



## LIVEABILITY IN THE NEIGHBOURHOOD OF HOPTILLE

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# 1 Introduction

This research plan is part of the graduation project of the Heritage Studio ‘Adapting 20th century Heritage’ with the focus on ‘New Heritage’. The studio looks into H-buurt, an area of Amsterdam Zuid-Oost, and new town Almere Haven and explores the potential of existing urban structures and buildings for the creation of additional dwellings or making those that are already present more suitable to contemporary and future needs. In order to decide on what to do with these neighbourhoods, we need to understand them first through research.

The first part of the research was collective and has provided us with a deeper understanding of what the H-buurt entails along with a set of challenges and values. Through this collective part many problems arose that needed our attention to be able to move forward. Themes such as safety, crime, social cohesion, accessibility and many more were important focus points of the collective research. Consequently, these have inspired the topic of this research plan and with that also formed the basis of the research.

The various number of themes that were touched upon in the collective research had an overlapping theme in common, namely the liveability of the neighbourhood. Although liveability is a very broad concept, it is an essential part of the everyday lives of the residents in a neighbourhood, city or any place people can dwell. The basic definition for liveability as found in the dictionary explains how liveability is ‘the degree to which a place is suitable or good for living in; habitable, comfortable and companionable’ (Cambridge Dictionary, 2020). Thus, it can be considered as a basic necessity, since it touches upon the various needs of people to feel good and at home in a place.

The liveability of a neighbourhood is experienced differently by different people. Nonetheless, there are certain criteria that are applicable for any user. And as architects we have the exciting chance to work with these criteria in our designs to improve the liveability. This research plan combines the knowledge gained through literature about liveability and spatial organisation, with the creativity of redesigning a part of the H-buurt.

**"Hoptille was built in the 1980's. From the beginning it had an unsafe reputation. In the first month there was already a shooting."**



*Illustration 1: Hoptille (Retrieved from <https://www.amsterdam.nl/stadsarchief>)*

## 2 Problem Statement

This among other couple of views is what the people of the H-buurt think of their neighbourhood. They are far from what the architect, Sjoerd Soeters, had in mind while designing for this neighbourhood. In the interview with him, that was part of the collective research the whole group did on the H-buurt, Soeters explained how the area was conceived as a kind of anti-Bijlmer. However, it has been eaten up by the Bijlmers miserable situation and has become even worse than that. Soeters concluded that the built form they developed was idealist and completely failed to make the difference that was needed in this area.

The collective part of this research looked into these 'failures' or as we called them challenges as well as the values that are present in the H-buurt. We aimed to look at the area from different perspectives resulting in the following stakeholders: Government, Makers, Owners and Users. These different inputs have led to the following problem statement. The H-buurt is a very diverse 'buurt' with people from different backgrounds that is part of the greater neighbourhood of Amsterdam Zuid-Oost. Throughout the years this neighbourhood has been neglected by the government in comparison to other neighbourhoods in Amsterdam. This has led to a deterioration of the social and urban conditions of this place. Buildings remained in poor condition, public spaces were left unmaintained and there was no sufficient investment in education. This in turn has allowed Zuid- Oost to be an attraction and breeding ground for criminal activities, poverty and unemployment. All of these circumstances are connected with each other creating a vicious cycle.

## 3 Research Question

Based on the problem statement this research will answer the following research question.

*How can we design the spatial organisation of Hoptille to enhance the liveability of this neighbourhood?*

So, in other words in which way should we design outdoor spaces, building blocks and streets of a neighbourhood to improve the liveability. To be able to answer the main question a couple of sub-question need to be answered through this research plan. These are:

- What is liveability and how does it influence a neighbourhood?
- What are the criteria to improve the liveability of a neighbourhood?
- Which spatial organisations are available and how can they be projected on Hoptille?
- Asses the different models on the criteria for liveability.

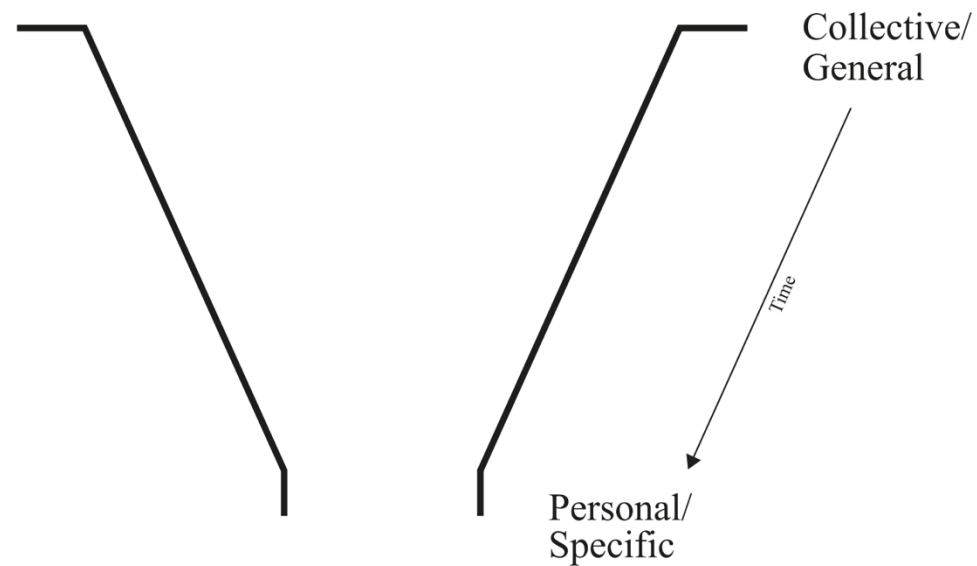


Illustration 2: Methodology Diagram (Collective Work)

## 4 Research Structure and Methodology

This research consists of two parts: Collective and Individual research. The reason behind splitting this research into two parts is to explore different areas of the research topic independently. Splitting the topic into sub-topics helps in gathering information and insights on different aspects of the topic which, on putting together give a holistic approach with enough information about every aspect.

The collective part focusses on the H-buurt as whole through the eyes of the previously mentioned stakeholders. The individual part is based on research by design, which eventually will lead to outcomes that can be used further for the design part of the project.

### 4.1 Collective Research

#### Almere-Haven

The pilot research in Almere Haven is used as an experiment, before diving into the research in the H-buurt. During this experiment, the goal is to test and adapt the research methods and to extract the attributes and values from the opinions of residents. The pilot research consists of two approaches, a media one and an on-site one. Both methods explore residents' experiences, memories, opinions and perceptions, as well as opinions on social media. After this pilot research, the methods were discussed, and the best methods are used in the H-buurt research. Both approaches are further explained below.

#### Media

The first method being used in Almere Haven is the social media research. Several sources were being used for this method, like Facebook, Instagram, Flickr and books about the vision. First, the raw data of all the sources was collected and documented. After documenting this raw data, the data was interpreted, and values were assigned to the various attributes. In this phase, a quantitative and a qualitative approach were used. In the quantitative study, a list of attributes and values was composed. In the qualitative study, the past, present and future perspective were collected with the corresponding



Illustration 3: Methodology Diagram (Collective Work)

attributes and a comparison study was conducted. Lastly, the input data was used for making hotspot maps, mind maps and the Sankey diagram. The hotspot map indicates the distribution of the locations where people took photos. The mind maps provide information about the attributes at the various locations. The Sankey diagram is used to compare the different stakeholders and whether their values correspond.

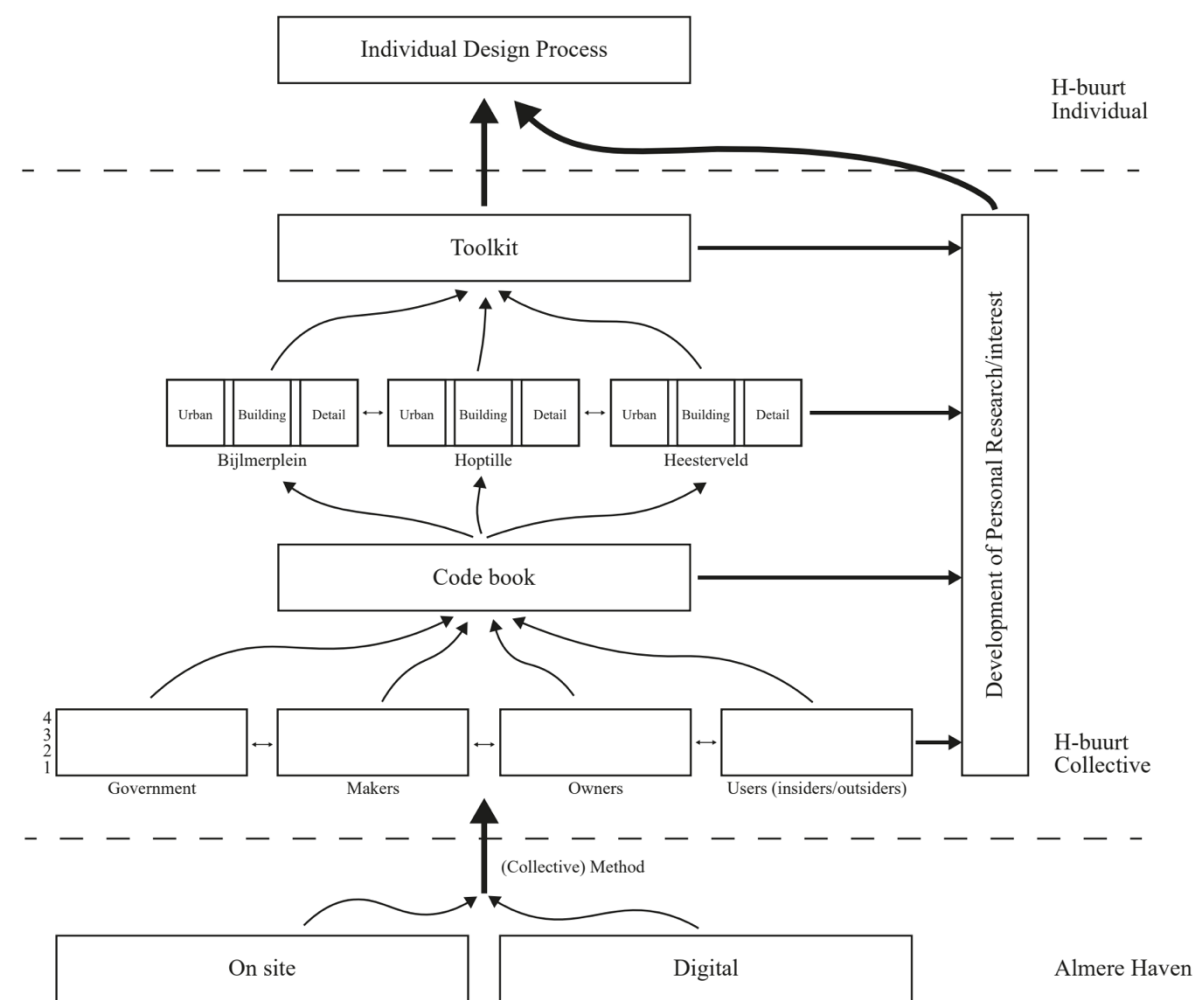


Illustration 4: Methodology Diagram (Collective Work)

On site

The second approach was on site. This involved street interviews of different kinds and several site visits. In total four different methods were used for the interviews, open conversation (A), drawings (B), pictures (C), and questionnaire (D). Each method had its own goal and specifics.

Method A was used during the first site visit. The method is open and based on a conversation. Its goal was to gain a variety of information about the interviewees and their experiences, without leading them into specific directions. It was a suitable method to get a first impression of Almere-Haven. However, it also resulted in unusable data.

The other three methods were prepared for the second site visit. Method B is also open, but visual instead of textual. The goal here was to obtain information about personal, intuitive, and specific attributes/opinions.

Method C and D are more specific. Method C is also visual and aims to direct and acquire specific information within a framework (images) without influence of personal interpretation. Method D is textual again. The goal of this method is to obtain comparable information and opinions about specific subjects of the research(question).

An overview of the four methods is shown below:

	Textual	Visual
Open	Open conversation (A)	Drawings (B)
Specified	Questionnaire (D)	Pictures (C)

In addition to the information gathered through one of the methods, the following base information was acquired: Age, sex (female/male/other) and how long the interviewee has lived/worked in the area. The



data was then documented and analysed. The analysis consisted of colour coding the data in order to extract Values, Opportunities, and Challenges (non-values). From these first interpretations of the data different graphs and maps were made to summarise the results.

### **Translation to H-buurt**

In order to learn from the Almere-Haven research, the group reflected on all methods used. For the media group, there were a few methods that worked quite well for gaining quantitative data. The sources Facebook, Instagram and Flickr, were most useful for the research. The hotspot and tag maps show where photos were being taken and which tags were used. This combination resulted in a quantitative study with a qualitative map as well.

The on site group decided on a top four of the tested methods and a list of recommendations. For each method, the main goal was established. Each method has its own reflection. This reflection was not just focused on the execution of the method but also on the documentation and the first analysis of the data. Both groups combined their research into small booklets and presented them to each other to share the gained knowledge. This was focused on the methods used and their (dis)advantages. The research method tested in Almere created a frame of reference for H-buurt. For H-buurt, there will be more time and multiple stakeholders. This will influence the methods used. In addition to this, the users of H-buurt might react differently to the tested methods than the users of Almere-Haven.

### **H-buurt**

To start the H-buurt research, the group divided into four smaller groups. Each was appointed a Maker according to Howard (2003) in order to cover different perspectives in the area. The division was as followed: Insiders/Outsiders, Owners, Academics/Makers, and Government.

A collective strategy and method were developed to create comparable results across all groups. The strategy follows a weekly schedule with the same focus for each group per week. Within this, different methods can be used by the groups to achieve this focus. The first week was for exploration and in the second week a similar method was used by all groups, photo elicitation (Harper, 2002). Seven photos were selected and shown to all interviewees along with a collective question. These answers were then compared in week three. The fourth week was used to gather more in-depth information and/or the processing of the data.

The method for processing of the data was equal for all groups. The program Atlas.ti was used to code the data to be analysed later on. For coding, an inductive strategy is chosen. This approach requires reading the data and identifying codes throughout the process. It is not clear which codes will be included in the final code book beforehand. This ensures that the codes reflect the issues of importance from the interviewees, not the preconceived notions of the researchers (Hennink, 2020).

The specific method per subgroup is described below.

### **Government**

The government group focused on the perspective of the government on the H-Buurt. This includes the municipality, the national service for cultural heritage, but also organizers on the neighbourhood scale. The research consists of two parts, both spread out over five weeks. The goal is to identify the values in the H-Buurt, from the perspective of the government.

The first part of this research is desk research. This provides an overview of the area, in the form of demographics and plans & policies. The demographics include topics such as income, population or migration background. Demographics reflect trends and how those trends developed over time. Through analysis of these statistics, we can identify events and societal change (passive influences) and policy change (active influences). These influences might represent certain values that are held. Added to that, an overview of government plans tells where challenges are in the area. A challenge represents a value that could or should be present but is not yet.

Second, interviewing representatives from different government agencies contextualizes the desk research. The interviews are structured around a fixed set of photos. This way the responses are comparable. The interviews are transcribed and coded, so that can be further analysed and compared.

### **Makers**

The maker/academic group did research upon the makers and academics according to the table of Howard (2003). Makers were original architects, urban planners and re-designers. Academics involved specialists from architectural heritage, urban and housing fields. The research was built up in several parts for five weeks to find out what attributes and values could be found from the maker and academic perspective.

The first part consisted of site visiting, studying literature and other secondary resources to get familiar with the architecture and context of the Bijlmer initial idea till now. As a result, summarized literature and a timeline provide for a comprehensive overview. The following step was preparing and having interviews with the architects and academics themselves to find out attributes and values of each of them. Therefore, a set of pictures was shown to each of the interviewees to react on, followed by more in-depth questions about their project/specialty. By having the same pictures shown to different interviewees, outcomes can be compared and can be for common grounds or conflicts. The in-depth question provided a personal insight.

The outcome of these interviews have been turned into transcripts. These transcripts form the base to find out the values and attributes, hindrances and mismatches with the help of qualitative and quantitative coding.

### **Owners**

The owners group focused on the real estate property within the five neighbourhoods of H-Buurt. There were 5 steps within the research phase, which built up on each other and could be combined in one in-depth research on the attributes and values out of the owner's perspective. The first steps were taken through background research to get an understanding of the topic, the scope and its importance. Overview maps and a timeline of the history of Housing Associations have been created through online research, literature and mapping.

The gained knowledge of week one enabled the group to set interviews with the stakeholders themselves. Interviewees have been asked to bring photos of the neighbourhood and explain their personal relation to them. A short personal introduction was followed by 6 (collectively) picked photos of different areas within the H-Buurt. Goal was to get a personal reaction to the photos shown. Those reactions allowed us to gather valuable information of possible owner related focus points. It was important to gather information from diverse sources, in the interviewees case with different professional - and even personal - backgrounds to get a wide range of reactions, opinions and therefore values. A physical narrative walk with some of the interviewees should back those values up. During the walk, photos will be taken of important

elements to the interviewee and give more insight into their perspective (Gabrielle, 2005). Finally, those values - in the form of transcripts - were coded to be of further use in research.

Users (Insiders/Outsiders)

The users group focused on the perspective of the people who live or work in the H-buurt or visit the H-buurt for a different reason. The aim is to understand the attributes current users’ value, so these can be taken into consideration for future designs. For the research three sources were used, which were approached in similar ways. First general research was done, secondly more detailed information was gathered. Furthermore, all this research was coded, and the data interpreted. Finally, conclusions were drawn, and overviews of the information were made.

For the first source, interviews, four types of interviews were conducted. In the first week a basic set of questions was used to get a general idea of the opinions about the area. This information was used to create a more detailed set of questions and a collective set of photos, which were used for the online questionnaire in week two as well as the in-depth interviews. This photoset was simultaneously used for the street interviews.

For the second source, social media, information was gathered on Flickr, Instagram, and Facebook. The information consisted of pictures with hashtags and comments.

For the third source, research done by others, information was gathered from scientific sources on the users’ perspectives specified to Bijlmerplein, Hoptille and Heesterveld.

All information was coded in separated files which were translated into a heat map, word map and an overview of attributes and values.

Illustration 5: Different approaches on Liveability (Office of the Deputy Prime Minister, 2006)

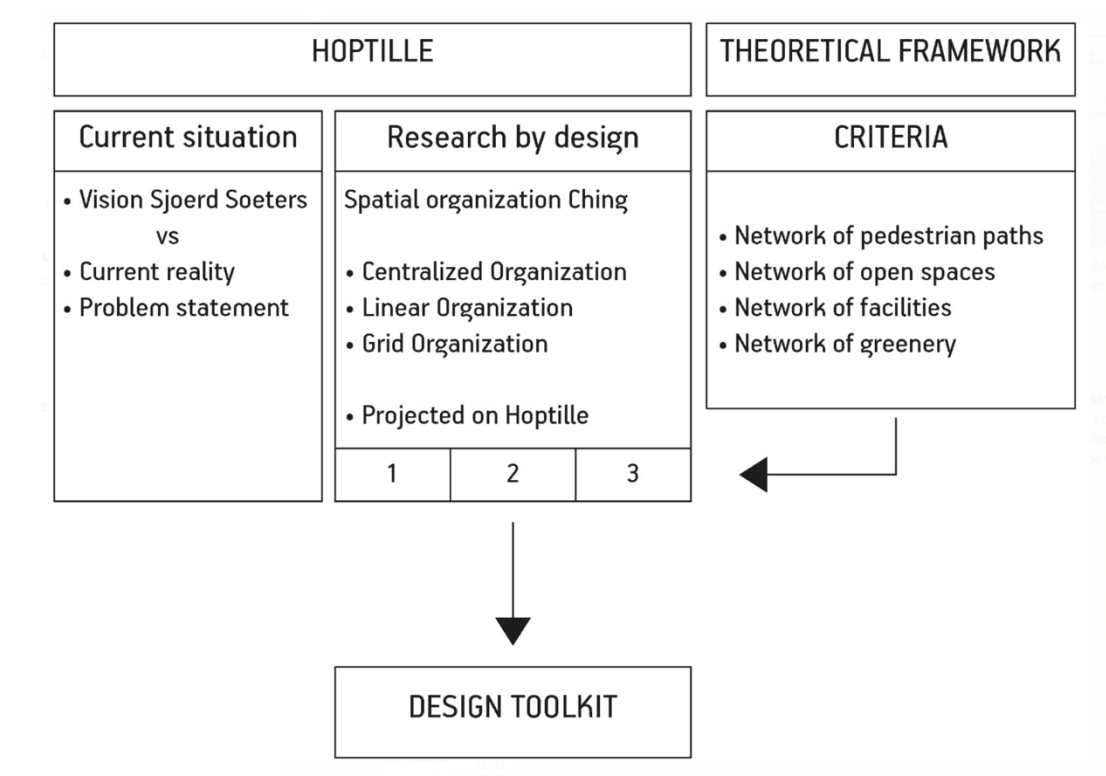
4.2 Individual Research

The collective research has brought forward some problems that are present in the neighbourhood. Looking at these and comparing them with the vision the architect Sjoerd Soeters had in mind for Hoptille, I have set up the problem statement and research question for my own individual research. The individual part of the research is conducted through research by design. The aim of this research is to create a design toolkit for the spatial organisation of Hoptille which will improve the liveability of this neighbourhood. The methodology behind this, is explained in the diagram on the left.

This individual research consists of three parts. The first focuses on the term liveability and what it really means in architecture, for the neighbourhood and for me in this research. Based on the literature a set of criteria are defined that influence the liveability of a neighbourhood.

The second part focuses on the different spatial organisations and the way they can be used for the new design of Hoptille. As was mentioned before the spatial organisation of a neighbourhood has an impact on its liveability. Therefore, through this research I am looking into the several forms of spatial organisations and projecting them on Hoptille. For this I am using the theories of Francis D.K. Ching from his book ‘Architecture: Form, Space and Order’ (2014). Ching defines five types of spatial organisations of which I have chosen three to work with, namely, Centralized Organization, Linear Organisation and Grid organisation. Based on these I have designed three models of Hoptille.

In the third part all of the above come together. The three models I made for Hoptille are ‘tested’ against the criteria that is derived from the theories on liveability. This leads to a set of conclusions that indicate which spatial organisation of combination of these create a neighbourhood that has a high quality of liveability. These conclusions result in a toolkit to be used for the further design of the graduation project.



5 Research by Design

Omuta (1988)	Holt-Jensen (2001)	Vesser at al (2005)	Heylen (2006)	ODPM (2006)
Employment	Aesthetics of living	Housing	Dwelling	Environment Quality
Housing	Environment	Social Environment	Social Environment	Physical Environment
Amenities	Personal	Physical Environment	Physical Environment	Functional Environment
Educational	Social Relations	Functional	Safety	Safety
Nuisance	Functional			
Socio-economic				

Illustration 6: Different approaches on Liveability (Office of the Deputy Prime Minister, 2006)

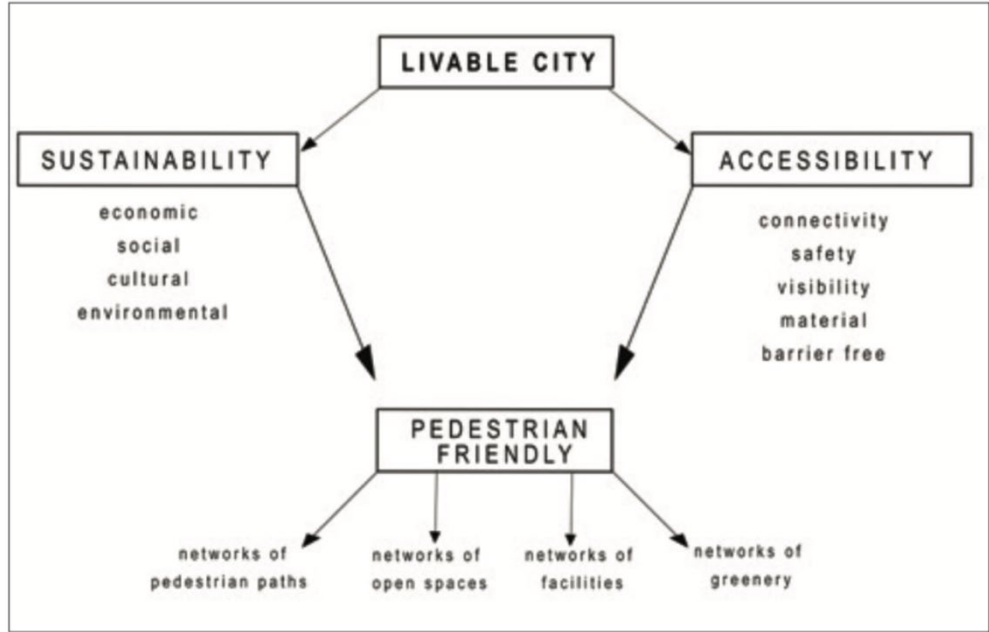


Illustration 7: Definition of the Liveable City (Zec, Kolakogluy & Erem, 2018)

5.1 Theoretical Framework

The concept of liveability is very broad and can be different between particular disciplines. The dimensions and the criteria vary depending on the researchers’ culture, discipline and objectives (van Kamp et al., 2003; Pacione, 2003). For instance, Omuta (1988), used dimensions like amenities, employment, nuisances, housing and socio-economy in order to determine the liveability index of different neighbourhoods in Benin City. Whereas other researchers take on different criteria in measuring this. The table on the left shows the variation of dimensions and criteria of different researchers to measure liveability.

This research focuses on the relationship between the built environment and liveability, by defining what liveability is and which spatial criteria are needed for it to have a positive outcome.

In this project I aim to create a design for Hoptille that focuses on the needs of the users of the place. Therefore, this research looks at liveability from the perspective of the users of the neighbourhood. This approach of defining liveability is also present in the work of Norouzian-Maleki et al. (2015), who define liveability ‘as the quality of life as it is experienced by the residents of a neighbourhood within an urban area’. They draw a clear connection between the built environment and liveability and indicate that a range of aspects associated with the built environment have an impact on the liveability of a place. These aspects range from accessibility, inclusiveness, equity, safety, continuity, participation and greenery, to the design, maintenance and use of the built environment, the availability, accessibility and proximity of parks and public spaces, and the perceived safety of an area (Norouzian-Maleki et al., 2015).

Similarly, in their research on liveable cities, Zec, Kolakogluy & Erem (2018) determine liveability as ‘a quality of living and the quality of a daily routine which city residents can experience’. In their approach they create a conceptual framework that combines two basic qualities, namely: sustainability and accessibility which in turn comprise a pedestrian friendly urban environment. This pedestrian friendly urban environment is made out of four elements:

- 1. Networks of pedestrian paths
- 2. Networks of open spaces
- 3. Networks of facilities
- 4. Networks of greenery

These four elements will be used as the criteria for assessing the current spatial organisation of Hoptille and the three new models based on the theories of Ching. In the following chapter these four elements are explained and more elaborated on. This is done based on the research of Zec, Kolakogluy & Erem (2018), other literature on the definition of these elements and the findings from collective research.





*Illustration 8: Open Space (Retrieved from <https://www.archdaily.com/948252/11-steps-to-achieve-quality-public-spaces-at-a-neighborhood-level-un-habitats-guideline>)*



*Illustration 9: Community Square (Retrieved <https://ashlime.com/crowdus-plaza>)*

## 5.2 Criteria for liveability

### Networks of Pedestrian Paths

“The paths, the network of habitual or potential lines of movement through the urban complex, are the most potent means by which the whole can be ordered. The key lines should have some singular quality which marks them off from the surrounding channels: a concentration of some special use or activity along their margins, a characteristic spatial quality, a special texture of hour or facade, a particular lighting pattern, a unique set of smells or sounds, a typical detail or mode of planting” (Lynch, 1960).

As Kevin Lynch beautifully describes a path is more than a connecting medium between two points. Although, to be at certain destination matters, but how to get there matters more. A place which is walkable is more pedestrian friendly. Take it as if you walk on a path you wish to reach your destination quicker, even though you are not short on time, means the medium (which is the path itself) is not creating any ease in your journey. The network of paths should be connecting as many necessary points as possible without leaving people feeling lost or carried away. The features of a walkable community can be as connected, clear, comfortable, convenient, pleasant, safe, secure, universal and accessible (Ceccon & Zampieri, 2016).

### Networks of open space

A liveable community has a continuous connection between central areas and distant settlements. Pedestrian paths and cycling tracks should connect to social places, and should connect community life as well (Salzano, 1997). Open spaces are where people of different walks connect to each other and develop the sense of community. These places are where people discuss and share community problems and their solutions.

Keeping in mind the very case study in mind, I am more concerned with benefitting from such open spaces. One way is to transform these spaces into some recreational spaces like building a small basketball court or a yoga practice centre, so the people have an excuse to connect to each other and discuss community related issues. Open spaces like beaches and streets should display innovative, safe and creative products so the users or public are intrigued to come out on these public places; once public is out on a common place interaction and community building will start happening spontaneously.

### Network of Facilities

“The building with a lively building edge is connected, part of the social fabric, part of the town, part of the lives of all people who live and move around it ... If the edge fails, then the space never becomes lively” (Alexander, 1977).

Public places should be surrounded with some facilities that would be in the interest of the community. When open spaces have some useful facilities to offer, the public will definitely want to spend more time out at such places; and this definitely means more public interactions. Having a wholesome library in the corner of a main street or a sound dine out





Illustration 10: Hoptille (Retrieved from <https://www.at5.nl/artikelen/193265/slachtoffer-gewond-na-beroving-in-zuidoost>)



Illustration 11: Hoptille (Retrieved from <https://www.nul20.nl/foto/bouwplannen-zuidoost>)

restaurant is what people love going to instead of an idle street where only people move back and forth. These buildings, along with their very functions, provide a better ground for community work and public interactions.

### Network of Greenery

Greenery not only beautifies a place but also promotes a positive environment. Furthermore, it can enact as an urban rehabilitation action and become an icon of modernity (Virtudes, 2016).

With the increase in urbanisation, adding greenery to a public space gives a message of positivity. People prefer a green place to be out more than a place with empty sidewalks. Adding this feature to a neighbourhood increases the liveability index of that place as it is a direct factor to a pedestrian friendly area.

## 5.2 Liveability in Hoptille

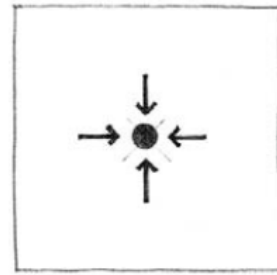
If we were to look at the current spatial organisation of Hoptille and test it against the criteria of liveability, it becomes clear that it fails on many aspects. The one criterion it does include is that of 'networks of paths. Hoptille has many pedestrian friendly streets, with no vehicles coming inside. However, the quality of these streets is not as sophisticated as Lynch (2016) describes. The long building blocks do not allow the public to roam around freely and easily.

As for the remaining three criteria, it is safe to say that they are not visible in Hoptille. Even though from an urban scale it looks like there is a lot of greenery, this greenery does not have the qualities needed for it to improve the state of the neighbourhood. Most of the greenery is private and the amount that is public does not have any function, rather than filling up the space. This leads us to criteria number 2; open spaces, which are absent in Hoptille as well. As had become clear from the collective research there are many tunnels, corners and smaller empty spaces that impact the safety in a negative way and trigger crime by becoming the breeding places of usage and exchange of drugs for instance. As for the last criteria; network of facilities. These are not present in Hoptille for all the present building blocks are filled with dwellings. As one of the interviewees from the collective research stated: "There is little to do in the area, which makes the Hoptille boring".

These are some of the points that illustrate the current state of Hoptille. One way to improve the liveability is by designing an improved spatial organisation for Hoptille to meet the criteria needed. In the following chapter three new spatial designs are created based on the models of spatial organisations of Ching (2014) and tested on the criteria of liveability.

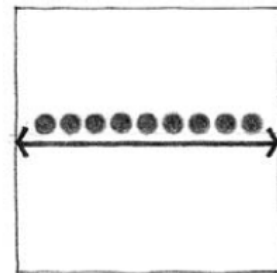
### Centralized Form

A number of secondary forms clustered about a dominant, central parent-form



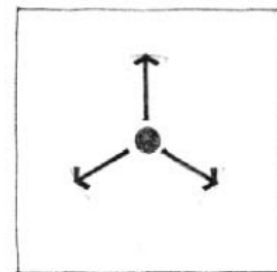
### Linear Form

A series of forms arranged sequentially in a row



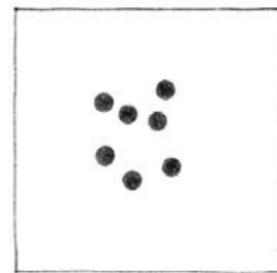
### Radial Form

A composition of linear forms extending outward from a central form in a radial manner



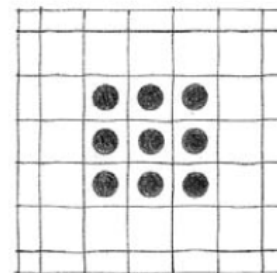
### Clustered Form

A collection of forms grouped together by proximity or the sharing of a common visual trait



### Grid Form

A set of modular forms related and regulated by a three-dimensional grid



## 5.3 Spatial Organisation based on Ching

Ching (2014) distinguishes five types of spatial organisations. In this chapter three of these are explained briefly and projected on Hoptille, these are Linear Organisation, Centralised Organisation and Grid Organisation. Each of the resulting three models of Hoptille illustrates a way in which the organisations of Ching can be used on the current situation of Hoptille.

### Linear Organisation

In his book Ching (2014) describes Linear Organisation as a series of spaces that function alike; there might be some other linear spaces crossing over, which emphasises the importance of the junction(s). The following image from Ching's Linear Organisation Model gives a better overview of how it looks like. The pivotal spaces are the significant spots for community development and public interactions. The linear and homogeneous series of similar spaces results in a directional movement of public and helps in connecting different public spaces with a clear path.

### Centralised Organisation

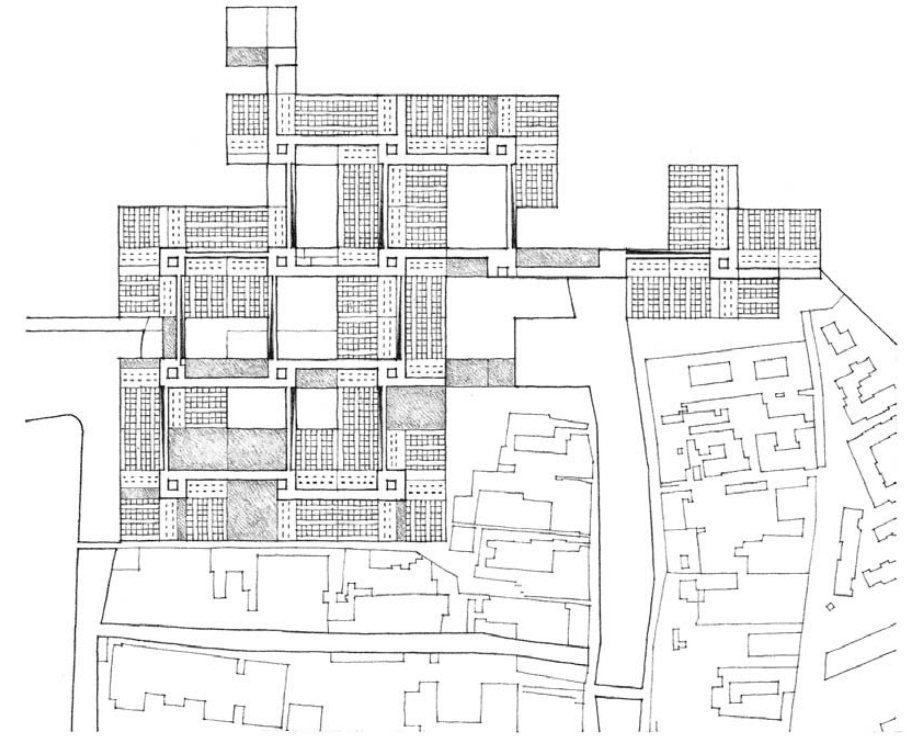
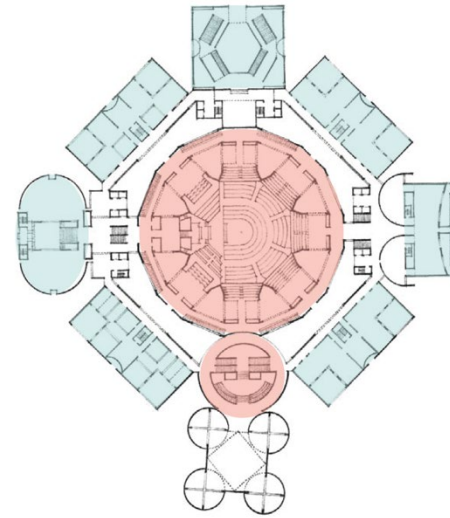
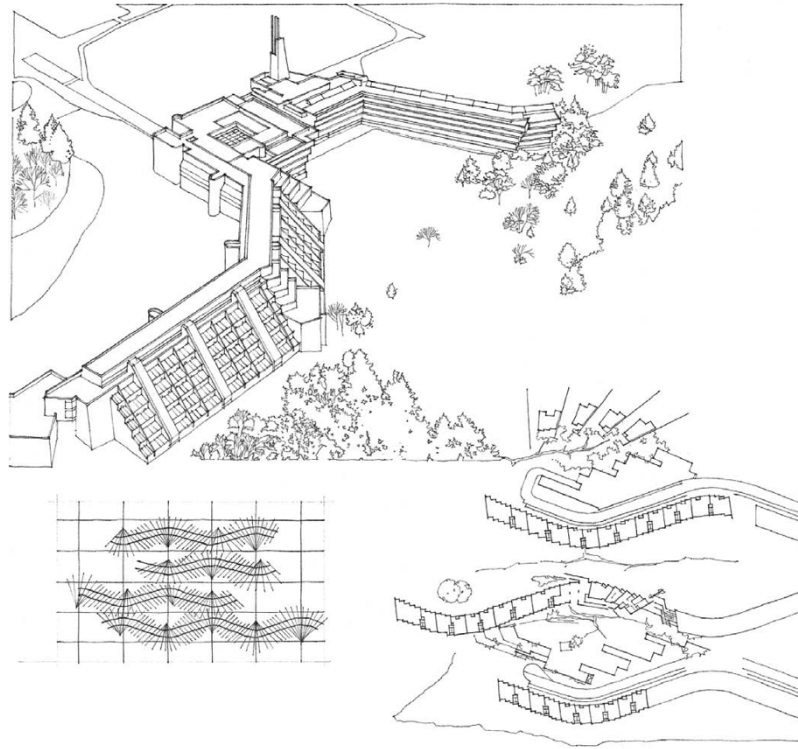
This type of organisation allows several secondary spaces to share a stable and centralised common space in order to link with each other. These formations are mostly common in building a community space like Mosques, Churches or even libraries.

The central space is where public interact with each other and have discussions. The secondary organizations could form different shapes as obvious in the above picture shown hexagonal, Oval, Square, Pentagonal or Circular.

### Grid Organisations

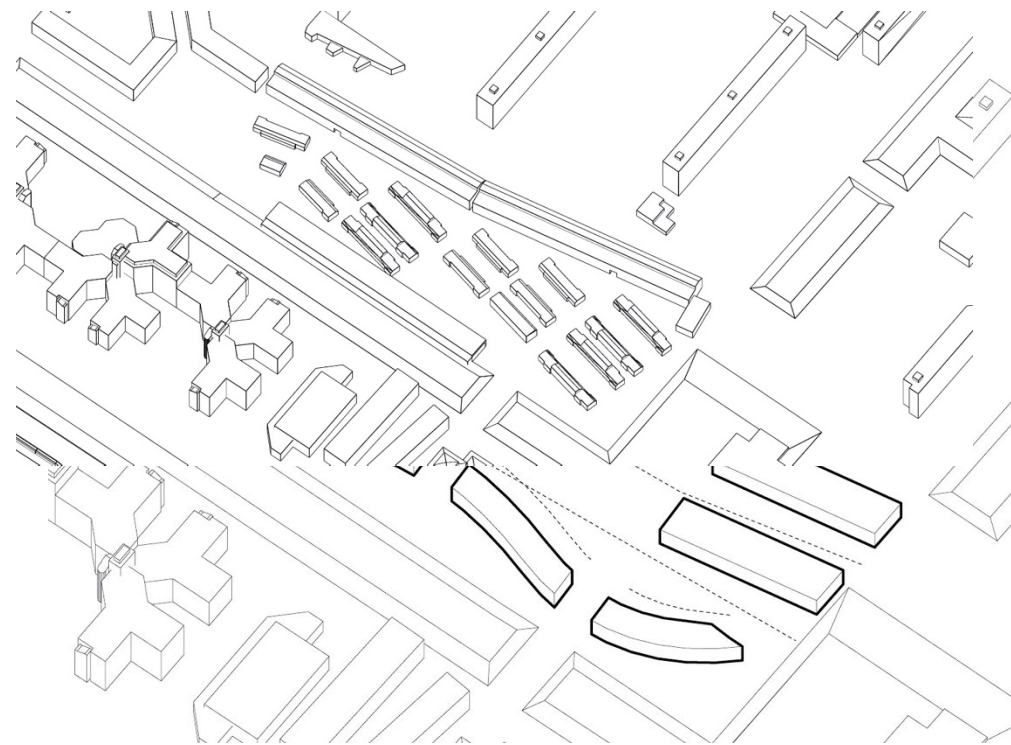
'A grid organisation consists of forms and spaces whose positions in space and relationships with one another are regulated by a three-dimensional grid pattern or field' (Ching, 2014). The major property of this organisation is its pattern and continuity of the series of spaces in an organised manner. This organised pattern proposes a better and regular surveillance in which the small blocks work as a separate entity.





*Illustration 13: From left to right; linear, central and grid organization examples (Ching, 2014)*

*Illustration 14: Current situation Hoptille (own drawing)*



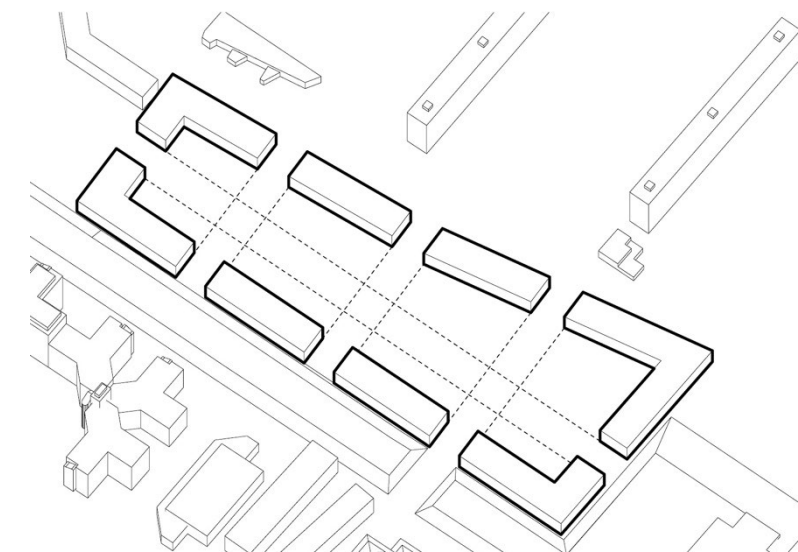
*Model 1 Linear*

#### >Network of pedestrian paths, open spaces, facilities and greenery

In this model there is a strong network of pedestrian paths. However, due to the paths being all linear the quality may not be as appealing as should be. The paths over here seem to be more as a connection from one point to another. Also, their accessibility is not as strong. There are a few entering points, but overall, the long building blocks take over.

This model allows for the creation of some open spaces. The open spaces between the block can be turned into green spaces. Apart from that these blocks allow for the creation of a front yard and a backyard; however, this again will be private which does not add up to the communal greenery.

A negative side of this model is that it is not the ideal model for the application of facilities. Some outer corners of the building blocks can be used as spaces for the implementation of some facilities.



*Model 2 Central*

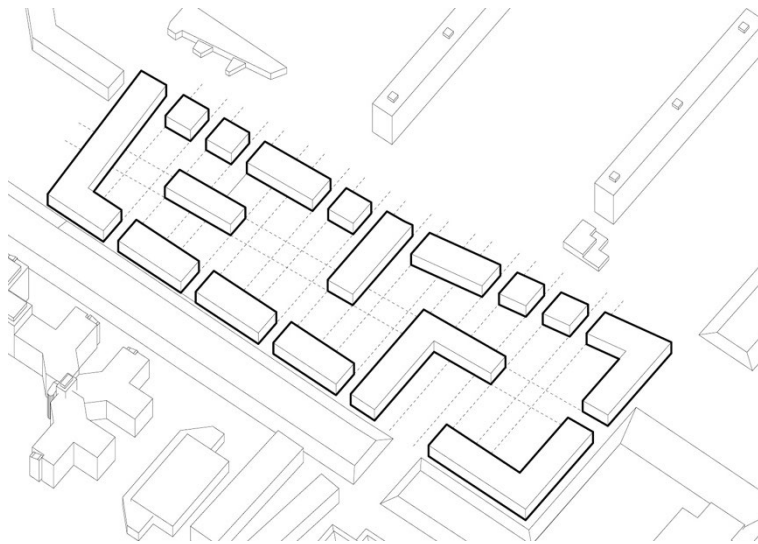
## 5.4 Assessing spatial Organisation models

This chapter starts by briefly explaining the three models I have made based on the spatial organisations of Ching. After that the models are assessed on the criteria on liveability that were defined in the earlier chapter. The illustration below shows the current situation of Hoptille.

### Model 1 Linear

The first model is based on the linear spatial organization of Ching. In this model the building blocks are placed linear to each other and create longer lines that could be used for pedestrians. To avoid the creation of one long building block that will create a barrier between the spaces, the blocks are cut at several points creating a number of new entry points. With this model there will be more dwellings and higher buildings than the current situation. The resulting open spaces function as semi-public or fully public spaces, meaning that every resident of the neighbourhoods can use these.





*Model 3 Grid*

The last model is based on the grid organization. As the name suggests the building blocks follow the underlying grid. With this model it is more possible to play with the sizes of the open spaces and therefore create large public spaces and more intimate semi-public or private spaces.

#### **>Network of pedestrian paths, open spaces, facilities and greenery**

This model has many access points and pedestrian pathways. By opening up the building blocks on the outer edges, the area will be more accessible.

The organization of the building blocks allows for the creation of open spaces of different dimensions. These can be used in different ways by different people. The smaller open spaces may become more private or used by a group of people surrounding the space, whereas the larger open spaces can be used as public spaces for the whole neighbourhood. The same is applicable for the greenery and the facilities. Some of these courtyards can become places with lots of greenery, while other can function as smaller squares with terraces of cafes for instance.

#### **Model 2 Central**

The second model is based on the central type. Here the midrise buildings in the middle will be demolished to make place for a series of public spaces. On the outer edges of the area new blocks are added to the remaining building blocks, creating an enclosed space in the middle. In this model there is a clear grid of where the entrances of the neighbourhood are, all of which are aligned towards the grand central public space.

#### **>Network of pedestrian paths, open spaces, facilities and greenery**

The central open space can become a pedestrian only place. This means that older people as well as children can walk around freely without the need to be cautious for vehicles. Due to the large space available, the paths can be designed in such a way as Lynch (1960) described. However, since there is no real hierarchy or structure, it may lead to pedestrians having to be more careful in their wayfinding.

This model allows for the most open space in terms of dimensions. The whole middle area is open and can be filled in as the residents or designer pleases. This large open area can be used for smaller stalls with certain facilities, or it can be used as a public park. A downside, however, is that the area might become too large and therefore lacking any kind of intimacy.

#### **Model 3 Grid**

	Network of pedestrian paths	Network of open spaces	Network of facilities	Network of greenery
Hoptille	+	-	--	-
Model #1 Linear	+/-	+/-	-	+
Model #2 Central	+	++	+	+
Model #3 Grid	+/-	++	++	++

6 Conclusion

Going back to the research question: *How can we design the spatial organisation of Hoptille to enhance the liveability of this neighbourhood?* It has become clear that there are several ways to do this. In order to enhance the liveability, it is important to understand this term and be aware of the fact that it is a broad concept that can differ in the various disciplines. In this research the term liveability was defined by four criteria: network of pedestrian paths, network of open spaces, network of facilities and network of greenery.

The second point of focus is about the spatial organisation that enhances the liveability and provides room for the mentioned criteria to take shape in. It has become clear that each type of spatial organisation enhances a certain perspective on liveability. Some types are more suitable than others, such as the grid organisation that has scored more positive notes on all of the criteria.

For my graduation project in the case of Hoptille, the grid organisation is a favourable choice. However, this does not directly mean that the best spatial organisation for liveability is the grid organisation, because liveability is dependable on many factors across different disciplines, backgrounds or

neighbourhoods. Also, it is perfectly possible as well to choose which criteria is more important in a neighbourhood and decide on the spatial organisation for that. Moreover, what would make the design more interesting, is to find a balance or combination between these different spatial organisations. Based on the table a combination between the central and grid organisation can create an interesting outcome both design wise and liveability wise.

A proposal could be that the open and public places can be transformed into centralized organizations and the blocks where neighbours are more hesitant to interact with each other can be integrated into grid organization.

The central concentrated spaces, then, can be used for facilities or for social events while at the same time function as a recreational space for social cohesion. In this way, both types are adding value to each other forming a community.

7 Relevance

Designing a neighbourhood that places the needs of the residents up front is an assignment that can prevail with any architect. As has become clear there are many factors that influence the liveability of a place. Many of which are not even architecture related, for each discipline handles different criteria and points of focus. Nonetheless, architects can have a direct and indirect impact on how a neighbourhood will be experienced and what it will bring forward. Through this research I tried to create a framework that combines the tangible elements of spatial organisation with the less tangible criteria of liveability. This framework does not only applicable on the neighbourhood of Hoptille, but as well in other neighbourhoods in The Netherlands. However, one needs to be careful and considerate in using this framework in different areas of the world. Since each area may have a slightly different understanding of what liveability is.

This research was conducted by getting information from online platforms and interviewing the architect and the residents of the H-buurt. This gave me a vast information that I used in this research. The shortcoming of this research is relying on only one set of information. Surveying and interviewing the people of Hoptille would have provided a better idea of how the dweller’s think about the architecture and infrastructure of the area. But it was not possible for me to go around and do these interviews as Covid19 breakout has restricted us to go in public frequently.

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Interview with. Man at the large square of Bijlmerplein in front of the Lidl , week 2, Amsterdam , date, place etc'