HOW REGIONAL DESIGNING INFLUENCES STRATEGIC SPATIAL PLANNING

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DESIGN IN THE PLANNING ARENA

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Annet Kempenaar

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5. Regional designing: a strategic design approach in landscape architecture

6. Conclusions and discussion

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1

Introduction

1.1 Introduction

Between 2001 and 2004, I was one of the participating stakeholders in the design process that developed a regional design for the New Dutch Waterline (in Dutch: Nieuwe Hollandse Waterlinie). This 85 km long defence system built in the 19th and early 20th century – consisting of inundation areas and multiple fortresses (Figures 1.1, 1.2 and 1.3) – had sparked renewed national attention at the time, as a unique ensemble of Dutch cultural heritage, and was adopted by the Dutch Government as a 'National Project' (Patijn et al. 2000).

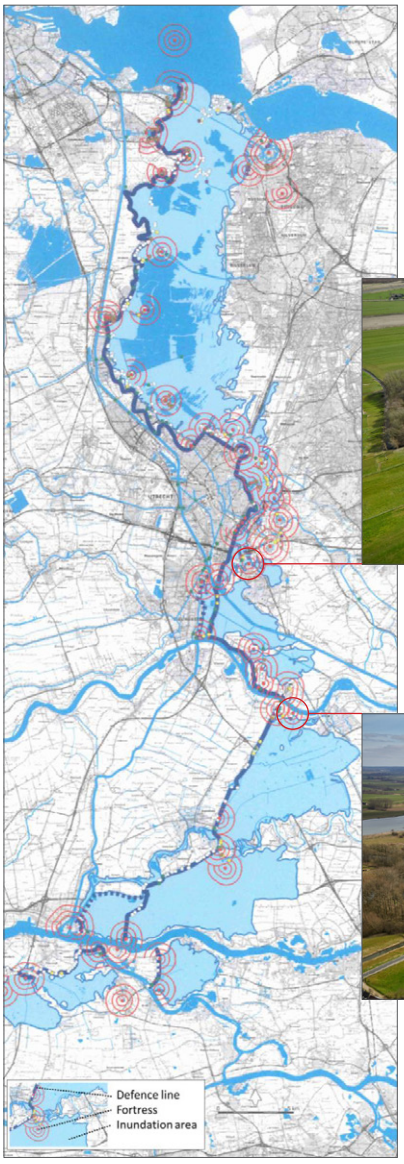

Figure 1.1 Map of the New Dutch Waterline (Luiten et al. 2004)

Figure 1.2 Fortress 't Hemeltje (Stichting Aquarius)

Figure 1.3 Fortress Everdingen (Stichting Acqurius)

The aims of the project were to bring new meaning and use to the historic landscape structure and its buildings, and to direct spatial planning and development in the region in order to enhance the New Dutch Waterline. A design team, in collaboration with stakeholders, was commissioned to develop a design for the area of the Waterline that presented ideas for the future use and development of the New Dutch Waterline in relation to other spatial developments in the region – e.g. water management, urban developments, nature conservation, and recreational use – as well as an implementation strategy. In 2004 this regional design was formerly finalised and published as the Waterline Perspective (Luiten et al. 2004), which was presented to, and ratified by, the governmental bodies involved. Since then, it has affected and influenced spatial planning and actual developments in the Waterline region.

To my surprise, the Waterline design process not only produced a design for the future spatial arrangement of the region and an implementation strategy, it also altered the opinion and position of stakeholders, and their relationships. As such it influenced and improved the conditions for its own implementation. During the design process I became aware of the value of the Waterline, and was convinced that it should inspire and enhance the arrangement, use, and form of spatial developments in the region. I developed a commitment to the plan. In addition, I became part of the Waterline network and got to know other stakeholders with whom I later initiated implementation projects.

In retrospect, participating in the design process for the New Dutch Waterline was a unique experience that sparked my fascination for the topic of this thesis: regional designing and its influence on spatial planning processes. In my professional career I have experienced the effect of regional designing in various processes. However, I have also observed that some regional design efforts hardly exert any influence. I noted in myself and others a lack of explicit knowledge on the effect and influence of regional designing, and that even less was known about how this influence occurred. These observations and experiences fuelled my fascination for the regional design process and led me to engage with this PhD subject. I wanted to know more about the influence of regional designing and how it is created.

1.2 Regional designing

'Regional designing' is conceptualised and used by scholars in different ways. Balz and Zonneveld (2015, p. 871), for example, define regional design as: "*a distinctive method of policy argumentation that makes use of spatial representations of the plausible future of regions*". Meijsmans (2010, p. 5) uses regional design to identify a: "*practice in the making*", encompassing: "*project directed approaches on the scale of regional planning*", in which design is: "*a key factor concerning the content and … its elaboration as a process of co-production*". These conceptualisations seem to have little in common at first sight, but they complement one another, and together touch upon the different aspects that make up regional designing: developing long-term futures, a regional perspective, the act of designing, and the co-production of regional designs.

Regional designing envisions possible and desirable futures (Stremke et al. 2012, Neuman 2000, De Jonge 2009, Rauws and Van Dijk 2013, Van Dijk 2011, Balz and Zonneveld 2015, Meijsmans and Beelen 2010). It engages with regional situations that face issues that put the existing situation under pressure, such as adapting to climate change (Brand et al. 2014), transition to renewable energy sources (Stremke and Koh 2010, De Waal and Stremke 2014), or structural demographic changes (Kempenaar et al. 2016a).

Regional designing develops long-term future perspectives (Van Dijk 2011, Rauws and Van Dijk 2013), which gives it a strategic character (De Jonge 2009, Neuman 2000). It relates to strategic design approaches in other design disciplines, and focuses on pointing-out long-term and overall aims and interests and on the manner and means to achieve these. Regional designing, therefore, not only draws up vital visions of what regions can become, it also envisions pathways towards these futures and short-term actions that set the development towards these futures into motion. However, regional designs are not blueprints or fixed plans (Van Dijk 2011, De Jonge 2009), they are navigation devices that direct actions towards the uncertain future that lies ahead (Langner 2014). Regional design goals and objectives provide this direction, and, as such, aim to guide decisions and developments concerning the physical environment over a longer period of time (George 1997, Neuman 2000).

'Region', or 'regional', refers to the larger geographic area, with all its land uses and physical characteristics being taken into account in regional designing (Neuman 2000, De Jonge 2009, Stremke 2010, Lewis 1996, Steinitz 2012, Langner 2014, Van Dijk 2011, Rauws and Van Dijk 2013). Such a region ranges from the size of several municipalities up to a (nation) state, and is defined by institutional, functional, physical, historical or cultural borders, or a combination of these (e.g. Keating 2004). Alongside a geographic perspective, regions are studied from a relational perspective, or a combined perspective (e.g. Jones and Paasi 2013). This relational perspective is also present in regional designing; it actively addresses relationships, for example between stakeholders and different land uses, and seeks to attune these (Neuman 2000, Lewis 1996, Rauws and Van Dijk 2013).

Designing in regional designing relates to the application of creative and iterative design thinking (De Jonge 2009, Rauws and Van Dijk 2013, Van Dijk 2011, Lawson 2005). Regional designing synthesises different kinds of information and perspectives into a comprehensive set of ideas (Rauws and Van Dijk 2013, De Jonge 2009). In addition, regional designing, like other design disciplines, makes extensive use of visuals, such as maps, infographics, images and sketches, to represent the regional design ideas, plans and proposals (Balz and Zonneveld 2015, De Jonge 2009, Meijsmans and Beelen 2010).

Some scholars include the execution of plans and proposals as part of the regional design process (e.g. Lewis 1996). I do not. Regional designing is 'forethought in making' (De Jonge 2009, p. 28). It concerns the designing of plans and proposals, and leaves the execution or implementation of these plans and proposals to others.

Regional designing has roots in landscape architecture and urban designing (Neuman 2000, De Jonge 2009). These are both spatial design disciplines engaged in giving three-dimensional form and function to outdoor spaces (Lenzholzer et al. 2017). Neumann (2000, p. 117) explicitly addresses the bringing of three-dimensional form into regional designing when he defines regional designing as: "*the intentional act of shaping the physical form of human settlement patterns in geographic regions*". This aspect is little present in most conceptualisations or descriptions of regional designing. I regard it a defining feature, as regional designing engages with architectural form and composition on a regional scale. The regional design for the New

Dutch Waterline, for example, aimed to express the difference between the protected West side of the former defence line, and its East side – from which the enemy was expected to come – in three-dimensional form and function. It proposed light forms of urbanisation and patches of forest on the West side, and open vistas on the East side.

Meijsmans (2010) mentions design as a key factor in the process of co-production in regional designing. This collaborative or interactive character of the design process is another aspect that is seldom addressed in conceptualisations of regional designing, but it is, however, present in many descriptions and accounts of regional designing (e.g. Brand et al. 2014, Kempenaar 2016, Meijsmans and Beelen 2010, Waggonner et al. 2014, Stein 2005). Regional designing is a collaborative effort where representatives of various stakeholder groups participate in the design process.

Based on the deliberations above, I conceptualise regional designing in the context of this thesis as:

> The collaborative envisioning of the future physical form and arrangement of settlements, infrastructures, water features, nature reserves and other land uses in a region, including the relationships between them, their aesthetic appearances, and how this future could come about.

Design, and, as such, regional design, can be both a noun and a verb, which is confusing (Lawson 2005, Steinitz 2012). Throughout this thesis, I will, therefore, make a distinction between regional designs: the products that are the outcomes of the act of regional designing; and regional designing: the process of creating these products (cf. Lenzholzer et al. 2013). Moreover, I will use the term 'regional designer' to refer to a design professional who works on regional designs and who is trained and educated in a spatial design discipline.

1.3 Regional designing and spatial planning

Regional designing is entangled with spatial planning, via the process of deliberatively adapting the spatial organisation of the physical environment to meet society's needs (Van der Valk and Van Dijk 2009). Regional designers and spatial planners work closely together in the

realm of adapting the physical environment, but they tend to have a different focus. De Jonge (2009, p. 16) expresses this difference as follows:

> *"we can make a distinction between the regional design activities focusing on creating, visualising and concretising concepts and proposals that play a role in a (public) decision-making process, whereas the regional planning activities chiefly focus on the organisation of the process of decision-making by defining the choice situations".*

The current spatial planning field is complex and dynamic (e.g. De Roo and Hillier 2016, De Roo and Silva 2010, Innes and Booher 2010) and encompasses multiple ambitions, activities and perspectives. Spatial planning can be both regulatory and strategic; it is concerned with long-term and short-term processes; it is an action-oriented as well as a communicative discipline; it addresses local, supra-local, regional, national and international scales; it produces policies and legal regulations; and it is the domain of political deliberation, amongst other things (Carmona and Sieh 2008, Sanyal 2005, Knieling and Othengrafen 2009). This complex spatial planning field can be conceptualised as a network of multiple planning arenas (Rydin 2007), in which governmental and non-governmental stakeholders participate (Innes and Booher 2010, Healey 2006), and engage with different planning situations on various scale levels. These planning arenas interact with each other, have a formal or informal character, and engage with operational or strategic planning issues.

In this complex planning network, regional designing is employed as a particular method to develop spatial visions, long-term perspectives and strategies (Rauws and Van Dijk 2013), and is, as such, part of *strategic* spatial planning processes. Strategic spatial planning initiatives originate in planning situations in which problems and challenges call for new ideas about the future and how to deal with this future (Albrechts 2004). Many cities and regions have started strategic spatial planning in response to a changing planning context, increased uncertainty, and new planning issues (Albrechts and Balducci 2013, Schatz 2010) such as climate change, rapid urbanisation processes, structural demographic changes or economic shifts. Strategic spatial planning generally takes place in an informal setting (Albrechts and

Balducci 2013), and is focused on inducing structural change and development (Kunzmann 2013, Sartorio 2005).

Albrechts (2004) drew up a general structure of strategic spatial planning processes. Based on specific problems and challenges, and the input of cooperating stakeholders, an agenda for the planning initiative is set. This is followed by a kick-off report, an integrated strategic plan, and the execution or implementation of short-term and long-term actions. Regional designing is used in these processes to develop agendas, reports and plans that contain or lead towards a spatial vision, a long-term perspective and a strategy for the region to deal with the problems and challenges at hand (e.g. De Zwart 2015, Hopkins 2001, Oosterlynck et al. 2011). Figure 1.4 visualises this position of regional designing in strategic spatial planning processes.

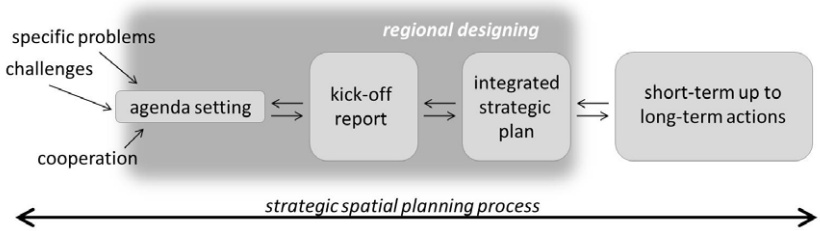

Figure 1.4 The position of regional designing in strategic spatial planning processes (adapted from Albrechts 2004, p. 751)

1.4 The influence of regional designing on spatial planning processes

Regional designing develops spatial visions, long-term perspectives and strategies that intend to induce structural change towards an envisioned desirable future. As such, it aims to influence, affect, and direct strategic spatial planning processes in a certain direction. However, regional designing acts in a complex web of actions and is observed to have both transformative effects (Neuman 2012, De Jonge 2009) and hardly any impact at all on spatial developments (De Jonge 2008). Regional designing can be considered successful when it produces effects that support and enable strategic spatial planning to initiate developments towards the envisioned desirable future.

In plan-evaluation research different perspectives are used to look into the influence and effects of plans (e.g. Hopkins 2012, Laurian et al. 2010, Lyles et al. 2016, Oliveira and Pinho 2010). Firstly, plans are evaluated

by investigating whether actual policies and actions conform to a plan. Secondly, a plan can be used in, or affect, decision-making processes. Thirdly, a plan can have affected actual changes in the environment. Fourthly and finally, a combined perspective can be employed that uses all three angles. In the context of this thesis, I am interested in all effects that regional designing can have, and, therefore, employ a combined perspective. I use the term 'influence' to indicate the range of effects of regional designing on spatial planning processes.

Regional designing influences spatial planning during the regional design process and after this process is finished, both immediately after, and in the long-term. During the regional design process regional designing interacts with, and affects, its planning context. After the process of regional designing, regional designs affect and influence decision-making processes (e.g. Lyles et al. 2016, Faludi 2000, Hopkins 2012), which in the long-term can lead to alterations in the physical environment.

During regional designing, a complex interaction takes place between the designer(s), the involved stakeholders, and the planning situation. Designers structure, organise, lead, manage and facilitate the creative and iterative collaborative design process with stakeholders (Meijsmans and Beelen 2010, Simonsen and Robertson 2013). Furthermore, their professional expertise is used to develop appropriate ideas. They blend different kinds of information and perspectives into coherent sets of ideas (Lawson 2005), visualise ideas, and draw up the regional designs.

Stakeholders have a direct or indirect relation with the planning situation and are, in most situations, the future users of the regional design outcomes (Van der Velden and Mörtberg 2014). This gives them a critical position in the actual influence of regional designing. When stakeholders do not agree with, or do not adopt, the regional design ideas, regional designing can be expected to have little effect.

The planning situation consists of the existing spatial arrangement in the region, including how it came about, the problems and issues that put the existing spatial arrangement in a region under pressure and the social, political, economic and cultural situation in the region. Regional designing must be tailor-made to the planning situation (e.g. Hopkins 2001, Hopkins 2012, Hajer et al. 2006) in order to become useful and effective. To fit a planning situation, regional designs take different

forms, depending upon the situation (Hopkins 2001). If the outcome of regional designing does not respond appropriately to the planning situation, it risks ending up being redundant.

Planning situations are affected by collaborative plan-making processes like regional designing (e.g. Hopkins 2012, Neuman 2012). Collaborative plan-making processes change the attitudes and relationships amongst stakeholders (Innes and Booher 1999, Forester 2013), and prepare them for future action (Simonsen and Robertson 2013). In order to produce such effects, the regional design process needs to be a 'genuine' participation process (e.g. Van der Velden and Mörtberg 2014, Bratteteig et al. 2013, Arnstein 1969), in which stakeholders have a real say in what happens. If this is not the case, regional designing can become what Arnstein (1969) called an act of tokenism and have little actual effect.

Both stakeholders and designers will have experiences with, and observations on, the effects that emerge and are created during the regional design process. Decisions taken during the regional design process are documented in the regional design, in addition to the final vision, long-term perspective, strategy, and line of reasoning that was developed. The influence of regional designing after the regional design process is finished can be found in documents that report and reflect decisions taken in the post regional designing period. In addition, those involved in decision-making and in the preparation of decisions will have observed and experienced the influence of regional designing on these decisions.

Regional design goals and objectives can still influence decision-making in the long-term. The actual actions and activities, though, will differ due to changes in conditions, situations and insights since the regional design was drawn up. This long-term influence can be found when reference is made to the goals and objectives of regional designs in reports of decisions, or when those involved in decision-making recall this relationship. In the long-term, regional designing might also have contributed to actual alterations in the physical environment. However, such developments take place in a complex web of actions, making it hard to determine if, and to what extent, a regional design has influenced changes to the physical environment (Carmona and Sieh 2008).

1.5 Knowledge gap and research question

Regional designing has predominantly developed in practice and is only recently getting more attention in academia. Research into regional designing is often focused on the analysis of a specific case, or series of cases, related to a particular planning issue such as urban development (Pahl-Weber and Schwarze 2014, Langner 2014), water management (Waggonner et al. 2014, Brandt et al. 2013), and large scale infrastructure development (Heeres et al. 2017). Studies in regional designing have addressed the role of design-based envisioning in strategic spatial planning (e.g. Oosterlynck et al. 2011, Van Dijk 2011, Rauws and Van Dijk 2013), investigated the political working of regional designs (De Zwart 2015), described an overview of regional designing in the US (Neuman 2000), researched interactive design sessions with stakeholders (Van Dijk and Ubels 2016), and assessed the performance of spatial representations produced by regional designing in spatial governance (Balz and Zonneveld 2015). Further studies have explored regional designing as a 'project of projects' (Meijsmans and Beelen 2010), developed a framework for long-term regional design (Stremke et al. 2012), and investigated the theoretical base for collaborative designing in large-scale landscape architecture (De Jonge 2009).

This research on regional designing demonstrated, for example, that regional designing is appropriate in planning situations that require perspectives that call for innovation and that go beyond compromise (De Jonge 2009). Moreover, it has revealed that regional designs can have a determining, envisioning, problem-setting, or proposing character and as such enhance political processes (De Zwart 2015), and that regional designing proposes different tactics: from developing local projects based on a vision, to initiating regional transformation through local projects (Meijsmans and Beelen 2010). However, the influence of regional designing on strategic spatial planning processes has had little attention in academic research up till now. Knowledge is lacking on the kind of influences that regional designing can have, on how this influence is realised, or on how the influence is developed and fostered in the regional design process. This research aims to fill this knowledge gap by investigating:

What is the influence of regional designing on strategic spatial planning and how is this influence realised in spatial planning practices?

In this research, I focus on the influence of regional designing on strategic spatial planning processes as it is observed and experienced by the stakeholders who are involved in these processes. In addition, I am interested in the long-term influence of regional designing, and in the directions that are proposed in response to a planning situation. I also look at the regional design process that develops the response to the planning situation, and highlight how the influence of regional designing is fostered in the design process.

1.6 Research approach and design

1.6.1 Epistemology

In the research of this thesis I take a pragmatist stance. Pragmatism emerged in the late 19th, early 20th century in the US, with John Dewey, William James and Charles Sanders Pierce as the main thinkers of the time (Crotty 1998, Healey 2009). Pragmatism does not build on a division between 'the world' and 'the mind', and between objectivity and subjectivity; it builds on experience, which connects doing and undergoing (Logister 2005), and has an orientation towards real-world practice (Creswell 2009). Pragmatism relates to constructivism in its construction perspective on knowledge: knowledge is constructed "*in and out of interaction between human beings and their world*" (Crotty 1998, p. 42). However, pragmatism differs as it takes a specific stance on what takes central stage in this construction of knowledge. It looks "*away from first things, 'categories', supposed necessities*" and "*towards last things, fruits, consequences, facts*" (James 1950, p. 15). It argues that people derive meaning, and, thus, knowledge, based on the *consequences* of actions (Creswell 2009).

1.6.2 Methodology

The research in this thesis is rooted in the practice of regional designing and spatial planning, in the world of those who experience the effects

of regional designing. The chosen methodology for the research is a multiple case study approach, which allows the study of the influence of regional designing in various real-life settings. Case study research enables research into the practical world; it is fitted for investigating a phenomenon in a real-life context (Yin 2009). The rich narratives of case studies are particularly helpful in learning about a complex and evolving phenomenon (Flyvbjerg 2006). The phenomenon under study here is the influence of regional designing on strategic spatial planning processes and the context is spatial planning practice. Furthermore, the case study research in this thesis has an interpretative character (Yanow 2000); it aims to understand how regional designing influences strategic spatial planning.

The choice, or sampling, of cases is critical in a multiple case study research set up (Yin 2009). All cases in this thesis are concerned with regional designing in the context of strategic spatial planning processes on a regional scale. In addition, each case study addressed the influence of regional designing from a different angle. Below, I briefly introduce the case studies and explain what was studied in each of them. Although the case studies each had a particular focus, the findings of the all the case studies jointly informed the answer to the research question.

The first case study studied the influence of regional designing in ongoing regional spatial planning processes in the city regions of Eindhoven and Parkstad, both located in the South of the Netherlands. The observations and experiences of stakeholders involved in these spatial planning processes took central stage in this study. The second case study concerned a longitudinal study of the influence of regional designing for a cross-border region located in Belgium, Germany and the Netherlands. In this region, four episodes of regional designing have occurred since the late 1980s, enabling the study of the long-term impact of regional designing. The third case study investigated the direction that the influence of regional designing should take, by studying the responses to a specific planning situation in the context of a regional design competition. This competition was held for a region in the North of the Netherlands that faces population shrinkage in the near future. The fourth and final study studied regional designing as a strategic design approach and investigated the principles that Dutch landscape architects employ in regional designing.

1.6.3 Methods

Case study research typically builds on multiple methods and combinations of data sets to inform the problem under study (Yin 2009). The case-studies in this thesis are predominantly based on qualitative data sources: interviews, documents and observations. A questionnaire was used to gather additional data on the background of the participants of the design competition in the third case study. Table 1.1 shows an overview of the data sources used to study each of the cases.

Table 1.1 Data sources for each of the studied cases

Case	Data - sources
City regions of Eindhoven and Parkstad in the south of the Netherlands	Semi-structured interviews Literature
Cross-border MHAL Region: Maastricht (NL), Hasselt (BE), Aachen (DE), Liège (BE)	Project documents Semi-structured interviews Participant observation
Regional design competition for a shrinking region in the north of the Netherlands	Competition entries Competition documents Questionnaire Observation
Regional designing by Dutch landscape architects	Semi-structured interviews

For the first case study, on the urban regions of Eindhoven and Parkstad, a snowballing technique was used to select interviewees until the point of saturation was reached (Miles et al., 2014). A systematic search for academic literature in landscape architecture and urban design from two databases provided the literature used in this study.

The project documents used for the longitudinal study for the Maastricht/Heerlen, Hasselt/Genk, Aachen and Liège (MHAL) Region concerned intermediate, final and evaluation reports related to the various episodes of regional designing for this region. The interviewees for this study were selected based upon their nationality, their involvement in two or more regional design episodes, and the distribution of this involvement over the various episodes. The participant observation took place in the meetings, workshops and events organised during the last episode of regional designing.

The study on the regional design competition used all entries for the regional design competition, the design brief, and the jury report.

Furthermore, all participants of the competition were invited to fill in an online questionnaire. The observation of the process in multiple meetings organised during and after the competition enabled a general feel for the competition and the context in which it took place. In addition, the meetings were used to gather background information on the competition.

In the study on Dutch regional design practice, the interviewees were selected based on their education as a landscape architect, their work-experience, their current employment, and their involvement as a designer in multiple regional design projects.

The content of the interviews and documents of all cases studies were analysed through a protocol of qualitative coding (Bryman 2012, Miles et al. 2014). For this purpose, all interviews were transcribed. The coding in the various studies all began with a rudimentary, content-based coding scheme. During the iterative and interpretive coding process, these coding schemes developed into richly detailed schemes for each of the studies that enabled the identification of patterns, and gave insights into the topic under study. A univariate analysis (Bryman 2012) was done on the outcomes of the questionnaire in the study on the regional design competition.

1.6.4 Research quality

In researching this thesis, various strategies were employed to ensure the quality of the research. During the research, and particularly in writing up the research results, I have tried to be as transparent as possible about the data collection and analysis methods used, how conclusions were arrived at, if any assumptions were made, and highlighting other relevant aspects of the research process. Moreover, multiple data sources were used to study the various cases, enabling triangulation (Creswell 2009). Other techniques to secure the quality of the research (Miles et al. 2014) included:

– Checks with fellow researchers. Each of the case studies in this research was done in collaboration with one or more researchers. This enabled cross-checking of findings and interpretations during the research process.

- The use of thick descriptions. Thick, and context rich descriptions enable the understanding of complex situations, as well as the line of reasoning followed by the researcher.

- Checks with colleagues involved in other, but similarly organised, research projects or using similar sampling, data collection or data analysis techniques. These checks helped me to apply sampling, data collection, and data analysis techniques more accurately and precisely. It also revealed new options offered by certain techniques, as well as their limitations.

- Presentations of preliminary work and conclusions at conferences and workshops with peers. The feedback on early findings, and discussion of the research – theory, methods and findings, enriched the research and enabled me to be more clear and specific in the presentation of the research.

- Publication of the respective studies in peer-reviewed scientific journals. The anonymous and critical feedback of peers on papers enriched both the research and my view on the research. Moreover it enabled a better and clearer presentation of the research on paper. At the time of finalizing this thesis, Chapters 2 and 4 are published as an article in a scientific journal, Chapter 3 is accepted for publication, and Chapter 5 is in review.

1.7 Organisation of the thesis

The general outline of this thesis is as follows: the next four chapters comprise the empirical body of work done for this thesis, followed by a final concluding chapter. Chapter 2, 'Design makes you understand', explores contributions of contemporary regional designing to planning and development processes on the basis of Dutch stakeholders' experiences in the urban regions of Eindhoven and Parkstad, and includes a literature review. In Chapter 3, the long-term effect of regional designing is set central stage. This chapter contains a longitudinal case study that unravels impacts of four regional design episodes for the MHAL Region. Chapter 4 analyses a regional design competition for a shrinking region. It studies the proposed directions that the influence of regional designing should take in response to shrinkage. Chapter 5 focusses on regional designing as a strategic

design approach. It explores the principles employed by Dutch landscape architects in regional design processes to enhance the understanding of the design process in strategic design approaches. Chapter 6, the final chapter, answers the research question, discusses the contribution of this research to the academic debate, explores issues for further research, and reflects on its societal relevance.

2

"Design makes you understand" – Mapping the contributions of designing to regional planning and development

Kempenaar, A., Westerink, J., van Lierop, M., Brinkhuijsen, M. and Van den Brink, A. (2016) '"Design makes you understand" - Mapping the contributions of designing to regional planning and development', *Landscape and Urban Planning*, 149, 20-30.

Abstract

Designing has assumed a prominent position in current regional planning and development. There is, however, no coherent body of knowledge on how designing contributes to, alters or influences planning processes. Our essay explores a leading example: the contributions of designing to Dutch regional planning and development, and identifies topics for scholarly research that will improve the understanding of design approaches in planning and advance regional design practice. We interviewed stakeholders involved in Dutch regional planning practice and identified eleven contributions of designing: four to the content and seven to the process of planning. An exploration of scholarly literature in landscape architecture and urban design added more depth and understanding to these contributions. We conclude that the long-term scope of regional design means its impacts must also be evaluated over the long term. Moreover, stakeholder involvement in a design process draws attention to the political aspects of designing and the need to develop skills to balance multiple interests. Finally, as designing and planning are never the same in different situations, empirical research and design experiments in different planning settings can reveal which characteristics determine the potential of designing in different planning contexts.

Research Highlights:

- Designing contributes to the content and process of regional planning and development.
- Designing advances the understanding of regional situations and opportunities.
- Designing improves collaboration and networking in planning and development.
- A research agenda on design approaches in planning.

Keywords: regional design, regional planning, landscape architecture, urban design, stakeholder participation

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2.1 Introduction

Over the last 25 years, designing has assumed a prominent position in the planning and development of urban, rural and peri-urban areas (Madanipour 2006, p. 213, Neuman 2000, Childs 2010, Meijsmans 2010). This upsurge in design activities within planning arenas is illustrated by a number of recent projects, such as 'Rebuild by Design' in the USA for the development of long-term resilient plans for the Hurricane Sandy Rebuilding Taskforce (anonymous n.d.), the 'Le Grand Pari(s)' initiative to generate new ideas for the Paris metropolitan area (Wells 2009), the 'Infra Eco Logi Urbanism' research and design project for the Great Lakes Megaregion on the border of Canada and the US (Thün et al. 2013), the 'Dessau Landschaftszug' design strategy for the Dessau region in Germany (Langner 2010, Langner 2014), and the 'Coastal Quality Studio', a series of collaborative design workshops for climate change adaptation in the coastal areas of the Netherlands (Brand et al. 2014). Design projects like these focus on a supra-local or regional scale and take a strategic perspective. In that sense they are reminiscent of late 19th and 20th century regional designs from well-known landscape architects and urban planners like Frederick Law Olmsted, Constantinos Doxadis, Le Corbusier and Frank Lloyd Wright. Current regional designs are the outcome of intense collaboration between people from different disciplines and with the participation of many stakeholders (Neuman 2000, Meijsmans 2010, Balz and Zonneveld 2015, Steinitz 2012).

Not all regional design projects are equally successful. In the Netherlands some turned out to have had enormous and transformative effects, while others hardly had any impact at all (De Jonge 2008, De Jonge 2009). Nevertheless, regional designing and design approaches to planning have become quite common in Dutch planning practice over the last two decades (Meijsmans and Beelen 2010, De Zwart 2015). In academia however, regional designing and design approaches to planning are only slowly getting more attention. There is still little understanding on how designing contributes to, alters or influences the planning and development of a region, or what factors explain the success of regional designing. Several authors have emphasized the need to further understand the role of design in planning (Balz and Zonneveld 2015, De Jonge 2009).

Previous essays in this journal have touched upon this subject. For example, Nassauer (2012) addresses in her essay the concept of

landscape as a medium and method for designing. Based on the 'laws' that landscapes are by definition integrative and visible, she introduces two principles. The first focusses on landscape as a medium to create synthesis and to merge diverse perspectives. The second principle sees landscape representations as a means to explore and imagine alternative future landscapes, which can lead to surprising insights and innovations. Both principles are useful and valuable in planning processes and might explain the prominent role landscape architects played in the development of regional designing in Dutch regional planning (De Zwart 2015). In addition, Ahern et al. (2014) explore in their essay ways to enhance transdisciplinary and innovative urban planning and propose a framework for adaptive urban designing. In another essay, Von Haaren et al. (2014) explore the value of design approaches in landscape planning, concluding that landscape design is a suitable approach in certain planning situations. In our essay we take regional design(ing) in Dutch planning and development as a leading example and focus on the contribution of designing to regional planning and development. We explore regional designing in Dutch planning practice and aim to develop a research agenda on regional designing.

In the next section we outline our perspective on designing and planning and their positions in the 'making' of a region, before exploring stakeholder experiences in Dutch regional planning practice. We then turn our attention to scholarly research and debate, followed by a reflection on the opportunities for designing in planning. This results in a range of topics for scholarly research on design approaches in regional planning.

2.2 Design, planning and the 'making' of a region

'Design' is both a noun and a verb. As Lenzholzer et al. (2013) have said, it is helpful to distinguish between *designs*, the artefacts that are the outcomes of the act of designing, and *designing*, the process of creating these results. Besides *designs* and *designing*, we use the term *designer* to mean a professional who is trained and educated in a spatial design discipline, such as landscape architecture or urban design.

In general terms, designing can be defined as "*the playful creation and strict evaluation of the possible forms of something, including how it is*

made" (Lynch 1981, p. 290). This 'something' in Lynch's definition is in our case the landscape of a region – the arrangement of settlements, infrastructure, water features, nature reserves and other land uses, including the relationships between them and their aesthetic appearance. This kind of designing is referred to as regional design and has its roots in landscape architecture and urban design (Neuman 2000, De Jonge 2009). The resulting designs cover a large area and seek to accommodate change over a long period of time. They have a strategic character and provide the framework for smaller scale decisions.

Regional designs usually consist of maps and illustrations that represent a desirable future for a region. These large-scale representations are accompanied by proposals for small-scale and short-term interventions that make the vision and the pathway towards the desired future tangible (Neuman 2000). However, it is also possible to bring a specific situation to the forefront, the idea being that a particular small-scale development can act as a catalyst for further change and development within the region. This tactic emerged in Southern Europe in the 1980s for the development of cities like Barcelona, Rome and Madrid (Meijsmans 2010, Neuman 2012). Either way, regional designing aims to improve the regional situation and addresses multiple scales in space and time. It is therefore closely bound up with the spatial planning and the development of regions.

Planning used to be carried out primarily by government authorities. However, in many countries it is now a more inclusive process of governance involving both governmental and non-governmental stakeholders (Sanyal 2005, Innes and Booher 2010, Healey 1997). The nature of European planning has also changed from a predominantly regulative activity to a more strategic and proactive activity to facilitate or stimulate development (Roodbol-Mekkes and Van den Brink 2015, Waterhout et al. 2013, Reimer et al. 2014). This has led to an increasing need for coordination, facilitation and process management in the planning and development of regions.

Planning systems, practices and cultures differ (Sanyal 2005, Reimer et al. 2014, Knieling and Othengrafen 2009). Some planning styles are top-down, hierarchical and government-led, whereas others lean on bottom-up initiatives from non-governmental stakeholders. Differences also occur in the dominant scale at which planning takes place, the institutional setting, the tools and planning modes, and

whether planning is sectoral in scope or aims to be comprehensive (Reimer et al. 2014). Many of these differences reflect the prevailing social and economic conditions, the organization of the state and the social culture in which planning is embedded. However, planning systems, practices and cultures are not static and fixed; they evolve and change under the influence of many factors, such as changing socio-economic circumstances, emerging political ideas, and the migration of planning ideas between planning systems, cultures and practices (Sanyal 2005, Waterhout et al. 2013, Healey 2012). This makes it worth sharing and exchanging concepts and innovations across planning cultures and practices. While this essay focuses on Dutch regional planning and design practice, our conclusions may be applicable to other geographical and political contexts. Sharing concepts, experiences and ideas from different contexts can be, as we believe, valuable for developing innovative planning and design approaches.

Academics frequently discuss and dispute the relationship between planning and designing (e.g. Steiner 2011, Gunder 2011, Anselin et al. 2011, Von Haaren et al. 2014, Van Assche et al. 2013). Their differences of opinion seem to have their origins in the differences among geographic and political contexts, between planning and design cultures, their conceptions of what planning and designing are, and the kind of design or planning discipline they have in mind. However, there often is less dispute or discussion between planning and design practitioners. In regional planning arenas, they closely work together on the 'making' of the region. In the Dutch context, spatial planning is about deliberately adapting the spatial organization of the physical environment to meet society's needs (Van der Valk and Van Dijk 2009), implying a significant overlap between planning and designing. Planners and designers have different – complementary – aims, activities and competencies in this shared realm (De Jonge 2009). Regional planners tend to aim for democratic legitimacy, justice and the realisation of public goals, whereas designers focus on change, renewal and spatial quality. The activities and competencies of planners relate to formulating goals and direction, describing problems and solutions and programming activities and instruments. Regional designers shape, create and envision regional futures, order information and search for coherence and connections.

Planners and designers are not the only ones involved in the making of regions. Various stakeholders also participate in regional planning

and development. They can be divided into three groups: 'producers', 'regulators' and 'users' (Madanipour 2006, Carmona et al. 2010), all of which commission, employ or engage designers. Producers build and develop projects, and create new situations. Regulators usually represent institutional bodies and have a role in regulating land use. Users live or work in the region and use its spaces. All these groups potentially benefit from designs and designing (Madanipour 2006). Producers benefit from designing because it 'shapes' the product, helps to coordinate the process and can stabilize market conditions. Regulators benefit because designing can help to guide change towards a desired situation and develop governance arrangements. And finally, users benefit from designing because it can improve both the functioning and the experience of places. But how do stakeholders *experience* the regional design process?

2.3 Stakeholder experiences and perspectives

We now turn to Dutch regional planning practice and look at how stakeholders experience the role of designing in planning. In the 1980s, in reaction to the rational planning approach of the previous decades, initiatives were taken in the Netherlands to explore the potentials of designing at a regional scale and using the integrative and visual capacities of designing in regional planning (Frieling 2002, Salewski and Paine 2012, De Jonge 2008). These experiments proved to be influential and fuelled the development of regional design in Dutch spatial planning practice. Regional design is now an integral part of regional planning and development in the Netherlands (De Zwart 2015).

We interviewed producer, regulator and user stakeholders in two regions in the Netherlands, asking them what the role of design was in the planning processes they were involved in. We identified the first four interviewees based on a stakeholder analysis, and used a snowball technique to identify further interviewees, asking each interviewee for other stakeholders to interview. In total we held 23 interviews, eight with producers, ten with regulators and five with users.

The interviews were transcribed and analysed using codes (Miles et al. 2014). In the first round of descriptive coding, codes were given to *what* was said on the role of designing. The coding was done by the first three authors of this essay and at several moments during the coding

process they checked and aligned the codes and interpretations with each other. From this round of coding, the *contributions* of designing to regional planning and development emerged as a central concept. In a second round of coding, we interpreted and clustered the mentioned contributions in eleven categories of contributions: four to the *content* and seven to the *process* of regional planning and development. Not all contributions of designing were mentioned by all stakeholders. Table 2.1 lists the categories of contributions to the content and to the process, and the number of interviews in which the contribution was mentioned. These contributions are described below and illustrated with quotes from the stakeholders, Table 2.2 summarizes the main points. Illustrative quotes were translated into English by the authors.

Table 2.1 Contributions of designing to the *content* and to the *process* of regional planning and development, with the number of interviews in which the contribution was mentioned (in total 23 interviews were held)

Contributions of designing to the **content** (number of interviews)	Contributions of designing to the **process** (number of interviews)
- Developing alternative views and solutions (14) - Creating a framework for spatial development (11) - Making high quality designs (8) - Mapping and exploring spatial issues (7)	- Sparking communication and interaction (14) - Creating insights (11) - Building support and engagement (10) - Enabling joint conceptualization and envisioning (9) - Supporting decision-making (9) - Accelerating development (6) - Improving collaboration and networking (2)

2.3.1 Contributions of designing to the content of regional planning and development

The first contribution of designing to the *content* of regional planning and development is *developing alternative views and solutions*. It concerns the development of new or alternative ways of looking at an area, issue or possible solutions. Stakeholders indicated that these intermediate design products enlarged the scope of spatial issues and their possible solutions, as illustrated by the following quote:

> *"… and these were eventually brought together in three scenarios on how you could develop this. Just out of the box, trying to take a new direction quite distinct from traditional approaches."* (municipal programme manager / producer)

The second contribution of designing to the content of regional planning is *creating a framework for spatial development*. The stakeholders described how framework designs or design strategies offered outlines or guidelines for future developments and actions. As one of them noted:

> *"[The designers] drew up a vision for the entire area and we picked out a couple of themes, which we made the focus for accelerating the development of spatial quality in this area. This is how designs have a real effect on what we actually do."* (water board advisor / user)

Making high quality designs is the third content-related contribution of design. The stakeholders mentioned the design of smart and integrated proposals for spatial issues as a strong contribution of design. The comprehensive nature of design proposals in particular was mentioned as a quality, as well as aesthetic enhancement:

> *"There they replaced the street furniture and made it more spacious. They … created beautiful new frontages, small shops with a boutique appearance."* (provincial official / regulator)

The fourth content-related contribution of designing, *mapping and exploring spatial issues*, refers to mapping, analysing and visualizing the existing situation, issues and opportunities as part of a design process. Several stakeholders described the value of combining maps to understand the interactions and relationships between different issues, and the power of visualizing this information. One of the interviewees said:

> *"My next meeting is about the Benelux* project. They are trying to visualize – how shall I put it – what it would be like without national borders and use this to identify where the border creates spatial constraints."* (state official / regulator) * Belgium, Netherlands and Luxembourg

The stakeholders linked the above *content*-related contributions of designing strongly to design products like spatial analysis maps, multiple development options, framework designs and detailed design solutions. The process of designing – how these design products came into being – appeared to be less relevant for these design contributions.

2.3.2 Contributions of designing to the process of regional planning and development

In addition to the four content-related contributions, we identified seven contributions of designing to the *process* of regional planning and development. The first process-related contribution is *sparking communication and interaction*. The stakeholders described how designing, particularly the use of visual representations, triggered discussion. Moreover, the act of drawing a line on a map or selecting what to put on a map was mentioned as something that initiated responses:

> *"At a certain point we organized a couple of workshops and started drawing, discussing and sketching. Then it all becomes concrete and often quite exciting when you make a plan, drawing or a legend. … the legend often gives rise to more discussion than the map."* (consultant / producer)

Creating insights, the second contribution of designing to the planning process, was described by the stakeholders as moments of insight or understanding induced by designs or while participating in a design meeting. A few quotes describe a collective shift in perspective during a design meeting, but the stakeholders predominantly referred to their own moments of insight:

> *"There was a draughtsman at the meeting who tried to sketch what we talked about. That was informative. It created insights I wouldn't have come up with that made us think: that would be very good to do, that's how we should do it."* (municipal advisor / regulator)

The third process-related contribution of designing is *building support and engagement*. The stakeholders described the capacity of designing to get people involved and generate support for plans and proposals. Several quotes related this contribution to the visualization of ideas and proposals by designers. However, the majority of the quotes describe situations in which support and engagement was built through the active participation in the design process, for example in a design workshop. As one stakeholder stated:

> *"… you create natural ambassadors [for the plan] instead of opposition and fear."* (general manager housing cooperation / user)

The fourth content-related contribution, *enabling joint conceptualization and envisioning*, relates to the collective interpretation of problems and possible solutions in interactive design workshops. The stakeholders stressed the importance of including multiple parties in the development of ideas and plans, as they all brought knowledge to the table that was needed to create a good plan:

> *"We didn't make plans and then ask everyone if they liked them. We first explained the process. We said: 'We are going to make a development vision, because we see a lot of things happening in this area, and we need your help. "* (municipal programme manager / producer)

Supporting decision-making, the fifth contribution of designing to the planning process, is the part played by designing in making informed decisions, both in formal decision-making procedures and in informal settings like design workshops. This contribution was regularly linked to designs, as they provided the information to make decisions:

> *"Those scenarios represent a range of economic possibilities for the period to 2040.… they are … conceivable, so you can draw them. That helps when making decisions on how best to plan the area or make the best use of the available space."* (state official / regulator)

The sixth process-related contribution, *accelerating developments*, is designing as a means to initiate or accelerate a development. Design experiments in particular were mentioned as a way to accelerate renewal and provoke innovation:

> *"I see them [the design experiments] more as an instrument to help us pick up on existing ambitions and breathe new life into them."* (alderman / regulator)

The seventh contribution to the planning process is *improving collaboration and networking*. The stakeholders referred to collaborative design sessions as networking events where people meet and where initiatives are combined and coordinated. They said it improves efficiency and funding potential, which are both strong motives for further collaboration.

> *"You notice that engaging with other people in an integral approach [to territorial development] appeals to more stakeholders and makes it easier to get grants or funding."* (water board advisor / user)

When describing these contributions of designing to the *process* of regional planning and development, the stakeholders specifically mentioned a design process in which stakeholders participate and engage in the design process. Although visualizations and designs were also mentioned as contributing, they are seen as most effective when produced by co-creation in a design process that includes collaborative design workshops or charrettes.

2.4 Scholarly research and reflection

In addition to the experiences and perspectives of Dutch stakeholders in the planning process, we explored the scholarly perspective on contributions of designing to regional planning and development. In this scholarly exploration we continued our Dutch scope, but also included several writings that showed a strong relation with one or more of the contributions that we encountered in our interviews.

In line with the general standard of peer review in academic research, we choose to focus our search for literature on peer reviewed writings: on refereed papers and edited books. We used the database of our university (books and PhD theses), a life-science university with a longstanding landscape architecture programme, and the SCOPUS database (Social Sciences and Humanities). The university library covers a wide collection of books and publications on landscape architecture and adjacent disciplines such as urban design, landscape ecology, and spatial planning. SCOPUS currently covers over 22.000 active titles of journals, conferences and books, in various fields. Although SCOPUS is not the most comprehensive database for design literature (Gobster et al. 2010), it uses peer review as one of its selection criteria and it includes the majority of the peer reviewed landscape architecture and urban design journals, as well as a good selection of other scientific journals in which landscape architecture and urban design scholars tend to publish. We acknowledge that these choices have limited our scholarly exploration, for example by excluding valuable scholarly work that not matches the criterion of peer review and only

including journals that are listed in SCOPUS and indexed as relevant for the Social Sciences and Humanities. Our aim was not to execute a comprehensive systematic review, but to add more depth and detail to our understanding of the contributions of designing to Dutch regional planning and development.

In spring 2014 we searched the two databases using keywords (see Appendix A). From this initial list of publications obtained we filtered out duplications, unavailable publications, and non-refereed publications to obtain a long list. Next, we read the article abstracts, scanned the table of contents of the books and read the introduction chapters. Based on this initial review we selected the literature relating to landscape architecture or urban design, and to design and planning on a supra-local scale. We furthermore focussed on publications that addressed the Dutch context and situation, complemented with other writings that showed a strong relationship with one or more of the contributions of design. This resulted in a much reduced list of publications, which was then supplemented with peer reviewed literature known by the authors or suggested to us by other scholars. Finally, we scanned the references of the publications for additional relevant peer reviewed writings. This process resulted in a total of 33 journal articles, 22 book chapters (out of 4 books), 2 PhD theses and 1 conference paper. The final list of publications can be found in Appendix B.

We read the selected publications summarizing their relationships to the contributions of designing to regional planning and development. The four *content* related contributions of designing seemed to be well covered. However, the seven *process* contributions were not equally addressed in the scholarly literature we reviewed. Below we describe what our literature review added to our understanding of the contributions of designing. This scholarly perspective is summarized and put next to the interview perspective in Table 2.2.

Table 2.2 Summary of our interviews and our SCOPUS/library literature review on the content- and process-related contributions of designing

	Interviews Dutch stakeholders	Literature SCOPUS/library
Content-related contributions	*Developing alternative views and solutions*	
	- Increases scope on spatial issues and their solutions	- Links alternative views and solutions to specific (process-related) purposes
	Creating a framework for spatial development	
	- Offers guidelines for future developments and actions	- Constitutive frameworks focus on change - Regulative frameworks reduce risks - Coordinates activities and developments
	Making high quality designs	
	- Increases quality due to integrated nature of solutions and aesthetic enhancement	- Improves functioning of an area - Enhances aesthetic experience - Integrates elements into coherent solutions
	Mapping and exploring spatial issues	
	- Helps to understand spatial interactions and relationships - Empowered by visualizations	- Maps diverse spatial patterns and relations Identifies topics for discussion - Facilitates problem and project definition - Is a base for framing plans
Process-related contributions	*Sparking communication and interaction*	
	- Visualizations and drawing on a map trigger discussions	- Visualizations and drawing on a map trigger discussions - Designers deliberately use this effect
	Creating insights	
	- Insights and understanding induced by designs and participation	- Visualization influences perception - Can change minds about something
	Building support and engagement	
	- Visualization helps to build support - Participation builds public support	*Few references found to collaborative designing* - Landscape as a means to engage people - Designing, designed landscapes important in supporting sustainable development
	Enabling joint conceptualization and envisioning	
	- Participation of stakeholders in design process - Incorporate stakeholder knowledge	*Few references found* - Landscape as a medium to connect perspectives - Charrettes develop shared visions
	Supporting decision-making	
	- Making informed decisions	- Making informed decisions - Consensus building and mediation
	Accelerating development	
	- Initiate developments, renewal and innovations	*Few references found* - Both accelerating and lengthening processes
	Improving collaboration and networking	
	- Workshop as a networking event - Combine and attune initiatives - Improved efficiency and chances of funding	- Improves potential for change - Organizes development processes - Partnerships can also fall apart

2.4.1 Scholarly literature on content-related contributions

Developing alternative views and solutions is described predominantly in relation to specific, more process-related purposes: framing the problem and area (Chapman 2011, Balz and Zonneveld 2015, Meijsmans 2010), supporting decision-making (Van Dijk 2011, Chapman 2011), improving awareness among stakeholders (Hajer et al. 2006b), and facilitating change (Balz and Zonneveld 2015).

Regarding *creating a framework for spatial development*, Neuman (1998) says that frameworks can be divided into constitutive and regulative frameworks. Constitutive frameworks, or visions, focus on development and change (Neuman 1998, Madanipour 2006, Rauws and Van Dijk 2013), while regulative frameworks more or less solidify an agreed or existing situation (Neuman 1998). Frameworks, and particularly masterplans, can be perceived as inflexible and rigid. Nevertheless, inflexibility can also be an asset in complex planning situations, as it "*reduces the risks of investment and helps secure the value of property*" (Madanipour 2006, p. 179). Furthermore, we found that frameworks are considered to be effective instruments for coordinating multiple planning activities, managing resources, regulating the production of urban space and coordinating decisions on investments (Madanipour 2006, Rauws and Van Dijk 2013).

Making high quality designs is addressed in various scholarly publications. Designs change the spatial organization and aesthetic appearance of the environment, and can thus improve the functioning and experience of places (Neuman 2000, Madanipour 2006). Designing has the capacity to blend multiple perspectives or disparate elements into a coherent solution (Crewe and Forsyth 2003, Von Seggern and Werner 2008, Backhaus et al. 2012). This integrating capacity of designing is considered important for designing high quality solutions. Landscape-oriented designing is described as a specific field of interest for developing integrated and comprehensive solutions (De Meulder 2010, Van Damme et al. 2013, Nassauer 2012).

Regarding the *mapping and exploring spatial issues* contribution, we encountered numerous spatial issues that are mapped, explored and visualized as part of a design process. These include for example existing territorial structures (Balz and Zonneveld 2015), challenges and opportunities (Backhaus et al. 2012, Meijsmans 2010), interests

and ambitions (De Zeeuw et al. 2010), possibilities, wishes and political intentions (Sijmons 2006), how the future might look (Madanipour 2006), and extremes and the potential positives and negatives of these extremes (Weller 2008). This mapping, exploring and visualizing is seen as a research tool (Schram 2010) and is used to identify topics for discussion (Feddes 2006). It also facilitates problem formulation, project definition and concept development (Meijsmans 2010) and provides a solid base for framing plans (Chapman 2011).

2.4.2 Scholarly literature on process-related contributions

We now turn to the references that we found in the reviewed literature to process-related contributions of design. Visualization is described as an important technique for *sparking communication and interaction* (Meijsmans 2010, Beelen 2010, Sieverts 2008, Weller 2008). Several authors describe the same discussion-triggering effect of drawing on a map mentioned by one of the stakeholders (Neuman 1998, Van Dijk 2011) and the deliberate use of this effect by designers (Beelen 2010). Designers perceive visualizations and maps as adaptable and 'use' them to absorb comments and suggestions (Beelen 2010).

Regarding the *creating insights* contribution, the visual nature of designing and designs is described as having a powerful influence on people's awareness and perception of things and therefore a means to change their minds (Neuman 1998, Sieverts 2008, Balz and Zonneveld 2015, Meijsmans 2010, Hajer et al. 2006b, Van Dijk 2011). Designing is observed to change the perception, framing and understanding of problems (Sutton and Kemp 2006), fields of action (Neuman 1998, Sieverts 2008, Balz and Zonneveld 2015), motivation for action and planning policy (Van Dijk 2011). Sutton and Kemp (2006) say that on rare occasions a design charrette helps people to re-examine their fundamental beliefs. These sources refer mostly to individual insights and moments of understanding and only a few authors mention a collective change of perspective. Hajer et al. (2006b) describe how policy-makers, experts, administrators, activists, etc. change their perspective when they become co-designers in a collaborative design setting. They also mention an increased learning ability in a group setting. Madanipour (2006) refers to the role of designs in distinguishing a city or region from other cities and regions and promoting it to

large groups of people, for example by employing a 'starchitect' or developing a flagship project.

Only a few of the reviewed documents referred to the role of designs or designing in *building support and engagement* for a plan or development through a deliberative and collaborative design process. Warren et al. (2012, p. 168) state that "*convincing landscape designs hold the power to engage and persuade citizens, politicians and land users*", while van Dijk (2011) mentions participation and interactive charrettes as powerful stimulants for raising awareness and commitment. Nassauer (2012) describes that in designing, landscape is a means to engage people with diverse perspectives in a transdisciplinary design process. However, little seems to be written on how support and engagement is built in collaborative and deliberative designing or on its methodology and methods. Ahern et al. (2014) introduce a transdisciplinary adaptive design and planning model, but also argue the need to develop experimental urban planning and design protocols and a transdisciplinary working method. Furthermore, in addition to the perspective that emerged from the interviews, several scholars address the role and importance of designing and designed landscapes to build support and engagement for sustainable landscape development, improve human-nature relationships and promote earth stewardship (see for example: Felson et al. 2013, Musacchio 2009, Felson and Pickett 2005).

We also found few references to *enabling joint conceptualization and envisioning*. Landscape is described as a boundary object in designing, enabling people with different perspectives to engage in a design process (Nassauer 2012, Van Damme et al. 2013). In addition, a couple of scholarly publications were found on charrettes or workshops (Sutton and Kemp 2006, Walker and Seymour 2008, Roggema 2014). Roggema (2014) points to the development of shared visions and perceptions as an important asset of interactive participatory design-meetings like charrettes. He also notes that "*design charrettes are not commonly found in academic literature*" (Roggema 2014, p. 61), as does De Jonge (2009), who states that "*when it comes to practical theories on co-design in landscape architecture, either on local or regional scale, [scientific] contributions written from the designers point of view are hard to find*" (p.24). This seems to contrast with professionally oriented literature, particularly in the USA, in which several extensive publications address design charrettes and collective conceptualization and envisioning (for

example: Lennertz and Lutzenhiser 2014, Condon 2008). Moreover, neighbouring disciplines such as planning have extensively addressed deliberative and collaborative approaches (e.g. Healey 1997, Innes and Booher 2010, Forester 1999).

The *supporting decision-making* contribution is backed up by claims that designs and designing are helpful for making informed decisions (Van Dijk 2011, Chapman 2011) and for choosing between options (De Zeeuw et al. 2010, Van Dijk 2011). Moreover, designing is also described as a means to build consensus (Neuman 1998, Von Seggern 2008, De Zeeuw et al. 2010, Madanipour 2006, Sutton and Kemp 2006) and mediate between conflicting ideas or parties (Sijmons 2006, Madanipour 2006, Meijsmans 2010, Neuman 1998, De Meulder 2010, Forester et al. 2013). However, little has been written on how consensus is built or how mediation takes place in design processes or is influenced by designing.

Accelerating developments is not much referred to in the scholarly literature we read. However, the timing and pace of development were mentioned a few times in relation to designing. Designing is seen to have the potential to move processes forward (Warren-Kretzschmar et al. 2012) or kick-start a development (Schram 2010). Chapman (2011) suggests that the "*potential savings in time and contention later in both the design and implementation stages are great*" (p. 528). On the other hand, it was also suggested that a design approach can lead to lengthy processes with limited results (Schram 2010).

In relation to *improving collaboration and networking*, designing is described as a means to bond people and build community (Sutton and Kemp 2006, Meijsmans 2010). Designing can potentially unite different groups of stakeholders and is valued for its potential to reduce risks and anxieties (Madanipour 2006). Designing creates situations for collaboration (Forester et al. 2013) in which rivalries can be disregarded (Von Seggern 2008). It changes relationships and by doing so affects the potential for transformation in a region (Hajer et al. 2006b, Rauws and Van Dijk 2013). And it is also described as forming and structuring entire planning and development processes (Forester et al. 2013) and being used to identify stakeholders, organize the process of negotiation and co-production (Meijsmans 2010) and create its own design brief and clients (De Zwart 2010). Designing does not follow fixed rules and procedures; it bends them and creates its own rules and

structures (Hajer et al. 2006b). In exceptional situations this has resulted in a change of institutions or even the initiation of new institutions (Neuman 2012, De Zwart 2010). Balz and Zonneveld (2015) say that design proposals can also cause partnerships to fall apart, which implies that this contribution of designing can work both ways, and it cannot always be relied upon to improve collaborations.

2.5 Towards a research agenda on regional designing

Table 2.2 presents a summary of what emerged from the interviews and literature review on the content-related and process-related contributions of designing. The content-related contributions, which are strongly related to the products of the design process, seemed to be well covered in scholarly literature. The process-related contributions, however, were not all represented broadly in the literature we consulted: *building support and engagement, enabling collaborative conceptualization and envisioning* and *accelerating development* were limited addressed. A systematic literature review of these topics could enlighten whether we were hindered here by the limitations of our exploration.

The stakeholders linked *building support and engagement* and *enabling collaborative conceptualization and envisioning* in the interviews to a design process that involves many stakeholders in workshops and interactive meetings. Based on what we encountered in our literature review, collaborative and deliberative design approaches deserve more attention in landscape architecture and urban design scholarship. In neighbouring academic fields like planning, collaborative and deliberative approaches have been extensively discussed over the past 20 years (e.g. Healey 1997, Innes and Booher 2010, Forester 1999) and new techniques like participatory GIS (e.g. Dunn 2007) are being developed to support such collaborative and deliberative processes. However, we argue that it is necessary to research collaborative and deliberative methodologies from a design perspective, and to develop appropriate theoretical frameworks. The elaboration of such transdisciplinary working methods is also argued by Ahern et al. (2014) in their essay on adaptive urban planning and design. Collaborative and deliberative methodologies make specific demands on the skills of designers, for example in dealing with group dynamics and power relations. They also require designers to balance multiple perspectives

and stakeholder interests, raising political, ethical and democratic issues (cf. De Jonge 2009, Hajer et al. 2006a, Carmona et al. 2010).

In addition, the effect of designing on the speed of planning and development processes emerges from Table 2 as a worthwhile topic for research. Can designing really initiate and speed up planning and development processes? If so, what are the mechanisms at work, and which conditions and factors influence this potential of designing? Moreover, regional design takes a long-term perspective and so the effects and outcomes will take time to come to fruition (Forester et al. 2013). What are the long-term effects of regional designs and designing? All these time-related topics should be considered while investigating the impact of designing on regional planning and development. However, we acknowledge that designing and design approaches are not by definition suitable in all planning and development situations, and that the Netherlands might well be a unique case. This brings us to our next topic: opportunities for designing in regional planning and development.

The contributions of designing that we encountered in the stakeholder interviews, open up a range of possibilities for designers in planning situations, from exploring and mapping the potentials of an area to taking a central position in attuning the wishes and interests of stakeholders, and from creating a shared vision of a desired future to building support and engagement for future developments. But when is designing a feasible or desirable approach in planning?

Tasks, applications and values embedded in both design and planning cultures are important considerations in identifying whether designing could be feasible in planning (Von Haaren et al. 2014). The views on the position of designing in regional planning that we encountered in our interviews probably relate to some specifics in Dutch planning and design, such as the strong traditions in both comprehensive planning (Faludi and Van der Valk 1994, Van der Cammen and De Klerk 2012) and large-scale landscape design (Janssen and Knippenberg 2008, Steenhuis et al. 2009). Furthermore, the devolution of planning responsibilities and the inclusion of many different stakeholders (Waterhout et al. 2013, Spaans 2006), the habit of using detailed visual representations in planning (Dühr 2007), and the policy shift towards a more proactive and development-oriented style of planning (Van der Cammen and De Klerk 2012) will have played a role in the development

of designing as part of Dutch regional planning and development practice. The extent to which these factors have been important, or how critical each factor has been, remains hard to say, and calls for further research.

The question of when designing is feasible or desirable in planning was also raised in the perspective essay by von Haaren et al. (2014) on landscape design and landscape planning in this journal. They built their argument on a conception of landscape design at the scale of the site with simple ownership situations, and they see landscape planning predominantly as a sectoral and formal task with legal obligations. Their conclusion is that designing could take a lead role in landscape planning situations where change is welcomed and the ownership situation is relatively simple. In other, more complex situations and where the focus is on conservation and the legal obligations of landscape planning (protection of natural processes and cultural values through landscape planning is required by law in some countries), they consider design approaches to be less feasible.

On these points we take a different position and argue that designing can be valuable in a wider range of planning situations. First, conservation and protection also involves change. We argue that the designer's ability to envision new situations makes designing useful not only in situations of change, but also valuable in exploring how to protect or conserve values in a changing context. Second, we considered designing on a regional scale, which uses collaborative and deliberative design methods. This kind of designing could be feasible in governance-oriented planning contexts with multiple stakeholders as it can produce contributions that are fruitful in these contexts (*building support and engagement, joint conceptualization and envisioning, and improving collaboration and networking*). Third, our conception of regional planning and development involves the coordination of multiple sectoral developments. Designers are trained to blend different kinds of information and elements into a coherent set of ideas (Lawson 2005) and could therefore be effective in such complex and comprehensive planning situations. When planning does not seek to engage with future developments and changes, or involve stakeholders, or coordinate multiple sectoral developments, we expect design approaches to be of limited added value in planning. However, empirical research and design experiments in various planning

contexts are needed in order to reveal whether these expectations are borne out in practice.

The success and usefulness of designing in planning contexts also depend on disciplinary cultures and traditions (Van Assche et al. 2013), which differ between continents, countries, regions and schools. For each situation, an appropriate and suitable balance should be found for designing in planning. Moreover, since "*planning can slide into blind procedure, and design can deteriorate into blind aesthetics*" (Van Assche et al. 2013, p. 193), it is important to embark on a continuous learning trajectory that is flexible, leaves room for trial and error and can adapt to future changes.

2.6 Conclusion

In our essay we have explored the contributions made by regional designing and design approaches to Dutch regional planning and development and have seen that designing can contribute to regional planning and development in a number of ways. Designing enables a better understanding of the area, of the viewpoints of various stakeholders, of the possible futures and options, of the actions that can be taken and of who should be involved. Or, in the words of one of the stakeholders:

> *"Design makes you understand"* (municipal official / regulator)

This perspective not only opens up a range of opportunities for designing in planning, but also calls for extensive scholarly investigation, because there is still much that we do not understand about the effects and impacts of regional designing, regional design methodologies, the feasibility of design approaches in planning and how this differs depending on variations in planning and design practices and cultures. In this essay we have explored stakeholder perspectives and scholarly literature regarding designing in regional planning and development from a Dutch perspective. It would be worthwhile to learn about design approaches and experiences in planning from other geographical and political contexts. Based on our explorations we have identified topics for future research on regional designing. The aim of this research should be to better understand designing as part of regional planning and development, and to advance this emerging design practice.

3

The impact of regional designing: new perspectives for the MHAL region

Kempenaar, A., Brinkhuijsen, M., and Van den Brink, A. (2017) 'The impact of regional designing: New perspectives for the Maastricht/Heerlen, Hasselt/Genk, Aachen and Liège (MHAL) Region', *Environment and Planning B: Urban analytics and city science*, online first.

Abstract

Regional designing is used to envision regional futures that aim to guide decisions on the environment in the region over a longer period of time. However, longitudinal studies on the actual use and effect of regional designing are lacking. This paper investigates the impacts of regional designing in the complex and fragmented setting of a cross-border region. Since the late 1980s, this region was subject to four regional design episodes that each have had different impacts: from a new perception of the region to initiating regional collaboration and effects on the Dutch professional debate. The study showed that regional designing is a powerful means to overcome difficulties that arise from the fragmented setting of a cross-border region. Moreover, it revealed that both plans and people are important in the transference of regional design outcomes from a regional arena to sub-regional planning arenas. Conditions, such as status and available funding, improve the chances of transference, and the context in which the regional design is embedded is a critical factor that the impact that regional designing will have.

Keywords: regional design, cross-border spatial planning, impact analysis

3.1 Introduction

Regional designing is a means to develop regional visions and spatial strategies. Such visions and strategies advise stakeholders in what to aim for in the development of their region, in the light of an uncertain future; they are a prelude for action (Hoch 2016). Visions are drawn up in a collaborative visioning process with stakeholders (e.g. Helling 1998, Nam 2013), which is a process of persuasion and seduction that has a lot in common with planning as persuasive story-telling (Throgmorton 2003, Van der Stoep 2014). In this process, the world is reimagined with the aim of developing common ground for collective action (Rauws and Van Dijk 2013), which can be useful in regions where an overarching regional authority is weak or lacking, such as a cross-border region. Regional designing is a particular approach to visioning that uses the sense-making, synthesising, visualising and creative capacities of designing to develop visions for a region (Rauws and Van Dijk 2013, De Jonge 2009).

Regional designing induces various effects in a regional context. It develops alternative regional conceptions that can lead to a renewed perception of the region (Rauws and Van Dijk 2013). It can unite different groups of stakeholders (Von Seggern et al. 2008, Neuman 2012) and foster shared understanding (Van Dijk and Ubels 2016). These contributions of regional designing are not only of direct use in regional planning processes (Kempenaar et al. 2016b), they can also be valuable in the long-term development and transformative processes of regions.

Notwithstanding a growing number of studies on regional designing and design approaches to planning (see for example: Meijsmans and Beelen 2010, Von Seggern et al. 2008, De Jonge 2009), and a recent study into the immediate effects of regional designing on stakeholders and stakeholder decision-making in regional planning and development (Kempenaar et al. 2016b), little empirical research has been done into the long-term effects of regional designing on regional transformation and development processes. Moreover, knowledge about the manner, in which these (potential) long-term effects of regional designing arise is lacking. The study of long-term effects or impacts – as we call them in this article – and how these impacts arise is a difficult and tricky endeavour as gathered from previous research into the evaluation of plans (e.g. Carmona and Sieh

2008, Guyadeen and Seasons 2016, Hopkins 2012). How, for example, can outcomes been linked to one intervention, when developments take place in a complex web of actions? Moreover, different plans aim to work in different ways (Hopkins 2001), and this should be taken into account when the outcome or use of plans is studied (Hopkins 2012, Lyles et al. 2016). The study of the influence of plans and plan-making, is considered important as it can inform the understanding of the drivers of success of, in our case, regional designing (Lyles et al. 2016). Moreover, it can provide valuable insights for those involved in regional planning and designing, and it can increase the legitimacy of regional designing.

This paper aims to foster the learning process about regional designing by developing insight into the spectrum of possible impacts of regional designing, and in the factors and conditions that are in play in the realisation of these impacts over time. We explored the impacts of regional designing in the context of a developing cross-border region. Our research questions were: What are the traceable impacts of regional designing for this cross-border region, and what enabled the realisation of these effects?

In the next section we elaborate on our notion of regional designing for a cross-border region. This is followed by a framework for analysing the impacts of regional designing. The methods section elucidates our research approach and how we selected and studied our case. Next, the cross-border region that was subject of our study is introduced, followed by an analysis of traceable regional design impacts and their realisation. The discussion section addresses what we can learn from our research and reflects on the method used. We complete this study with our conclusions.

3.2 Cross-border regional designing

Regions are not permanent and everlasting, they perpetually evolve under the influence of many factors (Paasi 2009, Keating 1998). 'Old regions', such as Tuscany in Italy, or Catalonia in Spain, have grown historically and were gradually established. These 'old' regions have significant meaning to their inhabitants and they are culturally embedded. In contrast to 'old regions', 'new regions' are more recently established regions that have little self-evident raison d'être and are

generally lesser-known by the general public. They are created to serve a specific purpose and need to be more actively build and constructed (Paasi 2009). The process of developing a region has different stages, from conception to creation to consolidation (Gaberell and Debarbieux 2014).

Paasi (1991, 2009) introduced *the theory of the institutionalization of regions* to conceptualise the different dimensions of region building. The first dimension concerns the territorial shape of a region, which can be historically rooted or just decided upon. The territorial shape defines the regional boundaries, and distinguishes a region from other territories. These boundaries can have critical implications, for example, on the eligibility to apply for certain funding. Secondly, regions are symbolically shaped. This dimension concerns the creation of regional symbols, such as the name or logo of a region. Symbolic shaping is a contested process, as it brings together cultural, historical and political interests and expresses power relations. The third dimension is the institutional shaping of a region. This dimension is much related to both the territorial and symbolic shaping of a region, since institutions are needed to produce and reproduce these shapes (e.g. Dembski and Salet 2010). Regional institutions act both inside and outside the region and use tools and products, such as a common agenda or a regional map. The fourth and final dimension concerns the establishment of the region. Established regions have become part of a broader social consciousness and are utilised in discourses and social practices.

Cross-border regions lie in two or more nation states. Although several 'old' cross-border regions exist, such as the Basque Country in France and Spain, the majority of cross-border regions – particularly in Europe – are so called 'new' regions. European cross-border regions have a specific role and position in the process of European integration (Durand 2014). The European Union (EU) promotes territorial cohesion and has structural funds to support collaboration across and within border-regions to balance developments and to overcome national differences. This has led to the foundation of multiple cross-border regions throughout Europe over the last decades (Association of European Border Regions n.d.) and various initiatives on the coordination and planning of spatial developments in European cross-border regions (Fricke 2015, Luukkonen and Moilanen 2012).

Cross-border regions act in the different societal contexts of the involved nation states (Jacobs 2016). They lack a strong overarching authority and a synchronisation of planning philosophies, systems, tools and methods (Durand 2014). Planning initiatives, therefore, need to build upon collaboration, soft planning initiatives and looser styles of governance and institutionalisation (Luukkonen and Moilanen 2012), such as regional designing. This cross-border planning situation results in a network of informal (cross-border) and multiple formal (national) planning arenas involved in the planning and coordination of spatial developments in a cross-border region. The coordination of developments in such a fragmented planning landscape depends on the capacity of regional planning ideas, concepts, visions and strategies to transfer to other planning arenas. Moreover, to have effect, these ideas, concepts, visons and strategies need to have persuasive power and hold that power over a considerable period of time (Healey 2007, Albrechts et al. 2003).

The development of such ideas, concepts, visions and strategies takes place through regional designing. A strong vision – based on a shared perception of the region – can coordinate decisions on spatial developments, despite the fragmented planning landscape in cross-border regions. Moreover, it can direct actions towards a desired regional future. To analyse if regional designing has had such impacts in a 'new' cross-border region, we developed a framework that we describe in the next section.

3.3 Analysing the impact of regional designing

The interest of our study lies with understanding the spectrum of impacts that regional designing can have, and how these impacts are realised over time. Based on previous studies into regional designing we distinguish four potential areas of its impact. Firstly, regional designing aims to affect *decisions concerning the physical environment* in a region (Neuman 2000, De Jonge 2009), and as a consequence, influences the actual physical developments. Regional designing produces visions, perspectives, and strategies, which can be used as navigation devices for regional planning and development in the uncertain and unpredictable future that lays ahead (Langner 2014).

Secondly, regional designing can change *the perception of a region*. Regional designing enables collective conceptualisation and shared envisioning, and builds support for the envisioned ideas (Kempenaar et al. 2016b, Van Dijk and Ubels 2016). This makes regional designing a powerful means to change perceptions (Balz and Zonneveld 2015).

Thirdly, regional designing builds *regional networks and relationships* (Rauws and Van Dijk 2013, Hajer et al. 2006a). In regional designing, multiple stakeholders participate in atelier-sessions, workshops and charrettes that are organised as part of the regional design process. This can bond people, build community, unite stakeholders, and create situations for collaboration in which rivalries can be disregarded (Von Seggern et al. 2008, Meijsmans and Beelen 2010).

Fourthly and finally, as planning and design are evolving and developing disciplines, an innovative regional design endeavour can also impact the planning and design professions and the way that plans are made (Salewski and Paine 2012, Millard-Ball 2013). Therefore, *ways of plan-making* is a fourth area of impact that we distinguished.

These capacities of regional designing are valuable for the planning and development of regions, particularly in fragmented cross-border regions. We used the four potential areas of impact to study actual impacts of regional designing in our case region. Certain potential regional design impacts, as described above, emerge during the design process. We, therefore, considered both the design products, as well as the design process, in our analysis.

To diagnose an *impact* we looked for a (reported) *effect* of regional designing on a different planning arena than its origin, in combination with a traceable *pathway of transference* that links the outcome of the regional design process to the affected arena. We considered the combined study of effects and traceable pathways of transference important, since effects can be in line with a plan without a link to the plan. In addition to the effects and pathways of transference, we analysed – for as far as we were able to reconstruct pathways of transference – which elements, mechanisms and conditions attributed to the transference of the regional design outcomes to other planning arenas.

To determine the effects of regional designing, we combined a *plan conformance* and a *plan performance* perspective (see, for example: Hopkins 2012, Laurian et al. 2010, Guyadeen and Seasons 2016, Lyles et al. 2016). Plan conformance is generally used in plan-evaluation research to indicate when policies and actions proposed in a plan are carried out in conformance with the plan. Plan performance is used in two ways. One line of research uses performance to indicate if a plan affected actual changes in the environment (e.g. Berke et al. 2006) and another line uses performance to indicate if a plan is used in decision-making processes (e.g. Faludi 2000, Mastop and Faludi 1997, e.g. Berke et al. 2006). We follow Lyles et al. (2016), who use plan performance to indicate if a plan affected actual changes in the environment and use *plan influence* to indicate the influence of a plan on decision-making processes.

Considering the strategic nature of regional designing (De Jonge 2009, Neuman 2000), Mastop and Faludi (1997) and Faludi (2000) would argue that a plan influence perspective (although they would call it a performance perspective) would be the appropriate perspective for evaluation. We argue that strategic plans or design can have effects in line with all three perspectives. For example, when a perception of the region in a sub-regional planning arena aligns with the perception that is envisioned in the regional design, is this in line with a plan conformance perspective. The use of the regional design in making decisions on the physical environment complies with a plan influence perspective. And finally, an actual physical alteration in line with the regional design ideas coincides with a plan performance perspective. Furthermore, the complementary use of plan conformance, plan performance and plan influence holds the promise of "*deepening our understanding of how and why plans and planning succeed or fail*" (Lyles et al. 2016, p. 384). Therefore, we take all three perspectives into account in our study.

Pathways of transference can be more troublesome to determine, since the outcome of planning and design processes are generally very well noted, whilst the process that led to these outcomes is often less documented and difficult to reconstruct in retrospect. Moreover, multiple factors determine what actually happens, and decisions are often built upon multiple sources, making it hard to determine to what extend a plan or design has contributed to a decision (Guyadeen and Seasons 2016, Carmona and Sieh 2008). However, plans and designs

always have a logic or assumption on how they should or could work, when they are made (Hopkins 2001) and are reported to have had influence and effect (e.g. Neuman 2012, Hajer et al. 2006a). This strengthened our ambition to trace pathways that indicate how effects of regional designing came about in our case region.

We considered a pathway as a reported connection between the regional design and its effect in another (sub-regional) planning arena, including the elements, mechanisms and conditions that enabled transference to the other arena. For example, when a regional design is used by stakeholders to develop local plans, it has transferred from the regional design arena to local arenas. The presentation and the handing over of the regional design to local authorities can then be identified as a mechanism that enabled transference. Stakeholders, the presentation and the document are all identifiable elements. Certain conditions, such as the availability of funding or a formal status of regional design outcomes, can increase the chances of transference.

3.4 Methods

A basic assumption in our research is that plans and plan-making processes, in our case regional designs and regional designing, have an influence on the decisions and developments that unfold in planning processes. To demonstrate such influence, a longitudinal study on the impact of regional designing would preferably be done by comparing two situations, one with regional designing, and one without. However, no two situations are alike, making such a comparison study impossible. To study the long term effects of regional designing, we chose a case study approach (Yin 2009), which enables the study of a phenomenon in its context. We studied the effects that are attributed to the plan or plan-making process, and explored what is considered the impact of regional designing by those involved in spatial planning processes. Our research is built on what is documented on the influence and impact of regional designing in reports, and on the experience and recollection of those involved in regional planning.

The selected case for our research concerned a cross-border region located in the Netherlands, Belgium and Germany that includes the cities of Maastricht/Heerlen, Hasselt/Genk, Aachen en Liège, hence the MHAL abbreviation for the region (see Figure 3.1). This region is a so

called 'new' region, initiated in the 1980s, for which multiple regional designs were made over the last 30 years. This enabled us to study the transference of regional design outcomes over a longer period of time. The case region and the regional designs are introduced in the next section of this paper.

Figure 3.1 The MHAL region

We studied impacts of regional designing and their pathways of transference, by means of a document review, in-depth interviews and participant observation of the last regional design episode. To establish an impact or pathway of transference, it had to build on at least two different sources, or be complimented with another reliable source. Therefore, we carried out additional desk-research, using internet websites of governmental organisations, regional policy documents and literature, to substantiate the effects and pathways that were found in just one interview or project document.

For each episode of regional designing we reviewed the final report, all available intermediate reports and evaluation reports (see Appendix C for an overview of these documents). All documents were summarised and analysed using our analytical framework. The intermediate, draft and final reports turned out to be valuable sources for reconstruction of each design episode, whilst the evaluation reports were an important source for identifying effects, transference of effects, mechanisms and conditions.

The semi-structured interviews were held in July 2013 and August 2013 with German, Belgian and Dutch stakeholders who were involved in two or more regional design episodes (see Appendix D for an overview). This limited our potential interviewees, but ensured that the interviewees were able to share observed effects and transference pathways of different regional design endeavours. Each interview lasted between one and two and a half hours, was transcribed and then the content analysed through a protocol of coding (Miles et al. 2014), starting with a code list based upon our conceptual framework. The interviews turned out to be a valuable source for identifying effects, transference of effects and the elements, mechanisms and conditions that enabled transference. Moreover, the interviews were valuable in gaining a deeper understanding of the design episodes.

The participant observation took place between February 2012 and May 2014. During this period, the first and second authors of this paper participated in the design workshops and other project meetings held as part of the regional design process for the design of a landscape perspective for the region. This participant observation enabled a good understanding of the latest episode of regional designing and current cross-border regional collaboration.

3.5 The MHAL Region

The MHAL Region is the urban core of the Euregion Meuse-Rhine, which was established in 1976 as one of the first European cross-border regions. Three languages are spoken within the region (French, German and Dutch), and it includes four different planning cultures: those of Germany, the Netherlands, Flanders and Wallonia. In the late 1980s, the MHAL Region was designated for 'further elaboration' in national spatial policy in the Netherlands (Ministerie van VROM 1988). The Schengen-Treaty was to come into force from 1993 onwards, meaning free traffic of people and goods within the EU. This was expected to open up regional opportunities and lead to new spatial developments in this cross-border region, hence the attention in Dutch national spatial policy. The Dutch focus coincided with the regional aim to intensify the cross-border collaboration in the Euregion Meuse-Rhine and instigated a more intense phase of regional collaboration (Varró 2014).

Since the late 1980s, the MHAL Region has been subject to multiple regional design efforts, which can be divided into four episodes of regional designing, separated from each other by periods without regional design efforts. This is visualised in Figure 3.2. Below we describe each design episode, the main characteristics of the design process, and the final designs and outcomes.

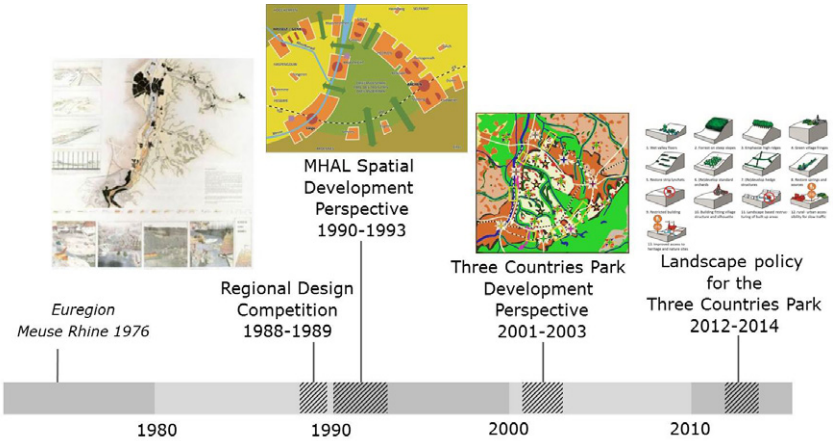

Figure 3.2 Time line of the four episodes of regional designing for the MHAL Region

3.5.1 A design competition on a regional scale 1988 – 1989

In 1988 – 1989 a regional design competition was held for the MHAL Region. This competition was organised by a Dutch professional organization that had the ambition to re-establish attention to form and design in spatial planning. The MHAL Region encompassed themes that were topical in spatial planning at that time: collaboration and coordination between cities in an urban region, disappearing borders in Europe, and form and function of urban/rural complexes. The winners of the competition envisioned a complementary polycentric regional urban structure, an ongoing ecological structure, one regional airport near Liege and new attractive living environments in the rural landscapes of the Region (EoWijers-stichting 1989).

3.5.2 The MHAL Spatial Development Perspective 1990 – 1993

Between 1990 and 1993, regional designing was employed as part of a cross-border planning initiative that developed the MHAL Spatial Development Perspective (Internationale Coordinatiecommissie 1993).

In the early stages, the design activities mainly consisted of mapping and exploring the spatial structures and developments in the cross-border region and its position in north-western Europe. Later on, the design activities turned into developing different models and spatial concepts for the MHAL Region. Out of the developed options, the so called 'landscape park model' was chosen, upon which the final spatial development perspective was based. This spatial development perspective (Figure 3.3) consists of a polycentric urban structure with a cultural landscape in the middle – a Three Countries Park – surrounded by both nature reserves and agricultural areas. The perspective was elaborated into an urban, a rural and an infrastructural perspective, each accompanied by a map, a programme and strategic projects.

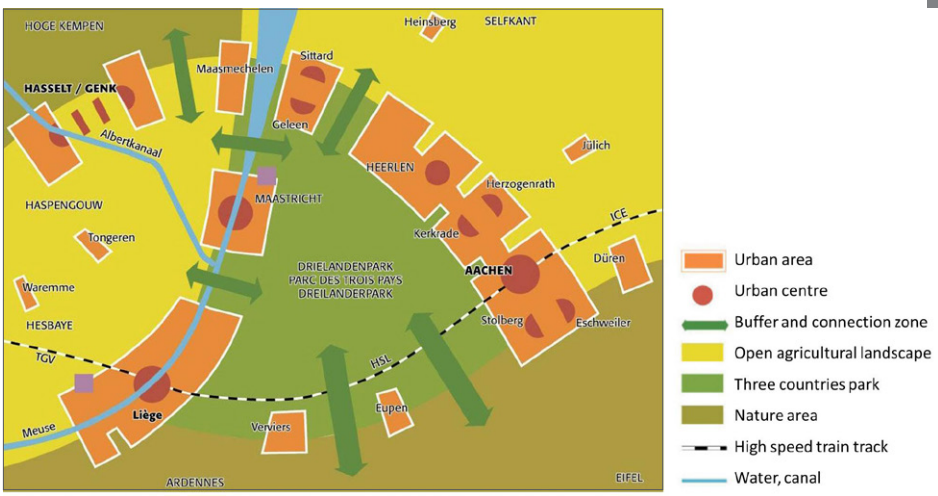

Figure 3.3 The conceptual design for the MHAL Spatial Development Perspective (*Source*: Internationale Coordinatiecommissie, 1993)

3.5.3 The Three Countries Park Development Perspective 2001 – 2003

About one decade later, between 2001 and 2003, a development perspective was drawn up for the Three Countries Park, the heart of the MHAL Region (Projectgroep Drielandenpark 2003). To develop the perspective, a series of five two-day design workshops were held under the guidance of a regional designer. These workshops provided the information and ideas to draw up the development perspective for the Three Countries Park. The Three Countries Park Development Perspective centred around 26 policy guidelines and two maps, one representing the existing structure of the region and one representing the desired developments (Figure 3.4). This perspective reproduced

the spatial concept of the MHAL Spatial Development Perspective, but added the explicit ambition to restore stream valleys, develop tourist identities, and add recreation facilities.

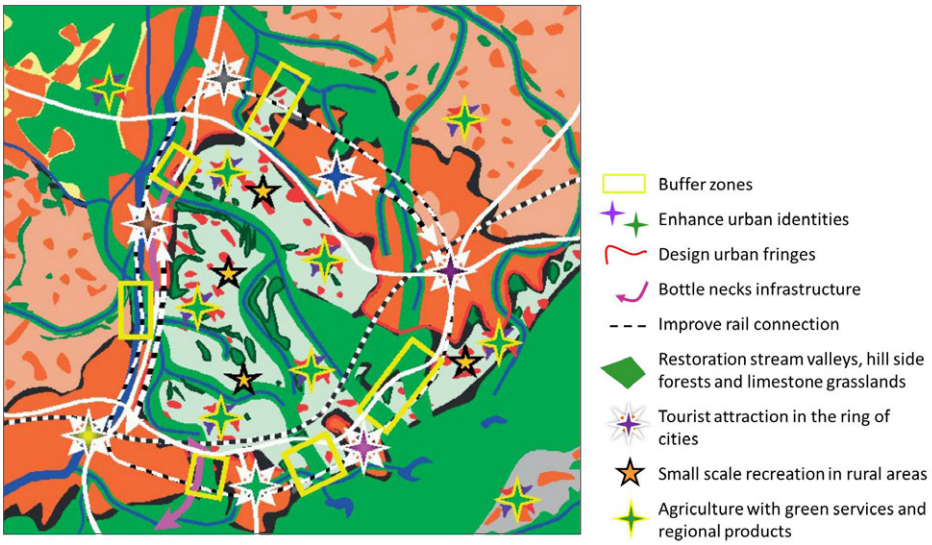

Figure 3.4 The development perspective for the Three Countries Park (*Source*: Projectgroep Drielandenpark, 2003)

3.5.4 Designing a landscape policy for the Three Countries Park 2012 – 2014

From 2012 to 2014, once again, around one decade later, a landscape design approach was used to develop a landscape policy for the Three Countries Park (Lohrberg et al. 2014a). The design activities in this episode aimed at developing guidelines that would enable local and regional authorities, as well as other initiators, to safeguard, preserve and enhance the landscape qualities of the Three Countries Park. Throughout the project, five one-day workshops were held with regional stakeholders. In these workshops, the stakeholders brought in their knowledge, and evaluated and discussed the intermediate design results with the project team. The proposed landscape policy for the Three Countries Park consisted of thirteen guiding principles that will lead to a landscape framework for the region (Figure 3.5) and four implementation strategies.

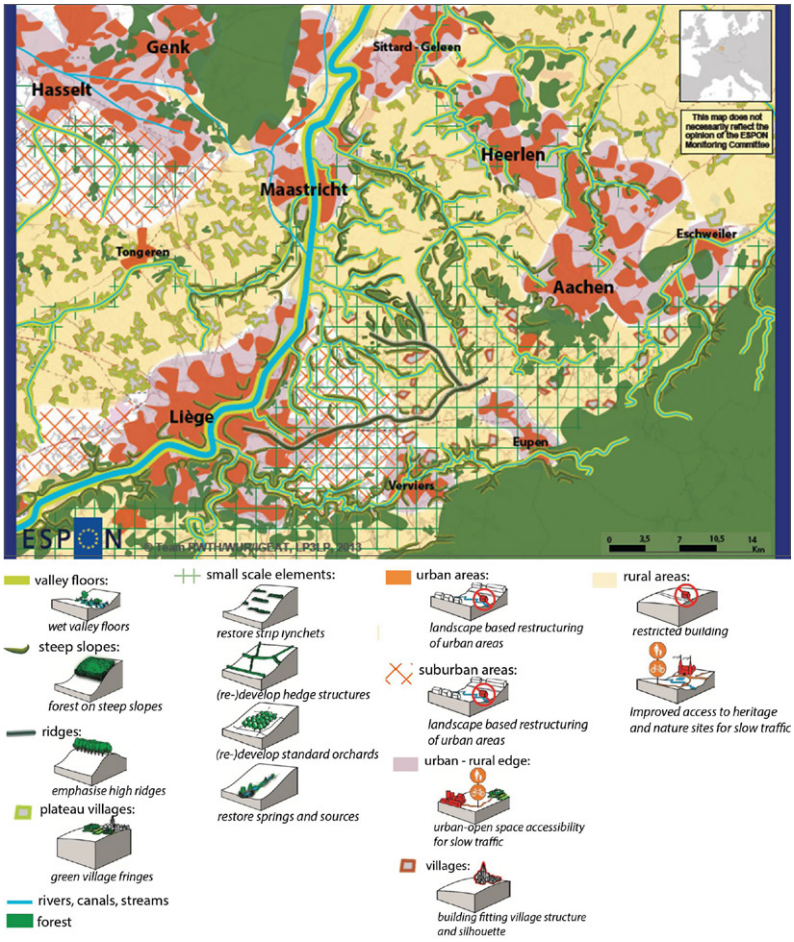

Figure 3.5 Overall landscape framework for landscape development in the Three Countries Park (*Source*: Lohrberg et al. 2014b)

3.6 Impacts of the four design episodes for the MHAL Region

The episodes of regional designing for the MHAL Region each had a specific purpose, focus and approach. We found impacts of all design episodes in other arenas, but each in their own way, and not in similar areas of impact. Below, we describe these impacts of the subsequent design episodes on the four areas of impact that we distinguished and their attributed pathways of transference. We start with the *perception of the MHAL Region*, followed by the *networks and relationships in the region, decisions concerning the physical environment* and *ways of plan-making*.

3.6.1 Perception of the MHAL Region

Until the 1980s, there was no MHAL Region. National perspectives framed the respective parts of the region as peripheral, marginalized border areas. The 1988-1989 design competition coincided with the start of thinking about the MHAL Region as one region located in North West Europe. The regional designs of this first episode illustrated that the region could be thought of as a coherent unit with complementary parts. Unfortunately, neither the winning, nor any of the other designs is reported to have had a lasting effect in the Region in the studied documents or in the interviews. The design competition was not regionally embedded or part of an ongoing regional planning process, it was organised for, and by, the Dutch professional planning and design community. Moreover, the winning competition entry caused some controversy. It proposed to merge Maastricht-Aachen airport with the Liège airport to a location near Liège. This suggestion touched a 'sore spot': the Dutch province of Limburg wanted to keep the airport on Dutch territory.

Although none of the design ideas seem to have transferred to other planning arenas, the information package made for the regional design competition was reported to have been used in the second episode of regional designing. This package was, at that time, one of the rare documents on the MHAL Region as one region, all other information was fragmented. Moreover, some of the Dutch professionals who organised the competition also got involved in the creation of the MHAL Spatial Development Perspective and 'took' the information package to this arena. As one of the interviewees noted:

> *"We had made a contour map of the cross-border region for the design competition. That was quite hard, as Dutch contours didn't match the Belgian ones. … So we already had some maps from the competition that we could use [for the design of the MHAL Spatial Development Perspective]".*

The MHAL Spatial Development Perspective is reported to have had a major effect on the perception of the MHAL Region. It contributed to a switch in perception from multiple, peripheral and marginalized border areas into one coherent, polycentric urbanised region centred around a valuable cultural landscape in the middle. The interviewees described this transition as an emergent process that took place over the course

of the project. The new conception was visualised in a simple but strong representation of the conceptual design for the MHAL Region (Figure 3.3), making one region visible and foreseeable. Moreover, the interviewees connected the change in perception of the region to a change in perspective on the stakeholders from the other sides of the border: they transformed from competitors into potential partners. The interviewees also attributed the coming about of these transformative effects to the carefully organised and sensitively managed cross-border planning process.

The strength and long lasting use of the spatial concept for the MHAL perspective (Figure 3.3) is illustrated by its reproduction of the concept in the Three Countries Park Development Perspective (Figure 3.4) and the landscape policy for the Three Countries Park (Figure 3.5). These reproductions are subsequent and more detailed elaborations of the first conceptual design. Moreover, the conceptual design and its later elaborations transferred to national, sub-regional and local planning arenas, in which they were reproduced and elaborated for parts of the region. The 'Plan Regional d'Aménagement du Territoire de Wallonie' in Belgium was amongst the first administrative plans to adopt the MHAL concept (Internationale werkgroep MHAL 1996).

This use of the MHAL concept lasted for a long time. In 2012 the spatial concept of the MHAL Region – first published in 1993 – was reprinted in the Spatial Structural Plan for the Belgian province of Limburg (Provincie Limburg 2012), and the MHAL concept resonates through the texts in the Provincial Environmental Plan for the Dutch province of Limburg (Provincie Limburg 2014). This latter plan included an image of the Three Countries Park, and also recites the main ideas of the Three Countries Park Development Perspective.

The stakeholders involved in the creation of the MHAL Spatial Development Perspective, the final document, and some of the thematic research documents that preceded the MHAL Spatial Development Perspective were reported multiple times as critical elements in the transference mechanisms. Furthermore, the idea that collaboration across borders throughout the EU is the way forward, was a strong condition for the MHAL conceptual design to transfer and affect sub-regional planning arenas. This also accounts for the availability of EU funds over the years, for the development of cross-border regions, such as the MHAL Region.

3.6.2 Networks and relations in the MHAL Region

All regional design episodes contributed to the development of cross-border networks and relations. During the first episode of regional design – the design competition – preliminary contacts were made to share the idea of a joint spatial perspective. However, the controversy around the winning entry, which proposed to move Maastricht Aachen Airport to Liège, illustrated that cross-border collaboration needed to be developed carefully with a strong eye for sensitivities. Leaving out strong controversies, like the airport discussion, was mentioned in the interviews as an important condition during the other design episodes to develop and establish good cross-border collaboration, just like taking sufficient time, the absence of one dominant partner, and receptive management of the project.

The project leaders of both the MHAL Spatial Development Perspective and the Three Countries Park Development Perspective were praised in the interviews for their sensitivity and role in establishing and developing cross border collaboration. Both projects were perceived as 'unique' and 'out-of-the-ordinary' in the eyes of the interviewees, which created according to them a bonding effect amongst participants. With regard to the MHAL Spatial Development Perspective, the use of design to develop models and spatial concepts as part of an experimental cross border spatial planning endeavour was mentioned as a unique experience.

In the third episode of regional designing, during the making of the Three Countries Park Development Perspective, stakeholder workshops were organised as an integral part of the design process. During the workshops people met, got to know each other and created relationships, whilst sharing their knowledge and discussing design ideas. This participatory design approach for the Three Countries Park Development Perspective was much appreciated and described as a unique experience by the interviewees. The networks and relationships that were created during the second and third episode of regional designing for the MHAL Region are still operational today:

> *"When colleagues of mine want to deal with an issue across the border, they say: 'Hey, you are from the Three Countries Park, do you know who in Maastricht is responsible for this or that?".*

Moreover, the networks and relationships are actively employed to develop projects and apply for funding, as is illustrated by the preliminary stages of the fourth episode of regional designing. The funding application for this project had to be done on such short notice that it could only be realised by using the existing network and good relationships between the nine collaborating partners in the Three Countries Park. The project itself, on a landscape policy for the Three Countries Park, is of such a recent date that it is hard to determine its lasting effect on regional networks and relationships.

3.6.3 Decisions related to the physical environment

The impact of the first episode of regional designing – the design competition – on decision or policy-making for the physical environment was regarded non-existent. The next design episode, for the MHAL Spatial Development Perspective, did contribute to decision-making about the physical environment according to the studied documents and interviews. A review of the strategic projects listed in the MHAL perspective indicates that over half of these projects have been realised or are being realised. The majority of these projects were already active at the time the MHAL Spatial Development Perspective was drawn up, and many factors have influenced the realization of these projects. Therefore, it is almost impossible to determine to what extent the MHAL perspective has contributed to their realisation. However, the conceptual design for the MHAL Region placed these separate project ideas into an integrated, coordinated and coherent setting. The interviewees indicated that this has empowered several of these projects and that it influenced the programming of national and regional investment budgets. In addition, the MHAL Spatial Development Perspective was incorporated into the Operational Programme Interreg II of the Euregion Meuse Rhine (Internationale werkgroep MHAL 1996), and, as such, used in decision-making about the European funding of projects in the region.

The Three Countries Park Development Perspective was also seen to have impacted on decisions about, and the development of the physical environment, although in a more limited way. The partners involved in the Three Countries Park initiative developed and adopted several implementation projects, which have led to new, adjusted and connected cross-border walking and cycling paths, cross-border water

management and art projects that mark historic sites. Being part of an integrated coherent perspective for the Three Countries Park was a critical condition for these projects to get access to EU Interreg funds.

The regional design episodes for the MHAL Region also affected planning policies and shaped decision-making environments. These notions fit with the idea that regional design aims to guide decisions on a smaller scale (Neuman 2000). In a cross-border setting, this can be a specific aim, as it is easier to align substantive planning ideas, than it is to align different planning systems. In the fourth regional design episode the challenge was to develop guidelines for landscape development that would fit, and could be used in all four planning cultures in the MHAL Region.

Long-term effects and impacts of the landscape policy for the Three Countries Park are still developing and unsure. However, the municipality of Aachen announced during the public presentation of the Landscape Policy for the Three Countries Park in May 2014 that it will use the 13 guiding principles on landscape development for making a new landscape plan – a statutory planning scheme in Germany. Furthermore, the landscape policy is used to develop a green infrastructure programme for the Three Countries Park. Both examples illustrate that ideas from this fourth episode of regional designing transferred to, and are used in sub-regional planning arenas.

3.6.4 Ways of plan-making

The first episode of design, the regional design competition, was reported to have had effect on the way of plan-making, at least in the Dutch professional field of planning and design. At the time of the competition, design had received renewed attention in Dutch national planning as a way to envision and visualise possible and desirable futures (Salewski and Paine 2012). Several initiatives to explore this potential of designing on a regional scale were started in the late 1980s. The design competition for the MHAL Region was one of these initiatives that influenced the professional debate. As one of the interviewees put it:

> *"The true integrating capacity of designing became visible in the competition. So it was a strong confirmation of the added value of designing on a regional scale".*

This impact of the design competition on Dutch planning and design practice is explained by the fact that it was well-nested in the Dutch professional world. The competition was organised by Dutch planning and design professionals, and the participants were also predominantly Dutch professionals.

Several suggestions were made in the interviews that the next episode, the MHAL Spatial Development Perspective, and its conceptual design, might have had an influence on the spatial planning practice in Flanders. Careers and change of jobs of some of the participants in the making of the MHAL Spatial Development Perspective were the attributed mechanisms to this suggested effect. However, this claim could not be substantiated in this study.

Furthermore, elements of the MHAL Spatial Development Perspective were mentioned as good examples in the Europe 2000+ report (European Commission 1995) and the project won an honourable mention at the 1994 European Urban and Regional Planning Awards (Internationale werkgroep MHAL 1996). This suggests some influence on the discussions aligned with the European Spatial Development Perspective, a direct pathway, however, could not be identified in this study. Finally, on the third and fourth episodes of regional designing nothing was reported or suggested regarding impacts on the profession of planning and design.

3.7 Discussion

The impacts of regional designing that we found in our study, arose in the highly complex context of a cross-border region that must rely on soft planning initiatives in a fragmented planning landscape. These findings improved our understanding of regional design impacts and their realisation. We have seen that regional designing plays a role in developing new conceptions, in altering the perception of stakeholders, and that it builds and reinforces networks and relationships. In addition, it can contribute to the development of the spatial planning and design disciplines. However, we could not establish pathways between

regional designing and changes in the physical environment. Changes in the physical environment are subject to multiple influences, of which a regional design effort is just one of many. In fact, all impacts we have found in our study have come about in a complex web of actions, in which multiple sources contribute to actual changes, and in which it is hard to determine causality. Our findings though, show that the various episodes regional designing did influence how spatial planning unfolded in the MHAL Region. They demonstrate that regional designing can be an influential means to employ in processes of spatial change and transformation.

The various impacts of the four design episodes, have taught us that an impact is not self-evident. An important factor in the realisation of effects that we found in our study is the context within which regional designing is embedded. The limited impact of the design competition – the first design episode – on the planning and development of the MHAL Region, is explained by its lack of embeddedness in this regional context. Instead, it was well-embedded in the Dutch professional world of regional planners and designers, in which it had effect. The other design episodes were fully embedded in the cross-border context, their outcomes transferred to and impacted subsequent design episodes, and sub-regional and local planning arenas. These findings show that regional designing is highly contextual, and builds upon ideas and concepts of previous regional design episodes and other regional planning endeavours.

Concepts have a powerful nature, but their performance depends on their content, the ambition and power of their users, and their setting (Hagens 2010). They can be strong symbolic markers in transformation, but they must be reaffirmed to retain their mobilising capacity (Dembski and Salet 2010). The spatial concept developed in the second episode of regional designing was reaffirmed in the third and fourth episodes. Moreover, it transferred to sub regional planning arenas in all three countries, where it affected decisions and policy documents. The spatial concept for the MHAL Region proofed to be a powerful and influential concept.

However, concepts and ideas continuously compete and grapple with other concepts (Westerink et al. 2013) in the perpetual process of regional becoming. In institutional terms the Euregion Meuse Rhine – which indicates a slightly larger cross-border area – has been more

successful than the MHAL Region (Varró 2014). The Euregion gained, for example, a formal position in the programming of EU funding. In addition, the name to indicate the cross-border region shifted over the years from MHAL Region to Three Countries Park, as can be derived from the names used in the various regional design episodes for the region. Moreover, despite all cross-border initiatives and developments over the last decades, people living in the region refer to 'Pays de Herve', 'Voerstreek', 'Münsterländchen' or other names to indicate a particular area in the region (Lohrberg et al. 2014a). Despite these different ideas and conceptions, Maastricht used the idea of a cross-border urban network embedded in a valuable cultural landscape for its bid to become European Cultural Capital in 2018 (Varró 2014). Unfortunately, Maastricht did not win, but it shows that the spatial conception of the region developed in the second episode of regional designing is still utilised.

In a detailed study into mobilising policy attention for a civic initiative, the alignment of issue-frames, relationship-frames and process-frames was found to enable the emergence of persuasive stories that mobilised people into action (Van der Stoep et al. 2016). Similar processes might have happened in our case. During the second, third and fourth episodes of regional designing – most notably in the second – stakeholders changed their perspective on both the region (issue-frames) and other regional stakeholders (relationship-frames). Moreover, they developed a positive connotation on the process itself, which was framed as unique (process-frame). Re-framing is a subtle process of adjusting one's perspective based on an understanding of each other's frames, and takes place when people talk and listen to each other (Van Herzele and Aarts 2013). In regional designing this occurs during stakeholders workshops that are organised as part of a participatory design process. Regional design processes, therefore, must be carefully designed, organised and receptively managed (Van Dijk and Ubels 2016). A notion that was also expressed in the interviews, and which is a reoccurring theme in communicative and deliberative planning theory (e.g. Forester 1999, Healey 2007, Innes and Booher 2010). However, participatory and collaborative design processes are notably absent in the academic literature in spatial design disciplines such as landscape architecture and urban design (Kempenaar et al. 2016b). We argue that these spatial design disciplines urgently need to develop a knowledge base, as well as sound methods and methodologies, on participatory and collaborative design processes,

as our study shows that the actual influence and impact of regional designing depends on these processes.

In the interviews, available funding and the 'fitness' – or lack thereof – of the ideas with the cultural and institutional setting in a country, as well as with existing policies, developments and political ambitions, were pointed out as important factors that determine the chances of physical realization. This is in line with Jacobs (2016, p. 19), who argues that *"the existing boundaries may need to become the starting point of a cross-border spatial planning, because these are embedded in society and are capable of facilitating implementation"*. We think this is a valuable point to take into account in future cross-border regional design or visioning endeavours and as a specific point of interest in future research into cross-border regional designing and spatial planning initiatives.

Notwithstanding the limited impacts found from a plan performance perspective, our study shows that a combined plan conformance, plan influence and plan performance perspective, can provide valuable insights on how and why strategic planning – regional designing in our case – is successful or not. Moreover, it shows the value of including the plan-making process in the evaluation of plans and planning efforts. The importance of both plans and processes, as well as their strong interlinkages have been noted and expressed by multiple scholars (e.g. Forester 2013, Hopkins 2001). However, a combined evaluation of plans and processes seems to get little attention in research on plan-evaluation up till now. We argue that this deserves more attention and follow up.

3.8 Conclusion

Regional designing contributes to new perspectives for a region: to new perceptions of what the region is or can be, and to new relationships and collaboration. We have seen that this have been influential and lasting effects in the MHAL Region, which contributed to the perpetual and fuzzy process of regional development and transformation. Regional designing realised these impacts in the complex context of a 'new' cross-border region. Our study demonstrates that designing is a powerful means in bridging difficulties that arise out of an institutionally fragmented situation. This is not only useful in cross-

border planning, but in all kinds of planning endeavours that engage with complex and fragmented situations.

However, regional design effects are not self-evident. Our study showed they depend on a proper embeddedness in a regional context. Moreover, they ground in the regional design process, making the plan-making process an important aspect to take into account in the evaluations of planning efforts, and future research into regional designing. Plans, in which regional designs are visualised and documented, as well as people who have been involved in the regional design-process, derived from our study as critical factors in the transference of regional design outcomes to other planning arenas. Conditions, such as status and available funding improve the chances for transference. Those setting up a regional design process should, therefore, carefully consider the kind of design to be drawn up, who to involve in the regional design process, how to organise and manage such a process and how they can optimise the conditions for regional design outcomes to have an impact.

4

Change of thought: findings on planning for shrinkage from a regional design competition

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Abstract

Shrinkage or 'no growth' is expected to condition the long-term perspective of many Western cities and regions. Planning for shrinkage differs substantively from planning for growth and therefore calls for a change of thought in spatial planning. In our paper, we analyse how planning professionals responded to a 'planning for shrinkage' challenge in a regional design competition. We found they fully adapted to the shrinking perspective, took a strategic approach, and promoted a leading role for local inhabitants. Collaboration with local inhabitants and entrepreneurs, creating new alliances, and timing emerge as key themes for planning professionals in planning for shrinkage.

Keywords: shrinkage; strategic spatial planning; regional design; design competition; process design

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4.1 Introduction

While shrinkage or 'no growth' has been on the spatial planning agenda for quite some time in places like Germany or the USA, in other countries such as the Netherlands, it is still a relatively new topic. Recent research highlights shrinkage or 'no growth' as a dominant development trend in cities and regions in the Western world (Sousa and Pinho 2013, Turok and Mykhnenko 2007, Kabisch and Haase 2011), indicating that shrinking cities and regions are becoming a structural phenomenon. As such, shrinkage and decline generally have a negative connotation. A common first reaction in planning to the perspective of shrinkage or 'no growth' is therefore to develop strategies that aim to restore growth (Wiechmann and Bontje 2013, Sousa and Pinho 2013). As this often has only limited success, there is a growing need in planning for a sound body of knowledge and good practices on how to deal with shrinkage.

Thought and theory development on planning for shrinkage is still in its early stages (Wiechmann and Bontje 2013). Several scholars point out the profound differences between planning for growth and planning for shrinkage, questioning the appropriateness of existing planning tools and approaches in the latter area (Hollander et al. 2009, Rybczynski and Linneman 1999, Ehrenfeucht and Nelson 2011, Haase et al. 2014). They call for a 'change of thought' in planning, as well as a sustained focus on theory development in order to properly address shrinkage in planning.

In practice, planning professionals respond to new planning situations as they come along, dealing with new situations as best as they can. They use their practical and experiential knowledge to respond to relatively unknown planning challenges such as shrinkage. This makes it worthwhile to study responses of professional planners to this phenomenon, and then use these responses to reflect on and enhance theory on planning for shrinkage. In this paper, we examine the outcomes of a design competition for the planning and development of a shrinking region in the north of the Netherlands to assess how the outcomes of this competition relate to current notions on planning for shrinkage. Our central research question is: how do planning professionals respond to a 'planning for shrinkage' challenge and what characterizes their plans? In the ensuing sections we map out our conceptual framework, followed by our research methods, the findings from the competition, a discussion, and the conclusion of our findings.

4.2 Spatial planning in times of change

Spatial planning is concerned with the process of deliberately adapting the physical spatial organisation to meet society's needs (Van der Valk and Van Dijk 2009). Modern spatial planning originated in response to urban demographic and physical growth induced by the industrial revolution, and has more or less been planning for demographic and economic growth ever since (Sousa and Pinho 2013, Wiechmann and Bontje 2013). Notwithstanding differences in planning cultures and planning situations, spatial planning across Western Europe changed over the past decade under the influence of some general trends (Waterhout et al. 2013, Haughton 2010, Olesen 2012). First of all, the issues that justified spatial planning in the past, such as accommodating growth, protection of open spaces, and urban containment, have changed. Nowadays, issues like adapting to climate change, demographic change, and transition towards renewable energy sources dominate spatial planning agendas (Stremke and Koh 2010, Wilson 2006, Sousa and Pinho 2013). Furthermore, whereas planning used to be a government activity, it has now shifted towards forms of shared governance, in which non-governmental parties are included in the planning process and take over responsibilities (Healey 1997, Innes and Booher 2010). And finally, in line with developments in political thinking, governmental planning responsibilities are reduced and devolved upon lower tiers of government (Albrechts et al. 2003, Waterhout et al. 2013, Olesen 2012, Roodbol-Mekkes and Van den Brink 2014). These developments have led to shifts in spatial planning and the emergence of informal or 'soft' planning spaces next to formal planning arenas (Allmendinger and Haughton 2010).

In response to new planning issues, a changing planning context and increased uncertainty about their future, many cities and regions have employed a form of strategic spatial planning (Albrechts and Balducci 2013, Schatz 2010). While traditional planning systems are mainly focused on regulating land-use and spatial developments, strategic spatial planning deals with pressing issues in the face of an unpredictable future, and is focused on inducing change and development (Kunzmann 2013, Sartorio 2005). It usually has an informal character and coexists with traditional planning systems (Albrechts and Balducci 2013, Olesen 2012).

In strategic spatial planning, regional design is a means to develop integrated strategic plans (Oosterlynck et al. 2011). Regional design envisions the possible, desirable future physical form of a region, and is rooted in both landscape architecture and urban design (Neuman 2000, De Jonge 2009). Regional design is a form of '*second order*' design that is "*mostly engaged in designing the decision environment within which others (sometimes these are other design professionals) make decisions to alter or add to the built environment*" (George 1997, p. 145).

The outcome of a regional design, an integrated plan, is an important instrument in strategic spatial planning. Plans, and the making of plans, are critical in the coordination of interdependent planning activities and decisions in situations where multiple streams of action are possible (Hopkins 2001). Plans propose different tactics to shape the world, can have multiple forms, and work in different ways. A plan can be an *agenda*, as a list of things to do, a *policy* that provides 'if-then' rules, a *vision* of what could be, a *design* describing a fully worked-out outcome, or a *strategy* exploring contingent series of actions (Hopkins 2001). Plans usually contain texts and multiple visual representations like maps, figures and illustrations (Ryan 2011). In addition, plans are always specific to the situation and context they are made for. In that sense, plans can be seen as crystallization points, documenting ideas and proposals for specific planning situations.

4.2.1 Towards no-growth thinking in spatial planning

In many countries, spatial planning has been continuously catering for growth over many decades. This relationship between planning and growth was so strong that the two have almost become synonymous. However, continuous growth is shifting to limited growth, 'no growth', stabilization or even shrinkage in many cities and places (Haase et al. 2014, Sousa and Pinho 2013). Drivers for this shift vary from social / lifestyle-related causes like decreasing fertility rates, economic and industrial developments, to environmental impacts and externally imposed causes like political regime changes or wars (Reckien and Martinez-Fernandez 2011). In Europe, low birth rates and natural population losses are expected to condition the long-term perspective (Wiechmann and Bontje 2013), indicating a structural perspective of limited growth, stabilization or shrinkage for many European cities and regions. However, 'no-growth' or shrinkage is never the same process

across different locations. For example, Wiechmann (2003) distinguishes four types of shrinking regions in Europe: industrial agglomerations in economic decline; peripheral, sparsely populated depopulation areas; transformation regions with industrial regression; and rural emigration areas with a decreasing birth rate.

Transition from continuous growth to shrinkage is a serious game-changer for spatial planning. It deprives planning from some of its main activities, such as designing and developing urban extensions, new infrastructures and industrial locations. Moreover, it also truncates the resources for spatial development projects (Wiechmann and Bontje 2013). However, 'no growth' or shrinkage does not eliminate the need for spatial changes and improvements. Climate change for example might increase maximum river discharges, which impresses the need to adjust the physical environment to prevent future flooding. Moreover, new spatial challenges such as vacancies and empty sites open up opportunities to improve the physical environment, for example by fixing planning failures or developing a green-blue network in a dense urban area (Sousa and Pinho 2013, Haase et al. 2014). Shrinking cities and regions can reinvent themselves and become better when they 'grow' smaller (Rybczynski and Linneman 1999).

However, in many shrinking situations spatial planning still aims for transforming economic decline into growth and strengthening economic competitiveness (Wiechmann and Bontje 2013). Planners seem to have limited ideas on how to address shrinkage situations (Schatz 2010, Schilling and Logan 2008), and planning theory is lacking an empirically grounded theory on planning for shrinkage (Sousa and Pinho 2013). Sousa and Pinho (2013) distinguish two kinds of responses in planning for shrinkage: reaction-responses try to turn shrinkage into growth, whereas adaptation-responses adapt to and optimize the consequences of shrinkage. From the literature on planning in the context of population decline, Schatz (2010) deduced four general principles for 'good planning' for shrinkage: planners must leave behind the assumption of future growth, use strategic processes with an emphasis on citizen participation, adopt a balanced approach in addressing the physical, economic, environmental and social needs of a community, as well as change the role they themselves play

4.2.2 Framework for analyzing responses to planning for shrinkage

The aim of our research is to examine professional responses and plans for a 'planning for shrinkage challenge', and compare these with the emerging theoretical notions on planning for shrinkage as described above. Planning for shrinkage differs significantly from planning for growth, but it is not clear which aspects of spatial planning are particularly affected by a shrinkage context. Our analysis of the professional responses therefore includes all dimensions of spatial planning. Based on the definition of spatial planning (Van der Valk and Van Dijk 2009) given at the beginning of this section, we distinguish the three dimensions of planning as follows: society's needs, or why planning activities are needed; the proposed physical spatial organisation, or what is going to be where; the proposed process for spatial planning and development, or who is involved and how it is done.

To characterize the plans made by professionals, we use the five kinds of plans described by Hopkins (2001): agenda, policy, vision, design and strategy. The analysis and characterization of the plans will reveal the tactics proposed by the planning professionals in their responses to shrinkage.

4.3 Research methods

We chose a case study approach to research professional planning responses to shrinkage. The selected study is an unusual and unique case that fits our purpose: a design competition to stimulate innovative ideas on the future spatial planning and the development of a shrinking region in the north of the Netherlands. Design competitions are a common phenomenon in architecture, urban design, and landscape architecture (Chupin 2011). Usually, competitions are used to commission building or (re-) development projects; in our case the focus was on *ideas* for planning and development, with an emphasis on the implementation of these ideas. In this design competition, open to all planning and design professionals, participants were asked to develop proposals for the particular shrinking region, resulting in a range of professional responses to this 'planning for shrinkage challenge'.

In general, design competitions contain three phases (Chupin 2011, Van Wezemael 2011). First, a client defines a brief and asks for proposals regarding the given problem. Second, multiple design teams develop and send in a plan, and third, a jury judges the plans and selects the winners. In each of these phases, ideas about the given situation are expressed and documented: in the design brief (first phase), in the plans made by the design teams (second phase), and in the jury-report (third phase). We read these competition documents and plans in a factual manner (Ryan 2011). Ryan describes three ways to read and interpret a plan. A factual reading focusses on the primary, literal meanings of a plan. Next, as a plan is always influenced by political, social, economic and physical contexts, it can be read in a contextual manner interpreting the plan's contextual meaning. Third, a plan can be placed in a history of plan making, for example for a city or region, or in the work of the plan's author. This calls for a temporal reading, interpreting and reading the plan in its temporal context. Our focus is on reading the documents and plans in a factual manner and determining the literal meaning. Through this reading we determined what the documents and plans purported and proposed, characterized the proposals, and identified different elements in the plans. Next we summarized and structured our findings according to our framework, and classified the plans based on the elements they contained.

In addition to analyzing the documents and plans, we participated in several meetings organized in relation to the competition, both during and after the contest. This enabled us to verify our (preliminary) results and gain more insight into the background and motivation of the commissioners of the competition. Additionally, in order to also gain insight into the background of the participating planning and design professionals, we conducted a survey. The survey contained questions regarding the age, residence, professional background, and motivation for participating in the competition. The survey was tested by two researchers and two competition participants before it was posted online for three weeks, immediately after the award ceremony. In total, 242 people were invited to participate, including all members of the teams, and those who subscribed but renounced to participate. Altogether, 126 persons responded, including representatives of 33 of the 36 participating teams.

4.4 Planning professionals' responses to shrinkage

In 2011 and 2012, a design competition on a regional scale was held with shrinkage as a central theme. The *Eo Wijers Foundation*, an influential institution in spatial planning and design in the Netherlands (De Jonge and Van den Berg 2008), co-organised the competition with the provincial and local governments of the Veenkoloniën, a shrinking rural region in the north of the Netherlands. The jury of the competition consisted of renowned planning and design professionals, regional politicians, entrepreneurs and citizens (EoWijers-stichting 2012). The prize-winners of the competition were announced in an award ceremony in March 2012.

In total, 204 planning and design professionals, divided across 36 teams, participated in the competition. The survey held amongst the participants shows that they had various professional backgrounds, were relatively young and came from across the Netherlands (Table 4.1). The top five reasons named for participating in the competition revealed that the participants saw the competition as a platform for developing and presenting state-of-the- art, innovative ideas on current spatial issues such as shrinkage. These reasons, combined with the large number of participants and the variety of professional backgrounds, indicate that shrinkage is an emerging theme in planning practice in the Netherlands, which has caught the attention of planning professionals. In the following, we describe and analyze each phase of the competition, the design brief, entries and the judging.

4.4.1 The design brief

The planning issues presented in the design brief reveal that the commissioners have fully accepted the long-term outlook of 'no-growth'/shrinkage for the region (EoWijers-stichting 2011). The most important issue of the design brief concerned the demographic changes in the Veenkoloniën: an expected population decline of 5–10% until 2040, a rapidly decreasing working population, as well as an ageing population. These prospects put pressure on availability and proximity of services and amenities. The brief introduced 'the regional comfort zone' as a concept to capture the idea of scaling up eroding 'local' patterns of daily activities (shopping, doctor, school, etc.) to the

regional level in a 'comfortable' manner. The precise way in which to achieve this was left to be worked out by the design teams.

Table 4.1 Profile of the participating planning and design professionals in the design competition for the Veenkoloniën region

Number of participants	204
Number of teams	36
Area of residence	Veenkoloniën (competition region): 1% Northern part of the Netherlands: 17% Other parts of the Netherlands: 80% Outside the Netherlands: 2%
Age	< 25 years: 7% 26 – 35 years: 34% 36 – 45 years: 29% 46 – 55 years: 16% > 56 years: 13%
Top 5 participating disciplines in the competition	1. Urban planning and design 2. Landscape architecture 3. Other, e.g. ecology, agriculture, management, communication 4. Spatial planning 5. Architecture
Top 5 reasons for participating in the competition	6. Opportunity to develop concrete proposals for current spatial issues 7. The competition is a vehicle for presenting innovative ideas and concepts 8. To refine personal thoughts/vision on spatial planning and development 9. Cooperation with other team members 10. Possible new commissions

The aim of becoming a self-supporting region was the second issue in the design brief. The brief envisioned a region with renewable energy as a driver for development, and a renewed water system, no longer depending on water influx from outside the region. At the same time, the brief also mentions opportunities for the regional agribusiness on the European and global markets, indicating ambiguity amongst the commissioners in their regional economic ambitions. The third planning issue concerned spatial planning itself. The brief called for radical new ideas and concepts for the planning and development of the region, since traditional planning efforts have had little success in the past. This planning issue is not linked to shrinkage, but strongly resonates with the idea that growth-oriented planning approaches, tools and instruments do not fit planning for shrinkage.

The planning issues led to a competition assignment that focused on the development of a 'method for sustainable value creation' (the

text of the competition assignment can be found in Appendix E). This method should chart a course of successful developments, creating (new) values that make living in the Veenkoloniën comfortable and agreeable. The design brief however did not conceptualize the notion of 'sustainable value creation' any further, but in its explanation of the assignment used terms like 'develop new revenue models', 'exploit opportunities', and 'make use of the surplus of space'. The design teams were furthermore asked to build their proposals on local stories and initiatives, as well as involve local inhabitants, entrepreneurs and farmers in the development of their ideas. The assignment of the competition clearly put a focus on the planning process, indicating that the commissioners saw this as the major planning challenge for the region. The ideas on planning for shrinkage expressed in the design brief are summarized in Table 4.2.

Table 4.2 Ideas on planning for shrinkage in the Veenkoloniën from the design brief

Planning for shrinkage in the Veenkoloniën – design brief	
Society's needs	- Population decline / ageing population - Self-supporting region - Renewable energy / improved agriculture / self-supporting water system - Limited success of government planning in the past
Physical spatial organisation	- Regional comfort zone
Planning and development process	- Method for sustainable value creation - Involve inhabitants and build on local stories and initiatives

4.4.2 The competition entries

In general, the design teams took an adaptive rather than reactive approach to planning for shrinkage in their proposals (cf. Sousa and Pinho 2013), and fully accepted population decline and a shrinkage perspective for the region. Only one team suggested that their approach might lead to population increase in the future. Various entries made use of new opportunities that come with shrinkage, such as transforming the surplus of land into new wilderness and generating previously unthought-of living conditions in the Netherlands. The quest for 'sustainable value creation' triggered a variety of responses. A couple of entries with a focus on agribusiness saw opportunities for an economic revival of the region based on specific agricultural techniques and developments. The majority of the entries though, inclined towards a self-supporting economic perspective where value is created in combination

with non-monetary means like optimizing networks and connections, swapping goods and labour, as well as building communities.

Concerning the future of physical spatial organization, the teams presented a variety of proposals on the spatial ordering and coordination of activities and developments. The majority of the teams seemed to ignore the 'regional comfort zone' concept presented in the design brief. The teams built their proposals on known planning concepts, such as a hierarchy of settlements, area categories, corridors, as well as networks and nodes. It could well be that they used these existing planning concepts for working out the idea of a 'regional comfort zone', but they did not make direct reference to it in their explanation. The concept of 'multiple land use' was included in one-third of the entries, and therefore the only planning concept that stood out. The teams did not explain their use of this concept, but their use of 'multiple land use' might have had to do with maximizing the use and profit of each piece of land so as to 'create maximum sustainable value'.

The teams made extensive proposals on the planning and development process. Citizen participation and building on local initiatives were dominant in a majority of the entries, which mirrors the idea that citizen participation is important in planning for shrinkage. The design teams took citizen participation a step further than was asked for in the design brief. The design brief asked the participants to *build their proposals on* the stories and initiatives of the inhabitants, but two-third of the teams made citizen involvement with a leading or initiating role for citizens, local entrepreneurs or farmers *the centre of their proposal*. As a consequence, they suggested a modest, collaborative or facilitating role for the regional and local governments. Around one-third of the design teams proposed the founding of cooperatives as a means to collectively organize planning initiatives.

Although requested in the design brief, remarkably few design teams reflected on the role and position of professional spatial planners and designers. Six out of nine design teams that gave attention to this aspect, saw professional planners as facilitators of the regional planning and development process. Three placed themselves at the heart of regional development, actively participating and cooperating with inhabitants and entrepreneurs in initiatives. It might be that for most participants, it was easier to come up with innovative ideas about planning for shrinkage, rather than positioning themselves within this

process and defining the added value of planning professionals in planning for shrinkage.

The plans made by the participating design teams can predominantly be classified as 'strategies' since they focused on interdependent actions and developments, as well as on how to organize and coordinate these. Several teams combined their strategy with a 'policy' element, including a kind of 'if–then' rule. A few strategies were combined with a 'vision' element, sketching a possible future. One entry included an element that referred to an 'agenda', using timelines to indicate at what point in the future a specific topic would become critical.

The proposals of the design teams were presented in plans that encompassed both visuals as well as explanatory texts. Representations of organization models, process structures and people were dominant in the plans. We coin the term *process design* for this part of the plans, as they visualized and explained the envisioned process or organization for the development of the region. A few teams combined such a process design with a spatial design, in which the future spatial physical composition of the region was elaborated on a map. However, in most plans a process design is combined with 'semi-finished' design products like spatial principles or building blocks. Several plans also included visualizations of possible future situations as examples of how their ideas might work out over time. These 'semi-finished' spatial design products were presented as substantive inputs to be used during the proposed planning and development process. Figure 4.1 shows the panels from '*Samen Pionieren*'[1] (Pioneering together) that presented a process design in which building blocks and timelines were used. Figure 4.2 shows a panel from the entry '*Wat weet een boer van saffraan*'[2] (What do farmers know about saffron), presenting a spatial principle and a visualization of a possible future situation.

Table 4.3 summarizes the ideas on planning for shrinkage found in the competition entries. The table shows that the design teams mainly

Notes

1. '*Samen Pionieren*' was created by Marc Holvoet, Ed Ravensbergen, Paul van Bree, Jelmer van der Meulen and Janneke Zuidhof from *Atelierbruut* (www.atelierbruut.nl).

2. '*Wat weet een boer van saffraan*' was created by Richard Colombijn, Claire Oude Aarninkhof and Renzo Veenstra from *RRog stedebouw en landschap* (www.rrog.nl), and Arjan Boekel from *energielandschappen* (www.energielandschappen.nl).

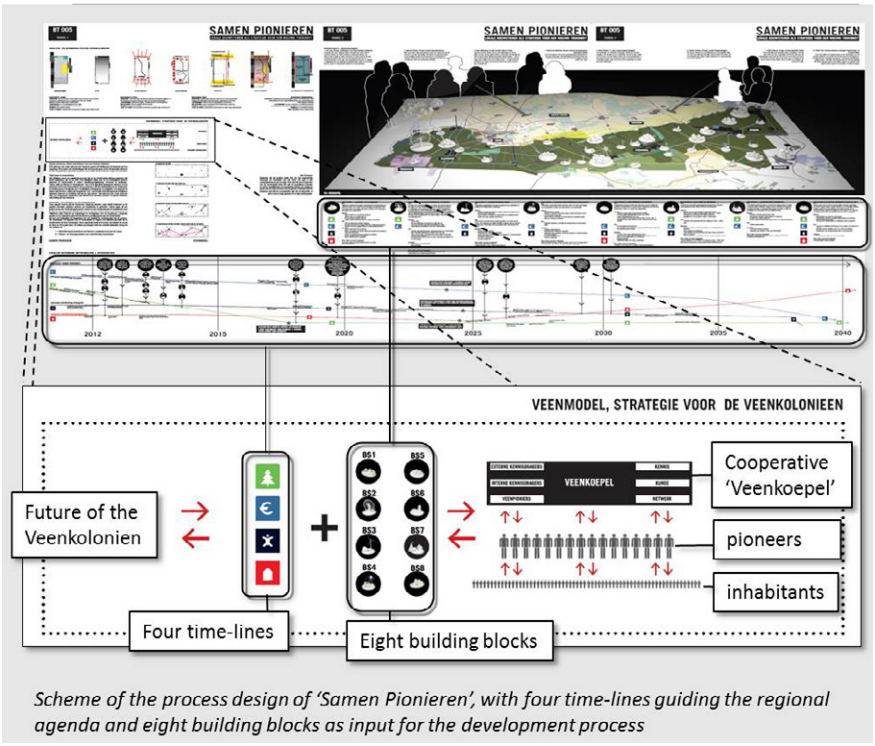

Figure 4.1 Visualisation of the process design for 'Samen Pionieren' (Pioneering together), using building blocks and time lines (*source*: Eo Wijersstichting (n.d.))

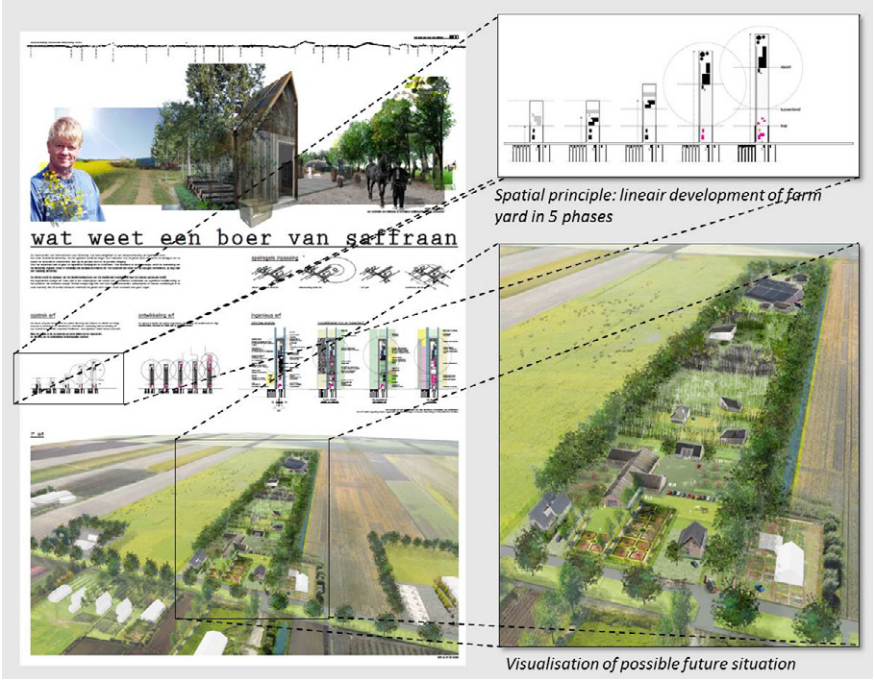

Figure 4.2 Spatial principle and visualisation of a possible future of the entry 'Wat weet een boer van saffraan' (what do farmers know about saffron) (*source*: Eo Wijersstichting (n.d.))

added to the ideas contained in the design brief. As a response to shrinkage, the design teams promoted forms of bottom-up planning. The proposed leading role for inhabitants, entrepreneurs and farmers and the facilitating role for regional and local government stand out. Furthermore, in light of the ample use of maps and spatial frameworks in 'traditional' Dutch planning (Dühr 2007, Van der Cammen and De Klerk 2012), all-encompassing master plans were noticeable by their absence. Instead, the teams took a strategic approach with process designs and 'semi-finished' design products as characteristic elements in their plans.

Table 4.3 Ideas on planning for shrinkage in the Veenkoloniën, sourced from the proposals. The elements reproduced from the design brief are in normal text, those not included in the proposal are ~~struck through~~, and new elements from the proposals are in **bold**.

Planning for shrinkage in the Veenkoloniën – design teams	
Society's needs	- Population decline / ageing population - Self-supporting region - Renewable energy / improved agriculture / self-supporting water system - Limited success of government planning in the past
Physical spatial organisation	- ~~Regional comfort zone~~ - **Multiple land use** - **Various existing planning concepts**
Planning and development process	- Method for sustainable value creation - Involve inhabitants and build on local stories and initiatives - **Citizen participation up to the level of co-production** - **Leading role for local entrepreneurs, farmers and residents/ facilitating role for governments** - **Cooperative** - **Process designs with semi-finished spatial designs**

4.4.3 The Jury's Choice of Winners and Reflection

According to the jury, none of the proposals constituted a complete response to all issues and topics addressed in the design brief (EoWijers-stichting 2012). The jurors advised the commissioners to start a follow-up with a combination of the three winning proposals. The jury judged the first prize-winner as most radical, innovative and smart in their time and context-related approach, which also leaves room to adopt other initiatives. The second prize was appreciated for

its smart spatial combinations of agriculture and water. The third prize had a comprehensive plan with promising ideas about combinations of networks and building blocks. In their choice of winners, the jury affirmed the perspective on planning for shrinkage that was expressed in the proposals by the design teams. The winners of the first, second and third prize all made a case for citizen involvement with a substantial or leading role for inhabitants, entrepreneurs and farmers, and proposed the founding of one or more cooperatives in the region. All winning teams delivered a strategy, represented in a process design with 'semi-finished' spatial design products.

Several elements from the literature on planning for shrinkage were also referred to by the jury in their reflection on the competition. They remarked that shrinkage creates new planning opportunities, and that it leads to decreasing financial resources for local governments. Furthermore, the jury hypothesized a paradigm shift in spatial planning and design. They observed a shift from spatial to time-related aspects in the proposals of the design teams, and a changed focus and position of planners and designers. Through these observations, the jury adds an important notion to the existing body of knowledge on planning for shrinkage: "*More than before, design is about creating new alliances and a different attitude of designers in the process, in which tasks, timing and structure of the process are considered first, before elaborating on a spatial solution*" (EoWijers-stichting 2012, p. 20).

4.5 Discussion

Several of the professional responses to planning for shrinkage that we found in our case study resonate with notions on planning for shrinkage from the literature. First, our case study illustrates that shrinkage does not eliminate the need for spatial planning. In our case, redesign of the regional water system, transition to renewable energy, improvement of the agricultural system and a comfortable and agreeable living environment were identified as 'society's needs', which justify spatial planning. Second, shrinkage opens up opportunities for improving the spatial physical arrangement. Particularly the surplus of space in a shrinking situation triggered ideas on spatial improvements in our case. Third, our results illustrate that one of the biggest challenges in planning and designing for shrinkage is to leave the assumption of growth behind. Although adaption to the shrinkage perspective and

population decline was dominant in the ideas developed in all phases of the competition, we found ambiguity in the design brief concerning the economic perspective, and identified a few competition entries that specifically aimed at an economic revival of the region.

At the same time, our research results also nuance and specify some of the notions from the existing literature on planning for shrinkage. Schatz (2010) identified the use of a *strategic approach* with an emphasis on *citizen participation* as one of the principles for 'good planning' in a shrinkage context. The professional responses in our case study have put a strategic approach with citizen participation at the heart of their planning for shrinkage approaches. All the plans made for the competition fell in the category of 'strategy', sometimes combined with elements of 'agenda', 'policy', and 'vision'. This emphasis on strategy is not surprising considering the uncertain context and newness of planning for shrinkage. As Hopkins (2001, p. 41) states: "*Strategies fit situations in which there are many interdependent actions under the authority of many actors and occurring over a long time in relation to an uncertain environment*".

In relation to citizen participation, the proposals on planning for shrinkage in the competition entries not only confirm the need to include citizens, but the majority of the teams even gave local inhabitants, farmers and entrepreneurs a leading role in planning for shrinkage. In an urban shrinking context, it has been argued that citizen participation can help stabilize deprived areas, ameliorate polarization and help establish functional cohesion and networks (Sucato, 2006 in: Sousa and Pinho 2013). In our case, which is focused on a sparsely populated rural area, the emphasis on participation was related to building up and utilizing non-monetary resources like man-power and social capital in order to create a comfortable and agreeable living environment. The proposed leading role for inhabitants in our study calls for a proactive and initiating role of inhabitants, and also suggests forms of self-organization (Van Dam et al. 2014). Further empirical research into the relation between the type of shrinking region (cf. Wiechmann 2003) and forms of citizen participation (see for example Arnstein 1969, Vigoda 2002) could shed light on what kind of participation and collaboration fits a certain planning for shrinkage situation.

In the planning for shrinkage literature, the appropriateness of existing planning tools and approaches is questioned (Hollander et al. 2009, Rybczynski and Linneman 1999, Ehrenfeucht and Nelson 2011, Haase et al. 2014). We found that the design teams used a variety of 'traditional' concepts related to spatial physical organisation – such as multiple land use, hierarchy of settlements, networks and nodes. It appears these concepts were found useful for their respective approaches to planning for shrinkage. This suggests that concepts on the physical spatial organization, which were developed for planning in times of growth, can also be valuable in planning for shrinkage. However, the competition only reveals *ideas* on planning for shrinkage. Accordingly, the questions of whether these concepts prove to be useful and feasible in the actual planning and development of shrinking regions, as well as which concepts fit certain shrinking situations, call for a different kind of research.

Our last point of discussion concerns the issue of planning and design in its particular relation to planning for shrinkage. As the jury pointed out, in their proposals for a shrinking region, the teams have put considerations of tasks, timing and structure of the planning process ahead of the elaboration of the spatial structures and configurations. This indicates that in planning for shrinkage, the design and organization of the planning process precedes the design of the spatial physical organization. Moreover, in their choice of winner and in their ensuing reflection, the jury explicitly added time, and more specifically timing, to the agenda of planning for shrinkage. In a context of limited resources and various developments which need attention, timing could become a critical aspect of planning for shrinkage.

The plans made by the design teams predominantly encompassed process designs and 'semi-finished' spatial design products, which reflect the dominant focus on the structure of the planning process, and who should be involved in planning for shrinkage. This might raise doubts about the use and appropriateness of regional design in planning for shrinkage. However, recent research illuminates that design, or a design-based approach, can be a means to organize and structure processes in new and uncertain planning situations (Forester et al. 2013, Neuman 2012). Design can also connect people, instigate networks and build community (Meijsmans and Beelen 2010, Hajer et al. 2006, Sutton and Kemp 2006). Furthermore, visuals, which are extensively used in design, spark communication and interaction,

open up new perspectives and influence the perception of things (Von Seggern et al. 2008, Meijsmans and Beelen 2010). Finally, when a rigid perspective on frameworks or master plans is abandoned, such schemes can be used as navigation devices in the uncertain future that lies ahead (Langner 2014). These are all valuable assets of design that can contribute to planning for shrinkage.

Finally, we argue that the focus and role of planners and designers in planning for shrinkage differs from their role and contributions in planning for growth. Making plans, coordinating activities and facilitating processes is not enough in planning for shrinkage. Planning professionals should have their focus on joining in the actual development of a shrinking region, on creating new alliances, on actively cooperating with citizens and on participating in initiatives.

4.6 Conclusions

Planning for shrinkage differs from planning for growth, and calls for changes in thought on spatial planning. Shrinkage affects society's needs, but does not eliminate the need for spatial planning. Scholars question the appropriateness of existing planning tools and approaches for planning for shrinkage. In planning for shrinkage, it is important to fully accept the shrinking perspective and develop strategies to deal with a changed and uncertain future. In our case, planning and design professionals fully adapted to the shrinkage situation, and developed strategies through which they promoted citizen participation in their plans as part of a 'planning for shrinkage challenge'. In doing so, they affirmed existing notions on these topics from the literature on planning for shrinkage.

However, our results also nuance, specify and change some of these thoughts. First, the design teams not only included citizen participation in their proposals for a shrinking rural region, they furthermore envisioned a leading role for local inhabitants, farmers and entrepreneurs, and a facilitating role for governments. Their strategies included structures and mechanisms to coordinate the actions of multiple actors, create non-monetary values, and deal with future uncertainties. Second, in their strategies the professionals put the design and structure of the planning process before the design of physical spatial arrangements, resulting in process designs and 'semi-

finished' design products to be used in the planning process. This is a significant change of thought in planning, at least in the Netherlands. Third, in their elaborations on the physical spatial arrangement of the region, the design teams incorporated a variety of known planning concepts, suggesting that these can also be valuable in planning for shrinkage. While our research was limited to the level of *ideas*, new research should shed light on the actual suitability of known planning concepts when applied to planning for shrinkage. Fourth, compared to 'traditional' planning, planners and designers have different positions within processes of planning for shrinkage. Interaction and collaboration with local inhabitants and entrepreneurs, timing, as well as creating new alliances emerge as key themes for planners and designers in planning for shrinkage.

5

Regional designing: a strategic design approach in landscape architecture

Kempenaar, A. and Van den Brink, A. (in review) 'Regional Designing: a strategic design approach in landscape architecture', *Design Studies*

Abstract

Regional designing is a strategic design approach in landscape architecture that envisions desirable regional futures. This paper studies the principles of regional designing to gain insight into the specifics of the design process of strategic design approaches. Strategic design approaches engage with long-term processes of change, and focus on overall aims and how to achieve them. We found that their design process is open-ended, and that their design object is dynamic and volatile. Furthermore, the design process itself contributes to the broader process of change. Designers facilitate this design process, and contribute to it with their design expertise. Their collaborative attitude and strategic focus give new dimensions to the culture of designing.

Research highlights:

- Strategic design approaches focus on ways to achieve desirable future situations.
- The object of strategic designing is volatile and open-ended.
- Collaborative design processes are powerful assets in processes of change.
- Sensing and responding are critical skills in strategic designing.

Keywords: regional design, landscape architecture, strategic design approach, collaborative design

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5.1 Introduction

In landscape architecture, regional designing is a strategic form of design. It is employed to envision the possible and desirable future arrangement of settlements, infrastructures, water features, nature reserves and other land uses in a region, including the relationships between them, their aesthetic appearance, and how this can be realized in the future (Kempenaar et al. 2016b, p.21). Furthermore, regional designing aims to coordinate and influence multiple interdependent decisions and actions concerning the physical environment in a region over a longer period of time (Neuman 2000, De Jonge 2009). As such, it produces visions, strategies and pathways that can be used as navigation devices in the uncertain future that lies ahead (Langner 2014).

Strategic forms of designing are also developing in other design disciplines, particularly those that engage with a transition towards a sustainable society. This transition calls for new strategies and changes in how the world is designed. Bachman (2012) argues that, considering the current complex world, aspects such as foresight, systemic relationships and interdependencies, should receive more attention in design. Thackara (2006) pleas for shifts towards 'sense and respond', 'deep context', 'seeding edge effects', 'smart recombinations', 'social fiction', 'design with people' and 'design as service' in order to design for a sustainable world. Moreover, scholars in sustainable design emphasise the need for process-based, multi-scale, multi-actor and systemic approaches in design in order to arrive at sustainable design solutions (e.g. Blizzard and Klotz 2012, Charnley et al. 2011, Ceschin and Gaziulusoy 2016, Coley and Lemon 2009).

Various scholars have researched and reflected on strategic design approaches with roots in different design disciplines (e.g. George 1997, Meroni 2008, Charnley et al. 2011, Ceschin 2014, Bachman 2012), and presented directions or guidelines for strategic designing (e.g. Dorst 2015, Thackara 2006, Blizzard and Klotz 2012). However, what strategic design processes have in common remains under-addressed, and empirical studies grounded in strategic design practices are limited. Furthermore, these studies generally ignore regional designing as a strategic design approach in landscape architecture. Therefore, to enhance the understanding of the design process in strategic design approaches, we focus on regional designing as a strategic design approach. Our research question is: Which principles do landscape

architects employ in regional designing and how can these principles be understood from the perspective of strategic design approaches and vice versa.

The paper is organised as follows. It starts with a section on strategic design approaches. This is followed by an introduction of regional designing and a description of the research approach and research methods that were used to study the principles of regional designing. The findings of this study are presented in the ensuing section. The discussion section discusses what we derived from these findings on strategic design approaches and the paper finishes with our main conclusions.

5.2 Strategic design approaches

Designing is generally understood as a specific kind of cognitive activity that differs from non-designing with commonalities across different design fields (Visser 2009, Lawson 2005, Cross 2006). However, designing also takes different forms in various design disciplines and design projects (Visser 2009). Differences occur for example in the nature of the design issue, the structure of the design process, the involvement of non-designers in the design process and the representation of the design outcomes.

Moreover, differences occur between tangible and more strategic forms of designing. In the field of product and service design, Joore and Brezet (2015) made a distinction between four aggregation levels in designing: product design, product-service design, system design and vision development. These levels and their associated forms of design are integrated and interrelated. The complementarity and mutual relationship between strategic and more tangible design efforts is also expressed by e.g. Bachman (2012), George (1997), de Jonge (2009), and Ceschin and Gaziulusoy (2016). Strategic design approaches do not stand alone. They precede, follow and interact with more tangible forms of designing.

Strategic design approaches share commonalities across different design disciplines (Figure 5.1). They all engage with *strategic* goals and ambitions in designing, that is with long-term or overall interests and the means to achieve them (Oxford University Press n.d.). Quite

a few of these approaches developed from a strong engagement to design for, and to induce change towards a sustainable and socially just world (Manzini 2015, Thackara 2006). The current understanding of the world is that it is systemic, complex, interconnected and dynamic, that not all can be known and that uncertainty is ever present (e.g. Dorst 2015, Meadows and Wright 2008, Barnett 2013, Thackara 2006, Bachman 2012). Strategies and strategic thinking fit these kind of situations (Hopkins 2001). Strategies are geared towards opening up unthought-of long term possibilities and opportunities, structural change, and the coordination of multiple streams of actions of interdependent actors (Hopkins 2001, Sartorio 2005, Healey 2013, Albrechts and Balducci 2013).

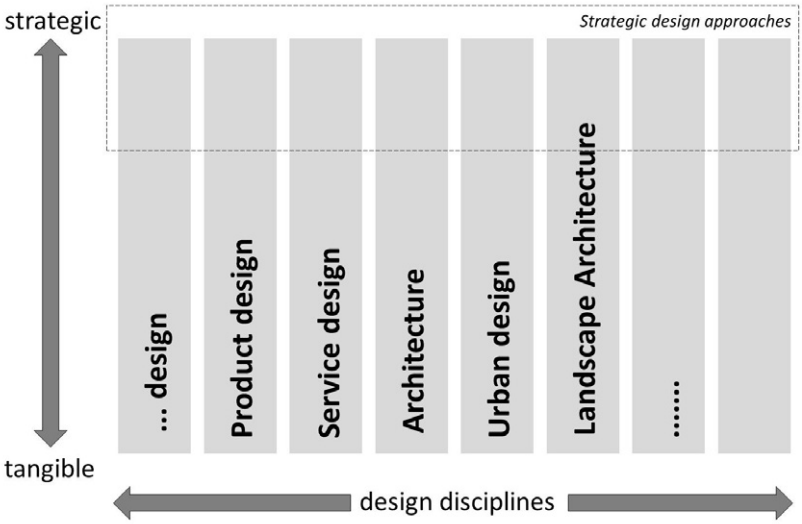


Figure 5.1 Strategic design approaches across different design disciplines

Strategic design approaches tend to take a systems perspective (e.g. Joore and Brezet 2015, Ceschin and Gaziulusoy 2016, Ceschin 2014, Manzini 2015, Blizzard and Klotz 2012, Charnley et al. 2011, Hillgren et al. 2011, Bachman 2012, De Jonge 2009). This systems perspective originates from the notion that complex problems are not related to one particular component that can be isolated. They emerge from the relationships and the interactions between various constituent parts. Strategic design approaches therefore consider the whole system – the components, their relationships and their interaction – to sense and understand a complex problem.

In the situations that strategic design approaches engage with, it is not clear beforehand which aspects and actors should be taken into account, nor what appropriate system boundaries are. This turns the attention to a thorough investigation into the existing (problem) situation, its history, and its wider context (Dorst 2015, Meroni 2008). Such an exploration leads to a renewed perception of the core of the problem or the deadlocks that keep it in place, and to new frames through which boundaries become clear, and which enable the identification of relevant aspects and actors. However, continued attention to the situation and context is critical during strategic designing, insights or conditions might change, also altering what is and what is not relevant (Charnley et al. 2011, Meroni 2008, Ceschin 2014, George 1997).

Strategic design approaches generally develop visions on, or use visioning to develop ideas about possible and desirable futures (e.g. Ceschin 2014, Joore and Brezet 2015, Ceschin and Gaziulusoy 2016, Meroni 2008, Ryan et al. 2016, Manzini and Vezzoli 2003, De Jonge 2009). Based on a defined or reframed problem situation, new desirable future situations come into perspective that open up new ideas on possible solutions (cf. the coevolution of problem and solution space: e.g. Dorst and Cross 2001, Wiltschnig et al. 2013). The long-term visionary character of strategic design approaches gives them an indirect relation to the designed object (George 1997, De Jonge 2009). This calls for support or collaboration with tangible forms of design, for example towards designing products or services that can be part of the envisioned future (Ceschin and Gaziulusoy 2016), or towards recombining 'tried-and-tested' solutions in a new situation (Thackara 2006).

Furthermore, pathways, strategies and scenarios are important elements in strategic design outcomes, just like the formulation of short and medium term actions that set the process towards the desired future into motion (e.g. George 1997, Meroni 2008, Blizzard and Klotz 2012, Ceschin and Gaziulusoy 2016, Dorst 2015, Neuman 2000), and altering conditions so that they enable and support processes of change (Ceschin 2014). Pathways, strategies, scenarios, actions, and conditions, draw attention to a process-oriented perception of designing (Ceschin 2014). In strategic design approaches, processes or influencing processes become the object of designing. This design perception can also affect and alter the position of design: it can

become a service (Thackara 2006), which is permanently embedded in organisations (Dorst 2015).

Strategic design approaches are about designing in collaboration with people that have a direct or indirect relation to the design problem (e.g. Thackara 2006, Meroni 2008, Charnley et al. 2011, Blizzard and Klotz 2012, Ceschin 2014, Ceschin and Gaziulusoy 2016, Dorst 2015, Manzini 2015, Ryan et al. 2016, George 1997). The social embeddedness of design problems addressed in strategic design approaches adds to their 'wickedness' (Rittel and Webber 1973), and calls for an open exploration, and a deep understanding of motivations and experiences of all involved actors. Establishing common goals and aligning ideas and perspectives, with and between stakeholders and experts, is an important part of strategic design approaches (Charnley et al. 2011, Blizzard and Klotz 2012). They foster a genuine dialogue (Ceschin and Gaziulusoy 2016, Meroni 2008), in which information and perspectives are shared and new partnerships and relationships can be formed. In the long-term this is expected to lead to social innovation and sustained change (e.g. Manzini 2015, Hillgren et al. 2011).

In strategic design approaches, designers must have a learning attitude (Blizzard and Klotz 2012, Meroni 2008, Ceschin 2014) to deal with changing conditions and respond to the input of various actors, experts and stakeholders. Moreover, mutual learning (Blizzard and Klotz 2012), sense-making (Charnley et al. 2011) and capacity-building (Meroni 2008) take place. Therefore, all participants must be open to new insights and to foster these processes. In addition, designers require transdisciplinary skills and a flexible design and management attitude (e.g. Ceschin 2014, Ceschin and Gaziulusoy 2016, Charnley et al. 2011).

The above exploration of strategic design approaches is composed out of literature originating from different design disciplines, such as urban design, architecture, product design and service design. Although there are differences between these disciplines, the exploration touches upon multiple characteristics that together sketch the following outline of strategic design approaches:

> Strategic design approaches aim to alter socio-technical systems and take a systems perspective. They thoroughly investigate the existing/problem situation in order to define and reframe the situation. Such a new frame structures the

situation, opens up visions on possible and desirable future situations, and indicates pathways towards this future situation. Strategic design approaches interact with tangible forms of designing during the design process. Moreover, they embark upon co-design processes with people that have a direct or in-direct relation to the design problem. And finally, strategic design approaches call for flexibility, for a responsive and learning attitude, and for transdisciplinary collaboration skills to foster and manage these processes.

In the next section, we introduce regional designing, a strategic design approach in landscape architecture, which took central stage in our study.

5.3 Regional designing

Regional designing engages with issues that put the existing spatial form and function of a region under pressure, such as adapting to climate change (Wilson 2006, Brand et al. 2014), transition to renewable energy sources (Stremke and Koh 2010, De Waal and Stremke 2014), or structural demographic changes (Sousa and Pinho 2013, Kempenaar et al. 2016a). Regional designing envisions possible and desirable futures, including how they can be realised. As such, it takes a long-term perspective, and addresses a supra-local or regional geographic scale.

The outcomes of regional designing, the regional designs, point out long-term overall aims and interests, and the means to achieve them, which have to be operationalized into actions, activities and projects. Moreover, regional designing is a collaborative, participative and deliberative effort. It involves multiple stakeholders in the design process who each have a stake in the future use, development and regulation of the region (Madanipour 2006, Carmona et al. 2010).

Regional designing is closely bound up with spatial planning (e.g. Kempenaar et al. 2016b, De Jonge 2009, Pahl-Weber and Schwarze 2014, Van Dijk 2011) and used as means to develop regional visions and strategies in spatial planning processes. As such it is employed in for example Australia (Weller 2008), the USA (Waggonner et al. 2014, Steinitz 2012, Thün et al. 2013), Italy (Palermo and Ponzini 2012, Vigano 2010), France (Van Daele and Depuydt 2010, Vanempten

2010), Germany (Langner 2014, Stein 2005, Von Seggern et al. 2008), Scandinavia (Bornhorst and Schmid 2015) and the Netherlands (De Zwart 2015, Meijsmans and Beelen 2010, De Jonge 2009). Regional designing has to fit the social, economic, cultural and institutional spatial planning situation, which is different in each country or state (e.g. Knieling and Othengrafen 2009, Sanyal 2005). Moreover, regional design endeavours are tailor-made to the geographic region and the issues they address. This makes each regional design effort different and specific.

However, regional designers deal with the specifics of each situation in every regional design endeavour. Based on these experiences they have developed principles in the course of their career, which help them to organise and structure the regional design process (Lawson 2005). Principles reflect notions on appropriate activities and ways of doing in regional designing, and as such on the methods and methodology employed in regional design processes. Therefore these principles offer a lens through which it is possible to gain insight in what drives regional designers and also in what sense regional design contributes to an enhanced understanding of strategic design.

5.4 Research approach and methods

To study the principles of regional designers, we interviewed Dutch landscape architects who have worked on multiple regional design projects. The Netherlands is a suitable case to study regional designing, as it has developed a strong tradition in regional designing over the last decades (De Jonge 2009, De Zwart 2015). In the 1980s, in reaction to the rational planning approach of the previous decades, various experiments were set up to explore the potential of designing on a regional scale, using the integrative and visual capacities of designing in regional spatial planning (De Jonge 2009, Salewski and Paine 2012). These experiments were successful and fuelled the uptake and further development of designing on a regional scale. In the 1990s and 2000s this developed into a widespread practice of regional designing, with a growing community of practitioners.

In our study we interviewed landscape architects who reached the 'expert', 'master' or 'visionary' level in regional designing. Overall, six levels of expertise can be distinguished in designing: novice, advanced

beginner, competent, expert, master and visionary (Lawson and Dorst 2013, p. 99). 'Expert' is the level at which a response to a specific situation is intuitively, and appropriate actions are taken immediately. A 'master' sees this way of working as contingent, and develops new ways of doing. A 'visionary' level redefines the domain or creates new ones. We considered 'expert' to be the level to have developed (personal) guiding principles (Lawson 2005). We therefore chose to interview landscape architects working on regional design projects with at least 15 years of professional experience.

To select our interviewees, we identified the landscape architects with 15 or more years of experience who had worked on multiple projects described in previous studies and publications on Dutch regional designing (De Jonge 2009, Meijsmans and Beelen 2010, De Zwart 2015), regional projects known by the authors, and by consulting landscape architects in our network. We included landscape architects holding positions in both private and governmental organisations. Both are engaged in regional designing, but with different positions in the regional design process and with a different perspective. Privately employed landscape architects are commissioned to do regional design projects, often by governmental organisation. Governmentally employed landscape architects initiate such projects, participate in them as representatives of their organisation, and deal with the follow up.

We discontinued interviewing after twelve interviews were completed, according to the criterion of saturation (Bryman 2012). At this point we had a rich and varied image of the design principles used by experienced landscape architects and no new concepts emerged from the interviews. Table 5.1 gives an overview of the landscape architects interviewed, their current working position and previous experience.

Table 5.1 Overview of the interviewed landscape architects

Nr	Gender	Years of experience	Current position	Previous experience
1	F	15+	Staff member provincial organisation	National governmental organisation
2	M	15+	Research / consultancy organisation	Private firm, national governmental organisation
3	M	15+	Private firm	Private firm
4	M	20+	Staff member provincial organisation	Private firm, municipal organisation
5	F	20+	Staff member national governmental organisation	Private firm, national governmental organisation
6	M	20+	Co-owner private firm	Private firm, engineering company
7	F	20+	Staff member national governmental organisation	Municipal organisation, national governmental organisation
8	M	25+	Self-employed	Self-employed
9	M	25+	Self-employed	Private firm, self-employed, national governmental organisation
10	M	25+	Research / consultancy organisation	Municipal organisation, national governmental organisation
11	M	25+	Co-owner private firm	Municipal organisation, engineering company
12	F	25+	Co-owner private firm	Private firm

The interviews were held between July 2015 and August 2016 at the working place of the interviewees and had a semi-structured nature. All interviews lasted from one to one and a half hours. The interviews were transcribed, and then analysed on their content through a protocol of coding (Miles et al. 2014). A first round of coding of three interviews was used to develop a list of reappearing themes in the interviews: context, design process, products, principles, methods, skills, and engagement of the regional designer. We used this list for a second round of descriptive coding, in which codes were given to everything that was said in the interviews. Then we clustered what was said in the interviews in relation to the design principles that emerged from the interviews, to develop rich descriptions of these principles, including their associated methods, skills, and position or role in the design process.

5.5 Regional design principles

All regional design projects are shaped to the specifics of the region and its institutional setting, as was emphasised in the interviews. They are unique and have different aims and outcomes. Regional designing was for example said to be used to develop policy guidelines, to open up new regional vistas, to influence the political agenda, to coordinate developments of various stakeholders, to improve and develop relationships, and to design and structure the forthcoming stages of a spatial planning process. Notwithstanding this diversity, the interviews showed that regional designers have developed various, sometimes very personal ways of creating and developing appropriate regional designs for specific situations. Although each designer used their own words in expressing these principles, our analysis showed many parallels and similarities between them. We derived seven regional design principles from the interviews:

- taking a dynamic systems perspective,
- addressing multiple geographical scales,
- looking from history to future,
- creating a continuing dialogue with stakeholders,
- reframing the region,
- sensing and responding,
- balancing direction and openness.

These principles reflect the methodology followed by designers in regional designing. The interviewees related each principle to particular methods, techniques and design skills. Moreover, they gave rich descriptions on how and when to apply a principle, and the function of the principle in relation to the overall regional design process. Often these descriptions were interlaced with personal experiences and telling examples. Below we present what we derived from the interviews on the principles for regional designing.

5.5.1 Taking a dynamic systems perspective

The interviewed landscape architects take a dynamic systems perspective in regional designing. They perceive regions as slowly changing and developing complex systems with multiple interdependent relationships. As one of them said: "*the landscape of*

a region changes continuously at a slow pace, sometimes a little faster, sometimes very slowly". This perspective enables regional designers to understand how the existing situation in the region came about, in what direction it is expected to develop in the future, and what the main drivers of change are in the region.

Regional designers use multiple methods and techniques to get a good understanding of the dynamic and complex regional system. These include field visits, studying of (historic) maps, Geographic Information System (GIS) analyses, and document and literature study. The 'triplex model' and the 'layer approach' were frequently referred to in the interviews as conceptual frameworks used to analyse and understand the regional system. The first is a layer-cake model that was developed in the 1970s and 1980s at the landscape architecture group at Wageningen University in the Netherlands (Duchhart 2007). It is based on the ideas of Ian McHarg, as outlined in his classic study: '*Design with Nature*' (McHarg 1969). It distinguishes three interrelated layers: an abiotic, a biotic and an anthropogenic layer and states that a landscape perceived at a certain moment in time is no more than a snapshot of a continuous process of change. The layer approach appeared in the 1990s in Dutch spatial planning. The layer approach also distinguishes three interrelated layers: the substratum, the network, and the occupation layer, each with a time dimension indicating the rough life-time span of spatial structures and the pace of development in each of the layers (Priemus 2007, Van Schaick and Klaasen 2011).

In addition, stakeholder analyses, policy documents, regional studies, and personal information of stakeholders were mentioned as important information sources in gathering an understanding of the socio economic, cultural, and political situation, as well as the drivers of change in the region. This information is drawn on maps of the region to give it a spatial dimension and to identify correlations, connections, relationships and frictions.

In relation to developing a good understanding of a region, the interviewees considered the ability to think in interactions, change and (slow) movement important. Furthermore, they considered general knowledge on how spatial configurations or landscapes come about, to be critical knowledge for regional designers. It is, in combination with good basic research skills, the basis for every investigation into the specifics of a particular regional situation. Furthermore, a general

feeling for (regional) politics and how decisions are made, were also mentioned as important in developing a good understanding of the region and the mechanisms of regional change.

5.5.2 Addressing multiple geographical scales

Regional designers address both smaller and larger geographical areas than the region itself in regional designing. The interviewees expressed that they take a larger geographic area into consideration to explore the relationships of the region with other regions and areas, and to position the region in its context. In addition, the interviewees indicated that in regional designing the focus also switches to perspectives related to the human scale, such as experiences, aesthetics and architectural composition. As one of the interviewees said: "*… in the end it [regional designing] is also about trees and grass … and the sunlight dancing with them*".

The switch to a local, human scale is used to test how the regional ideas work out, by elaborating a proposed intervention for a specific site. This will show if an idea is feasible and which local conditions are required in the future. The testing is used to improve and refine the ideas and concepts on a regional scale. In addition, the local scale is essential in the communication of regional design ideas. Several interviewees indicated it is the appropriate scale level to connect to stakeholders or others who are not trained in thinking spatially on a regional scale. Reference images and visualisations of 'how things could be' illustrate the abstract regional ideas and make them tangible and foreseeable.

The interviewees indicated that regional designers develop the ability to switch between various levels of scale, and know when it is opportune or necessary to address another scale. Moreover, to 'test' regional design ideas on a human scale, regional designers need site-design skills. They must be able to give appropriate form and dimensions to ideas, they need knowledge about materials, know what is feasible and logical in concrete situations, etc. Furthermore, they need skills that enable them to visualise such ideas and elaborations.

5.5.3 Looking from history to future

The temporal perspective of regional designers spans from the history to the future of a region, as the interviewees pointed out. Regional designing is about developing interventions in an existing dynamic and complex situation. Regional designers must work within and with 'what is' and can only change a little. Or as it was expressed by one of the interviewees: "*as a regional designer you only work on the next chapter in the long history of a region*". Regional designers, therefore, pay close attention to the historical context of a region and how it arose. Furthermore, regional designers aim to develop scenarios and interventions that set off a certain desirable chain of events. These scenarios envision pathways towards desirable futures, and are often related to historic situations or development.

The time-perspective in regional designing stretches from decades to centuries and epochs when the history of a region is considered. Decades is the time dimension that is often considered in the future perspective. This long-term future perspective is made tangible by 'zooming in' and reasoning back from the future to today, the current month, or the current year. Basic research and analytical skills, as well as the ability to think in interaction, processes and development, were considered important skills in the interviews related to this principle.

5.5.4 Creating a continuing dialogue with stakeholders

Regional designing is defined in the interviews as a collaborative process with stakeholders. It is considered common practice in regional designing to invite representatives of all relevant stakeholders to participate in the design process. A sense of belonging to a group is created during a regional design process, which can take from several months to up to a couple of years. People get to know each other, a certain level of trust is built, and stakeholders will experience, in the words of one of the interviewees: "*the joy of making things together*".

Stakeholders are an important source of specific regional knowledge that is essential for developing a good understanding of the region and the regional context, and as such for making an appropriate regional design. Moreover, the involvement of stakeholders in the regional design process enables them to develop shared ideas and perspectives,

and to take ownership over the developed ideas. To facilitate this, regional designers address the distribution of responsibilities over various actors in collaborative design sessions and try to connect actors with specific goals. Stakeholder ownership was said to translate in support for the regional design ideas, but can also turn into future action and collaboration between stakeholders.

However, regional designing is not just about facilitating a process. Regional designers engage in a "*continuing dialogue with stakeholders*", as was said in one of the interviews. As a designer, and as an expert on landscape and spatial development, the regional designer contributes substantively to this dialogue. These contributions range from knowledge of the landscape, how it functions, its history, or how things are interrelated in the landscape, to using design skills to create coherent and comprehensive perspectives, detailed designs for specific places, and pathways or scenarios on how things could be realised.

To organise and structure the collaborative dialogue in regional designing, a cycle of multiple half / one / two day sessions are organised as part of the regional design process. The number and length of the sessions is determined by the complexity and aim of the project, and the number of stakeholders involved. The latter can range from around eight or ten to up to 80 or 90 people. Game-based exercises, using sticky notes, drawing on maps and working on a three-dimensional model, were a few of the techniques mentioned in the interviews that are used in interactive sessions. All interviewed landscape architects said they have little theoretical- or methodological background in these participatory processes and that they learned and developed methods and approaches for collaborative design processes in practice.

All interviewees indicated the importance of using visuals such as maps, reference images, and visualisations of possible future situations in collaborative design sessions to structure and focus the ongoing dialogue. The act of drawing on a map, or using a map in conversations to point out things were mentioned in multiple interviews as ways to trigger discussions and make them concrete and tangible. It adds a level of precision to conversations that can clarify things. More importantly, it adds a spatial dimension to what is discussed and helps to build a shared understanding. In the words of one of the interviewees:

> *"… that you notice that a collective image is created literally and figuratively, that a joint vocabulary emerges… you do that by putting a map on the table and start drawing. I do not know a lot of other techniques that can accomplish this".*

In relation to the organisation and management of an appropriate dialogue in regional designing, all interviewees stressed the need for well-developed process and facilitation competences. These competences include listening, sensing, empathising, as well as experience with group dynamics, and the ability to lead and interact within a group. Moreover, addressing controversial issues, pointing out dilemmas and confronting people were also mentioned as important skills. Finally, regional designers need to develop the ability to 'read' when it is opportune to do something (and when not), both at the scale of the regional design process itself, within the setting of a collaborative sessions and at the scale of regional processes.

5.5.5 Reframing the region

All interviewees reported that designers face a substantial amount of fuzziness and openness in the first stages of regional designing. A natural first response to this fuzziness is to broaden and widen the initial perspective, to investigate the region and to question the given requirements. In addition, regional designers search for opportunities that arise from the existing situation, and they want to see, check and investigate whether all relevant issues and relationships are in the picture, how they relate to each other, and where problems arise. One of the interviewees said: "*In researching the regional problem, you search for frictions between issues and situations, you look for what doesn't fit … there only is a problem when there is friction*".

Based on the understanding of the region, how it came about, the opportunities and its current drivers of change, the region is reframed (cf. the frame creation model; Dorst 2015). This reframing enables to identify critical places, to separate main issues from side issues, and to evoke, structure and order ideas. The essence of this new perspective on the region is often represented by a motto, a spatial concept or a logo. Furthermore, the new perspective enables the development of scenarios or the envisioning of how things can come about.

Storytelling was indicated in the interviews as a method used to develop new regional frames. Regional designers tell stories about the regional landscape: about unseen relationships in this landscape (e.g. between the soil and the occupation pattern), about its history, how it came about etc. Stakeholders respond to this and tell their stories. In the process of telling and re-telling, the regional story evolves and changes. At a certain point the story becomes a specific regional perspective that directs choices and selections. Several interviewees indicated that this cannot be directed, it emerges during the process, sometimes at the beginning of a regional design process, sometimes at a much later stage, and occasionally it doesn't happen at all. However, reframing the region is something that always takes central stage in the focus of regional designing according to the interviewees.

5.5.6 Sensing and responding

The regional design process itself was described in the interviews as an iterative exploration, in which not all is known and 'discoveries' are made along the way. Designers, therefore, need to be open and adapt to new insights; they have to sense and respond. Some of the interviewees described the active exploration and search for new insights as the core of regional designing and as a critical activity in developing new ideas, perspectives or visions. Creating these new insights is not something that can be enforced. However, the interviewees indicated that it is possible to improve the conditions and circumstances for new ideas and insights to emerge, for example, by field visits, conversations in different settings, or investigating reference projects.

Alteration of conditions and circumstances also happens in a broader sense in regional designing. The interviewees indicated that the regional design process itself adds to, and alters the context in which regional design outcomes have to perform. Particularly the landscape architects with a governmental background described the alteration of contextual conditions as being one of the important effects of regional designing that can open up new opportunities. For example, involving stakeholders in a regional design process can improve relationships and build trust between organisations, as one of the interviewees reported: *"… then we had a truly open discussion on substantive issues… on what is relevant and what is important… this has done a lot of good in our*

relationship with municipalities and in the mutual relationships between municipalities".

Sensing and responding is also employed in the collaborative sessions with stakeholders. These sessions are carefully prepared in advance by the designer or the design team, but almost all interviewees emphasised that a session almost never unfolds as anticipated. In these sessions, the designer or design team must be responsive to what happens and often adapt 'on the spot'.

5.5.7 Balancing direction and openness

Balancing direction and openness is the final principle that we derived from the interviews. It reoccurs in regional designing in multiple ways. Firstly, the interactive regional design sessions need to have an open character to give room to stakeholder input and let them have influence on what is happening. This is critical in creating a level of genuine participation (cf. the ladder of citizen participation; Arnstein 1969), but can also lead to fuzzy situations. Interactive regional design sessions however, are not a complete open space, in which anything goes, as was expressed by a few of the interviewees. The sessions are prepared by the designer or the design team, and have an intended focus. This focus needs to be balanced with whatever emerges during the session.

Secondly, balancing direction and openness is a principle that is also applied to the regional design process. Although open and exploring at certain stages, at other moments regional designing is converging, and choices have to be made. This is when the regional designer uses his or her ability to blend different kinds of information into a coherent set of ideas, in scenarios or options to choose from. Choices in regional designing are either based on consensus that is built within the involved group of stakeholders, or on informed decisions made by the Commissioner, a Steering Committee or another appointed group. Thirdly, and finally, the end result combines direction with openness. The final outcome needs to be focused enough to give direction and guide decisions and actions. However, it also needs to be flexible and leave room for future adaptation and elaboration of the envisioned pathways to desirable futures.

The interviewees described that regional designing gives direction by being both integrative and selective. Regional designing focuses initially on all relevant issues and themes in a region, including their relationships, which is followed by an interpretation and reframing of the problem and the central question(s). The reframing directs what should be addressed and what not, what are the appropriate boundaries of the region, who should be involved, what expertise is needed, etc. This is when regional designing gives direction and is selective. It distinguishes between essential and side issues, and it might leave out or lose less relevant themes along the way. Moreover, regional designing points towards critical elements and places, or in the words of one of the interviewees:

> *"Regional plans can be selective in two ways: …. when looking at the entire region, this and this are the places to act and invest … and considering the socio-economic dynamics, these interventions could trigger a series of events that would really advance this regional society".*

5.6 Discussion

The seven regional design principles that we derived from the interviews reflect features of other strategic approaches, such as a systems perspective, reframing, interaction with tangible forms of design, a focus on pathways towards desirable futures, engaging in a dialogue with stakeholders, and a learning and responsive attitude. Based on our study, we call attention to three dimensions of strategic design approaches that give their design processes a specific character. These are: engagement with processes of change, collaborative design processes with stakeholders, and the design culture in strategic design approaches.

Creating or inducing structural change lies at the heart of strategic design approaches. Their design processes focus on intervening, and on altering or directing developments towards a desirable future. This contrasts with tangible forms of designing that focus on objects, products, services, architectural space, or other concrete outcomes. The focus on change in strategic designing makes the object of designing open-ended and volatile, and shifts the attention to thinking in movements, growth, decline, transformation, etc. as we derived from our study. The interviewees included a strong dynamic component

in their design thinking. They understand regions as ever changing, temporary assemblages, as: "*a collection of different types of objects and relations that act on, and with, each other to form a dynamic arrangement or organization of material conditions*" (Barnett 2013, p. 60). This is, for example, explicitly addressed by the 'from history to future' principle in regional designing, which draws the focus in the design process to the historic, ongoing, and future processes of change in a region. Such a 'change over time' perspective is characteristic for strategic design processes engaged with pointing out long-term and overall interests and the means to achieve them.

In landscape architecture, processes of change have always been a relevant theme, as plants and trees grow and take time to fully mature, and outdoor spaces are regularly adjusted over time to new uses and changed circumstances. These kinds of change processes relate to clock-time, a linear perception of time and change. The interviewees in our study also addressed the importance of a kairos oriented perception of time (e.g. Smith 1969), which is focussed on propitious moments for decision or action, and the role of events. Kairos-time is very relevant in strategic thinking, and as such in strategic design approaches, as utilizing 'windows of opportunity' and 'the right time' is critical in creating structural change.

The interviewees in our study pointed out that designing can alter or influence circumstances and conditions to create an environment in which things can happen and opportunities arise. The alteration of conditions, or influencing circumstances can become an explicit goal of strategic design approaches, which is also addressed by Ceschin (2014) in his reflections on a new strategic design attitude. The organisation of an event, the collaborative design process with stakeholders or a collaboratively developed perspective alter and change situations and conditions, and are actively employed to do so, as we derived from our study.

Strategic design approaches organise, facilitate and manage collaborative design processes, or dialogues, as they were referred to in the interviews and in literature on strategic design approaches (De Jonge 2009, Ceschin and Gaziulusoy 2016, Meroni 2008). Collaborative designing is not unique to strategic design approaches (e.g. Sanders and Stappers 2008, Simonsen and Robertson 2013), and are generally motivated by empowering disadvantage groups or making better

designs (Simonsen and Robertson 2013, Van der Velden and Mörtberg 2014). In strategic design approaches the ability of collaborative design processes to alter and change conditions takes central stage. Stakeholders develop ownership over ideas, and change their perception during collaborative design processes (Kempenaar et al. 2016b, Van Dijk 2011). Moreover, collaborative design processes build strong networks and relationships, which can evolve in future collaborations (Meijsmans and Beelen 2010, Von Seggern et al. 2008). These are strong assets in creating and inducing change, and gives the collaborative design process an important position in the broader process of change in strategic design approaches.

The final point we want to address is the design culture in strategic design approaches. The landscape architects that we interviewed for our study, expressed a specific attitude towards designing. They indicated that as a regional designer you do not 'take over' and own the design or the project, the designers' role is to guide, facilitate and fuel the collaborative creation process with stakeholders. In strategic design approaches, the designer is part of the group, not the expert that knows better, leaving little room for a 'starchitect' attitude. This design culture of strategic design approaches is captured in Manzini's renewed description of design (Manzini 2015, p. 53-54):

> *"Design is a culture and a practice concerning how things ought to be in order to attain desired functions and meanings. It takes place within open-ended co-design processes in which all the involved actors participate in different ways. It is based on a human capability [designing] that everyone can cultivate and which for some – the design experts – becomes a profession. The role of design experts is to trigger and support these open-ended co-design processes, using their design knowledge to conceive and enhance clear-cut, focused design initiatives".*

We consider strategic design approaches a particular way of designing that is functional in transitions, particularly in those towards a sustainable and socially just world. Strategic design approaches are not focussed on the design of an object, building, outdoor space or service. They engage with altering conditions, creating contexts, and inducing change. Moreover, they embark upon complex co-creation processes, which contribute to that change. This results in new positons and roles

for designers, and it gives new dimensions to the culture of designing and what designing encompasses.

5.7 Conclusion

Our study revealed seven principles that are employed in regional designing, a strategic design approach in landscape architecture. These principles reflect the characteristics of strategic design processes: a systems perspective, reframing, interaction with tangible forms of design, a focus on pathways towards desirable futures, engaging in a dialogue with stakeholders, and a learning and responsive attitude. Strategic design approaches are geared towards opening up unthought-of long-term possibilities and opportunities, and inducing structural change. The focus on structural change sets strategic design approaches apart from tangible forms of designing, and adds a dynamic component to the object of designing. The particular function of the collaborative design process with stakeholders also make strategic design approaches stand out. These co-design processes influence the perception and relationships of stakeholders, and as such play a critical role in the process of inducing change. Furthermore, strategic designers position themselves as part of the group and do not 'own' the design or design process themselves. They use their design expertise to guide, facilitate and fuel the collaborative creation process, and, as such, add new dimensions to the culture of designing.

6

Conclusions and discussion

6.1 Introduction

The previous chapters in this thesis studied the influence of regional designing on strategic spatial planning in various real-life situations. Cities and regions adopt such strategic planning initiatives to develop new directions for spatial situations that are under pressure (Albrechts et al. 2003, Schatz 2010, Balducci et al. 2011, Albrechts 2010) due to, for example, climate change, rapid urbanisation processes, structural demographic changes or economic shifts. Regional designing is a means to develop spatial visions, long-term perspectives and strategies that provide direction for the future, and it influences (strategic) spatial planning processes to follow this direction.

During my professional career I have engaged in various strategic spatial planning initiatives where I both observed and experienced how regional designing affects these planning processes. I became fascinated with regional designing and wanted to know more about its influence, and how this influence is realised. Knowledge of, and insights into, the kind of influence that regional designing can have on spatial planning reveals and highlights what makes it a useful means to employ. Furthermore, knowledge on the manner in which influences are created can enhance regional designing. Such knowledge would also shed light on the specifics of a regional design process and the 'art' of regional designing. However, these subjects have received little attention in academic research. This thesis addresses this knowledge gap by seeking answers to the following research question:

> *What is the influence of regional designing on strategic spatial planning and how is this influence realised in spatial planning practices?*

In the research, I examined stakeholder experiences to identify the immediate influence of regional designing on strategic spatial planning. To explore its long-term influence, I combined the documented influence of regional design efforts – e.g. in evaluation reports and planning documents – with the recollection of stakeholders who were involved. Furthermore, I studied the design brief, the entries, and the jury report of a regional design competition, to investigate different perspectives on the direction that the influence of regional designing should take in a particular planning situation. And finally, I explored the perspective of designers to develop an understanding

of what is done in regional design processes to foster the influence of regional designing. This final chapter synthesises the findings of this research and answers the research question. Additionally, it reflects on the research process, discusses the research results in the light of the ongoing scientific debate, gives suggestions for further research and addresses the societal relevance of this research.

6.2 Answering the research question

The findings of the studies presented in this thesis show that regional designing has various kinds of influences on spatial planning practices. Furthermore, the studies illuminate the responsive nature and open-ended character of regional designing. Its outcome is not known beforehand, but emerges from the interaction between the designer or design team, the existing situation, and the stakeholders who are involved in the regional design process. This makes the design process a breeding ground for the influence of regional designing on spatial planning. In the following sections I will answer the research question by synthesising the findings on the influence of regional designing on strategic spatial planning (6.1.1), elaborate on the responsive nature of regional designing (6.1.2), and discuss how the seeds of influence are sown during the regional design process (6.1.3).

6.2.1 The influence of regional designing on strategic spatial planning

The empirical chapters of this thesis reveal a spectrum of regional design influences on spatial planning practices. This spectrum ranges from direct influences on ongoing strategic spatial planning processes, to impacts in the long-term, and to influences beyond the immediate context of regional designing. The studies also show that not every regional design effort has a similar kind of influence, or amount of impact. The actual influence depends on the specific aim of regional designing in that particular situation, the involved stakeholders, the stage of the (strategic) planning process, previous experiences with regional designing, and the structure and context of the design process.

I distinguish four categories of influence of regional designing:
– the influence on the aims of spatial planning,

- the influence on the spatial planning process,
- the influence on the contextual conditions of spatial planning,
- the influence on the development of the planning and design disciplines.

Below I elaborate on the findings for each of these categories of influence.

The influence on the aims of spatial planning

Developing new or alternative perspectives on the future spatial arrangement of a region lies at the heart of regional designing. This thesis shows that this is an influential contribution of regional designing to strategic spatial planning processes, and that it influences the aims of spatial planning. New perspectives open up new and innovative ideas that otherwise would never have been thought of. They broaden the options and possibilities of what can be considered a possible and desirable future, and, as such, affect decisions on spatial planning goals. The case study in Chapter 2 showed this is a much appreciated contribution of regional designing to spatial planning. New perspectives focus on the spatial arrangements in a region, and on the processes, procedures, etc., that lead up to new or altered spatial arrangements. Generally, it is a combination of both.

In the process of developing new perspectives, designers give information a spatial dimension, for example, by drawing it on a map. They actively map, explore and investigate the planning situation, including how it came about, and they identify specific regional qualities. Furthermore, they investigate the spatial dimensions and consequences of the issues at hand. This combined mapping, researching, relating and visualising of spatial information emerged from the studies in this thesis as an important and valuable activity in regional designing. It provides insights into the planning situation, spatial relationships, and the dynamics of a region, not only to the designer, but also to the stakeholders who are involved in the design process.

The spatial explorations and elaborations are aimed at reframing the planning situation. Through this reframing, new perspectives develop that, in their turn, open up possible future situations and solutions. In design research, this is referred to as the co-evolution of problem and solution spaces, which has been shown to take place in

individual design processes (Dorst and Cross 2001), and in the design processes of design teams (Wiltschnig et al. 2013). This thesis shows that the co-evolution of problem and solution space also takes place in collaborative design processes with non-designers.

The longitudinal case study on the MHAL Region (Maastricht, Hasselt, Aachen, Liège; Chapter 3) demonstrates that a new perspective developed through regional designing can influence spatial planning over a long period of time. The spatial conception of the MHAL Region that was drawn up in the early 1990s formed the base for later regional designs that were drawn up in 2003 and 2014. Moreover, it was employed to program EU funding, and it acted as a spatial framework for the development of sub-regional spatial planning policies. It proved to be an influential spatial concept.

The influence on the spatial planning process

The influence of regional designing on spatial planning processes relates to the support of decision-making processes and the design of upcoming stages in spatial planning. The support of decision-making processes unfolds in two ways. Firstly, regional designing enables multiple options or scenarios to be developed, with each considering all issues at hand but envisioning different outcomes. These options or scenarios result from the deliberative process with stakeholders in the design process. They point out the main issues for (formal) decision-making and enable informed decision-making. Secondly, regional designing can create consensus. This occurs when stakeholders agree on an issue during the design process. Consensus between stakeholders can make decision-making in spatial planning dispensable or a formality. However, if the consensus does not fit opinions and interests of others outside the regional design group, new discussions and debates might arise. In most situations consensus is reached on some points, whilst decisions need to be taken on others. As such, regional designing coordinates and aligns various interests, and highlights critical differences. This prevents unnecessary discussions or negotiations, and focusses discussions and decision-making on the relevant themes and issues.

Regional designing also contributes to strategic spatial planning via proposals for upcoming stages in the planning process. These

proposals influence the manner in which the planning process unfolds and develops. This influence of regional designing was explicitly mentioned by the interviewed landscape architects for the study on regional design principles (Chapter 5) as a possible focus and aim of regional designing. In the study on the competition for the Veenkoloniën (Chapter 4), thoughts on the upcoming spatial planning process were the dominant focus of the design teams. They combined process designs or procedural frameworks with semi-finished, spatial design products, which elaborated ideas on three-dimensional form and function. In these regional designs "*tasks, timing and structure of the process are considered first, before elaborating on a spatial solution*" (EoWijers-stichting 2012, p. 20). It shows that regional designing has a combined focus on both substantial and procedural issues, recognising the importance of both process and plans.

The influence on the contextual conditions of spatial planning

Regional designing also influences strategic spatial planning by altering the *contextual conditions* of planning. I found that it affects perceptions, prepares stakeholders for future action, and builds relationships and networks. New perspectives on the existing situation and on possible solutions – as produced by regional designing – alter the opinions, views and frames of reference of stakeholders, and, therefore, the spatial planning context. The development of a new perspective takes place in a collaborative design process, meaning that stakeholders participate in this development and have a say in it. As a result, the new perspective is a shared perspective that is supported, or at least understood, by those who were involved. Such a common and shared idea about the future is a strong asset in (strategic) spatial planning processes.

Many of the stakeholders involved in regional designing are (potential) future actors in the elaboration and implementation of regional designs. During their involvement in the design process, they not only contribute to this process with their specific knowledge, but they also develop a sense of ownership over the developed ideas. This builds support and engagement, and prepares them for future action, and as such, alters the conditions for spatial planning. In addition, the interactive design process changes the understanding between stakeholders, and alters their relationships. Regional designing initiates

and develops regional networks that can last over a long period of time, as was found in the longitudinal case study of Chapter 3.

The influence on the development of the planning and design disciplines

The final category of influence concerns the effect of regional design efforts on the development of the *planning and design disciplines*. I found this particular influence of regional designing in the studies of Chapters 3 and 4; both related to a regional design competition that influenced the Dutch planning and design discourse. The competition for the MHAL Region took place in the late 1980s, a time in which designing on a regional scale received renewed attention in Dutch planning. The competition, and the analysis of the competition results by scholars from the Radboud University Nijmegen (Ekkers et al. 1990) provided evidence of the integrating capacity of regional designing, and, as such, of the added value of designing on a regional scale. The competition for the Veenkoloniën Region took place in 2011 – 2012 and focused on appropriate responses to shrinkage, a relatively new contemporary planning phenomenon. This competition illuminated the fact that shrinkage calls for a different approach to spatial planning due to a surplus of space and reduced governmental resources. In response to this situation, the design teams put temporal aspects before spatial aspects and gave a leading role to citizens and local entrepreneurs in their proposals. As such, the competition results also tapped into the current discourse on the division of roles and responsibilities between the government and other actors in spatial planning (Westerink et al. 2016).

Both competitions were organised with the aim of developing ideas and approaches to new planning issues that could also be valuable in other planning situations. This thesis demonstrates that not all regional design efforts have such a general aim. Instead, regional designing is generally focussed on a specific regional situation. Moreover, few regional design efforts are organised as a competition, they generally take the form of a commissioned project. The majority of these projects have little influence on the development of the planning and design disciplines in general. However, they do affect and enhance the individual expertise of those designers and planners that are involved in these projects.

6.2.2 The responsive nature of regional designing

The research in this thesis shows that different regional design efforts have different effects and influences. Regional designing acts in a complex web of actions, in which multiple views and interests are at play. Moreover, each planning situation is unique and specific. In order to become effective and influential, regional designing has to fit the specifics of the planning situation. It has to take the existing spatial arrangement into account, including how it came about, provide solutions for the problems that put the existing spatial arrangement under pressure, and fit the economic, social, cultural and political situation in the region. Regional designing does not start with a tabula rasa, it focusses on developing an appropriate response to the planning situation.

Regional designing develops such responses through, using the words of Schön (1983), a reflective conversation with the situation, in which both the designer(s) and stakeholders take part. In situations with complex issues, external experts are also invited to participate and to bring their expertise into the conversation. The conversation with the planning situation is a collaborative reflection-in-action process, which starts with sensing and investigating the planning situation, followed by a first response, which is then evaluated and leads to new questions, things to find out, etc. The conversation generally ends when the goals of the regional design endeavour are reached, which can range from a fully worked out integrated plan, to multiple viable options for future development, to reframing the planning situation.

This thesis shows that the position of stakeholders in this conversation is pivotal. Stakeholders have detailed knowledge of the spatial, social, political, economic, and cultural situation in the region. This information is critical in creating a genuine understanding of the region, and for making high quality regional designs that fit the specifics of the spatial planning situation. However, stakeholders not only bring their knowledge into the conversation with the situation, they also participate in discussions, they exchange ideas, and they join in in evaluating first ideas. Stakeholders actively take part in responding to the spatial planning situation and in the framing and reframing process that leads to new perspectives.

The role of the designer(s) in the conversation with the situation is to develop sound and comprehensive regional designs. They bring in their design expertise to develop and draw up the intermediate products and ideas, which are used during the design process to trigger interaction, to structure and deepen discussions, and to support intermediate decision making. In addition, designers generally design and facilitate the collaborative design process, in which the conversation with the situation unfolds and the response is created. Designers, therefore, must have strong response-ability skills, both in the creation of regional designs, and in the design and facilitation of the collaborative design process.

This thesis shows that regional designers have developed several general principles to respond to the specifics of a situation (Chapter 5). They perceive regions as evolving and dynamic systems, in which interventions can be placed to direct their development towards a desirable future situation. They address multiple geographical scales, and look from the history to the future of the region to develop a good understanding of the region, and to create an appropriate regional design. In this design process, reframing the region is a pivotal step to open up new perspectives and possible solutions. Furthermore, designers engage in a continuing dialogue with stakeholders, they sense and respond to the situation and whatever comes up. Finally, they have learned to balance direction and openness during the design process, in the interactive events with stakeholders, and in the final regional design.

These principles sketch the outline of a regional design methodology and demonstrate that regional designing resembles strategic design approaches in other design disciplines. Regional designing differs from concrete designing for outdoor places and has an indirect relationship with the designed object or space. It is focussed on pointing out long-term and overall goals, plus strategies and actions that lead towards these goals. It tests ideas in detailed elaborations for exemplary areas at a smaller scale, and uses such elaborations to illustrate the overall, and sometimes abstract, regional design ideas. Furthermore, processes and process-thinking take a prominent position in regional designing, alongside close attention to spatial arrangements, functionality, composition, and aesthetic appearance. In addition, the collaboration with stakeholders in the design process makes regional designing distinctive. Their involvement in the design process is not only essential

for the quality of the designs, it also leads to valuable intangible outcomes, such as support and commitment, preparation for future action, networks and relationships, and a shared perspective.

This interaction with stakeholders in the design process adds an extra dimension to the response-ability skills of regional designers. The research reveals that interactive sessions almost never unfold as anticipated. Because designers have a central role in the organisation and facilitation of interactive events with stakeholders, they have to make immediate responses to what happens during these events. They need to develop an openness to emerging issues, balance this with what is needed to advance the regional design process, and adapt the interactive event appropriately whilst it is ongoing.

6.2.3 Sowing the seeds of influence

This thesis shows that the design process is critical for the future value, use, and influence of regional designing. The collaborative design process with stakeholders predetermines the influence of regional designing on strategic spatial planning: the seeds of influence are sown during this process. Three aspects in the design process are critical for creating influential regional designs: the expertise of the designer or design team, the interaction with stakeholders in the design process, and the context in which regional designing is embedded. The relative importance of each of these aspects depends on the specific aim of the regional design endeavour. For example, in the design process for a comprehensive integrated regional plan, the interaction with future actors and a firm embedding in the regional context is important, whereas in a regional design process that aims to influence the professional planning and design discourse, the focus is on engagement with a broad range of professional designers and planners.

The expertise of the designer(s) is critical for achieving quality in the regional design process and the regional design outcome(s). Designers use their design ability to reframe situations and integrate different kinds of knowledge and information into technically sound and comprehensive regional designs that fit the planning situation. They also use their design skills to test ideas in elaborations for exemplary areas on a smaller scale. The designers visualisation skills are employed to represent information, ideas, different options and the final regional

design. These visualisations have an important role in triggering and structuring the interaction with stakeholders and making future situations foreseeable. Finally, designers structure, organise, and facilitate the interactive design process with stakeholders, and must be able to structure and manage these processes appropriately.

The participation of stakeholders in the design process is the second critical factor to create influential regional designs. Stakeholders bring detailed knowledge of the spatial, social, political, economic and cultural situations into the design process that improves the quality of the design. Stakeholders also take part in the conversation with the situation, in which they gain new insights, get to know other stakeholders, and develop ownership of the regional design ideas. The participation of stakeholders generally takes place through a cycle of multiple half, one, or two day workshops or interactive events that are organised as part of the regional design process. The groups participating in the interactive events generally range in size from 10 to 80 people. This thesis reveals that although these sessions are prepared carefully, they almost never unfold as anticipated, calling for on the spot response-ability and adaptability from the designer(s) who facilitate the events. The designers interviewed for the study in Chapter 5 indicated that they have little theoretical background in the design, organisation and facilitation of participatory and collaborative processes. They developed their knowledge on processes and their process skills predominantly in practice.

The context in which regional designing is embedded, is the third critical factor for its (future) use and influence. This thesis reveals that regional designing predominantly has effect in the context in which it is well-embedded. The competition in the longitudinal case study on the MHAL Region (Chapter 3), for example, had no impact on spatial planning in the region. It was not well-embedded in the regional context. Instead, it influenced the professional planning and design community in the Netherlands, in which it was well-embedded. The other episodes of regional designing for the MHAL Region all had an influence in the region, which is explained by their embeddedness in the regional spatial planning context. These findings show the need for attention to the embedding of regional designing in a context, in relation to its aimed influence.

In addition to these three critical factors, I found that the uniqueness of the project, the absence of a dominant stakeholder, sufficient time, and the avoidance of strong controversies are factors that can enhance the influence of regional designing. In addition, timing emerged from the research as a factor acting upon the influence of regional designing. In some cases, regional designs need 'time to ripen' before they are picked up by others. It can also happen that they 'lose momentum' and end up redundant, waiting for a new 'window of opportunity' to arise. Designers, particularly those employed in governmental organisations, actively try to affect these kind of conditions to improve the uptake and influence of regional designs.

Notwithstanding the expertise of the designer, the participation of stakeholders in the design process, the context in which regional designing is embedded, and additional enhancing factors, the actual influence of regional designing depends on more than the design process alone. When regional designing is employed in situations in which a design approach is not appropriate, for example when there is no need for change, or when the outcome is already defined, it can be expected to have little effect (De Jonge 2009). In addition, regional designing acts upon the interrelated and complex web of actions in spatial planning in which regional designing is just one of the perspectives and interests at play. If a regional design is given a formal status, or related to funding programs, its use and influence will improve (Chapter 3). Moreover, planning situations evolve and change due to ongoing developments, foreseen and unforeseen changes, as well as unexpected events. This also has an effect on the actual influence of regional designing. This thesis reveals and explores the importance of the design process for the future success and value of regional designing.

6.3 Discussion

6.3.1 Methodological reflection

In this thesis, I applied a multiple case study approach to study the influence of regional designing on strategic spatial planning, and how this influence materialises in spatial planning practices. This approach enabled me to study the influence of regional designing in various real-

life situations. The case studies were examined subsequently (although not in the order in which they are presented in this book), each study partly overlapping the previous one. I was, therefore, able to build upon developing insights and previous experience in setting up each subsequent case study. This fuelled my learning process in carrying out research, as well as my understanding of the research topic. This research strategy fits with a pragmatic approach to research.

My research encompassed four case studies that root in the Dutch tradition of regional designing. This undeniably biased my research to a Dutch perspective. The influence of regional designing is a highly complex and contextual phenomenon. My Dutch background, and my professional work-experience in Dutch landscape architecture and spatial planning practice, have enabled me to develop a rich and detailed understanding of the influence of regional designing in the various case studies. To counteract my Dutch bias, and to be able to place the research results in an international perspective, I have read and used international literature on the topics under study, and I visited multiple international conferences. During these conferences, I discussed my intermediate results and findings, and participated in academic discussions that were relevant for my research. Finally, the review process that precedes the publication of a paper in scientific journals helped me to understand and position my research in an international audience.

The selection of the range of case studies used in this research was guided by the specific focus of each case study. The aim of the overall research set-up was to study different aspects of the influence of regional designing. This resulted in four different studies that did not follow a replication logic (Yin 2009, p. 54), that is, they were not designed to either predict similar results or contrasting results, and did not use similar data sources and data collection protocols. Therefore, the multiple case study approach in this thesis can be best characterised as four single case-studies that each researched a different aspect of the influence of regional designing. This approach enabled the triangulation of findings, for example on the different kinds of influence of regional designing.

The choice of data sources, sampling techniques, and research methods for the case studies followed the logic of each individual study. In the analysis of the data, all studies lean heavily on the interpretation by

the researcher. In the studies for Chapters 3 and 5, the analysis of the data and findings was discussed in-depth with my supervisors, and I used thick descriptions to enable the understanding of the findings and the line of reasoning I followed. The studies of Chapters 2 and 4 were done with multiple researchers, enabling the check of findings and interpretations among peers. Other research methods could also have reduced the reliance of the research on the interpretation of the researcher. For example, in a research set-up with focus groups (Bryman 2012), in which respondents discuss a topic in a structured way, sense and meaning making is done collectively within the group, allowing participants to challenge each other. Moreover, in such a research set-up, important issues can surface without the interference of the researcher. However, limited time and resources were constraints that precluded the use of this research method in the context of this thesis.

6.3.2 Contribution to the academic debate

This thesis provides knowledge on the different kinds of influence that regional designing can have on (strategic) spatial planning and how this influence is realised. Previous research on regional designing addressed, amongst other things, its theoretical base (De Jonge 2009), various aspects of its performance and working (e.g. Balz and Zonneveld 2015, De Zwart 2015), or analysed design-based envisioning in relation to specific planning issues (e.g. Langner 2014, Waggonner et al. 2014, Heeres et al. 2017). This thesis demonstrates that regional designing can affect the aims, the process and conditions of spatial planning, and it can have an effect on the development of the spatial planning and design disciplines. Furthermore, the research shows that regional designing combines substantial and procedural issues, recognising the importance of both process and plans. With these contributions, this thesis adds to the understanding of the usefulness of regional designing as a method for visioning in strategic spatial planning.

One of the general points of critique on visioning processes in strategic spatial planning is that they generally do not solve the problem of the continued co-existence of multiple visions (Rauws and Van Dijk 2013). Rauws and Van Dijk (2013) argue that designing helps to overcome the problem by the act of synthesis that is central in designing. This thesis

shows that next to this 'technical' act of blending of different ideas and perspectives in a coherent set of ideas (Lawson 2005), regional designing also works to overcome the co-existence of multiple visions, by its focus on developing a *shared* perspective in a collaborative design process with stakeholders. An additional point of critique on visioning relates to the disconnection between the vision and the values of those affected by the vision (Shipley and Michela 2006). The collaborative regional design process enables stakeholders – those affected by the vision – to participate and to bring their ideas and perspectives into the visioning process. Moreover, stakeholders can develop a sense of ownership over the regional design ideas during the design process. This reduces the 'gap' between the vision, that is embodied by the regional design, and the values of those affected by the vision.

However, in order to establish these effects, this thesis showed that it is essential that stakeholders take part in, and contribute to, the collaborative framing and reframing process that leads to the regional design. They engage, together with the designers, in the conversation with the regional situation (cf. Schön 1983), in which the co-evolution of problem and solution space takes place. This conversation is conceptualised as a dialogue, both in literature (De Jonge 2009, Meroni 2008, Ceschin and Gaziulusoy 2016) and by the interviewed designers for the study in Chapter 5. The dialogical setting in regional designing creates a free space in which multiple, diverse voices and perspectives can grapple with each other (Thorpe and Gamman 2011, Van der Velden and Mörtberg 2014), resembling the ideas of 'radical democracy' (Laclau and Mouffe 2014). People develop new perspectives and mutual understandings in these spaces. Moreover, they alter their relationships. These are valuable assets in the visioning processes of strategic spatial planning, and make the dialogical setting a prerequisite for successful and influential regional designing.

Such a dialogical setting requires specific conditions. Participants should, for example, leave their immediate interests behind (De Jonge 2009). This is a situation that is best addressed in an informal setting. In addition, the design process should foster genuine stakeholder participation, that is, participation in which power and influence is shared with, or handed over to, the participants (e.g. Arnstein 1969, Bratteteig and Wagner 2014, Van der Velden and Mörtberg 2014). Stakeholders must have a real say in the design process (Kensing and Greenbaum 2013). This calls for an extensive shift in the culture of

landscape architecture from designing *for* people to designing *with* people, a shift that is also argued for other design disciplines (e.g. Thackara 2006, Manzini 2015). Designers must share their power and influence over the design process and the design outcome, without losing or throwing away their confidence and expertise as designers. As the research in this thesis revealed, this expertise of regional designers is critical for developing appropriate and influential regional designs. Moreover, the professional expertise and the contributions to the dialogue that derive from it, are appreciated by those involved in regional designing (Chapter 2).

Regional designing acts upon the complex web of actions in spatial planning practices, and, as such, performs well in the complex, interrelated and dynamic context of our current world. Several scholars in landscape architecture have explored and conceptualised this current complex, interrelated and dynamic understanding of the world for landscape architecture from a theoretical perspective (e.g. Bélanger 2013, Waldheim 2016, Barnett 2013, Prominski 2005). They emphasised the evolutionary character of landscapes and the related open-ended character of landscape designing. This thesis presents the outlines of a methodology for designing in a complex, interrelated and dynamic context, captured in seven principles for regional designing that were derived from regional design practice (Chapter 5):

- taking a dynamic systems perspective,
- addressing multiple geographical scales,
- looking from history to future,
- creating a continuing dialogue with stakeholders,
- reframing the region,
- sensing and responding,
- balancing direction and openness.

Moreover, it gives insights into the concrete methods and techniques employed by landscape architects in these practices and points out important skills for this kind of designing (Chapter 5), such as response-ability to various situations.

With these regional design principles, this thesis also contributes to the knowledge base on strategic design approaches (e.g. Manzini 2015, Ceschin 2014, Ceschin and Gaziulusoy 2016, Dorst 2015). Strategic design approaches differ from the design of concrete object and spaces.

They have an indirect relationship with the designed object and focus on long term goals and how to achieve these goals. The principles for regional designing reveal that strategic design processes have specific characteristics, such as a systemic perspective, an open-ended and volatile design object, and a focus on reframing. These characteristics relate to a strong engagement with long-term processes of change and transformation, the collaborative design process with stakeholders and the specific design culture in strategic design approaches.

This thesis on the influence of regional designing on strategic spatial planning also relates to a broad strand of research in planning that focusses on the evaluation of plans (see for example: Laurian et al. 2010, Oliveira and Pinho 2010, Hopkins 2012, Guyadeen and Seasons 2016). The majority of such studies focus their research on the plans and leave out the plan-making process. The research in this thesis adds to plan-evaluation research with a research approach that included the making of plans (the regional design process) in its scope of studying the influence of regional designing. This design process turns out to be a breeding ground for the actual influence of regional designing, showing that it is worthwhile to take the plan-making process into account in plan-evaluation research.

In addition, this thesis also addresses how the influence of regional designing materialises in planning practices. Plan-evaluation research tends to have a dominant focus on developing an evaluation method, or performing a detailed evaluation of the effect of a particular plan or policy. The question of how effects come about, or what pathways exist between plan and effect, get much less attention (Millard-Ball 2013). With its focus on how the influence of regional designing is realised, this thesis provides insights that are valuable for those who design and organise regional design processes. It learns them, for example, that genuine participation of stakeholders is as essential as the expertise of the designer(s) who will lead the design process, and that they should carefully consider how the regional design process is embedded. This thesis demonstrates that research into the way in which plan-effects materialise is valuable and can enhance plans and plan-making processes.

6.3.3 Further research

In my research, I investigated the influence of regional designing in a predominantly Dutch context. I only touched upon a Belgian and German context in the longitudinal case study for the cross-border MHAL Region (Chapter 3). Further research in regional design practices in other countries and settings would enrich and deepen the understanding of the influence of regional designing. In addition, since regional designing has its roots in both landscape architecture and urban planning and design (Neuman 2000, De Jonge 2009), it would be worthwhile to research regional designing from an urban planning and design perspective. Such research may add to the understanding of regional designing from an urban design perspective, and could reveal differences in methods and methodology used by urban designers and landscape architects in regional designing.

This thesis demonstrates that the interaction with stakeholders during the design process is pivotal in regional designing, and it revealed the principles that practising landscape architects use to organise and manage this interaction. The research also uncovered a major knowledge gap on participative, collaborative, and deliberative designing in regional designing, and landscape architecture in general. There are various subjects related to participatory design processes that lack a sufficient knowledge base. Different motives and aims for participation, for example, call for the involvement of different stakeholder groups (Caalders 2002, De Jonge 2009). This raises the questions of who to involve in regional design processes, in what manner, and at which moments in time. Regional designing is seen as a setting in which different perspectives can grapple with each other in a (relatively) free space (De Jonge 2009). Power relations, however, are never far away and can be expected to enter the regional design arena at any time. The question is then, how to deal with these power relations, particularly when they are unequal? Different situations call for designers to take different positions and roles in the design process (Thorpe and Gamman 2011), as well as requiring different methods and techniques to foster the involvement of stakeholders (Brandt et al. 2013). What does this imply for regional design processes, the methods used in these processes, and the skills of designers? These are just a few examples of issues that require further attention to advance the body of knowledge on participatory, collaborative, and deliberative design processes in landscape architecture.

One other topic arises from this thesis that is of particular interest to academia in landscape architecture: timing. Time has always been a topic of interest in landscape architecture (Van Dooren 2017), as trees and plants take time to grow and mature, and the design of outdoor spaces is adjusted over time. These time-related issues in landscape architecture are in line with chronological time; a linear perception of time. In researching this thesis, I came across 'the right time', 'times that are ripe', or 'windows of opportunity' in interviews as relevant concepts of time in regional designing. These are in line with a kairos-oriented perception of time (Smith 1969, De Jonge 2009). However, the kairos concept of time is rarely operationalised. Research into the role of major events (e.g. the Olympic Games) on spatial developments suggests that such events, or even just the plans for such events, can alter the timing of spatial developments (Van Dijk and Weitkamp 2014). Moreover, a kairos perception of time relates to concepts like tipping-points (e.g. Scheffer et al. 2009) and panarchies (e.g. Holling 2001), which evolved in the discipline of landscape ecology to understand complex and changing systems. Further research is needed to fully understand the function of the kairos concept of time in regional designing, and to operationalise this concept so that it could enhance regional design practice.

6.3.4 Societal relevance

Regional designing is a valuable means employed in regions where new issues and problems put the existing spatial situation under pressure. This thesis demonstrates that regional designing not only envisions possible and desirable future situations, but that it also produces powerful influences on spatial planning processes. Regional designing, for example, enhances decision-making by aligning the interests of various stakeholders and pointing out critical differences. It develops appropriate responses to specific situations, proposes upcoming stages in the planning and development processes, and enhances planning conditions by altering perceptions and establishing networks and relationships. Importantly, potential future actors gain ownership over the envisioned perspective during the regional design process, which prepares them for future action. These are valuable insights for those responsible for, and involved in, strategic spatial planning processes; it can enhance the focus and aim of future regional design efforts.

This thesis also provides insights into how these influences on spatial planning processes are created. It learns those responsible for strategic spatial planning initiatives that the influence of regional designing arises from a regional design process in which stakeholders actively participate and collaborate with designers. In addition, the research in this thesis revealed that a regional design should be embedded in the regional context to exert influence on regional spatial planning processes. Again, these are valuable insights for those involved in strategic spatial planning and regional design practice.

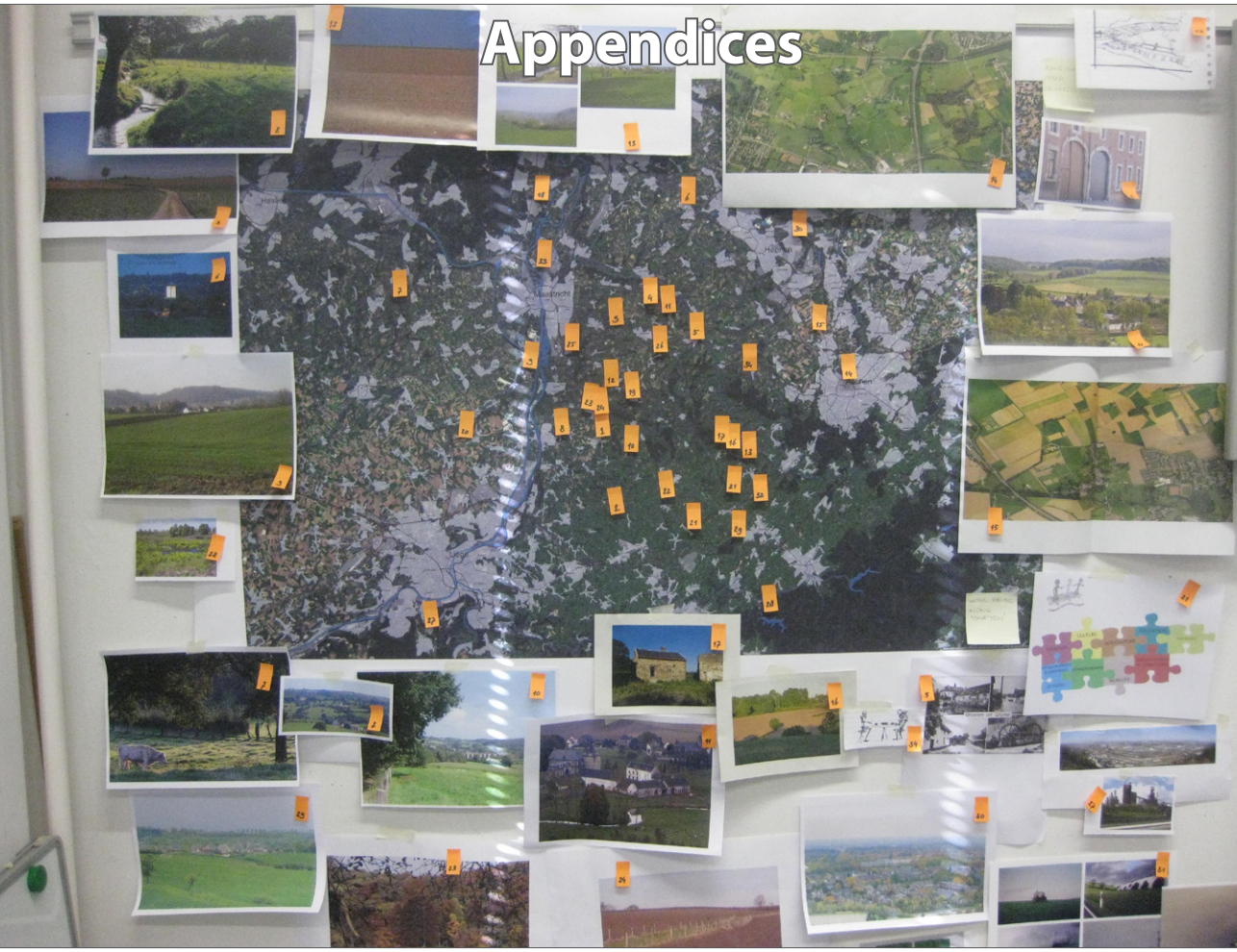
Furthermore, this thesis revealed that response-ability is a critical skill in regional designing that has two dimensions. Firstly, regional designers must be able to develop appropriate responses to spatial problems and issues in specific situation, using and combining different kinds of information and perspectives. This dimension of response-ability is generally well-covered in most undergraduate- and graduate programmes in landscape architecture. Secondly, regional designers engage and interact with stakeholders in participatory regional design processes. They organise, structure and manage such processes and facilitate workshops, ateliers and other interactive events. This requires a different kind of response-ability: one that is focused on the interaction between people, on how to guide this interaction, and on how to organise and facilitate participatory processes. This dimension of response-ability is predominantly developed in practice, as I derived from the study in Chapter 5. My recommendation is to include courses in undergraduate- and graduate programmes in landscape architecture that provide a basic knowledge base, and skills training, for participatory design processes.

Moreover, attention to participatory processes seems to be almost absent in the professional discourse in the spatial *design* disciplines – this is in contrast to the spatial planning disciplines, in which it is a regularly addressed subject in professional journals, blogs, or in meetings. This is remarkable, considering the critical function of participatory processes for the influence of regional designing. Paying attention to participatory processes in regional planning and design is particularly relevant in the Netherlands in the coming years, as participation is becoming a matter of law. In 2019, new legislation on the environment is expected to come into force, which combines all previous laws, rules and regulations concerning the environment, including spatial planning, into one law. Part of this legislation will be

the obligation for municipalities and provinces to collaborate with stakeholders and citizens in developing comprehensive environmental visions. This thesis has shown that regional designing can be an influential means to develop ideas for such environmental visions when participation reaches a genuine level (Arnstein 1969) during the design process.

To conclude, based on the findings in this thesis I recommend to those involved in actual regional design practices to have a strong eye for the quality of both the plan and the design process, as both are important for the future use and value of regional designs. Regional designing not only affects the aims of spatial planning, it also influences spatial planning processes and conditions, and the development of the planning and design disciplines. It is important to have realistic expectations and to carefully consider, in advance, which kind of influence regional designing should have in relation to the planning situation and the aim of the specific regional design project. Such considerations provide insights in how to structure and organise a regional design process, who to involve, and in which context it should be properly embedded, and, as such, enhance the use and value of regional designing.

A



Appendix A

Keywords, the number of publications found in the initial search and the number of publications selected for review – Chapter 2

Keywords (search terms)	**SCOPUS** (subject area Social Sciences and Humanities)	**University library** (books and PhD theses)	Number of selected publications*
role of design AND landscape architect*	1	-	0
role of design AND urban design	7	-	0
landscape architect* AND urban design	88	21	1
regional design	16	26	6
landscape architecture AND planning	107	155	4
urban design AND spatial planning	40	-	2
charrette OR charrettes	76	4	3
collaborative design AND landscape	15	-	0
collaborative AND urban design	33	-	2

*this is the number of publications after filtering out duplications, unavailable publications, non-refereed papers/edited books, and selecting publications relating to landscape architecture or urban design, to design and planning on a supra-local scale, and to the Dutch planning and design context or to one or more contributions of design.

Appendix B

List of reviewed publications – Chapter 2

Author(s)	year	title (journal)
Journal article		
J. Ahern, S. Ciliers, J. Niemelä	2014	The concept of ecosystem services in adaptive urban planning and design (*Landscape and Urban Planning*)
K. van Assche, R. Beunen, M. Duineveld	2012	Co-evolution of planning and design; Risks and benefits of design perspectives in planning systems (*Planning Theory*)
A. Backhaus, T. Dam, M. B. Jensen	2012	Storm water management challenges as revealed through a design experiment with professional landscape architects (*Urban Water Journal*)
V.E. Baltz, A.M. Zonneveld	2014	Regional Design in the context of Fragmented Territorial Governance (*European Planning Studies*)
D. Chapman	2011	Engaging Places: Localizing urban design and development planning (*Journal of Urban Design*)
M.C. Childs	2010	A Spectrum of Urban Design Roles (*Journal of Urban Design*)
K. Crewe, A. Forsyth	2003	LandSCAPES: A Typology of Approaches to Landscape Architecture (*Landscape Journal*)
K. Crewe, A. Forsyth	2011	Compactness and connection in environmental design: insights from ecocurbs and ecocities for design with nature (*Environment and Planning B: Planning and Design*)
S. van Damme, H. Leinfelder, P, Uyttenhove,	2013	Landscape as a Medium for Integration in Design Practice: The Case of Flanders, Belgium (*European Planning Studies*)
T. van Dijk	2011	Imagining future places: How design co-constitutes what is, and thus influences what will be (*Planning Theory*)
F. Gaffikin, M. Mceldowney, K. Sterlett	2010	Creating Shared Public Space in the Contested City: The Role of Urban Design (*Journal of Urban Design*)
A. J. Felson, S. T. A. Picket	2005	Designed experiments: New approaches to studying urban ecosystems (*Frontiers in Ecology and the Environment*)
A. J. Felson, M. A. Bradford, T. M. Terway	2013	Promoting Earth Stewardship through urban design experiments (*Frontiers in Ecology and the Environment*)
M. Gunder	2010	Commentary: Is urban design still urban planning? An exploration and response (*Journal of Planning Education and Research*)
J. Forester, A. Balducci, A. Madanipour, K. R. Kunzmann, T. Banerjee, E. Talen, R. Richardson	2013	Design confronts politics, and both thrive!/Creativity in the face of urban design conflict: A profile of Ric Richardson/From mediation to the creation of a "trading zone"/Conflict and creativity in Albuquerque/Reflecting on a mediation narrative from Albuquerque, New Mexico/From mediation to charrette/Physical clarity and necessary interruption/Ric Richardson responds (*Planning Practice and Theory*)

S. Langner	2014	Navigating urban landscapes - adaptive and specific design approach for the 'Landschafszug' in Dessau (*Journal of Landscape Architecture*)
A. Madanipour	2006	Roles and Challenges of Urban Design (*Journal of Urban Design*)
H. Meyer, S. Nijhuis	2013	Delta urbanism: Planning and design in urbanized deltas - comparing the Dutch delta with the Mississippi River delta (*Journal of Urbanism*)
L. R. Musacchio	2009	The scientific basis for the design of landscape sustainability: A conceptual framework for translational landscape research and practice of designed landscapes and the six Es of landscape sustainability (*Landscape ecology*)
L. R. Musacchio	2011	The grand challenge to operationalize landscape sustainability and the design-in-science paradigm (*Landscape Ecology*)
J. I. Nassauer	2012	Landscape as a medium and method for synthesis in urban ecological design (*Landscape and Urban Planning*)
J.I. Nassauer, P. Opdam	2008	Design in science: Extending the landscape ecology paradigm (*Landscape Ecology*)
M. Neuman	1998	Does Planning need the plan? (*Journal of the American Planning Association*)
M. Neuman	2000	Regional Design: Recovering a great landscape architecture and urban planning tradition (*Landscape and Urban Planning*)
M. Neuman	2012	The Image of Institution (*Journal of the American Planning Asociation*)
W. Rauws, T. van Dijk	2013	A design approach to forge visions that amplify paths of peri-urban development (*Environment and Planning B: Planning and Design*)
F. Steiner	2011	Commentary: Planning and Design – Oil and Water or Bacon and Eggs (*Journal of Planning Education and Research*)
S. Stremke, F. van Kann, J. Koh	2012	Integrated Visions (Part 1): Methodological Framework for Long-term Regional Design (*European Planning Studies*)
S. Sutton, S. Kemp	2006	Integrating Social Science and Design Inquiry Through Interdisciplinary Design Charrettes: An Approach to Participatory Community Problem Solving (*American Journal of Community Psychology*)
J.B. Walker, M.W. Seymour	2008	Utilizing the design charrette for teaching sustainability (*Journal of Planning Education and Research*)
R. Weller	2008	Planning by Design Landscape Architectural Scenarios for a Rapidly Growing City (*Journal of Landscape Architecture*)
J. Wu	2013	Landscape sustainability science: Ecosystem services and human well-being in changing landscapes (*Landscape Ecology*)
F. de Zeeuw, A. Franzen, K. Aalbers, A. van Hal, B. Dulski	2010	Designing the Future (*Sustainability*)

Edited Books / book chapters		
M. Hajer, D. Sijmons, F. Feddes (editors)	2006	Een Plan dat Werkt, Ontwerp en politiek in de regionale planvorming
M. Hajer, D. Sijmons, F. Feddes		– Inleiding, De politiek van ontwerp
D. Sijmons		– De Regio als Belofte, Op zoek naar de juiste schaal
F. Feddes		– Een plan dat werft, Een workshop over ontwerp en politiek
M. Hajer, D. Sijmons, F. Feddes		– Deltaplanologie, Onderzoekend ontwerp in perspectief
N. Meijsmans (editor)	2010	Designing for a Region
N. Meijsmans		– Preface
N. Meijsmans		– The Regional Research Project, A Mode of Operation to Advance
P. Viganò		– A Territorial Project
B. de Zwart		– Design as a Mediating Vehicle
K. Beelen		– Designing Between Matrix and Map, The Reflective Practices of MUST
B. de Zwart		– A Triptych of Expertise, The Design Competition as an instrument to Unite Assignment, Design and Commissioner
A. Schram		– Regional Design as a Research into Society's Will
S. Langner		– The Dessau Landschaftszug, A Landscape Belt on Demolished Wastelands by Process-Oriented Design
B. De Meulder		– Back to the Start and Elsewhere, Travels between Cities and Natures
R. Roggema (editor)	2014	The Design Charrette
L. Vos		– Innovations in Organisational and Community Learning
R. Roggema		– Shifting Paradigms
H. von Seggern, J. Werner, L. Grosse-Bächle (editors)	2008	Creating Knowledge, Innovation Strategies for Designing Urban Landscapes
W. Krull		– With Brains, Heart and Hands
H. von Seggern, J. Werner		– Designing as an Integrative Process of Creating Knowledge
H. von Seggern		– Understanding is Essential for Designing
T. Sieverts		– Improving the Quality of Fragmented Landscapes – a Global Challenge
M. Prominski		– Design Knowledge
C. Reed		– Stossworks: Hybridized, Expansive, Incomplete
D. Karow-Kluge		– Designing through Experiment

PhD theses		
J. de Jonge	2009	Landscape architecture between politics and science: an integrative perspective on landscape planning and design in the network society
I.T. Klaassen	2004	Knowledge-based design: developing urban & regional design into a science
Conference paper		
B. Warren-Kretzschamar, C. von Haaren, R. Hachmann, C. Albert	2012	The Potential of GeoDesign for Linking Landscape Planning and Design (*DLA conference, Bernburg/Dessau Germany*)

Appendix C

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Episode 1 Regional Design Competition

EoWijersstichting, (1989). Jury rapport, ideeën prijsvraag 'Stad en land op de helling, ruimtelijk ontwerpen voor een stukje Europa' [Jury report, open competition 'Town and country on the slope, spatial designing for a piece of Europe']

Ekkers, P., Mastop, H., Dekker, A., and Raggers J., (1990). Regionaal ontwerp en beleid, plananalyse stad en land op de helling [Regional design and policy, plananalysis town and country on the slope]

Episode 2 MHAL Spatial Development Perspective

Intermediate reports:

Internationale Voorbereidings Commissie, (1991). Op weg naar een ruimtelijk ontwikkelingsperspectief voor het stedelijk kerngebied van de Euregio Maas-Rijn [Towards a spatial development perspective for the urban core of the Euregion Meuse-Rhine]

Internationale Coördinatie-commissie, (1992). Ruimtelijk Ontwikkelingsperspectief, voorontwerp [Spatial development perspective, draft design]

Final report:

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Evaluation reports/follow ups:

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Episode 3 Three Countries Park Development Perspective

Intermediate report:

Projectgroep Drielandenpark, (2003). Concept ontwikkelingsperspectief Drielandenpark [Draft development perspective Three Countries Park],

Final report:

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van Cutsem, M., and Demulder, C. (2012). De toekomst van het Drielandenpark [The future of the Three Countries Park]

Website:

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Episode 4 Landscape Policy for the Three Countries Park

Interim report:

Lohrberg, F., Wirth, T. M., Brüll, A., Nielsen, M., Coppens, A., Godart, M. F., Kempenaar, A., and Brinkhuijsen, M., (2013). LP3LP Landscap Policy for the Three Countries Park, Interim Report.

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Appendix D

Interviewees and their involvement in the four design episodes – Chapter 3

Interviewee	Background	Episode 1	Episode 2	Episode 3	Episode 4
A	Organiser regional design competition				
B	Organiser regional design competition /Dutch national policy advisor				
C	Staff member Belgian province of Limburg				
D	Staff member city of Aachen				
E	Staff member Dutch province of Limburg				
F	Project manager Three Countries Park Initiative				

Appendix E

The Competition Assignment – Chapter 4
Competition assignment for the 9th Eo Wijers design competition (translated from Dutch, see: EoWijers-stichting 2011):

A. Develop a method for sustainable value creation leading to the development of 'regional comfort zones' in the Veenkoloniën. Use the identity and uniqueness of the region and the opportunities in its energy, agricultural and water systems to enhance the region's independence, and to empower its inhabitants.

B. Take the stories and experiences of the inhabitants and users in the region as a starting point and use them when developing your method.

C. Investigate and visualize your ideas on the possible outcome of the method on three scales:

   a Radius approx. 5 km: The local scale of projects and local initiatives. Choose and elaborate on a key project or initiative, which can provide an important engine for development. Show its systemic potential. Which parties will drive this initiative forward? Is it an example for other areas? Which revenue model can be linked to this initiative?

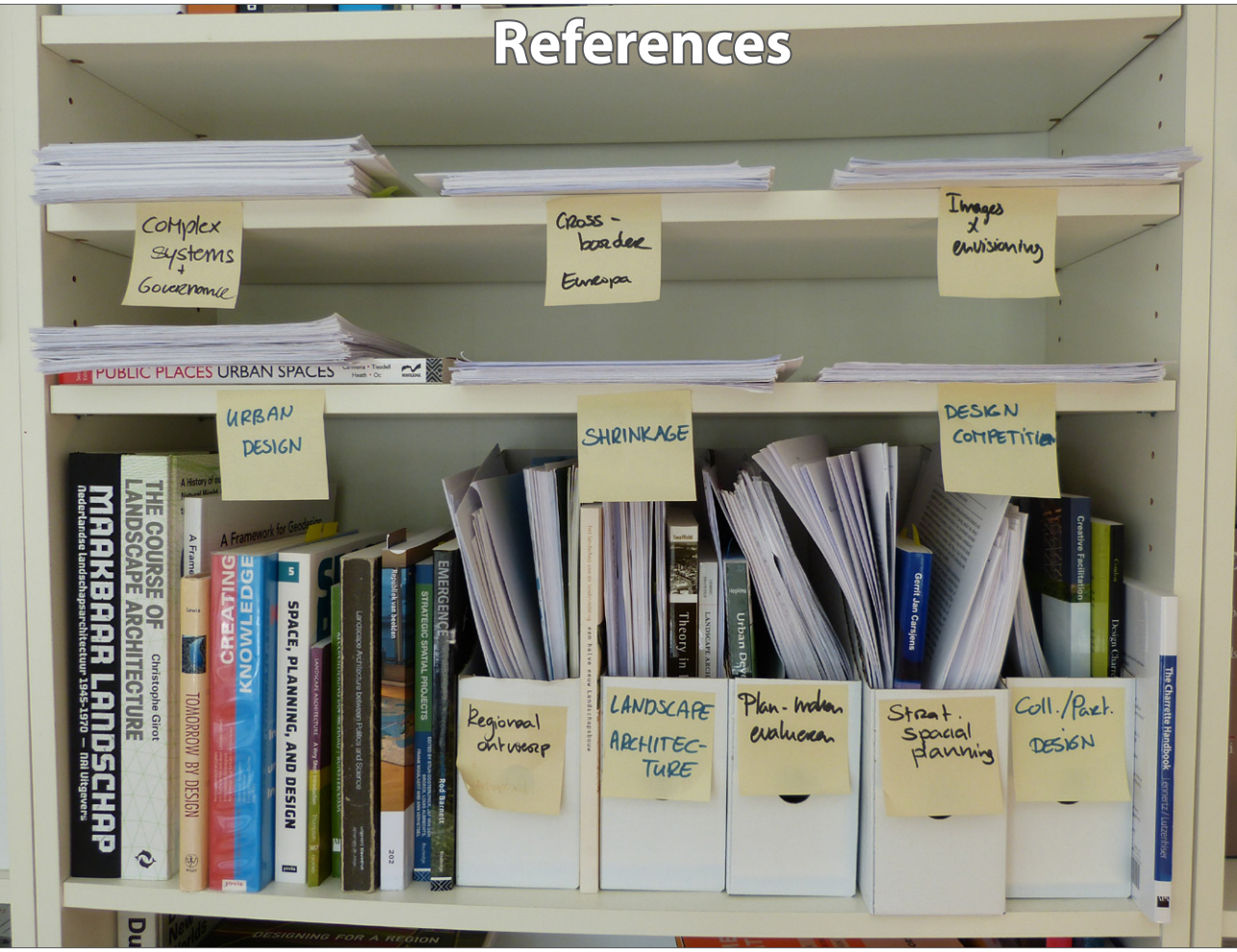
   b Radius approx. 20 km: The scale of the 'regional comfort zone'. Show through a design (for an area of your choice) how the method will enhance the region and improve its independence from services and systems outside the region. This design is not a blueprint, but a way to connect with the inhabitants and users of the area.

   c Radius approx. 100 km: The regional scale of the Veenkoloniën and beyond.
   Determine what conditions on the scale of the Veenkoloniën or beyond contribute to the desired development on a local and regional scale. Sketch the corresponding spatial structure. Show how investments and transformations on the higher level contribute to the regional comfort zone and local initiatives.

Which actors, companies and (semi-) governmental bodies are involved at this scale?

D. Clarify the next steps you propose to take if you win the competition, and include a planning proposal for 2012 and beyond. Specify the implementation strategy you advocate, and the required internal and external communication.

R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EMERGENCE
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S

Summary

Summary

In this thesis regional designing is defined as the collaborative envisioning of the future physical form and arrangement of settlements, infrastructures, water features, natures reserves and other land-uses in a region, including the relationships between them, their aesthetic appearances, and how this future could come about. As such, it is closely entangled with spatial planning and employed in strategic spatial planning to develop spatial visions, perspectives and strategies. Strategic spatial planning initiatives are taken up by cities and regions that face new planning issues that put the existing spatial situation under pressure and that call for structural change. Regional designing develops direction and strategies for such change in close collaboration with stakeholders. Moreover, it acts upon the complex web of actions and developments in spatial planning, affecting spatial planning processes and influencing them towards the envisioned direction.

Although regional designing is gaining more attention in academia recently, a good understanding of, and a sound knowledge base on the influence of regional designing on spatial planning is lacking. Little is known about the kind of influences that regional designing can have, how this influence is created and what designers do in regional design processes to foster the influence of regional designing. This thesis aims to fill this knowledge gap by answering the following research question:

> *What is the influence of regional designing on strategic spatial planning and how is this influence realized in spatial planning practices?*

To answer the research question, a multiple case study approach was chosen to study different aspects of the influence of regional designing in various real life settings. In total four case studies were done, each with their own research design and set up.

Chapter 2 explores the contributions of designing to Dutch regional planning and development, and identifies topics for scholarly research that will improve the understanding of design approaches in planning and that can enhance regional design practice. To identify contributions of designing to regional planning and development, stakeholders were interviewed, who are involved in spatial planning in the city region of

Eindhoven and the Parkstad Region (both located in the South of the Netherlands). This resulted in eleven contributions of designing to regional planning and development: four to the content and seven to the process of planning (Table 1). An exploration of scholarly literature in landscape architecture and urban design added more depth and understanding to these contributions.

Table 1. Contributions of designing to the *content* and to the *process* of regional planning and development

Contributions of designing to the content	Contributions of designing to the process
- Developing alternative views and solutions - Creating a framework for spatial development - Making high quality designs - Mapping and exploring spatial issues	- Sparking communication and interaction - Creating insights - Building support and engagement - Enabling joint conceptualization and envisioning - Supporting decision-making - Accelerating development - Improving collaboration and networking

Important themes for further research that emerged from the study are: the effect or impact of regional designing in the long-term, participatory design methods and methodology in (large scale) spatial designing, and experiments and empirical research on designing in various planning settings, which can reveal what characteristics determine the use and value of designing in different planning contexts.

Chapter 3 concerns a longitudinal case study on the long-term use and effect of regional designing. It investigates the impacts of regional designing in the complex and fragmented setting of the MHAL Region (Maastricht, Hasselt, Aachen, Liège), a cross-border region located in Belgium, Germany and the Netherlands. Since the late 1980s, this region was subject to four regional design episodes that each have had different impacts: from contributing to a new perception of the region to initiating regional collaboration and affecting the Dutch professional debate. The study shows that regional designing is a powerful means that helps to overcome difficulties arising from the fragmented setting of a cross-border region. It changes perspectives and develops new networks and relationships. Moreover, the study demonstrates that both plans and people are important in the transference of regional design outcomes from a regional arena to sub-regional planning arenas. Conditions, such as status and available funding, improve the chances of transference, and the context in

which regional designing is embedded is a critical factor in the impact that regional designing will have.

Chapter 4 investigates the responses to a 'planning for shrinkage' challenge developed for a regional design competition. This competition was held in 2011-2012 for the Veenkoloniën, a region in the North of the Netherlands that faces shrinkage. Shrinkage or 'no growth' is expected to condition the long-term perspective of many Western cities and regions. Planning for shrinkage differs substantively from planning for growth and calls for a change of thought in spatial planning. The case study analyses the ideas about appropriate responses to the 'planning for shrinkage' challenge that were formulated in the design brief, the competition entries and the jury report. The shrinkage perspective for the region was fully adopted and all ideas indicated a prominent role for local inhabitants. Whereas the design brief only suggested participation of inhabitants in the development of ideas, the competition entries took participation one step further and gave the inhabitants a leading role in the future planning and development of the region. The entries were furthermore characterized by a strategic approach, in which they combined process designs and procedural frameworks with semi-finished spatial design products. Collaboration with local inhabitants and entrepreneurs, creating new alliances, and timing emerged from the responses as key themes in planning for shrinkage.

Chapter 5 studies the principles of regional designing that are employed by landscape architects in Dutch regional design practice and uses these principles to reflect on the design process of strategic design approaches. Seven principles for regional designing were derived from interviews with experienced regional designers:

- taking a dynamic systems perspective,
- addressing multiple geographical scales,
- looking from history to future,
- creating a continuing dialogue with stakeholders,
- reframing the region,
- sensing and responding,
- balancing direction and openness.

Strategic design approaches, such as regional designing, engage with long-term processes of change, and focus on overall aims and

how to achieve them. They embark on collaborative design processes with stakeholders. These design processes are open-ended and their design object is dynamic and volatile. Furthermore, the collaboration with stakeholders in the design process contributes to the broader process of change. Designers facilitate this design process, and contribute to it with their design expertise. They are part of the group and do not own the design themselves. This gives new dimensions to the role and position of the designer in the design process and the culture of designing.

Chapter 6 synthesizes the findings of the previous chapters and answers the research question. From the case studies, I derived four categories of influences of regional designing: it influences 1) the aims, 2) the process and 3) the conditions of spatial planning, and it can impact 4) the development of the spatial planning and design disciplines. Not every regional design effort though, has similar effects. The actual influence of regional designing depends on the aim of regional designing, the planning situation, the involved stakeholders, the stage of the (strategic) planning process, previous experiences with regional designing, and the structure and context of the regional design process.

Regional designing is responsive by nature. To be effective and influential, regional designing has to develop appropriate responses to specific planning situations. Such responses are collaboratively developed by the designer(s) and regional stakeholders through an open conversation with the situation, in which the problem and solution space co-evolve. Stakeholders contribute with their knowledge to the conversation with the situation and actively take part in discussions, the exchange of ideas and the evaluation of ideas and proposals. Designers use their design skills to blend different perspectives and ideas in coherent set of ideas. Furthermore, they visualise ideas and proposals, which fuels and structures the discussions with stakeholders. Designers also hold the responsibility for the regional design process and the interaction with the stakeholders. They facilitate and structure the workshops that are organised as part of the regional design process. Regional designers therefore, must have strong response-ability skills, both in the creation of regional designs and in the design and facilitation of the collaborative design process.

The regional design process is critical for the future value and use of regional designing. In this process the seeds of influence are sown. Critical factors in the design process for the influence of regional designing are: the expertise of the designer, the interaction with stakeholders, and the context in which the regional design process is embedded. The expertise of the designer is critical for developing integrated and appropriate responses to the planning situation, and for the design and facilitation of the regional design process. The knowledge that stakeholders bring into the design process is critical for the development of responses that fit the planning situation. Moreover, their participation in the design process gives them ownership over the ideas and prepares them for future action. Finally, this thesis showed that the context in which the regional design process is embedded determines where regional designing will most likely have its effect.

The research in this thesis predominantly focussed on regional designing in a Dutch context. Research on regional designing in other planning cultures would enrich and deepen the understanding of the influence that regional designing can have on spatial planning and its methods en methodology. Concerning these methods and methodology, this thesis revealed a knowledge gap on participatory designing in regional designing and in landscape architecture in general. Participatory and collaborative design approaches, considering their importance for the quality and influence of regional designing, deserve more attention in future research in landscape architecture, and in landscape architecture education programmes. And finally, a kairos perception of time, focussed on propitious moments for decision or action and the role of events, arises from the research as a worthwhile research topic. In strategies, and as such in regional designing, doing things at the right time is an important concept. However this kairos concept of time is hardly operationalised in landscape architecture and calls for further attention.

The societal relevance of this thesis lies in the fact that it reveals a broad spectrum of regional design influences on spatial planning, that it explores the role of the design process in producing these influences, and that it shows the importance of response-ability in regional designing. Those engaged in actual regional design practice should have a strong eye for the quality of both the plan and the design process. Furthermore, considerations on the kind of influence that regional designing should have provide insights how to structure

and organise a regional design process, who to involve, and in which context it should be properly embedded, and, as such, enhance the use and value of regional designing.

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The SENSE Research School declares that **Ms Annet Kempenaar** has successfully fulfilled all requirements of the Educational PhD Programme of SENSE with a work load of 44.5 EC, including the following activities:

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- *Changing minds, the impact of designing for the MHAL region.* AESOP Conference 2015: Localizing urban food strategies - Farming cities and performing rurality, 13-16 July 2015, Prague, Czech Republic
- *Involving stakeholders in cross-border regional design*. 2016 Design Research Society conference, 28-30 June 2016, Brighton, United Kingdom

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Propositions

1. Response-ability is a critical skill for regional designers.
   (this thesis)

2. The design process predetermines the influence of regional designing on strategic spatial planning.
   (this thesis)

3. Writing a scientific paper is a 'wicked problem' as defined by Rittel and Webber (1973).

4. Experience in practice provides an indispensable knowledge base for acquiring a doctoral degree in design.

5. Sustainable product design is a contradiction in terms.

6. A non-intervention culture blocks the learning capacity of an organisation.

7. Friendship is a powerful institution in continuous need of reproduction.

Propositions belonging to the thesis, entitled:

Design in the Planning Arena, how regional designing influences strategic spatial planning.

Annet Kempenaar

Wageningen, 18 September 2017