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Urban Gardening in Utrecht

Temporary placeholder or desired development goal?

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SUMMARY

This thesis explores the different perceptions of stakeholders involved in Utrechts urban gardening landscape. The central focus of this thesis is to gain a better understanding of the temporality and permanence of urban gardening initiatives and the role and influence of the involved stakeholders in influencing the permanence of urban gardening initiatives. The introduction describes the pressures described in scientific literature that affect urban gardening projects and contribute to a temporal nature of such. The societal relevance describes that there is great benefit to long-lasting urban gardening initiatives and cities try to integrate them more permanently. The research gap section shows that there are still gaps in knowledge about how to support bottom-up urban gardening initiatives. In particular, the perspectives of governmental stakeholders have been insufficiently investigated. The objective of this research is to assess the perspectives of governmental and non-governmental stakeholders of utrechts urban gardening landscape on the temporality and permanence of these initiatives. From this, the general research question was formulated: What are the perspectives of governmental and non-governmental stakeholders in urban gardening initiatives on the temporality and permanence of these initiatives? To answer this question, two theoretical frameworks were used: the Strategic Niche Management framework by Smith & Raven (2012), with a special focus on the empowerment strategy (Raven, 2016), and the Conditions appropriate for temporary use by Nemeth & Langhorst (2014). The methodology section then describes how this study is conducted. First, the research design, a case study in Utrecht, is explained. Then, how the data was collected through interviews and then analyzed. The results of this study showed that stakeholders' perspectives were different. While governmental stakeholders, who were considered most responsible for protecting urban gardening initiatives, viewed temporality more as a flexible planning tool, while non-governmental stakeholders viewed temporality more as a threat. The conclusion of this thesis answers the central research question in detail. Finally, scientific and societal recommendations are formulated based on the limitations and findings of this work.

Keywords: urban gardening, stakehodler perceptions, sustainable urban development, temporality, permanence, land use conflicts, community engagement

1. INTRODUCTION

1.1. RESEARCH PROBLEM AND RELEVANCE

The urban space is the most populated living space, and it continues to grow strongly (UN, 2022). More than 90% of the inhabitants of the Netherlands are living in cities. Also worldwide, more than 56% of the population lives in cities (Macrotrends, 2023) and forecasts assume that these trends will continue to increase (UN, 2018). An increase in the world's population and the accompanying urbanisation poses new social, ecological, and economic challenges for politicians, planners, and residents. Densification of the urban fabric, competition for usable space and pollution are just a few examples of the increasing challenges our cities are facing (Mills & Song, 1979).

One way to tackle these issues and to improve people's quality of life is to create or preserve open/ green spaces. These spaces can then be used by the public for recreation, networking, education, or even productive use. The positive effects of these green spaces on humans' health and the environment are already well discussed in modern literature (Amano et al., 2018) and result in it being a preferred tool for planners and citizens to improve people's life conditions. An ever-growing interest in the use of these green spaces can be seen in inclusive gardening projects. These often socially oriented initiatives (Keshavarz & Bell, 2016) are known as urban gardening (UG) initiatives.

Urban gardening initiatives as a planning tool for politically involved stakeholders, are becoming more and more common nowadays, also in the Netherlands (v. d. Jagt et al., 2017). Both, the municipality, and citizens can be initiators of initiatives. Still, the long-term success of these Urban Gardening initiatives is often questioned, as they often disappear as soon as a more important development goal takes over the space again or if the crises ended (Bell, 2016). That is why urban gardening initiatives are often described as struggling (often of marginalised groups), and they defend their garden communities or other green spaces against capitalist developments. In the future, it will get increasingly difficult to defend these and other open spaces against ambitious development goals (Keshavarz & Bell, 2016).

The central focus of this thesis is to understand the advantages and disadvantages of temporality in urban gardening and the role of the government in terms of its influence towards the permanence of these initiatives. The aim is to find out what the role and range of influence of involved stakeholders is, regarding the protection of grassroot urban gardening projects. And consequently, what conclusions can be drawn for urban planning.

1.2. SOCIETAL RELEVANCE

As already mentioned above, green and open spaces are essential for human health. A wide variety of literature has addressed the topic over the past 30 years. The results suggest that the health of people, who have sufficient access to these spaces, improves. The positive effects have been attributed to reduced morbidity, stress, obesity, and cardiovascular and respiratory diseases (Nielsen & Hansen, 2007; Maas et al., 2009).

The positive effects of urban gardening are also far-reaching and complement the benefits of traditional green and open spaces. The inclusive nature of the initiatives makes them a place for networking and social exchange. Urban gardens are also often understood as teaching places where users can exchange ideas about the environment and food cultivation. Furthermore, these gardens can contribute to food security insofar as they are cultivated productively. The fact that food production in the Global North is rather secondary has already been touched upon above. But even in the Global North, there are more and more examples of urban gardening projects that focus on the production of resources. From this perspective, urban garden projects can potentially combat social, ecological, and often also economic problems (Demailly & Darly, 2017).

Despite the growing interest in the topic in the literature and the increased use of urban gardening as a planning tool in urban planning in the last decades, the long-term success of urban gardening can be questioned. Many initiatives are only temporary placeholders and disappear as soon as other development goals prevail. While conventional agriculture is the epitome of sedentariness and location loyalty, urban gardening is becoming increasingly temporary and not site-specific. Terms like “Impermaculture” (originating from impermanent and permaculture) and physical adaptations like portable planters are becoming more common and represent the stark difference between rural and urban agriculture (McCann et al., 2023). Examples of non-permanent gardens can be seen all over Europe. One example is the neighbourhood community garden "Rosa Rose" in Berlin-Friedrichshain. The origin of the project was a private wasteland in 2004, which was defended against investors in the following years. In 2010, however, the "Rosa Rose" project had to move and began on a green space in Jessnerstraße, 600 metres away. Thanks to the strong support of the neighbourhood, the garden has been able to survive until today (rosarose-garten, n.d.[1]). Another memorable example is a shepherd initiative from Paris. Shepherding relies on relocation and so the animals are guided through different public spaces, on some occasions even through central parts of Paris.

[1] Rosa Rose Garten (n.d.). Retrieved October 9, 2023, from http://www.rosarose-garten.net/

The initiative aims to gradually make room for the animals - whether wild or domestic - in the urban space (theguardian, 2019[2]).

Still, the interests in long-lasting urban gardening initiatives, to better support creative and experimental individuals and projects, while increasing the cities resilience towards crises, is growing. In this context, Amsterdam's Breeding Ground policy, for example, is increasingly oriented towards implementing initiatives more permanently (Makousiari, 2020).

1.3. RESEARCH GAP

The non-permanent nature of urban gardening initiatives has already been discussed in scientific literature. In some papers, the temporary lifespan of the initiatives is intentional or voluntarily, in other cases, however, described as involuntary because of displacement or the capitalisation of the area.

Demailly and Darly (2017) describe that urban farmers and gardeners in Paris, who want to cultivate an area, can only obtain temporary leases from developers and other landowners. The research showed that urban gardening activities have difficulty permanently integrating into the urban fabric, while the natural process of urban renewal provides temporary spaces. Some initiatives have managed to come to terms with limited access to space. This is expressed in the various adaptation strategies that enable the temporary and nomadic form of gardening. The pressure on the initiatives has led to many new sub-forms of urban gardening (Demailly & Darly, 2017).

However, there are also voices which emphasise the advantages of the short-lasting nature of urban gardening projects. Here, too, they speak of "placeholders" who can use spaces productively until there is a "higher or better use" (McCann et al., 2023).

In individual cases, success factors and barriers for initiatives have been identified. For example, the community garden project "Allmende Kontor" in Berlin was studied. This well-known urban gardening project is located on the former airfield in Berlin-Tempelhof and was made available to the public by the city of Berlin in 2010 and leased to associations on fixed-term contracts. Wunder (2013) describes that the success factors can be attributed, among other things, to good networking between the activists and a participatory governance approach. The barriers identified are the temporality of land use, insufficient financial support, a lack of recognition by public administration of the provisioning services gardens provide and a general lack of legal structures to define rights and duties of urban gardeners (Wunder, 2013, p. 15-18). When looking at the

[2] The urban shepherd of Paris – photo essay (2019). Retrieved October 9, 2023, from https://www.theguardian.com/world/2019/oct/29/paris-urban-shepherd-photo-essay

success factors and barriers, it is striking that the success is particularly related to the activists' own commitment and participation. The barriers here also relate to the temporarily of use and the insufficient support of governmental institutions.

Strategic Niche Management is an approach developed to advance socio-technical transitions that take place in the context of sustainable development. It was created to give sustainable technologies a safe space so that they can then be integrated in the long term (Caniels & Romijn, 2008). In scientific literature, Strategic Niche Management (SNM) theory has been used as an analytical framework for the analysis of the success and failure of sustainable innovations, which are in this case urban gardening initiatives. Strategic Niche Management is less a practical approach, but more a theoretical one, that could be used to help to understand how niche innovations can be integrated more successfully in the long term.

Due to the increasing pressures onto open spaces through densification, and the attribution of new values to green space, a window of opportunity is given to establish local initiatives as niche innovations. Citizens and companies are taking initiative to introduce more diverse green spaces, such as biodiversity friendly parks, green- and water-friendly squares, and urban gardens. (Aalbers et al., 2019).

In terms of SNM, such urban gardening initiatives can be considered as 'niche innovations' (Geels, 2002). How to support urban agriculture projects through SNM has already been addressed in the literature. Aalbers et al. (2019) examined 5 green space initiatives in the Netherlands and their success and failure factors as well as the perspective of local authorities. The results showed that the citizen initiatives in particular have problems integrating into the urban fabric in the long term. Of the two citizen initiatives examined, none were able to survive for long, which was attributed to a lack of financial support and a lack of cooperation with the municipality. Aalbers et al. (2019) also describe that it would be relevant to examine the conditions that would enable citizens to participate in the management of their urban green spaces in the longer term (Aalbers et al., 2019).

However, the role of governmental organisations also plays a major role in this sense and has not been sufficiently investigated in the literature in relation to the permanence of initiatives. An examination of the support that policies and regulations - either provided or not - have on the permanence of initiatives is important to stimulate the sustainable integration of citizen-led urban gardening initiatives.

From the insights gained, it can be seen that there is a knowledge gap in the area of citizen-led initiatives or of initiatives initiated by small businesses. Aalbers et al. (2019) found that there are differences between citizen-led (bottom-up) and municipality-led (top-down) initiatives. The biggest differences can be attributed to the differences in size and identity of the green spaces. The so-called 'critical knowledge' results in big differences between the two types. What this means is that citizens and the community often have different ideas about how to develop and interpret open and green spaces (Aalbers et al., 2019).

Further research needs to be carried out to gain more clarity of the governmental perspective on how they influence long-term integration of the 'niche innovation' of grassroot urban gardening initiatives, how they can strengthen their use and management claims and ultimately make them more permanent.

1.4. Research Objective

The overarching goal was to develop a better understanding of the temporality and permanence of urban gardening initiatives and the role of the involved stakeholders in influencing the permanence of urban gardening initiatives. To achieve this goal, the following research objective was defined:

The objective of the research was to assess the perspectives of governmental and non-governmental stakeholders in urban gardening initiatives on the temporality and permanence of these initiatives.

1.5. Research Question

To answer the objective, the following Main Research Question was formulated.

Main Research Question:

What are the perspectives of governmental and non-governmental stakeholders in urban gardening initiatives on the temporality and permanence of these initiatives?

Sub Research Question 1:

What are the perceptions of governmental and non-governmental stakeholders in urban gardening initiatives on the temporary use of vacant urban spaces?

Sub Research Question 2:

What are the perceptions of governmental and non-governmental stakeholders on the need for protecting temporary urban gardening and making them more permanent?

2. THEORETICAL FRAMEWORK

This chapter explains the different concepts and theories used for this thesis. The concepts explained derived from the research objective. The following concepts are linked to theoretical models to operationalise them for the course of the work.

First, the term urban gardening will be defined (2.1.), showing the type of initiatives that were the focus of the study. Then, the Multi-Level-Perspective (MLP) theory will be introduced, to describe how transitions take place. Geels and Schot's (2002) MLP theory is a framework that can be used to understand and assess transitions in socio-technical systems. To analyse the temporality or long-term implementation of urban gardening initiatives, the MLP theory, with a focus on (2.3.) Strategic Niche Management (SNM) can be used. SNM is a concept within the framework of the MLP theory and can be used as an analytical framework for the analysis of the success and failure of sustainable innovations, which are in this case urban gardening initiatives. The next section (2.4.) operationalizes the terms "temporary use" and "long-term use". The final section (2.5.) includes the analytical framework which will be used in this research, which derived from the theory.

2.1. URBAN GARDENING

Urban gardening initiatives are rising in popularity over the last decades in many European cities and around the world (Bell, 2016). They are a preferred tool for politicians, planners, but also citizens, to use available space collectively and sustainably. That is why those urban gardening projects are also often referred to as community gardening projects. The idea behind it is to come together as a group or collective, to practice and learn about agriculture, while creating green space, that relieves the people and the city from stresses like congestion and pollution, while also producing food and other resources.

When talking about agricultural or gardening initiatives in urban areas, which are often just referred to as urban gardening initiatives, many different terms are mentioned, which sometimes have more and sometimes less to do with each other. The diversity of this "urban gardening landscape" can be quite confusing. This master thesis focused mainly on the term urban gardening, therefore in the following text the term will be distinguished from other similar terms.

In scientific literature, the term urban gardening is poorly defined, and it is likely that it will stay that way for the following years (Biedermann & Ripperger, 2017). Therefore, for the purposes of this study, a delimitation of the terms was created to avoid confusion. One way to delimitate the different terms, was done by Simon-Rojo et al. (2015). The two tables below (Table 1 & 2) show a possible way to group the different terms (Simon-Rojo et al., 2015). A main separation was made between less productive forms of gardening initiatives, which are referred to as *Urban Food Gardening* (gardening level) and a second, more productive group, named *Urban Farming* (farming level).

TABLE 1: DIFFERENT FORMS OF URBAN GARDENING (GARDENING LEVEL) (SIMON-ROJO ET AL., 2015)

Individual Production		Collective Gardens
Allotment Gardens	Squatter Gardens	Educational Gardens
Family Gardens	(Guerrilla Gardening)	Community Gardens
		Allotment Gardens
		Therapeutical Gardens

TABLE 2: DIFFERENT FORMS OF URBAN FARMING (FARMING LEVEL) (SIMON-ROJO ET AL., 2015)

On-site experience		Flows
Leisure Farms	Cultural Heritage Farms	Local-Food + Farms
Social Farms	Experimental Farms	Environmental Farms
Educational Farms		
Therapeutical Farms		

In this paper, the term *urban gardening* will be used. This term will be referring to the social forms of urban gardening activities (coloured green in the tables). The focus of the paper is therefore on initiatives that are socially motivated and collectively cultivated, regardless of their productivity. Productivity here refers to the monetization of initiatives.

The differences in productivity can be used as a criterion to compare different gardens with each other, provided that productivity influences the long-term success of initiatives. In the context of the later used Strategic Niche Management theory (Schot & Geels, 2008) and in the context of this thesis, an initiative has integrated into the dominant market if it has integrated itself in the long term as one of the socially cultivated initiatives, which are marked green in Tables 1 & 2.

The literature about urban gardening initiatives shows, that these incentives can often be understood as a counterincentive towards arising societal issues. These issues can differ depending on factors, like the location, and are either economic, environmental or social, or a combination of these (Bell, 2016). That means, in times of societal crises, such as food insecurity, environmental crises, or increasing social conflicts, more urban gardening initiatives are emerging.

Even though urban gardening is a worldwide phenomenon, there are visible differences between how it is practiced in the Global North and the Global South. The scope is shifting, depending on the related issues. By looking at the issue of food security, the literature shows many examples of urban gardening initiatives from the Global South that focus on producing resources. Those from the Global North tend to focus more on social aspects such as inclusion and education (Bell, 2016), to counteract social societal issues.

2.2. Multi-Level Perspective

The Multi-Level Perspective (MLP) can be used to understand how technological transitions occur or in this case, how bottom-up urban gardening initiaitives can be integrated more permanently. The MLP (Figure 1) distinguishes between three levels of heuristic concepts. The (1) socio-technical landscape, the (2) socio-technical regime and the (3) the niche-innovations (Geels & Schot, 2007).

2.2.1. MLP - socio-technical landscape

The sociological-technological landscape at the macro level forms the exogenous (externally influencing) environment, beyond the direct influence of actors of the socio-technological regime and niche innovations. Influences at this macro level have an impact on the deeper meso and micro levels. Examples are political and cultural values, demographics, but also geopolitical changes such as wars and economic crises. Changes at this level often take a long time (decades) (Geels & Schot, 2007).

2.2.2. MLP - socio-technical regime

At the meso-level there is the socio-technical regime. This level refers to the dominant socio-technical system. The structures represented on that level consist of dominant rules and clusters of institutions and actors (Geels & Schot, 2007), which are in a stable state (Geels, 2002).

2.2.3. MLP – niche innovations

At the micro-level, the level of the niche innovations, you can find these protected spaces. These protected spaces aim to develop and protect niche innovations. This level can be seen as an incubation space for new technologies and ideas. Urban gardening can be named here. These emerging technologies and novelties are yet unstable and of low performance (Kemp et al., 1998). This research focuses on urban gardening initiatives as niche innovations.

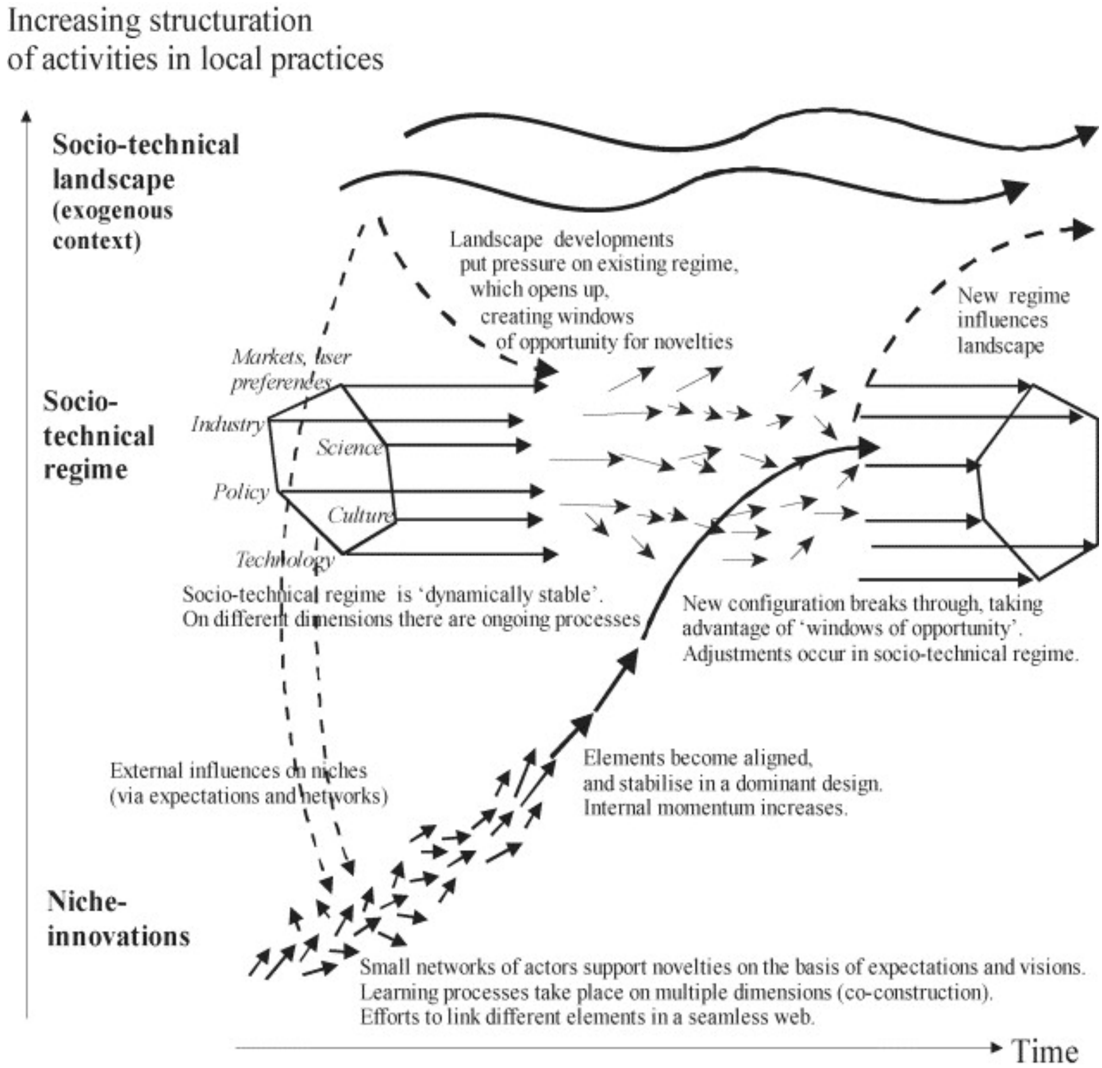

FIGURE 1: MULTI-LEVEL PERSPECTIVE ON TRANSITIONS (ADAPTED FROM GEELS, 2002, P. 1263)

A transition takes place when there is a change from one socio-technical regime to another. In the context of this thesis, from an unsustainable and temporary state to a sustainable and long-term state of urban gardening. In this context, innovative urban gardening practices can be characterised as niche innovations that gain momentum and begin to challenge the regime. But the exogenous influences of the landscape level also have an impact on the regime level. These influences destabilise the system so that niche innovations can become a regime (Geels, 2002).

2.3. Strategic Niche Management

Strategic Niche Management (SNM) is a concept within the framework of the MLP theory and can be used as an analytical framework for the analysis of the success and failure of sustainable innovations, which are in this case urban gardening initiatives. While the MLP theory focuses on an holistic view about how transitions occur, SNM focuses especially on the level of 'niche innovations'.

SNM as a practical tool aims to create niches for technologies, i.e. "protected spaces", which enable the testing and development of practices and/or regulatory structures. This is necessary because many technologies are not yet competitive, but offer worthwhile promises in sectors such as energy, transport and agriculture (Schot & Geels, 2008). SNM can also be used as an analytical tool, to help to understand the development of niche innovations.

Scholars argue that SNM is not a technology-push approach for radical innovations, but more an approach towards sustainable development through technological innovation combined with social change. This link between technological and social change is essential and is often neglected or relegated to a later stage (Schot & Geels, 2008) and is also important for the context of urban gardening. The holistic nature of urban gardening initiatives in terms of sustainability overlaps very well with the SNM approach. Urban gardening initiatives are not just technological approaches, but also target other areas, such as how people interact with their environment or the production of resources. The strong social aspect of urban gardening, such as strengthening the sense of community or co-operation, can also be linked to SNM.

The fact that the social aspect of SNM is often neglected is important for urban gardening. While the technical aspects are often talked about, the social aspects need to be acknowledged as being influential enough for the long-term success of an initiative. It is important to recognise the strong influence and importance of the social aspects of urban gardening and that they are impactful for the success and durability of initiatives.

The following sections explain how these "protected areas" or in our case urban gardening initiatives can be protected and supported. In their analysis, Smith and Raven (2012) identified three characteristics of effective protection in the context of transition processes: (1) shielding (2) nurturing and (3) empowerment. Most emphasis will put on the third stage, (3) the empowerment stage, since it can be linked towards integrating innovations into the long-term.

2.3.1. Shielding path-breaking innovations against mainstream selection pressures

The shielding process is responsible for creating and keeping "protected spaces". It is an outward-oriented activity designed to fence off pressures from the outside, meaning the mainstream regime or environment. The goal is shield or secure spaces to have experimental spaces, where niche innovations can exist safely (Smith & Raven, 2012).

Shielding can either happen actively or passively (Smith & Raven, 2012). Shielding in an active form happens, when a protective space is created actively. This can be done through active and strategic actions, which are organized by policy and non-policy actors. Policymakers for instance, can actively shield technical innovations through policies and financial incentives. One reason why you should protect initiatives that are not yet profitable is that you have the prospect that these initiatives can solve societal and collective goals in the future (Schot & Geels, 2008). But also, non-policy actors can be responsible for constructing niches (Smith & Raven, 2012).

A passive shielding space exists where protective mechanisms are already in place before the innovation is introduced (Smith & Raven, 2012). These spaces exist, for example, in particularly suitable geographical locations where the conditions are such that innovation can develop without competition and subsequently challenge the dominant regime (van Uffelen, 2023).

2.3.2. Nurturing path-breaking innovations in protective spaces

If a place is appropriately shielded and a safe space for experimenting is created, an innovation or initiative can go into the next stage. This next stage is the nurturing phase. Nurturing is a process aimed to support the innovation in the developmental stage.

One main aspect of this phase is the creation of a collaborative atmosphere for the niche. The main characteristics that are important to consider in this phase is to help with networking, assist with learning processes and defining expectations (Smith & Raven, 2012).

(1) The network formation process refers to the process of building networks. These (social) networks are very important for the niche development, to establish the links between the various stakeholders. These links are essential so that resources can be exchanged. These resources can be various things, such as materials, knowledge, money, or technologies (van Uffelen, 2023). The stakeholders should come from all areas of society (public, academic and industry) in order to broaden the cognitive frame and strengthen collaboration between the actors. In addition, influential stakeholders should also be targeted for network formation (Manders et al., 2018).

(2) The second characteristic is the learning process. During this process it is very important to account for a shared learning environment. In this environment actors can exchange knowledge and experiences, but also empirical evidence and other helpful instruments with each other (van Uffelen, 2023). This enviroment of sharing knowledge, collaboration and cooperation, is essential for niche innovations to develop (Schot & Geels, 2008).

(3) The final element is called shared expectations, which refers to the alignment of expectations in the stakeholder landscape. This is very important, since expectations are drivers for the development process (Schot & Geels, 2008). This again, strengthens collaboration and cooperation in the stakeholder landscape. In order to align these expectations effectively, they first need to be robust, which refers to the expectation(s) being shared by a wide variety of actors. They also

need to be specific, which refers to a clear development idea and also of high quality, which refers to them being substantiated by ongoing projects (van Uffelen, 2023).

2.3.3. Empowering path-breaking innovations

The final stage is the empowerment stage, which focuses on phasing out the innovation and complements the shielding and nurturing phase. That process refers to the institutionalization of the innovations and the challenge of the dominant regime. There are two different ways in which niches can be developed. The first one is (1) fit-and-conform and the other one is (2) stretch-and-transform (Smith & Raven, 2012).

(1) Empowering through the fit-and-conform approach means that your innovation will become competitive with mainstream socio-technical practices in the dominant regime/ unchanged selection environment (Smith & Raven, 2012). This strategy aims on improving technologies to improve their socio-technical competitiveness alongside the conventional regime lines. This process does not need any far-reaching institutional changes, or any changes related to the regime. It aims on demonstrating the high performance of the innovation with regard to existing standards (Raven et al., 2016).
Shielding measures are only temporal in this strategy and will not be necessary after the development of the new technology or innovation, when the same level of price-performance of the existing technology is reached (Raven et al., 2016).

(2) The second strategy is the stretch-and-transform one. In this strategy, unlike the first one, the institutions that influence the existing performance criteria, need to be changed. The idea is to change the selection environment in a way, that makes it more compliant for the innovation (Smith & Raven, 2012) An example given by Smith et al. (2016) was evaluating electricity-generating technologies not only according to their costs per kWh produced, but also related to the associated emissions produced by each kWh (Raven et al., 2016).
In order to be successful with this strategy, the advocates need be persuasive with the wider audience, but also need to be politically powerful for actually being able to stretch-and-transform regime-structures. Factors related to this power are resource attributes, experience, institutional positions, and connections with other influential actors (Raven et al., 2016).
Shielding measures will not be removed in this strategy but can become new forms of sustainability through institutionalization and new regulations, changing the dominant selection environment.

This part of the transition theory is particularly important for this paper, as the empowerment phase aims to integrate urban gardening initiatives on a permanent basis. Kern et al. (2015) came up with a framework that includes a set of indicators that can be used to assess whether an innovation falls under one of the two categories. These indicators can help identify if an initiative is competitive within an unchanged selection environment or if the selection criteria need to be adjusted, since the innovation would not be competitive otherwise. Table 3 shows Kern et al.'s (2015) framework, which assigns various indicators to the different empowering strategies.

TABLE 3: INDICATORS FOR EMPOWERING WORK (KERN ET AL. (2015), BASED ON SMITH & RAVEN (2012))

Empowering Strategy	Description	Look for evidence of...
Fit-and-conform	Global actor networks work towards niche competitiveness within unchanged selection environments	...Framing supportive measures as only temporary ...Framing niche developments as improvements in costs, performance and efficiency ...Arguing and promoting that innovation will be competitive under conventional criteria; no radical changes to institutions, infrastructures, skills, etc. required
Stretch-and-transform	Global actor networks work towards changes in mainstream selection environments	...Framing the niche as embodying widely desired sustainability criteria such as ecological or social benefits ...Arguing for the need for (and attempts at) achieving institutional reforms to enable to wider deployment of sustainable innovations

2.4. TEMPORARY USE & LONG-TERM USE

The following sections deal with the concept of temporality. The term is linked to SNM and then being framed with the help of supporting literature.

In the discussions surrounding the SNM approach, temporary use is mentioned as an important factor to nurture niche innovations, towards integrating them in the long-term into the broader system or regime. It emphasizes that a gradual evolution is needed for these innovations, to not only integrate them more permanently, but also into the broader system. If a permanent state of these initiatives wants to be achieved, an ongoing process of development, resilience-building, gradual integration and policy changes needs to be given, to ensure the acceptance within the broader socio-technical landscape (Geels & Schot, 2008). In the context of Strategic Niche Management (SNM) long-term or permanent use refers to the sustainable and continuing application of strategies that nurture, empower and shield niche innovations within a socio-technical system over an extended period of time. In SNM, the focus is on integrating niche innovations into the mainstream system or regime in the long-term (Geels & Schot, 2007).

Bishop and Williams (2012) talked about temporary uses in their book on “the Temporary City”. A city or urban space can be perceived as a space that is always dynamic. This dynamic process is known as urban transformation and can be understood as an ongoing process of making and re-making the city. “*The city is never an end state but is perpetually eveloving*” (Bishop & Williams, 2012, p. 19). During the constantly changing cityscape, spaces are continually being swallowed up that do not establish themselves in the long term. These limited utilisation claims are also known as temporary uses. Although temporary use is by no means a new phenomenon, the topic has received increasing attention in recent years (Bishop & Williams, 2012). New studies especially explore that temporary use no longer is a win-win situation in relation to the utilisation of vacant space, but that planners are lacking adequate instruments and concepts for long-term developments (Matoga, 2019).

That also implies, that these temporal uses are not formalized, meaning they are not embedded in an urban development or zoning plan, but allowed temporarily. Bottom-up, civic based and informal initiatives are undergoing increased instrumentalization, professionalisation and institutionalisation. The planning domain is suffering from a lack of sufficient tools, that can help create long-term developments (Matoga, 2019).

There are also voices in favor of the temporal use. Bishop and Williams (2012) argue that temporary uses are a manifestation of a more dynamic, flexible, and adaptive urbanism, allowing the city to better respond to its needs, concerns and preferences. Looking from a very broad perspective, however, any use is temporary if you wait long enough. Thus, it can be said that every space in the city has a specific function, but this function changes faster for some and slower for others (Bishop & Williams, 2012). By minimizing the downsides and by maximizing the advantages, the temporary use model is a good alternative to the traditional approaches used on vacant lands (Németh & Langhorst, 2014).

Nemeth and Langhorst (2014) came up with several conditions appropriate for temporal use and can be seen in Table 4 below. These conditions are sorted according to their condition, like ownership of land, role/influence of the city, general economic climate, development potential of the space, and potential uses of the space (Németh & Langhorst, 2014). These conditions for temporary use serve as a second theoretical framework through which the results are viewed.

TABLE 4: CONDITIONS APPROPRIATE FOR TEMPORARY USE (NEMETH & LANGHORST, 2014)

General Categories	More appropriate for temporary use	Less appropriate for temporary use
Ownership of land	- Public ownership	- Private ownership (*unless vacant too long)
Role/ influence of the city	- Lack of (or poor efficacy of) public investment or incentives - Slow-growth/declining cities - Trial and error, flexible approach embraced - Socially progressive goals (inclusion, diversity, access)	- Traditional planning tools successfully encouraging private investment - Growing/vibrant cities - Top-down, master-planning - Pragmatic, financial/economic goals only
General economic climate	- Low private development interest - Times of "disruptive, stressful, social and urban change" - Exploit uncertain transitional period	- High private development interest - More stable, predictable times - Immanent redevelopment likely
Development potential of the space	- Long-vacant land or structures	- Recent vacancy; likely to redevelop quickly

	- Vacant land/abandoned structures - Areas with high risk of decline and “contagion effect” - Non-corporate, low-capital businesses or investors likely - Smaller scale - Leftover/remnant parcels, small, fragmented spaces - Higher use value - Areas seeking redevelopment, attraction of new residents and businesses - Active community/residents/non-profits/small investors	- “Underutilized land” (awaiting planned development) - Areas of stability - Corporate developers, big business, municipal “growth regimes” - Larger scale - Larger, continuous spaces - Higher exchange value - High-profile, central tourist areas - Top-down, corporate interests
Potential uses of the space	- Events/programmatic uses - “Soft content” - Desire/need to break from mono-functional environments - Desire to encourage/create new meanings, functions, identities, and relationships for/of a space - Test unfamiliar or potentially controversial ideas - “Tactical” unsactioned and transgressive uses, frequently by marginalized demographics, subcultures (e.g. squatting) (De Certeau, 1984)	- Fixed infrastructure, buildings - Inflexible built form - Already diverse, multi-use environments - More stable, secure areas - “Proven” solutions, uses - “Strategic” sanctioned uses catering to preferred/ privileged/ mainstream

		demographics (De Certeau, 1984)

2.5. Conceptual Framework

This section describes the conceptual framework used for this thesis. Figure 2 below is a representation of the conceptual framework of this work. It shows that the stakeholders involved with urban gardening are analysed in terms of their perceptions of the temporality of the initiatives. The perceptions are considered under the focus of the theories presented: Strategic Niche Management with a special focus on the indicators for the empowering strategies and the conditions appropriate for temporary use.

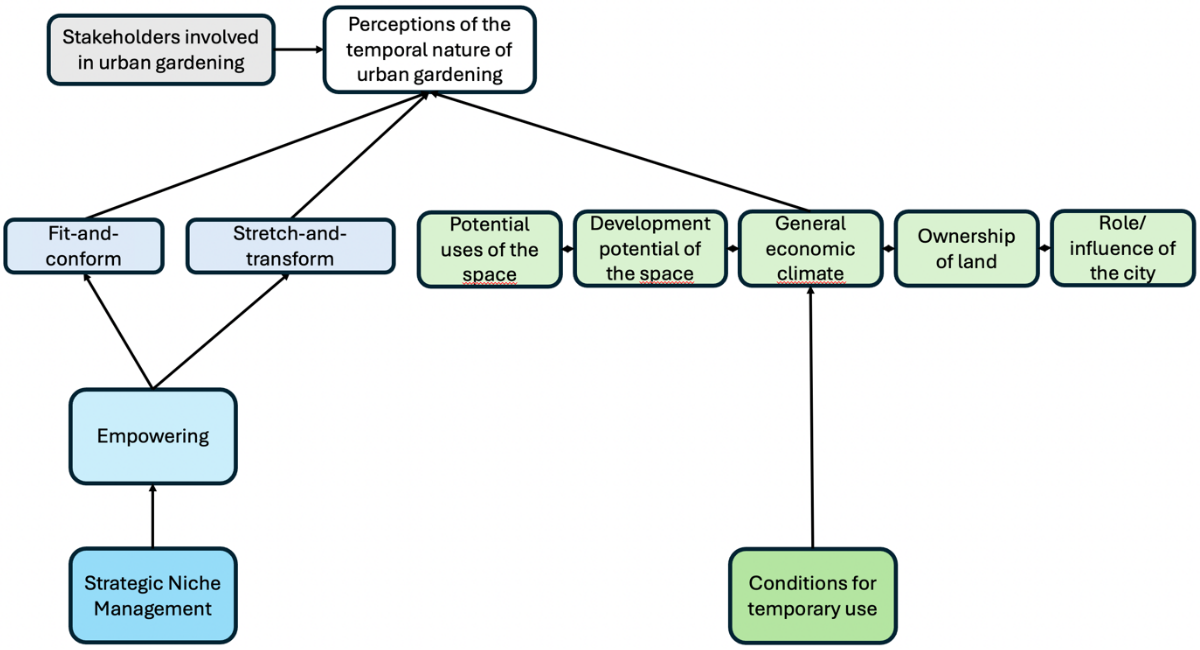

FIGURE 2: CONCEPTUAL FRAMEWORK

The perceptions of the stakeholders provided information about which direction of niche development (fit-and-conform or stretch-and-transform) the respective stakeholder aligns with. These strategies can then be compared with the conditions for temporary use (CATU): potential uses of the space, development potential of the space, general economic climate, ownership land, role/influence of the city. Depending on the perception of a stakeholder, the person is more likely to agree with the fit-and-conform strategy or the stretch-and-transform strategy. Now, with the help of the CATU theory by Nemeth & Langhorst (2014) and the corresponding conditions from Table 4, it can be examined at what point the conditions make urban gardening viable.

Initiatives that go hand in hand with the fit-and-conform strategy can be integrated into the regime. Initiatives that challenge the regime are more compatible with the stretch-and-transform strategy. The table with the CATU indicators can then provide information about when temporary use would be appropriate, for example on public land or on long-disused land or, in the case of the stretch-and-transform strategy, where urban gardening can be used as a tool for e.g. a transition.

Conclusions about a permanent integration of urban gardening initiatives with the fit-and-conform strategy can be drawn when initiatives are in strong agreement with the conditions for temporary use. In the case of the stretch-and-transform strategy, initiatives can be found that initiate new changes under the conditions for temporary use, like the uptake of new urban policies or a change of the city's approach towards land use issues and community building.

3. METHODOLOGY

This section discusses the methodology used in this research. First the Research Design (3.1.) will be described, followed by the data collection methods (3.2.) as well as the data analysis methods (3.3.).

3.1. APPROACH/ RESEARCH DESIGN

To measure the perceptions of stakeholders on urban gardening initiatives, a qualitative research method was conducted. Individual stakeholders in the urban gardening landscape (e.g. municipalities, community gardeners) may perceive the temporal nature of these initiatives differently.

The aim of the qualitative research was to gather data on the perception of the involved stakeholders on urban gardening and on how it can be supported. Their opinion about how the stakeholders perceive temporal use and vacant spaces, and on how to make the initiatives more permanent were gathered. The data from the stakeholders was collected through semi-structured interviews. The qualitative method of collecting data should be collected in a way, that it reflects these perceptions. Qualitative data collection is always linked to interpretations and context-specific circumstances, while quantitative research focuses more on empiric and statistical methods.

A case study design was used for this research, which was conducted in Utrecht, the Netherlands. The city has been chosen, due to its representative character regarding the diversity of urban gardening initiatives, that will be the focus of this paper (UNA, 2021)[3]. But also, practical reasons such as proximity, access to knowledge and networks, and Utrecht's dedication and strategy towards a more sustainable future (Gemeente Utrecht, n.d.)[4], resulted in picking Utrecht as a case.

3.2. DATA COLLECTION

To gain clarity about the influence of governmental and non-governmental stakeholders in supporting urban gardening grassroot initiatives, different actors were approached for the interviews. The data was mainly collected from people involved in the management, initiation, or participation of an initiative.

[3] Urban Nature Atlas (2021) – Retrieved January 3, 2024, from https://una.city/?search_api_fulltext=utrecht

[4] Gemeente Utrecht – Our vision for Utrecht in 2040 (n.d.) – Retrieved January 4, 2024, from https://healthyurbanliving.utrecht.nl/our-vision-for-utrecht-in-2040/

By examining existing literature for specific points of contact, such as directories, maps, associations, or other forums where people exchange knowledge about urban gardening (in Utrecht), first points of contact were initiated. Further points of contact were arranged through snowballing or the chain-referral sampling method, where the primary data sources are responsible for nominating other potential data sources, in order to generate a sufficient sample. A main source of contact was also the Buurt-Natuur030 network.

By doing the interviews in a semi-structured way, an open conversation can be encouraged through asking open ended questions (Silverman, 2014). These open-ended questions were pre-determined to guide the interview and to ensure the full coverage of the respected topics. The interview protocol can be found in Appendix 1.

Table 5 shows the number of interviews conducted for each group of stakeholders. To ensure proper data saturation and to have a representative sample, a minimum amount of 3 interviews were conducted per stakeholder group.

TABLE 5: NUMBER OF INTERVIEWS PER STAKEHOLDER GROUP

Type of stakeholder	Total
Governmental stakeholder	3
Companies/ Entrepreneurs	3
Non-Governmental organisation	3
Community-garden project	3
All interviews	12

These perceptions varied and depended on the stakeholder's position and opinion towards urban gardening and differed depending on how the stakeholder viewed the potential, the risks and benefits, as well as the willingness to support urban gardening projects.

3.3. STAKEHOLDER ROLE

This section will discuss the different stakeholder roles. The different stakeholders that were encountered during the data collection phase and their role and involvement in Utrecht's urban gardening scene (related to question 2 – 5 of the interview protocol) will be presented. There are four groups in total, they are companies or entrepreneurs, governmental stakeholders, community garden projects, and non-governmental organizations (NGO’s).

The first group includes companies and people earning income with green spaces. C1 is a Landscape Architect which focuses on green and sustainability. C2 is a project manager of spatial planning projects and also owns a privately owned green space with animals and some plants. C3 is a business owner, who works in private gardens as a designer and gardener. The interviewee also recently started a new business, where he rents out gardening lots in seven different private locations and offers agricultural courses to its participants.

The second group includes people, that are governmental stakeholders. Interviewee G1 works in the policy field of urban nature (in Eindhoven). The interviewee is also a gardener in one of Utrecht Natuurlijks city gardens. G1 is also politically active in the green left party. G2 and G3 both work in the municipality of Utrecht and are colleagues. G2 is working in the “City-Team” and is responsible for all the daily work in the public spaces. This work includes maintenance work on green spaces and pavements, as well as being the contact person from the whole city for all the people who are “doing something in green”. G3 works as a policy advisor, senior policy advisor and project leader. The interviewee is responsible for the “Green Structure Plan” of Utrecht and is familiar with all kinds of initiatives.

The third group are the members of community garden projects. Interviewee CG1 is already a city gardener for 15 years and rents a plot in a big urban garden. They were also very active in the project and a spokesperson for it when the project was in danger due to an infrastructure project. After negotiations and lobbying with the municipality, a new basis for the initiative was negotiated. Interviewee CG2 is an active member and representative of their neighborhood initiative. They gathered interested people to start a maintenance project in their newly built neighborhood and the municipality gave them 14,000 euros in start-up capital. Interviewee CG3, like the previous one, is a representative of their neighborhood initiative and was actively involved in the initiation and organization of their urban gardening initiative.

The fourth group includes representatives and members of non-governmental organizations. The first interviewee NGO1 is a volunteer in two urban gardens and a representative member of Utrecht Natuurlijk, a well-known urban gardening organization. Interviewee NGO2 is part of a network of guerilla gardeners and started an informal organization to green and connect neighborhoods through movable plant containers and benches. Interviewee NGO3 also participates in urban gardening and self-maintenance projects and is the representative and organizer of an NGO that evolves around self-maintenance projects. They also organize events, where city gardeners can show off their self-maintenance projects.

3.4. DATA ANALYSIS METHOD

This process involves the methods behind the data analysis phase. First, the conducted interviews were transcribed. In the next step, the principles from the theoretical framework were applied in a process referred to as coding, using Atlas.ti as a software. Similarities and differences were then analysed in the interviews, first through an open, inductive way (identifying what pops up) and then in a more closed, deductive way, with a pre-set of codes, which derived from the research questions and the analytical framework. The different principles from the introduced theories were then used to get a better understanding of the stakeholders' perceptions on temporal use and the need for protecting these spaces and making them more permanent.

The conditions for temporary use can be linked to the first sub research question, stakeholders' perception on temporary uses and vacant spaces. The SNM-principles, especially the last empowering-phase, applies to the second sub research question, which relates to the stakeholders' perception on the need for protecting these spaces and making them more permanent. Nevertheless, other aspects of the two theories are also used for the analysis.

The next step involved analysing the data to come up with recommendations and insights. This was done through the application of the theories and their principles. Based on the analysis, recommendations for improving governmental and non-governmental support will be provided. Lastly, the framework will be evaluated, and the limitations of this study presented. The applicability of this study will be evaluated, to highlight parts that potentially need refinement or additional considerations.

The table (table 6) below shows the different core concepts according to which the interviews were deductively examined, their description and the corresponding interview questions that were used to investigate the concepts. The last column shows the codes that were used in the analysis of the interviews and arose inductively.

The concept of temporality was one of the core concepts and was mainly clarified by question 6 (How do you perceive the temporal nature of urban gardening?), question 8.1 (When is it appropriate to use temporary use, pros and cons?) and question 9 (Is there a relationship between vacancy and temporary use?). The concept of vacancy derived from the theory of conditions for temporary use by Nemeth & Langhorst (2014) and served as one of the core concepts in the creation of the questionnaire and the subsequent analysis. It was mainly clarified through question 7 (How do you perceive open/ vacant spaces in relation to Urban Gardening?) and question 8 (What is the potential and role of vacant spaces? How can they be used effectively?) of the questionnaire. The concept of protection served as another core concept of the analysis and was mainly clarified by question 11 (Should Urban Gardening be better protected/ empowered to become more permanent?) of the questionnaire. The concept was adopted from Geel's (2002) Strategic Niche Management theory for technological innovations. Specifically, the aspect of empowerment refers to Smith & Raven's (2012) continuation of this Strategic Niche Management theory and explains how innovations can challenge the dominant regime and then ultimately integrate or institutionalize themselves there. The concept of empowerment is the last preliminary code and it derived from the SNM strategy by Smith & Raven (2012) explained above. It was mainly clarified through question 8.2 (When is it appropriate to use permanent use, pros and cons?), question 10 (Has Urban Gardening a potential to be more permanent?) and question 11 (Should Urban Gardening be better protected/ empowered to become more permanent?)

TABLE 6: PRELIMINARY CONCEPTS WITH THEIR RELATED INTERVIEW QUESTIONS AND THEIR CODES

Core Concept	Description	Interview Questions	Codes
Temporality	The need for temporal use	6. How do you perceive the temporal nature of urban gardening? 8.1 When is it appropriate to use temporary use, pros and cons? 9. Is there a relationship between vacancy and temporary use?	- Urban renewal - Temporality - Conditions appropriate for temporary use - Conflict - Contamination - Costs Disagreement
Vacancy	Vacant spaces & Redevelopment	7. How do you perceive open/ vacant spaces in relation to Urban Gardening? 8. What is the potential and role of vacant spaces? How can they be used effectively?	- Vacancy - Repurposing - Food production - Revitalization

Protection of Urban Gardening initiatives	The need of protecting these spaces	11. Should Urban Gardening be better protected/ empowered to become more permanent?	- Protection - Business model - Funding - Policies - Responsibility - Social Media
Empowerment & Permanence	The need for permanent use	8.2. When is it appropriate to use permanent use, pros and cons? 10. Has Urban Gardening a potential to be more permanent? 11. Should Urban Gardening be better protected/ empowered to become more permanent?	- Permanence - Empowerment - Education - Maintenance - Complementary - Economic benefits - Innovation - Sustainability - Learning - Trend

Table 7 below shows the concepts and their descriptions that emerged during the analysis of the interviews. These are participation & collaboration, responsibility, land use, policies and others. The last column shows the codes, which emerged during the analysis of the interviews inductively.

TABLE 7: CONCEPTS THAT EMERGED LATER AND THEIR INDUCTIVE CODES

Participation & Collaboration	Involvement of community members in decision making and participating	N.a.	- Community Engagement - Social Value - Collaboration - People involvement - Agreement
Responsibility	Who is responsible for making urban gardening	N.a.	- Responsibility - Awareness

	initiatives more permanent?		- Guerilla Gardening - Stakeholders - Top-down
Land Use	Different concepts of land use	N.a.	- Land Use - Private Land Use - Public Use
Policies	The use of policies	N.a.	- Policies
Others/ unused codes			- Community Initiatives - Liveability - Combination

3.5. VALIDITY OF THE STUDY

The results of the analysis are the researcher's personal interpretations of the interviewees' opinions, as well as of the document analysis. Since this paper was only written and analysed by one researcher, the data is subjective towards *my* point of view and interpretations. This can then lead to results not being particularly meaningful which will have negative consequences for the internal validity of the study. Being aware of this is crucial to overcome upcoming biases.

3.5.1. POSITIONALITY

My opinion towards urban gardening is and was a positive one and my initial idea was to encourage long-lasting initiatives. However, I was initially critical about the temporal nature of urban gardening initiatives, but through research in the literature and discussions with stakeholders, I have gained a more nuanced opinion about this concept. I was afraid, that this prejudice will influence my perspective on this topic, but it has led to a broader understanding of the concepts of temporality and permanence in urban planning.

4. RESULTS

This section will be presenting the results of the collected data during the fieldwork-phase of the thesis report. The presented data is a result of a thorough analysis process, which included qualitative coding of the transcribed interviews.

The results section of this thesis report will be divided into seven paragraphs and structured according to the main four concepts that derived from the theoretical framework, as well as four other main concepts that emerged during the data collection phase. The concepts from the theoretical framework are temporality, vacancy, protection of urban gardening initiatives, participation & collaboration, and empowerment & permanence. The remaining concepts emerged from the interviews inductively. These concepts are responsibility, land use, and policies. In each of the subchapters the results of the respected analyzed data for these concepts will be discussed.

Figure 3 below shows the distribution of the different frequencies of codes in the different concept groups. The groups with the most coding are the concept groups empowerment & permanence (165), participation & collaboration (157) and temporality (141), which were deduced by the theory. Followed by a medium density of data is the concept vacancy (50), which was also deduced by the theory, followed by the induced concepts such as land use (52), responsibility (47), protection (39), policies (31) and finally others (23).

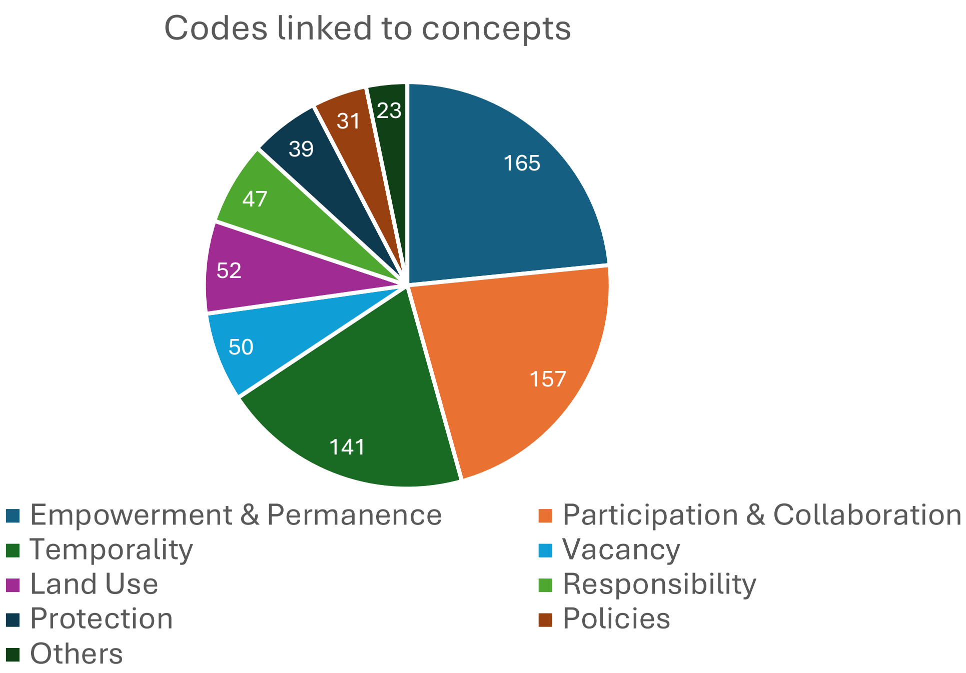

FIGURE 3: CODES LINKED TO THE ANALYSIS GROUP

4.1. Temporality

The aspect of temporality was one of the most discussed topics in the interviews. The data of this section results from question 6 (How do you perceive the temporal nature of urban gardening?), 8.1 (When is it appropriate to use temporary use, pros and cons?) and 9 (Is there a relationship between vacancy and temporary use?) from the interview protocol. Every stakeholder discussed the aspect of temporality and the answers ranged from short to throughout. The whole analysis group "temporality" includes 7 different codes (Contamination, Temporality, Disagreement, Conditions appropriate for temporary use, costs, urban renewal, conflict) which were used 141 times in total throughout all interviewees.

The columns of the 8 below list the different stakeholder groups (Community Garden Projects, Company/Entrepreneur, Governmental Stakeholder, NGO/Non-Governmental Organisation) and the rows list the different codes which were linked to that temporality with their frequency of occurrence.

From the table 8 below it can already be seen that businesspeople and government representatives are the groups that provided the most information regarding temporality and urban renewal, followed by the NGO group and finally the Community Garden Projects.

TABLE 8: CODE FREQUENCIES OF THE DIFFERENT CODES IN THE POLICIES TEMPORALITY GROUP

		Community Gard... 3 49	Company/ Entrep... 3 61	Governmental St... 3 84	NGO 3 74	Totals
Contamination	3		1		2	3
Temporality	45	7	13	17	8	45
Disagreement	3			3		3
Conditions appropriate...	13	3	7	3		13
Costs	3	1	1		1	3
Urban renewal	62	10	13	25	14	62
Conflict	12	7	1	1	3	12
Totals		28	36	49	28	141

It was seen as common knowledge between all of the stakeholders that urban pressures like densification and the urban renewal were main drivers influencing the permanence of urban gardening initiatives. There was also a shared awareness about the existence of temporal initiatives among the vast majority of stakeholders. (Real estate) developers, a stakeholder that has unfortunately not been included in the interviews, was also often mentioned among the interviewees as an influential stakeholder influencing urban gardening.

Still, the concept of temporality was approached differently by different types of stakeholders and big discrepancies were experienced between interviewees and their individual groups.

Stakeholders who are doing something with green as a business or are earning their money with planning green spaces, had a more pragmatic approach to the concept of temporality and were very much aware about the threats and also generally critical about it. This means that they focus more on economic sustainability than on permanent integration. If an initiative is profitable, temporary existence is also accepted without any problems. However, this economic sustainability is not easy to achieve, reported business owner C3 and government representative G1. Few reasons given for this were the contamination of the urban soil, which makes early and productive harvests difficult, and restrictions on public, social projects, which make free operation difficult, according to C3. Other interviewees, NGO1 and NGO3, also reported about contaminated soils and its negative influence onto urban gardening projects.

Utrecht's governmental body had opposing views about temporality. Some governmental stakeholders did not believe in the temporal nature of urban gardening initiatives or were less critical about it. Governmental stakeholder G3 was especially skeptical. He did not agree that there is a temporal nature to community gardening projects. After being asked that question, they replied: *"That's not true. No, no, it's really not true. They are not temporarily. Yeah, they exist temporarily. But they are, you know, at a place where we'll be going to build the houses or offices or so, or they have another goal for it. But no, we don't see it as temporarily. It's just, it's really, yeah, the value is if it's long lasting."* The interviewee disregarding that aspect was an interesting moment during the interviews, considering the influence this stakeholder has and the intensity of his disbelief. This conversation was standing out between other governmental stakeholders, and also between all stakeholders. Even though this stakeholder disagreed with the temporal nature of urban gardening initiatives, they emphasized the importance of learning from these temporary places, if a place is rebuilt. They pointed out the special situation of Utrecht's dense urban fabric and therefore the importance to learn about and from the engagement that was arranged during this temporal time, especially if there were aspects connected to circularity.

Also, this governmental stakeholder's colleague G2, a main contact person for green projects in Utrecht, was not highly opinionated about temporal urban gardening initiatives. After being asked about their opinion of temporary projects on vacant land the interviewee replied: *"Yeah, I don't have. It happens. And yeah, sometimes when the gardens or people taking the place are so long there that they overreact, or they have a new view of it. But mostly the things are going through, and they look other spaces."* Even though this interviewee was more curious and open about temporality than his colleague, it seemed that they were also not aware of the issues regarding temporality, that the other stakeholders mentioned. Still, these governmental stakeholders were aware about the existence of temporary existing initiatives and pointed out initiatives, for example a project with movable plant containers and unregistered groups, which the municipality typically describes as "nomads".

Conflicting to these statements was the one from governmental stakeholder G1, who criticized Utrecht's governmental body. They stated that the governmental body is not working unitedly, but "*everybody is doing a little bit for themselves. So every subject has their own vision, their own team, and they don't really work as one machine. It is not a really integrated part of the policy and of the spatial developments."* Another reason mentioned was the inconsistency of the developers promises. Ambitious developers often don't do, what they have planned. One major reason here were the costs, that exceeded the initial goal, so developers cut down on the green, G1 said. "*Developers can't make money off of health and of happiness*." (G1) This coincides also with what business owners mentioned.

The main reason given by the business stakeholders why initiatives are only temporal was the business model, especially interviewee C1 and C3 emphasized the importance of monetarizing initiatives. While these stakeholders from the business group were more skeptical about the permanent integration of urban gardening and linked permanent integration to more conditions, such as monetization, state support and state restrictions on the use of public space, the interviewees from the community-garden projects were experienced as generally not very critical. They mostly did not experience threats to their initiative and if they did, they overcame them after negotiating with the municipality. When being asked about if they have knowledge about the temporal nature or other temporal initiatives, these interviewees were less opinionated compared to the other stakeholder groups. These stakeholders were more focused on the gardening and social aspects of urban gardening, and less on the administrative parts. Interviewee CG3 was an exception and explained in more detail that green spaces get victimized, and that the city has other priorities at the moment. Realizing new plans is getting more challenging due to the high demand for housing. The political context makes it also very difficult to introduce new green areas on a moderate or bigger scale. Grassroot movements tend to have a higher success rate, according to community gardener CG3.

Some stakeholders have also expressed their positive opinion about temporary urban gardening initiatives. Community gardener CG3 elaborated on that and stated that it was eye opening to see, that those projects can persist in their value even though they are temporary. Government representatives in particular shared this opinion, as well as the business owners. Temporary green can also create awareness and can "*give people and developers an idea about how an ideal world can look like*", CG3 stated. Temporal green can also be used to create enthusiasm towards gardening and greenery. If it is used strategically and "*when they're (the people of the city) actually seeing it and they're experiencing it, they are like: Ohh, this is actually quite nice*.", G1 said. Movable plant containers can also create awareness at random places that a green transition is possible. Moving these containers away eventually can create a desire for the inhabitants to green their area.

Worth mentioning and critical towards the temporal nature of urban gardening initiatives were the stakeholders of the NGO group, which is characterized by their social focus. Two out of the three stakeholders (NGO1 & NGO 2) were aware of at least a few temporary initiatives. Interviewee NGO2 could not answer the question, when temporary use is appropriate and when it is not. "*That is the million-dollar question*", they said. More important for them is if it connects people and if it creates a sense of community. The interviewee also points out the immense pace of the urban renewal that Utrecht is going through recently and that urban gardening projects do not stand a chance against the decisions of the municipality to realize certain developments goals. During the financial crises between 2009 and 2013 it was way easier to realize those initiatives, interviewee NGO2 stated. This is also coincided with NGO1's statement. They also referred to the financial crisis and indicated as well, that a lack of a space-keeping society around the initiatives, are threats for urban gardening initiatives. A representing quote here was: "*I think the problem with temporality is the organization of keeping the thing going. I think, I imagine that that is the major hurdle, is getting people to keep it, to maintaining it, participation I mean."*

Interviewee NGO3 on the other hand was not aware of many temporary initiatives and even sounded skeptical, similar to governmental stakeholder G3, stating that they do not believe that many temporary projects existed. This could have to do with the close relationship between these two stakeholders, considering that NGO3 gave me the contact of governmental stakeholder G3, and G3 also mentioned NGO3 as their close partner. Interviewee NGO3 is also highly involved in greening and also organizes community events where people can show their green space projects to other inhabitants, which might give them a more one-sided and positive view onto the issue of temporality. When the interviewee was asked about the issue of temporal green, they gave short and relativizing answers and seemed a bit unsure about their response, saying often "*I think*" or "*maybe*". They also stated that "*houses are first*", which coincided with the statements of governmental stakeholders G3 and G2.

4.2. VACANCY

This section discusses the answers of the questioned stakeholders about their perception of vacant land. The data of this section results from question 7 (How do you perceive open/ vacant spaces in relation to Urban Gardening?) and 8 (What is the potential and role of vacant spaces? How can they be used effectively?) from the interview protocol. The whole analysis group "vacancy" includes 4 different codes (vacancy, food production, revitalization, repurposing) which were used 50 times in total throughout all interviewees.

TABLE 9: CODE FREQUENCIES OF THE DIFFERENT CODES IN THE VACANCY ANALYSIS GROUP

	Community Gard... 3 49	Company/ Entrep... 3 61	Governmental St... 3 84	NGO 3 74	Totals
Vacancy 9		2	2	5	9
Food production 22	2	6	3	11	22
Revitalization 2	1		1		2
Repurposing 17	1	5	8	3	17
Totals	4	13	14	19	50

All of the stakeholders are aware that there is not much vacant land available in Utrecht and that free spaces in the city are becoming more and more valuable. This scarcity of vacant land was seen as one of the major hurdles for integrating permanent green. The ongoing densification and the housing crisis are putting pressure onto the remaining green and vacant spaces. Another shared opinion was that vacant land are places of opportunities, places with high potential and high value. This statement was especially emphasized by business stakeholders and governmental stakeholders.

The majority of the stakeholders, especially the business stakeholders, governmental stakeholder G1, and non-governmental stakeholder NGO1 and NGO2, saw a strong relationship between vacant land temporary use. This connection was reasoned with the pressures from the housing market and their developers. Because these types of developments are often prioritized within the framework of urban renewal or are carried out by developers, urban gardening projects are often neglected. This overlaps with the opinions from the "temporality" analysis group. The stakeholders that were more critical and aware about the temporal nature of urban gardening initiatives earlier, also saw a connection between vacancy and temporary use.

There was also a common opinion about the high transformative potential of vacant spaces. This was particularly discussed and important to the business and government people. They emphasized the transformative potential of vacant land and advocated unitedly to make it easier for the community to get involved on vacant land. To ensure that, these stakeholders advocated for better policies to either encourage people to not disengage quickly after the uptake of a project or policies that enable an easier use of vacant private and public spaces. The different statements about policies and land use will be discussed at a later stage in the "policies" and "land use" section. Vacant land can act as a breeding ground for creative ideas and as spaces for experimentation.

Related to that, governmental stakeholders G1 and G3 had opposing thoughts here, which shows again the discrepancies between these two governmental stakeholders. G1 is involved in policy decisions themselves and has first-hand insights into the use of vacant spaces. They voiced their concerns as followed: *"It's just kind of a, yeah, disappointing when it's successful and then it has to go because housing comes and that's not only for green, that's with a lot of initiatives that are really cool and then they have to move because other developer starts developing."* That statement showed again the awareness about the existence of temporary spaces, and they suggested that the municipality could play a bigger role in assisting initiatives to become more permanent, either by relocating or integrating them better into the city. On the other hand, governmental stakeholder G3 stated "*it's a little bit cynical, that they give people space for ideas temporarily and then rebuilt it and don't learn from these ideas.(...) you can do it once and you can destroy your own city ecosystem",* implying that they themselves are learning and integrating temporary initiatives regularly, but then went on stating at a later stage "*there's also a lot of pressure for housing now so it's not always certain that the same idea will come back.",* in which they practically contradicted themselves and therefore acknowledging passively in a sidenote also the risks, as also G1 and other stakeholders stated. The exuberant optimism of governmental stakeholder G3 about the non-existing temporal nature of urban gardening initiatives seemed a bit unnecessary, considering the knowledge and position municipality this stakeholder holds in the municipality. Knowing many initiatives themselves and being part of the municipality for an extended amount of time gives this stakeholder many insights in a variety of project developments and perspectives, which they also showcased during the interview. A possible reason why it is difficult to incorporate all of the ideas into a new plan is reflected in the following quote of governmental stakeholder G3: "*When there's space in the green or there's a space that is not used, every space in Utrecht people ask questions about it, because everybody has ideas. But so yeah, there's always a search for open space to do things there. And yeah, yeah, we try to coordinate this. But when there is an initiative in urban gardening, we let it be social, so community gardening. We don't give the space to a single person, private people, anymore*."

4.3. PROTECTION

This section discusses the responses of the interviewed stakeholders regarding their perceptions about the protection of urban gardening initiatives. The data of this section results from question 11 (Should Urban Gardening be better protected/ empowered to become more permanent?). Every stakeholder was asked this question. The whole analysis group "protection" includes 4 different codes which were used 43 times in total throughout all interviews.

The table 10 below shows some similarities between the company and NGO stakeholders. The application of the codes business model indicates that these stakeholders focus more on economic factors.

TABLE 10: CODE FREQUENCIES OF THE DIFFERENT CODES IN THE PROTECTION ANALYSIS GROUP

	Community Gard... 3 49	Company/ Entrep... 3 61	Governmental St... 3 84	NGO 3 74	Totals
Business model 15		7	2	6	15
Funding 3		2	1		3
Protection 21	5	5	8	3	21
Totals	5	14	11	9	39

All of the stakeholders acknowledged the need for the protection of urban gardening initiatives in one way or another. Governmental stakeholders G2 and G3 were more hesitant, stating that "it is difficult" to protect these spaces due to the guerilla and informal nature of these initiatives. G3 also stated that green spaces are protected by the "zoning plan" (in Dutch: Bestimmingsplan) and therefore always protected. Who is responsible for the zoning plan and what it includes is discussed in the later sections "Responsibility" and "Policies".

The vast majority of stakeholders also found that social cohesion and community engagement are key factors for the protection and survival of urban gardening activities. This commitment ensures that the initiatives or areas continue to be maintained or managed. This high level of willingness to get involved was also a shared characteristic of all interviewees. Although there was general agreement that these initiatives needed to be protected, not all stakeholders were positive about it. For example, there was a critical voice from non-governmental stakeholder CG3 about how they view the protection of the initiatives. They were not particularly positive about the long-term protection of urban gardening initiatives, stating: *"I'm not very positive about this, fortunately though. Umm, yeah, I don't know. Specifically, now in the political context, nowadays in the Netherlands. I think it will, maybe it will survive as a grassroots movement. Because neighbors and people who live in the city are very willing to preserve small areas."* This statement once again reflects the enormous pressure that larger open spaces are currently experiencing and this is consistent with the statements of the government-critical stakeholders G1, NGO1, NGO2, C1 and C3.

There was also a consensus about the high value of collaboration and participation of and between governmental and non-governmental actors. Although it has already been described that there were discrepancies between government stakeholders and other stakeholders such as businesspeople, the majority of those interviewed (CG1, CG2, CG3, NGO3, C2) described a good cooperation with the municipality. And that it was precisely this cooperation that led to the protection and extension of the initiative. More about participation and collaboration will be discussed in the following section.

4.4. Empowerment & Permanence

This section discusses the answers of the questioned stakeholders about their perception about the empowerment and permanence of urban gardening initiatives. The data of this section results from question 8.2 (When is it appropriate to use permanent use, pros and cons?), 10 (Has Urban Gardening a potential to be more permanent?) and 11 (Should Urban Gardening be better protected/ empowered to become more permanent?). The whole analysis group "empowerment & permanence" includes 10 different codes (economic benefits, trend, empowerment, learning, permanence, complementary, innovation, maintenance, education, sustainability) which were used 165 times in total throughout all interviews.

From the table 11 it can be deduced that the representatives of the government and non-governmental organizations in particular were concerned with the topic of empowerment. The aspect of maintenance was also a major topic that came up in the discussions about the permanent integration of urban gardening initiatives.

TABLE 11: CODE FREQUENCIES OF THE DIFFERENT CODES IN THE EMPOWERMENT AND PERMANENCE ANALYSIS GROUP

		Community Gard...	Company/ Entrep...	Governmental St...	NGO	Totals
		3 49	3 61	3 84	3 74	
Economic benefits	6	1	1	1	3	6
Trend	3		1	2		3
Empowerment	45	8	8	14	15	45
Learning	2			2		2
Permanence	38	5	10	13	10	38
Complementary	2			2		2
innovation	7		1	4	2	7
Maintenance	42	9	6	8	19	42
Education	16	3	5	1	7	16
Sustainability	4		4			4
Totals		26	36	47	56	165

This section focuses on the answers of the respected stakeholders on how to empower urban gardening initiatives or participants to make these spaces more permanent. According to the interviewees, the most common way to empower citizens in Utrecht is through self-maintenance agreements. These maintenance agreements are a very common practice in Utrecht, and they enable citizens to take care of public spaces by making agreements with the municipality. They make it possible for inhabitants to use and interact with public spaces in a legal way and to practice gardening there. Those maintenance agreements are a good way to decrease the maintenance load for the municipality for public green spaces, include active citizens and diversify green spaces, as there are few regulations on what may happen on these areas. There is a wide variety of these self-maintenance projects in Utrecht. Interviewee G2 and NGO3 have especially deep insights in those initiatives. NGO3 organizes yearly events where everyone can showcase their self-maintenance projects and G2 is the governmental contact person of everyone who is doing something in green in Utrecht. But also, other interviewees (C2, NGO2, NGO3, CG1, CG2, CG3) have personal experiences with those self-maintenance projects.

According to the interviewees, a greater diversity of and in between these green spaces and self-maintenance projects increases the biodiversity, the urban climate and the aesthetics of Utrecht. It also increases the sense of ownership citizens experience over public space, educates them and others about the environment and decreases the strong gap between public and private space. The concept of private, public and semi-public "land use" will be discussed in a later section. The governmental stakeholders are also aware of how successful those maintenance projects are and stimulate them wherever they can. In relation to that stakeholder G3 shared their insights about the municipality's efforts towards the creation of a new edible district, which will be Europe's first edible district. This idea was adopted from the inhabitants, that lived in the area before. And after developers dropped out, the municipality took over to realize the idea.

Another way to empower citizens is through education, which can be seen as a major component of urban gardening initiatives. This was also shared by the majority of the interviewees (C1, C3, NGO1, NGO2, NGO3, CG2, G1). According to the respondents, urban gardening is able to teach people about many things, like food production as well as plant and soil sciences. But also other aspects, which have been described earlier, are positively affected by this (community building, social cohesion, education in agricultural and environmental practices, intergenerational and intercultural collaboration, stimulation of participatory efforts).

The biggest discrepancies between respondents about the aspect of empowerment & permanence was their confidence about if it is possible for urban gardening initiatives to become more permanent in the future. Here again the interviewees can be divided into two groups. One bigger group that is more positive and confident (G3, CG1, CG2, NGO1, NGO2, NGO3, C1, C2) about the permanent integration and one group that is more hesitant and non-confident (G1, CG3, C3) about it. Governmental actor G2 holds a centered position here, acknowledging the high potential of permanent initiatives, while also stating the risks from higher development goals, like housing or mobility.

Housing and mobility projects being the biggest threats to urban gardens, was also a common occurrence across the interviewees. Every single respondent was aware about the housing crisis and acknowledged the strong pressures onto the remaining free and green spaces from these developments.

Also, certain trends, like urban gardening being fashionable at the moment, the housing crisis, the increase of environmental interests, and the post-covid movement of people wanting to go outside and connect more, are influencing the uptake and permanence of urban gardening initiatives in a positive way, G3 and C3 stated.

4.5. Participation & Collaboration

The results of this section center around participation and collaboration, which emerged from the analysis of the interview data. The whole analysis group includes 5 codes (people involvement, community engagement, agreement, collaboration, social value), which were mentioned 157 times throughout all interviews.

The table 12 shows that social factors and community involvement play a major role for all groups. All groups also talked about agreements and different approaches to collaboration, which indicates a high degree of participation. Of all the groups, government representatives provided the most information on the various aspects of this analysis group.

TABLE 12: CODE FREQUENCIES OF THE DIFFERENT CODES IN THE PARTICIPATION AND COLLABORATION ANALYSIS GROUP

	Community Gard... 3 49	Company/ Entrep... 3 61	Governmental St... 3 84	NGO 3 74	Totals
People involvement 2		1	1		2
Community Engagement 51	13	10	17	11	51
Agreement 28	7	3	12	6	28
Collaboration 36	6	5	12	13	36
Social Value 40	7	10	10	13	40
Totals	33	29	52	43	157

As described earlier, participation and collaboration were described as major factors influencing the longevity of an initiative. According to the interviewees, the collaborative effort is very big in Utrecht. All of the interviewees experienced some kind of participatory or collaborative nature, nobody has been able to succeed by themselves. Governmental actors use ideas, manpower and efforts from the inhabitants and work together with them to realize ideas, while non-governmental actors use assistance, like space, guidance, money and other resources from the municipality for their projects. This joint effort was seen as a major factor for Utrecht's success story. Without working together, the permanence of an initiative can be influenced negatively. This can be counteracted in several different ways, like making agreements between inhabitants and the government, collaborating between stakeholders, involving the community in maintenance aspects and involving professionals and most importantly the strong social value of the initiatives.

The strong social value of urban gardening initiatives was a major factor for every single interviewee. Every interviewee mentioned the strong social value of urban gardening initiatives. This strong social value of these initiatives results in many positive aspects, just as community building, social cohesion, education in agricultural and environmental practices, intergenerational and intercultural collaboration, as well as the stimulation of participatory efforts.

If initiatives are well planned, so participants experience a high degree of participation, people feel that they belong to the place. And if the social cohesion between participants and collaboration between stakeholders like the municipality is strong, it can increase the participants' sense of ownership over the public space. This sense of ownership can have a positive impact on the longevity of an initiative. According to the respondents, having a sense of ownership increases the feeling of responsibility over a place and also the workload that people invest into a place. This is crucial for keeping an initiative going.

4.6. Responsibility

This section discusses the results regarding the stakeholder's perception about whose responsibility it is, to protect and empower urban gardening initiatives. This analysis group also emerged from the analysis of the interview data, and it includes 5 codes (people involvement, community engagement, agreement, collaboration, social value), which were used 47 times throughout all interviews.

TABLE 13: CODE FREQUENCIES OF THE DIFFERENT CODES IN THE RESPONSIBILITY ANALYSIS GROUP

		Community Gard... 3 49	Company/ Entrep... 3 61	Governmental St... 3 84	NGO 3 74	Totals
Awareness	6	4	1		1	6
Responsibility	16	4	1	2	9	16
Top-down	12	2		7	3	12
Stakeholders	3		3			3
Guerilla Gardening	10	1		1	8	10
Totals		11	5	10	21	47

As mentioned in the earlier section (participation & collaboration), there was a consensus among the stakeholders about it being joint effort, a united responsibility, to make urban gardening initiatives more permanent. According to the answers of the respondents, not only the municipality, but also the citizens themselves are responsible for protecting or empowering urban gardening initiatives. But it is safe to say that there was also a common understanding about the strong influence of the municipality and that they had the most influence in protecting or empowering urban gardening initiatives out of all questioned interviewees. This was particularly voiced by G1, NGO1, NGO2, NGO3, C1, C2, C3, CG1 and CG2. All of these stakeholders mentioned the municipality as the most influential stakeholder, which was one of the biggest agreements so far. Even government-critical interviewees from earlier came to a consensus here. The only interviewee that saw the biggest responsibility by themselves was interviewee CG3. Also, the remaining governmental stakeholders G2 and G3 were not unaware about their responsibility and shared their ranges of influence but didn't clearly state themselves as the most responsible stakeholder. But it is visible that the municipality plays a major role for the vast majority of the interviewees.

The municipality is also responsible for the “zoning plan”, which is a document that includes all of the different development goals and “destinations” for the city of Utrecht. These destinations are a more or less fixed idea about how an area should be developed. Changing one destination of a parcel to another is “*quite a process”,* G1 stated. In order to enable sustainable development of the city, it is important to think carefully about this zoning plan. The registered destination developments can therefore also be an important tool to stimulate developers to integrate green spaces and other sustainable aspects into their plans. If a target development is entered in the zoning plan, the developer cannot change it easily and must orientate himself on the entered destination, unless a change is made. Therefore, an optimal alignment of this zoning plan by the municipality is an important responsibility for a sustainable and lasting integration of urban gardening projects and other green spaces. A reflective quote from governmental stakeholder G3 about the zoning plan was: *“We, as a municipality, we guard the destination (zoning) plans. That's really a political issue. So, we have some policies, and we translate them into destination plans and that orders the city a little bit. Otherwise, we get a mess, everybody could do anything everywhere.”*

However, it is also important to mention that even ordinary citizens can have a strong influence. There are various ways to do this, such as founding projects, participating in them, supporting them with knowledge, work or resources, or even guerrilla gardening. Guerrilla gardening is an often illegal form of gardening where public areas are greened without permission. The two interviewees NGO2 and CG2 have had positive experiences with it and reported that even government representatives support the responsible application of this form of gardening. This was quite surprising considering that these activities are mostly illegal. These illegal activities include removing paving stones and then planting in the cracks, right up to setting up plant pots and benches in public places. None of the interviewees have had any problems with their installations so far. On the contrary, the efforts have met with a very positive response. This positive response was also evident from government representatives. For example, government representative G1 and G2 commented positively on the removal of paving stones and showed a "thumbs up", when they were asked about their opinion of it.

Finally, it should be emphasized again that the governmental institutions have a great deal of decision-making power. The vast majority of projects are either initiated or supported by the municipality and it can be said that the municipality is putting in great efforts towards greenifying the city. The support of the initiatives occurs in the shape of knowledge, space and other resources, such as money, knowledge, space as well as professional gardeners and other workers.

4.7. Land Use

The results of this section center around the concept of land use, which emerged too from the analysis of the interview data. The whole analysis group includes 3 codes (people involvement, community engagement, agreement, collaboration, social value), which were used 52 times throughout all interviews.

The table 14 shows that government stakeholders provided the most information on land use. They were the stakeholder dealing most with the topic of land use. Business owners talked most about private land use, as this form of land use seemed most important to them.

TABLE 14: CODE FREQUENCIES OF THE DIFFERENT CODES IN THE LAND USE ANALYSIS GROUP

	Community Gard... 3 49	Company/ Entrep... 3 61	Governmental St... 3 84	NGO 3 74	Totals
Public use 9		1	6	2	9
Land Use 29	5	6	15	3	29
Private land use 14	1	8	3	2	14
Totals	6	15	24	7	52

The concept of land use popped up regularly during the interviews and it is possible to make inferences about the temporal nature of urban gardening initiatives. An important aspect here is again the strong pressure on the use of the remaining open spaces in Utrecht. Densification, urban renewal and the increase in population are putting strong pressure on urban garden projects and other public green and open spaces. These land use conflicts make it hard for any (gardening) initiative to compete against higher development goals, like housing. This was agreed upon by all interviewees.

Another interesting finding was that private spaces can also be important for social urban gardening projects. In order to ensure a permanent integration of urban gardening initiatives, some interviewees find it inevitable to also include these spaces. Although traditional gardens are traditionally found on private property, these types of privately managed gardens were not investigated in this study. However, private spaces can also provide room for social (semi-public) initiatives that would otherwise not be available in the public space. For example, business owner C3 carries out his gardening projects on various rented private spaces. Interested gardeners can then cultivate land on these private plots and also enroll in courses on various agricultural practices taught by a professional third-party gardener/farmer. If their initiative would be semi-public or semi-private, the business owner said, it would be more difficult to carry out his plan. According to this interviewee, it is more sustainable, "more relaxed" and easier to achieve his goals on private property, because there one can concentrate more on economic sustainability and does not have to meet certain guidelines for a (semi-)public initiative. They nevertheless advocate for closer cooperation with the authorities, since they would be pursuing the same goals.

Also, the other business interviewees C2 and C1, as well as community gardener CG1 have experiences with private land uses and are aware of their risks and possibilities. Private land use can enable initiatives to establish themselves, but can also be the reason for its failure, which was the case for interviewee C1. Their initiative was founded on private land and existed temporarily until the site was redeveloped for housing. The same thing happened to business owner C2, but they managed to establish themselves permanently after negotiating with the municipality and the developers.

It should also be mentioned again how important maintenance projects are on public areas, where residents can take on maintenance work outside of their private property. This form of using public space is very important in Utrecht and was mentioned in most interviews. It allows interested people to be more involved in the design of public space, to get to know people, to grow food and to green the city, outside of the private space. And it is precisely this participation in public space that seems to lead to better cohesion and interest in public matters. It also relieves the burden on the municipality and diversifies the green spaces.

4.8. Policies

The results of this section center around policies. This analysis group also emerged from the analysis of the interview data, as all stakeholders expressed their views on policies. The whole analysis group includes one code (policies), which was used 31 times throughout all interviews.

The table 15 shows that government stakeholders in particular provided information on policies. Especially with the rather critical governmental stakeholder G1, there was an explicit exchange about policies and their advantages and disadvantages.

TABLE 15: CODE FREQUENCIES OF THE DIFFERENT CODES IN THE POLICIES ANALYSIS GROUP

	Community Gard... 3 49	Company/ Entrep... 3 61	Governmental St... 3 84	NGO 3 74	Totals
Policies 31	1	6	19	5	31
Totals	1	6	19	5	31

The first one was the "zoning plan", which was already talked about in the "responsibility" section. As a small summary, the zoning plan is a major document, which includes the developmental destinations of the different areas of the city. This zoning plan is guarded by the municipality and acts as a major tool to enforce major developments. It can help to implement long-term goals, particularly in the areas of infrastructure, the environment and housing. The set development targets are then difficult to change. But it is precisely this rather static approach that can lead to problems in individual cases. This was reported by governmental stakeholder G1. The set zoning plan does not offer enough flexibility for deviations, and it is very difficult to make changes to the plan. However, according to governmental stakeholder G1, sometimes it is important to be able to react to spontaneous changes and to make adjustments in the urban structure that were not foreseeable. The zoning plan can also be used as an enforcement tool to give developers a set direction. For example, if the zoning plan specifies green spaces in an area that is also to be developed for housing, it is much easier to integrate urban gardening projects there.

Another document is the greening plan. This document can be understood as an addition to the development plan and is used whenever major developments are carried out. The greening plan includes all aspects of the unbuilt outdoor area. Whenever large companies or developers carry out plans in an area and built for example houses, a greening plan must always be drawn up. Unfortunately, it is not always possible to enforce this greening plan because there is no legal regulation and no penalties for complying with this greening plan, according to government representative G1.

Government representative G1 also mentioned Utrecht's vision for 2040 (in Dutch: Ruimtelijke Strategie Utrecht 2040) and mentioned that it is possible and visible in the vision to create more living space and at the same time more green spaces but criticized that the different visions are not coordinated across the different sectors. For example, the green vision and the climate adaptation vision are separated, but according to interviewee G1 they could be incorporated into one united strategy.

5. Discussion

The discussion chapter of the final report answers the sub-research questions of the thesis. The text that follows is organized according to the sub-research questions. After answering the questions, the stakeholders' responses are considered through the introduced theories in order to integrate the findings into the existing theoretical framework and to gain possible new insights.

Now that the results of this thesis have been disclosed, the various sub-research questions can be answered. The answers to the questions are provided in an investigative and exploratory manner in order to fulfil the research objective to explore the temporal nature of urban gardening initiatives in Utrecht, gather perceptions of the involved stakeholders on urban gardening and on how it can be supported.

5.1. Temporary use of vacant urban spaces

The first Sub-Research Question was: *What are the perceptions of governmental and non-governmental stakeholders in urban gardening initiatives on the temporary use of vacant urban spaces?*

The results of this study have shown that both governmental and non-governmental stakeholders see a great transformative potential in urban gardening initiatives on vacant land. According to the questioned stakeholders, many of Utrecht's grassroot urban gardening movements start on vacant land. These places are seen as important breeding grounds for innovative solutions and transformations in the urban fabric. In relation to temporary urban gardening initiatives, this means that they have the possibility to develop into permanent structures or become part of larger developments. All stakeholders, but governmental actors in particular emphasized the great transformative potential of temporal urban gardening initiatives and pointed out the diversity and creativity of this pool of ideas. Ideas that can then be incorporated into permanent plans and developments. Governmental stakeholders have spoken to a great extent about the large pool of ideas that accounts for the wide variety of urban gardening initiatives in Utrecht. Many of these ideas come from what were once temporary and sometimes informal or even radical initiatives, such as guerrilla gardening. The stakeholders witnessed that although it is not possible to adopt all ideas, especially the innovative ones are able to establish themselves in future plans and structures of the city.

This observation is compatible with the stretch-and-transform strategy (Smith & Raven, 2012), where the transformative potential of an initiative has the possibility to influence the current state. The current state refers to a state in which urban gardening is not competitive towards other developments. However, the social and environmental values, which are strongly aligned with those of urban gardening, are reflected in Utrecht and increase the possibility that temporary initiatives can establish themselves on vacant land and prevail over other developments. This is in line with Raven's (2016) strategy, which assumes that permanent integration is only possible if there is broad support from established social and political structures and that one has to be persuasive with the wider audience, socially and politically, to be successful with this strategy. While it was perhaps predictable that advantageous social and political structures already existed in Utrecht, it was surprising to note the advocacy and engagement among and in between stakeholders. This was an important finding for this study as it suggests that both, politically and socially, there is not only a great interest and commitment to ecological and social issues in Utrecht, but that Utrecht is also successful with that strategy. In order to continue to be successful with this strategy, it is advisable to continue to view vacant land as a place of transformation, where ideas can be tested and then incorporated into future developments.

If the strategy is successful and urban gardening begins to set new standards (Smith & Raven 2012) and develops from a temporary structure to a permanent one, the transformative potential is not lost, but it can develop into other important areas and it can contribute to innovations in bigger infrastructures. For example, urban gardening can make its way into other urban developments, like green roofs or facades and can contribute more to urban resilience (Aalbers et al. 2019) or create social "hubs" that continue to generate new ideas (Bell, 2016).

Still, both governmental and non-governmental actors demonstrated through their statements that areas that are only vacant for a short period of time can create problems that make temporary use difficult. The reasons given by non-governmental stakeholders why it is difficult were ecological sustainability due to contamination of urban soils, difficult economic sustainability due to a too short term, and difficult social sustainability because it takes time for a community and a sense of responsibility to develop. This coincides with Nemeth & Langhorst's (2014) theory about the conditions for temporary use. There a distinction is made between long vacant and recently vacant with regard to the development of potential space indicator. Spaces that are only temporarily available for a short period of time are rather unsuitable for being ecologically, economically and socially sustainable. Here it should be emphasized again that Utrecht is a very densely built city, with a high degree of urban renewal and little vacancy. This leads to a high diversity of creative initiatives, but not all of which find a direct place in future developments.

One striking feature was that business owners in particular preferred the concept of private land use in order to avoid being confronted with the guidelines of public space, also for temporary initiatives. According to Nemeth & Langhorst's (2014) indicator on ownership of land, temporary use on private land is less appropriate, unless it has been vacant for a long time. In this finding, a discrepancy can be observed between the results and the theory, since the business stakeholders, unlike the theory, preferred temporary use on private vacant land over use on public land. According to the stakeholders interviewed, this can bring several benefits. One of the benefits is that there are fewer regulations to follow on private land. So, by having to focus less on adhering to regulations, such as keeping to opening hours or having to cope with bureaucratic burdens, you can focus more on sustaining the initiative, such as generating revenue. Another advantage is the availability of new areas that would otherwise not be developed or used intensively. Private landowners can make their land available, earn something from it, and monetized initiatives can operate there. The lower contamination of the soils also plays a smaller role on privately provided areas. This strategy, which was particularly pursued by business stakeholders, of involving private areas more strongly, illustrates the great flexibility and possibilities that private areas enable.

5.2. PROTECTING TEMPORARY URBAN GARDENING INITIATIVES

The second Sub-Research Question was: *What are the perceptions of governmental and non-governmental stakeholders on the need for protecting temporary urban gardening initiatives and making them more permanent?*

The results showed that stakeholders have different opinions on whether temporary urban gardening needs to be protected or not. Most of the stakeholders stated that there is a small need for protecting temporary urban gardening initiatives and making them more permanent. This is because Utrecht was already equipped with the protective mechanisms responsible for a permanent integration of initiatives, such as a green-social government and an ambitious population, as well as a long history of including urban gardening in urban planning. This view was particularly supported by Utrecht’s governmental body and non-governmental stakeholders, such as NGO members and Community gardeners. There is a large number of permanent urban gardening initiatives and many opportunities to engage in gardening and self-maintenance incentives in public spaces, and, according to governmental stakeholders, good ideas will prevail even despite land use conflicts. These findings are consistent with Smith & Raven's (2012) shielding strategy, even the passive shielding process, since the protective mechanisms are already in place, such as a high awareness and ambitious society and a supportive political environment, already exist in Utrecht, which can be considered in protecting the initiatives.

However, the active shielding process would also be an option, as there is particularly strong pressure on vacant spaces as well as on temporary projects. Most of the stakeholders, governmental and non-governmental, are at least aware of the existence of temporary projects and a large proportion of them have themselves been affected by involuntary temporality. In this context, involuntary temporality refers to cases where initiatives remain temporary, contrary to the will of the stakeholders. This situation is not a decision, but rather the consequence of high land use pressure and competition between different types of land uses. It can often happen that initiatives are closed or relocated when larger developments take over or they only get a short-term usage permit. The findings are consistent with Nemeth and Langhorst's (2014) indicator on the role of the city, where fast-growing cities tend to prefer more permanent and high-return developments over temporary low-return investments. The appearance of the concept of involuntary temporality points towards the fact that conditions, which can limit the permanence of an initiative are active in Utrecht. Demailly and Darly (2017) also mentioned that urban gardening projects often only acquire temporary permits and lack the ability to be formally integrated into the long-term. The uncertainty for urban gardening initiatives is a frequently mentioned phenomenon in the literature, especially in rapidly growing cities, as also mentioned by Nemeth and Langhorst (2014).

Despite the fact, that the questioned stakeholders declared a small need for protecting temporary urban gardening initiatives, the results also showed that governmental stakeholders were given the greatest responsibility for protecting temporary initiatives. Because they were the stakeholders who made the important decisions and who had the most influence. The fact that government representatives play a central role (Nemeth & Langhorst, 2014) or often carry the most power and responsibility (Colomb, 2012) has also been the subject of literature.

Combining Nemeth and Langhorst's (2014) indicators for temporary use with the stakeholders' perceptions of Utrecht's circumstances, it can be mentioned that Utrecht has unfavourable conditions for temporary use. The main factors mentioned in Nemeth and Langhorst's (2014) list of indicators for this were that Utrecht is a growing and vibrant city and that there is also a lot of interest from private investors, as well as little and only short-term vacancy and an already diverse and multi-use environment. The unfavourable conditions for a temporary integration of urban gardening initiatives in Utrecht can be linked again to the stretch-and-transform strategy (Smith & Raven, 2012). In Kern et al.'s (2015) framework on how to assess whether an innovation falls under one of the two categories (stretch-and-transform, fit-and-conform) it states to look for evidence of widely desired sustainability criteria such as ecological or social benefits. This widespread desire for ecological and social sustainability was clearly reflected among all stakeholders as well as among the political background in Utrecht. The second indicator for this strategy is also present, 'arguing for the need for (and attempts at) achieving institutional reforms to enable to wider deployment of sustainable innovations' (Raven et al., 2015). The results showed that strong pressures, triggered by grassroots advocacy can have an impact on institutional reforms, such as plans and policies. It is also the case that stakeholders who are involved with temporary urban gardening can directly exert influence onto high responsibility stakeholders like governmental representatives. This could happen through lobbying or direct collaboration.

The agreement with Smith & Ravens (2012) stretch-and-transform strategy points towards a more radical approach to permanently integrate urban gardening in Utrecht by adapting the selection environment for the initiatives. It is less about making urban gardening competitive, but rather about adapting norms and social structures that support this form of sustainable land use. To be successful with this strategy, it is recommended that the value of land use should be questioned. Instead of calculating land with an economic value, ecological and social factors should play a greater role, which was also described by Raven et al. (2015) and the stakeholders in this study. Practically, this means to advocate for policies that aim for more than a temporary protection. Ways to do this would be possibly through creating explicit areas in the zoning plan that prioritize social and environmental developments or creating new social norms, that give a new value to urban gardening.

5.3. Limitations

This section reflects on this research project in regard to its methods and limitations.

External Validity

The choice to use a case study as study design may have a direct impact on the external validity, as the results cannot be applied to cities other than Utrecht. Focusing on only one urban area means that the data cannot be generalized. Other cities may have a different socio-economic, cultural and political context, so applying the gained knowledge onto other cases should be done with caution. However, it might be possible that other (Dutch) citites have similar characteristics to Utrecht and future research should examine if there are similar conditions elsewhere, or if these dynamics also hold in cities of different sizes or forms of government.

A city with similar circumstances could be, for example, Freiburg, Germany. Although Freiburg is a bit smaller than Utrecht, it shares many characteristics regarding its sustainable vision and other aspects of urban planning. For example, both cities focus on sustainable infrastructure, eco-friendly construction and energy projects as well as on the principle of participation and local governance (greencity.freiburg, n.d.[5]).

[5] Green City Freiburg - Sustainable urban development (n.d.). Retrieved Septmber 27 , 2024 https://greencity.freiburg.de/pb/1592989.html

Internal Validity

Another limitation was that not all key stakeholders were interviewed. Many of the interviewees named developers as an important stakeholder. They were identified as a stakeholder, that obtains a lot of influence in land use decisions. Especially in cities like Utrecht, where there is a high interest and demand for housing. Some interviewees also said that the opinions of developers are often very different from theirs and are based more on economic goals. It would have been very interesting to capture these perspectives of developers in order to compare them with the others. Thus, not all opinions and stakeholders were interviewed and therefore the results obtained should be viewed with caution. However, this work still provides insights and scientific knowledge on the perceptions of different stakeholders about the temporal nature of urban gardening initiatives in Utrecht.

Also, the relatively small number of interviewees for each group of stakeholders, 3 persons per group, is at the lower limit and may pose problems for internal validity, as data saturation is only minimal. This was also confirmed by the fact that there were regularly differing opinions between the stakeholder group representatives. Also, the small number of total interviews (12) might only capture a small percentage of the total social dynamics between the different actor groups. Not capturing or misinterpreting those social dynamics can have negative impacts on the internal validity of the study. The reason why not more interviews were conducted was that it was difficult to get in touch with the various stakeholders. There were also three informal conversations with urban gardening representatives, which were not recorded or structured. The internet platform Buurt-Natuur030 and through snowballing it was possible to acquire people for interviews. If more time had been available, it would have been possible to find out more about other people through the contacts made.

Data collection methodology

This section addresses the limitations of the data collection methodology. Although it was adequate to select interviews to capture stakeholders' perceptions, it also increases the subjectivity of the interpretation of the data. This can be referred to as researchers bias and can have an impact on the validity and reliability of the results.

6. Conclusion

At the beginning of this thesis, a general research question was formulated from the declared knowledge gap. The aim of this research consisted of gaining more clarity of the involved stakeholders in urban gardening and on how they influence the long-term integration of the 'niche innovation' of grassroot urban gardening initiatives, how they can strengthen their use and management claims and ultimately make them more permanent. This case study attempted to provide a foundation for exploring the knowledge gap and answering the general research question:

What are the perspectives of governmental and non-governmental stakeholders in urban gardening initiatives on the temporality and permanence of these initiatives?

The results of this study have shown that temporality is an important and central component of urban gardening initiatives in Utrecht.

Government stakeholders' perspectives on the temporal nature of urban gardening initiatives were varied and complex. Some viewed these initiatives as temporary solutions addressing immanent problems, such as the need for a healthier living environment in dense neighborhoods or acting as a placeholder for vacant land. These findings build upon prior scientific research of Nemeth & Langhorst's (2014) theory, where temporary initiatives are a catalyst for innovation and other sustainable permanent developments. They can be temporary solutions which can be removed or adapted, depending on what is considered more important in the context of urban renewal. Temporary urban gardening projects can be considered as testing grounds for innovative ideas, especially in areas affected by high land use pressure (Colomb, 2012). This approach can be called "strategic temporality", where temporary solutions can introduce new practices that can also potentially become permanent structures (Nemeth & Langhorst, 2014). In this approach, temporality is not an unwanted limitation, but can be used consciously without having to take the risks of permanent integration. Especially in areas like Utrecht, where competition is high and vacant space is low, temporary urban gardening projects can help to test ideas (Colomb, 2012).

While most governmental stakeholders viewed temporality as a flexible tool, other stakeholders, such as business owners and urban gardeners, viewed it as a problem. They stated land use conflicts and competitions as the biggest challenges and barriers for a permanent integration of urban gardening initiatives. They see these initiatives as an integral part of urban planning that should be permanently integrated and protected. The temporality of initiatives can cause problems in regard to community building, economic sustainablity and environmental issues. This was also reflected in D'Alisa et al.'s (2015) book Degrowth, where the temporarilty of urban initiatives (with a social and environmental background) causes issues for building a sustainable community. This difference in interests, having a flexible planning tool on the one hand (governmental stakeholders) and wanting an ongoing community building project (non-governmental stakeholders) on the other, represents a conflict. Many of the non-governmental stakeholders demand institutional reforms that enable a permanent integration of urban gardening initiatives. The perspectives of government and non-governmental stakeholders have shown how difficult it is to compromise spatial planning objectives (transport and housing) with social and environmental concerns.

Also consistent with Nemeth & Langhorst's (2014) theory is that temporary urban gardening initiatives adapt to specific local characteristics, including the economic climate, the role and influence of the city, and the city's general attitude toward urban renewal and other forms of development. However, the study expands upon the literature by demonstrating, that in places with high land use pressures and little vacancy, temporality was the result of strategic decisions by governmental stakeholders. Because these stakeholders were the ones who decided when and where which project would be initiated. For example, in areas with low vacancy and high development pressures, compromises are more likely to be necessary than in cities with high vacancy and lower development pressure (Colomb, 2012). These strategic decisions are necessary to overcome the complex challenges of a rapidly growing city.

If temporary urban gardening initiatives are to become more permanent, governmental and non-governmental stakeholders should take certain actions. A careful application of SNM strategies (Smith & Raven, 2012) is required, particularly with the empowerment strategy, where urban gardening is developed from a temporary structure into a permanent one. Governmental actors were also using the fit-and-conform strategy more often, which allows for urban gardening being used as a felxible tool and as a temporary solution. However, they and also the non-governmental stakeholders were more pushing for the stretch-and-transform approach, where urban gardening will be recognized as a permanent and essential part of our cities. This approach aims to break down institutional frameworks to permanently integrate sustainable innovations such as urban gardening. All stakeholders should work together to accomplish this task. Governmental stakeholders should provide institutional support, while the other stakeholders should advocate for policy changes.

Theoretical reflection on the theories used

The application of Strategic Niche Management (SNM) theory has led to insights into the dynamics of temporality and permanence. The focus on the empowerment strategy, especially the stretch-and-transform approach, provided insights on how to transform temporary urban gardening projects into permanent structures. The inductive codes and the findings indicate that the SNM theory does not cover all facets of urban gardening. While the SNM theory illustrates how innovations such as urban gardening can challenge institutional frameworks and thus integrate into the long term, the aspect of temporality is not sufficiently addressed, especially in areas such as Utrecht, which are affected by high land use pressure. This shows gaps in the SNM theory, which should be adressed by future researchers.

The theory of Nemeth and Langhorst (2014), the Conditions Appropriate for Temporary Use (CATU), was an important addition, as it also addresses spatial and institutional aspects. The CATU theory was able to show that temporality can also be used consciously and strategically to respond to different spatial dynamics. The results of this study can contribute to the CATU theory by showing how factors such as political support and willpower, as well as land availability, can play an important role in the temporality and permanence of urban gardening initiatives.

6.1. Scientific recommendations

1. Including temporality in the SNM framework
   This study has established that the aspect of temporality was not fully covered by the SNM theory (Nemeth & Lanhorst, 2014). Future research could expand the framework to investigate how temporality affects the transition from temporal niche innovations to permanent structures.
2. Focusing on private spaces
   During this study and also in the literature of Nemeth & Langhorst's (2014) theory, public space was repeatedly described as suitable for urban gardening initiatives. However, it would also be interesting to include private spaces in the consideration of this study. Profit-oriented initiatives in particular could benefit from the use of private spaces, as there are generally fewer regulations to be observed in these areas than in public areas. The extent to which private spaces are suitable for the permanent integration of grassroots urban gardening projects in Utrecht could be the subject of future studies.
3. Including developers as stakeholders
   The aim of this work was to gain insights into the different actors of Utrecht's urban gardening landscape in order to integrate grassroots urban gardening initiatives into the long-term, strengthen their use and management claims and ultimately make them more permanent. However, an important stakeholder, investors and developers, were not represented. The results of this study show that this actor is an important part of the urban fabric that can influence the dynamics of urban renewal.

6.2. Societal recommendations

1. Increasing Participation
   Participation is an important part of urban gardening and the empowerment strategy of Smith & Raven (2012). Local governments and NGOs should focus on inclusive community building, where participation and a sense of ownership is a

big part of an initiative. This sense of ownership binds people to the place, leads to greater social cohesion and, in the long term, to greater resilience towards other developments and changes in the urban fabric. It would be possible to increase the participation of citizens in the design of their public space, e.g. through the already existing self-maintenance initiatives. Also, organizing workshops or providing resources is a great way to empower citizens.

2. Public-Private partnerships
   In the course of the work, it was determined that private spaces should also be taken more into consideration. Partnerships between public bodies and private actors should be strengthened in order to better achieve common economic, ecological and social goals. Focusing solely on public spaces may disregard opportunities which may arise through incorporating private spaces.
3. Creating temporary spaces
   Based on the results of this study and the conditions appropriate for temporary use established by Nemeth and Langhorst (2014), it can be recommended that more effort should be made to maintain and create temporary spaces. These spaces should be seen less as temporary placeholders and more as places for the incubation of ideas.

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APPENDIX 1: INTERVIEW PROTOCOL

The interview protocol will be used to guide the interviews in a certain direction but does not need to be followed strictly to ensure a fluent and open discussion about how the stakeholders perceive the temporal nature of Urban Gardening, their influence in supporting these measurements and potentially making them more permanent. Also, some questions can be adjusted, removed, or added, depending on the stakeholder or situation.

The questions from the interview structure derived from the main research question as well as the two sub research questions (see 1.6.) and the theoretical frameworks used to ensure a full coverage of the respected questions. The interview questions are phrased in a relatively open way, to reduce bias and to encourage a free and open conversation with the individual stakeholders.

Interview protocol

Interviewee: Governmental actor / non-governmental actor / (Participator)

Formalities: Recording the Interview (Audio &/ Video), Data processing, Consent for using the data, Confidential and anonymous

Structure of the interview

⇒ Introduction: Short background of myself and the study

1. Personal Urban gardening definition, vague problem definition

⇒ Personal information

2. What is your role/ involvement regarding Urban Gardening?
3. How long have you been in that role/ involved with Urban Gardening?
4. What is the initiative/ organization/ NGO / governmental body called that you are a part of?
5. What is your general opinion about Urban Gardening?
    5.1. Planning, managing (or participatory) process of an UG initiative

⇒ Vacant spaces & temporality: Perceptions on temporary use/ vacant spaces

6. How do you perceive the temporal nature of Urban Gardening?
7. How do you perceive open/ vacant spaces in relation to Urban Gardening?
8. What is the potential and role of vacant spaces? How can they be used effectively?
    8.1. When is it appropriate, to use temporary use, pros and cons?
    8.2. When is it appropriate to use permanent use, pros and cons?
9. Is there a relationship between vacancy and temporary use of Urban Gardening?
    9.1. Temporary placeholder or desired development goal?

⇒ Protection & permanent use: Perceptions on the need to protect these spaces and making them more permanent

10. Has Urban Gardening a potential to be more permanent?
11. Should Urban Gardening be better protected/ empowered to become more permanent?

APPENDIX 2: DATA MANAGEMENT PLAN

Landscape Architecture and Spatial Planning (LSP)

Data management MSc thesis (V 1.0)

Complete the categories 1 to 6 as part of your research proposal and add it as an Annex to the final research proposal. After submitting your draft proposal, update the information of categories 1 to 6 if necessary, and complete the details of category 7. Add the completed data management document to the data you submit to your supervisor.

1. Details of the MSc thesis

Name student	Niklas Georg Witt
MSc thesis code	LUP80436
Supervisor(s)	Gerrit-Jan Carsjens
Start date thesis	10-10-2023

2. Short description of your research

Preliminary title	Urban Gardening – temporary placeholder or desired development goal?
Abstract (max 100 words)	The central focus of this thesis is to understand the advantages and disadvantages of temporality in urban gardening and the role of the government in terms of its influence towards the permanence of these initiatives. The aim is to find out what the role and range of influence of

	involved stakeholders is, regarding the protection of grassroot urban gardening projects. And consequently, what conclusions can be drawn for urban planning.

3. Data management roles

Roles	
Who is **collecting** the data?	Niklas Georg Witt
Who is **analysing** the data?	Niklas Georg Witt

4. Expected types of research data

Data stage	**Types of research data & software choice to process it (if applicable)**
Raw data	Interview transcripts & policy documents
Processed data	Coded interviews and document analysis
Other?	N/a

5. Short-term storage solutions

Describe where the data will be stored physically during your research (e.g. on paper, laptop, USB drive, your university M-drive, other) and how a backup is organized.

Data stage	**Storage location and backup**
Raw data	Laptop storage, backup on icloud on mac + outlook

Processed data	Laptop storage, backup on icloud on mac + outlook
Other?	N/a

6. Sharing, ownership and privacy

Sharing, ownership and privacy	**(With) who(m), what and how?**
Data **sharing** - Do you have plans to share your data with other parties (besides your supervisor)?	N/a
Data **ownership** - Are there agreements about the data ownership with other involved parties? (besides your supervisor)	N/a
Privacy - Are there privacy or security issues, and if there are, how are you dealing with them?	N/a

7. Long-term storage

Your supervisor will take care of the long-term storage of your data. Which part of your research data has value for long-term storage and how is the data organized?

Data stage	**Which data will be stored for the long term or should be destroyed?**
Raw data	Interview data; Laptop storage, backup on icloud on mac
Processed data	Interview data; Laptop storage, backup on icloud on mac
Other?	N/a

Describe how the stored data is organized (e.g. file structure and file names)	Filed on laptop under the name “Master Thesis”. In that folder are other folders dedicated to the different stages of the thesis, like “Brainstorming”, “Proposal” and “Data acquisition”. Other folders will follow, if they are needed during later stages, e.g. “Data analysis”. The Data acquisition folder is separated into “Interview recordings”, “Interview transcripts”, “Policy documents” and “Other”.

APPENDIX 3: CONSENT FORM

Title of the study: Urban Gardening – temporary placeholder or desired development goal?

Researcher: Niklas Georg Witt

Read carefully: I declare that I understand the aim and content of the interview, which has been clearly explained to me. I have been able to ask questions about the study and my questions have been answered to my satisfaction.

- The interview will be recorded, and a transcript will be produced
- The transcript of the interview will be analysed by the researcher
- Access to the transcripts is limited to the researcher and academic consultants from Wageningen University & Research

Quotation Agreement:

Words may be quoted directly in the final paper. With regards to accepting of being quoted, please sign next to the statement that you agree with:

	I agree to be quoted directly.
	I only agree to be quoted directly, after reviewing the transcript
	I do not agree with being quoted directly

I understand that:

○ I can refuse to answer any questions and that I can withdraw from the interview at any given time without giving a reason

○ I understand that my personal information that can identify me, such as my name, will not be shared beyond the researchers team

○ I understand that the audio recordings will be destroyed after the interview has been transcribed

I declare that:

- ○ I consent voluntarily to be a participant in this research
- ○ I give permission to use the results of this interview in a scientific report or publication
- ○ I give permission to audio record the interview

Interviewee: ______________________________

Name: ______________________________

Date: ______________________________

Researcher: I have accurately explained the aim and content of the interview to the participant and ensured that the participant understands to what they are consenting to.

Researcher: ______________________________

Name: ______________________________

Date: ______________________________

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