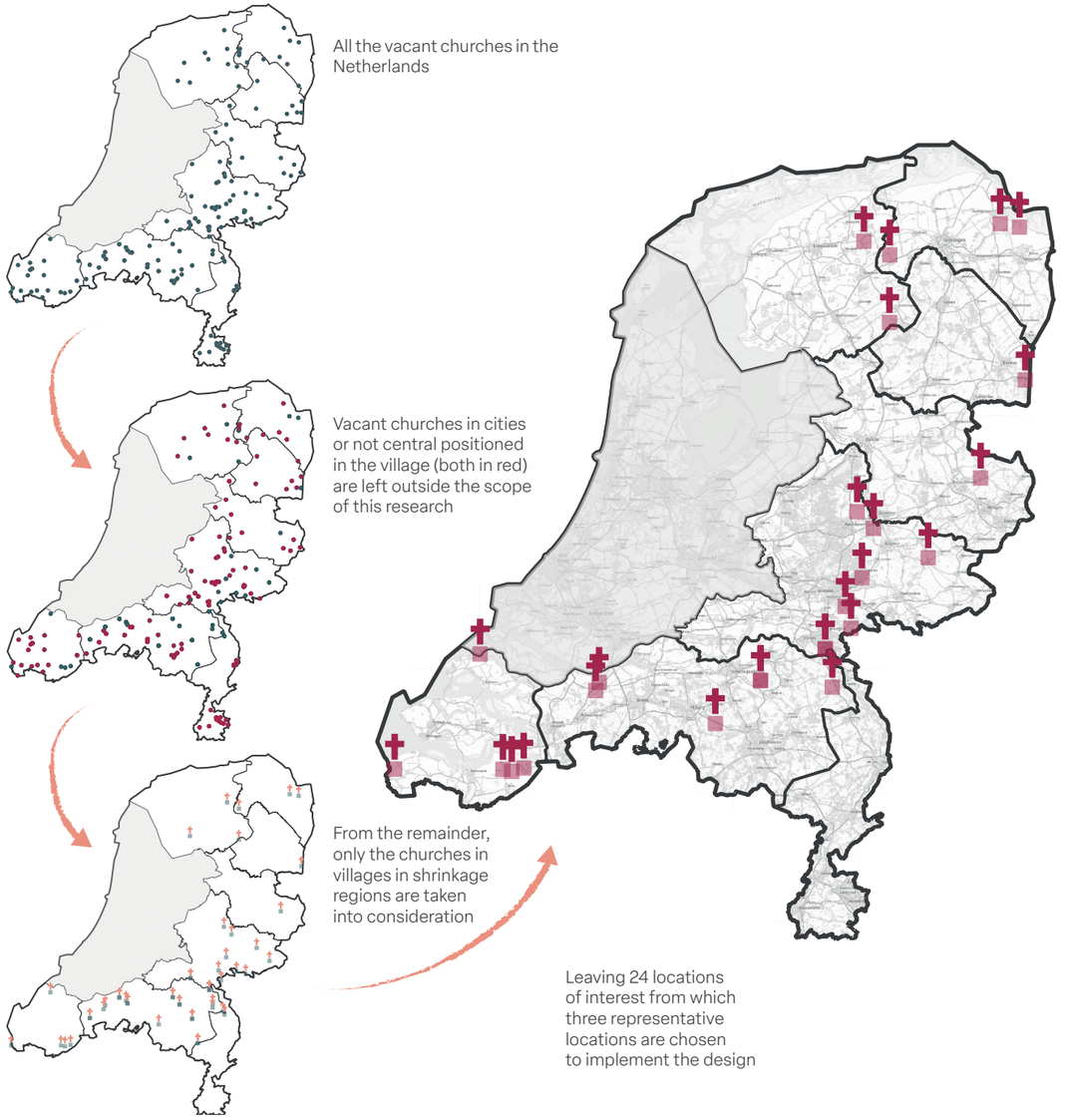


Figure 5.5: Establishment of the 24 locations of interest based on RCE (2021) & Kadaster & CBS (2020).

First, the population count is scrutinized. All these locations are projected to deal with shrinkage by the year 2050. This does not necessarily mean that they have had to deal with shrinkage in the past years, however. Eight of the twenty-four locations have experienced population growth in the past eight years, as can be seen in Figure 5.6. However, take these high growth percentages with a grain of salt, because the major outliers are mostly villages with a low population count.

A slight change in population reflects in significant percentage changes. This goes both for growth and decline of the small settlements.

There is a clear distinction between the smaller villages which have a high swing in positive and negative percentages, the medium sized villages which overall have experienced a population decline in the past eight years, and the two larger villages. With Heeswijk-Dinther posing an interesting exemption to the declining population trend, with a growth of 6% since 2013.

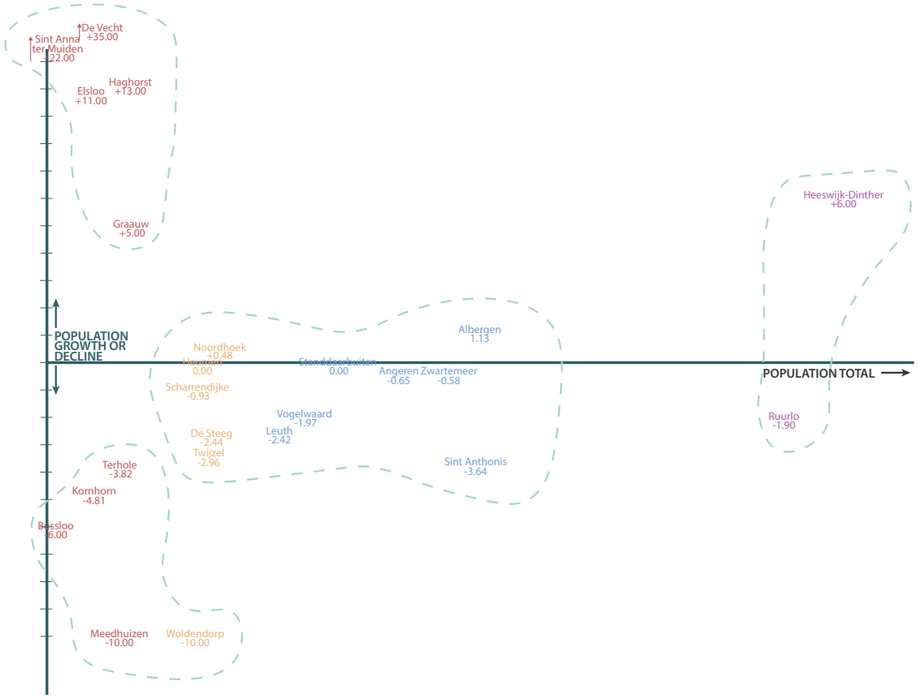
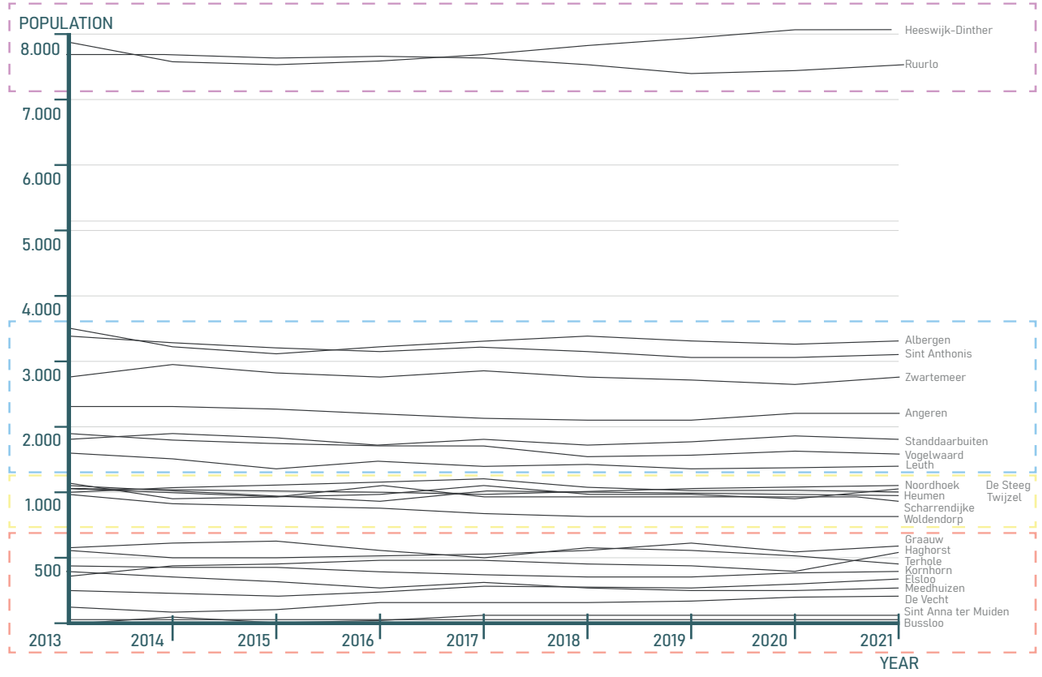


Figure 5.6: Settlement population growth and decline measured against the total population count. Data derived from AlleCijfers (2021).

Figure 5.7: Settlement population growth and decline measured on a timeline (2013 - 2021). Data derived from AlleCijfers (2021).

In Figure 5.7 the population count per village is put on a timeline. Here it becomes clearer what the direct population change is. For a multitude of the locations of interest, there has been an uplift in population between 2016 and 2018. Also, almost all villages conclude 2021 with a positive line relative to the 2020 data.

It also becomes clear in Figure 5.7 that the different sizes of villages can be grouped. Roughly these groups are the small villages with a population of below ~750: Busslo, Sint Anna ter Muiden, De Vecht, Meedhuizen,Elsloo; Kornhorn, Terhole, Haghorst, and Graauw; the villages with a relative constant population of around the 1.000 inhabitants: Woldendorp, Scharendijke, Heumen, Noordhoek, Twijzel, and De Steeg; the midsized villages which have surpassed the 1.000 inhabitants threshold and vary between the 1.500 and 3.500 inhabitants: Leuth, Vogelwaard, Standdaarbuiten, Angeren, Zwartemeer, Sint Anthonis, and Albergen, and finally the larger villages of Ruurlo and Heeswijk-Dinther with a population of around the 8.000 inhabitants.



One of the major results of shrinkage found in the literature (and causes, in the downward spiral that shrinkage holds) are lowered accessibility and a declined sense of community. With twenty-four locations of interest, it is difficult to show the accessibility to facilities and the remoteness of place spatially in a comparative way.

However, an attempt is made in Figure 5.8. Working with GIS-data, the data to the nearest train station, healthcare facility, supermarket, bar/restaurant, and secondary school is compared and defined as reachable or not. The table shows the average distance from residential buildings within the specified villages to the nearest facility. As a comparison, the average for the Netherlands as well as the average for that specific province is given. In addition, the distances are colored in terms of reachability without using motorized transport. Here, the assumption is taken that almost everybody has access to a bicycle, and an average cycling speed of 12km/h is used (CBS, 2002). That means that a distance of 3 kilometers is reachable within 15 minutes and a distance of 6 kilometers is reachable within 30 minutes. These are marked with deep green and light green correspondingly. Anything further away than approximately 30 minutes of cycling is marked as undesirable to access by bike.

It can be noted that especially in Zeeland the distance to the nearest train station and other facilities such as healthcare and education are inaccessible by bike. Luckily, almost in all locations the nearest supermarket is reachable. The same goes for a bar or restaurant. Secondary schools are in general further away, usually only build in larger villages and towns. However, requiring students to cycle more than 30 minutes to school every day is on the verge of reasonable.

Location	Train station	Healthcare	Supermarket	Bar/Restaurant	Secondary school
National	6.9	6.5	1.5	1.9	13.8
Zeeland	19.5	7.7	1.8	1.9	6.5
Scharredijke	34.2	12.3	0.5	5.2	12
Sint Anna ter Muiden	59.4	10.6	1.3	1.8	10.2
Vogelwaarde	40.8	8.0	0.3	0.4	8.8
Terhole	43.8	4.0	4.5	4.1	4.6
Graauw	50.3	7.4	6.6	3	6.5
North-Brabant	7.1	6.5	1.5	1.2	3.7
Standdaarbuiten	4.9	4.4	0.5	0.3	4.9
Noordhoek	6.6	8.3	3.3	0.4	6.5
Haghorst	11.7	10.9	3.1	0.3	8.4
Heeswijk-Dinther	12.5	10.6	0.7	0.5	0.9
Sint Anthonis	5.5	8.2	0.5	0.6	3.5
Gelderland	5.1	6.3	1.5	2.3	3.7
Heumen	4	7.6	3.5	0.3	3.4
Leuth	11.3	12.3	0.4	5.6	8.1
Angeren	8.2	8.1	0.5	0.7	3.4
De Steeg	2.6	5.2	2.7	2.2	4.1
De Vecht	6.2	11	5.5	0.2	6.2
Bussloo	4.4	10.3	3.5	4.6	5.7
Ruurlo	1.3	8.8	0.7	6.6	4.8
Overijssel	5.9	6.6	2.2	2.5	4.5
Albergen	8.3	7.3	0.6	0.6	5.5
Drenthe	9.3	9.7	2.5	3.5	5.4
Zwartemeer	11.8	12.4	1.8	1.65	3.7
Groningen	7.6	11.0	2.0	2.3	4.5
Kornhorn	11.6	15.9	3.5	2.5	4.7
Meedhuizen	7.6	7.3	0.3	0.3	6.6
Woldendorp	11.8	11.6	0.4	0.4	0.5
Friesland	10.5	12.7	2.4	3.2	5.3
Twijzel	4.7	17.5	3	0.6	5.1
Elsloo	20	22.5	8	4.9	9.1

Reachable by bike (12km/h):
- < 15 min (<3km)
- 15 - 25 min (<5km)
- 25 - 35 min (<7km)
- > 35 min (>7km)

Figure 5.8: Average distance to the nearest facilities and cycleble distance. Data derived from Kadaster & CBS (2020).

In Figure 5.9 we take a look at the number of facilities within the reach of five kilometers. One of the conclusions of the theory was that a local supermarket, bar/restaurant, and primary school play a huge role in strengthening the local community and shaping the identity of the settlement. Facilities such as these are closed down as a result of population decline, one of the major negative effects of shrinkage. There are six villages which lack in one of these three facilities. However, a variety of choice is often limited in the other villages, with just one local supermarket or bar/restaurant reachable within five kilometers.

Even though the size of the villages differs quite a bit, from 85 inhabitants in Bussloo to over 8.000 inhabitants in Heeswijk-Dinther, the historic spatial layout is still clearly visible. When we take a look at the layout of these villages with the building age as a criterion, the villages can be nominated into the categories of village types mentioned in the introduction chapter. These villages have been around for centuries, very slowly growing or even declining. It is as a result of the reconstruction period, mid-twentieth century, and the decades afterwards that the villages experienced exponential growth. Expansions were planned and completed as a whole, but the structure of the village is still visible in the main road layout. Most of the villages have a linear origin or were built around a brink. Especially villages in the eastern part of the Netherlands are more often built around a '*brink*', a logical phenomenon, since villages in the West often had to deal with land reclamation and were built along polder and dike structures. The categorization of the spatial layout and origin structure of the villages can be found in the appendix.

From these comparisons, the three project locations have been chosen to represent vacant churches in villages in shrinkage regions. The project locations are in Scharendijke, Schouwen-Duiveland in Zeeland; in Haghorst, Hilvarenbeek in North-Brabant, and Leuth in Berg en Dal in Gelderland.

Figure 5.9: Number of facilities reachable within 5 kilometers. Data derived from Kadaster & CBS (2020).

Location	Supermarket	Bar/Restaurant	Primary school
National	**13**	**38**	**13**
Zeeland	**4**	**7**	**5**
Scharredijke	2	0	1
Sint Anna ter Muiden	2	2	1
Vogelwaarde	1	2	2
Terhole	2	11	5
Graauw	0	2	1
North-Brabant	**12**	**26**	**12**
Standdaarbuiten	5	6	2
Noordhoek	2	3	6
Haghorst	1	9	3
Heeswijk-Dinther	3	9	4
Sint Anthonis	4	3	4
Gelderland	**10**	**16**	**11**
Heumen	5	4	7
Leuth	1	0	3
Angeren	6	11	5
De Steeg	5	6	6
De Vecht	0	1	4
Bussloo	1	1	5
Ruurlo	4	0	5
Overijssel	**7**	**10**	**9**
Albergen	3	2	3
Drenthe	**5**	**5**	**6**
Zwartemeer	6	4	9
Groningen	**6**	**13**	**7**
Kornhorn	3	2	7
Meedhuizen	1	2	1
Woldendorp	1	1	1
Friesland	**4**	**7**	**6**
Twijzel	6	6	11
Elsloo	0	1	2

06
THE TOOLBOX

The toolbox is created as an answer to the issues resulting from shrinkage defined in Chapter two. This chapter continues on the previous chapter and creates a spatial answer to the results of the SWOT-analysis. The toolbox is a stand-alone booklet separate from this thesis. An introduction and a conclusion on the toolbox elements is given here, as well as a summary of the assortment of toolbox elements.

6.1 The Toolbox as an Instrument

6.2 Toolbox Assortment

6.3 Evaluation and reflection

6.1 THE TOOLBOX AS AN INSTRUMENT

The resulting negative factors from the second chapter of this thesis, on the shrinkage in rural Netherlands, have been defined in four categories. These are the four categories that persist throughout this thesis: Facility, Mobility, Identity, and Community. In countering the negative effects of shrinkage, a set of design implications have been proposed. Design principles that are focused on redevelopment of the village core and link to the central religious heritage – the church building. These design implications have been organized and categorized and together form the basis for the toolbox which is submitted in this chapter.

This chapter offers a summary of the toolbox elements, divided in the four themes. The toolbox itself is a standalone booklet, with the distinctive design implications shown on cards, with a very brief description and a supporting isometric image presenting the design implication. In addition, the implications are also positioned on five elements considering the scale, complexity and focus of the implementation of the design.

These five elements are: the scale of the implication – *is the implication more focused on the church building itself, or the entirety of the village?*; the complexity of the implication – *is the implementation of design a detailed and difficult design or is it easily and briefly implemented?*; the alteration to the heritage – *does the design implication alter the church building a lot or not?*; the positioning of the implication between design and governance – *is the implication true design focused or more based on an alteration in regulations and governance?*, and finally the focus on usage of the design implication – *is the design element to be used by locals, or is it more focused on an external attraction of visitors and tourists?*.

While the implications are categorized along the four themes, they do not solely subject change within that theme. They also influence the other themes – in lesser significance. Take for instance the first implication of the Facility-theme: the implementation of a local farmer's market near the church. While it is clear that this implication is part of the Facility-theme – it facilitates a local market and stimulates the local economy – it also influences the other themes. The implementation of a local farmer's market gathers people at one location and stimulates (involuntary) meetings between people. Stimulating social cohesion, which is part of the Community-theme. It also creates a local activity which attracts outside visitors: a part of the Identity-theme, and with the addition of this market, people have to travel less far to the nearest place to gather supplies, part of the Mobility-theme.

Therefore, the design implications, together with the positioning on scale, complexity, alteration, and focus, are also accompanied by a radar-chart portraying the field of influence within the four themes of the design implication. The severity of the focus on a specific theme is defined by a set of five actors graduating on a scale from one to four (one being a negative influence, two neutral, three slightly positive, and four significantly positive). These actors are based on the conclusions from the literature on shrinkage in the rural Netherlands in chapter two. Per theme, the average of these actors is taken, and this is linked to the corresponding four rings in each of the radar graphs.

The different actors per theme are shown here to the right. The scoring of each design implication can be found in the appendix of this thesis. The denomination of actors per theme will be mentioned there again as well. These actors that define the scoring per theme are the same actors used in chapter seven, with the comparison of the project locations and in measuring the severity of change on the four themes.

On the next pages an assortment of all the toolbox elements categorized by the four themes is displayed. Further information on each of the elements can of course be found in the standalone toolbox booklet.

Facility:

- Addition of new functions/facilities
- Increase of available retail functions
- Increase of available (social) facilities
- Increase of cultural/entertainment possibilities
- Attraction of (new) inhabitants

Mobility:

- Increase of accessibility retail functions
- Increase of accessibility (social) facilities
- Accessible public transport
- Increased focus on slow traffic
- Decrease of car dependent environment

Identity:

- Appearance of tangible heritage
- Appearance of intangible heritage
- Increase of outside attraction
- Increase of inside attraction
- Available facilities contributing to identity of the village

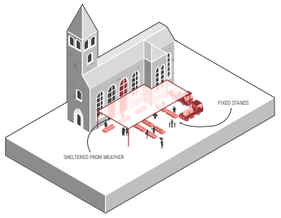
Community:

- Increase in locations of planned/voluntary social interactions
- Increase in locations of unplanned/involuntary social interactions
- Increase in connections between existing functional structure
- Addition of space to use for social activities and events
- Increase in places and (social) structures to become a part of/to join

6.1 TOOLBOX ASSORTMENT

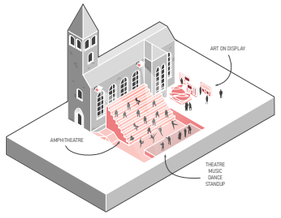
Facility

LOCAL FARMERSMARKET



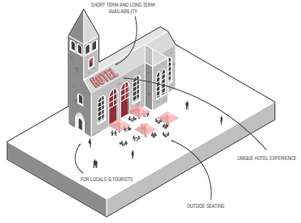
F1

STAGE FOR CULTURAL ENTERTAINMENT



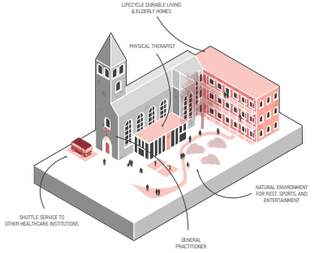
F2

HOTEL/RESTAURANT/CAFE



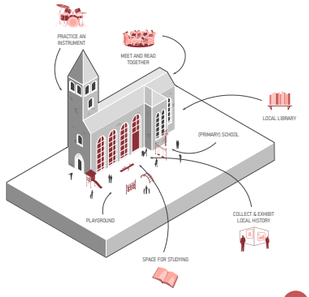
F3

JOINT HEALTHCARE INSTITUTION



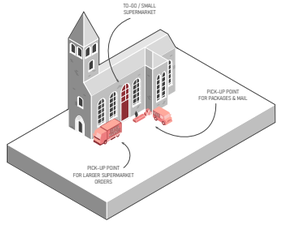
F4

PLACE FOR EDUCATION



F5

LOCATION FOR LOCAL DISTRIBUTION

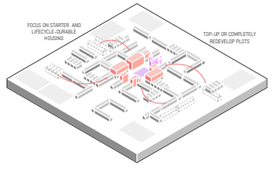


F6

CONCENTRATION OF FACILITIES AT THE HEART

F7

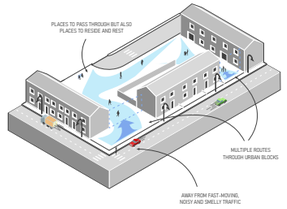
NEW DENSIFICATION STRATEGY



F8

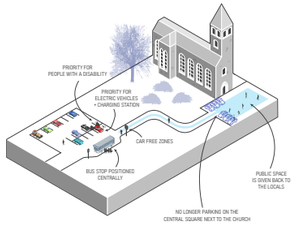
Mobility

BREAK STRUCTURE WITH SLOW TRAFFIC



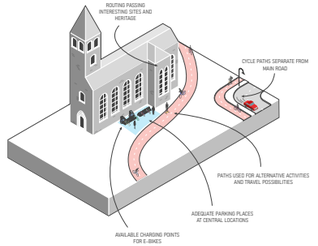
M1

CENTRALIZED PARKING / CAR-FREE ZONES



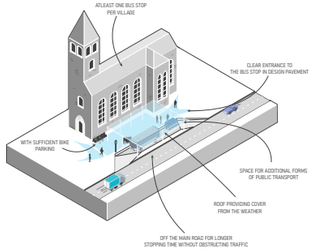
M2

BICYCLE-INCLUSIVE ENVIRONMENT



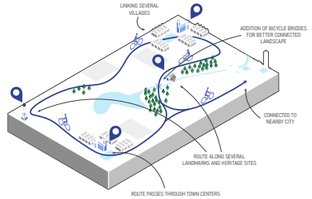
M3

CENTRAL BUS STOP



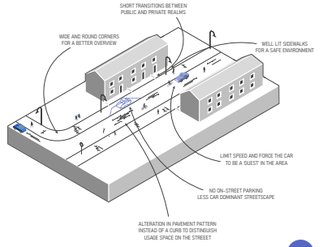
M4

REGIONAL BICYCLE ROUTING



M5

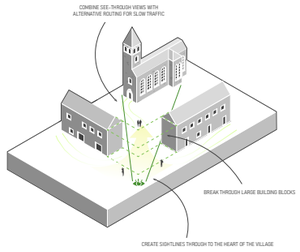
NON-HIERARCHICAL 'VILLAGE STREETS'



M6

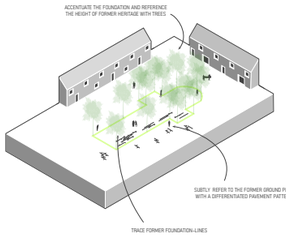
Identity

CREATE SEE-THROUGH VIEWS



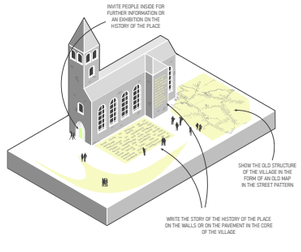
I1

HISTORIC OUTLINES OF FOUNDATION REINTERPRETED



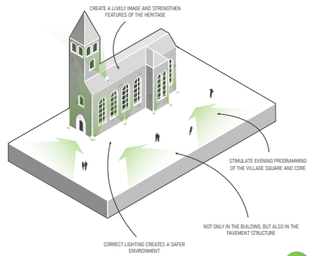
I2

TANGILIZE HISTORY BY WRITING OR VISUALIZATION



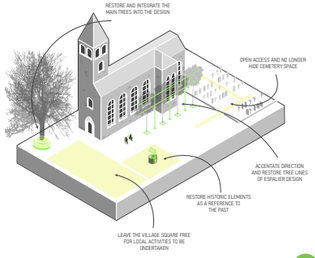
I3

EMPHASIZE CHARACTERISTICS WITH A LIGHTING PLAN



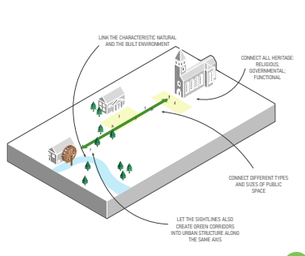
I4

RESTORE CHARACTERISTIC FEATURES



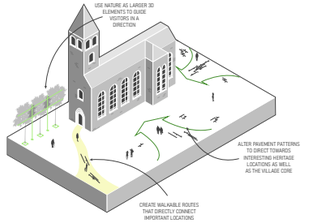
I5

CONNECT SIGHTLINES BETWEEN CHARACTERISTIC ELEMENTS



I6

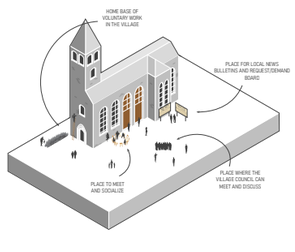
ACCENT STREETS WITH DIRECTIONAL PATTERNS TOWARDS HERITAGE



I7

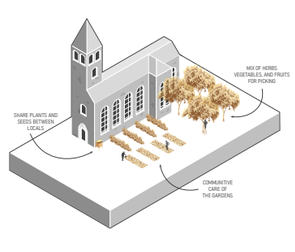
Community

SOCIAL HUB & COMMUNITY CENTER



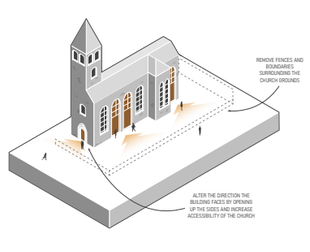
C1

URBAN FARMING & SOCIAL GARDEN



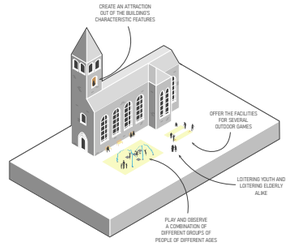
C2

ACCESSIBLE AND OPEN TO PUBLIC



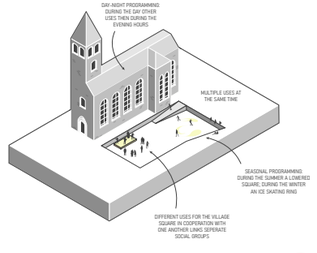
C3

EXPERIENCE AND OBSERVE – FOR ALL AGES



C4

MULTIFUNCTIONAL VILLAGE SQUARE



C5

6.1 EVALUATION AND REFLECTION

The toolbox can be a really useful element in explaining the different possibilities of using church heritage to diminish the effects of rural shrinkage and to stimulate the livability of rural cores. It is, however, a holistic answer to the large-scale effects of shrinkage and offers more generic design implications. Due to its holistic approach, the toolbox is also never really complete. There are positives and negatives to be discussed on this matter; these will be further expanded on in this section.

First off, the main positive note of the toolbox. The way the toolbox is structured, it provides a really clear view on the broad spectrum of possibilities of redeveloping rural cores and church heritage. The clear distinction between the themes and the coherent design of the isometric images helps understanding the content and the usage possibilities. The toolbox is not only an interesting set of illustrations to be used as a reference or as inspiration for further design issues, but it can also be used in workshops with stakeholders.

The toolbox elements can be used as cards participants can bet with. It can form a basis of understanding the limits of the framework within the involved stakeholders wish to participate. It can also provide a more expansive perspective for the participants, showing new opportunities and possibilities they had not thought of before. Therefore, it can be of use for both sides to the table: it provides the participants a broader horizon of possibilities and it provides the workshop leader with a clearer understanding of the participants' visions.

The broad capacity of the toolbox in general also characterizes the limitations of the toolbox shown in this thesis. It is impossible to incorporate all elements and the toolbox can be something that is further expanded on throughout time. Currently, there are four themes used in the toolbox. The themes Facility, Mobility, Identity, and Community. However, there are many more possible themes to think of. For instance, the theme Sustainability, concerning with the long-term effects of changes – both environmental and demographic. The long-term effects of shrinkage and the counter measurements are in general something that can be further looked at and monitored across a longer period of time.

Also, environmental considerations have not been taken into account in the themes of this toolbox. The effects of the nitrogen crisis on agricultural communities are immense and can be devastating for villages. The themes chosen to be represented in the current form of the toolbox are purely based on the literature on shrinkage in the rural Netherlands.

Perhaps that is also the beauty of the holistic setup of the toolbox: the toolbox is currently merely a starting set of 4 themes and 26 design implications, but it can easily be expanded on and is in this context only limited to the boundaries of rural problems, where the village core and religious heritage can be part of the solution.

The design implications currently illustrated in the toolbox are derived from the literature, from analysis of the project locations, and from designing the project locations. So not only do the four themes form the basis of the analysis, but the analysis also offers new insights on new design possibilities for the toolbox. The same goes for the design: the toolbox does not only function as the starting point of the design of the project locations, but the designing itself also showed new possibilities for the toolbox.

For instance, the Facility-designs of *F4 – A Joint Healthcare Institution* – and *F5 – A Place for Education* – are clear examples of toolbox elements derived from the literature. One of the conclusions from chapter two is the limited access to (social) facilities. But when taking these factors into consideration in analyzing the Facility theme for project location Haghorst, I found that the village also lacked a place where packages can be delivered and picked-up from; where supermarket products can be delivered for local inhabitants (for the nearest supermarket is in a different village). This resulted in the addition of *F6 – The Church Building as a Location for Local Distribution*. In analyzing Haghorst I also found out the village did not even have access to a bus stop, which in turn led to *M4 – The Creation of a Central Bus Stop.*

Another example of the circular nature of deriving the toolbox elements, this time with the toolbox elements and design, can be seen in *C1 – A Social Hub & Community Center*, and *C2 – Urban Farming & Social Garden*. In designing the project location Scharendijke, the church becomes a social hub and community center with an adjacent social garden for locals. However, the church has restricted access points and is orientated towards a select number of houses. The location has to be altered drastically to be more open to others. This design question in turn leads to the creation of *C3 – An Accessible and Open Location for all Public*.

As can already be seen in these examples, the toolbox elements are heavily interwoven. This is expected, the four themes themselves are already intertwined: the availability of facilities relates to the mobility issue; the identity of a village is partly built on the community's effort. These interlacing components of the themes also make it that certain toolbox elements have been combined to one, for instance in the theme of Mobility on the non-hierarchic village street [*M6*] and a now removed element in Identity on the historic village street structure.

The interlacing further results in some elements of the toolbox being closely related to each other. Such as *F2 – A Stage for Cultural Entertainment* – and *C4 – A Place to Experience and Observe for all Ages*. I think this might be a major trap for the toolbox: in order to create a holistic toolbox, many elements show some form of overlap with one another. Resulting in a more chaotic combination of very similar elements. I tried to avoid this disarray by providing the radar chart on the position of the toolbox element compared to all four of the themes, so it becomes clear that each element is not solely linked to the theme it is positioned under.

In the end, the aim of the toolbox is to not only offer design suggestions. But also show the effects of the implications. Therefore, in this thesis the toolbox elements are tested on the three different project locations. To show the integration of the toolbox elements in different scenarios and in different combinations. There is a field of tension between the type of church and the surrounding public space. Every design inquiry is loaded with different factors and different stakeholders at play. Here the toolbox can form a starting point, but the resulting design is always distinctively unique for that singular location.

The goal is to transform the mass-product of vacant church buildings into each a unique product, with a different combination of toolbox elements, resulting each in a distinctive design: tuned to the local factors and stakeholders and their wishes involved. This is further shown in the next chapter, where three distinctive project locations are approached in the same way but where the results differ significantly.

07

DESIGN

The seventh chapter continues with the toolbox elements that will be implented to three distinctvie project locations. This chapter consists of an overall introduction and continues with the three project locations - Haghorst, Scharendijke, Leuth - consecutively. These sections are constructed by first an outline of the project location, considering the history and the large scale location. Then a spatial analysis on the village is projected, based on the four themes derived from Chapter two: Facility, Mobility, Identity, and Community. Finally, a design proposal is drafted and presented. The chapter is concluded in a comparison between the different project locations and the old and new situations.

7.1 Introduction

7.2 Project Location I: Haghorst, North-Brabant
- *Outline*
- *Analysis*
- *Design*
- *Process and management*
- *Reflection*

7.3 Project Location II: Scharendijke, Zeeland
- *Outline*
- *Analysis*
- *Design*
- *Process and management*
- *Reflection*

7.4 Project Location III: Leuth, Gelderland
- *Outline*
- *Analysis*
- *Design*
- *Process and management*
- *Reflection*

7.5 Comparing the project locations

7.1 INTRODUCTION

The toolbox with design elements forms a general exploration and inspiration of possibilities for village churches. However, each village is different; each church is different. In size, in demographics, in problems, and in possibilities. It is impossible to find a holistic answer to redevelopment of village churches due to this uniqueness.

Therefore, from the 24 locations of interest – villages in shrinkage regions with a currently vacant church building – three locations were chosen to further apply the elements of the toolbox to and show the implementation of these toolbox elements in each a distinctive situation. The locations chosen are the village Haghorst, in North-Brabant, the village Scharendijke, in Zeeland, and the village Leuth, in Gelderland.

In this chapter the designs for these villages are put forward. The locations are discussed one after another and the chapter is concluded with a comparison of the locations with each other and a reflection on the implementation of design on these locations and others. For each of the locations, first an introduction of the place and the church building is given. Then the analysis of the village as a whole is put forward based on each of the four themes – Facility, Mobility, Identity, and Community.

A conclusive analysis-map, together with the design proposition on a zoomed in scale focusing on the village heart and the church building are displayed, followed by the design of the location and the different implications put forward.

The analysis and design of the location are concluded in an exploration on how the place could be developed, with what stakeholders involved, and how the management of the place could be done. Together with a reflective statement on the project location specifically.

The design is linked to the elements of the toolbox. In the maps this link is visible in several small colored circles with a letter-number combination. These relate to the respective toolbox elements. In the text this letter-number combination is written down between square brackets to link to the corresponding toolbox element.

To the right, in Figures 7.1 through 7.3, aerial photos of the project locations are shown. Haghorst - the top left image - is visibly the smallest village of the three project locations, with only 885 inhabitants (AlleCijfers, 2022). Scharendijke, on the top right, has a total of 1.065 inhabitants. Leuth, bottom right, is the largest village and has a total of 1.575 inhabitants. Visually, Scharendijke appears to be the largest village, but many of the urban structure visible are holiday parks for tourists.

Figure 7.1: Aerial photo of Haghorst (GoogleMaps, 2022).

Figure 7.2: Aerial photo of Scharendijke (GoogleMaps, 2022).

Figure 7.3: Aerial photo of Leuth (GoogleMaps, 2022).

7.2 PROJECT LOCATION I: HAGHORST, NORTH-BRABANT

Outline

The first location which will be explored is the village of Haghorst, positioned in the municipality of Hilvarenbeek in North-Brabant. The village of Haghorst is really small, with only 885 inhabitants in 2021 (Allecijfers, 2022). The village of Haghorst is also relatively new, existing only since halfway through the 1920s.

The village is originally an '*ontginningsdorp*': a reclamation settlement. The village came into existence when in the early decades of the nineteenth century the rough terrain between Tilburg and Eindhoven was starting to get used for agricultural purposes. The reclamation of the land and the quest for agricultural industries, together with the construction of the Wilhelmina-canal (1923) between Tilburg and Eindhoven, meant that a village came into existence near one of the water locks in the canal. The village did not expand much further than a couple of streets until the last decade of the nineteenth century.

Haghorst is positioned in a relatively bare landscape characteristic to peat reclamation areas. However, the Wilhelmina canal and the bicycle paths along this canal position the village along a tourism-axis. The village has little local functions, with no supermarket and one primary school, raised in 1950. The local political fraction committed to the independence of the village, such as reassuring the village would get its own zip code. However, since 1997 the village was added to the municipality of Hilvarenbeek, just like all the surrounding villages in the area. Haghorst does attract a lot of visitors yearly due to several festivals held in and around the village.

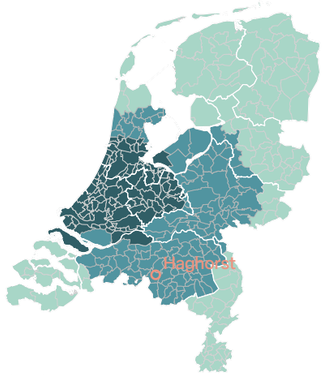


Figure 7.4: Haghorst on national scale.

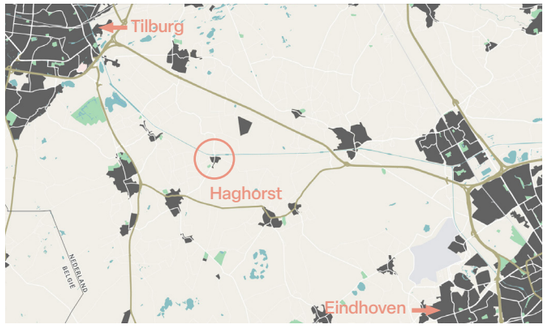


Figure 7.5: Haghorst on regional scale.

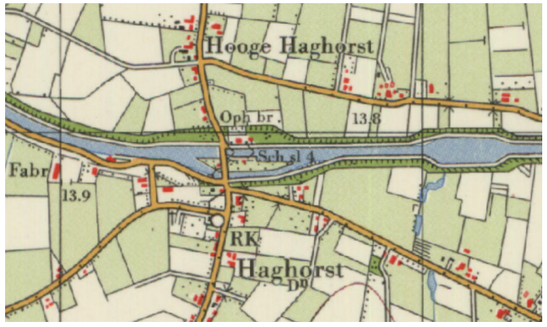


Figure 7.6: Haghorst in 1970. The village consisted mostly of one main street. the church (RK) was the central element (Kadaster, 2015).

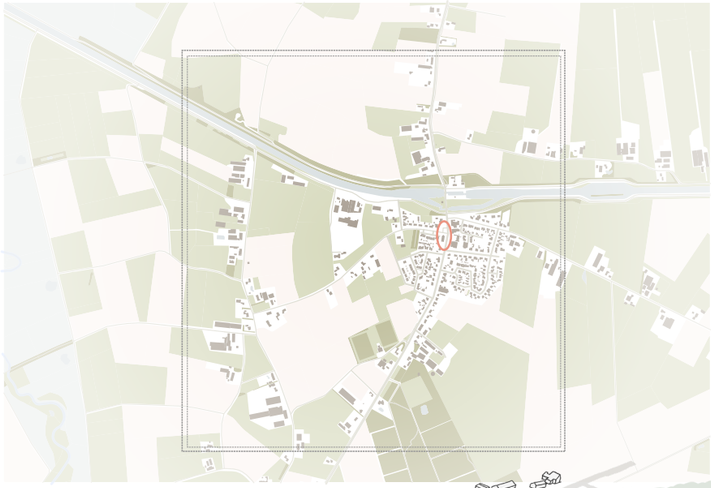


Figure 7.7: Map of Haghorst with the village heart marked (Scale 1:25,000).

Figure 7.8: Aerial drawing of Haghorst viewed from the north.

Since 1944 the village was allowed to form its own parish, which was created in 1949. The bricks used for the church were transported by the local farmers themselves from the surrounding regions by horse and cart. The small Roman-Catholic church was dedicated to Saint-Joseph. The parish itself was small, with a little over 500 participants.

The building is classified as an aisle church and shows elements of traditional architecture. The construction of the building began in 1946. Originally, the building was constructed as an emergency church, but it was this building that was later used as the definitive church for the parish in 1949. The building is oriented north-south, with the altar in the South part of the building.

On top of the entrance of the church was a small tower with a small bell. The parishioners built a larger frame for a new bell themselves in 2004. This bell tower is positioned on the south end of the church, standing free, and is made from a steel frame.

Positioned along the main road perpendicular to the canal and with a small village square next to it, this small church forms the center of the village. Opposite of the church, on the corner of the square, a small statue can be found in memorium of the first reclamation workers founding the settlement.

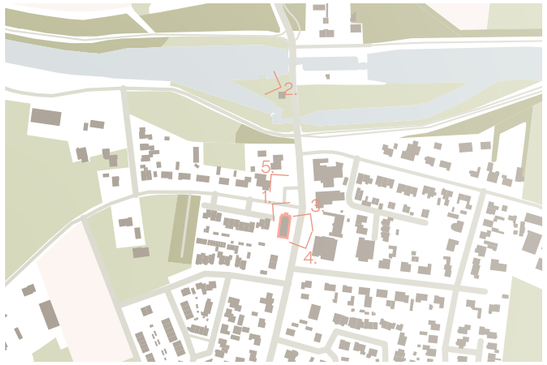


Figure 7.9: Locations of the photos marked on the village center of Haghorst.

Figure 7.10: Photo 1 - The main entrance of the Saint Joseph church in Haghorst with atop the entrance the small bell-tower. The entrance is facing north and is currently not in use - only the backdoor is used.

Figure 7.11: Photo 2 - view on the Wilhelmina-canal. The canal is in use for inland freight transport and offers a touristic view with several old water locks, of which Haghorst has one. A cycle path goes along the side.

Figure 7.12: Photo 3 - the side of the church viewing towards the south. With the stand-alone new bell-tower and behind that the former rectory of the church.

Figure 7.13: Photo 4 - the main street viewed towards the north. On the left side the front of the church is visible. Centrally the village square lays to the left of the road. In the far distance the water lock edges the village.

Figure 7.14: Photo 5 - a view across the village square towards the south-east, with on the right the front facade of the Saint Joseph church.

Figure 7.15: Spatial analysis of Haghorst on the theme of Facility.

Analysis

The village Haghorst offers little local facilities. However, the village does harbor a primary school as well as two restaurants/cafés. The closest supermarket is located in the nearby village Diessen at around three kilometers away and it takes around twelve minutes to visit it by bike, or alternatively around 35 minutes walking. The nearest hospital is located in Tilburg, fifteen kilometers away. The nearest Highschool is also positioned in Tilburg, at around eleven kilometers distance, which takes about 36 minutes by bike.

The two restaurants/cafés are positioned centrally in the village, opposite of the church and the main square. Next to the restaurants/cafés and the church is the multifunctional location 'Den Deel'. This location was bound for closure but is now, per halfway through 2022, reinstated as asylum for refugees from Ukraine. An initiative from the locals.

Next to Den Deel, to the south, the St. Jozef primary school is positioned, together with a small gym. Opposite of the school, just south of the church building, there is a small animal petting garden. Together with the church building and the main square, the elements listed above form the heart of the village Haghorst.

The areas in transparent blue and red are locations with a higher mixed land-use. The blue areas are more dominant towards business functions with on the side residential functions; the areas in red are more lenient towards residential functions with business functions as secondary function. The heart of the village shows more red areas, these blocks harbor the few retail the village has. The blue areas are mostly dominant in the surroundings outside of the village. These areas harbor agricultural functions.

Figure 7.16: The two restaurants/cafés along the main road both have an outside seating area, opposite of the church square. Here lie opportunities for connecting both sides of the road.

The village is positioned quite remote, however, in the Netherlands this often means still quite a reasonable connectivity to the road network and nearby cities. The nearest highway connection is just shy of a ten-minute drive. The cities of Tilburg and Eindhoven are reachable within 30 minutes by car and just over 30 minutes by bike. Most of the facilities as well as extensive retail are found in these cities. There is a connection to the regional cycle network along the Wilhelmina-canal which can be strengthened and used as an opportunity for the village.

Any connection to public transport is non-existing. The nearest bus stop is near the village Diessen and requires a twelve-minute ride by bike or a 35-minute walk. This poor connection has been found a key issue for the future livability of the village.

The village square is – just as in all the other project locations to be discussed – used as a parking lot. This parking lot is not in much use, most visitors visit the village by bicycle and not by car. There are regularly no more than two or three cars parked at the square.

Figure 7.17: The main street runs along the village square and across the bridge of water lock. This road is mostly used by cars, bicycles and tractors.

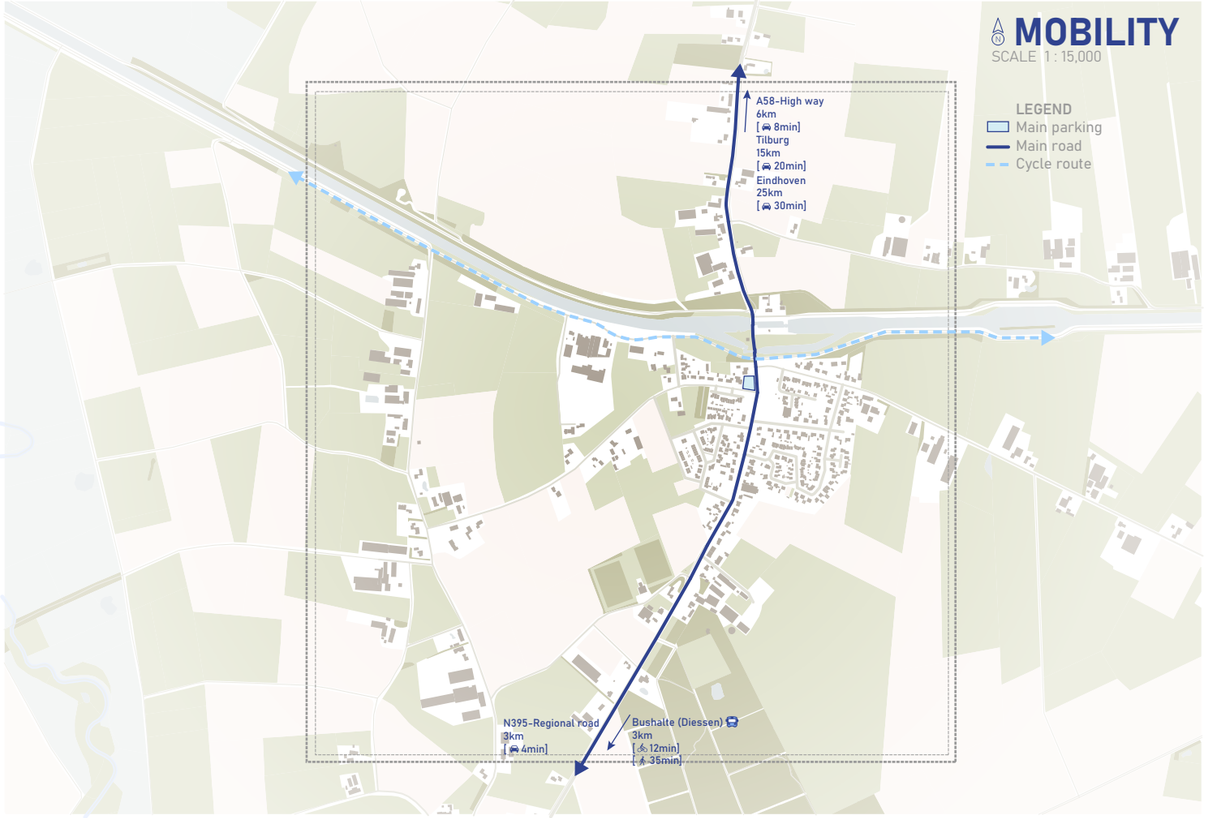


Figure 7.18: Spatial analysis of Haghorst on the theme of Mobility.

Figure7.19: Spatial analysis of Haghorst on the theme of Identity.

Haghorst was originally founded near the water lock and pumping station '*Sluis IV*'. The water lock, the old bridge and the building of the pumping station are still present at the village and are marked as heritage. These historic elements form a landmark for any visitors cycling along the regional cycle network which runs along the Wilhelmina-canal.

Furthermore, the church positioned centrally when entering the village, with its free-standing clocktower and the former rectory behind that. On the corner of the square there is a statue dedicated to the reclamation workers who worked in the area and founded the village.

To tourists the village is mostly known for the several festivals which are held in the fields surrounding the village. The '*Haghorst's Spektakel*' which holds multiple activities, from lawnmower-races to the yearly returning street theater festival, has more than 600 volunteers working together. The '*Stuiterbal*' is a recognized carnival festivity attracting around 8,000 visitors – more than ten times the number of inhabitants of Haghorst.

The village of Haghorst is recommended for the water lock and pumping building as well as the nearby forest and as a stop along the regional cycle network by the tourism office of municipality of Hilvarenbeek.

Figure 7.20: The free-standing clocktower with behind it the former rectory. The belltower is surrounded by playground equipment and next to it there is also a small animal petting garden.

The village core is characterized by the few functions the village holds. Here, the two restaurants/cafés are found. The outside seating area of both these two locations are relatively extensive considering the limited number of inhabitants of the village and suggest a focus on tourism.

Next to these buildings the multi-functional accommodation is positioned. In combination with the primary school, this MFA also holds a playground for children. The building is now repurposed to house refugees from Ukraine. This local initiative suggests community participation.

Since 1956 there are also a football and korfball club. The sport fields are positioned just to the south of the village.

Since the village is so small, the local facilities are all within a walkable distance and usable by all who reside in the village. This offers the possibility for all inhabitants to feel connected with the village core.

One of the side streets next to the Saint Joseph church has recently been redeveloped to also accommodate a *jeu de boules*-court, initiated by the local residents. This suggest a strong local social cohesion between neighbors and is something that can be expanded on.

Figure 7.21: The statue dedicated to the reclamation workers who made these lands hospitable, positioned on the corner of the village square, along the main road and opposite of the church and the restaurant/café.

Figure 7.22: Spatial analysis of Haghorst on the theme of Community.

In conclusion, the village Haghorst is a relatively remote place which does not have any access to facilities other than a primary school, a multi-functional accommodation, and two restaurants/cafés. The access to public transport is very limited and by bike it takes over 30 minutes to reach the nearest city. The mobility and available facilities in the village form a weakness for the future and need to be (partially) improved on.

However, the village has a strong identity as a former reclamation settlement and is part of the water lock and pumping station which it is positioned next to. Along the southern bank of the Wilhelmina-canal there is a cycle path that is used intensively. The village is recognized for its yearly festivities that appeal to a larger audience. These can be used as an opportunity to further attract new visitors.

The local community appears to be tight and local initiatives make the living environment more pleasant, interesting, and useful. Social cohesion strengthens the community, and the small scale of the village offers a walkable environment with easy access to the village core. These are strengths which can be used to enhance the livability of the village.

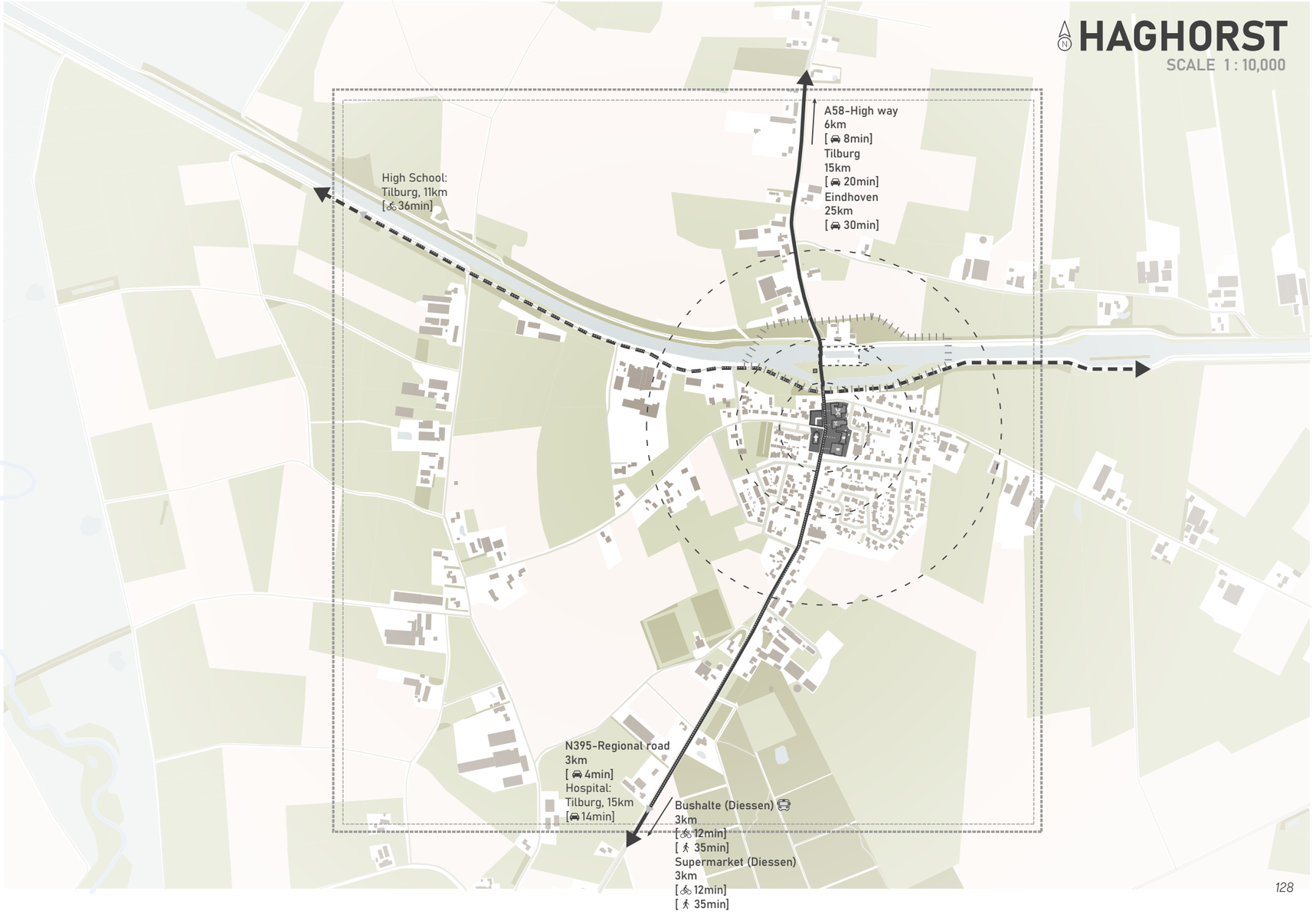


Figure 7.23: Spatial analysis of Haghorst with the four themes combined in a conclusive drawing.

Design

The heart of Haghorst is the place where all activities come together. The place where locals meet and where visitors come-by for a drink or food. The design proposal aims to stimulate the positive characteristics of the village core and tries to negate the negatives. The way the buildings are positioned, they are currently all aimed away from each other. The main road through the village separates the restaurants/cafés from the village square; the MFA is positioned next to the primary school, but they are orientated differently, and the church separates the playground and animal petting garden from the village square and the rest of the surrounding buildings.

The main goal of the design is to link all the locations together and create a holistic village heart, where each element contributes to the larger whole. The MFA, primary school, and petting garden are together the main driver in attracting local youth. The restaurants/cafés become a billboard inviting visitors who are cycling along the Wilhelmina-canal into the village heart. The village square is repurposed to be used more broadly and intensively by the locals and links to the currently present *jeu de boules*-court in the side street. The church building will act as the catalyst between all these elements, functioning as a pick-up point and a small local supermarket with the daily necessities available.

First off, let us take a closer look at the main street. The road is currently used by small trucks, tractors, cars, and bicycles. Crossing straight through the village heart and separating the elements west and east accordingly. The goal is to slow the traffic down and let the motorized transport become a guest instead of the dominator of the road. The altered design of the road layout will offer a sort of lock, just like the water lock at the Wilhelmina-canal, where traffic is slowed down by guiding it through a series of obstacles. The road hierarchy is also reinvented: no longer is the main road set up to a dominance of motorized transport, where slow traffic is forced to keep to the sides, but in the new design, slow traffic – people walking or on a bicycle – have the right of way.

The hierarchy is diminished and the separation between car-road and pedestrians in the form of high curbs are removed, this connects to the toolbox element of non-hierarchical ‘village streets’ [*M6*]. The road is marked by crossing lines indicating possible different flows of traffic aside from the continuing route through. The car as guest and with traffic at lower speeds, the area around the playgrounds, animal petting garden, and the primary school also becomes a safer environment for children and adults alike.

Next, in addition to the non-hierarchal road with slower traffic, the separated playground on both sides is joined together. Currently, the playground is split between the MFA and on the opposite side of the road surrounding the bell tower next to the church. In the design, the playground is combined at the MFA location and along the primary school, with on the opposite side of the road a more extensive animal petting garden. Which will be expanded to the entire area on the south of the church, spreading towards the bell tower. Creating an open and accessible location to the public [*C3*].

An important addition to the village is the integration of the village in the regional public transport network. The need for equal chances between villages starts off with an equal access to public transport facilities:

Figure 7.24: Schematic design proposal of Haghorst in 3D based on the toolbox themes.

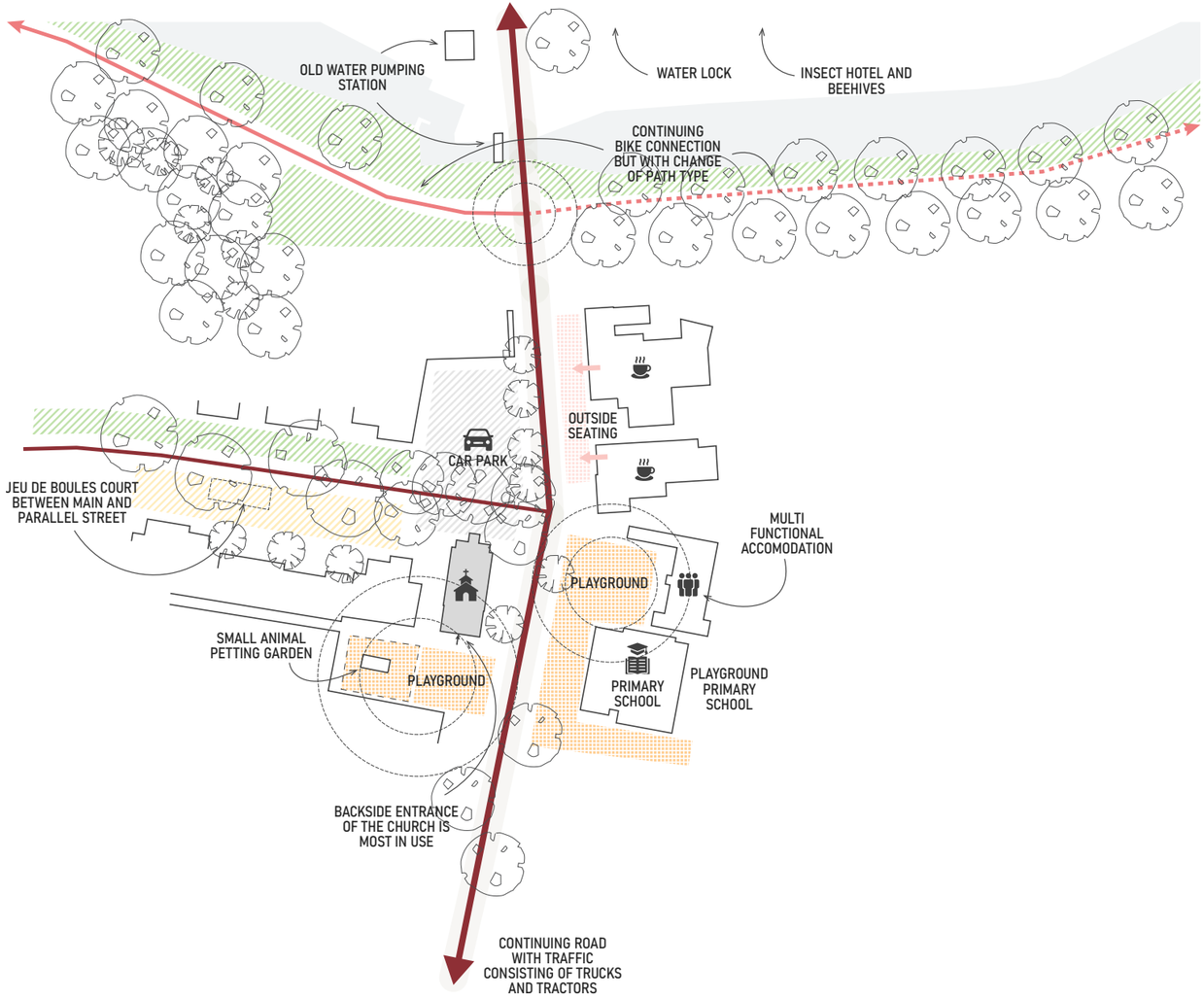


Figure 7.25: Schematic analysis of the center of Haghorst.

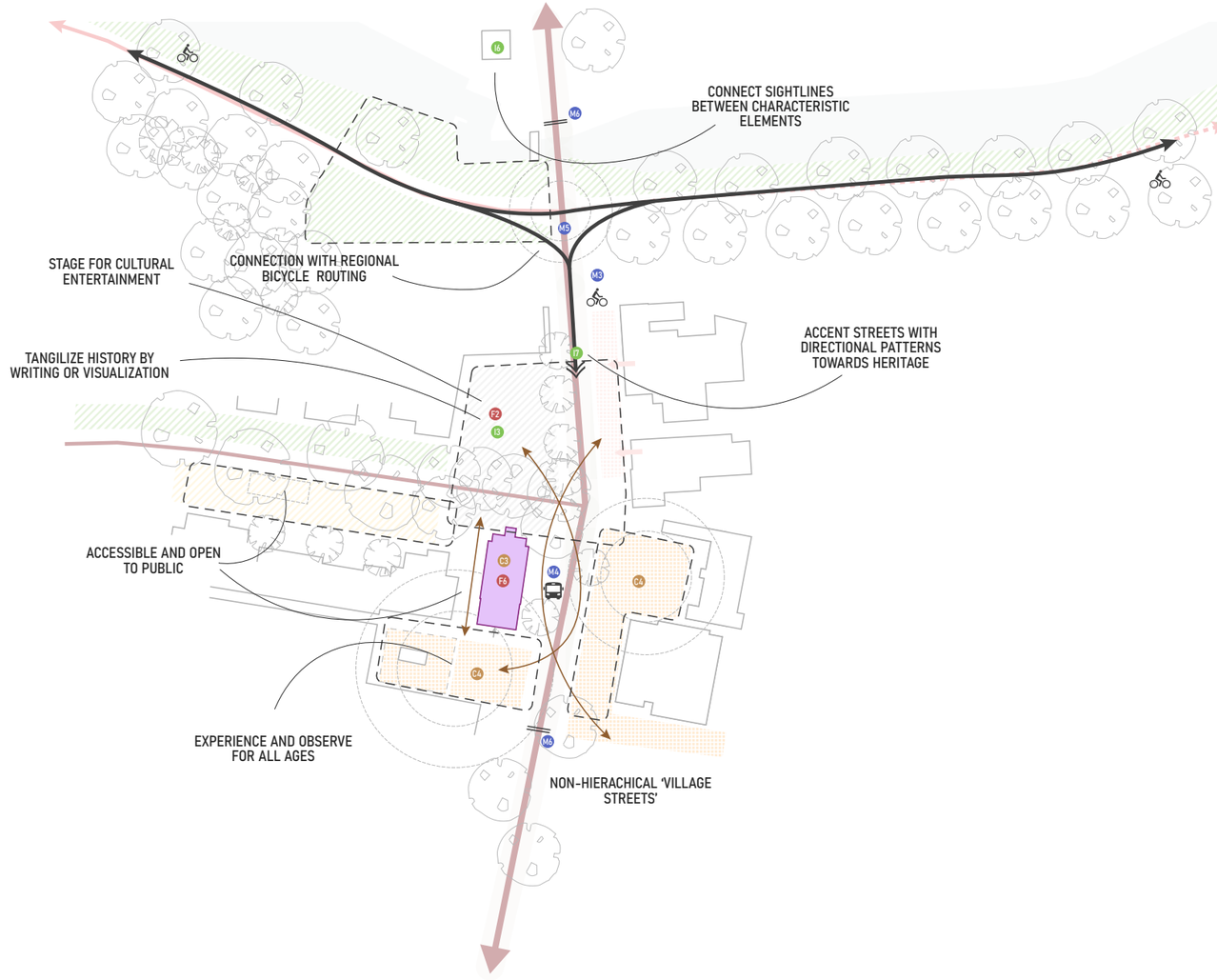


Figure 7.26: Schematic design proposal of Haghorst based on the toolbox themes.

each village deserves at least a bus stop, and the design incorporates this bus stop positioned centrally in the village, next to the primary school and the church building [*M4*].

The connection with the regional bicycle network, which runs through the town and along the Wilhelmina-canal needs to be strengthened [*M5*]. While the continuous route has little obstacles in its way, it also does not attract visitors to come and stay in the village Haghorst when they pass it. The goal is to first attract the eye of the visitors and then guide them inwards into the village, with the two restaurants/cafés. At the intersection to the north of the village, a pop-up location with seating and with a water tap is to be constructed. This location can be exploited by a joint effort of the two restaurants/cafés, or just by one of the two. The goal is to make passing cyclists stop for a moment, when stopped they are guided inwards to the village center [*I6 & I7*]. Creating additional bicycle parking as well as e-bike charging stations more inward into the village can accomplish this [*M3*].

Next up, the village square will be redefined. Currently, the village square is dedicated to a barely used car parking. The goal is to both bring visitors and local inhabitants together more easily and more often. The design for the new square lowers the square by two steps. The square can be used for theater like activities, where the steps form a ring of seating, with a small platform which can be used as a stage [*F2 & I3*]. The square can also be exploited for additional outside seating for the two restaurants/cafés when the village manages to attract new tourists during the summer months. The square can also be flooded during cold periods in the winter months, transforming it to a local ice-skating ring to enjoy for locals and visitors alike.

Figure 7.27: Design of the center of Haghorst (scale 1:800).

Finally, the church building itself is repurposed to serve the local community again. The church is relatively small, but it is to be used by a mix of functions. The building can function as a pick-up point, for ordered packages which can be delivered to the church instead of to your house when you are not at home; the church can be used as a drop-off point for ordered groceries, stalling them in a small cooling cell, so that they stay fresh [*F6*]. The church also houses a small grocery store, with the basic necessities. The inventory is along what one can find in a to-go supermarket or convenience store. There is also an option to work together on a deal with a local bakery in a nearby village, where on weekend days fresh bread is delivered and sold – attracting the locals to go on a morning stroll to the village center and subconsciously meet one another [*C1*]. Also, the eggs laid by the chickens of the animal petting garden are stalled in this shop and are free to be taken by anyone [*C4*].

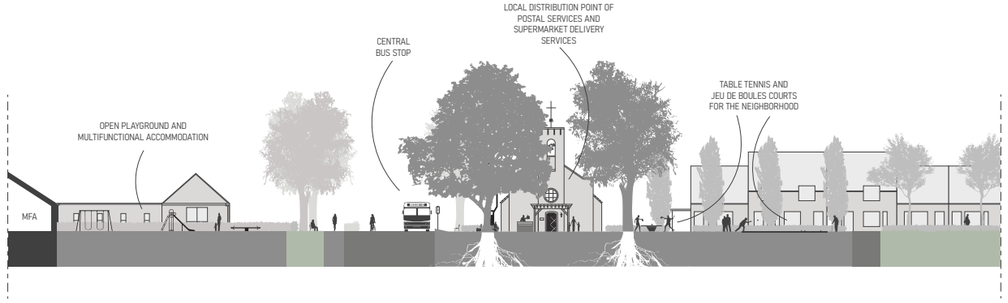


Figure 7.28: Section AA' (scale 1: 750).

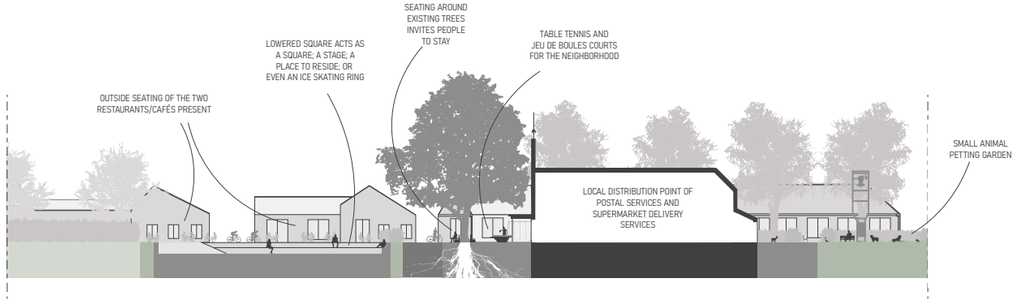


Figure 7.29: Section BB' (scale 1: 750).

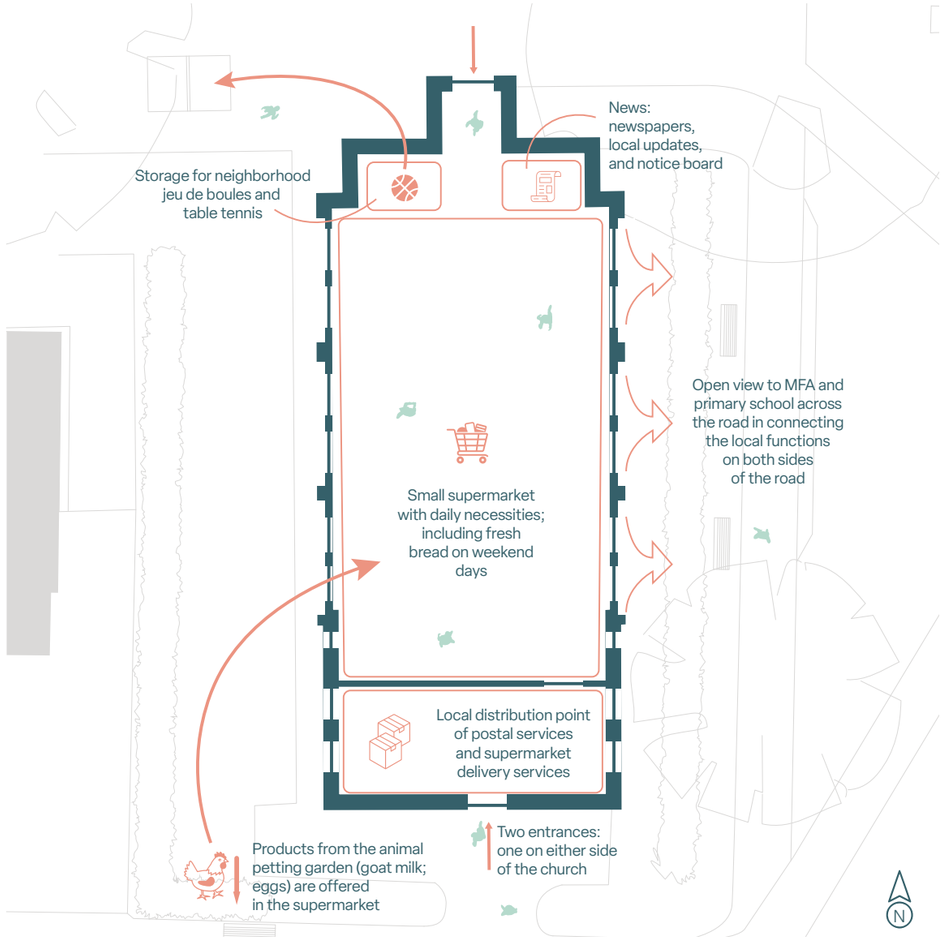
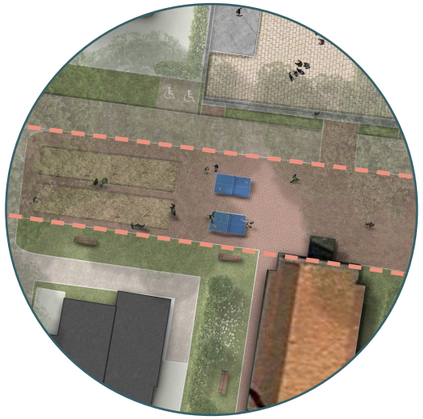
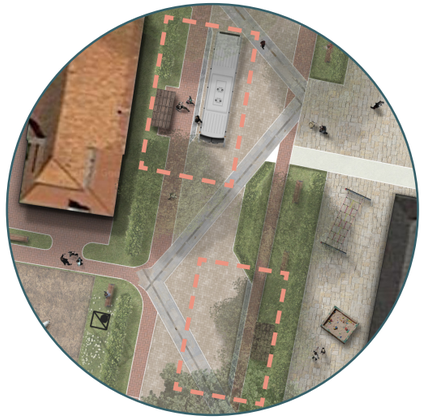


Figure 7.30: Function and connections of the Saint-Joseph church in Haghorst (scale 1:250).

Local get-together
Right next to the church there are two *jeu de boules*-courts and two table tennis tables. These are in addition to the already existing *jeu de boules*-court in the neighborhood and offer a place for people to get together and enjoy a leisurely afternoon. Equipment can be borrowed in the church building next to it. The courts are aside from the village square, so they can be used separate from each other. The brick pattern of the pavement stretches in front of the church towards the lowered square, acting as a bridge crossing this small side street.

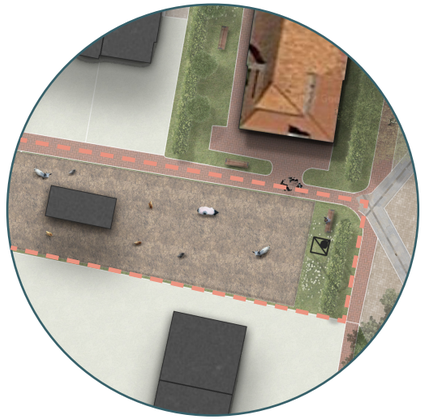


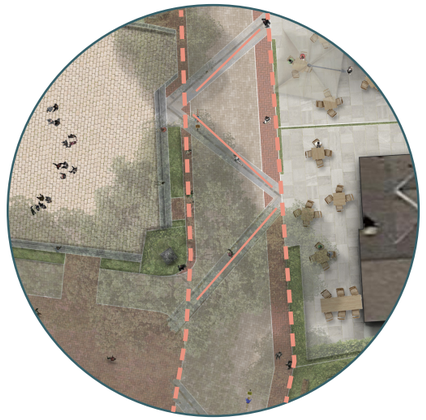
Lowered village square
The village square is lowered by 1.2m. The edges of the square adjacent to the church and the two restaurants are transformed into a double step which can be used for seating. The village square can be used for cultural activities, with a small permanent podium. The square also offers limited parking space when there are no activities going on. During the winter months, the square can be flooded and act as an ice-skating ring – something the Wilhelmina-canal is not suitable for, as it is a main route for boat traffic and is kept ice free. The excess of ground material which becomes available in lowering of the square can be used for restrengthening the banking of the water lock, which is due to undergo repairs.



Bus stop
The bus stop is positioned centrally in the new design of Haghorst's core. Right next to the MFA, the former church, the primary school, and the animal petting garden. The off-set banking of the sides of the street creates a chicane where cars can't overtake the bus when is stopped. This is to prevent unnecessary dangerous situations, limits the speed cars can take through here, and increases road safety.

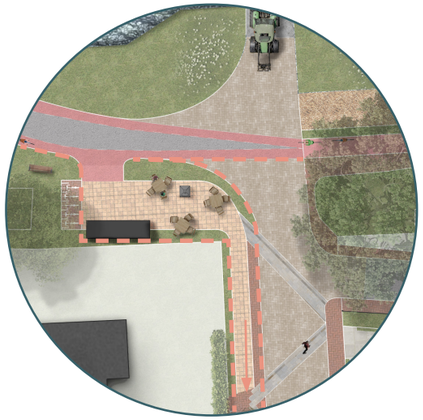
Animal petting garden
Just to the south of the former church building there already was a small animal petting garden. This is now extended towards the road and the petting garden is run in cooperation with the primary school on the opposite side of the road, stimulating interaction between the children and the animals and offering educational opportunities. The eggs laid by the chickens are offered in the convenience store in the former church building.





Crossing the road
The main street through the village heart is no longer dominated by motorized vehicles, but offers equal ground to pedestrians and vehicles alike. There is a separation in brick pavement style and color between the sidewalk and the main road. There is also a crossing pattern in the pavement in slate, which connects the restaurants with the main square and the former church building, as well as the MFA and the primary school with the petting garden and the church. A playful enhancement guiding visitors through the village.

Inviting cyclists
At the north side of the village, near the water lock and pumping station, the regional cycle network passes through. Here, the corner is redecorated as a water-stop, with a free water tap and a small kiosk run by the restaurants, offering refreshments during the summer period. The facility is limited and invites visitors to further wander into the village, where there is also a larger bike parking area and e-bike charging stations.



Process & Management

The redevelopment of the village core does not happen overnight and requires an extensive planning and collaboration between the different actors. While this can be a subject of a thesis on its own, a limited vision on how this can be achieved will be put forward here.

The approach to these kind of redevelopment projects is to start small and let the smaller projects form a solid foundation and justification for the larger developments. For the village Haghorst this starts off with the repurposing of the former church building to the local hub described previously.

Also, the existing local initiatives such as the small animal petting garden and the *jeu de boules*-courts can be expanded upon, raising the social cohesion and stimulating enthusiasm for the place. In this first step, a resting place and water tap for passing cyclists can also be realized.

The second step is the redevelopment of the streetscape of the village. Removing the hierarchy ruled by car traffic and creating a more walkable zone as well as connecting all the different functions of the village via visual lines in the pavement creates a holistic pedestrian friendly and coherent location. This is where the village core starts to come together as a whole. With the creation of additional bike parking space and the by now already existing water tap and resting place for cyclists, a small stall can be created where people can get drinks or ice cream. With the aim of inviting visitors further into the town, to the two restaurants/ cafés present.

The final phase consists of the most expansive development alteration: the transitioning and lowering

Figure 7.31: Phasing of the Haghorst core development in three phases.

of the village square. This final step should be taken outside of the tourism seasons and will conclude the core's development projects. With the lowered square available for local and cultural entertainment possibilities, the core of Haghorst becomes a place to pass, reside, and undertake in a wide variety of activities.

This all requires not only willing investors and developers, but also a close collaboration between the actors present in the village. Because the church has already been sold to a developing party, the former church board will not be an influencing actor in this process. However, it is always wise to include them in conversations on the future of the building, for they know the heritage of the place – both tangible and intangible – best.

Also, the different design implications in the area can lead to collaborated undertakings by local actors. For instance, the proposed small grocery store in the church building can offer the products delivered by the small animal petting garden for free – such as eggs from the chickens and perhaps goatmilk. The petting garden itself can be maintained in cooperation with the primary school on the opposite side of the road. Where animal care can be taken into the children's educational programs.

Finally, there are opportunities for the two restaurants/ cafés in the village. Together, they can exploit the drinks stand inviting cyclists into the town and towards their terraces. Additionally, the lowered village square on the opposite side of the road offers both of them the opportunity to create combined events attracting the local inhabitants of Haghorst and outside visitors alike.

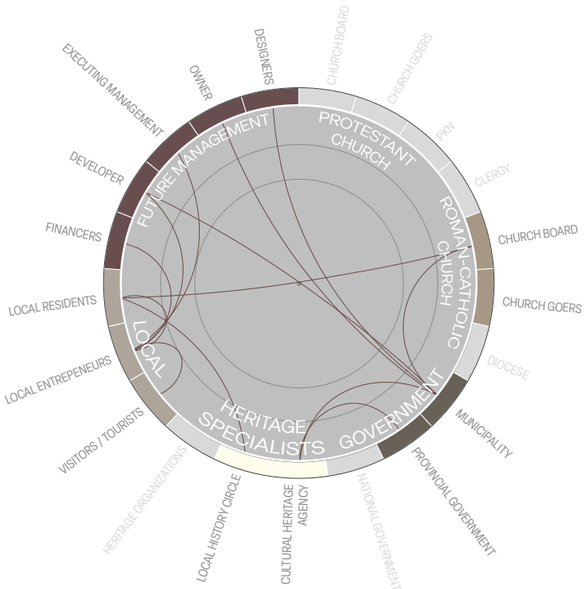


Figure 7.32: Stakeholders of importance in the Haghorst core redevelopment project.

Reflection

The village Haghorst is a small village. With just over eight-hundred inhabitants, Haghorst is the smallest core in the municipality of Hilvarenbeek. This leads to limited financial possibilities in the redevelopment of this core. The focus of the redevelopment therefore is more based on infrastructural adaptions and redesigning the public space rather than large scale overhaul development projects. However, the financial feasibility of this redevelopment project is still relatively slim. It can be assumed that, were this design to be implemented, higher investment partitions of the design, for instance the lowered main square, would be one of the first implications to be left out of the final composition of the location. It is also up to the municipality to invest in such public development, while their focus might rather be on larger villages within the area.

The limited size of the village, on the other hand, leads to a more connected social environment for the inhabitants, who are more closely associated with the local village core. It is Thissen & Loopmans (2013) who state on this matter that the organizational power of the local community is decisive for the incentive of increased livability and the quality of facilities on a local scale. The role of governmental and municipal influence is more limited to the stimulation of inhabitants' initiatives rather than structuring the formal boundaries of the public realm. (De Boer et al., 2011)

This is true for all three of the project locations and their developments. The governmental/municipal involvement is aimed at providing a basis to start from. Supporting and stimulating the start of local initiatives forming and linking involved stakeholders from a moderating position. It is up to the community to carry the future of the church and the use of the public space; the position of the municipality is only in guiding the effort. The local community can either make or break the projects, therefore it is wise to work with a set leader who will manage the different views and aims to remain true to the original concept of the plans. These positions are best executed from a newly founded local foundation which is embraced by the community, who are placed in the board and steer the expectations of the project and create the perspective for the future. Further investigation on the specific structure and realization of such a foundation is outside the scope of this thesis and could prove an interesting future study.

The goal of the development of Haghorst is to connect the distinct functions – the restaurants, the MFA, the school, the church, the square, the petting garden – present in the village. They are now positioned linear, without any interaction between them, and the newly created links create a more circular functional environment. The church remains somewhat of a barrier between the animal petting garden and the main square, and the orientation of the church is directed perpendicular from the MFA and primary school on the opposite side of the road. For a better connection of the church to the surroundings, it might prove necessary to open the south side of the church and implement a glass façade with openings. However, the church holds a municipal monumental status, and it is difficult to implement any architectural alterations to the building.

Overall, the redevelopment of the core of Haghorst and their formerly Roman-Catholic church brings the local functions and facilities together, offers newly added facilities for the community, adds space for local initiatives, both small and large scale, and invites visitors towards the center of the village.

▲ *Figure 7.33: Drawing of the Haghorst design proposal seen from the main square to the front of the church.*

▲ *Figure 7.34: Drawing of the Haghorst design proposal seen from backside of the church.*

7.3 PROJECT LOCATION II: SCHARENDIJKE, ZEELAND

Outline

The second project location is the village Scharendijke in the province Zeeland. Scharendijke came into existence in the fifteenth century. The village was built along and perpendicular to a '*Schaardijk*', a dike which is placed directly to the waterway, without any adjacent floodplains separating the embankment and the waterway.

The village did not grow much until the early twentieth century. Before that time, the village was not much more than a series of farmhouses and dike worker homes. But the construction of a small harbor – the *Kloosternol* – changed this. The harbor was constructed to transport the harvest of the madder plants, which were farmed locally. The plants roots yield a red dye, that was commonly used throughout the centuries for dyeing cloth.

In the later part of the twentieth century the village came to rely on tourism. The harbor was expanded with a marina in 1977 and with the completion of the nearby Brouwersdam in 1972, Scharendijke became a center for watersports such as surfing, sailing, and diving. Scharendijke also held a dolphinarium from 1973 through 1980. Each summer some 150,000 spectators visited the dolphin shows.

Since the 1960s Scharendijke has been marked as a growth core within the local municipality and it became the village in the local vicinity to expand and grow, with multiple hamlets in the surrounding area. In the 1970s the first expansion in the village came through; in the 1980s the second. In 2021, Scharendijke had 1,065 inhabitants. This number is slowly declining. (Allecijfers, 2022)

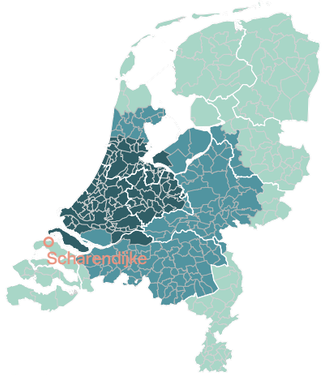


Figure 7.35: Scharendijke on national scale.

Figure 7.36: Scharendijke on regional scale.

Figure 7.37: Scharendijke in 1950. Before major expansions. Originally a typical dike settlement, perpendicular to the dike (Kadaster, 2015).

Figure 7.38: Map of Scharendijke with the village heart marked (Scale 1:25,000).

Figure 7.39: Aerial drawing of Scharendijke viewed from the west.

In 1871 Scharendijke saw the foundation of a Christian Reformed Congregation. A year later, the church came into use. The original church was deconstructed and rebuild at the same location in 1916. This is the building that is currently still standing. The church was constructed as a Neogothic aisle-church with a small front façade crowning with originally a bell. The bell has been removed when the church was left out of service.

For a long time, this church was the only church in service in Scharendijke. This changed in the aftermath of the disastrous flood in 1953. Large parts of Zeeland were flooded and also Scharendijke and the surroundings did not escape this calamity. Luckily, the strong sea dike, which Scharendijke was built along, did not break and apart from flooding the village was not heavily damaged. However, surrounding villages were less lucky and the Dutch Reformed church in the nearby village of Elkerzee was severely damaged. In 1955 a new Dutch Reformed church, the Bethlehem church, was opened centrally in the newly expanded part of Scharendijke.

In 1993, due to reducing numbers of churchgoers, the two congregations merged in a federated connection and held services alternatively in each church. The Bethlehem church was more centrally positioned in the newly expanded area of Scharendijke and was larger, so in time this church became the dominant place to hold services.

In 1995 plans were made to demolish the church, a school and nearby warehouse to make place for fifty new houses, but these plans were not realized. Still, six years later – in 2001 – the Reformed church was closed and left out of service in favor of the Bethlehem church. The building has been left vacant for 21 years now and is still vacant this day. The church is overgrown with plants and in dire need of restoration.

The small area behind the church has also never been reused and has also been overgrown. These days in this small bush a community project has manifested itself here in the form of a small garden with a treehouse and the possibility to share plants and seeds.

Figure 7.40: Locations of the photos marked on the map of Scharendijke.

Figure 7.41: Photo 1 - View on the Reformed church of Scharendijke. The former village square on the left has been dedicated to parking. The front facade of the building is barely visible due to plants overgrowing the building. The former bell has been removed from the small tower.

Figure 7.42: Photo 2 - view across the former village square which has been repaved and dedicated to parking. The parking lot also houses a mailbox and the only ATM in the village.

Figure 7.43: Photo 3 - the side of the church. The windows are boarded and plants have overgrown the building. It is time to restore the building before it is damaged beyond repair.

Figure 4.44: Photo 4 - the empty plot behind the church has also been overgrown, but has been in use as a community garden with a tree house and a place to share plants and seeds between the locals.

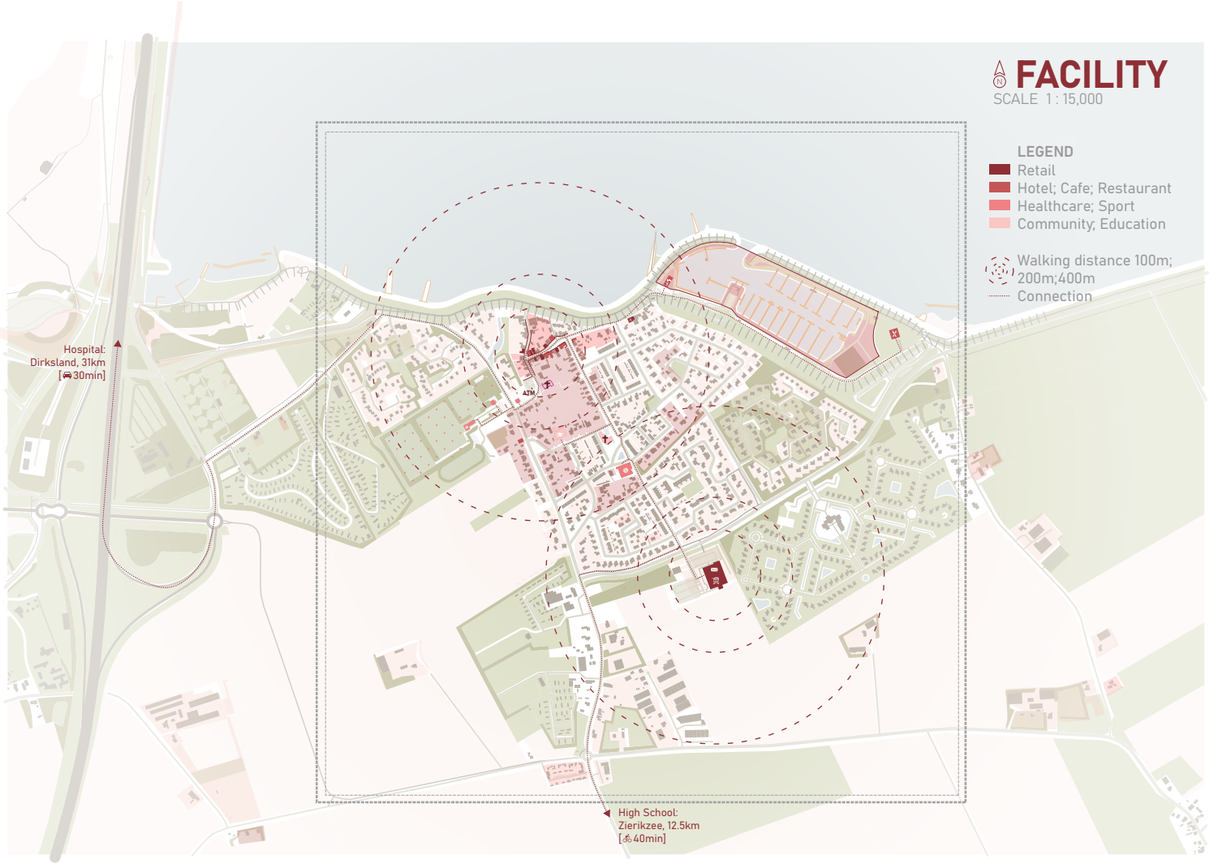


Figure 7.45: Spatial analysis of Scharendijke on the theme of Facility.

Analysis

The village Scharendijke offers more diverse functions and facilities compared to the previous project location Haghorst. Scharendijke has a larger number of inhabitants, and this is also visible in the available facilities. In the north, in the old part of the village near the dike, the original village core is positioned. Here there are several small local retail stores, which offer varying products. There is a bike repair store, a small clothing store, and a store focused on water sports, mainly diving. There are also a small number of restaurants and cafés and considering the larger outside seating area they have, it can be assumed that their main clientele focus are visitors and tourism.

There is also a supermarket present in Scharendijke. The supermarket is positioned to the south of the village, on the side of a continuous road. This suggests that the supermarket is aimed at both the inhabitants of Scharendijke, as well as the neighboring hamlets, and especially the many holiday parks in the surrounding area. This does mean however that the supermarket is less accessible to the inhabitants of Scharendijke itself, with the walking distance to the supermarket quickly surpassing a ten-minute walk.

Education wise, the village has a primary school present. The nearest high school is however positioned in Zierikzee, more than half an hour of cycling away. The bus line takes a route along all the other hamlets in the area and takes longer than one could by bike.

There are several sporting facilities in Scharendijke. First off, there are soccer fields as well as tennis courts and a padel court with associated sports clubs. In the winter months, there is also a field that can be flooded to form an ice-skating ring. In the center of the village there are also indoor sporting facilities.

Healthcare options are more limited in Scharendijke. There is one general practitioner, but the nearest hospital is on a different island, positioned in Dirksland over 30km away, which takes more than half an hour by car. Further healthcare facilities in Scharendijke are non-existent.

The local harbor facilitates most of the tourism attractions, with two restaurants, a hotel, and a Yacht Club. The harbor offers long term stationing of sailing vessels and boats as well as some of the most excellent diving spots in the Grevelingen water.

Scharendijke, just as many places in Zeeland, does not have close access to a highway connection. There is however the N57, a continuous provincial road connecting the islands of Zeeland. Scharendijke is positioned quite closely to this road and Rotterdam and the Randstad area are accessible within three quarters of an hour.

The village also has a connection to the public transport network with two bus stops. However, these bus stops are positioned slightly awkwardly, with limited connection to the interior of the village itself. The western bus stop is positioned close by the primary school, but just off any connection to the village core. The southern bus stop is positioned near a holiday park and has no connection to the village at all. The nearest train lines are on the island south of Schouwen-Duiveland, where Scharendijke is positioned, and the nearest train station is in Goes. This takes over an hour by bus, with multiple transfers. So any traveling by public transport to the rest of the Netherlands is difficult.

This leaves Scharendijke slightly isolated and car dependent. This is also visible in the large number of car parks surrounding the village. There is however a connection to the regional cycle network, which also passes along the Brouwersdam. A future for longer distance cycling by e-bike might be a solution against the car dependency of the area.

Figure 7.46: Just like in many villages, the former village square has been transformed to a car park due to the high car dependent nature of these places. There is an opportunity to transform the surroundings to a less car dominant streetscape.

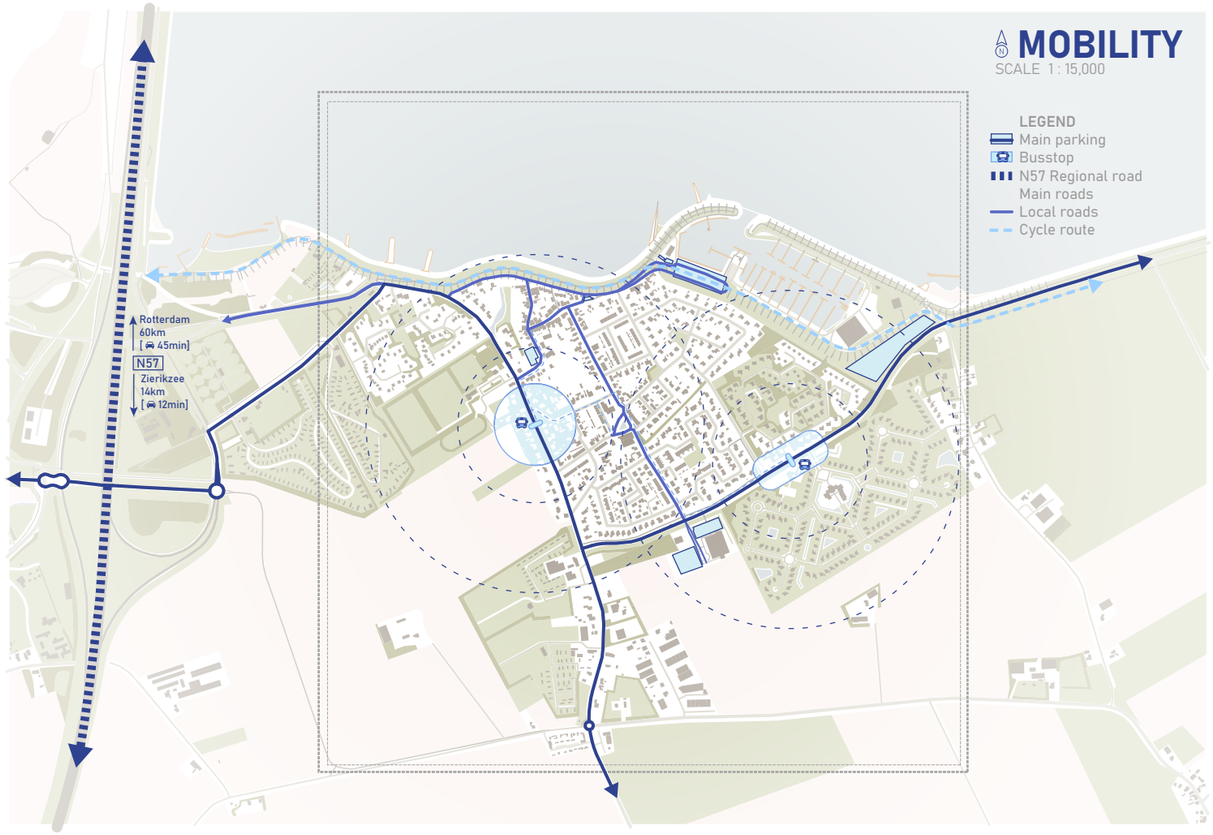


Figure 7.47: Spatial analysis of Scharendijke on the theme of Mobility.

Figure 7.48: Spatial analysis of Scharendijke on the theme of Identity.

Scharendijke relies mostly on tourism. The village is positioned near the Brouwersdam and the coastline of Zeeland, where thousands of people visit the long beaches yearly. The village also has a marina and offers water sports facilities.

However, Scharendijke itself has no visible connection to the water, because there is a large dike separating the village and the waterfront. When visiting the downtown area, in the north, this is also noticeable. There are currently plans to expand the main village streets onwards to the dike by large staircases, but even on top of the dike (which rises seven meters above the ground level) there is also a seven-meter drop towards the water, with a hard border and no beaches. Making any real connection inhospitable.

In spite of the lack of physical connection, the village is still known for water sports and beach tourism, with many holiday parks surrounding Scharendijke. The total surface area of these holiday parks surpasses the area of the village and in the summer months the number of tourists transcends the number of inhabitants.

Figure 7.49: A view from the dike towards the water. The seven meter high dike is the main protection, since there are no floodplains, and has withstanded all weather conditions thusfar, including the 1953 flood. In the distance, the roofs of the buildings of Scharendijke are all that is visible from atop this barrier.

Figure 7.50: The main axis connecting the cores of the village with the tower of the Bethlehem church visible.

Scharendijke roughly consists of two cores. The old downtown area and the newer heart of the expansion area. The downtown area is positioned next to the dike structure and consists of older buildings, mostly built in the later part of the nineteenth century and the earlier part of the twentieth century. This core also houses most of the retail functions and a couple of restaurants and cafés.

The second core is positioned more centrally in the village and is made up of an open space and the Bethlehem church. In the later expansion of the village, from the 1960s onwards, this became the central place where the roads lead towards. The main north-south axis connects the two areas but is nothing more than a normal street with residential functions on either side. The supermarket, a hub to the south where the post office and a bookstore are also found, is separate from either of the cores and is positioned in line with the north-south axis through the village.

So, while the village has multiple semi-cores, there is no true heart to the village and these cores are not strongly connected. The focus is more on tourism than on the inhabitants themselves and this might form a threat to the social cohesion between the people living here. When visiting the location this also became apparent when interviewing inhabitants on the street. Questioning them where they would point the core of the village to be, they mostly pointed to the old core in the north. But when asked if they visited that core often, they would reply that they more often came past the central core and did not as often visit the northern core.

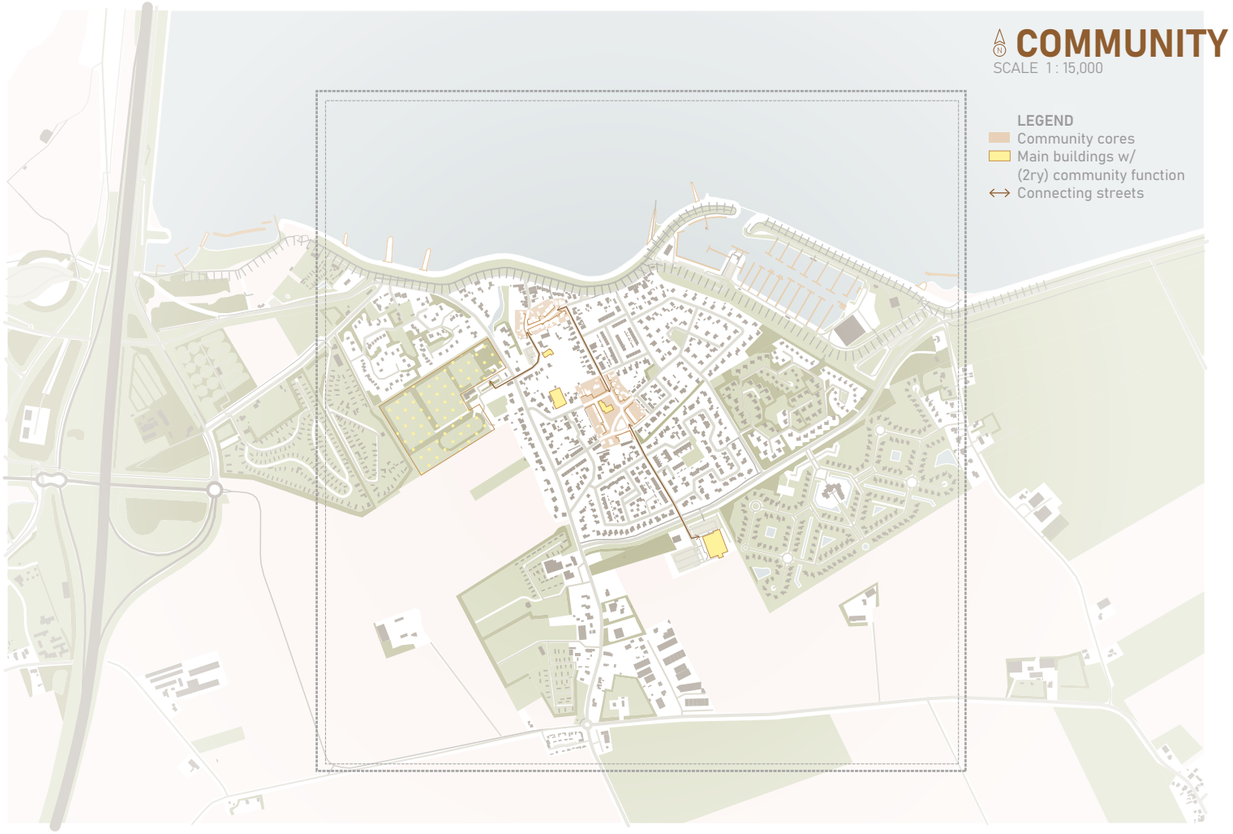


Figure 7.51: Spatial analysis of Scharendijke on the theme of Community.

In conclusion, while the village Scharendijke is positioned quite remotely, with no access to a nearby highway and limited public transport availability, the village does offer some unique possibilities.

Scharendijke heavily relies on tourism attraction, with multiple holiday parks surrounding the village, the nearby beaches at the Brouwersdam and the leisure marina with a focus on watersports. However, this also translates to a more limited offer of facilities for the local inhabitants due to the focus on tourism.

The core of the village is split in two zones, the old area with most of the available functions such as retail and restaurants, near the dike in the north, and the more central location with the Bethlehem church but without any other functions in the surrounding plinths. The connection between these two areas is poor.

A challenge for Scharendijke will be to stimulate a stronger social cohesion in creating space for the inhabitants which can be called ‘theirs’ and offer a place for local initiatives which stimulates inhabitants to get together and have tourism remain a subject to the inhabitants instead of an overarching and dominating factor.

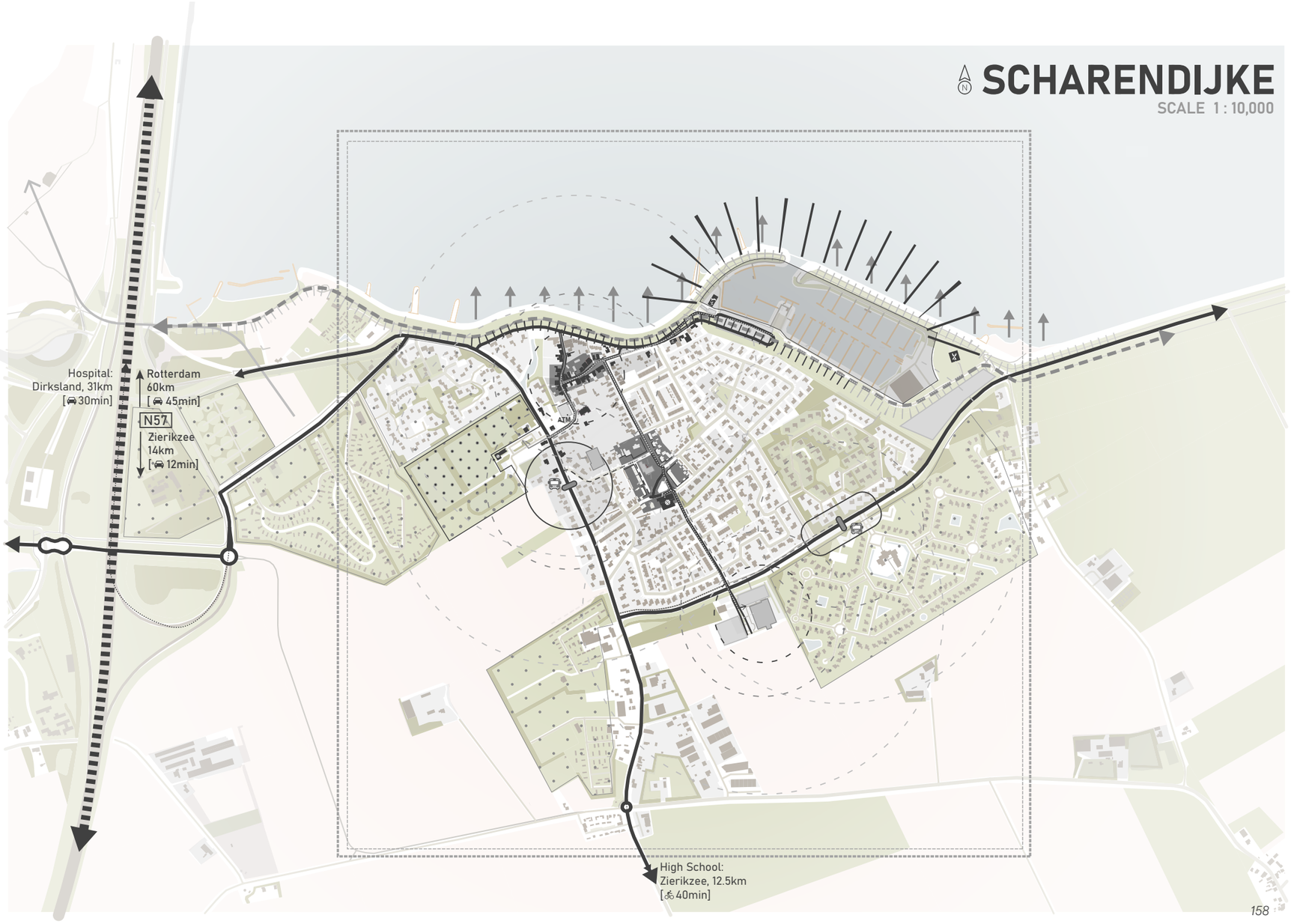


Figure 7.52: Spatial analysis of Scharendijke with the four themes combined in a conclusive drawing.

Design

The vacant Reformed Church which is the subject of this location's study is positioned off of the main axis between the two cores of the village Scharendijke. It is however positioned in an optimum location for expansion of the cores and connecting the existing axes. With the available vacant area surrounding the building, there is a huge opportunity to create a social core in the village.

The goal of the (re)development of this location is to better connect the residential core and the functional core and to create a place which is dedicated to providing a social space for the inhabitants of the village as well as attract and invite visitors to participate in the activities which are currently hidden from the view [*C3*].

The first element to be discussed is the existing unregulated community garden and the expansion and regulation of this place. Just south of the church there is a small garden with plants and seeds created by locals surrounding this vacant area filled with sprawl. The goal is to open this place to the good of the rest of the village and let it become the main axis along the activities in this core happen.

The design offers an alternative route from the social core towards the functional core and the large car park next to the sports fields. This is achieved by breaking through the existing urban structure at two places and create a connecting path to be used on foot or by bike [*M1*]. This path flows along and around the community garden and also connects the primary school's yard towards this new interior place filled with activities. Creating new sightlines on the side and the back of the church and opening the dead-end vacant lot towards a continuous route [*I1*]. The routing connects to the former village square, which is currently in use as a car park, but will be reinstated as a car free square once again. Central in the new routing is the former church building, at the crossroad between the north-south and the west-east axes through the project area.

As mentioned, the car park in front of the church building will be removed and the parking at the sports fields just west of the core will be dedicated to fulfilling the parking needs [*M2*]. The village square itself is reinstated as an open ground and is repaved with sandy colored bricks, in line with the former type of pavement before the square was transformed to an asphalted car park [*I5*]. The road leading from the main road towards the village core, passing the church and the square will be car free, aside from supply traffic and dedicated traffic [*M6*]. The bus stop present in the village is moved a bit further north and positioned on the main road next to the road towards the church, connecting to the walkable routing towards the cores and creating a new entrance to the village for visitors by public transport [*M4*]

The bushes separating the square and the small water body to the side are removed and the two are connected via a lowered single-step concrete slab spanning the full length of the interface between the water and the square. This lowered line can be used for seating. The attention is drawn to the water by adding a water element in the form of a small fountain with a small monument dedicated to the strength of the dike defenses and the importance of the dike workers who served the dike and lived in Scharendijke in the past.

The church building itself holds the key to the project development. The vacant building itself is given a new function, to serve as a small community center, forming

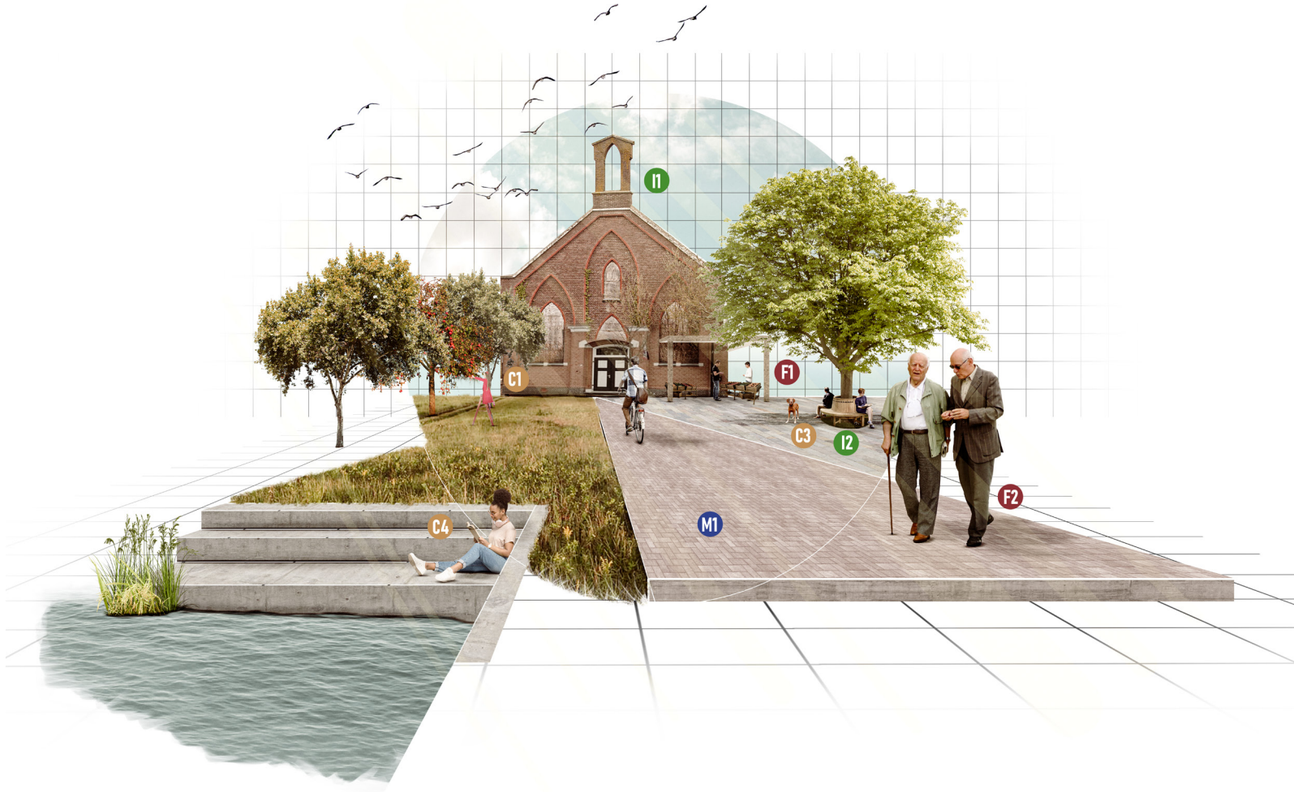


Figure 7.53: Schematic design proposal of Scharendijke in 3D based on the toolbox themes.

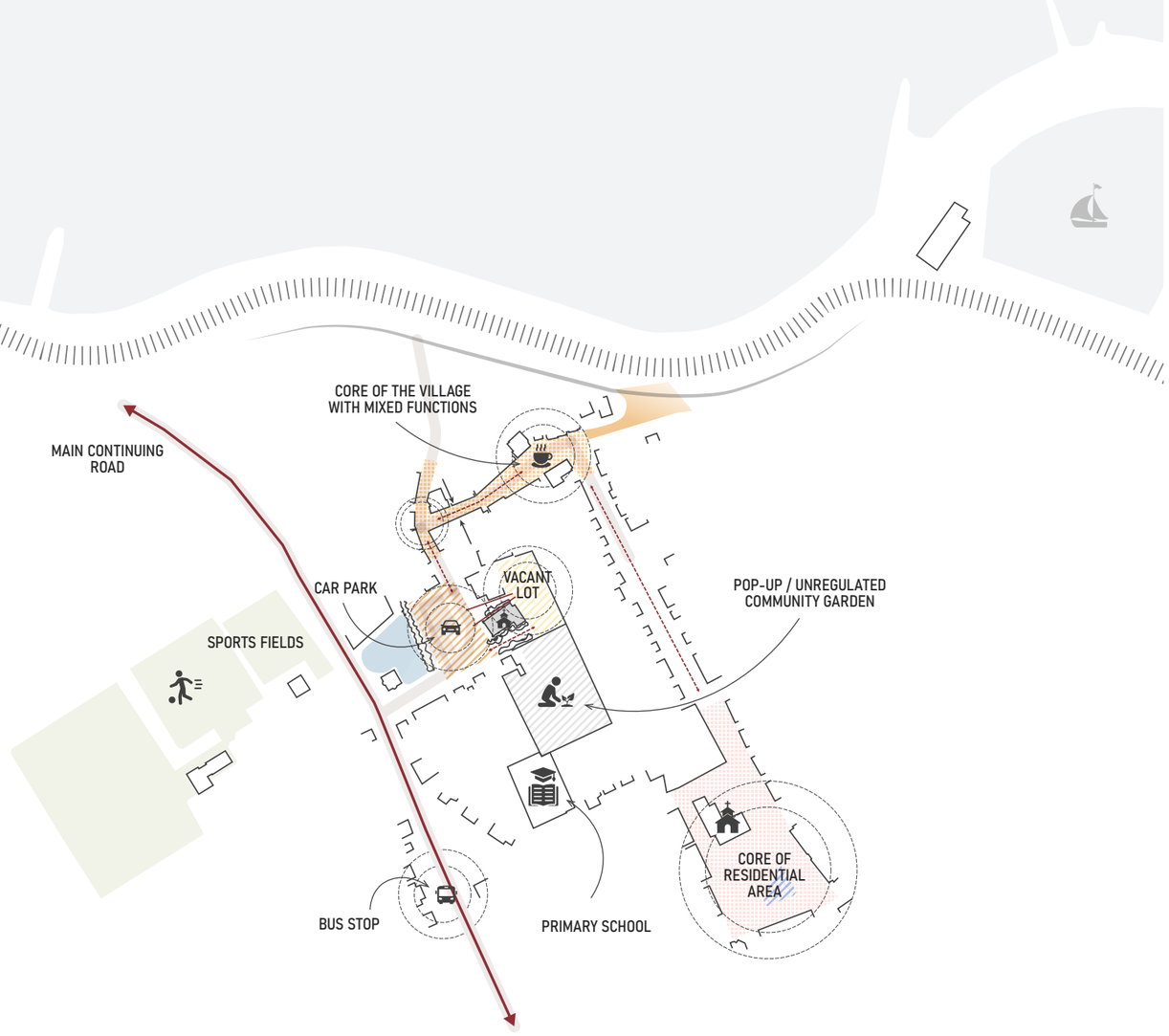


Figure 7.54: Schematic analysis of the center of Scharendijke.

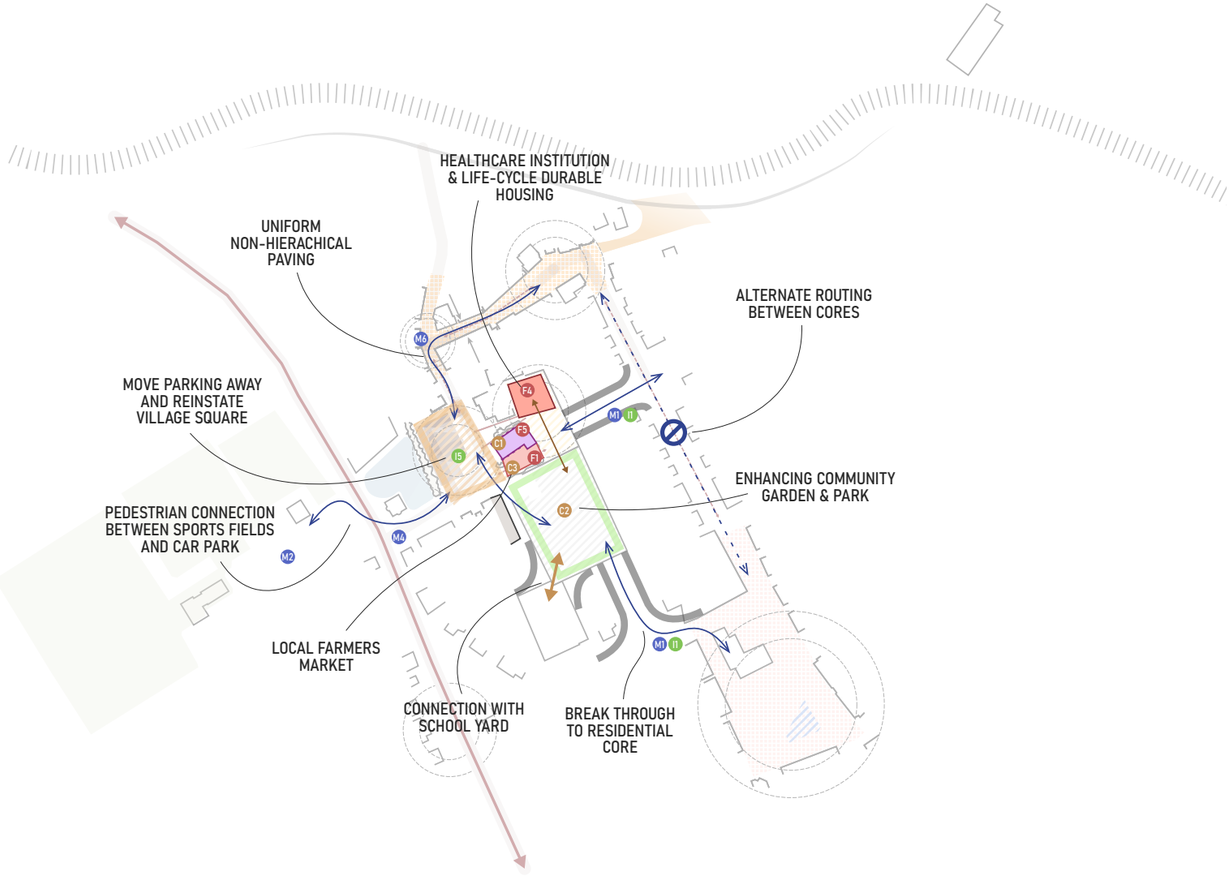


Figure 7.55: Schematic design proposal of Scharendijke based on the toolbox themes.

Figure 7.56: Design of the center of Scharendijke (scale 1:800).

a social hub for local inhabitants [*C1*]. The building will also offer a small library with literature on the history of Scharendijke, its inhabitants, and the history of both the churches in the village [*F5*]. There are a number of books on these subjects, ranging from atlases to interviews and descriptions of the local inhabitants. However, these are all part of a closed collection in the library in Zierikzee. There is also a connection with the bookstore next to the supermarket in the south, so that essential items can be purchased or used here. The building will offer reading tables aside from regular seating areas part of the community center.

To the outside of the church a roof with open sides constructed on columns is placed. This roofed area is used for a local farmers market on the weekend days [*F1*]. The concept is as follows: in the area there are a number of farms which sell their goods on the side of the road. Once a week they are invited to sell these food wares in this central location, which offers permanent stalls and a roof to function as a small marketplace. In addition, locals are encouraged to sell any products here as well, working with a reservation system for the available places. This local pop-up market concept invites local inhabitants, and visitors and tourists alike.

The vacant lot to the north-west of the church building is used to construct a new set of care homes which are dedicated to those who need a little extra help with their daily routines [*F4*]. In close cooperation with the nearby general practitioner, this place provides healthcare services to its inhabitants and also offers joined day activities. The inhabitants are responsible for running/helping the community center in the church. Also, they are part of coordinating and maintaining the community garden.

The community garden, consisting of a vegetable and herb garden, a seed and plants bank, and several fruit trees, central in the project area, will form the heart of the project, connecting all the different elements [*C2*]. First off, the routing travels around the community garden, creating an organic flow through the area. Also, the community garden is an extension to the already existing informal garden and offers the possibility to share plants and seeds between locals, just like before. But this time in a more organized fashion. There is also a toolshed, providing the necessary equipment to maintain the garden.

The garden is maintained and used by three parties: the local inhabitants of Scharendijke that would like to be involved and make use of the garden, the care home responsible for proper maintenance of the garden, and the primary school, making use of the garden as part of their educational program for students.

The yield of the garden, from both the vegetables, the herbs, and the fruits, are freely to be used by anybody. But the excess can be sold or given away at the local farmers market every weekend. This way, none of the yield is left unused and thrown away.

As a result, this (re)development of the church and the surrounding vacant area provides a new walkable routing through the area; it offers new possibilities for activities to be undertaken at the village square; the area provides a nice parklike environment where locals and visitors can rest and reside; the community garden strengthens the local cohesion between different target groups; the church offers a place to get together and acts as a community center; the extension to the side of the church with the local market creates a connection and interaction between the inhabitants of Scharendijke, visitors and tourists, and people living on nearby farms or in nearby hamlets.

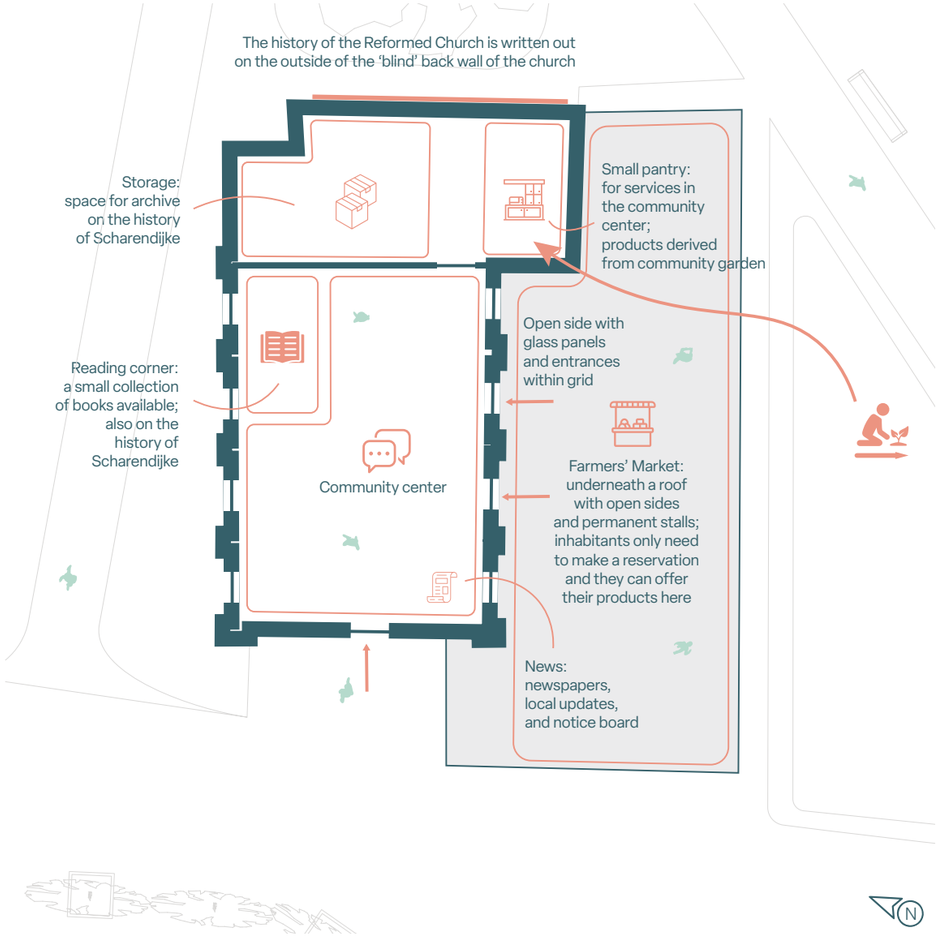


Figure 7.57: Function and connections of the Reformed church in Scharendijke (scale 1:250).

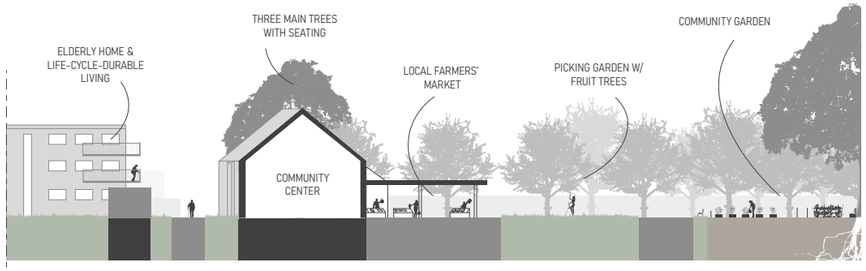


Figure 7.58: Section AA' (scale 1: 750).

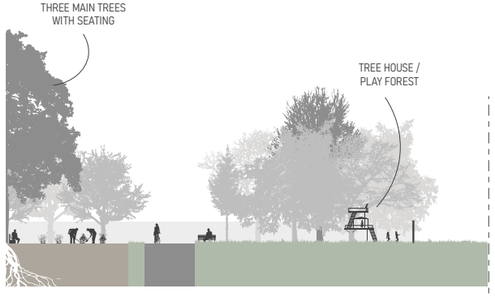
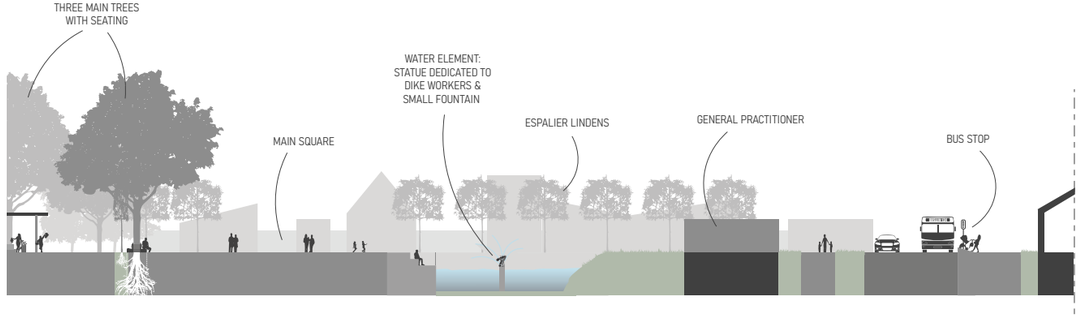
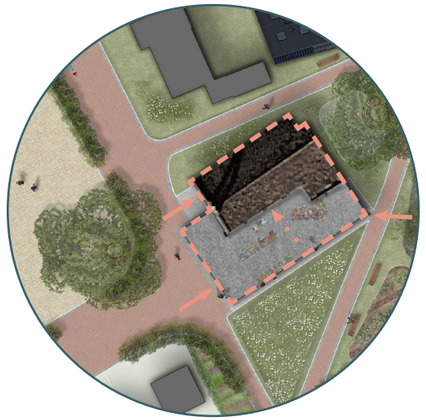


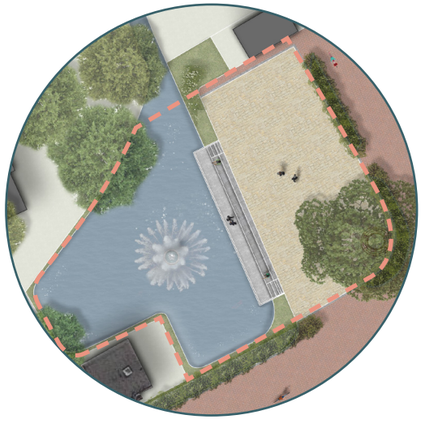
Figure 7.59: Section BB' (scale 1: 750).

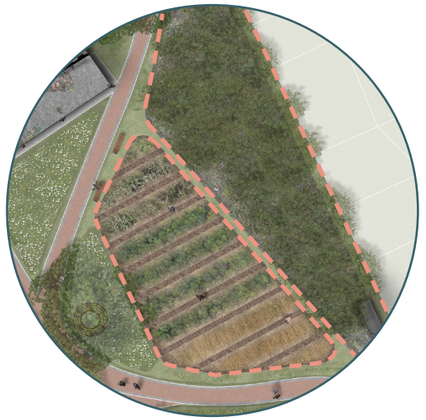




Community center & farmers market
The formerly vacant church building finds a new future in a diverse set of functions. The relatively small building will be used as a community center and has a small corner on the history of Scharendijke. Outside, the open but roofed permanent stalls are used for a weekly farmers market by locals. The building has no monumental status, which provides the possibility to open the side of the building with a glass façade as well as opening doors. The back (east side) of the church has a blind façade, upon which on the outside the history of the building and the disastrous days of the 1953 flood, which the building withstood, are portrayed in word and picture.

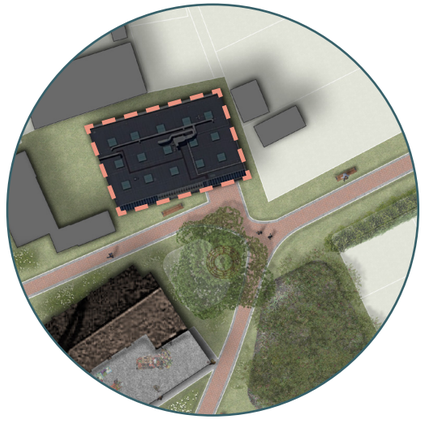
Church square and water monument
The square is restored to its former state and the parking lot is removed. The bushes towards the water body are removed and an extended and lowered terrace is placed where people can sit. In the water a small monument is placed in dedication to the dike and the dike workers which formerly inhabited Scharendijke, with additional information on panels. Creating a reference to history as well as a new place for activities to happen.

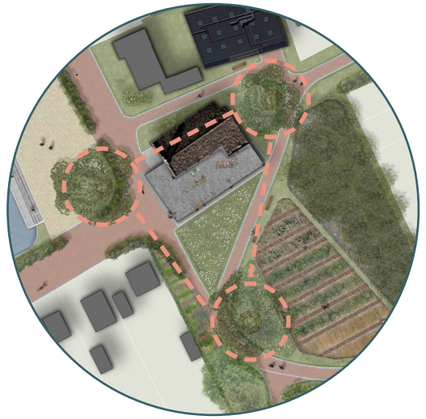




Community vegetable and herbs garden & fruit trees
The community garden forms the heart of the newly developed area. The already existing informal community garden is further expanded upon, with the idea of an exchanging box for seeds and small plants implemented in the new design. The garden is run and maintained by both the local inhabitants, as well as the inhabitants of the new care home and the students at the primary school.

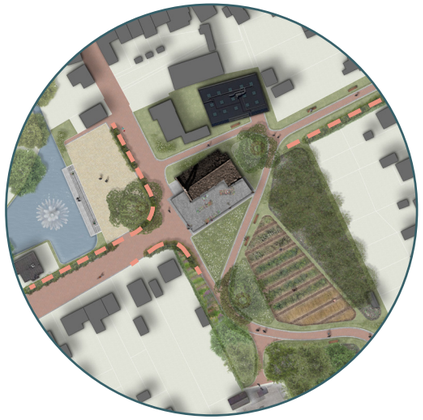
New care home
On the vacant plot to the north of the church building there will be a small apartment building constructed, with life-cycle durable apartments. There is a close relationship with the nearby general practitioner and the apartments are aimed at existing inhabitants in Scharendijke who are in need of a bit more care. This also provides a new flow in the housing market, with the possibility for starters to settle in the newly available houses in the village.

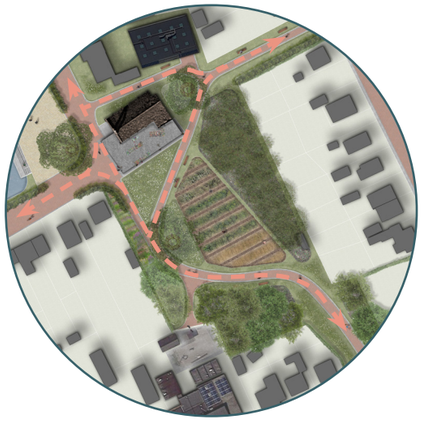




Triangle of lindens
The different elements surrounding the church building – the main square, the community garden, and the care home – are linked together by a triangular set of large lindens trees with circular seating surrounding the base of the stem. A sight often seen around church buildings in the past.

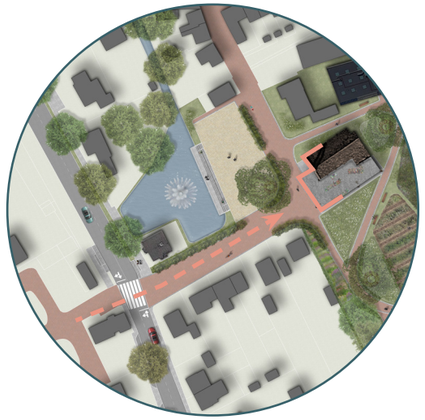
Direction by espalier lindens
In addition to the three large lindens trees, there are rows of espalier lindens guiding the visitors through the area and around the church. There was already an existing row of espalier lindens along the main square. Additional espalier lindens are placed along the corners of the path flowing around the community garden and to the back of the church, strengthening sightlines and providing a sense of direction through the area.





Flow of routing
The path through the area is curvy and flows organically from left to right. In these curves there is a reference to the curvy road which makes out the old core of the village and the path takes the visitor from the residential core, passing the church, to the functional core of the village – or the other way around. The aim is to create a walkable environment which does not bore the visitor, offers a solid and easy walkable route and at the same time provides an interesting place to reside and rest.

An entrance to Scharendijke
The central parking lot of the village is positioned opposite of the main road, near the sports fields. The bus stop is placed at the junction between the main road and the axis of the church. With espalier lindens guiding visitors inwards and the opened body of water with the village square adjacent, the church building and its surroundings form a new (side) entrance to the village. Inviting people in and serving as a central junction between all the different directions people move off to.



Process & Management

The development project for the project location Scharendijke is quite an extensive one. Not only is the church building itself transformed, but also the adjacent vacant and sprawled lots, as well as the parking lot at the village square. Additionally, the entire routing through the village is altered and large parts of the core are repaved. Also, the urban structure is altered and broken through. This requires rigorous planning and a long-term vision on the horizon.

In line with the previously mentioned technique at Haghorst, where the combination of the parts creates the whole, the first step in Scharendijke would also be to start small. Without breaking through the urban structure yet, the project can be started with cleaning out the vacant plots and the wild sprawl of plants and the development of the community garden. In addition to this, the church can start with the necessary removal of overgrown plants and the renovation of the building. and soon function as a community center.

The second phase is focused on the routing through the area and involves breaking through the existing urban structure. The pathing through the area is constructed and the whole becomes a coherent project. In this phase the construction of the apartment building is also undertaken, as well as the construction of the roof extension housing the farmers market.

The final phase focuses on the enhancement of the village square. This former parking lot has been in use as a construction site/storage location for the development of phases one and two. Now the project is finalized and the village square, together with the adjacent water body, are upgraded to their final state.

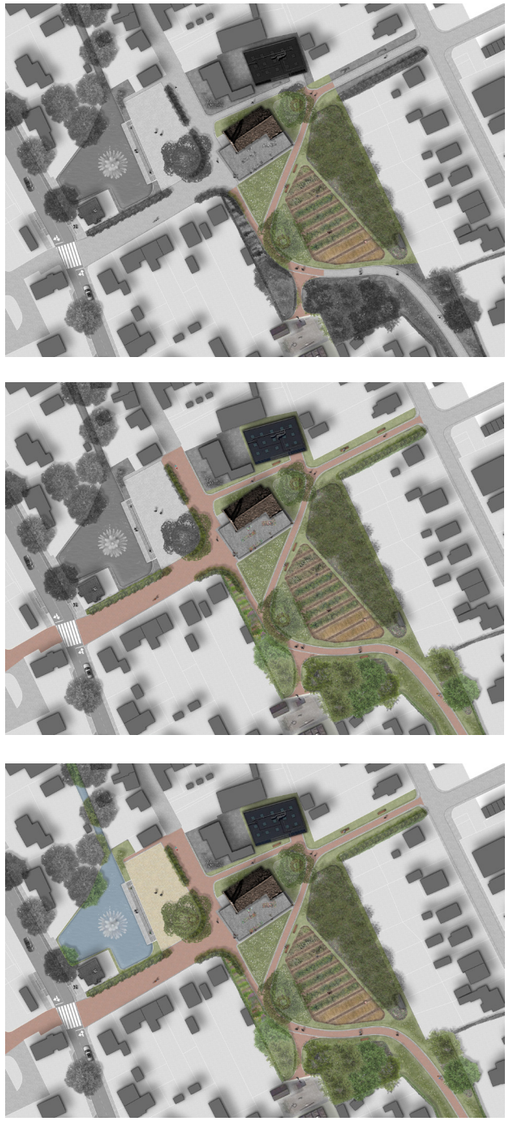


Figure 7.60: Phasing of the Scharendijke core development in three phases.

The future of a socially strengthened Scharendijk also relies on the cooperation between the different parties involved. There lies a strong support base in the linking of the elements of the project. The food yielded from the community garden can be sold at the farmers market or given away in the community center. The community garden is regulated by the local inhabitants in cooperation with the inhabitants from the new apartment building and can be used by the primary school for educational purposes. The community center can also form the basis for local initiatives for activities, for which the village square can be used.

While the church building has been left vacant for a long time, the church-going community can make use of the building again, albeit in a different way. In cooperation with the church congregation, the community center in the church building can be used as a place for religious literature study sessions and can be used for varying secondary activities which can not take place in the larger church in use.

Municipal involvement can support the financing of the project and in the later stages increase the possibilities of the farmers market and help stimulate the number of visitors to the area through media outlets and tourist information provision as well as subsidies for the survival of the market.

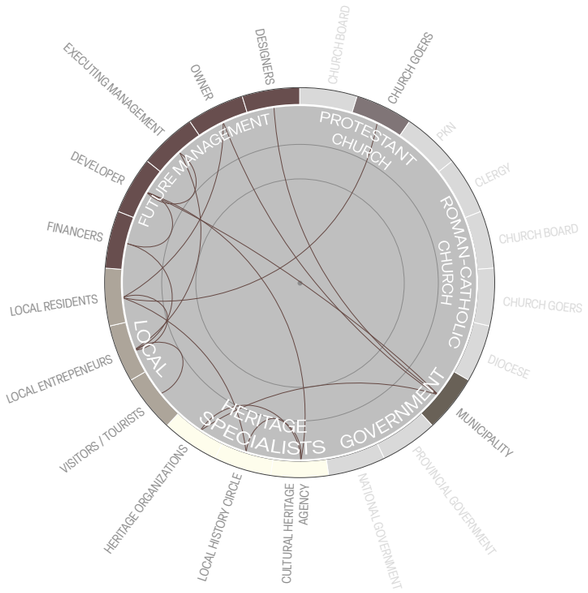


Figure 7.61: Stakeholders of importance in the Scharendijke core redevelopment project.

Reflection

The village Scharendijke has a lot of future potential. The municipality of Schouwen-Duiveland has in the past decades developed with multiple tourism attractions. And yearly more than five million touristic overnight stays took place in the municipality, with a combined worth of circa 200 million euros (IJben et al., 2021). However, the study by BRON also showed that, based on the use of a RETS-model, the perceived negative impact of tourism is just as high as the psychological empowerment of having all these visitors. The social empowerment of the local community has been negatively influenced by tourism: locals share their public space with visiting tourists and have difficulty in calling a place 'their own' anymore (IJben et al., 2021). There is a dissident need for private space to share among the local community. That is what this design for Scharendijke aims to provide.

The existence of the community garden behind the church formed the basis of the design for the location. The way locals shared this overgrown public space, which felt as a more private and intimate concealed location, shows the hidden underlying social structure of the neighborhood. Perhaps the design for the location has opened this formerly secluded space a little too much. This has been done in balancing between the different goals for the location – such as creating a stronger connection between the different cores of the village.

The project location Scharendijke was the first location visited and the first location a design was drafted for. The original design for Scharendijke consisted of all the core elements currently part of the plan, but the connection between the elements was lacking. This is perhaps one of the major results in the continuation of designing and revisiting former design elements. While the first steps in the design process were identifying the different elements, functions, additions, and subtractions in the area, the more important later steps were connecting all these separate implications. The creation of a strong physical connection between the elements is just as important as linking the functions of the elements together.

This relation between the tangible and intangible is visible throughout the graduation process. Creating connections between the past and the future, between the church and the village, and within the local community in strengthening the social cohesion and livability of the village. It also shows the need for the role of the urban designer, connecting the different toolbox elements in a unique fashion for each of the project locations.

Figure 7.63: Impression of the Scharendijke design seen from the south, from the community garden towards the church building. A place for the local community to get together and share in their own public space.
(next page)

Figure 7.62: Drawing of the Scharendijke design proposal seen to the front of the church.

7.4 PROJECT LOCATION II: LEUTH, GELDERLAND

Outline

The third and final project location is the village Leuth, positioned in the province Gelderland. The village is situated in the former flood plains of the river Waal, in an area known as the Duffelt – stretching from Nijmegen to Kleve (DE).

The first mentions of Leuth date from around 890. The village was situated on a sandbank in the marshes which often flooded with water form the Waal. However, the history of this place goes back much further. Leuth is positioned on the limes road – the former perimeter of the Roman empire, where Leuth is positioned between the garrison city Nijmegen and the border itself, just north-east of Leuth, where the Waal and the Rhine come together. It was along this road that on a sandbank in the marshes the village came into existence.

The village was part of the Kingdom of Prussia until 1815, when in the aftermath of the Napoleonic Wars at the Congress of Vienna the surrounding area as well as the village became part of the United Kingdom of the Netherlands. From then on it remained Dutch. Up and until the twentieth century the village grew little. Most of the inhabitants were either active in local agriculture or factory workers in the nearby dairy steam-factory. The remains of this factory, mostly only the large brick chimney, are still maintained and the factory holds a monumental status. In this region, all along the former floodplains of the Waal, there are number of these large brick chimneys visible on the horizon, all from former steam dairy-factories or brick-factories.

In the Second World War, Leuth was heavily damaged, and the village core mostly destroyed in the later months of 1944. During a five-month period, throughout Operation Market Garden and afterwards, the village

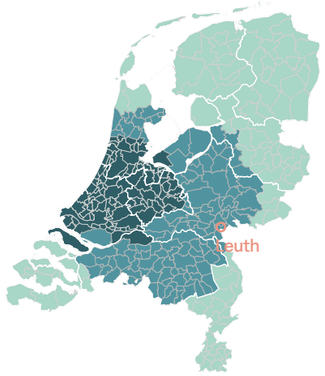
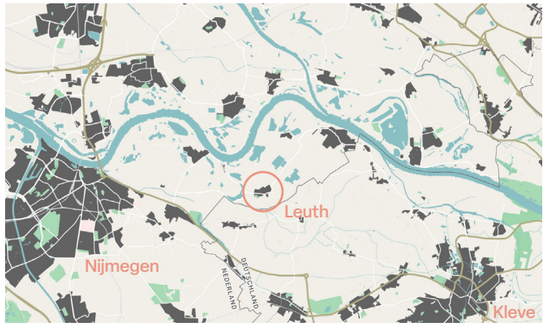


Figure 7.64: Leuth on national scale. ▲



▲ Figure 7.65: Leuth on regional scale.

▲ Figure 7.66: Leuth in 1970 (Kadaster, 2015).

Figure 7.67: Map of Leuth with the village heart circled (Scale 1:25,000). ▶

▼ Figure 7.68: Aerial drawing of Leuth viewed from the south.

was positioned right on the frontlines. Because of a nearby German command post, Leuth was under constant allied artillery fire.

After the war, the village was restored, and a new village core was developed. During the 1970s up till the 2000s the village grew slightly to a total of 1,575 inhabitants (Allecijfers, 2022). In the past five years the village has been in slight decline.

While the Roman-Catholic church in Leuth – the St. Remigius church – is from the twentieth century, the religious history goes back much further. In 1304 the village got their own chapel, ruled by the parish in Zyfflich (DE). Before that, the inhabitants of Leuth had to walk four kilometers each Sunday to visit their church in Zyfflich. In 1465 this chapel got exalted to become a church and the Leuth parish was formed.

This church was renovated in 1869, but eventually demolished in 1936, when a newer larger church was constructed in the front of the old one.

It only took eight years for the church to need large-scale renovations again: the church's tower and roof got heavily damaged during the Second World War. After renovations the St. Remigius church remained in service until 2017. The church was desecrated in 2020 and remains vacant up to today.

There are plans for the construction of apartments in the church, but due to the covid-crisis these plans got postponed. For now, the former rectory right next to the church is used as housing for refugees fleeing the war in Ukraine.

Figure 7.69: Locations of the photos marked on the map of Leuth.

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Figure 7.70: Photo 1 - The Remigius church as seen from the main road to the south. The church entrance is positioned on this side, while the orientation of the building itself is west-east. The rectory is positioned to the south-east end of the church (just to the right of this picture).

Figure 7.71: Photo 2 - The Remigius church as seen from the north-west side. To the left there are several shops. The church itself is almost completely hidden from the view as it disappears behind a series of plane trees which have outgrown the size of the church.

Figure 7.72: Photo 3 - The front of the church with the adjecent cemetery on the north-side of the building. While the cemetery holds some really old graves, it is still in use, with a few newer graves from the past decade.

Figure 7.73: Photo 4 - an image of the Remigius church and the village core from 1944/45. there is not much left of the buildings after allied bombing and the entire village was flooded due to German occupants destroying the nearby dikes. The result is a desolate and abandonded Leuth, where it will take years to restore the village (Laurier Military History Archive, 2018).

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Figure 7.74: Spatial analysis of Leuth on the theme of Facility.

Analysis

Let us again go through the different aspects of the village Leuth in spatial analysis along the four themes Facility, Mobility, Identity, and Community. First off, Facility. Leuth has a small village core with a supermarket which also offers postal services, and a barbershop. There are some restaurants in Leuth, spread along the main road through the village.

To the north-east of the village there is a small business park with a tenfold businesses ranging from car dealerships to interior decoration stores. Further expansion of the area is difficult due to recent archaeological findings and the required ground research for further development of the area, which is accompanied by high costs.

Central in the village, just north of the village core, there is a primary school with an indoor sporting facility. There is also a multi-functional accommodation as part of the building cluster surrounding the primary school, however this small building has limited capacity and is not used often. The nearest secondary school is positioned in the nearby town Ubbergen, around eight kilometers away. It takes around 25 minutes by bike or fifteen minutes by car/bus. There is a direct public transport connection.

To the south-west there are several soccer fields with the local soccer association. There is also a tennis association with fields to the south-east.

There is a relatively high mixed-use index for the village itself (residential blocks colored with a red overlay). This would suggest a larger number of home-settled companies. This reflects in the data of the village, which mentions a larger number of self-employed entrepreneurs in the fields of business and financial services and real estate. The buildings outside of the village perimeter color predominantly blue, with agricultural activities as their predominant occupation.

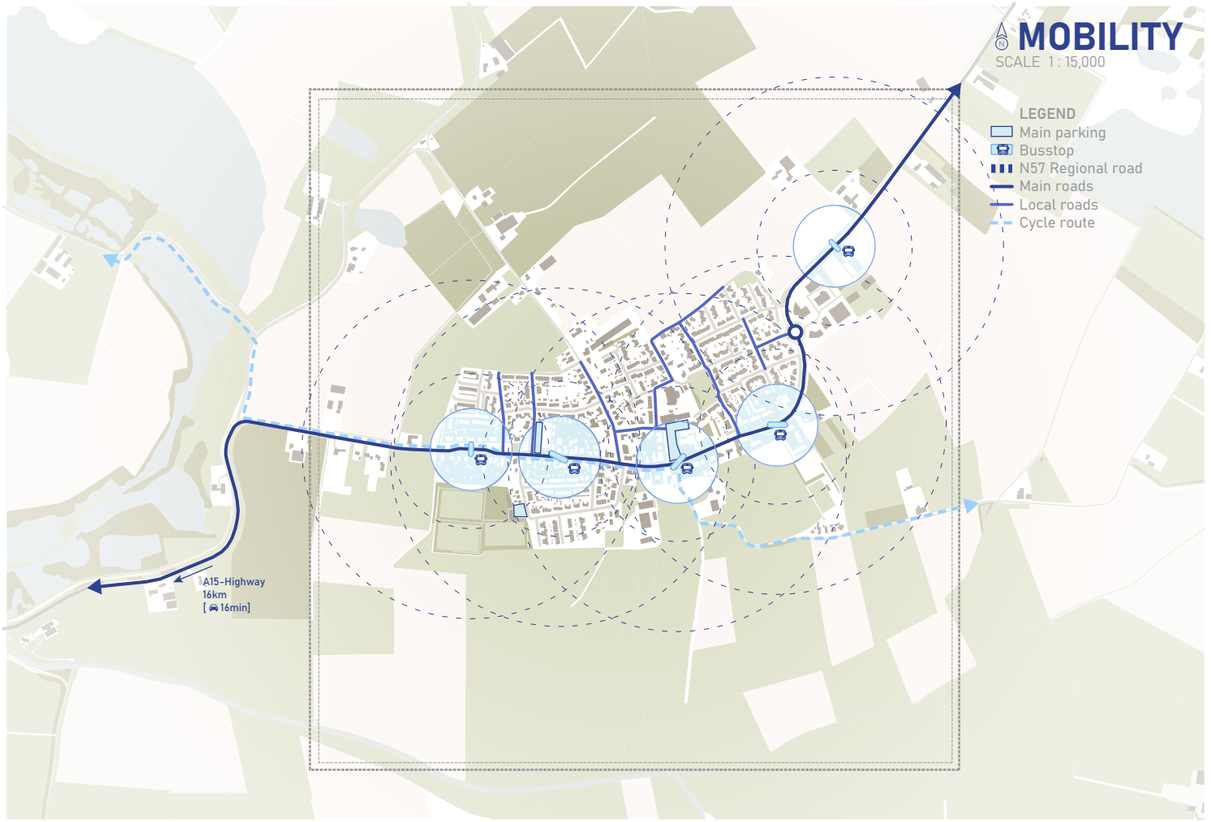
The village Leuth is constructed along the former Roman limes road connecting Nijmegen to the frontline. The orientation of the main road through Leuth is running in a similar direction. The main road through Leuth is an N-road and the village council has been lobbying in the municipality on reducing the maximum speed through the village from 50km/h to 30km/h – thus far without success.

The village itself is positioned in a corner of the Netherlands, with the border with Germany close-by. With only one more Dutch village before reaching the border, the orientation of mobility in Leuth is fully towards the west, towards Nijmegen. Nijmegen holds most of the needed functions and facilities and is positioned fifteen kilometers away. The nearest highway connection is also in Nijmegen.

Public transport wise, the village Leuth has a relatively large number of bus stops considering the limited number of inhabitants. There are a total of five bus stops in the village and they are easily accessible by foot within five minutes of any location in the village.

Also, in this area there are several regional bike routes. One of these routes passes through the village. However, a dedicated bike path separate from the main road has been a point of discussion in the village. Right now, cyclists have to cycle on the main road.

◀ *Figure 7.75: Leuth has several monuments dedicated to both the military and civilian casualties during the Second World War. There are several local history foundations which are dedicated to remembering this difficult past.*



▲ *Figure 7.76: Spatial analysis of Leuth on the theme of Mobility.*

▲ *Figure 7.77: Spatial analysis of Leuth on the theme of Identity.*

As mentioned previously, many of the older buildings in Leuth have been destroyed during the Second World War. Leaving only a limited number of (restored) heritage. There are several municipal monuments, including a couple of old farmsteads, the chimney of the former dairy steam-factory (the building in green just outside of the village to the west in Figure 7.72), and of course the restored Remigius church central in the village.

Furthermore, there are currently two areas dedicated to archaeological findings, where, among other things, an old well and human skulls from around the first century A.D. have been dug up. Providing important information on the history of Leuth as well as the history of the Roman limes.

To the west of the village there is a larger marshland area, which is dedicated as a natural area.

Figure 7.78: The chimney of the former dairy steam-factory positioned behind one of the monumental farms, along the main road through Leuth. The local region has a lot of these steam-factories, for dairy as well as bricks, because of the nearby water ways for transport and the easy accessible bricks needed for constructing the factories. ▶

Leuth has a small but active community. The village houses a local '*Schutterij*' – which can be roughly translated as a *schooting guild* and originates from voluntary citizen militias in the medieval and early modern Netherlands. Their dedicated building is also in use for different events and activities throughout the year. In addition, there is the small muliti-functional accommodation mentioned previously, near the primary school, which offers local activities focused on the younger public.

Most of the local activities have an older audience. The online activities agenda of Leuth reveals a dominance of activities and events focused on elderly. Not coincidently, for Leuth's population consists for 23% of people aged 65+ and 32% aged 45-65 years (Allecijfers, 2022). The village deals with a growing problem of aging.

There are mentions that the building where the Schutterij is positioned and where most of the local activities take place will have to be closed in the near future. Perhaps the redevelopment of the Remigius church can offer a new place for people to get together and meet.

Figure 7.79: The church building itself has been out of use since 2017 and the local parishioners go to the nearby village Beek to attend services. The building itself has been in need of some restauration and is left with early stages of overgrowing plants which have been barred with large fences.

Figure 7.80: Spatial analysis of Leuth on the theme of Community.

In conclusion, the village Leuth is positioned in the former flood plains of the river Waal, in a dead-end corner of the Netherlands. However, it is positioned with relatively close access to Nijmegen, one of the larger cities in the Netherlands.

There are limited facilities available in Leuth itself, but the village does have a supermarket and a (new) barbershop, as well as a small business park with several retail functions. There are also a couple of restaurants throughout the settlement along the main road. Leuth has a primary school, but the nearest secondary school takes 25 minutes to reach by bike. The nearest hospital is positioned in Nijmegen and the nearest general practitioner is positioned in the nearby village Beek.

While most of the old buildings in Leuth have been destroyed during the Second World War, the village holds an interesting history. With archaeological findings from the Roman time period and monumental buildings such as old farmsteads and an old dairy steam-factory, the village holds a not-so-visible rich history. This is also displayed in the local community, with an old Schutterij at the heart of all local activities.

Figure 7.81: Spatial analysis of Leuth with the four themes combined in a conclusive drawing.

Design

The core of the village Leuth is positioned right next the main road halfway through the village. The Remigius church is positioned centrally in this core. There is a lot of open space surrounding the church, filled with on the west and north side a really wide car park, on the north-west side a cemetery and on the east side a vacant lot together with an overgrown separation between the cemetery and the residences behind. The sense of open space is limited by the large trees blocking almost all sightlines through the area. A beautiful core with a big opportunity for redevelopment.

The design implications for this third project location take a lot of inspiration from the previous two locations, Haghorst and Scharendijke, and can in a way be seen as a (partly) conclusive assembly of the important design interventions of these two locations. The main design goals are threefold. The first goal is to create a village heart which is truer to the history of the place. Where the church is positioned centrally in a more open environment. The space surrounding the church building is in a way given back to the local population and no longer kept as a restricted space, fenced off with walls and overgrown plants [*C3*].

The second goal in the design is to provide a place for elderly. Leuth has a rapidly aging population, and this poses many challenges. However, an aging population does not necessarily have to be a negative thing. As mentioned previously in the literature on shrinkage in the paragraph on an aging population as a result of shrinkage, as long as we design our space in such a way that it can supply in the needs of an older generation, aging can be seen as an opportunity to work with.

The third and final goal of the design implications in Leuth aims to bring the local population together. With the church as a hub for social interaction, the ambition is to create a space that can be used for differing activities and can be a place where people can meet – voluntarily and involuntarily.

Let us progress through the design decisions. The church square in front of the church itself, on the west side, is currently used as a large parking lot. There is parking on both sides of the street, while from observations it can be noted that the car park is barely ever filled halfway full. The road leading through this lot is also wide enough to let three cars pass each other: unnecessarily wide. The design limits the car parking space to only the far side of the square and uses the newly available space in front of the church as a place for rest and contemplation [*M2*].

The first two trees on the side of the church near the main road will be repositioned elsewhere, to create a better view on the church – just like the more open space in front of the church in the past [*I1*]. The other trees will be surrounded by a bench, with a low hedge surrounding these spots. There will also be an addition of two *jeu de boules*-courts as well as two table tennis tables, in similar fashion as the design implications in Haghorst, North-Brabant [*C4*].

The area behind the church and cemetery, to the east, is to be cleaned up from any overgrown sprawl that is currently present there. This space is dedicated to becoming a small community garden like the garden in Scharendijke [*C2*]. The garden is separated from the main road by a pergola walkway flanked by fruit trees, oriented west-east and continuing to the church building itself along the cemetery wall. There is also a

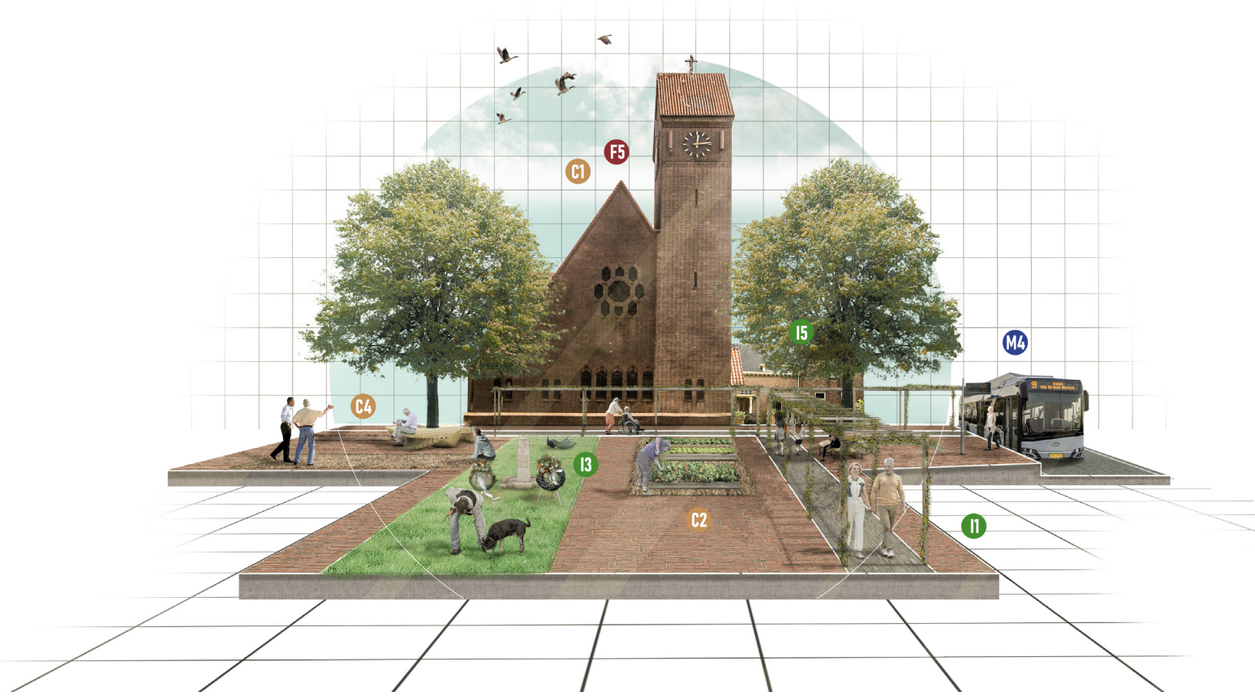


Figure 7.82: Schematic design proposal of Leuth in 3D based on the toolbox themes.

Figure 7.83: Schematic analysis of the center of Leuth.

Figure 7.84: Schematic design proposal of Leuth based on the toolbox themes.

small formerly used toolshed which will be reinstated and can be used as a place to store tools and ware from the community garden. The community garden will be accessible from the church via the pergola walkway and by the main road. There are also another two connections created on the upper side of the cemetery to the main village center and through a small alley between the houses to the north-east. This creates a breakthrough in the larger blocks and offers a walkable and more enjoyable routing through the project area.

Between the cemetery wall with the pergola walkway and the main road there is a large vacant lot. This place can become the main driver of the project, with the development of an apartment building with life-cycle durable apartments and close access to a district nurse, aimed at an older target group with an indication in need of healthcare support [*F7*].

This building is directly linked to the backside of the church and the former rectory building. The rectory also has a large kitchen inside, and the plan is to transform the rectory to become a refectory, a place where the locals – both the people living in the apartment building with a healthcare indication as well as the other neighbors – are welcome to come and eat dinner for a low price.

The church building itself will be transformed to become a community center. A place where the local population can come over for a cup of coffee or tea; a place where elderly can sit and read the newspaper; a place where everyone is welcome and where there are conversations between neighbors and where gossip spreads around [*C1*]. This is also the place where the local community officer comes by and has a talk with

Figure 7.85: Design of the center of Leuth (scale 1:800).

the neighbors with an eye on social control and where the local district nurse offers their regular thrombosis service.

There is also a small extension planned on the outside of the church, between the building and the rectory. Here a small markup of the history of Leuth and the dire situation during the Second World War is further elaborated upon. The former signs which offer a limited perspective of the past are further expanded on with a more extensive exhibition, which connects to the nearby monuments of the fallen military servicemembers and civilians during this period of time [*I3*].

Final in the design is a reorganization of the continuous road through Leuth. The space dedicated to the main road is not entirely wide enough to separate the car road and the bike path as well as having a sidewalk on both sides of the road. While this space is available near the core of the village, there are several bottlenecks elsewhere throughout the village. In order to not have a constant switch between separate bike paths and cyclists on the road and the dangers these switches propose, it is chosen in the design to let cyclists continue using the main road, only separating the car road and the bike path outside the village limits. However, the maximum speed through the center has to be brought down from 50km/h to 30km/h; something the village has been arguing in favor for, for a long time now [*M3*].

In addition, the central bus stop near the church has been separated from the main road. Elsewhere in the village, the bus stops at bus stops on the main road, leading to all traffic waiting for the bus to take off again [*M4*]. In separating the bus stop from the main road, the stopping time of the bus can be longer while no traffic is forced to wait. This offers the possibility of a longer stopping time for elderly to get on and off the bus, as well as provide a place to stop and wait for smaller buses dedicated to personal transport for the less mobile.

The entire village can benefit from this bus stop, with additional bike parking spots underneath a pergola row, which also leads to a walkway towards the church and the rectory, inviting visitors to take a glance at the exposition on the history of Leuth and the heart of the village.

Overall, the village core aims to provide a new cultural core of the village, where new activities can take place and where the local community is drawn towards for leisure and entertainment. Supplementary, the new development of an elderly focused apartment building, as well as a strengthened public transport connection to Nijmegen, offers a relaxed countryside living environment for an older population with close connections to all the facilities easily accessible in the larger city nearby. The apartment building might even attract the older population already living in Leuth to move closer to the center of the village, leading to housing becoming available for starters elsewhere in the village.

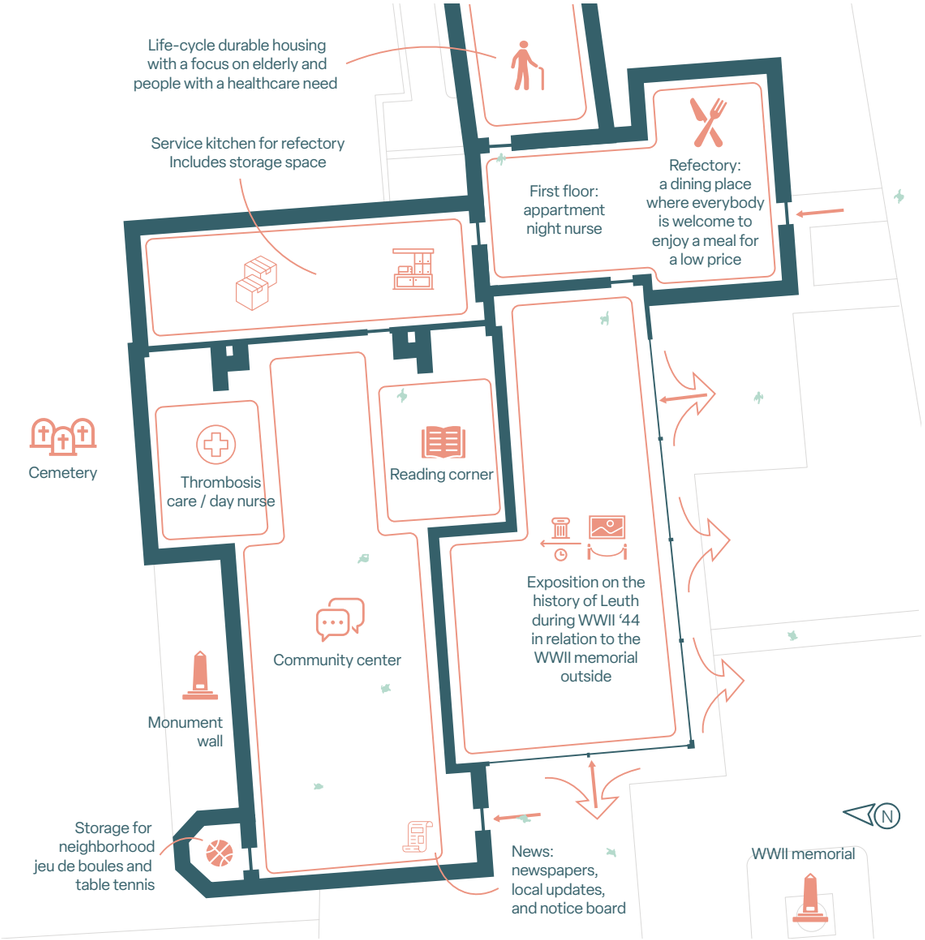
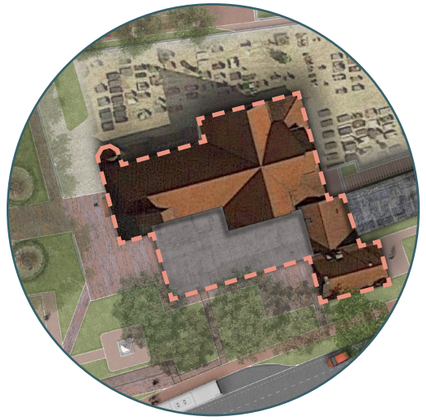
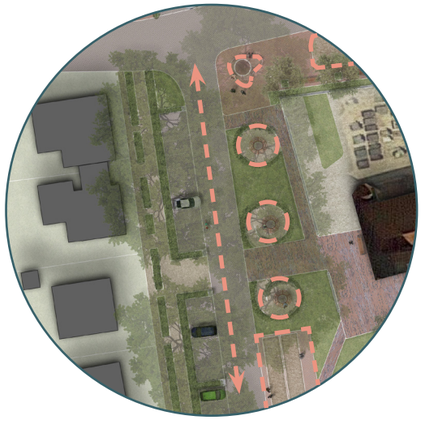


Figure 7.86: Function and connections of the Saint-Remigius church in Leuth (scale 1:300).



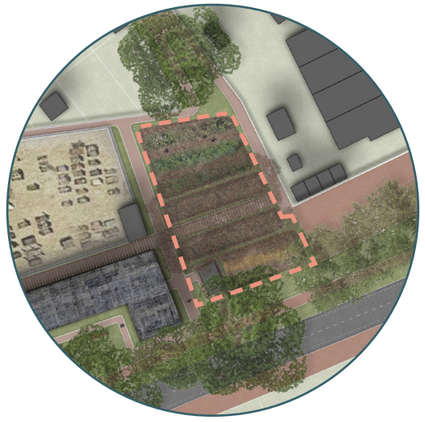
Church as new heart
The church will function as the heart of the local community once again: as a community center and an exhibition center on the history of the village, as well as a dining place in the former rectory where everybody is welcome to share in an affordable meal.

The village square redefined
The abundance of parking space and the wide road dedicated to car traffic are more limited. With parking only on the west side of the street. The additional public space that has become available now is dedicated to contemplation and openness. A green strip with benches surrounding the large maple trees present. There is also the addition of *jeu de boules*-courts and table tennis tables, to provide space for leisure activities for the neighboring inhabitants.



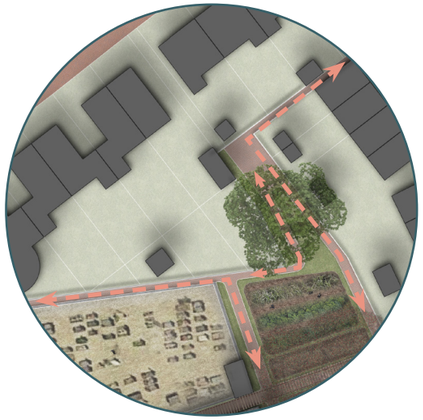
A new care home
The development of life-cycle durable appartments with as a target group the aging population of Leuth, is accompanied by a new cluster of activities surrounding the theme of the aging population. At its core is the apartment building, situated between the community center and the community garden, near the bus stop and dining space in the rectory.

The community garden
Behind the cemetery and the care home to the east there is a community garden. Made up from a row of vegetables and herbs as well as two rows of fruit trees flanking the pergola walkway through the area. The garden is maintained by the inhabitants of the care home in cooperation with a dedicated local group of volunteers. Stimulating the interaction between different social groups of different ages.



Central bus stop
The bus stop is positioned just off the main road. Offering space for busses and vans to wait for a more prolonged time in line with an aging and less mobile audience. The bus stop also holds bike parking, in an effort to attract the people living further away from the village core and let them use this platform to use the public transport from.

Walkways with a see-through view
Behind the cemetery and through the building blocks to the north there are two walkways created. Offering new see-through views on the church and breaking the block structure with paths for slow traffic, these walkways create a more connected environment with better access to the community garden and the church building.



Process & Management

While it is impossible to undertake such a transition of the village core in one go, the phasing of the redevelopment of the core of Leuth can be achieved in a smaller time frame than the previous locations. This is because one development enables the next, which in turn transitions to the next part of the development.

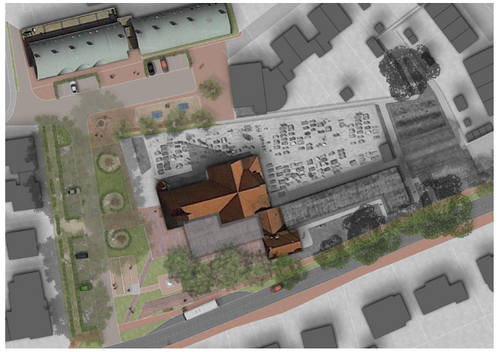
The first phase consists of redeveloping the square in front of the church, with the removal of half of the car parking lot and the construction of the separate bus stop with the facilities it offers and the extension to the church and rectory building. The vacant lot behind the rectory can be used as a construction site in the meantime.

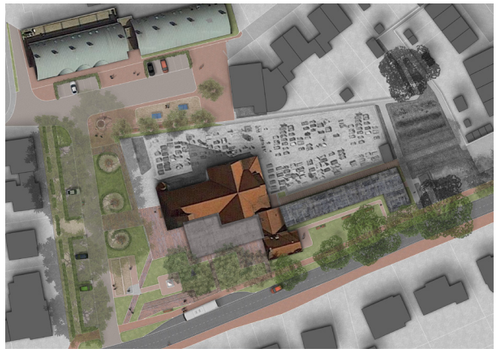
The second phase consists of the construction of the apartments building on the vacant lot which was formerly used as a storage space for the first phase of construction. During this time, the space to the east of the project location can be used as a construction site and storage location. All that is needed is to take away the wild overgrown plants and clean out the sprawl.

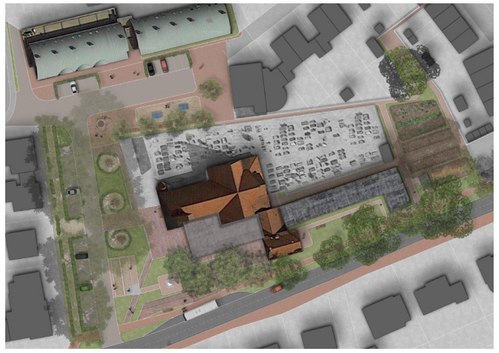
In the third phase, this final construction site is transformed into the community garden with fruit trees and the pergola walkway. Connecting the garden to the village core, the circle is finished.

In this new development of Leuth it is important to keep close contact with local entrepreneurs which can help stimulate local initiatives. The entirety of the plan is made feasible with the construction of the apartment building, which remains the core development goal.

Figure 7.87: Phasing of the Leuth core development in three phases.







The focus of the municipality, which consists of multiple previously separated municipalities, needs a shift to offer more support for the villages in the north of the municipality. That way, the public space can be made available by municipal funding.

Finally, while the church has been sold and is no longer in Roman-Catholic possession, it is important to include the former parish in the new development plans. They know their building best and can offer some innovative ideas for use of the inside space of the church.

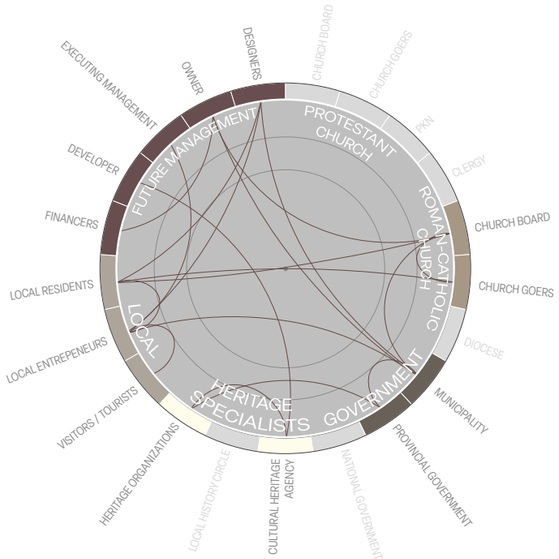


Figure 7.88: Stakeholders of importance in the Leuth core redevelopment project.

Reflection

The final project location of this thesis, the village Leuth, was also the last of the three designs to be finalized. This is also evident in the design of the location: it holds many elements from both the project location Haghorst and the project location Scharendijke. It does, however, take these elements and fuse them in way unique to the situation in Leuth, which focuses more on the aging population of the village and the heritage from the devastating history during the Second World War.

This third location takes from Haghorst the connection between the different functions, the alteration to the already existing public space and the central bus stop central in the design. It takes from Scharendijke the community garden centrally present in the redevelopment assignment and the addition of real estate to increase the feasibility of the project as well as connect the different elements of the design together.

Unique for Leuth is the large cemetery behind the church building. These design implications make no alteration to this place and leave it be. It is an interesting study on its own on how we can incorporate cemeteries into our urban structure and how we can change the negative perception and natural distancing of these places. Also, an interesting question on using cemeteries is at what point in the future it becomes acceptable to (re)develop or transition these places. This larger assignment on cemeteries is beyond the scope of this thesis.

As with the other two project locations, Leuth also has the former church square currently in use as a large parking lot. In all three of the locations, these parking lots were never fully filled with cars on the multiple occasions I visited the project locations. Changing the function of the square and removing parking instantly provides a large area where new activities can take place – in line with the former function of the square.

This is also a message for any village core redevelopment: question the excessive need for parking and opt for the former function of the village square as an empty space available for activities. For as long as there are cars parked, people will not make use of the space for other functions or activities.

▲ *Figure 7.89: Drawing of the Leuth design proposal seen from the main road to the front of the church.*

▲ *Figure 7.90: Drawing of the Leuth design proposal seen from the supermarket to the front of the church.*

7.5 COMPARING THE PROJECT LOCATIONS

The three project locations have both a lot of similarities and a lot of differences. They were all three positioned relatively central in the urban fabric of their village.

Haghorst has remained centrally positioned, with most of the functions available surrounding the church building.

For Scharendijke the urban structure has developed in a different direction, away from the church as a central position. There are two separate cores, and the new design proposal aims to connect the cores again.

The church in Leuth has previously been slightly outside of the center of the village but is now part of the core and acts as a landmark to signify the entrance to the village heart.

In all three of the designed project locations the church will function as an entrance to the village heart. A landmark that becomes the center of all activities and connects the existing and new functions, acting as a social hub for the village, central in the urban structure.

- Church Heritage
- Parking
- Primary School
- MFA
- Supermarket
- Restaurant/Cafe
- General Practitioner
- Retail
- Carehome
- Community Garden

New Functions

Haghorst

Local daily-necessities grocery store; post packages and groceries pick-up point; local products.

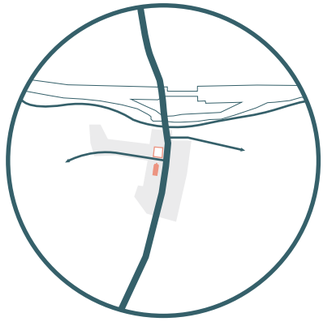
Scharendijke

Farmers' market; community center; reading and studying corner.

Leuth

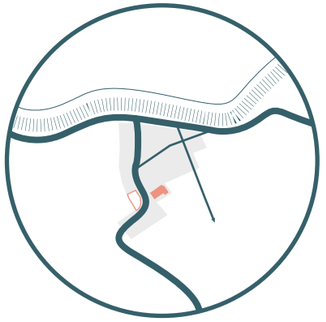
Community center; dining hall; reading and studying corner; exhibition center; medical checkup location.

Original position in urban fabric



Haghorst

The church is positioned centrally along the main road through the village, perpendicular to the Wilhelmina-canal.



Scharendijke

The church is positioned along the main road on the edge of the urban structure of the village, perpendicular to the dike.

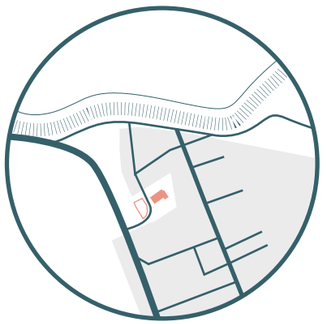
Leuth

The church is positioned a little way from the main road, separated from the urban structure of the village.

Current position in urban fabric

Haghorst

The church is still central to the village structure, along the main road. The position of the church as core in the growing village has not changed.



Scharendijke

The church is no longer positioned along the main road and the main village street is positioned to the east of the church. The church is positioned in an awkward corner without any good connections to the rest of the village.

Leuth

The church was reconstructed in the early twentieth century and is now better positioned centrally in the village. The church is now part of the core of the village and the urban structure is built around this central location.

Functions in the village

Haghorst

Linear to the main road through the village, Haghorst has a primary school, a multi-functional accommodation, two restaurants/cafes, the church and the main square used for parking.

Scharendijke

The village consists of two cores. The old core, with limited shops and restaurants/ cafes is positioned north of the church. The new core, to the south, consists of the new church and sporting facilities as well as the nearby primary school.

Leuth

The church is part of the core of the village, just off the main road. Here, there is a supermarket, a primary school, a multi-functional accommodation, and a restaurant.

Barriers and accessibility

Haghorst

The main barrier consists of the main road separating the church and village square from the other functions.

Scharendijke

The church is positioned in a corner without any strong connection to the rest of the village. There is a large vacant lot that is overgrown with plants next to the building.

Leuth

One of the main barriers surrounding the church is the border of the cemetery. There are also several rows of bushes and low fences surrounding the vacant lot to the east of the church, blocking any connection to the building blocks behind.

Original connections

Haghorst

While all the functions of the village are grouped together, there is no real interaction between them. Only between the MFA and the primary school and the small animal petting garden there is a connection.

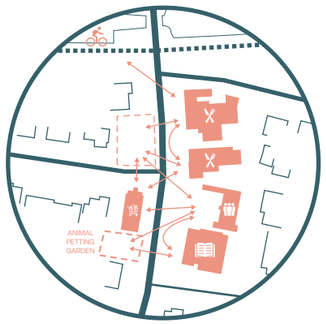
Scharendijke

All functions are scattered, and the closed building blocks limit any connection between the old and the new core as well as any connection to the church.

Leuth

The core consists of limited functions. The primary school is positioned behind the supermarket building and is not connected to the main square.

New connections



Haghorst

The proposed design connects all the functions across the street with one another.

Scharendijke

The proposed design breaks the large building block and creates a new heart functioning as community garden. New routing connects the two existing cores, and the church becomes the center of all activities.

Leuth

With the addition of the community center and the care home, the core of activities shifts further towards the main road and surrounding the church building.

The project location Haghorst is the smallest of the three project locations. This also reflects in the spread of the radar diagram. The village is more focused on the identity and the community, and less on the availability of facilities. There are especially difficulties with the mobility in the village. With limited access to facilities and retail, the village heavily relies on motorized transportation. There also is not any connection to the public transport network.

The proposed design is especially focused on countering the negative effects resulting from this mobility issue. It also stimulates the inhabitants to contribute to the local community and aims to strengthen the identity of the village.

The second project location, Scharendijke, has a stronger existing infrastructure, including access to the public transport network. Scharendijke is also a larger village, with more facilities available and has a strong identity as a dike village. The village attracts a lot of tourists, but there is less focus on the local community. This is something the design proposal focuses on in this project location. The new situation has more possibilities for community participation and adds functions facilitating social interaction in order to create a stronger social cohesion.

The third location, Leuth, is the largest of the three villages. However, the available functions in the village are limited and could better suit the demographics of the population.

The design proposal for this location is more focused on contributing to all four of the themes. In addition, it especially aims to contribute to facilities for the aging population. Creating additional community activities to interact with. The design also aims to strengthen the identity of the village by better visualizing the history of the village.

On the page to the right the strengths per theme are visualized as a comparison in a radar graph for both the old and the new situation per project location. On the next six pages, the different themes are further expanded upon per project location. The actors to which the design proposals are tested are in line with the toolbox actors which make up the radar graphs of the distinctive design implications of the toolbox. The legend for these radar graphs per theme (Figures 7.93, 7.95, and 7.97) is displayed here below.

DIV Diversity of available functions & facilities
RET Available retail functions
FAC Available (social) facilities
CUL Cultura/entertainment possibilities
GRO Growth/decline population

ACR Accessibility additional retail functions
ACF Accessibility additional (social) facilities
APT Accessibility public transport
FST Focus on slow traffic
CDE Car dependent environment

ATH Appearance of tangible heritage
AIH Appearance of intangible heritage
OSA Outside attraction
ISA Inside attraction
AFI Available facilities contributing to identity of the village

LPI Locations of plannend/voluntary interaction
LUI Locations of unplanned/involuntary interaction
CFS Connections between existing functional structure
SSA Space to use for social activities and events
PSJ Places and (social) structures to become a part of/to join

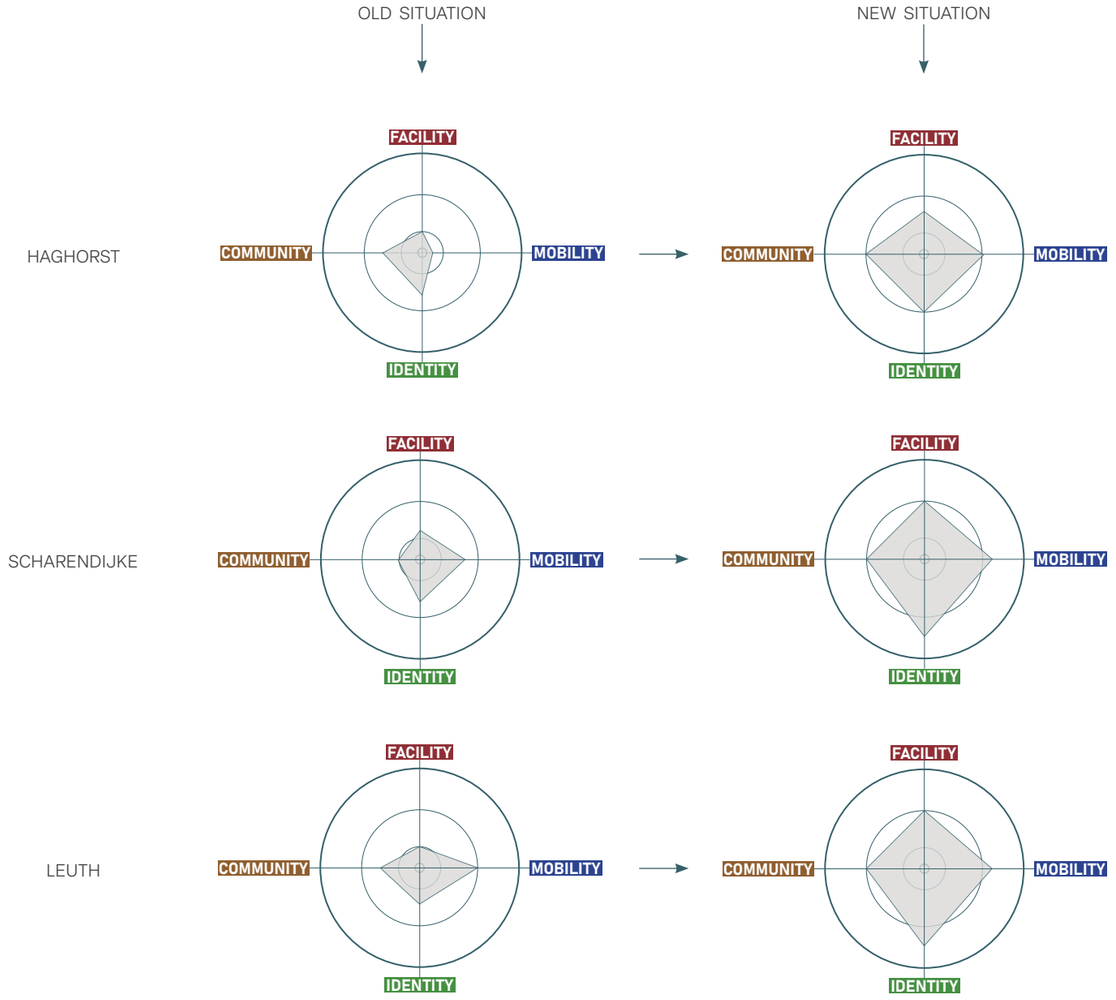


Figure 7.91: Radar-graphs with the comparison of the three project locations' old and new situation based on the four themes: Facility, Mobility, Identity, and Community.

HAGHORST

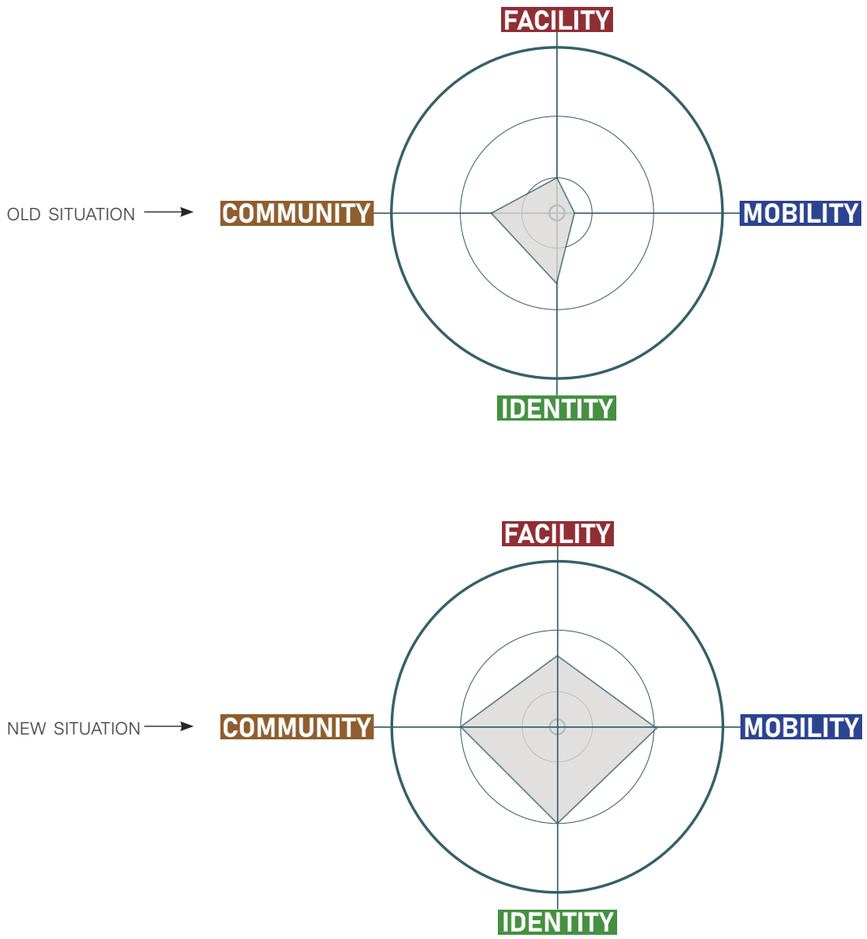
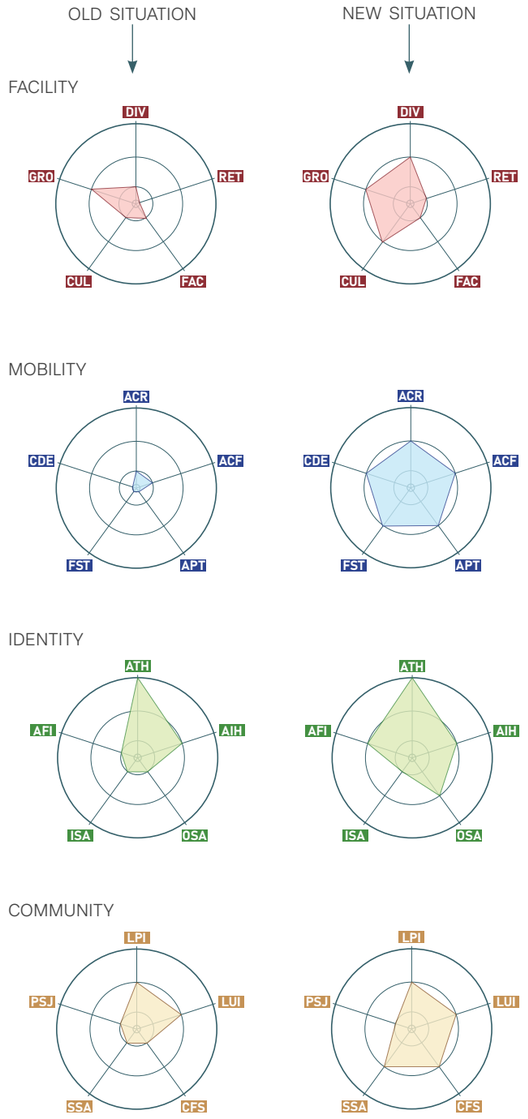


Figure 7.92: Radar-graphs with the comparison of Haghorst's old and new situation based on the four themes: Facility, Mobility, Identity, and Community.

Figure 7.93: Radar-graphs further explaining the actors within each of the four themes for the project location Haghorst.



HAGHORST

The design proposal adds additional facilities in the form of a small grocery store and a deliver point for packages. It also connects the existing structure of functions to each other and the newly added functions.

The main addition to the village is a bus stop. With the connection to the public transport network, many of the existing mobility issues can be countered. Also, the main street will become less car dominant, resulting in a more walkable environment in the core of the village.

The proposed design focuses on attracting outside visitors and drawing passing cyclists into the core of the village. The village already has an outstanding appearance of both tangible and intangible heritage, in the form of the church building, the former water lock and pumping station, as well as a monument dedicated to the first reclamation workers in the area, with additional educational screens on the history of the village.

The design aims to provide space for community activities, big (on the main square) or small (jeu de boules-courts). It also connects several of the functions surrounding the church, creating interaction between different social groups within the village.

SCHARENDIJKE

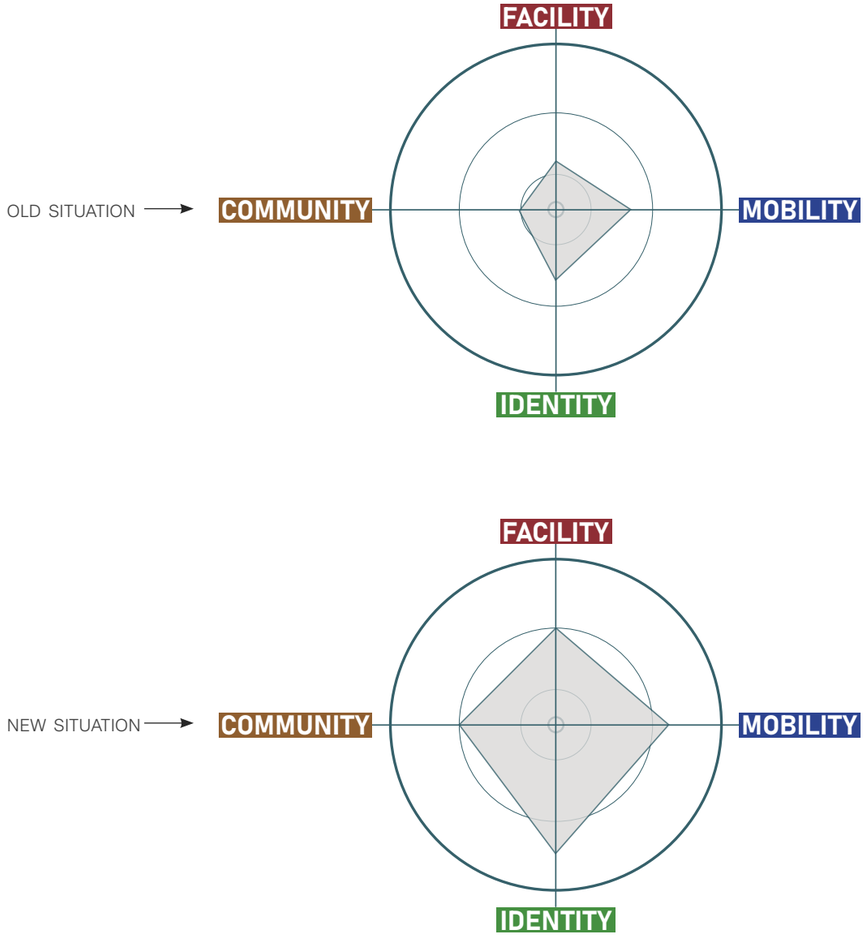
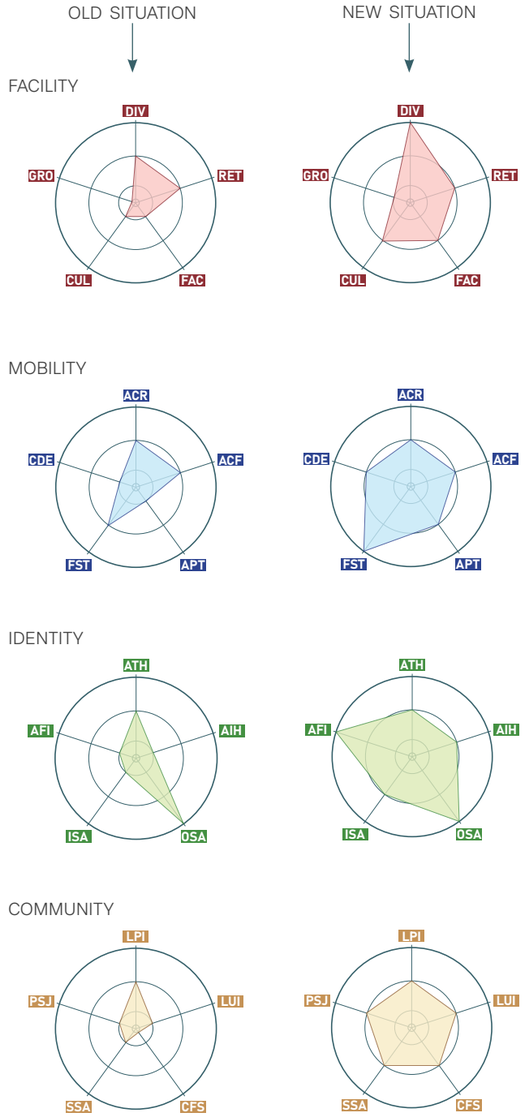


Figure 7.94: Radar-graphs with the comparison of Scharendijke's old and new situation based on the four themes: Facility, Mobility, Identity, and Community.

Figure 7.95: Radar-graphs further explaining the actors within each of the four themes for the project location Scharendijke.



SCHARENDIJKE

The design adds to the diversity of facilities in the village. Especially the creation of the local farmers' market adds to this. The redefined village square and the community center also add to the possibilities of cultural activities in the village.

The issues with mobility in Scharendijke are limited. The bus stop is repositioned for better access and the most influential alteration to the current situation is breaking through the existing urban blocks to create new routing for slow traffic, connecting the two cores of the village together.

Strengthening the identity of the village is mainly focused on creating a stronger local character for the inhabitants of Scharendijke to identify with.

The village is especially focused on tourism and offers little for the local community. The design proposal aims to create space for a multitude of community activities, strengthening social cohesion between the inhabitants of the village.

LEUTH

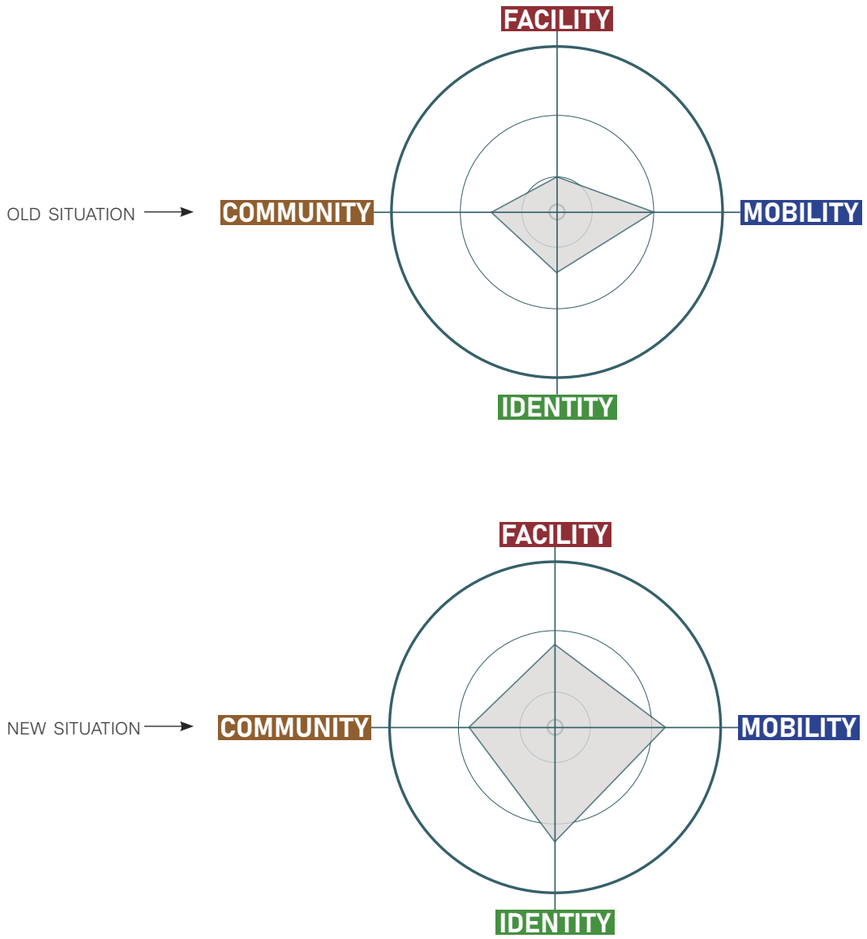
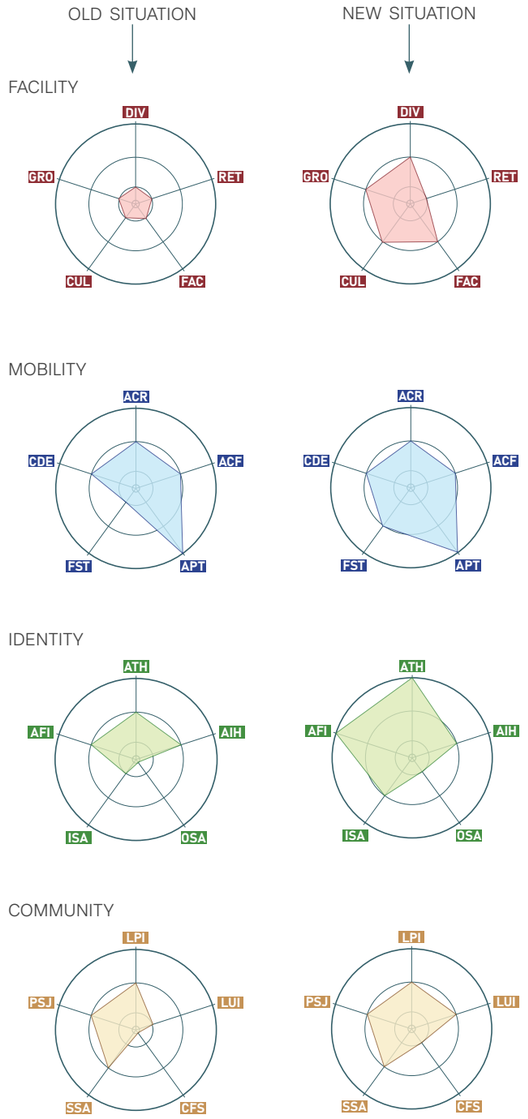


Figure 7.96: Radar-graphs with the comparison of Leuth's old and new situation based on the four themes: Facility, Mobility, Identity, and Community.

Figure 7.97: Radar-graphs further explaining the actors within each of the four themes for the project location Leuth.



LEUTH

Leuth has little facilities to offer, besides a local supermarket. Especially facilities aimed at the older population are limited. The design aims to provide in this by introducing a community center in the former church, which includes a dining hall, medical checkup station, and reading room.

The village Leuth is well connected by public transport. The improvements are mainly aimed at creating better routing through the project area and providing more space for slow moving traffic.

The village has a rich identity which the design proposal builds upon. The main tangible heritage of Leuth, in the form of the church building, becomes the center of the village again, with references to the other heritage in the region.

The additions of the design proposal are aimed at the aging population of Leuth and stimulate social interaction as well as offering community work in the form of a community garden.

08
CONCLUSION

This final chapter concludes the thesis. Here, the different elements and results presented in the previous chapters are reviewed and discussed. The chapter ends with a personal reflection on the graduation methods, results, and process.

8.1 Conclusion & Discussion
- *Review*
- *Discussion - Shrinkage in the Netherlands*
- *Discussion - Religious heritage and the Kerkenvisie*
- *Discussion - The broader context*
- *Conclusion*

8.2 Reflection
- *Methods and instruments*
- *Toolbox and the creation of the elements*
- *Interviews with municipalities*
- *Graduation project results*
- *Graduation process*

8.1 DISCUSSION AND CONCLUSION

Review

Let us start this concluding chapter with a summary on what passed on the previous two-hundred or so pages. How can religious heritage – together with the surrounding public space – as heart of a village, stimulate rural cores in shrinkage regions to increase livability and strengthen the community? That is the main research question and that is what I have tried to build up to in the chapters prior to this conclusion. With chapter one functioning as an introduction to the theme; with chapters two and three laying the foundation of the argument found in literature and spatial analysis as well as interviews and field work; with chapter six showing the different possibilities by using a toolbox, and finally, chapter seven explaining how the different design implications of the toolbox can be applied in three different project locations with different settings and how these scenarios overlap or differ from one another.

There is a lot of potential in using church heritage as a placemaker, in using heritage to stimulate livability and bring people together. The Church, and especially the religious real estate throughout the country, have always been an intrinsic part of society and church buildings are perhaps the most recognizable building we know.

The number of churches still in religious use has been in decline for the past sixty years: religious participation has been in decline for the past sixty years. Increasingly more churches are left vacant, in search of a new future – many of them hold a national or municipal monumental status. One in five churches has already been redeveloped, with another two in five churches losing their religious function in the coming twenty years.

And that brought us to the topic. What can we possibly do with these vacant stone giants, centering our urban structure. Especially in rural areas, where the problems of shrinkage are influencing the livability and the community of villages. A vacant church, centrally positioned at the core of the village, is like a heart that stopped beating and that needs to be started again.

The results of this thesis are twofold: on the one hand this thesis results in a set of design implications applicable to the holistic view on religious redevelopment in the form of a toolbox; on the other hand this thesis results in three distinctive designs of three village cores with the church as heart in these redevelopment projects, presenting a view on how the elements of the toolbox can be implemented.

These results are built on an interaction between the two core themes: shrinkage in the rural Netherlands and an increasing vacancy of religious heritage. Both of these themes are described and expounded in their corresponding chapters (two and three) by means of literature study and spatial analysis. The findings of these two chapters are combined in a vision statement based upon a SWOT-analysis in chapter five.

The design of the project locations is derived from the elements of the toolbox as well as analysis of the project locations themselves – which was categorized in the four themes that resulted from the literature on shrinkage in the rural Netherlands: Facility, Mobility, Identity, and Community.

The elements of the toolbox are a result of a mixture of inputs. They are constructed on problems found in the literature, from ideas that came to mind when working through the graduation process, from the analysis of the project locations as well as from the design of the project locations in an interaction between design, analysis, and definition.

There is a lot of literature to be found on the subjects of shrinkage and religious decline. This literature is specific to the developments in the Netherlands as well. Let us first focus on the literature on the subject of rural shrinkage in the Netherlands, then the literature on religious heritage combined with the Kerkenvisie and concluded with the position of the results of this thesis in the larger context.

Discussion - Shrinkage in the Netherlands

The literature on shrinkage is very extensive. Different authors focus on the causes, the effects, and the spatial implications of shrinkage in the Netherlands. Most of the literature dates to the early twenty-first century, from 2003 up and until 2015. The problem field of shrinkage does not change: the same problems have formed the cause of shrinkage, leading to the same effects, throughout the past decades. The statements on information from the first decade of the twenty-first century can easily be applied on data from the past decade.

However, very recently there has been a complete change in the way shrinkage has its grip on the rural parts in the periphery of the Netherlands: due to the Covid-crisis starting in 2019 and the inherent lockdowns that accompanied this period, there has been a shift in rural shrinkage and its causes. People started working remotely and found out that it was quite doable; people went looking for a more spacious environment, with living in lockdown at home in the city experienced as unpleasant. There has been an increased demand of living in the countryside.

This thesis started in September 2020, when the most recent complete data published on shrinkage in the Netherlands was from late 2019. This data showed a dreadful prospect for the rural Netherlands, but perhaps, due to the recent changes in behavior, the prospects for the future can be positively adjusted a little. This emphasizes what is inherent in this thesis: with the changing data on shrinkage and the changing number of vacant, redeveloped, and in-use churches, this thesis is a snapshot of the situation of writing.

It might be interesting to compare the spatial data on shrinkage to the increased number of vacant churches in the Netherlands through an extended time period and monitor how the correlation between the two unfolds. This is some advice for future research.

The literature on shrinkage in the Netherlands that was used is also very formal. The focus is on the problem statement, with lengthy defining of the causes and effects of shrinkage, but limited research on how these effects can be deflected or eased for the local population. There is a gap between the data on shrinkage and the possible spatial solutions on the matter. This thesis shows just a limited connection between the two, with the church building as mediator, but there are so many other possibilities to be found. There is an abundant amount of information to be found which is bottom-up: where the effects of shrinkage and their perception are discussed with the inhabitants of villages in shrinkage regions. This literature can form an interesting starting point to offer a more extensive view on viable solutions to the dire situation considering the livability in these places.

Discussion - Religious Heritage and the Kerkenvisie

Literature on the subject of religious heritage in the Netherlands can be described as descriptive. There is an abundance of sources to be found on the status of each church building, the style of construction and architects, the usage, and how it became vacant. The view of all this literature, however, is mostly looking back – at the past. How religious decline and a downturn of religious participation led to an increase in vacant church buildings, that is the core of the information.

There is of course information to be found on the future usage of church buildings as well. Beautiful inspirational books filled with project descriptions offering a new perspective on all the possibilities of redeveloping religious heritage. This information, however, often lacks on two key principles: the connection with the past and the connection with the surroundings. The possibilities of church redevelopment are of course endless. But especially the loaded history of the place and all that it meant, together with the connection with the local community, surpassing the boundaries of standard procedures, should be the main concern when considering church redevelopment. Here, the bridge between the past and the future is built by the local community. This is also the message the Cultural Heritage Agency aims to propagate but does not always succeed in doing so.

This thesis aims to accentuate this conscious connection between the past, the future, and the community, by not only offering a set of design implications in the form of the toolbox, but also applying this to the set of project locations to show the sensitivity of the development. In that sense, the thesis can be a strong addition to the set of inspiring references currently available on church redevelopment.

I believe this also forms the root of the difficulties municipalities have experienced in working with the Kerkenvisies, the strategic visions on the future of churches. The Kerkenvisie is inherently a difficult tool for municipalities because it focuses on the religious buildings itself. There are limited possibilities for policies and governance a municipality can force on the future of buildings themselves. This results in the Kerkenvisies becoming more of an inventory of the religious heritage in a municipality, and a sum-up of which churches will remain in service and which churches are likely to lose their religious function in the near future, without diving into the possibilities for these locations.

This is the outcome of a focus on the building as tangible heritage instead of the intangible heritage of the location and the opportunity of facilitating long-term solutions with round-the-table discussions and workshops to aim the usage of religious heritage towards a more sustainable future in line with the values of the past is lost in these strategies.

The Kerkenvisie could become much more valuable if it was able to create the bridge between the past and the future by building with the local community. This missed opportunity is slowly realized now and the interviews held also underlined this.

Perhaps the concept of the Kerkenvisie was a bit ahead of its time and are we now realizing how the strategy could be used in a different way; perhaps this realization is the result of trial-and-error with the Kerkenvisie. Definite is that this thesis can help to provide a new perspective on how to enter the process of the redevelopment of religious heritage.

Discussion - The broader context

This thesis has an precisely framed focus: 24 villages positioned in shrinkage regions in the periphery of the Netherlands with centrally in their village a vacant church. Of these 24, three representative project locations have been chosen to test the toolbox elements on. However, the elements of the toolbox and the design principles can also be applicable to a much wider range of heritage locations and be put in a broader context.

The size of a village church is generally restrained compared to their city counterparts. Most of the churches in villages, as extravagant as they may be, have a lower number of participants and need to house fewer people for services. The church often consists of a single aisle, without side aisles and has a lower roof. This is also noticeable in the churches part of the project locations. Two of them are small-sized churches (Haghorst and Scharendijke) and one can be defined as medium-sized (Leuth).

The possibilities with a smaller church are more limited compared to larger churches which one might find in cities. The available floor space is minimal, and it is not possible to create additional floors in the open space under the roof of the church. So, the available functions the church can harbor at one time are more restricted. Using the space in a multifunctional way, with different time schedules is key to the financial feasibility of the church redevelopment project. Churches in larger cities have more options available and also a much larger audience, with more local inhabitants and more visitors. Then again, they do have more ‘competition’ from other heritage sites with the eye on placemaking redevelopment and are less unique in that way.

I believe the set of toolbox elements - that was specifically constructed for addressing the issue of shrinkage in rural Netherlands – can also form an excellent starting point for other locations with churches looking for a new function. The key to a successful redevelopment of religious heritage lies in the understanding of the history of the place. Not only the recent history of churches serving as a spiritual home for religious services, but also the much broader function of the church in relation to the community. It is in this collaboration with the local community that a successful redevelopment of church heritage can find its future.

The vital goal is to create a multifunctional place, that links the history of the church with local entrepreneurs and the community. Not simply adding new functionality but building on the interwoven social and economic structure present. The results from this thesis can form as a reference to the possible elements in play here.

Conclusion

With the increasing number of religious heritages becoming vacant, the search for a new identity for these buildings becomes evermore important. A new identity that differs from any generic solutions and searches for a unique future suiting the specific building, place, and time. Churches have always been part of the common good of the population, the role of the church in the village has been very diverse – from celebration of life-events to a local marketplace or a place of sanctuary in dangerous times. In the past two centuries the role of the church changed to become part of the dedicated church community and no longer serve everybody. Now that religious participation is in decline, the goal is to find a new function for these stone giants, where the public good is embraced wholeheartedly. It is this public good that is now challenged. The effects of rural shrinkage are noticeable in villages all across the Netherlands.

This thesis deals with a holistic problem that requires detailed and location specific answers. Rural shrinkage leads to a wide range of effects, but they are unique for each village. For instance, villages in Zeeland have to deal with a limited access to public transport – especially the train network – and long distances to social facilities, such as hospitals, which are often positioned on other islands; while the eastern parts of Gelderland deal with an aging population and unsuitable housing and facility availability, which in turn leads to people moving away form the region. Each location therefor requires a different approach when considering core redevelopment.

Here, religious heritage can prove to be a more consistent factor across the different approaches. While the results will differ, the design environment has a lot of overlap between various locations with different churches. This is why the toolbox can be a strong starting point in village core transitions and religious heritage redevelopment.

The church is also more than just the building: it forms, or has formed, the basis of a tightly connected community of religious participants. The societal involvement of religious communities has been mentioned to be higher than average. Voluntary work and association activities are at the core of the existence of these communities.

This societal involvement carries further than only their own community. Recently, with an asylum crisis in Ter Apel, where refugees had to sleep outside, seventeen Dutch Reformed churches in Groningen and Drenthe offered to take in a total of 255 refugees for emergency shelter. (NOS, 2022a)

And also in these challenging times, with rising costs for energy and heating, both the Roman-Catholic Church and the Protestant Church have put in the work to offer financial support for those who can no longer pay their heating expenses and offer free warm food in a warm environment for those who can no longer sustain for themselves. (NOS, 2022b)

As mentioned in §3.2, on religious participation, neighborhoods with a higher number of religious participants also score better on participation in voluntary activities. Not only the religious community, but also non-religious inhabitants tend to be stronger affiliated with community service. (Schmeets, 2009) In redevelopment of the village core, there will be need for a core group of locals who are committed to successfully strengthening the community in the village and making this new revitalization work. A starting point in this community can be the existing church community. This does not only create a strong basis for the new (voluntary) activities in the village, but also restrengthens the existing church community – that, after losing their church building, can be noted to be in search of a new direction to make sure the community remains strong.

This is perhaps also what the set up for Kerkenvisies lack: any strategy on the intangible side of religious heritage. The Kerkenvisie, as has been mentioned, limits to the note which buildings will remain in function and which buildings are projected to remain in use. Not only does the Kerkenvisie fail to shine light on what happens with the building after it is taken out of religious service, it also fails to incorporate any strategy on the survival of the religious communities associated with the building.

For the Kerkenvisie to become completer and more useful as an instrument, it needs the addition of research and vision on scenarios what can be done with the building as well as the community. Here, the main result from this thesis – the toolbox with design elements – can offer that addition. The toolbox can not only be used to show preliminary options for usage of the building after it has been taken out of religious service, but also form a stimulus in creating the basis for the new community that will be needed to carry out the (voluntary) activities that are inherently interwoven with social functions that serve the public good. That way, the church building can remain part of the social structure of the village as well as the urban structure.

The church building is anchored to the village. It used to function in so many more ways than just hold a religious

function and that is what this thesis aims to convey: to show that it is possible to implement a whole new set of functions to village churches, that bring people together and offer a new sustainable perspective to the future of villages, while retaining the tangible and intangible heritage of the past and the responsibility that comes with this weight. This thesis shows how the village church can function again, with new connections tied to the rest of the village.

The main conclusion to this thesis is that there is no single answer to the perfect redevelopment of religious heritage. Each village, each core, each building requires a different approach. And also, every stakeholder involved, up to the point of the difference in design by architects and urbanists, each development is unique. This is also visible in the setup of the toolbox: the possible additions to this toolbox are endless. This thesis is a singular view, written from a singular perspective, based on the literature, interviews, and data during a limited time period. It is but one of many outcomes.

The overarching message this thesis conveys is, however, holistic: let us redefine how we view the redevelopment of religious heritage. There are so many possibilities for these majestic buildings. They have always been a part of the community; let them become a part of the community again. When the need arises for a new function for a church building, understanding the *Genius Loci* and the history of the place on one hand and the collaboration with local stakeholders on the other hand; where facilities such as healthcare and education are combined with functions stimulating social cohesion on a low-tier level, redevelopment of church heritage can be a success for the entire village to share in.

Where before the churches of the three project locations were solely purposed as a house of worship, the new future for these buildings is embedded in the local activities of the community again. As can be seen in Figure 8.1, the function of the church is no longer purely religious, but the building has become part of the village core again, facilitating in a much broader spectrum of uses. In line with the role of the church for the local community throughout history.

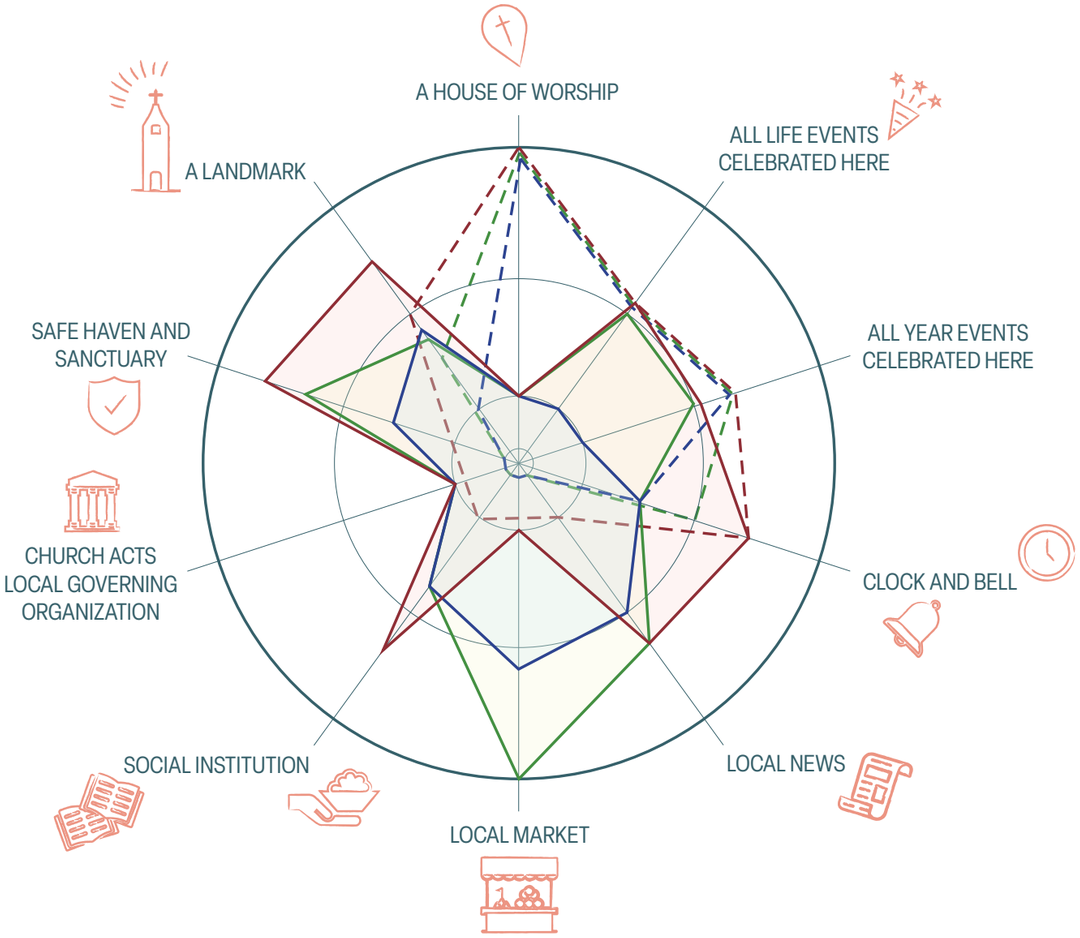


Figure 8.1: Radar-graph on the functions of the church based on the principles concluded in chapter 3, with the positioning of the three project locations' old and new functions.

8.2 REFLECTION

Graduation project results

This thesis focuses on two main themes. The first theme covers the increasing effects of shrinkage on the livability in rural parts of the Netherlands. The second theme converges on the increasing vacancy of religious heritage – specifically churches in villages. The amalgamation of these two themes based on an extensive literature review resulted in a set of design implications formed together in the toolbox, which was applied to three project locations, resulting in the final design.

The literature review in this thesis was quite extensive. Due to a bit of an extended starting period, in which I had troubles formulating the research goal (more on that later), I had a lot of time to dive into the literature on the subject of shrinkage and especially on the subject of vacancy in religious heritage. I believe that I provided a holistic view on these two main themes and showed different perspectives on the problems at hand.

However, there is much written on the subject of shrinkage and just as well on the decline of religious participation and the increased vacancy of church buildings, that it is nearly impossible to incorporate all opinions. I also found out that during the course of the graduation it becomes easier to find new sources of information, because you become more advanced in the knowledge on the subject, yet it also becomes more difficult to incorporate these new sources into the original findings.

One of the most interesting literature sources is the recently published book '*Kerkgebouwen*' by the Cultural Heritage Agency (Damme et al., 2020). This book offers 88 inspiring examples of church redevelopment projects but also lacks in any in-depth analysis on the subject. This book forms the foundation of my argument to view church redevelopment in a different light with a stronger connection to the intangible heritage and the role within the local community. Considering the redevelopment of church heritage from a societal perspective, deriving from the issues surrounding shrinkage, offers a completely distinctive and new view on the subject.

The toolbox with design implications is also part of the foundation of the argument on how to differently approach redevelopment of church heritage. The toolbox shows a more holistic proposition on different possibilities, much like the book Kerkgebouwen (Damme et al., 2020), but constructed academically based on the extensive literature study, as well as a combination of analysis and design which led to further addition to the toolbox. The toolbox has become more of a conversation opener, a starting point. It is the application of the combination of different elements of the toolbox to specific design inquiries that make church redevelopment unique.

In the case of this thesis, the application of the toolbox led to three distinctive design proposals for three separate locations. I started out with four project locations: one of the locations was scrapped along the way. I do not think that four locations would provide a more extensive view on the subject and offer any really new insights on the matter. The design of the third location, Leuth, already combines a lot of the elements implemented in Haghorst and Scharendijke, and functions almost as a conclusive design to these two locations.

The three locations are also a good representation of the church buildings currently vacant in villages in the Netherlands. Both Haghorst and Scharendijke are relatively small churches, only Leuth has a larger church. Currently, smaller churches are the churches becoming more vacant. Parishes across several villages are combined and take service in the most representable church available; most of the time the larger and more prominent church in the region. Leaving smaller churches out of service. However, in the future also these larger churches will be put out of service and in search of a new function.

I believe that, while in cities redevelopment of a larger church offers more opportunities than redevelopment of a smaller church, in villages it is more difficult to redevelop a large church compared to a smaller one. In rural areas there is less demand for an extensive addition of new functions and the costs of redevelopment are significantly higher. One of the key elements for these future redevelopments will be to focus on a mixed-use environment. Something that I converged on in the project designs in this thesis as well.

Not only are the sizes of the churches representative for the current vacancy in church heritage, but also their former denominations. Two of the churches are of Roman-Catholic origin, the third one – Scharendijke – is a former Dutch Reformed church. There is currently an abundance of Roman-Catholic churches in search of a new future. However, the geographic position of the three project locations is, in hindsight, maybe a bit limited. The churches are positioned in Zeeland, North-Brabant, and Gelderland: leaving out any project location in the north of the country. The original fourth project location was positioned in Drenthe. However, this location fell out of favor due to its similarities with the locations of Haghorst and Scharendijke in size, denomination, and position within the urban structure.

In the end, I believe the toolbox and the three designs for the project locations offer a unique new perspective on handling church heritage in villages. Originally, I thought that the toolbox itself could become the final product. But I learned along the way that especially the application of these elements and the connection between them and the surrounding village structure are what makes good redevelopment. The role of the designer – both in architecture and urbanism – is herein key to successful completion of the project. The designer has to construct these connections and the result is unique for each of the project locations. Each with different stakeholders, different issues and needs, in a different context. This is what makes the role of the urban designer both important and exciting.

Methods and instruments

In deriving at the conclusive design proposals, I made use of a series of different methods, both deductive and inductive. I think that the majority of time has been put in research by literature and historic analysis of the project locations as well as on shrinkage and religious heritage. I was relatively late with the decision on which project locations I would further explore and design for. This led to a more limited time available for research by fieldwork. I only visited each project location twice, and I believe that in order to create a more suiting design for the specific locations I would have needed to spend more time at the locations and converse with more people on the streets about their findings on the matter of livability in the village.

One of the most interesting questions I was able to ask people, was where they would plot the core of the village on a map. This led to interesting results and in the case of Scharendijke led to the conclusion that the village had two cores: a functional (old) core and a residential (new) core.

The original basis for the toolbox is the literature study on shrinkage. However, the current elements in the toolbox are the result of a combination of different inputs. The open conversations held on the streets and visiting the project locations on a fieldwork trip also led to the addition of elements, especially within the theme of Community. The interaction between analysis, design, and the toolbox also led to a rearrangement of the toolbox and the addition of new elements.

I did find it difficult to show the toolbox not as an end product in a linear process, but as part of a circular design process, where the toolbox is reevaluated and becomes part of the future analysis and design questions in a cycle. The radar-graphs concluding the project locations' comparison, which are built on the same elements the radar-graphs in the toolbox are built upon, are part of this circular process. But I am unsure if this is the best way to showcase this.

The toolbox itself consists of a very clear way of showing the elements. The same form of isometric images representing all of the design implications makes it that the toolbox is suitable for use in stakeholder workshops where the elements are displayed on cards. This idea is further explained in the evaluation on the toolbox in chapter six.

Overall, the manner of representation is really important in providing a clear message. Maps and plans show a 2D explanation of the 3D environment. It is important to keep testing the design from the perspective of a person, from eye-level. Here, digital-made visualizations and renders provide the most visually pleasing and holistic image of what the future of the project looks like. However, the simplest sketches by hand illustrate the idea and viewpoint of the designer much better than any corrected and perfected image. That is why I aimed to combine both of these methods. Showing visuals of the finalized project as well as hand sketches on the different elements, providing a clearer understanding of my own perception of the design implications.

Originally, I planned on using a 3D environment of a single project location and creating a Virtual Reality (VR)-experience around it. I believe that VR offers an interesting medium to cross the bridge between designer and user and help the conversation between the two parties. It can also play a supporting role in stakeholder participation trajectories. A VR-experience helps the stakeholder see different perspectives and envision what is possible with church heritage. This can help when there is an emotional attachment to the place and the subject needs to be addressed sensitively, for instance with the former users of the building: the church board and the church community.

At the same time, it offers the designer a way to register the reaction of stakeholders really well. Not only can you measure what each person focuses on or looks at the most, but while they can not see you, you can see them standing there. The body language also tells a story on how the person perceives the new environment in Virtual Reality.

Unfortunately, I was not able to use VR in the end. But I highly recommend using VR in sensitive projects such as redevelopment of church heritage.

This sensitivity surrounding the redevelopment of church heritage and also prognosing which churches will or will not remain in service in the coming years is also something I noticed in my interviews with representatives from all three of the project locations' municipalities.

These interviews helped me to create a better understanding of the municipality, their viewpoint on church heritage, and how they put the Kerkenvisie into use. I think the interviews would have been of better use if I had conducted them earlier on in the process. Now, the results of the interviews became a good addition to the total information package on church heritage. But I believe the results of the interviews could have been part of the foundation of the argument and be one of the drivers of change which the thesis could be built upon. This is something I learned in this graduation process: aim to conduct interviews as early as possible, it does not matter if you do not fully grasp the full scale of the subject you are researching yet: everyone I have spoken to and everyone I have interviewed has been overly enthusiastic to explain all there is to know in great detail.

Kerkenvisie

The Kerkenvisie is a curious tool. With the increasing vacancy of church heritage, the government rightfully started searching for a way to provide a bit more support and take away the uncertainty of what will happen with all these buildings. While the Cultural Heritage Agency has a lot of exact data on which church has already been redeveloped and to what function, as well as data on which regions are most likely to experience a steeper decline in churches that are still in service, they stimulate municipalities to come up with their own research and strategic visions for the heritage in their municipality. This leads to greatly differing Kerkenvisies per municipality, resulting in incoherence in a mix of different approaches. I think this is one of the great difficulties with the Kerkenvisie. They are not coherent between the different municipalities and can not be assured in quality.

The Kerkenvisie is also a difficult tool for municipalities. They can not directly influence the usage of the churches in their municipality, and this results in the Kerkenvisie ending up as an inventory of the available heritage and a prognosis on which church will remain in service and which one will not, without a long-term perspective on future usage of these buildings. While the Kerkenvisie offers religious communities in the municipality some comfort and stability with the knowledge of which churches are most likely to remain in service and which churches not, it offers little perspective on the future of these buildings, while they remain positioned at the center of the neighborhood.

I believe that the toolbox in this thesis can provide aid in an addition to the Kerkenvisie. Where the different stakeholders involved also share in what they view as a suitable future for the building itself. The toolbox elements can be used as cards in a workshop-setting. The addition of this personal view on the future of the buildings themselves – which goes beyond the final destination of 'this church is prognosed to become out of service by 20 years', adds true perspective to what the people closely involved envision for the building that physically remains part of their everyday life, even when the building has lost its religious function.

Graduation process

Finally, I would like to add a personal note on the process of this graduation project. I started the graduation project in September 2021 and finalize the thesis with a presentation in November 2022. The start was difficult. The subject of church heritage was only chosen after several weeks of doubting on a subject. The concept of the subject results from an atlas I have written on the history of churches and monasteries in Roosendaal, that was presented early October 2021. First, I started with a singular project location, but it quickly became apparent that a more holistic approach to church heritage in general was needed: not just the focus on one project location, that had little to do with so many other unique locations with distinctive requirements.

The switch from a singular location to researching a multitude of locations came around December 2021 and left little time to prepare for the P2-presentation moment in early February 2022. From here on, I decided to work with a set of four (later three) project locations representing a set of 24 locations of interest. Unfortunately, I was left with long-term symptoms after a SARS-CoV-2 infection, resulting in a postponement of my graduation over the summer, to autumn 2022.

In the beginning of the graduation process I could have been more decisive in the decisions I needed to make. Both in finally deciding to work with church heritage and shrinkage as my main themes as in deciding on the project locations to design for. This put a burden on the later months' time planning. In the end it still worked out well and the result is this thesis before you, together with the separate toolbox-booklet. Hopefully reading this thesis has been as much of an inspiring journey for you as it has been for me writing it.

With kind regards, Joëll ten Hove.

Figure 8.2 (next page): Overgrown by plants, broken glass, and in need of restauration: this church - the Fatima church in Roosendaal - will soon be renovated and in use again by a healthcare institution providing for the community in the neighborhood again. This image of the church formed the driver of my research on the subjects in this thesis.

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APPENDIX

Actors defined per theme: radar-graphs toolbox elements

Scales:

Facility:

1. Addition of new functions/facilities
   (1 = decrease of functions/facilities; 2 = no change; 3 = singular increase; 4 = multitude increase)
2. Increase of available retail functions
   (1 = decrease of available retail functions; 2 = no change; 3 = singular increase; 4 = multitude increase)
3. Increase of available (social) facilities
   (1 = decrease of available (social) facilities; 2 = no change; 3 = singular increase; 4 = multitude increase)
4. Increase of cultural/entertainment possibilities
   (1 = decrease of cultural/entertainment possibilities; 2 = no change; 3 = singular increase; 4 = multitude increase)
5. Attraction of (new) inhabitants
   (1 = repulsion of inhabitants; 2 = no change; 3 = slight attraction, side effect; 4 = focus on attraction)

Mobility:

1. Increase of accessibility retail functions
   (1 = decrease of accessibility of retail functions; 2 = no change [long distance, car accessible]; 3 = newly accessible by public transport; 4 = newly accessible on foot/cycling)
2. Increase of accessibility (social) facilities
   (1 = decrease of accessibility of (social) facilities; 2 = no change [long distance, car accessible]; 3 = newly accessible by public transport; 4 = newly accessible on foot/cycling)
3. Accessible public transport
   (1 = decrease of accessible public transport; 2 = no change; 3 = access to PT-network; 4 = access to all incapacitated)
4. Increased focus on slow traffic
   (1 = decreased focus on slow traffic; 2 = no change; 3 = increased focus on cycling; 4 = increased focus on walking)
5. Decrease of car dependent environment
   (1 = increase of car dependency; 2 = no change; 3 = decrease and increase public transport dependence; 4 = decrease and increase slow traffic dependence)

Identity:

1. Appearance of tangible heritage
   (1 = decrease of tangible; 2 = no change; 3 = restauration of existing tangible; 4 = expanding on existing tangible heritage)
2. Appearance of intangible heritage
   (1 = decrease of intangible; 2 = no change; 3 = restauration of existing intangible; 4 = expanding on existing intangible heritage)
3. Increase of outside attraction
   (1 = decrease of tourism attraction; 2 = no change; 3 = side effect is tourism attraction; 4 = main focus is tourism attraction)
4. Increase of inside attraction
   (1 = decrease of local attraction; 2 = no change; 3 = side effect is local attraction; 4 = main focus is local attraction)
5. Available facilities contributing to identity of the village
   (1 = decrease of available facilities contributing to the identity of the village; 2 = no change; 3 = singular addition; 4 = multitude addition)

Community:

1. Increase in locations of planned/voluntary social interactions
   (1 = decrease of locations of planned/voluntary social interactions; 2 = no change; 3 = singular addition; 4 = multitude addition)
2. Increase in locations of unplanned/involuntary social interactions
   (1 = decrease of locations of unplanned/involuntary social interactions; 2 = no change; 3 = singular addition; 4 = multitude addition)
3. Increase in connections between existing functional structure
   (1 = decrease of connections between existing functional structure; 2 = no change; 3 = singular link; 4 = multiple links)
4. Addition of space to use for social activities and events
   (1 = decrease of space to use for social activities and events; 2 = no change; 3 = singular addition; 4 = multitude addition)
5. Increase in places and (social) structures to become a part of/to join
   (1 = decrease of places and (social) structures to become a part of/to join; 2 = no change; 3 = singular addition; 4 = multitude addition)

Design Implication	F1 - Local Farmersmarket	F2 - Stage for cultural entertainment	F3 - Hotel/Restaurant /Café	F4 - Joint Healthcare Institution	F5 - Place for Education
Theme & Actor					
Facility					
1. Add new func./facilities	4	4	4	4	4
2. Incr avail retail func	4	2	3	3	3
3. Incr. avail. (soc.) facilities	2	2	2	4	4
4. Incr. avail. cult. possibilities	4	4	3	2	4
5. Attract. (new) inhabitants	3	3	3	3	3
Total	3,4	3,0	3,0	3,2	3,6
Mobility					
1. Incr. access. retail func.	4	2	4	2	2
2. Incr. access. (soc.) facilities	2	2	2	4	4
3. Access. public transport	2	2	2	2	2
4. Incr. focus slow traffic	3	2	2	4	2
5. Decr. car dependency	2	2	2	4	3
Total	2,6	2,0	2,4	3,2	2,6
Identity					
1. Appear. tang. heritage	2	3	2	2	2
2. Appear. intang. heritage	3	3	2	2	2
3. Incr. outside attraction	3	3	3	2	2
4. Incr. inside attraction	3	4	4	3	3
5. Avail. facil. contr. identity	3	4	3	3	4
Total	2,8	3,4	2,8	2,4	2,6
Community					
1. Incr. planned soc. Interact.	3	3	4	2	3
2. Incr. unplanned soc. Interact.	4	3	3	2	4
3. Incr. connect. funct. struc.	3	4	3	2	3
4. Add. space soc. act. & events	3	4	3	2	3
5. Incr. joinable soc. struc.	3	3	2	3	3
Total	3,2	3,4	3,0	2,2	3,2

Design Implication	F6 - Location for Local Distribution	F7 - Concentration of Facilities at the Heart	F8 - New Densification Strategy	M1 - Break Structure with Slow Traffic	M2 - Centralized Parking / Car-free Zones
Theme & Actor					
Facility					
1. Add new func./facilities	4	4	3	2	2
2. Incr avail retail func	4	3	2	2	2
3. Incr. avail. (soc.) facilities	3	3	2	2	2
4. Incr. avail. cult. possibilities	2	2	2	3	2
5. Attract. (new) inhabitants	3	3	4	2	2
Total	3,2	3,0	2,6	2,2	2,0
Mobility					
1. Incr. access. retail func.	4	4	4	3	1
2. Incr. access. (soc.) facilities	2	4	2	3	1
3. Access. public transport	2	2	2	4	4
4. Incr. focus slow traffic	3	4	4	4	4
5. Decr. car dependency	4	4	3	4	4
Total	3,0	3,6	3,0	3,6	2,8
Identity					
1. Appear. tang. heritage	2	2	2	3	3
2. Appear. intang. heritage	2	2	2	2	3
3. Incr. outside attraction	2	2	2	2	3
4. Incr. inside attraction	3	3	3	3	3
5. Avail. facil. contr. identity	2	3	2	3	2
Total	2,2	2,4	2,2	2,6	2,8
Community					
1. Incr. planned soc. Interact.	2	2	2	2	2
2. Incr. unplanned soc. Interact.	3	3	3	3	3
3. Incr. connect. funct. struc.	4	4	2	3	2
4. Add. space soc. act. & events	2	2	2	2	4
5. Incr. joinable soc. struc.	2	2	2	2	2
Total	2,6	2,6	2,2	2,4	2,6

Design Implication / Theme & Actor	I2 - Historic Outlines of Foundation Reinterpreted	I3 - Tangilize History by Writing or Visualization	I4 - Emphasize Characteristics with a Lighting Plan	I5 - Restore Characteristic Features	I6 - Connect Sightlines Between Characteristic Elements
Facility					
1. Add new func,/facilities	2	2	2	2	2
2. Incr avail retail func	2	2	2	2	2
3. Incr. avail. (soc.) facilities	2	2	2	2	2
4. Incr. avail. cult. possibilities	2	2	2	2	2
5. Attract. (new) inhabitants	3	3	3	2	2
Total	2,2	2,2	2,2	2,0	2,0
Mobility					
1. Incr. access. retail func.	2	2	2	2	2
2. Incr. access. (soc.) facilities	2	2	2	2	2
3. Access. public transport	2	2	2	2	2
4. Incr. focus slow traffic	2	2	2	3	3
5. Decr. car dependency	2	2	2	2	2
Total	2,0	2,0	2,0	2,2	2,2
Identity					
1. Appear. tang. heritage	4	3	4	3	4
2. Appear. intang. heritage	3	4	2	3	2
3. Incr. outside attraction	3	4	3	3	4
4. Incr. inside attraction	4	3	3	4	3
5. Avail. facil. contr. identity	2	2	2	3	2
Total	3,2	3,2	2,8	3,2	3,0
Community					
1. Incr. planned soc. Interact.	2	2	2	2	2
2. Incr. unplanned soc. Interact.	2	2	2	3	2
3. Incr. connect. funct. struc.	2	2	2	2	4
4. Add. space soc. act. & events	3	2	2	4	2
5. Incr. joinable soc. struc.	2	2	2	2	2
Total	2,2	2,0	2,0	2,6	2,4

Design Implication / Theme & Actor	M3 - Bicycle-Inclusive Environment	M4 - Central Bus Stop	M5 - Regional Bicycle Routing	M6 Non-Hierarchical 'Village Streets'	I1 - Create See-Through Views
Facility					
1. Add new func,/facilities	2	2	2	2	2
2. Incr avail retail func	2	3	2	2	2
3. Incr. avail. (soc.) facilities	2	3	2	2	2
4. Incr. avail. cult. possibilities	2	3	2	2	2
5. Attract. (new) inhabitants	3	3	3	3	1
Total	2,2	2,8	2,2	2,2	1,8
Mobility					
1. Incr. access. retail func.	3	4	3	2	2
2. Incr. access. (soc.) facilities	3	4	3	2	2
3. Access. public transport	4	4	3	4	2
4. Incr. focus slow traffic	4	3	4	4	3
5. Decr. car dependency	4	3	3	4	2
Total	3,6	3,6	3,2	3,2	2,2
Identity					
1. Appear. tang. heritage	2	2	2	3	4
2. Appear. intang. heritage	3	2	2	2	2
3. Incr. outside attraction	4	3	4	2	2
4. Incr. inside attraction	4	3	4	3	3
5. Avail. facil. contr. identity	2	3	2	2	2
Total	3,0	2,6	2,8	2,4	2,6
Community					
1. Incr. planned soc. Interact.	2	2	4	2	2
2. Incr. unplanned soc. Interact.	3	4	3	2	2
3. Incr. connect. funct. struc.	2	3	3	2	2
4. Add. space soc. act. & events	2	2	3	3	2
5. Incr. joinable soc. struc.	2	2	2	2	2
Total	2,2	2,6	3,0	2,2	2,0

Design Implication / Theme & Actor	I7 - Accent Streets with Directional Patterns towards Heritage	C1 - Social Hub & Community Center	C2 - Urban Farming & Social Garden	C3 - Accessible and Open to Public	C4 - Experience and Observe - For all Ages	C5 - Multifunctional Village Square
Facility						
1. Add new func,/facilities	2	3	3	2	2	3
2. Incr avail retail func	2	2	2	2	2	2
3. Incr. avail. (soc.) facilities	2	3	2	2	2	2
4. Incr. avail. cult. possibilities	2	3	2	2	2	2
5. Attract. (new) inhabitants	2	3	2	2	2	2
Total	2,0	2,8	2,2	2,0	2,0	2,2
Mobility						
1. Incr. access. retail func.	2	2	2	3	2	2
2. Incr. access. (soc.) facilities	2	2	2	3	2	2
3. Access. public transport	2	2	2	2	2	2
4. Incr. focus slow traffic	2	2	2	2	3	2
5. Decr. car dependency	2	2	2	2	2	2
Total	2,0	2,0	2,0	2,4	2,2	2,0
Identity						
1. Appear. tang. heritage	3	2	2	2	2	3
2. Appear. intang. heritage	3	3	2	2	2	4
3. Incr. outside attraction	3	2	2	3	3	3
4. Incr. inside attraction	2	3	3	3	3	3
5. Avail. facil. contr. identity	2	3	3	3	2	3
Total	2,6	2,6	2,4	2,6	2,4	3,2
Community						
1. Incr. planned soc. Interact.	2	4	4	2	4	4
2. Incr. unplanned soc. Interact.	2	3	3	3	4	4
3. Incr. connect. funct. struc.	2	3	3	4	3	3
4. Add. space soc. act. & events	2	4	3	2	4	4
5. Incr. joinable soc. struc.	2	4	4	3	4	3
Total	2,0	3,6	3,4	2,8	3,8	3,6

Actors defined per theme: radar-graphs project location comparison old versus new

Scales:

Facility:

1. Diversity of available functions & facilities
   (1 = no diversity in functions & facilities; 2 = low diversity; 3 = medium diversity; 4 = strong diversity)
2. Available retail functions
   (1 = no available retail functions; 2 = low availability; 3 = medium availability; 4 = strong availability)
3. Available (social) facilities
   (1 = no available [social] facilities; 2 = low availability; 3 = medium availability; 4 = strong availability)
4. Cultural/entertainment possibilities
   (1 = no available cultural/entertainment possibilities; 2 = low availability; 3 = medium availability; 4 = strong availability)
5. Growth/Decline population
   (1 =decline inhabitants; 2 = no change; 3 = slight increase; 4 = strong increase)

Mobility:

1. Accessibility additional retail functions
   (1 = no accessible retail functions; 2 = Accessible long distance, by car; 3 = Accessible by public transport; 4 = Accessible locally on foot/cycling)
2. Accessibility additional (social) facilities
   (1 = no accessible [social] facilities; 2 = Accessible long distance, by car; 3 = Accessible by public transport; 4 = Accessible locally on foot/cycling)
3. Accessible public transport
   (1 =No access to public transport; 2 = poor access [non-central, non-walkable]; 3 = central access; 4 = well-covered access)
4. Focus on slow traffic
   (1 = Focus on motorized transport; 2 = no focus; 3 = focus on cyclable environment; 4 = focus on walkable environment)
5. Car dependent environment
   (1 = car dominant public streetscape; 2 = space for all modes of transport; 3 = decr. car dep. - focus on Public Transport; 4 = decr. Car dep. - focus on slow traffic

Identity:

1. Appearance of tangible heritage
   (1 = no appearance of tangible heritage; 2 = low appearance; 3 = medium appearance; 4 = strong appearance)
2. Appearance of intangible heritage
   (1 = no appearance of intangible heritage; 2 = low appearance; 3 = medium appearance; 4 = strong appearance)
3. Outside attraction
   (1 = no tourism attraction; 2 = low attraction; 3 = medium attraction; 4 = strong attraction)
4. Inside attraction
   (1 = no local attraction; 2 = low attraction; 3 = medium attraction; 4 = strong attraction)
5. Available facilities contributing to identity of the village
   (1 = no facilities contributing to the identity of the village; 2 = low number of facilities; 3 = medium number of facilities; 4 = strong number of facilities)

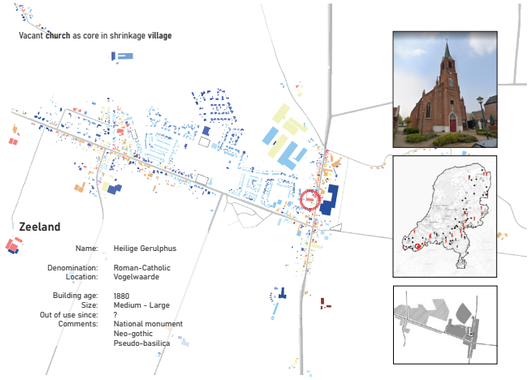
Community:

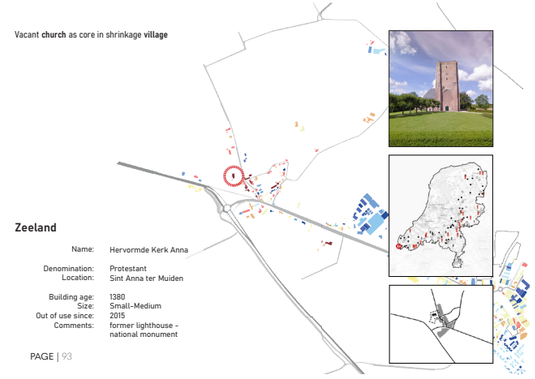
1. Locations of planned/voluntary social interactions
   (1 = no available locations of planned/voluntary social interaction; 2 = low availability; 3 = medium availability; 4 = strong availability)
2. Locations of unplanned/involuntary social interactions
   (1 = no available locations of unplanned/involuntary social interaction; 2 = low availability; 3 = medium availability; 4 = strong availability)
3. Connections between existing functional structure
   (1 = no connections between exisiting functional structure; 2 = low connections; 3 = medium connections; 4 = strong connections)
4. Space to use for social activities and events
   (1 = no space dedicated for social activities and events; 2 = low availability of space; 3 = medium availability of space; 4 = strong availability of space)
5. Places and (social) structures to become a part of/to join
   (1 = no places and [social] structures to become part of/to join; 2 = low number available; 3 = medium number available; 4 = strong number available)

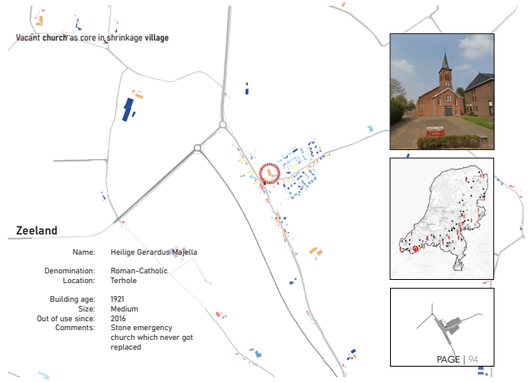
Project locations Original context	Location 1: Haghorst	Location 2: Scharendijke	Location 3: Leuth
Theme & Actor			
Facility			
1. Diversity func,/facilities	2	3	2
2. Avail retail func	1	3	2
3. Avail. (soc.) facilities	2	2	2
4. Avail. cult. possibilities	2	2	2
5. Growth / Decline Pop.	3	1	2
Total	2,0	2,2	2,0
Mobility			
1. Access. add. retail func.	2	3	3
2. Access. add. (soc.) facilities	2	3	3
3. Public transport	1	2	4
4. Focus slow traffic	1	3	2
5. Car dependency	1	2	3
Total	1,4	2,6	3,0
Identity			
1. Appear. tang. heritage	4	3	3
2. Appear. intang. heritage	3	2	3
3. Outside attraction	2	4	1
4. Inside attraction	2	2	2
5. Avail. facil. contr. identity	2	2	3
Total	2,6	2,6	2,4
Community			
1. Planned soc. Interact.	3	3	3
2. Unplanned soc. Interact.	3	2	2
3. Connect. funct. struc.	2	1	1
4. Space soc. act. & events	2	2	3
5. Joinable soc. struc.	2	2	3
Total	2,4	2,0	2,4

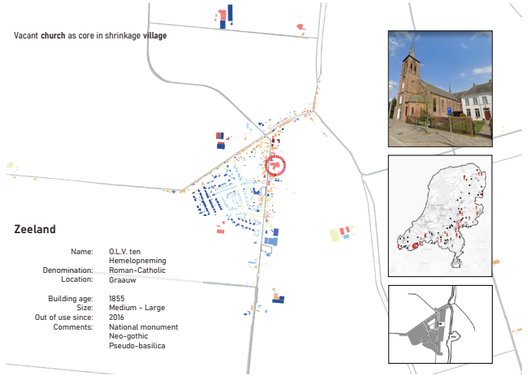
Project locations New context	Location 1: Haghorst	Location 2: Scharendijke	Location 3: Leuth
Theme & Actor			
Facility			
1. Diversity func,/facilities	3	4	3
2. Avail retail func	2	3	2
3. Avail. (soc.) facilities	2	3	3
4. Avail. cult. possibilities	3	3	3
5. Growth / Decline Pop.	3	2	3
Total	2,6	3,0	2,8
Mobility			
1. Access. retail func.	3	3	3
2. Access. (soc.) facilities	3	3	3
3. Public transport	3	3	4
4. Focus slow traffic	3	4	3
5. Car dependency	3	3	3
Total	3,0	3,2	3,2
Identity			
1. Appear. tang. heritage	4	3	4
2. Appear. intang. heritage	3	3	3
3. Outside attraction	3	4	2
4. Inside attraction	2	3	3
5. Avail. facil. contr. identity	3	4	4
Total	3,0	3,4	3,2
Community			
1. Planned soc. Interact.	3	3	3
2. Unplanned soc. Interact.	3	3	3
3. Connect. funct. struc.	3	3	2
4. Space soc. act. & events	3	3	3
5. Joinable soc. struc.	2	3	3
Total	2,8	3,0	2,8

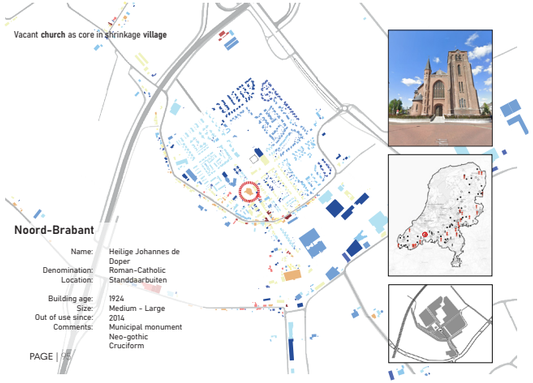
Location cards: 24 locations of interest

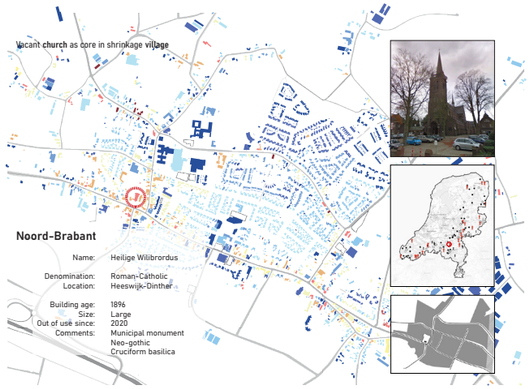










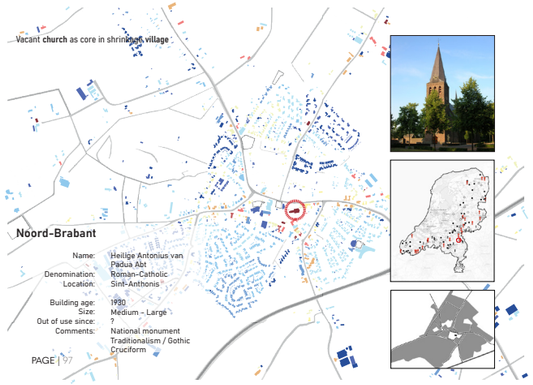


Noord-Brabant

Name: Heilige Wilibrordus
Denomination: Roman-Catholic
Location: Heeswijk-Dinther
Building age: 1896
Size: Large
Out of use since: 2020
Comments: Municipal monument
Neo-gothic
Cruciform basilica

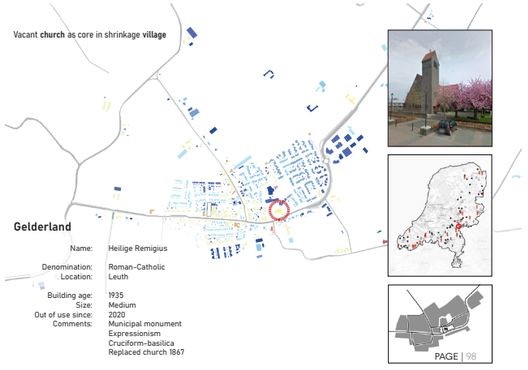
Gelderland

Name: Heilige Georgius
Denomination: Roman-Catholic
Location: Heumen
Building age: 1952
Size: Medium - Large
Out of use since: 2020
Comments: Traditionalism
Basilica
replaced church from
1881 - fire



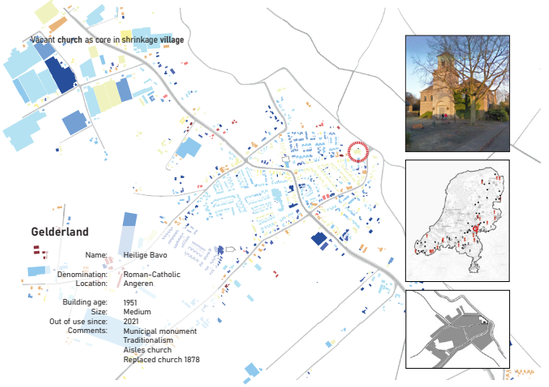
Noord-Brabant

Name: Heilige Antonius van Padua Abt
Denomination: Roman-Catholic
Location: Sint-Anthonis
Building age: 1930
Size: Medium - Large
Out of use since: ?
Comments: National monument
Traditionalism / Gothic
Cruciform



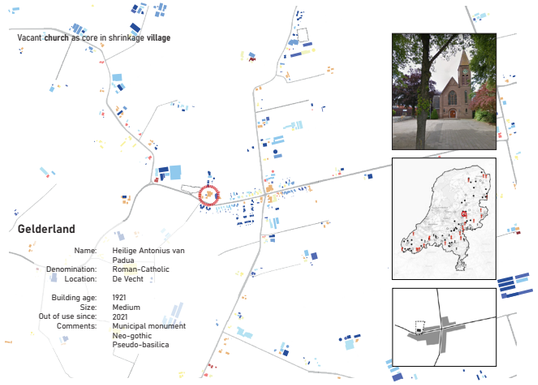
Gelderland

Name: Heilige Remigius
Denomination: Roman-Catholic
Location: Leuth
Building age: 1935
Size: Medium
Out of use since: 2020
Comments: Municipal monument
Expressionism
Cruciform-basilica
Replaced church 1867



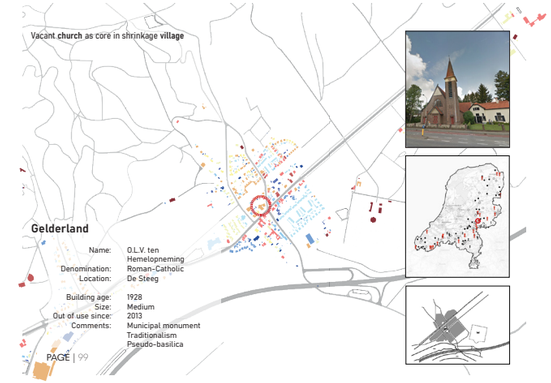
Gelderland

Name: Heilige Bavo
Denomination: Roman-Catholic
Location: Angeren
Building age: 1951
Size: Medium
Out of use since: 2021
Comments: Municipal monument
Traditionalism
Aisles church
Replaced church 1878



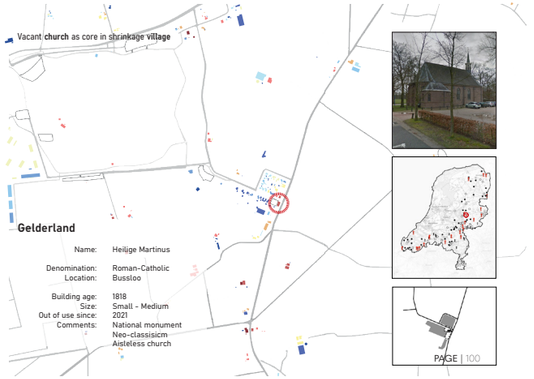
Gelderland

Name: Heilige Antonius van Padua
Denomination: Roman-Catholic
Location: De Vecht
Building age: 1921
Size: Medium
Out of use since: 2021
Comments: Municipal monument
Neo-gothic
Pseudo-basilica



Gelderland

Name: O.L.V. ten Hemelopneming
Denomination: Roman-Catholic
Location: De Steeg
Building age: 1928
Size: Medium
Out of use since: 2013
Comments: Municipal monument
Traditionalism
Pseudo-basilica



Gelderland

Name: Heilige Martinus
Denomination: Roman-Catholic
Location: Bussloo
Building age: 1818
Size: Small - Medium
Out of use since: 2021
Comments: National monument
Neo-classisicm
Aisleless church

Gelderland

Name: Hervormde Kapel

Denomination: Dutch Reformed
Location: Ruurlo

Building age: 1885
Size: Small
Out of use since: 2007
Comments: Aisleless church

Overijssel

Name: Heilige Pancratius

Denomination: Roman-Catholic
Location: Albergen

Building age: 1954
Size: Medium - Large
Out of use since: ?
Comments: Traditionalism
Basilica
Replaced church 1819

Drenthe

Name: Gereformeerde Kerk

Denomination: Reformed
Location: Zwartemeer

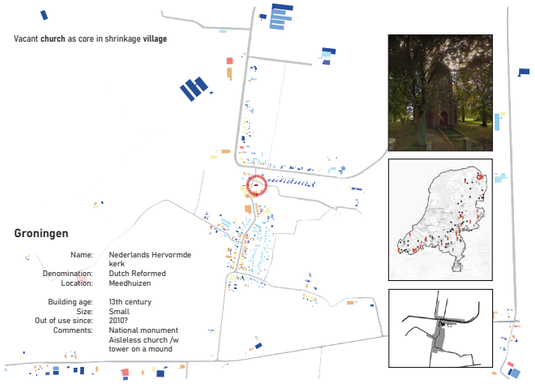
Building age: 1920
Size: Medium
Out of use since: ?
Comments: Municipal monument
Expressionism
Aisleless church

Groningen

Name: Gereformeerde Kerk

Denomination: Reformed
Location: Kornhorn

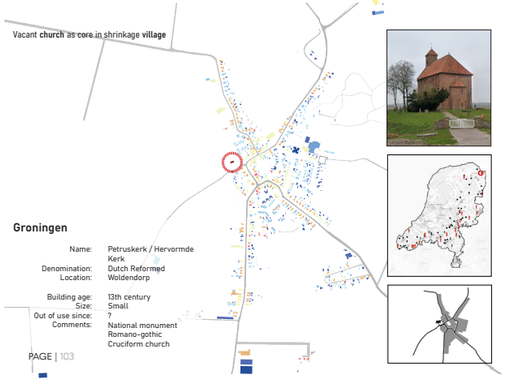
Building age: 1882
Size: Small
Out of use since: ?
Comments: Aisleless church



Groningen

Name: Nederlands Hervormde kerk
Denomination: Dutch Reformed
Location: Meedhuizen

Building age: 13th century
Size: Small
Out of use since: 2010?
Comments: National monument
Aisleless church /w tower on a mound



Groningen

Name: Petruskerk / Hervormde Kerk
Denomination: Dutch Reformed
Location: Woldendorp

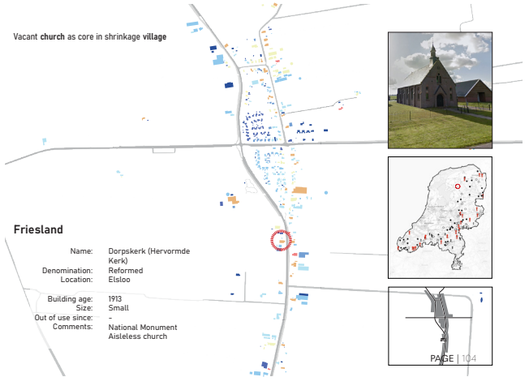
Building age: 13th century
Size: Small
Out of use since: ?
Comments: National monument
Romano-gothic
Cruciform church

Friesland

Name: Rehoboth

Denomination: Dutch reformed
Location: Twijzel

Building age: 1934
Size: Small-Medium
Out of use since: 2015
Comments: Expressionism
Aisleless church



Friesland

Name: Dorpskerk (Hervormde Kerk)
Denomination: Reformed
Location: Elsloo

Building age: 1913
Size: Small
Out of use since: -
Comments: National Monument
Aisleless church

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AR3U115 Graduation Lab Urbanism Studio
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November 2022