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Fourteen local governance initiatives in greenspace in urban areas in the Netherlands. Discourses, success and failure factors, and the perspectives of local authorities

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abstract

This article covers two years of research into the factors that determine the success or failure of initiatives taken by companies, citizens or municipalities in or for greenspace in urban regions in the Netherlands. The researchers investigated fourteen initiatives and selected five of them for more exhaustive case studies. Semi-open interviews were conducted with initiators, local government officers, elected municipal councillors and members of the municipal executive board. Websites and policy documents were also studied and initiatives were visited.

The study uses the policy arrangement approach which identifies actors and their coalitions, discourses, resources, and rules and regulations. The research investigates the development of the initiatives, the initiators' ambitions, and identifies the success and failure factors, local government involvement and views of the latter on how to approach societal initiatives in general. Do local authorities perceive a transition in the way their municipalities address societal initiatives? A short reflection on the applicability of change theories completes the research: Strategic Niche Management theory and change theory according to the Policy Arrangement Approach.

This review of initiatives combined with case study research provides in depth insights into the relations that exist or may develop around initiatives in greenspace. The research showed that the initiatives lead to a broader meaning and involvement of more actors around green spaces. They integrate greenspace with social and economic development. The greenspace which the initiatives develop includes among others vegetable production, letting out of greenspace for yoga or to schools, and wadis. Among the factors of success are the agreement with the municipality and whether the discourse is in tune with the current social climate. A failure factor is e.g. that 'green space has no value' compared to the value of land and buildings accrued by municipal real estate development, according to citizens and local officers.

The article contains recommendations to local governments and prospects for further research. Pragmatism, and thinking together with the initiators about how to turn an initiative into a success are part of these recommendations. The involvement of more actors and the broader meaning and integration of greenspace with social and economic development is possibly making it more resistant to building. This deserves investigation.

Keywords: greenspace, local initiative, niche management, success factors, local government.

Acknowledgements

Introduction

Worldwide, development of urban nature gets less attention in urban development than needed (Torres et al., 2018, also referring to Larrère and Larrère, 2015). Urban population growth jeopardizes urban greenspace development in cities when densification policies are practiced (McPherson 1998; Simpson, 1998; Xiao et al., 1998; Weng, 2001; Whitford et al., 2001; Pauleit et al., 2005; Tratalos et al., 2007, referring to Arnold and Gibbons, 1996; Wolch et al., 2014). Also in Europe, greenspace development is staying behind urban development (EEA, 2002; Pauleit et al., 2005). "*Cities in eastern and southern Europe, the Netherlands and Finland have experienced a strong loss of green spaces between 2006 and 2012*", according to ESPON (2017, p.4 and 18). Combined with a compact city approach and related increase of population density, this may imply an even stronger reduction of greenspace cover per capita. These urban developments have negative effects in terms of missing out on the important benefits of ecosystem services for urban areas (Tzoulas et al., 2007; De Groot, 2010; Braat and De Groot, 2012; Hartig et al., 2014; Kabish et al., 2015; Luederitz et al., 2015), and in terms of exclusiveness of greenspace (Brueckner et al., 1999; Aalbers et al., 2014). A UNEP-IPSOS survey in England, France, Germany and Spain among a representative sample (considering age, sex, occupancy) of 1000, aged 16 and older for each country, demonstrates that 70% of Europeans include proximity of greenspace among their criteria to choose a living space (Torres 2017, referring to UNEP-IPSOS, 2013).

Where green provisions are made they are often very similar: municipalities in the Netherlands appear to often develop a type of urban green[1] that is rather uniform in its shape and use: parks (Aalbers et al., 2014). In Sweden, this phenomenon is referred to as the 'parkification' of nature (Littke, 2015). Against the background of urban densification and 'parkification', initiatives of citizens and companies can be understood as expressions of a desire to greener living environments and adapting them to local needs and wishes (Aalbers, 2018). The initiatives present innovations in greenspace that may bump into a resistant socio-ecological system of greenspace management that is organized on the basis of other rules and resources (Aalbers and Sehested, 2018). Larrrère and Larrère (2015) ask for opening the vice of dualism and enabling human and nature interaction, as humans are part of nature themselves.

Here and there some more variation in urban greenspace seems to develop in the Netherlands: e.g. natural playgrounds such as in the Dutch areas the Speeldernis in Rotterdam or the Inside Out Forest in Diepenheim. Indeed, the perspective on nature in the Netherlands is changing towards a vision that is no longer limited to nature conservation only, both at the level of the state (Dijksma, 2014; Buijs et al., 2015) and in local initiatives taken by non-state actors (e.g. Aalbers et al., 2015; Mattijssen et al., 2015). Also elsewhere in Europe numerous management and development initiatives in greenspace taken by citizens and small companies have emerged over the last decades (Schukoske, 2000; Kurtz, 2001; Buizer, 2008; Jansson and Lindgren, 2012; Ernwein, 2014; García et al., 2014; Poulsen et al., 2014; Fors et al., 2015; Lohrberg et al., 2016; Barron, 2017; Buijs et al., 2017). Fors et al. (2015) observed that studies of these initiatives have focused on the benefits to users and administrators of involvement in these initiatives, but less on their outcomes in terms of greenspace.

Aalbers et al. (2015) analysed 40 greenspace initiatives by citizens and small companies in the Netherlands and interviewed some 50 citizens and entrepreneurs and looked also into the outcomes of

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[1] Urban green, urban greenspace, urban parks

these initiatives in terms of greenspace. They found that the initiatives develop a kind of greenspace that differs in scale and identity from state developed greenspace, and that the developed greenspace responds to the desires of locally involved residents. Aalbers and Sehested (2018) found that especially the 'critical knowledge' leads to this different greenspace: citizens often have a different understanding of greenspace or nature than the municipality (e.g. Van Herzele and Wiedemann, 2003 referring to Nicol and Blake, 2000 Buijs, 2009; Littke, 2015). Aalbers et al. (2015) identified how local authorities can support initiatives by citizens and small companies, on the basis of a survey of initiatives.

Since the 1980-s the quality and management of (urban) greenspace has obtained attention in Europe both in theory and practice, in parallel to the reorientation to quality in the larger public management reform (Lindholst et al., 2015). However, studies on the participation of citizens in the governance of green space lacks behind. Ostoic and Konijnendijk Van den Bosch (2015) reviewed 519 urban forestry articles from 1988 until 2014 and found that *"Studies related to active participation of citizens and partnerships in urban forestry have been missing" (p.129)*.

Kabish et al. (2015) did a systematic review of 219 articles on urban greenspace and human-environment interactions.[2] They found that only five papers were about social cohesion and participation, of which four applied qualitative analyses addressing local residents. Ostoic and Konijnendijk Van den Bosch (2015) identify the need for more evidence on the relation between the benefits of urban forests and existing policies (2015). Concerning the study of the relationship between users and greenspace, Jansson and Lindgren (2012, p. 143) wrote that *"Since the majority of users usually do not participate, their perspectives are seldom included in studies... more inclusive participatory methods must be developed. In-depth qualitative studies and case studies are required to deal with these issues and to provide new insights and contextual knowledge useful for the practice of urban landscape management"*.

This paper reports results of a two-years research on the interaction between companies, citizens and local governments managing greenspace in urban areas in the Netherlands. It looks into the perspectives of these different actors concerning greenspace, the influence they harness - including their contribution to biodiversity and the type of greenspace they bring about and the factors that determine the success or failure of green initiatives taken by companies and citizens in urban and peri-urban areas. It elaborates on the perspective of municipal staff on those factors and the municipal role towards these societal initiators.

'Ecological modernization' (Leroy and Arts, 2006) and 'transition' (Geels and Schot, 2007; Geels, 2011; Smith and Raven, 2012; Smith et al., 2015) are concepts that refer to change or innovation in socio-ecological (Ostrom, 2009), or socio-technical systems (Geels and Schot, 2007; Geels, 2011; Smith et al., 2015), brought by new actors such as companies and citizens and new roles and wider contextual changes in current societies, such as empowerment of citizens and the complexity of institutional relationships between the public and private spheres (Leroy and Arts, 2006; Geels, 2011; Smith and Raven, 2012). This paper inquires whether municipal actors perceive a transition over time in the way their municipalities approach greenspace and greenspace initiatives by companies and citizens. The study discusses this also briefly in the light of Strategic Niche Management theory (Smith et al., 2015; Aalbers and Sehested, 2018) which derives from social innovation studies, more specifically 'transition studies', and change theory following the Policy Arrangement Approach (Arts and Tatenhove, 2004; Leroy and Arts, 2006). The initiatives can be considered as expressions of the environment movement. Initially, in the 60-es, this was a conservation movement. Towards the new millennium it is developing from protection of "*an external realm of non-human nature to the greening of our own societies*" (Jamison, 2001 p.17, referring to Dobson, 2000). Jamison refers to it as 'sustainable development' agenda. The initiatives make this agenda concrete by their actions.

Theoretical framework

To influence their social and physical environment, actors use means of action. In social theory the notion of 'agency' and the 'duality of structure' (Giddens, 1984) are developed. 'Agency' applies to the effect of means of action that actors use, when 'controlling things and people' in greenspace management (Janson and Lindgren, 2012, referring to Soanes and Stevensen, 2009). Structure refers to

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[2] quality of life, recreation, justice, social cohesion, social inclusion, integration, social value, accessibility, wellbeing, health and perception

the institutions that actors are embedded in, and the rules which 'structure' their behaviour. Duality of structure is a notion developed by Giddens (1984) which suggests that actors are not only influenced by social structure but also themselves able to influence this social structure (hence the 'duality') by what Giddens calls 'means of action'. This duality can be recognized in the structured institution of the government as greenspace manager and responsible for the public interest versus the initiatives for change by companies and citizens as greenspace managers. Building on these insights in agency and duality of structure and Hajer's notion of discourse as 'a specific ensemble of ideas, concepts, and categorisations that are produced, reproduced and transformed in a particular set of practices and through which meaning is given to physical and social realities' (Hajer, 1995), Arts and Tatenhove (2004) and Leroy and Arts (2006) developed their Policy Arrangement Approach (PAA).

The 'naming and framing' of issues (Hajer, 1995) forms the basis for the design of policies. The policy arrangement is defined as "*the temporary stabilization of the organization and content of a policy domain at a specific level of policy making*" (Van Tatenhove et al., 2000 p.54).

The Policy Arrangement Approach is a tested theoretical approach to studying governing in the environmental, health and water policy domain (e.g. Wiering and Arts, 2006; Buizer, 2008; Stassen et al., 2010; Van Gossum et al., 2011; Aalbers and Pauleit, 2013; Aalbers et al., 2015). In the present research it is used for the systematic identification of the success and failure factors in terms of categories of means of action in the cooperation and implementation of the initiatives, at the level of the initiators and other actors. Whereas the policy arrangement is considered as stabilizing feature, this study uses an action oriented interpretation of the policy arrangement approach: presuming that various actors actively can influence the arrangement by using means of action, despite the fact that they are themselves also influenced by this arrangement.

The means of action of the initiatives and of the municipalities are categorized in four types:

- the narrative and objectives of the initiatives and of the municipal policy *("discourse")* and whether it brings parties together or not; the representation of greenspace in these discourses;
- the other people and organisations with whom the initiators work to realise their plans *("coalition")*;
- resources contributed by the different parties e.g. funding, expertise, time and other resources *("resources")*;
- how the parties do or do not interact with each other and the influence of legislation and informal rules *("the rules of the game")*.

In the international professional and scientific literature on urban greenspace six discourses have been identified (Ostoic and Konijnendijk, 2015): the managerial discourse about the reason for and way of managing greenspace; the ecosystem services discourse about the multiple services that nature produces (e.g. food production, climate regulation, mental restoration, etc.); the green infrastructure discourse about the importance and way of connecting greenspace to a larger structure); the civic involvement discourse about making greenspace more pleasant for citizens as consumers; the biodiversity discourse about the contribution of urban areas to biodiversity; and the urban planning discourse concerning greenspace in urban planning. The research investigated how the discourses by the initiators could be categorized in these terms. This was also done for the three categories of motivation for taking a green initiative, developed by Van Luijk (2000), i.e. whether it is obligatory, a moral duty or because it pays off.

In terms of Policy Arrangement Approach theory, change can come about by any of the four means of action (see also Rydin, 2003; Van Tatenhove and Leroy, 2003; Arts et al., 2006; De Boer, 2009; Arnouts, 2010). The Strategic Niche Management approaches (Smith and Raven, 2012) in transition studies, just as the Policy Arrangement Approach, have their origin in social structuration theory (Giddens, 1984) but their authors put the accent on the existence of 'niches', 'regimes' and 'landscape'[3] structures, according to different levels of structuration and propose the concept of 'critical knowledge' (see also Aalbers and Sehested, 2018). These two different theories on change or transition will be referred to when interpreting the results in the discussion section.

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[3] The 'landscape level' in the Multi Level Perspective refers to the deeper structuration of socio-technical systems that are not easily changed. This is not to be mixed up with the general meaning of 'landscape'.

The literature distinguishes biodiversity in terms of species and habitats from biocultural diversity as richness in human-nature interactions (Cocks, 2006; Elands et al., 2015). This distinction will also be made while discussing the results.

Research methods and data collection

research questions
The following four research questions will be answered in this article:
1   How do urban green space initiatives develop: What influence do initiators harness to realise their initiatives and what sort of green space or nature do they bring? Does biodiversity matter in the initiatives?
2   What makes projects succeed or fail in relation to the ambitions of initiators, according to initiators and municipal authorities?
3   What role do local government actors see for their municipality: In what ways are they involved in and do they relate to the initiatives and what type of actions can they take to make a success of an initiative?
4   Do municipal actors perceive a transition in the municipal interaction with local initiatives? If so, how?

comparative surveys of initiatives and of case studies
A qualitative and comparative research was conducted in 2016 and 2017. In the first year a survey of fourteen urban green space initiatives in the Netherlands was carried out. In the second year, this was followed by more indepth comparative case-study research of 5 of these initiatives, with a maximal variation (Flyvbjerg, 2006). Both methods compare to the 'case survey method' with the author as 'reader-analyst' (Yin and Heald, 1975). Case study research allows an in depth insight in the developments and social interactions of an initiative, in relation to the contextual factors of the initiative (Stake 1995; Flyvberg, 2006; Wahyuni, 2010). To compare several cases enables a more comprehensive, contextual understanding of the issues at stake and the differences between the cases. The survey of initiatives combined with case study research provides in depth insights into the relations that exist or may develop around initiatives in greenspace. *"Ideally case study research should use a multiple case study design involving multi-sites to be studied and using multiple methods to analyse the collected data. The rationale behind the choice of a multiple case study over a single case study is to enable comparisons between the observed practices by subjects studied in order to obtain a more comprehensive understanding of these practices"* (Wahyuni, 2012, p.72). Interviews, document study and site visits were conducted and photographs were taken.

selection of initiatives for the survey 2016
The initiatives (Tab.1) were selected from three lists with known Dutch initiatives[4] and on the basis of a suggestion of an innovation officer of the Dutch Ministry of Economic Affairs. The criteria used (App.1) to reach a maximum variation between the chosen initiatives (Flyvbjerg, 2006) were: phase of development (idea, realization/failure, completed and in use); type of actor taking the initiative (company, citizen, municipality); formal and informal (e.g. brownfields, verges, vacant lots) greenspace (Rupprecht et al., 2015); and type(s) of ecosystem services that the green space produces: cultural, productive, regulative or supporting.

The initiatives are located in all parts of the Functional Urban Area (Fig.1). This area is defined by the commonness of a labour market and housing market. For the Dutch situation this functional urban area extends way beyond Randstad and commuting (and traffic congestion) to and from Randstad is intense. Young people move to the city for study and work and economic and population shrinkage is a problem in several provinces. The national government has identified 9 shrinking regions and 11 regions where shrinkages is anticipated before 2040 (www.rijksoverheid.nl), involving some 90 municipalities,

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4   The online MAEX-change list of 822 societal initiatives, of which 221 concern public or green open space; a list of initiatives from the 'Temporary Nature' Green Deal between the Dutch state and initiators of greenspace; a list of local initiatives that was developed earlier for the Dutch Environment Assessment Agency by Mattijssen et al. (2015).

including larger cities outside Randstad. Proximity of greenspace is a factor of attraction in the choice of living environment for most people aged 16 and older (Torres, 2017).

interviews of initiators 2016

Interviews (semi-structured to open and in depth, App.2) with 14 initiators of green space initiatives were conducted in 2016: 9 with company employees, 3 with citizens and 1 with a consultant facilitator hired by a municipality, and 1 with a municipal officer. The interviews were recorded and typed reports were verified by the respondents. Questions were about: the ambitions of the initiator and specifically their greenspace ambitions; the discourses and additionally whether they recognized themselves in the management discourse, the civic involvement discourse, the ecosystem services discourse, the biodiversity discourse, the urban planning discourse and the green infrastructure discourse (Ostoic and Konijnendijk Van Den Bosch, 2016). Questions on the knowledge and capacities of the initiators and on cooperation with the municipality; other resources they contribute, such as land; and success and failure factors were asked for and finally ideas for other people who might (wish to) take an initiative in greenspace and for the government who intends to leave more room to citizens and the market in managing greenspace.

focusgroup 2016

The interviews helped to generate a list of success and failure factors for green urban space initiatives, categorized according to different means of action (see theoretical framework): obstacles encountered and aspects which helped to realise the initiatives. This list was discussed and amended and supplemented accordingly, during a focus group meeting with five citizens initiators held in the end of 2016. In addition, the initiatives and their results were described, including the biodiversity dividend.

selection of cases for the case studies 2017

For the case study research in 2017 also a maximum variation in cases was established on the basis of a list of criteria and variation therein (App.3). Five cases, in four municipalities, were identified. Criteria covered the existence or absence of a participation policy and a greenspace policy and the inclusion of the three main types of municipal actors (Executive Board members, municipal council members, officers). Eventually all four municipalities appeared to have greenspace policies. Also a variation in the type of municipal department involved was sought in the selection of cases (real estate, social affairs, greenspace, spatial planning) and company and citizens initiatives were included.

interviews municipal actors 2017

In 2017 municipal actors were interviewed: 2 councillors, 1 mayor and 3 other executive board members, and 4 officers, who had been involved in the initiatives. It turned out that none of the interviewed municipal officers were employed by the municipal green management sector. They were not traditional green managers.

Foci of the interview questions in 2017 (App. 4) were:

- municipal policy and informal rules of the game in relation to greenspace, biodiversity and societal initiatives; the role of the different categories of municipal actors; transition towards a policy concerning societal initiative and especially related to greenspace or nature, with changing practices in the way the municipal actors think and act about greenspace and initiatives of companies and citizens.
- specific details on the practical involvement in the initiative
- discussion of the list of success and failure factors; considerations and recommendations for action
- involvement of supra-local government levels.

As in 2016, written reports of the interviews were sent to each individual respondent for review on accuracy. Also the report text fragments related to his or her interview were checked this way, for consent with the correctness of the interpretation and to avoid any confidentiality problems.

The answers to the interview questions were ordered in an Excel table per municipality as well as per category of actor (officer, member executive board, mayor, councillor), for ease of analysis and comparison of answers between municipalities and between categories of municipal actors.

Results

This section presents the results, structured according to the four dimensions of the policy arrangement approach that were described in the theoretical framework section.

Discourses and other means of action deployed by the initiators

Table 1 summarizes the fourteen initiatives. The investigated initiatives by large and small businesses and citizens aim to conserve, create and manage green space and to provide several ecosystem services, including the attractiveness of a green environment for workers, residents or young people. Eight of the 14 initiatives integrate greenspace in economic development (Delftse PROEFtuin, Greens in the Park, Nature in Rotterdam Harbour, Philips Campus, Kweekland, Vijfstromenvallei, Fish returning wheel, Ecomunity park, Plan NECTAR) though not necessarily because it pays (Tab.2). And most of them combine this with open access for (local) citizens (DelftsePROEFtuin, Greens in the Park, Nature in Rotterdam Harbour, Kweekland, Vijfstromenvallei, Ecomunity Park) though maybe for some preferably as customers; or biodiversity targets (Philips Campus, Rotterdam Harbour, Fish Return Wheel). Most of these initiatives are on public land. Nature in Rotterdam Harbour, Kweekland and Greens in the Park are on own or rented land.

The urban green discourses (Tab.2) that the 14 initiatives communicate are about ecosystem services (12/14), about citizens involvement and about biodiversity (9/14), green infrastructure (7/14). Fewer communicate the urban planning discourse (5/14) and the green management discourse (4/14). The motivations (Van Luijk, 2000) for taking the initiative are predominantly that the initiators find it a moral duty to do so. For a number of initiatives the fact that 'it pays' is also a motivation for developing the initiative (Tab.2). Part of the initiators (companies as well as citizens) did not mention that 'it pays' but do however have an economic motive in mind as well with their green initiative.

Within several initiatives (e.g. company initiatieves Ecomunity Park and Kweekland and citizen initiative Hoekwierde), efficient working depended crucially on a good division of tasks between the initiator and the local government in which it was clear to both parties who has responsibility for what and who does what. With the cooperation between local government and initiative running well, the initiatives got space for realising their goals, based on trust among both actors.

As concerns the more indepth studied cases: Appendix 5 describes them more indepth, including their factors of success and failure and, where relevant, how failure was avoided in the cooperation. It also presents the practical outcome in terms of greenspace, bio(cultural)diversity and size. For the company initiative Philips Campus near the city of Eindhoven, the objective is to develop an attractive working environment for attracting especially much needed higher educated, talented young people, while contributing to biodiversity. Citizen initiative Plan NECTAR aimed at the development of nature, education, culture and tourism in and around an old school in the city of Arnhem and its hilly surroundings. The third initiative, company initiative Urban Garden Kweekland, also in the city of Arnhem, aimed at re-integration and participation of people who have difficulty finding a job, education, fresh food production and connecting and educating people, on a commercial basis, demonstrating the importance of a short food chain. The fourth case, citizen initiative Vijfstromenvallei, in Helmond, wanted to counter yet another municipal plan for built development in the urban fringe of the city and aimed at the development of a structure vision with a varied set of small scale economic development (including farming and a restaurant), nature conservation and recreation. The fifth case, company initiative Ecomunity park, aimed at the development of a business site in an attractive natural environment, combining business with education (attracting an annexe of an institute for higher education) in order to attract and keep the younger generation for the village in the urban periphery part of the Netherlands. Appendix 5 gives further insights in these five cases and the cooperation and outcome.

Factors of success and failure of societal initiatives of green space

Table 3 presents 36 factors of success and of failure for urban green space initiatives identified on the basis of the interviews of initiators from the 14 initiatives and the subsequent focus group discussion

with five of these initiators. The factors have been organized according to the type of means of action that the policy arrangement approach uses: discourse, resources, coalitions and rules of the game. While establishing the list, the wordings of the respondents have been kept and the researchers did neither reorganize them in the sense that the absence of a success factor could be mentioned as a factor for failure, or vice versa. Success factors are among others: the experience of the initiators with greenspace, with local government and their access to finances/a financial arrangement or a (green) business model. Communication capacity and especially communication and cooperation with the municipality whose organization can importantly contribute to success of the initiative, contribute to the success of initiatives. Agreement on objectives, fitting policy goals of the municipality are also important for success. A failure factor that arose during the focus group discussion is that greenspace is undervalued if compared to the value of land and buildings that are accrued by municipal real estate development. This was affirmed by the municipal officers, but not by the councillors and members of the executive board. Other failure factors were among others the lack of specific expertise or training, lack of feedback from the municipality, workload and officers not thinking in terms of innovation. See table 3 for additional factors and more details.

The municipal respondents concurred and judged the list to be more or less complete. One additional success factor was mentioned by them: the combination of ecology and economy in plans which would make it easy to obtain approval for these plans from municipal councils.

Overall, eleven of the fourteen initiatives in the survey succeeded so far (information 2016/2017). One company initiative (Visretourwiel) and two citizen initiatives (Vijfstromenvallei, Plan NECTAR) did not succeed to realize their initiative.

Plan NECTAR failed (after initial wider support) because of municipal real estate regulations and the double position of the initiator as temporary renter until the building would be destroyed for new development, and as initiator of a commercial initiative on the same location. Vijfstromenvallei came to a stand still, because the city council did not want to finance its request for budget to hire consultants to develop the structure vision. The Visretourwiel did not come to realization, because the initiator could not find (financial) support for his concept.

Several major patterns that were distinguished regarding success and failure factors are elucidaded below.

Perspectives of municipal respondents and means of action that they see for the municipality for cooperation with local initiatives
- *policy discourses*

The initiatives encounter various policies when cooperating with the local authority: policies for citizens participation, districts, urban farming, biobased economy, real estate, building vacancies, care, re-integration, circularity and spatial policies, European rural development policy and Nature 2000 policy. The municipal respondents were not directly linked to the greenmanagement departments but did involve colleagues from these departments for advice. These colleagues saw to the respect of municipal biodiversity and greenstructure policies.

But contradictory policy objectives (especially real estate versus greenspace policies) may occur within one and the same municipality. This was the situation for citizen initiative Plan NECTAR, which made it hard for the initiative to succeed. When policies of the municipality allign with the objectives of an initiative it becomes easier for the initiative to obtain support in various forms (see under 'resources'). The four municipalities in the case study research mostly adhered to their municipal policies but were willing to consider formulating or elaborating them together with initiators of new ideas. This was noticed for example for company initiative Kweekland, where officers and members of the executive board thought along constructively in the obstacles and the developments the initiator saw for the future. Also related to company initiatives Ecomunity Park and Philips Campus, officers and members of the executive board helped smooth out contradictory policies and called for the formulation of more general policy goals that helped avoid contradictions and made it easier for the initiative to fit their ideas in.
- *resources*

Municipalities help with knowledge, guidance, freeing up working hours of staff, money and land. Helping, facilitating "*to get an initiative going*" were terms that the municipal respondents used. Officers

for example helped citizen initiative Plan Nectar and company initiative Philps Campus to find their way through the various municipal offices and connected them also to relevant members of the executive board. Municipalities also helped some of the initiatives (e.g. company initiative Kweekland) find, buy or hire the land against a reasonable price. Financial support is in principle temporary, to get the initiative going. In two of the five cases (Philips Campus and Ecomunity Park) the municipality put a substantial effort into getting a large subsidy for the initiative from higher governments, in cooperation with the company. The involvement of officers was for several cases very substantial: from hundreds of hours work per year (Philips Campus) to several years fulltime (Ecomunity Park). One of the municipalities did not give subsidy to citizens who wanted to hire a commercial advisor to help them develop their plan, as financial support was not part of the municipal regulation on citizen's initiative. It led to a stand still of the Vijfstromenvallei initiative. Also the other citizen initiative Plan NECTAR came to a halt because the initiative did not have the required financial resources to buy the land. So, both citizens initiatives came to a stand still, because they did not have the financial resources.

- *coalitions*

For almost all initiatives in the survey the relationship with the government was primarily a relationship with the municipality. Important according to all municipal respondents is that the municipality thinks together with the initiators about how the initiative can become a success, including the interpretation of regulations. Three of the four municipalities also kept in contact for this. One municipality was more reactive. Pragmatism from the side of local government and working towards common goals have proven to be success factors: When asked about pragmatism as success factor, an officer mentioned that sometimes the municipality puts the rules aside in order to let an initiative go on, or puts own staff on the support of a promising initiative for writing a project proposal to obtain subsidy for it. The latter happened for both Philips campus initiative and Ecomunity Park. Also, "when ideas are idealistic and not practical, it will not work out", an executive board member says. The municipalities helped initiatives by putting them into contact with people, lending their networks to an initiative. Generally both initiators and municipality have wide networks and combining them helps initiatives to find support in various ways, also politically and financially (see above) or in terms of buyers or providers of produce when circularity is involved. The five citizens' initiatives in the survey came about with also help from businesses, for instance, Delftse Proeftuin received outdoor furniture from a restaurant and a shack from the railway company. For one of the citizens initiatives it was hard to establish an equal partnership with the municipality; the municipality officer was directed at establishing cooperations with project developers on the basis of professional agreements and cofinance; while the citizens initiative looked for financial help before they could present a financial feasible plan.

- *rules of the game*

Rules in terms of formal (local) policies are expected to be respected according to the municipal respondents, e.g. (local) land use regulations. Also informal rules such as an initiative needs to have the support of the neighbourhood and that it should be realistic, smart[5] and fit the current ideas or discourses of the municipality. The intiatives are expected to be future-proof, fitting the current societal discourses or issues, and often to enhance landscape quality. Also the financial livability, the soundness of the legal construction, and sufficient capacity of the initiator are found important criteria. In the five cases, this was more feasible for the company initiatives than the citizen initiatives. Communication about the conditions or expectations were considered of major importance to avoid frustrations and waste of time from both sides, i.e. at the level of the inititiators and municipalities. An officer stated that initiators in general often still believe the government should carry out the initiative's idea, whereas the government's role nowadays has changed from an executive to a more facilitating role towards initiatives. Helping to think together with the initiator about how an initiative may become a success instead of stressing what is not possible is found an important informal, cultural rule that should guide the municipality in its behaviour. It may need to rethink the initiative. This was the case in three of the four municipallities. Where possible, municipalities were willing to take action and quickly change rules in favour of initiatives they find important to support.

transition in governing, according to municipal respondents

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[5] SMART stands for specific, measurable, acceptable, realistic and timely.

As concerns the perception by the municipal respondents of whether there is a transition in the municipal practices related to initiatives by citizens and companies in general, several (mostly related) developments are referred to: a district oriented approach in which officers are placed in the municipal districts, whereas specialist officers are at hand in the central office; a demand driven approach, i.e. responding to initiatives and ideas by citizens and companies letting them pull developments; laying responsibilities in the neighbourhoods with citizens (also to save costs); focusing on concrete projects and less on paper policies; development of an open and flexible and hence cooperative culture, sometimes by replacing staff; stimulate staff to think together with companies and citizens who take an initiative about how it can be (changed to be) succesful. This is easier when municipal policy objectives are formulated more generally. But the transition also demands something from the initiators, e.g. that they get in touch with the neighbours for consent and possibly support, before asking this support from the municipality.

As shown in Appendix 3, three of the four municipalities in the case study research have a formal policy for participation, in the fourth it is part of the informal culture to facilitate initiatives, though formally included in the Biobased Economy policy. All four municipalities have formal greenspace policies. The preservation of greenstructure is an important objective in these policies, and green officers were said to see to its preservation and development when getting involved with initiators new plans. This means that transition of greenspace as result of societal initiatives is being combined with biodiversity and greenstructure preservation or development objectives.

Benefits of the transition, that are mentioned by the municipal actors are the *"positive flow with the residents"*, *"less appeal procedures"*, *"more fun"*, *"tailored work at local level"*, *"the municipality also needs citizens and companies"* and *"it contributes to economic development"*. An interviewed mayor mentioned that companies have possibilities that a municipality does not have and these can be used by a municipality. A negative remark concerned the magnifying glass of jurists and accountants which makes it a tough chore to justify expenditures between multiple parties, each having their own accountancy systems and legal obligations. Other barriers for transition mentioned at the level of municipalities were: the land use planning procedures, difficulty to free up needed personnel and the way of thinking that is not always adapted to cooperating with non-state initiatives.

differences in roles, between municipal actors and between municipalities

Some distinction between the roles of councillors, members of the executive board and officers was found in terms of their concrete contributions to the initiatives: councillors asked the attention of members of the executive board for initiatives, held an exposé before the council; executive board members kept in touch with initiatives, sticked to the municipal policy, arranged contacts and support in terms of subsidy, staff and formalization of the cooperation when needed; officers were more practically guiding the initiators, e.g they provided relevant contacts, explained the position of the municipality, wrote (exploitation)plans, coordinated processes (steered own municipal colleagues and informed and advised the council about the initiative). Concerning the council and the executive board, one respondent complained about the too political stances: *"Council and executive board are political, they want to score, but the societal actors must do it"*. And some councillors were very much against an officer helping a company to develop its plans, even if these plans were, aiming at the interest of the prosperity and liveability of the municipality and its younger generation.

There were differences between the municipalities: from very proactive officers to an officer who was more reactive.

feelings municipal actors towards each of the five initiatives

Asked about their feelings towards the initiative in their municipality it appeared that most respondents felt positive about the initiative in their municipality, except for one (citizen) initiative because it was judged financially unsound and thought to try to escape the formal rules. The positive feelings were expressed in terms of appreciation for entrepreneurship, vision, connecting of people, the fizzling of new initiatives, and the economic development brought by an initiative.

Discussion

support by municipalities

The interviewed municipal actors appear neutral to mostly positive and in favour of the specifically studied five local initiatives. The municipalities use three categories of means of action to support initiatives: resources, rules (if needed and in agreement with municipal policies they are even willing to change them) and coalition partners. The municipal policies are considered as an important frame for deciding to employ these means of action. And this can hinder an initiative when it does not fit in, or when it fits in with one policy but not with another municipal policy. There is awareness among municipal respondents that some municipal policies can be contradictory and they argue themselves for the formulation of more general, higher level policies to be leading. A similar suggestion was formulated by Aalbers et al. (2015) on the basis of some 60 interviews among initiators, state officers and other organizations relating to local initiatives in greenspace. Aalbers et al. (2015) suggest that the local state should be clear in what the overarching principles for all municipal policies are. This provides stronghold to non-state initiatives in greenspace that are confronted with contradictory sector policies.

The municipalities approached especially the company initiatives in a rather positive way. One of the municipalities was more careful to engage with the (first formal) citizens' initiative in their municipality. Even though the municipality had a formal policy for citizens' initiatives since several years and this was the first group of citizens applying for support under this policy, the municipal council hesitated and decided to not support its request for subsidy to hire two external commercial advisors. The area concerned by the plan which the citizens intended to develop a vision for, covered the fringe of three adjacent municipalities. So it was rather an ambitious and supra-local action. In the case of the other (citizen) initiative, the municipality started as a discussion partner, however, when it became clear the initiative was not consistent with the real estate policy of the municipality, the support stopped.

capacity of initiators, niche management and public interests

The municipal actors attach importance to the capacity of initiators to bring their idea to success and secondly to the initiative to last at the longer term without support by the municipality. Realizing initiatives demands lots of resources (see Table 3) such as experience, budget, communication and knowledge. Companies develop an initiative to make a living by looking for remuneration for their efforts, that they build into the initiative. Among the initiatives by citizens in the survey some were found who also switched their orientation a little in order to find an income with their efforts (TielCentrum XL, Plan NECTAR) and this practice is encountered also in other studies (e.g. cases in Aalbers et al., 2015: Inside Out Forest). Some changed their contact persons (e.g. Essenburgpark). Institutionalization, or structuration happens in terms of resources and rules (Giddens, 1985). The term 'niche' according to transition studies for the lowest level of social structuration of a practice applied well. The discourse or understanding of greenspace was mostly new compared to those by the municipality. In the case study research, there was weaker institutionalisation of local citizens initiatives than of the company initiatives, as the two citizens initiatives came to a standstill, while the company initiatives succeeded. Strategic Niche Management approaches both involving resources from other actors and their networks (see 'coalitions' in table 2) and the communication of critical knowledge that the initiators hold and communicate to the municipal actors to convince them to support the initiatives, can be recognized in the results. Also, what is perceived as an innovation in one place, may be mainstream elsewhere.

The previous implies that greenspace initiatives on public land may be exclusively manageable by citizens who can afford to spend their time for free and are endowed with the necessary capabilities and resources, or companies. This may be justified when they contribute to public interests, e.g. preserve greenspace that can be enjoyed by citizens who would otherwise be devoid of public green; biodiversity preservation; water and urban flood management; urban heat reduction; employment of people who can not find a job; and production of fresh food to complement local diets when no (affordable) fresh food is locally available (Poulsen et al., 2014). Otherwise an initiative may be considered as an act of private interest.

Some initiatives in the case study research exceed the resources and forcefulness of initiators (for example, because of their scale , or due to insufficient drive or capacity on the part of the initiators) and/or the municipal authority does not want to facilitate the efforts of the initiators. It seems that companies are better equipped. In such cases, the municipal authority would be well advised to explore the discourse of the initiative to assess whether or not it can be integrated into its policy and activities. This would also give citizens or businesses with insufficient capacity or possibilities to realise an initiative

an opportunity to influence policy, thereby reacting to the critique of bottom-up initiatives being the domain of a privileged or advantaged elite. Possibly there are structural changes thinkable and desirable that would enable citizens to take more charge of public greenspace in a more structural manner, not facing the numerous failure factors, e.g. shorter working days, joint management agreements for public space or change of rules?

new actors and more weight to ecosystem services

Greenspace development stays behind urban development, as referred in the introduction. Land use planning and landscape planning literature expresses concern for the sustainability of urbanization. In relation to this: the initiatives attribute a broader meaning to nature (Tab.1 and App.5). We do not observe a difference between the type of discourses on greenspace between companies and citizens: all discourses are used by these two groups, but the management and the urban planning discourses are weakly represented. Only two companies use the green management discourse, and three the urban planning discourse. Two of the citizens initiatives use the green management discourse and two use the urban planning discourse. The ecosystem services discourse is used by 13 out of the 14 initiatives. It means they see a broader meaning of greenspace than only biodiversity. 9 initiatives do however also adhere importance to biodiversity. The initiatives relate to multiple ecosystem services, beyond the mainly recreation oriented or biodiversity conservation oriented parks. This corresponds to findings by Aalbers et al. (2015) who studied some fifty initiatives by citizens and small companies and found that they develop a more integrated type of greenspace with multiple meanings and own identity and different use, compared to the greenspace developed by the state. They contribute towards new, multifunctional forms of urban green space that are possibly more rooted in the community because multiple ecosystem services tie it into the functioning of society. In this they can be seen in the light of the environment movement that has developed from a nature protection approach to a greening and sustainable development approach (Jamison, 2001). Together, the involvement of new partners and the resulting widening of the meaning of greenspace and possible rooting in society, may give it more weight in decision making processes on urban developments. Whether this is indeed the case seems important enough for investigation.

Most of these initiatives are on public land. Greenspace management brings management costs to municipalities. In this light the lending or renting out to other parties is understandable. Contribution of an initiative to public interests such as greenspace, economic development and biodiversity can justify such constructions.

seeing to structural dimensions of greenspace by municipal officers

Municipal officers responsible for greenspace are keen at preserving green infrastructure, they keep an eye on the greenpolicies and main structure. For urban ecosystem services provision this is important (Opdam, 2006). Together the areas and corridors or other forms of green (and water) connections can fulfil other natural functions than separate parts can fulfil. According to Opdam et al. (2006) simple core areas or nature reserves face problems, as they are fixed in space and time. They propose that green infrastructure allows development and adaption through the connections between the areas, and that greenstructure can combine biodiversity conservation and sustainable landscape development. The importance of greenstructure comes to the fore as required for ecosystem services contributive to ecosystem health (Opdam, 2006; Tsoulaz, 2007; Young and Potschin, 2011; Luederitz et al., 2016) as well as for ecosystem services contributive to public health (Tsoulaz, 2007). Green infrastructure concerns are of public interest. Also some of the initiatives contribute to biodiversity and ecological corridors, and thereby contribute to this public interest. The ecosystem services are part of the discourses of twelve of the fourteen initiatives that were studied in the survey.

policy arrangement approach, change theory and transition theory

The action oriented policy arrangement approach that was used in this research, helped to categorize the means of action put in by different actors in the cooperation around the initiatives. It helped to check that all relevant means of actions were investigated and for identifying any weaknesses of actors in "controlling" and "managing greenspace" (Jansson and Lindgren, 2012).

The interviewees have been asked about their perception of change or transition in the handling of local initiatives by companies or citizens by the municipality. In terms of Policy Arrangement Approach

theory, change can come about by any of the means of action. In this research we find that the different meanings attributed to greenspace, that are brought in by the companies or citizens with their different discourses, leads to a change. In turn, this different meaning brings other municipal actors to the table than merely the green officer[6]. These additional meanings, or maybe rather the fact that new actors arise who communicate these meanings of greenspace, may make greenspace more strong and resistant against other urban developments, since these new and additional actors may contribute also their resources and networks in controlling urban greenspace. Part of the companies and citizens demonstrate a capacity to contribute to or evoke an interdisciplinary cooperation on greenspace between municipal departments whereas otherwise these departments would probably have remained within disciplinary silos. This may stimulate policy attention to the multiple benefits of nature, where at present there are many barriers to wider uptake of urban green infrastructure e.g. inadequate knowledge about the linkages of green and blue spaces to different ecosystem services (ESPON 2017; Pauleit et al., 2018), which are multiple and in different disciplinary domains: e.g. social, health, water or economy.

Considering Strategic Niche Management insights: the initiatives can be considered as 'niche innovation' (Rip and Kemp, 1998; Geels, 2002); and change at the level of the 'regime', i.e. the greensector, green department or municipality for these cases, developed by the interaction and cooperation around the initiative. The 'critical knowledge' of the initiators is different from the knowledge of the more institutionalized municipality ('regime') and complements it, which leads to an adding up to existing greenspace management practices with new investments by new actors attributing new meanings to urban greenspace. The respondents indeed stress the importance of communication which enables exchange of 'critical knowledge' (Aalbers and Sehested, 2018) and putting the initiators in touch with their network to widen the support with for instance the input of resources from different parties. This aligns with the conceptualization of 'empowerment approaches' according to the Strategic Niche Management theories by Smith and Raven (2012) and Smith et al. (2015, 2016): The communication allows the companies and citizens to advocate their ideas and influence the understanding of greenspace by the municipality ('stretch and transform') and the contribution of resources from different actors helps the initiators to respond to all requirements to survive as local initiative ('fit and conform', Smith et al., 2015). Also Bock (2016) refers to the bringing together of resources from multiple actors in what she calls the 'nexogenous approach'. It conceives development of local initiatives as a multi-actor cooperation. This can indeed be recognized in the studied initiatives in the survey: citizens getting help from companies and municipality; municipalities seeking support from citizens and companies; companies involving citizens (as employees) and municipality.

What may be an innovation in one place or for one person, may be common practice in another place. But in general the Dutch policy discourse on nature was rather restricted, greenspace was understood as nature to preserve, agriculture or parks. Since the last decade more room for different ideas or conceptions of nature is developing, e.g. by means of the so-called Green Deals. Both the pressure on greenspace by densification and the attribution of values to greenspace as part of a good quality of living environment and local economy give rise to the local initiatives that were studied.

initiatives in the light of ongoing urbanization

Initiatives in greenspace can be found in all parts of the funtional urban area. The discourse of the initiative in the city core TielCentrumXL focuses the improvement of the quality of the living environment by greenspace in the form of planters and a small greenhouse, in order to create a more residential atmosphere in the fully paved city centre, hoping it will slow down traffic speed as well. On the other side of the urban-rural spectrum the Ecomunity-park initiator in the so called 'shrinkage municipality' Oostellingerwerf (i.e. a municipality that suffers from a reduction of inhabitants) www.Rijksoverheid.nl) endeavours to play the asset of quality of living and working environment by a natural business park where business, education and nature are combined. Also the Philips campus plays the asset of a green working environment. The initiatives demonstrate an appreciation for greenspace and try to make efforts where local municipal policies are underperforming. This underperforming in terms of greenspace policies in a context of urbanization is evidenced by the scientific literature (e.g. Aalbers, 2018; Pauleit et al., 2018). The commuting problem seems an expression of a fundamental imbalance in terms of green living

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[6] Herewith landscape planners, landscape architects and gardeners are referred.

enviroment and economic factors that are not approached in an integrated manner. Part of the initiatives develop and play the asset of combining greenspace with economic and or social development. They attribute multiple values to greenspace, way beyond only biodiversity. Intertwined urban rural development is an important policy goal of Habitat III, which propagates a more collaborative development of the urban and the (green) rural and to counter the urban rural dichotomy. The 2005 Scheme for Territorial Cohesion for the Montpellier Agglomeration in southern France signifies greenspace or landscape as vector for development of the agglomeration, linking urban and rural municipalities in shared approach. The Scheme won the price for urbanism 2005. The studied companies and citizens initiatives in the survey show a similar integrating approach to greenspace. Whether the broader value attributed to greenspace and developed renders it more resistant to building on the longer term needs to be studied.

Aalbers (2018) suggests that technological transport innovations are needed to support the development of a more intertwined urban-rural development at the scale of functional urban areas. Lifting transport above ground, freeing up greenspace, adapting to climate change, reducing air and noise pollution, densification, and defragmentation. These environmental issues are among the drivers of the local initiatives that have been studied.

methodology and approach

The qualitative research approach of this two years-study, conducting semi-open interviews with initially 14 initiatives, and the selection of five for more exhausting case studies, in which municipal actors were also included, is one of the first in the Netherlands in which the various actors within local governments (officers, councillors, members of the executive board) were consulted on their role in green space initiatives. Therefore, this approach contributes to a diversity of new insights on how various municipal actors facilitate and evaluate citizen and company initiatives in green. The sample of five case studies allowed us to compare the different ways in which the municipalities approached the initiatives. Furthermore, a strong feature of the study is the reliability of the list of success and failure factors, as it was verified by all respondents: initiators have shared their experiences about success and failure factors on which the list was based upon, and this list was afterwards checked, supplemented and deepened in a focus group meeting, whereas municipal actors have evaluated the list as correct and complete, from their point of view.

Conclusions

This section provides the answers to the research questions about the green space initiatives and the role of the municipality. These answers were found by the comparison of fourteen initiatives and further in depth study of five of these initiatives as case studies. They were all selected via a maximum variation approach of initiatives and cases.

How do urban green space initiatives develop: What influence do initiators harness to realise their initiatives and what sort of green space or nature do they bring? The initiatives that got off the ground – through the efforts of either businesses or citizens – contribute to biocultural diversity and bring different municipal actors to the table. This is possibly anchoring greenspace much more into society than parkification does, because of the broader meaning of greenspace with different ecosystem services being tapped, and more actors being substantially involved in the management.

Several initiatives, of companies as well as citizens, also contribute to biodiversity and link into wider green structures.

What makes projects succeed or fail in relation to the ambitions of initiators, according to initiators and municipal authorities? The list of success and failure factors (Tab.3) answers this question. In the interviews conducted in the case study research, an additional factor appeared: the combination of ecology and economy is mentioned to be a success factor, when it comes to selling project ideas to the municipal council. Initiatives for different greenspace management, by companies and citizens, are very

challenging. They may only be manageable by privileged citizens, and by companies who have a working business model and budget for the initiative. Part of the citizens initiatives turn into commercial initiative, change contact person or come to a stand still. The durability of citizens' initiatives deserves more investigation.

What role do local government actors see for their municipality: In what ways are they involved in the initiatives and what type of actions can they take to make a success of the initiatives? The overall impression is that the four municipalities are rather supportive of the initiatives. The initiatives involve greenspace officers in new thinking on greenspace and its meaning, including multiple ecosystem services. Municipalities respond in different ways to initiatives. It is found important to develop an authority-wide culture on how to respond to initiatives, in order to provide clarity for initiators about the course to be pursued by the municipal authority. Also more general, overarching policy goals are important for new initiatives which, because of their integrated nature, may be confronted with contradictory sector policies. Pragmatism and thinking along with initiators, subsidies and interpretation of regulations are in general important for the success of the initiatives. Two of the municipalities went very far in supporting company initiatives that combined greenspace with economic development. They contributed substantial working time of their officers to find subsidies for the initiative.

Do municipal actors perceive a transition in the interaction with the local initiatives? If yes, how? There is a change or transition going on towards multi-actor governance of greenspace in urban areas. This change happens both formally and informally. The informal change, i.e. in terms of culture, depends especially on the executive board and the council of a municipality. They need to set the culture if they want to support this change. Green officers see to the structural and biodiversity obligations, and this is defendable, considering scientific insights on the public interest in green structure and biodiversity.

The durability of especially citizens initiatives is a point of concern. In the case studies, the institutionalisation of the local citizens initiatives was weaker than that of the company initiatives. Of the five case studies, two were citizens initiatives, and three were company initiatives. Both citizen initiatives came to a halt due to a lack of financial resources and were not able to create a cooperation with the municipality. It would be relevant to look into the conditions that would make it possible for citizens to participate in management of (their own) urban greenspace at the longer term. An important question remains: What is the impact at the longer term of greenspaces managed by companies or citizens and drawing benefits from multiple ecosystems services, while involving multiple actors: are these spaces more resistant to urban building pressure than public greenspace in general?

More attention is required to the present dichotomy in thinking and approaching urbanization with the compact city paradigm and the shrinkage it causes in areas farther out. Part of the initiatives show a way forward in this respect, combining greenspace with development. Together such initiatives may be understood as a more fundamental reorientation in terms of thinking about quality of living environment, integrating greenspace with social and economic policies (Aalbers, 2018).

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Table 1. Overview of the 14 initiatives and their initiator.

		DESCRIPTION	INITIATOR
1.	PROEFtuin (Try-out) Garden, Delft	On temporarily fallow land of 3 ha. the soil is improved and a garden for vegetable, joga-club and school classes has been developed. Use and collection of vegetables on a commercial basis. Municipality helps with a shack and storage room	Small company and foundation
2.	Essenburgpark, Rotterdam	900x100 meter area next to railway track is protected and developed into a park. With help of the municipal CityLab010 also support of the city council was obtained.	Residents
3.	Experiment Selfmanagement Hoekwierde, Almere	Residents started the experiment with budget of the former Ministry for Social Housing and Spatial Planning (VROM-SEV) and in reaction against building plans of the municipality. The residents manage greenspace by contract with the municipality: keeping the neighbourhood green and tidy and making the areas further out more biodiversity friendly and attractive for recreation.	Residents
4.	For-tuin (For-tune), Krommenie	To keep future building land attractive to the residents, the municipality invited the latter to take charge of the temporary management. Together they developed playground, vegetable garden, a labyrinth, butterfly and bee-garden, and a frog pool.	Municipality
5.	Greens in the Park, The Hague	The company aims at developing a restaurant in a park, combined with a vegetable garden to supply the restaurant, a place to be for international tourist and other recreationists, including local residents going a walk around the block. They hire people with difficulty to obtain work, with municipal subsidy (7ftu).	Company
6.	Nature development Rotterdam harbour, Rotterdam	The port authority practices biodiversity management in cooperation with nature and environment NGOs and municipalities on 800 ha, including fallow land, railway verges and parts of the second Maasvlakte, a sprayed sand plain in the sea.	Company
7.	Philips Health Campus, Best	With an excemption of Flora and Fauna legislation, the company on a previously built area manages biodiversity with help of a nature NGO. It also has constructed the 'Central Park' in the middle of the campus to render it more attractive to young and higher educated potential employees. The park was cofinanced at the initiative of the municipality by the Provincial society for redevelopment of business areas.	Company
8.	Plan Nectar, Arnhem	Plan NECTAR is a vision for converting a former primary school in Arnhem North into a dynamic, sustainable and innovative ecological center. The building is located in a transition zone between nature and urban areas buildings. Maintaining and strengthening this transition function is one of the starting points of the NECTAR plan. The municipality was a discussion partner. But gradually it became clear that the plan was not consistent with the real estate policy of the municipality and chose to sell the property. This has stopped the initiative.	Citizens
9.	Stadstuin Kweekland, Arnhem	Kweekland is a city garden managed by a foundation in which entrepreneurs work together with volunteers, trainees, people with a distance from the labor market and the municipality. These actor work to make the garden accessible and to use it as a center for urban agriculture. The garden is open for local residents and other interested people to visit, learn about the garden and buy vegetables and flowers from the land.	Company
10.	TielCentrumXL, Tiel	The initiative TielCentrumXL was taken by a resident out of dissatisfaction with the traffic nuisance, pollution of the environment and the lack of greenery. In collaboration with other residents in and around the city center of Tiel dozens of façade gardens have been laid out. After an initial critical response from the city government there is	Citizen-company

|		
	now a positive cooperation between the initiators and the municipality has arisen.	
11. Vijfstromenvallei, Helmond	Vijfstromenvallei was created in 2009 out of dissatisfaction among residents in the city of Helmond on the ongoing building plans in the nature around the city. They develop a vision for the valley neighbouring the city. They aim at recreation use of the green space, to develop a multifunctional sustainable building and to develop small revenue models, which will also include possibilities for farmers. The municipalitiy supports the plan, but does not give financial support after a request was made by the initiative.	Citizens-Company
12. Visretourwiel, esturia Waddenzee	A technical engineer designed a 'fish return wheel'. It is a wheel that flows into the water when it is inflated and can be used to return fish that are brought inside, live in the estuaries. The wheel can be used in situations in which fish are transported through cooling water systems of power plants, which are located on the mouths of rivers, and in which many fish die. The initiative does not come to fruition, despite the fact is a sustainability prize and won an international prize.	Company
13. Wolkbreukbestendige stad, Dordrecht	In Dordrecht, the Stadslab 'Water in the Dordtse Ruimte' has been working on solutions for the inner-dike area of Dordrecht. During a residents' evening, the municipality challenges residents of the district Dubbeldam to come up with ideas to make the Damplein greener and water-friendly for the next thirty years. By the input of residents the sustainable aspect has received explicit attention in the redesign.	Citizens-municipality
14. Ecomunity-park, Ooststellingwerf	Initiative Ecomunitypark arose around 2004 when a company wanted to develop a green business park, together with eductaional institutions. The municipality of Ooststellingwerf informed the entrepreneur about the availability of a potential location. That was a start of cooperation between entrepreneur and municipality. The municipality facilitates the realization of the vision of the entrepreneur. Recently they started the construction of the building. The province, municipality and educational institutions jointly finance the building.	Municipality –company
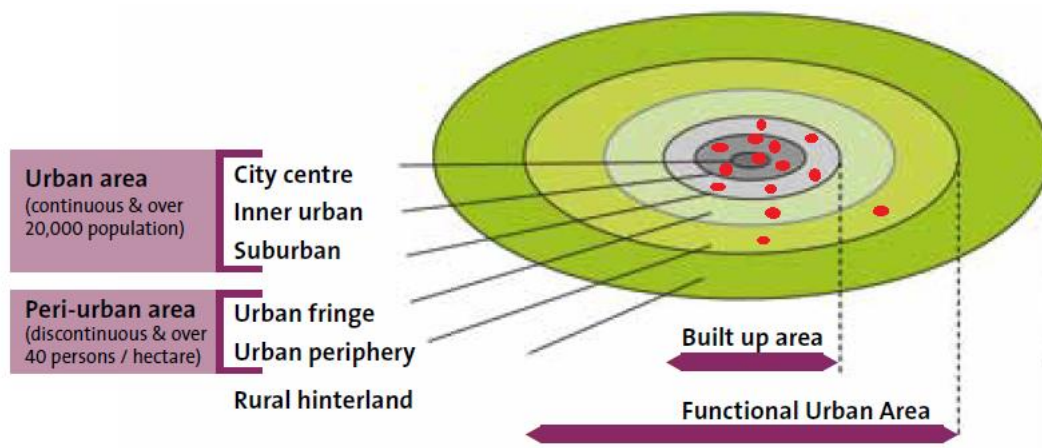
Figure 1. Locations of initiatives in the schematized representation of the Functional Urban Area (adapted from Piorr et al., 2014. Original picture by Joe Ravetz.)

Table 2. Urban Green discourses and motivations behind the initiatives.

company initiatives in yellow; citizens initiatives in orange; those on request municipality are marked with *

URBAN GREEN DISCOURSE (Ostoic and KVDB, 2015)	Delftse PROEFtuin	Ecomunity-park	Essenburgpark	Experiment Zelfbeheer Hoekwierde	For-Tuin *	Greens in the Park *	Natuur Rotterdamse haven	Philips Campus	Plan NECTAR	Kweekland	TielCentrumXL	Vijfstromenvallei	Visretourwiel	Wolkbreukbestendige stad *
Management greenspace				x	x	x				x				
Citizens involvement	x		x	x	x			x[7]	x	x	x	x		
Ecosystem services	x	x	x	x	x	x	x	x	x	x		x		x
Biodiversity	x	x	x	x	x		x	x				x	x	
Urban planning				x		x	x				x	x		
Green infrastructure		x	x	x			x	x	x			x		
MOTIVATIONS (Van Luijk, 2000)														
It pays						x				x	x			
It is appropriate	x	x	x	x	x	x	x	x	x	x	x	x	x	x
It is obligatory														

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[7] For quality of working environment of the employees, not about citizens in general.

Table 3. Factors of success and failure for business and citizens' initiatives.

	FACTOR	
DISCOURSE[8]		
	Success factors	
	1. agreement with municipal authority on goals and outlines of the initiative	
	2. discourse in tune with the current social climate	
	3. positive dissemination of discourse via the media (to generate support among the local population or municipality)	
	4. influence within the municipal authority via substantive discourse	
	Failure factor	
	5. 'green space has no value' compared to value of land and buildings accrued by municipal real estate development	
RESOURCES[9]		
	Success factors	
	6. work experience relevant to green space	
	7. experience of working with local government	
	8. budget	
	9. fund investments via financial arrangements involving multiple foundations or companies	
	10. for larger initiatives: green revenue model, part of a business that has reserved funds for it	
	11. wherewithal and forcefulness to exert influence within the municipal authority (communicative and networking skills, time and perseverance)	
	Failure factors	
	12. no training relevant to green space	
	13. no knowledge of biodiversity objectives	
	14. no feedback from municipal authority on local biodiversity objectives	
	15. no feedback from municipal authority on local green space objectives	
	16. inadequate integration of international biodiversity objectives in local government policy	
	17. initiative too difficult (task overload) to realise successfully (communication, financial management, time, organisation of work)	
	18. inadequate project management in municipal authority and so initiator is forced to repeatedly chase them up	
	19. local government officers have not bought into innovative thinking	
COALITIONS[10]		
	Success factors	
	20. public support (residents, media, politicians)	
	21. cooperation with local and regional partners	
	22. support from the municipal authority, which draws on its network to make the initiative a success	
	23. cooperation with the municipal authority to be able to use site	
	24. cooperation to establish the same goals	
	25. cooperation to obtain information and expertise	
	26. pragmatic cooperation	
	27. cooperation to generate support	
	28. relationship with municipal authority based on trust and agreements in principle	
	Failure factors	
	29. no support for initiative from the municipal executive	
	30. no support for initiative from the members of the municipal council	

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[8] In a nutshell, a discourse is a combination of ideas and concepts that lend meaning to a reality. This vision on how things stand is actively and repeatedly communicated to influence the social environment.

[9] Resources in this study: land and control over its use, financial resources, knowledge, labour and materials.

[10] A coalition is a group of actors who share resources or pursue the same policy and goals, and together try to realise those common goals.

FACTOR		
RULES OF THE GAME[11] (formal and informal)		
Success factors		
	31. exemption from the Flora and Fauna Act	
	32. agreements with local government on what is permissible	
Failure factors		
	33. uncertainty about the responsibilities and role of the initiators – versus local government	
	34. obstruction by the municipal authority	
	35. too rigid and formal interpretation of the legislation by the municipal authority	
	36. Human Environment and Transport Inspectorate obstructs the realisation of green space ambitions	

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[11] The rules of the game consist of cultural rules (how are people expected to behave) and the formal legislation.

Appendix 1. Criteria used for selection of the 14 initiatives.

Criterion	Characteristics (of a criterion)			
Criterion's weight				
1. Variation in phase	Formation of idea	Realisation	In use	
2. Variation in actors	Citizens	Companies		Local government
3. Formal/ not formal greenspace[12]	Not formal	Formal		
4. Variation in ecosystem services	Productive	Regulating	Cultural	Supporting

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[12] see Rupprecht et al. 2015

INTRODUCTION

1. History of the initiative: how did the idea arise and where do you stand now?

AMBITIONS

2. What are the goals of the initiative and what has been achieved per target so far?

3. Where are you most proud of?

4. Do you have green ambitions, for example in the sense of more green or more variety in green?

ACTORS INVOLVED

5. How is your initiative organized? How is the cooperation within the organization perceived?

6. Who else are involved in the project, apart from the own organization: governments, land-managing organizations, NGOs, trade and industry, etc.? What is the significance of their involvement?

COMMUNICATION AND SUPPORT
7. How is the initiative perceived by the target groups? What is your message? What kind of responses do you receive?

8. What kind of interest does your target audience show?

KNOWLEDGE AND COLLABORATION
9. How is the cooperation with the municipality? What does the municipality do to contribute to your initiative?

10. Do you ask for help/support of external organizations? What kind of support do you ask? And are you indeed helped a lot? What do you miss regarding support needed?

AVAILABILITY OF MONEY, MATERIALS, TIME
11. Do you have a balanced budget?

12. Who is the landowner and how is the use of the land arranged?

13. How do you obtain the materials and equipment for the initiative?

SUCCESS FACTORS AND BOTTLENECKS
14. Have you been running up against bumps that have delayed the progress of your initiative?

15. Have there been events or circumstances which helped to make a success of your initiative?

16. What tips would you forward to initiatives elsewhere in the country, who want to realize a similar idea?

17. And what would you like to advise the government, who is withdrawing to make room for citizens and entrepreneurs in regard to greenspace?

Appendix 3. Criteria used for selection of the 5 initiatives for in depth case study.

Criterion / Initiative	1. Participation a formal policy goal	2. Participation not a formal policy goal	3. Greenspace a formal policy goal	4. Greenspace not a formal policy goal	5. Officer	6. Member Exec. Board incl. Mayor	7. Councillor	8. Real Estate department	9. Social Affairs department	10. Greenspace or Spatial Planning department	11. Company initiative	12. Citizens initiative	13. Initiative with explicit biodiversity objective
Ecomunitypark, Ooststellingwerf		x	x[13]	[14]	x	x		x			x		x
Kweekland, Arnhem	x		x			x			x[15]	x	x		x
Philips Campus, Best	x		x		x	x			x[16]	X[9]	x		x
Plan NECTAR, Arnhem	x		x		x	x	x	x	x	x	x	x	-
Vijfstromenvallei, Helmond[17]	x		x		x		x	x				x	x

[13] Only for tree structure formal policy in vigour

[14] Part of formal Biobased Economy policy,

[15] Greenspace and Social Affairs are the responsibility of one and the same member of the executive board

[16] The initiative concerns three different members of the executive board: for sustainability and Work and Income; for Public Space; for Spatial Planning. One officer for Spatial Development and Economic Affairs was involved.

[17] 2003 Regulation on Citizen Initiative

Appendix 4. Interview guide municipal actors 2017.

Introduction

Function:..
Since when in this function and since when working at the municipality: ....
Municipality:... Do you focus on greenspace as part of your work? ....
Are community based initiatives a subject in your work? ....

Part I Policy in general

1. Does the municipality have a policy for community-based initiatives? And does she have a policy for community-based initiatives in greenspace? Could you describe that policy for community-based initiative?

    • Does it apply for all the initiatives or just that of citizens? Do you make a difference in approach between projects of citizens/social entrepreneurs/large companies?
    • Is your posture passive (wait for an initiative to contact the municipality) or active (encourage for instance residents to do something with greenspace)?

2. What is your role in that policy? Did the policy call for a change or transition in your way of thinking and acting as [Officer/Council Member/Alderman] for [sector]...?

3. Did the municipality make progress with that transition, and how? (On paper, or do they already act different?)

4. Based on your own experience as a [Officer/Council Member/Alderman], what is your perception of community-based initiative related to urban greenspace?

5. Does the municipality have -apart from community-based initiatives– a policy for urban greenspace? For biodiversity?

6. Could you describe that policy? If the municipality has biodiversity policy, does she make the link to point out her biodiversity management or development policy to the initiators? In other words: does the municipality consider the initiatives as an opportunity to carry through her biodiversity goals?

Part II Open questions about the involvement of municipalities in the case/cases in their community (check open ends)

7. How familiar are you with initiative X. How do you perceive the initiative?

8. What did you do specifically for this initiative (activities)? [deepen our knowledge of last year with some case specific questions!!]

9. To what extent do you think this initiative contributes to the policy objectives/the policy vision of the municipality? [Make concrete by asking deepening questions, among others in terms of biodiversity]

10. Which conditions did the municipality pose to the initiative? And which did you pose to other initiatives? If no response:
    *   Was everything the initiative planned to do, possible? And what facilitation was needed from the municipality? Did the initiative have to adapt to the local policy to fit?)

- Was an amendment to the land use/zoning plan needed for the initiative? And did the municipality agree on this amendment?

11. How did the municipapity facilitate the initiative? (land, money, materials, materiel, knowledge?) How was it to make this support available? Why?

12. Which obstacles did you yourself encounter within the municipality (cooperation between departments/collaboration between aldermen, councillors/officers)? What solutions would you propose for this?

Part III Options for action (we hand over the list with success factors and bottlenecks to the interviewee)

Last year, we interviewed a dozen of initiatives throughout the Netherlands and from their answers we composed a list of success factors and bottlenecks for the success of community-based initiatives. We would like to go through this list with you:

13. Which success factors and bottlenecks from the list do you recognize, with regard to initiatives in your town? Do you miss certain factors? If so, which ones?

14. For which success factors and bottlenecks from the list do you see a role for the municipality? Could you specify how you – in your function as ...- could contribute to the endurance of each of the success factors or the solving of the bottlenecks.

15. Which act options do others within the municipality have to accommodate community-based initiatives for urban greenspace?

16. Which barriers or possibilities do you see related to the act options?

17. Which of the act options do you think is the most promising for the municipal role? (Why is it, why is it not (do not want/can not))?

18. What should be done in the municipality to make this happen?

Part IV Closing questions about the involvement of higher authorities and the national government in particular

19. How do/did you encounter the national government/Ministry of Economic Affairs[18]) and the province when working on urban green with community-based initiatives? (How could this be different?)

20. Are you acquainted with the Rijksnatuurvisie[19] and the National Biodiversity Goals? In what way are they part of your work practice?

21. Do you undertake activities to bring biodiversity and Nature 2000 to the attention of entrepreneurs and citizens and to promote their knowledge of it? If so, what kind of activities?

22. Are you familiar with the Green Deal 'New Urban Nature'? Are you involved in it? Why are you/are you not? What do you expect from it?

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[18] During the research the Ministry of Economic Affairs was in charge for the issue of nature in cities.

[19] National policy vision on nature.

Appendix 5. Description of the 5 cases.

Philips Campus, Best / Eindhoven (223,000 inhabitants)

After pulling down a building on the Philips Campus (41 ha.) in 2007, an exemption of the Flora and Fauna law was obtained from the (then) Ministry of Economic Affairs with help of the Vlinderstichting[20] in 2014, for 3ha. This exemption enables creating an environment for natural development and biodiversity while keeping the possibility to eventually build part of the terrain without any restrictions by biodiversity legislation. The Vlinderstichting also advised Philips on the nature management of the campus. High biodiverse grazing area has been developed where sheep browse, connecting a wider nature network beyond the borders of the campus. A commission – including the Vlinderstichting – gave a very positive rating for biodiversity on Dutch business areas to the campus.

In 2014 a central park was developed to further increase the attractiveness of the campus for its employees and especially new, higher educated staff to be attracted. This resulted from an initiative by the municipality to submit a request for subsidy from the Provincie for Reconstruction of business area, together with Philips, two other companies and a real estate investor. The first three parties each invested several hundred thousand euros. During a reorganisation of personnel at Philips, critical questions were raised about using money for planting trees while firing people for economic reasons. This could have become a factor of failure. The reconstruction comprised both greenspace and infrastructure development of the wider business area. For the future the municipality hopes that the campus can be accessed by citizens from Best.

The alderman[21] feels involved and makes sure that the municipality facilitates the initiative. The officer spent a few hundred hours to help to realize the initiative by starting the request for subsidy and arranging the financial justifications, which was very time consuming and discouraging because each party has its own accounting system. So the officer facilitated the inititiave and took charge of a potential failure factor: (administrative) workload. It was not easy for the municipality to free up the officers time for this. They legitimized it with their policy for enhancing the attractiveness of business site and the campus to companies. Also, Philips own resources – land, personel, material, materiel and finances for development and maintenance – and the professional background of the various parties turned the initiative into a success. Philips employees are also involved in maintaining the green. The site makes people feel happy.

The initiative fitted the formal environment policy of the municipality of Best which aims at promoting biodiversity via spatial development and with citizens, companies and staff. Liveability is also an important policy objective. Best aims for coherence between environmental themes and with other policies. For the campus this is about linking biodiversity with liveability and attractiveness to business. In its green policy Best pays little attention to communication with companies other than developers and green companies (e.g. gardeners). The policy pays more attention to cooperation with citizens. To obtain provincial approval of land use plans outside the built areas, landscape improvement is conditional.

Plan NECTAR, city of Arnhem (152,000 inh.)

NECTAR (2013-2016) is a vision plan for the transformation of a former school building in the Dutch city of Arnhem to an ecological centre with a business and public-oriented character. The building had been used as primary school between 1950 and 2010. In 2010, the municipality contracted out the vacancy management to the SLAK foundation. SLAK did this by temporarily renting the property to artists. Initiator of NECTAR was one of the temporary residents, who had also been appointed as the administrator of the building. He had developed the plan to contribute to the neighbourhood. The initiator

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[20] Vlinderstichting is a foundation, a nature organization with special expertise concerning butterflies.

[21] member of the executive board. Alderman (wethouder) is a common name in Belgium and the Netherlands for this function. it can also be a woman, as in this case.

had drawn up a project plan (2014), in which the connections with the local policy were expressed and spent time in building a network. The plan got a broad public support of residents, housing associations, and several local NGOs.

Also local politicians showed interest in the plan. The initiator got in touch with council members of several political parties, who also supported the plan. Gradually, the plan appeared not to be consistent with the real estate policy of the municipality. Several years earlier the municipality's executive board had decided to dispose of a number of real estate objects. The former school was an object on the list. Board members distanced from Plan NECTAR. In this period the municipality still explored whether the initiator could finance the property. The investor had offered 600k euros. This amount was not sufficient for the municipality. The municipality had carried out a quick scan to explore the possibility of converting the current destination of 'social purposes while maintaining landscape values' to 'reside'. Outcome of the quick scan was that adding a limited number of apartments and houses on the location would fit well. This outcome apprized the property. In the spring of 2016 the municipality chose to sell the property, for 750k euros. The sale of the property meant the end of Plan NECTAR.

Kweekland, city of Arnhem (152,000 inh.)

Kweekland is an urban garden of about 1 ha, run by two enterpreneurs since 2013 who started a foundation for running the garden. They aim at participation and reintegration of people who have difficulties to find a job; educating people in urban agriculture and the benefits of short foodproduction chains; and thirdly connecting people in greenspace, by the sale of vegetable and fruits, the picking garden, the teahouse and by organizing events such as workshops, lectures and concerts. On average 30 people are active in the garden and greenhouses. The foundation financially manages at break even point. They rent the land at an affordable price from the municipality and earn income by running the shop, home delivery of produce to customers, and subsidies for employing people who otherwise would have a hard time to find a job.

Factors of success which the initiators experienced are the fact that the infrastructure was already there (greenhouses, toilets, irrigation, vegetable gardens and fruittrees); the fertile soil on the southern side of the hill; the relatively low land rent they pay to the municipality; the central and accessible location in town; the cooperation with the municipality who thinks along with them to see what might work, the urban agriculture policy of the city. Hindering factors are the limited income they derive from the exploitation, the municipal regulations, such as the permits needed to for instance keep chicken. The administrative demand this poses takes the energy from the enterprise that they would rather invest in different activities.

The municipality as written helps by asking a low rent for the site and its infrastructure, thinking along with the enterpreneur and subsidizing the employment opportunities. This is part of the municipal policy on urban farming. Also the municipality develops legislation that allows the increase of traffic by customers. Eventually such initiatives should become financially independent, according to the municipality. Higher government does not seem sensitive to the complexity of this kind of enterprise.

Vijfstromenvallei

The initiative Vijfstromenvallei was formed in 2009 out of concern among residents in the Dutch city of Helmond on the ongoing building plans for the natural valley near the city. The initiators developed an alternative interpretation for the Green Peel valley, aiming at a sustainable, recreational and green décor of this area. The plan included an environmental education centre, restaurant, children's farm, art centre, hiking and recreation area, bicycle routes and urban agriculture.

The initiators gathered the necessary signatures for their citizens ' initiative. In April 2014, they handed in their plan to the municipality. It was the first officially filed citizens' initiative in the municipality of Helmond since the regulation for citizens' initiatives existed. The filed plan included a request for support of the initiative in the decision-making process of the valley, and a preparatory credit of 15 kEuro for the further development of the plan. For this further development the initiators wanted to make use of a professional green advice office. The municipality decided to support the initiative, though not to provide

the financial credit, clarifying that (1) the regulation citizens' initiative does not provide finance and (2) the citizens' initiative consisted of two natural persons and grants to natural persons are not allowed. An additional argument to not grant the requested funding was fear of precedent for future (citizens') initiatives. As the plan fitted into the municipal's discourse and had the support of the Council, the executive Board proposed to the citizens' initiative to bring in the plan in the development process of the Green Peel Valley, in a form of citizen participation to be determined together (Municipality of Helmond 2015, p. 1). The municipality offered an officer as contact person, to guide the initiative related to knowledge of laws and regulations, content-relatede policies and the zoning plan.

Since the Council's decision, the municipality and initiative have had barely any contact. The officer has phoned the initiative several times. The initiative stated to approach the municipality when ready, but this has not happened yet (2017).

Ecomunitypark

The Ecomunity Park initiative (17 ha) was formed around 2004, when the owner of Ecostyle, a company with a green business model, had plans for the development of a Green Business Park with involvement of educational institutions for innovation. Especially the attracting and retaining of youth within the region in relation to economic development was an objective of the plan, the initiator and the municipality of Ooststellingwerf shared. The municipality tipped the entrepreneur about the availability of several agricultural plots. This was the start of the cooperation between the entrepreneur and the municipality. The municipality highly facilitated the realization of the plan for the Business Park by the development of a new zoning plan, recruitment of subsidies and, most recently, the establishment of Biosintrum- the official name of Ecomunity Park since 2017. Biosintrum has been designed as a centre in which companies collaborate with institutions of higher and secondary vocational education. A foundation was established to manage the centre. Province, municipality, some 20 companies (each of them financed 3,5kEuro per year for three years) and five educational institutions (each of them financed 20kEuro per year for five years) invested in the building. With these contributions, the exploitation of the first five years is also almost complete.

Biosintrum is now operational, and still new companies are hooked on. Also foreign companies have shown interest, which is likely related to the sustainable focus of the park. An Executive Committee for the foundation behind Biosintrum, consisting of three board members, will be installed. The plan reached the Top 3 nominations for the Sustainable Building Award 2018.