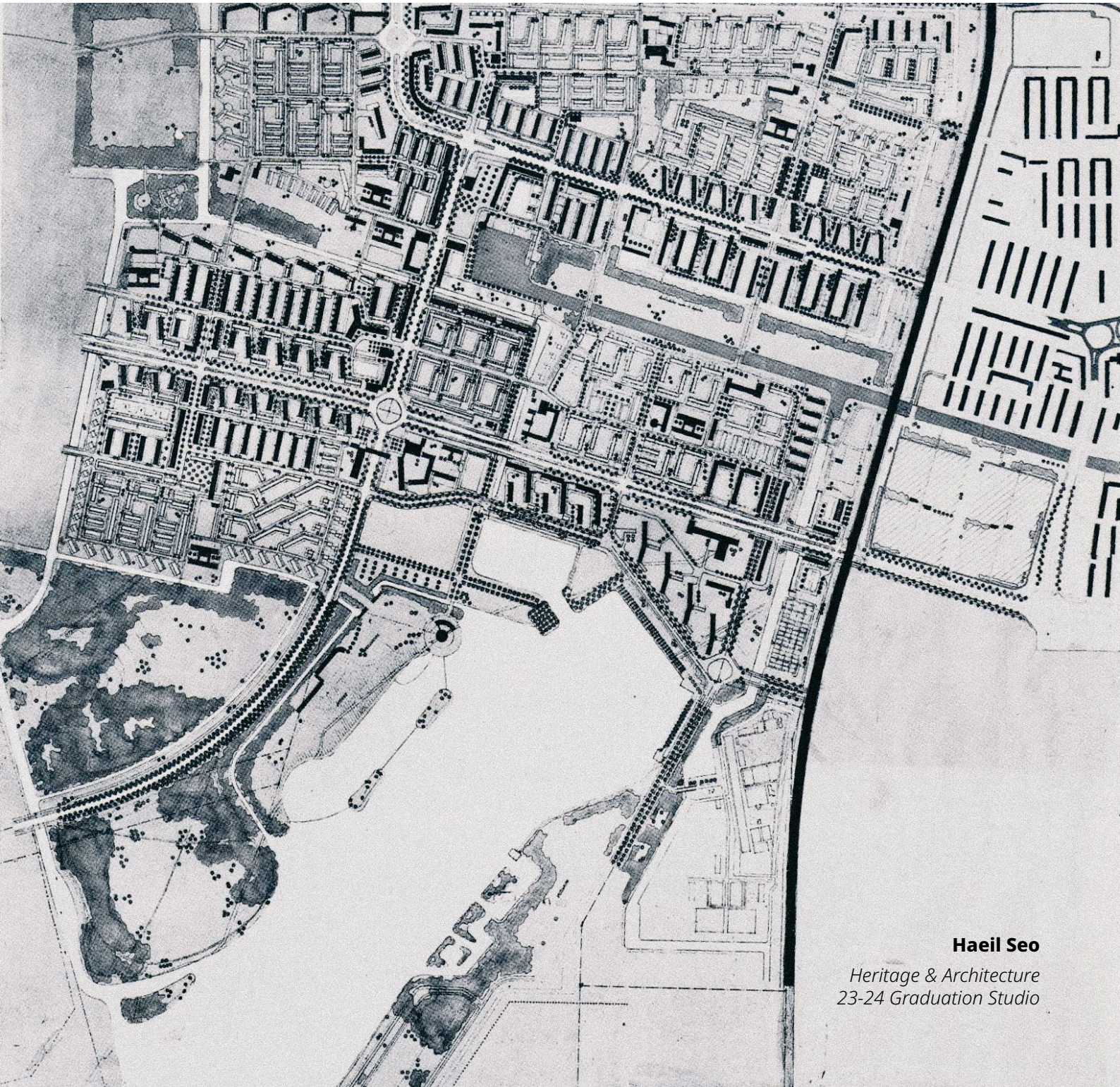
Research Plan

Heritage Redesign for **a Lively Neighborhood**

Heritage Redesign Strategies to Make a Garden City's Neighborhood Center Livelier : The Case of Plein '40-'45 in Western Garden City, Amsterdam Nieuw-West



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Heritage & Architecture
23-24 Graduation Studio

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Heritage Redesign Strategies to Make a Garden City's Neighborhood Center Livelier
: The Case of Plein '40-'45 in Western Garden City, Amsterdam Nieuw-West

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Adapting 20C. Heritage: Resourceful Housing

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Preface

The Graduation Studio 'Adapting 20C Heritage' explores how the post-war heritage of Amsterdam Nieuw-West can be transformed and utilized in response to the housing shortage that is already a serious social issue in Amsterdam. At the same time, we will consider how to value, preserve, and transform this relatively young modern heritage.

In addressing the housing shortage, which is the premise of the studio, I believe that while it is important to provide housing directly, it is even more important to create an environment in which housing can be provided, that is, to create a livable city. The degree to which a city is livable is often conceptually described as livability. Ruth & Franklin (2014) state that livability shapes the public's perception of a city and the competition between cities to attract human capital and infrastructure investment. In other words, livability can be a requirement to attract housing supply.

Then, how do we create a livable city? Kevin Lynch (1981) answers what a good city should look like with five dimensions: vitality, sense, fit, access, and control. Meanwhile, Balsas (2004) says that a vibrant city is a fundamental element of urban life and is crucial to livability. In short, it can be said that urban vitality is a primary and essential factor in creating a livable city.

Therefore, in this research, I will understand urban vitality as a fundamental element of livability and focus on it. This will be a first step in solving the housing crisis in Amsterdam. I hope that this research will help to make the neighborhoods in the Nieuw-West area livelier.

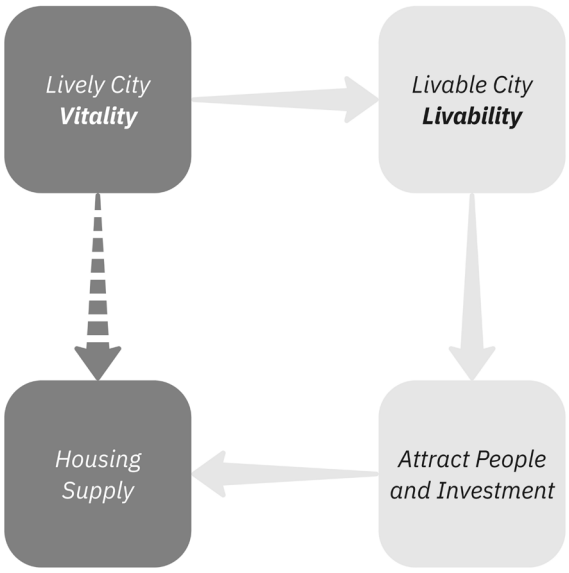

Figure 1. *How to solve the housing shortage crisis*

1. Introduction

1.1 Concepts and Relations

As a response to the huge number of people flocking to cities after the Industrial Revolution in the 19th century and to rapid urbanization, English urban planner Ebenezer Howard (1902) advocated for the ***Garden City*** in his book *Garden Cities of Tomorrow*, which was a model for controlling urban sprawl and a proposal for a form of suburban city that combined the economic and environmental advantages of rural and urban areas.

Meanwhile, the functionalist view of urban development gained strength after the two world wars (Gehl & Svarre, 2013), and Jane Jacobs opposed the urban planning and redevelopment of the time, publishing her seminal book, *The Death and Life of Great American Cities* in 1961, criticizing modernist developers, including the Garden City Movement (Jacobs, 1961; Coupland, 1997). In the book, she argued that the most important thing about a lively city is the social interaction between people and that urban planners should be sensitive to the complexity of human life in cities to promote social and economic ***vitality*** rather than building cities around theoretical principles (Jacobs, 1961; Mouratidis & Poortinga, 2020).

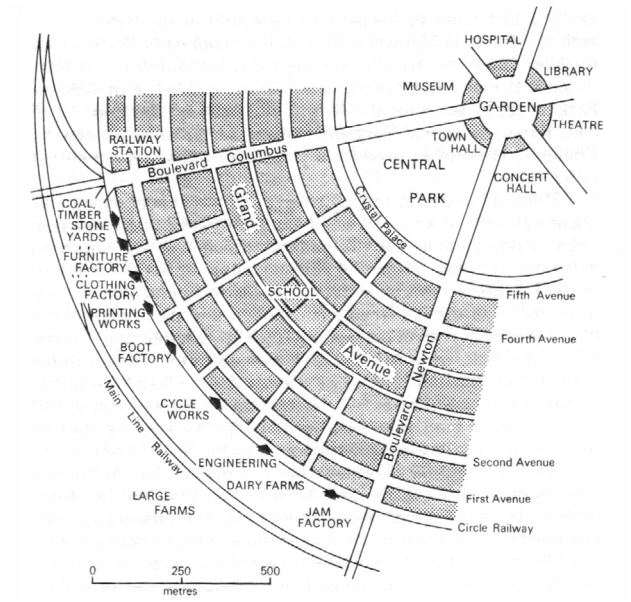

Figure 2. *Howard's Ideal*

Both chronologically and discursively, the idea of the Garden City predates discussions of public life and urban vitality (Gehl & Svarre, 2013). While the Garden City Movement has influenced the development of many cities, it is surprising that there have been few attempts to assess the urban vitality of those cities.

1.2 Problem Field

Amsterdam Nieuw-West was planned and developed based on the concept of a Garden City as part of Amsterdam's General Expansion Plan, AUP (Van Eesteren Museum). While the AUP distinguished and reflected the functions of the city according to functionalist principles (Van Eesteren Museum), the current Western Garden Cities are a mix of a functionalist cityscape and a traditional one (Oeffelt et al., 2010).

In 2001, fifty years after the first residents moved into the cities, Amsterdam embarked on an urban renewal of the Western Garden Cities (Oeffelt et al., 2010). *Nieuw Nieuw-West*, a book documenting the urban renewal process in Amsterdam Nieuw-West for about a decade starting in 2001, notes that the image of the Western Garden Cities, which had been attractive since the end of the 20th century, had become negative, with many public green areas making residents feel unsafe:

> At the end of the last century, the previously attractive Western Garden Cities began to suffer from a negative image. The cause of the demise was found in a very one-sided housing supply, with homes that were also worn out. An important part of the neighborhood consisted of small apartment buildings in the social rental sector. And the many public green areas that

should have given the idea of freedom, actually gave the residents an unsafe feeling. (Oeffelt et al., 2010)

On the other hand, *Environmental Vision Amsterdam 2050* (2021), which shows the overall urban planning vision for Amsterdam, states that the vision for the Nieuw-West area is to develop it as an urban center as one of the multi-core areas, while at the same time making use of the existing natural environment to improve the quality of the space so that it has its own character. Natalia & Heinrichs (2018) pointed out several indicators to identify an urban center, which include density, the diversity of uses, distance to transit, and destination accessibility, and these are all characteristics of a city that contribute to urban vitality, which will be discussed below. Therefore, examining the current state of the city from an urban vitality perspective will be an essential part of the vision for Nieuw-West.

1.3 State-of-the-art

Recent research on urban vitality can be categorized into several strands based on their content. One is to study how urban form affects urban vitality (Farahani et al., 2018, 2022; Zumelzu & Barrientos-Trinanes, 2019; Sung & Lee, 2015). Others are to study how to measure urban vitality more objectively (Wang et al., 2023; Domper et al., 2023), and others are to study measuring urban vitality in cities and comparing urban vitality between regions (Delclòs-Alió & Miralles-Guasch, 2018; Fuentes et al., 2020; Yue el al., 2021).

Through her observations, Jane Jacobs (1961) found that the vitality of a city is expressed through the walking activities of its residents and that these walking activities are closely related to the built environment. One of the most significant findings on the relationship between the urban environment and walking activities comes from Sung & Lee (2015), who studied how the urban environment is related to the amount of people's walking activity. The results showed that the four essential conditions of urban vitality and accessibility were

Figure 3. *Cityscape of Amsterdam Nieuw-West*

positively correlated with the amount of walking activity and that distance to border vacuums could have a negative effect on walking activity. It is helpful to this study in that it suggests that the vitality of a city can be measured by the amount of walking activity.

Farahani et al. (2018) conducted behavioral observations of three neighborhoods in Australia. They observed how much people engage in outdoor activities at the same time of day and in similar weather, depending on the diversity of uses in the neighborhoods. They used video recordings as their method, which was also used by Gehl & Svarre (2013) to study the vibrancy and social life of public spaces. This method is also appropriate for this study, which conducts case studies at the neighborhood level.

Delclòs-Alió & Miralles-Guasch (2018) made a numerical representation of Jane Jacobs' six conditions, mapped each item, and synthesized them to create the JANE Index map, which can be used to understand urban vitality by region at a glance. The variables of the conditions that make up the JANE Index used in this study could be used for this research. Figure 6 shows the six conditions used in the analysis.

1.4 Aims & Objectives

The purpose of this study is to create a design strategy to make a neighborhood more vibrant while embracing the garden city concept. Like other studies, this study uses case studies to analyze the case according to the urban vitality conditions.

However, in the existing studies, there are not many cases that have studied the urban vitality of cities developed with the garden city concept. The study of Torres & De Medeiros (2019) is one of them, but the methodology is the same as that of other urban vitality studies. Therefore, it would be new to analyze the concept itself through a literature study in parallel with a case study and to consider the direction of urban development through using both methods.

1.5 Research Questions

"How can a heritage be redesigned to make a neighborhood center, Plein '40-'45, livelier while embracing the urban planning concept, Garden City?"

The sub-questions to answer the main question are as follows:

"What are the conditions that affect the urban vitality?"

"What attributes of the built environment need to be changed to increase the urban vitality of Plein '40-'45?"

"What attributes of the Garden City concept are beneficial in terms of urban vitality?"

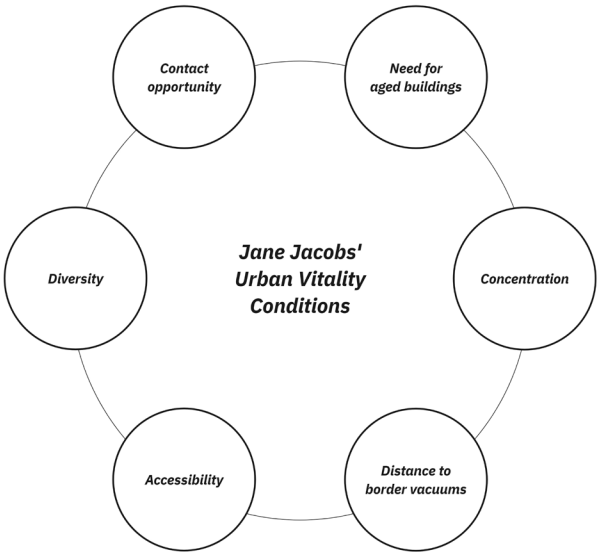

Figure 4. *Jane Jacobs' Urban Vitality Conditions*

2. Methodology

2.1 Theoretical Framework

As previously mentioned, urban vitality is achieved through social interaction between people and the complexity of public life in a city (Jacobs, 1961). Jacobs argues for diversity, contact opportunity, need for aged buildings, and concentration as essential conditions for urban vitality and also mentions accessibility and distance to border vacuums as additional considerations (Jacobs, 1961; Delclòs-Alió & Miralles-Guasch, 2018). In this study, the built environment and concept will be explored in a different method, with these conditions shown in Figure 6 as the primary keywords.

According to the framework of UNESCO-UIS (2009), cultural heritage includes tangible heritage, which has various historical, cultural, and artistic values, and intangible heritage, which is embedded in it. This study understands the built environment of the case as tangible heritage and the Garden City concept, which is the background of its development, as intangible heritage. In addition, each method has a different purpose: the study of the built environment is for evaluating the current state and finding potential improvements, and the study of the concept is for reflecting on the concept underlying the development from the perspective of urban vitality and suggesting a improved vision.

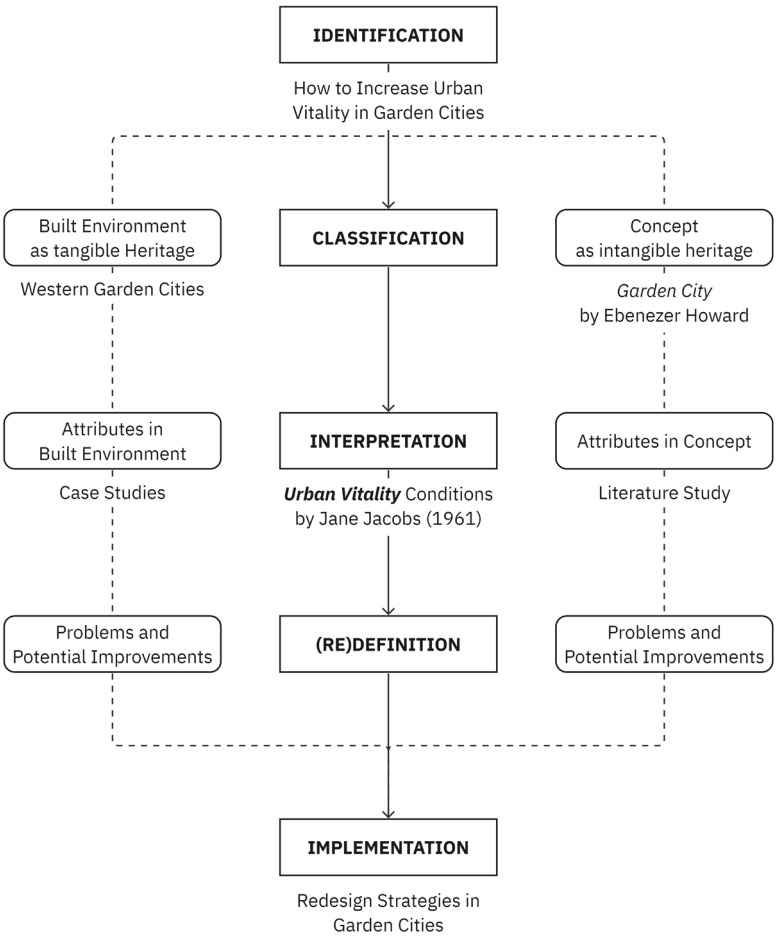

Figure 5. *Theoretical Framework*

2.2 Methods & Sources

There are two main methods used in this study. First, comparative case studies are used to analyze the built environment of Plein '40-'45 from the perspective of urban vitality. Two other lively squares, Marie Heinekenplein and Spui, will be investigated to assess the vitality conditions of Plein '40-'45. Figure 6 shows the variables for each condition and the data source for them. In order to look into the diversity of the building-use mix, a field study will be conducted. All data will be quantitative. The results of the case studies will be presented as a comparison table and mapped images for each area by condition. The results will show deficiencies and potential improvements to the urban vitality conditions of Plein '40'-'45. Meanwhile, the degree of urban vitality will be compared by calculating the amount of walking behavior using photography (Gehl & Svarre, 2013).

As for the concept of Garden City, a literature study will be used. Analyze Howard Ebenezer's *Garden Cities of To-morrow*, where the Carden City is claimed, based on the urban vitality conditions. The data will be both quantitative and qualitative and will be organized in a comparison table according to each condition.

Conditions	Description	Variables	Resolution	Data source
Diversity	A sufficient mix of uses is important to attract residents, visitors, and workers to a given area.	Building-Use Mix	Ratio of functions	Field Study & Data Amsterdam
		Residential-Non-Residential	Ratio of non-residential	Field Study & Data Amsterdam
Contact Opportunity	Frequent streets and short blocks are tools for creating diversity and opportunities for contact.	Block size	Average block size (m)	Google Map
		Street Frequency	Number of nodes (unit/km^2)	Google Map
Need for aged buildings	The diversity of architecture from different eras accommodates creative urban change and maintains the diversity of the city.	Average age of all buildings	Average building age	Data Amsterdam
		Standard devitation of building ages	Standard devitation	Data Amsterdam
Concentration	Higher density of development - that is, a higher density of people, housing, and buildings - can increase urban vitality.	Population density	Census Tract (People/km^2)	Dutch Central Bureau of Statistics
		Housing density	Net density of total floor area (area/km^2)	Data Amsterdam
		Building density	Net density of total floor area (area/km^2)	Data Amsterdam
Accessibility	High accessibility to bus stops, tram or train stations, and parks encourages walking activity.	Distance to public transportation	Distance (m)	Google Map
Distance to border vaccums	Border vacuums, such as large infrastructure and large single-purpose buildings, can discourage walking.	Distance from border vaccums	Distance (m)	Google Map

Figure 6. *Conditions, variable and data sources used in the analysis*

2.3 Case Study

As aforementioned, there are three cases for the case studies. The first case, Plein '40-'45 (Figure 7), is a neighborhood center in the Slotermeer, the first of the Western Garden Cities. A large shopping mall, government offices, and a canal surround the square. It is a relatively young square, built in 1955, and is also the experimental case for this study.

Marie Heinekenplein (Figure 8) is located just after crossing from Amsterdam Centrum into De Pijp. It is a densely populated square with a mix of traditional low-rise buildings and a relatively new mixed-use high-rise building.

Spui (Figure 9) is a lively square in Amsterdam Centrum. It is adjacent to Amsterdam's busiest shopping street, Kalverstraat. It is surrounded by traditional low-rise buildings built between the 17th and 20th centuries, mixed with residential and commercial uses. Marie Heinekenplein and Spui are used as control groups to identify attributes of the built environment in Plein '40-'45.

In each case, the scope of the investigation is centered square and its first layer of surrounding buildings. For Jane Jacobs' conditions, as shown in Figure 6, data will be collected for each variable. The case studies include photographing pedestrian traffic on the same day of the week, at the same time, and in similar weather to compare the vitality (Gehl & Svarre, 2013; Farahini et al., 2022).

Figure 7. *Plein '40-'45 in Slotermeer, Amsterdam Nieuw-West*

Figure 8. *Marie Heinekenplein in De Pijp, Amsterdam Zuid*

Figure 9. *Spui, Amsterdam Centrum*

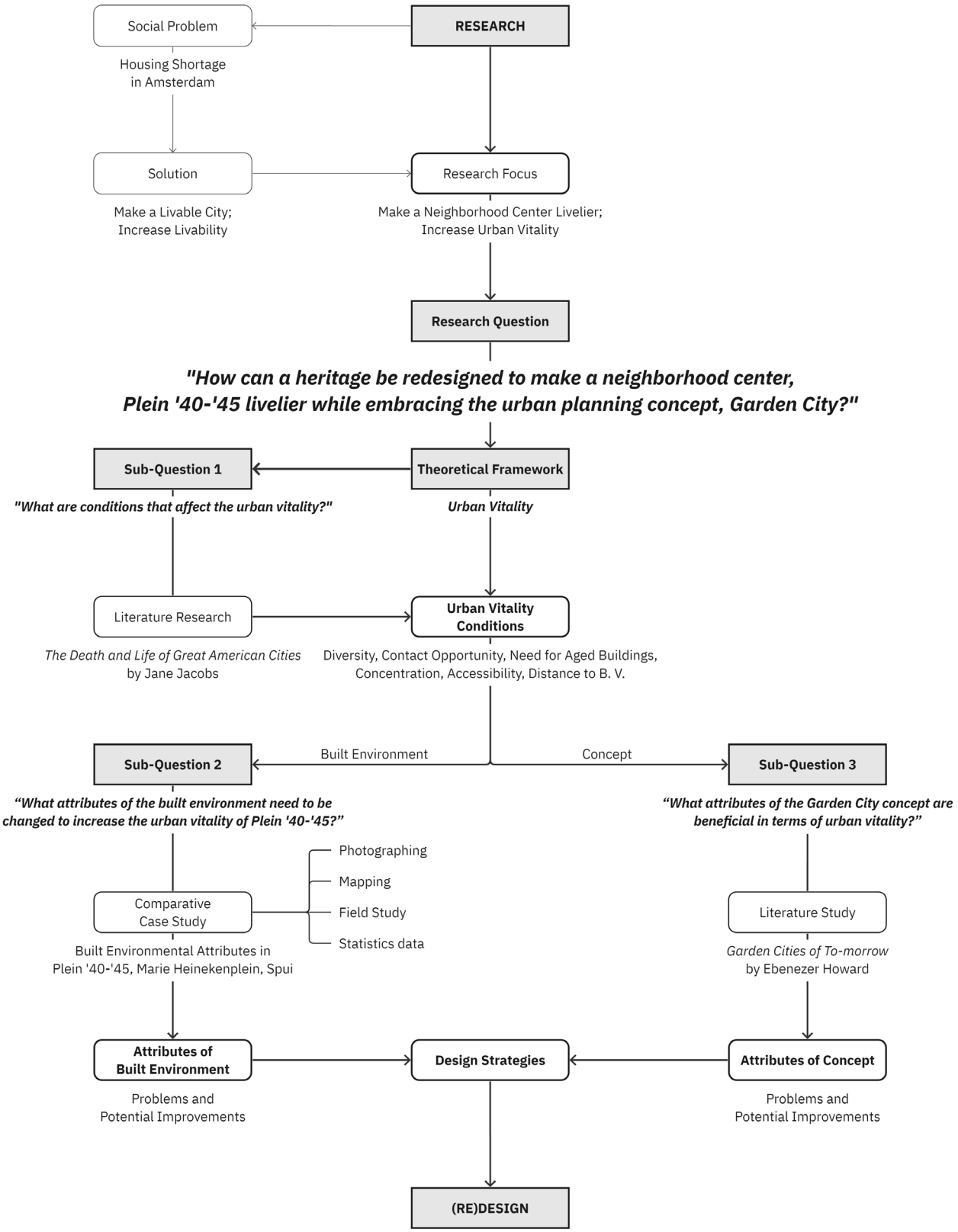

Figure 10. *Process*

2.4 Scope & Limitations

The studies will be conducted for eight weeks. The comparative case studies are based on one layer of buildings surrounding each square, with between 7 and 25 buildings surrounding the square in each case. All cases are located in Amsterdam, and the duration is three weeks, including collecting data and fieldwork. The literature research is based on one book, *Garden Cities for To-morrow*, and the study duration is two weeks. Before each of the two studies, an understanding of the Urban Vitality Conditions mentioned in Jane Jacob's book, *The Death and Life of Great American Cities*, is required.

2.5 Process & Timeline

In the first phase of the study, the items of each condition of urban vitality are reviewed and form the base map and table for comparing, analyzing, and synthesizing the cases. It is also used to analyze and document the literature study on the Garden City concept.

The research begins in Week 2. The comparative case studies and the literature study will be conducted for three weeks and two weeks, respectively, for a total of seven weeks, including synthesizing the materials. In week 8, all research is synthesized and analyzed, and a design strategy is considered. This process will determine which buildings and public spaces will be designed on Plane '40-'45 and what design interventions will be made.

The final two weeks are spent reviewing the research, applying the design strategy, and proceeding with the draft design. Figure 10 illustrates this process, and Figure 11 shows the timeline

2.6 Risk and Mitigation

For comparative case studies, Google Maps Street View can be a good substitute if field studies are not possible. Corresponding data are Building-Use Mix and Residential-Non-Residential for Diversity. Other data can be found in the Municipality's Data or statistics.

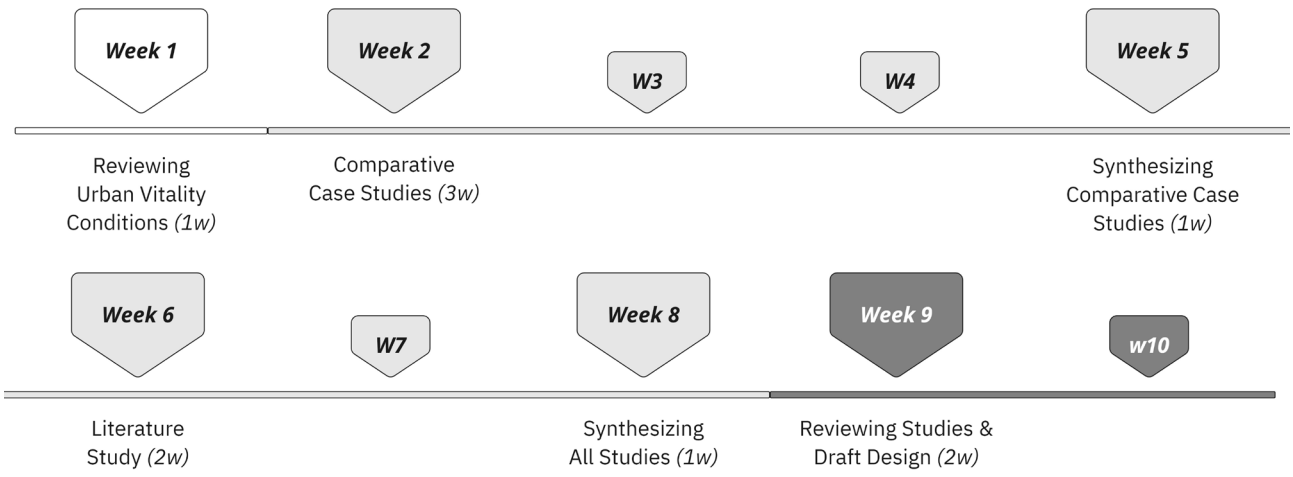

Figure 11. *Timeline*

3. Results & Conclusions

3.1 (Expected) Results

First, through comparative case studies, the attributes, problems, and potential improvements that Plein ‘40-’45 has could be found in terms of the built environment compared to other lively places, Marie Heinekenplein and Spui, from the perspective of urban vitality conditions. In addition, through the literature study, it will be possible to identify what attributes the Garden City concept has regarding urban vitality.

Therefore, the results could guide what needs to be redesigned and how to make a neighborhood livelier while embracing the Garden City concept.

3.2 (Expected) Conclusions

As Figure 12 shows, from the perspective of urban vitality conditions, by conducting research in two different directions, such as comparative case studies on the built environment and a literature study on the concept, it is possible to establish a design concept and strategies that are conceptually and practically complementary and modified.

The results can be used to strategize what to redesign in the buildings and public space of the area and in what direction. It can also help to establish a comprehensive development direction to create a more vibrant neighborhood by presenting the current form and built environment of Plein ‘40-’45 and the direction of the vision.

However, this study does not consider how much the Plein ‘40-’45 neighborhood reflects the Garden City concept, so it is not possible to generalize this study to judge other Garden Cities. However, this study can be used as an example.

In addition, if this study is followed up with detailed behavior observations, interviews, and social media to understand the impact of the built environment on people’s behavior and feelings, it will be possible to see the impact of urban vitality on public life and the value in it. This study can be used as a preliminary study.

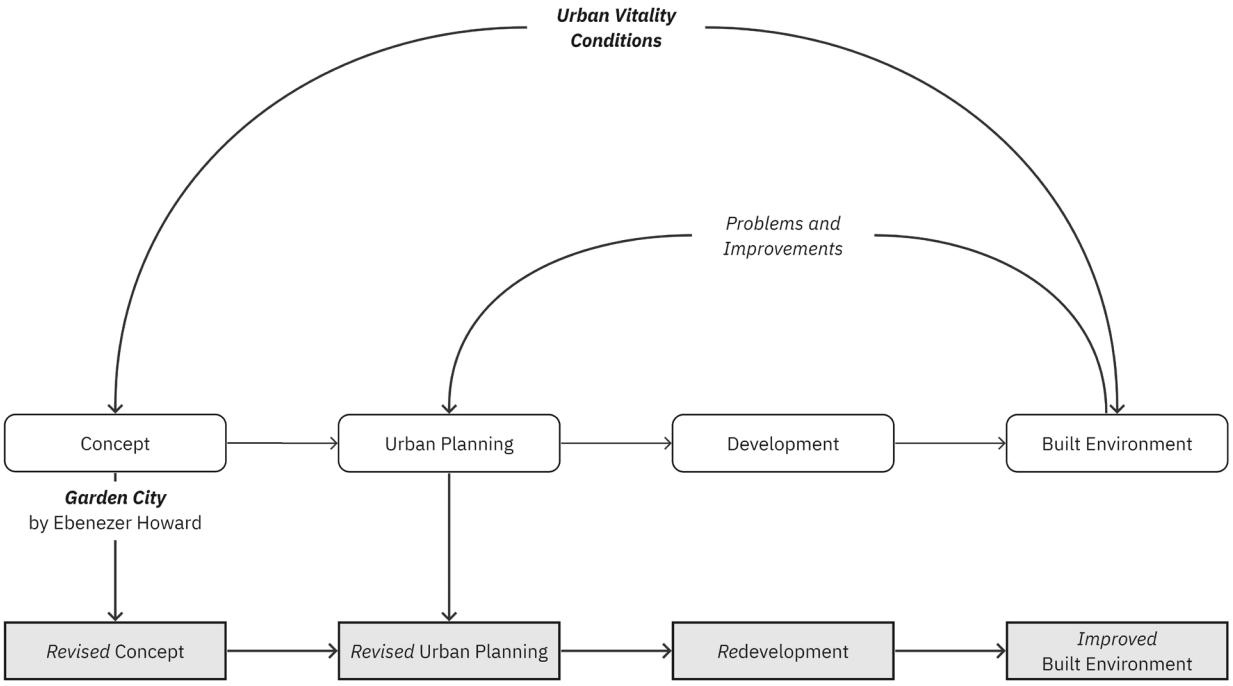

Figure 12. *Theoretical Framework for Redesign*

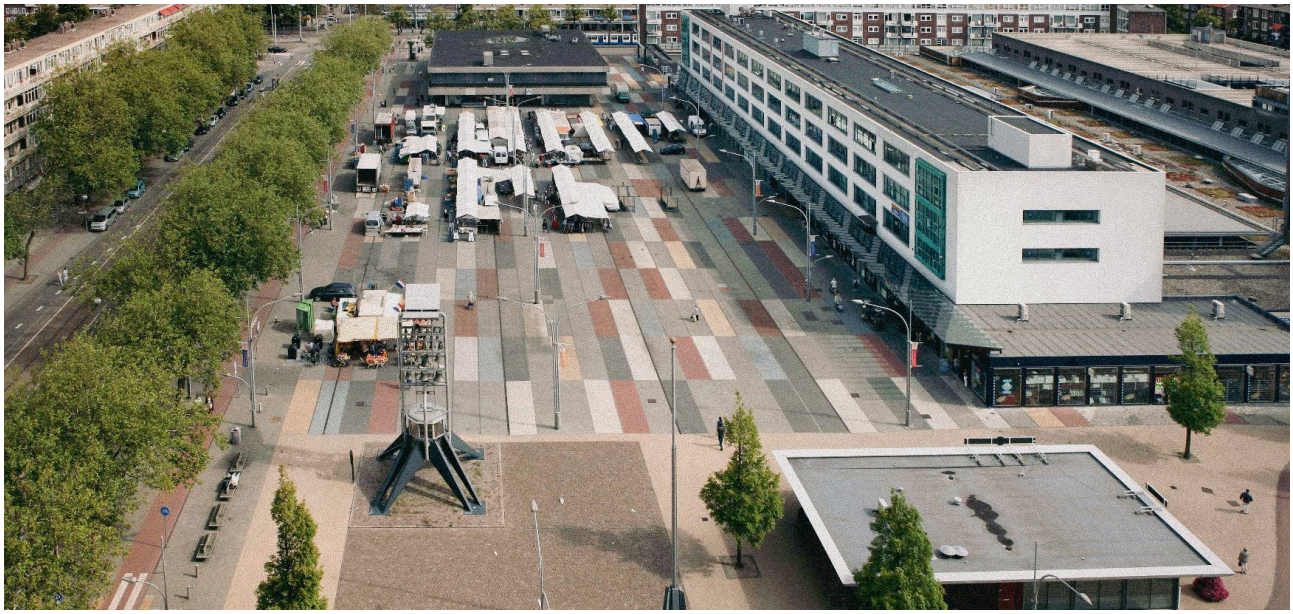

Figure 13. *Plein '40-'45*

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Figures

Cover Image. Plan Slotermeer, 1954. From "Merijn Oudenampsen," by M. Oudenampsen, 2013 (https://merijnoudenampsen.org/2013/04/03/retracing-the-garden-city/#_edn29)

Figure 2. Howard's Ideal. From *The Form of Cities* (p. 160), by David Ivan Scargill, 1979, Palgrave Macmillan.

Figure 13. Plein '40-'45. From "ons amsterdam," by W. Ruigrok & E. Slot, 1999 (https://onsamsterdam.nl/rond-plein-40-45-verrijzen-woonpanden)