

Strategic Planning for the Long-term Development of Shrinking Cities

Setting the terms of shrinkage
and aiming for resilience

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by

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AUTHOR DECLARATION

I have completed this dissertation independently and without inadmissible external support. I have not used any sources or tools other than those indicated and have identified literal and analogous quotations.

The submitted dissertation in its current version or another version has not yet been the subject of an academic or state examination procedure in this or a similar form or in parts (this also applies to versions in other languages).

The 'Rules of Good Scientific Practice' (Regeln guter wissenschaftlicher Praxis, GWP) published in the Official Communications of TU Dortmund University have been observed during the research process leading up to the submitted dissertation.

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Summary

The idea of urbanisation has always been a process of growth. Going against this, urban shrinkage has presented cities with many novel challenges and dilemmas. Policymakers and urban actors across various fields have intensified their efforts over the last two decades to develop solutions. Substantial progress and promising experiments have been observed at the national, regional and neighbourhood scales, as well as contradictions between different measures. So how can the various solutions and creativity be bundled into a force that enables a shrinking city to emerge from its population crisis and become a better place for people and nature? How can policymaking move beyond tactics and become strategy-making? These are the knowledge gaps that motivated this research. It is less about specific solutions for specific problems than it is about the strategy-making that connects the dots and opens pathways. It aims to understand what shrinkage as a path of development means for planning, identify what strategic planning work is needed to steer urban development under shrinkage, and how strategic (spatial) planning can support this strategic work.

At the core of this research is an international, comparative, in-depth case study of two medium-sized cities with long-term shrinkage — Den Helder (The Netherlands) and Zwickau (Germany). The case study examined their development strategies over two decades, analysed the spatialisation of the strategies, and identified the local factors contributing to the differences between the two cities. This led to the mapping of comparable structures of long-term development strategies and the spatial logic behind them, and the relation of key strategic features, from agenda-setting to approaches to strategic projects, to institutional and spatial local factors. The study has demonstrated that shrinking cities, with a combination of state support and local strategies, can not only stabilise themselves but also develop a positive long-term perspective by setting the terms of their course of shrinkage. From this perspective, localised growth and shrinkage are development dynamics in the sustainable transformation of shrinking cities. Central to forming this long-term perspective are the complementary goals of adaptation and transformation, structural objectives for qualitative development, and an approach to strategic processes that combines elements of both long-term planning and incremental adaptation. These elements are built upon ideas from diverse stakeholders and local organisations with development competences, and emerge from their interactions, coordinated actions, and collective learning. Embedded in this broad process of strategy-making, strategic spatial planning can take on the key function of integrating and synthesising policies at a level of long-term thinking, fundamental orientation, and action coordination, with a place-oriented emphasis. It critically depends on collective learning, commitment to transformative changes, and a supportive institutional framework for place-focused spatial planning.

This research also indicates that the stability of population development, resource availability, and institutional capacity constrain the emergence of long-term strategies. This indicates that to achieve meaningful long-term development, shrinking cities need sufficient support from higher-level governments to develop strategies at the level required to pursue long-term strategies for resilience-building. Otherwise, their piecemeal tactics might not effectively lead to necessary structural changes.

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1

Introduction

Since urban shrinkage first emerged as a global pattern of urban challenge (Martinez-Fernandez et al., 2016; Oswalt & Rieniets, 2006), local policymaking has gone through surprise, resignation, and resolution. The negative impacts of drastic population shrinkage on the local housing, social and technical infrastructure, inner-city economy, and public spaces often trigger further outmigration due to the worsening quality of life. The loss of the young and mobile population groups could lead to brain drain, weakened social structure, and low morale in the local community (González-Leonardo et al., 2021; Hospers, 2013). In the early phases, local policymakers have tried traditional growth tactics to break the vicious cycle. However, the structural local disadvantage as well as the overbearing globalisation process mean that shrinkage has no quick fix. Urban shrinkage has become a tricky problem that few cities could constructively acknowledge and tackle (Wiechmann & Bontje, 2015). However, state-funded programmes combined with local innovations have shown that the acute challenges could be effectively countered (Bernt, 2009; Bernt et al., 2012). Meanwhile, social and ecological innovations to substitute failing technical infrastructure showed a promising direction for shrinking city development to contribute to sustainability in ways that growing cities could not (Herrmann, Schwarz, et al., 2016; Schilling & Logan, 2008; Tomay et al., 2014). As demographic structure in many developed countries sets the stage for shrinkage in the long term, researchers and policymakers have begun to fundamentally re-envision the path of shrinkage as a normal process of organising urban systems to population changes, just as the path of growth does, where shrinking cities can aim for the goals of prosperity, quality of life, and other socio-ecological progress (Hirt & Beauregard, 2019; Oswalt & Rieniets, 2006; Sousa & Pinho, 2015). The need for a new mindset, new instruments, and different planning approaches for the challenges and opportunities of shrinking cities has come to be seen as the need for a ‘paradigm shift’ in planning and development policies (Hospers & Syssner, 2018; Martinez-Fernandez et al., 2016; Müller & Siedentop, 2004; Pallagst & Wiechmann, 2004).

However, what strategies, actors and instruments does steering the path of shrinkage entail? Instead of dealing with these elements as separate elements and coming up with a toolkit for shrinking city development, this research follows the avenue of strategy-making to develop a holistic understanding of the planning tasks entailed in the path of shrinkage, what strategic planning work is needed, and how strategies can emerge from the local policymaking landscape.

1. Research gap

1.1 Strategy-making versus ‘policy-making’

A missing piece in the shrinking cities research that could help to understand the planning challenges in shrinking cities and connect them to practical policymaking is a local perspective on strategy-making. What strategy-making accentuates, compared to general policymaking, is a long-term perspective for complex, dynamic situations, aimed at guiding actions that are not exhaustively specifiable towards a goal. Thus, it is a necessary perspective for the question of urban development, which, as Brugmann (2012) describes, is a ‘domain of strategy’ with its own complexity situated in local contexts. General policymaking might take on sectoral issues and build solutions from a repertoire of existing political agenda, good practices and instruments. Such a generally adopted repertoire can be seen as a policymaking ‘paradigm’, such as the growth paradigm underlying the growth-oriented pattern of urban planning development. Are the elements of a paradigm sufficient to understand and inform creative planning on a path of complex changes? The critique of the growth paradigm, such as the so-called ‘knee-jerk reactions’ to counter shrinkage with traditional growth tactics (Hollander & Popper, 2011), shows

the danger of taking pieces of the larger problem and treating them with elements of an established paradigm. Proposing a new planning paradigm for shrinkage serves the work of theorisation by illustrating alternative ways for urban development, but would it not have the same weaknesses, were it to become established and entrenched practice? How should cities identify the right moment to switch from the growth paradigm to the shrinkage one?

In contrast, strategic planning is a situated practice from the local perspective to negotiate realistic transformations for long-term goals (Albrechts, 2016). It often involves scanning the environment, positioning oneself, exploring goals, integrating agendas, and identifying actions in various temporal frames (Albrechts, 2004). This local perspective thus highlights path dependency, competing political agendas, and institutional limits in the theorisation of planning strategies for the path of shrinkage. Firstly, at the local level, global sustainability and its various socio-ecological agendas have such a temporal and political horizon that they cannot be a constructive leading goal for local planning to clearly address the more immediate challenges of interlocked interests (cf. Brugmann, 2012). Secondly, path dependency refers to how factors shaped by previous developments and decisions, as well as existing power relations — such as the existing spatial structure and building stock, locked-in investments in infrastructure, interests of private actors — could limit the possibilities of redeveloping infrastructure, redesigning urban spaces and reinventing lifestyles (Liebmann & Kuder, 2012; Van Assche et al., 2020). Finally, given limited financing and planning instruments, cities might or might not be able to steer certain aspects of their urban development. Strategy-making means working with all these ‘messy’ factors to bring about the most important changes.

A possible situation that shows the difference between making simplistic policies and developing strategies: the social department grapples with the rising proportion of elderly people in the city. It can either address the problem directly by making policies only about the quality of life of elderly people, such as promoting housing branded for this group. Or it can link this issue up with that of attracting young people and revitalising urban centres, to develop a strategy with the planning department that promotes apartments suited to both groups and mixed on an areal scale, simultaneously bringing consumers closer to service providers in urban centres.

1.2 From solving problems to a path of progress

Strategies for path creation go beyond the current problems, binding the framing of the past, the current solutions, and the future vision in a mutually constraining relation (Gáspár, 2011). In other words, the approach to current problems could well shape the room of manoeuvre, or path, towards the future. Therefore, the theorisation on planning for shrinking cities should give more attention to long-term development strategies. Much of the research on shrinking city planning has concluded that cities have to accept and constructively confront shrinkage (Pallagst, Fleschurz, & Said, 2017; Wiechmann & Pallagst, 2012). Empirical studies indicate that policymakers also focus narrowly on solving problems stemming from shrinkage, and have not sufficiently integrated other urban development goals (Bernt et al., 2014).

However, the idea of shrinkage as a path of development aims for a broader understanding of shrinkage that goes beyond problem-solving. In some countries, shrinkage has been around for many decades, and local governments have fully accepted it as a framing condition to planning. They know they must deal with shrinkage, but what can they do for the future? For the young generation, business and property owners, the future of shrinking cities cannot only be a greener city and with just liveability and no hopes for regaining prosperity (Bock, 2019; Panagopoulos et al., 2015). For many non-metropolitan cities in shrinking regions, a path of regrowth is unlikely. How could a path of shrinkage lead to prosperity?

Lacking ideas for this, policymaking in many cities cannot approach long-term strategies (Kühn, 2012), which reinforces a lack of long-term vision. Thus, there is a need for more research on long-term strategies that explore futures of shrinking cities in the local visions, hopes and approaches. Such research might also show the light at the end of the tunnel for cities coming to grips with shrinkage, because if shrinkage can be a normal path of development towards prosperity and progress, it need not be stigmatised or feared.

1.3 From tactics to strategies

Research on shrinking-city planning has made a strong case for the inadequacies of a planning paradigm based on assumptions of growth and has argued for a paradigm shift. Under this framing, the co-existence of growth and shrinkage in shrinking cities is often seen as a paradox or inconsistent policies (Rousseau, 2009; Schatz, 2017; Slach et al., 2019; Sousa & Pinho, 2015). If cities shrink, would building new infrastructure not lead to more problems? Furthermore, the paradigm shift away from growth could be misunderstood as an imperative for downsizing or degrowth. Such an imperative would elicit much opposition from the practice, because under certain circumstances, new housing and infrastructure could renew infrastructure and improve the quality of life for the local population (Ehrenfeucht & Nelson, 2020; Slach et al., 2020; Tighe & Ganning, 2016). Nevertheless, social inequality driven by gentrification often sparks debates on regrowth tactics and cautions against an overly ambitious aim for the quality of the urban environment (Ali et al., 2020; Fol, 2012). Therefore, quality of life is no failproof argument to justify an expansion or upgrade of infrastructure, since there is no benchmark regarding what quality of life is (in)sufficient.

This lack of clarity on regrowth, redevelopment, and attracting new residents underlines one thing: a fixed stance on growth and shrinkage is unconstructive for local strategy-making. From a local point of view, decisions for growth could make sense as tactics to sustain or revive an urban area, given the opportunities to work with (Schatz, 2017). And if the development can act as a catalyst for sustained improvement in wider urban areas, the benefits could outweigh the downsides. Therefore, the real question for shrinking city strategy-makers is not the contradiction between growth and shrinkage tactics. Tactics are the purview of the non-powerful, who can only adapt to the environment created by the strategies of the powerful (De Certeau, 1984). The question is, instead, how the public sector can steer these opposing forces so that their combined results make sense for the long-term and spatial development — in other words, how to achieve a greater level of strategic-ness.

2. Research questions and research design

Against this background, this research aims to understand the tasks of strategic planning for shrinking cities towards a path of development and to evaluate the instruments needed for this strategic work. The overarching research questions are:

- What does shrinkage as a path of development mean for planning?
- What strategic planning work is needed to steer urban development under shrinkage?
- How can spatial planning support this strategic work?

These research questions have been successively developed over the course of this research between 2019 and 2024, driven by the interplay between literature and empirical data. At the beginning of my PhD, I was mainly interested in finding out what should be planned and how, aiming at a solution for ‘adapting’ strategic planning in shrinking cities to better address the challenges of shrinkage. However,

through empirical findings, I have come to realise two things that have changed the way I formulate my overall research questions and answers. To begin with, the understanding or framing of shrinkage as a path of development is fundamental to the extent and depth of strategic planning work. This means I should not simply recommend what and how to make strategies without theories for the framing. Furthermore, my case study has shown that a broad range of policymaking processes and instruments, as well as temporal dynamics, are key to the development of effective strategies. This is more than what strategic planning, as we know it in urban planning, can cover, and it is also unrealistic to suggest a form of planning to unify all these factors. Therefore, I decided my answer should be about the role of this one instrument in the context of the necessary strategic work. I believe this eventual choice for an existing instrument also helps to connect this research to the planning practice.

The empirical study examines planning strategies and the factors that constrain their development in shrinking cities. It is designed as an international, comparative, in-depth case study of two medium-sized cities with long-term shrinkage. The selected cities were Den Helder (The Netherlands) and Zwickau (Germany). Den Helder had a population of 56,300 in 2020 and has been shrinking at an annual rate of 0.2% from 2010 to 2020. Zwickau has a population of 88,690 and has been shrinking at a rate of 0.6% during the same period. Both cities have dealt with shrinkage for decades, and a relatively synchronised timeline: their most drastic population loss is related to the end of the Cold War, and they established their first city-wide policies around the year 2000 and updated them with more comprehensive frameworks in the early 2010s.

The selection of cases drew on the ‘most-similar’ setup (Gerring, 2016), aligning the variables of the experience and willingness (municipalities have acknowledged and been dealing with shrinkage for a long time), complexity of development tasks (the cities are medium-sized regional centres), and financial capability (the cities have a stabilised economy and receive state subsidies). This was intended to isolate the factors, especially the severity of shrinkage, leading to different strategies. The research was conducted with the awareness of their other differences, for example, in national planning systems and local actor constellations, which were balanced with a holistic, context-sensitive approach (Yin, 2017). The choice of medium-sized cities is due to the ambiguity of the regrowth potential of medium-sized cities, which creates strategic complexity through uncertainty. At the same time, medium-sized cities incorporate typical urban characteristics while having a less complex spatial structure than metropolises, allowing a cross-scale perspective in line with ‘place development’, attending to both the city as a whole, neighbourhoods as parts, and the interrelation between the two scales. The selection of cases from different countries is to take advantage of the diverse strategies generated by different planning systems and cultures to expand the knowledge and theories on this shrinking city research topic, in view of its global nature (A. Haase et al., 2017; Pallagst, 2010).

Mixed methods were used for data collection and processing in a manner of ‘triangulation’, i.e. multiple sources and methods were used to seek convergence and corroboration (Bowen, 2009). Specifically, semi-structured interviews and document analysis, complemented with direct observations (including unplanned interaction with residents). Quantitative data is also collected and analysed, especially the development of population and vacancy at the city and the neighbourhood scales, to corroborate qualitative assumptions and findings as well as to provide context for understanding observed social processes. The approach of Grounded Theory was used to systematically analyse the data through first- and second-order coding, and identifying aggregated dimensions to construct concepts and theories (Gioia et al., 2013). The concepts were represented as the mapping of structures of development strategies for dealing with population shrinkage, including measures, objectives, long-term goals, and

general approaches, while the main factors constraining the strategy-making were related to these strategic elements in a higher-order model.

In a further step to shed light on the spatialisation of development strategies and spatial planning, the same cases were analysed again with additionally collected data. The comparison is aimed to find out, firstly, if the proposed perspective for spatialisation of strategies captures how things are in different situations of shrinkage, and secondly, what local factors are key to the spatialisation of strategies. Apart from the similar variables identified for the first round of comparative study, their similar spatial structure (core — inner city — green space — large housing estates on the outskirts — some detached suburban settlements) and an internal population trend of centralisation have become central to the case study design. The data I collected for the previous study covered many policy fields and served as a solid background for a deepened analysis of spatial strategies. New data, especially at the neighbourhood scale and about specific projects, were collected to increase the data 'resolution' and to corroborate theories. Instead of grounded theory, a more interpretive approach and abductive reasoning were applied here, because the statistical significance needed for systematic concept construction did not exist this time for the smaller pool of subjects and documents involved in spatial planning.

3. Literature review

Because Chapter 2, the first published article, is a literature review on shrinking city development in connection to sustainability, and the two other articles have their own literature review sections, this section does not thoroughly review all relevant literature. Instead, it outlines the strands of thoughts in the literature that drive the fundamental rationales of this research, including research that has been newly taken into account after the completion of the three articles.

3.1 Planning for shrinking city development

Population shrinkage impacts the viability of infrastructure and housing stock, as well as the vitality of the local economy and social sphere, often in a self-enhancing vicious cycle (Bontje, 2004; González & Vigar, 2010; Hackworth, 2014; Hospers, 2013; Moss, 2008; Strohmeier & Bader, 2004). The understanding of population shrinkage with the background of globalisation goes beyond traditional conceptualisation of urban decline, highlighting the structural, long-term nature of the process and the ineffectiveness of boosterism tactics (Cunningham-Sabot et al., 2013; Annegret Haase et al., 2014; Martinez-Fernandez et al., 2016). Meanwhile, a broad range of research on specific aspects of urban development, ranging from urban ecology, to cultural initiatives, to experimental governance and to community ownership, has shed light on the innovative potential in shrinking cities to break away from the traditional pattern of urbanisation (Herrmann, Schwarz, et al., 2016; Mallach, 2006; Matyushkina et al., 2023; Schilling & Logan, 2008). Therefore, urban shrinkage should be treated as a development condition side by side with urban growth: both are not free from challenges, but both can lead to desirable progress (Hirt & Beauregard, 2019; Siebel & Häußermann, 1987; Sousa & Pinho, 2015).

A central conclusion of research on planning for shrinkage is that planning has to reorient itself away from assumptions of growth and deal with shrinkage constructively with an emphasis on the quality of life, otherwise it risks doing more harm than good (Müller & Siedentop, 2004; Pallagst, Fleschurz, & Said, 2017; Pallagst & Wiechmann, 2004). However, there are few conclusive theories on what planning should primarily aim for in shrinking cities, especially regarding regrowth and shrinkage. Many cities, despite acknowledging and managing shrinkage, still aim for regrowth and employ mixed strategies, or

temporary use as a waiting strategy (Dubeaux & Cunningham-Sabot, 2018; Ivanov, 2022; Mallach, 2017; Schatz, 2017). The driving force is the continued dominance of neo-liberal logic in shrinking cities that follows downsizing as well as regeneration (Ali et al., 2020; Berglund, 2020a; Bernt, 2009; Hackworth, 2018). It is thus proposed that a pragmatic approach — context-sensitive application of ‘shrinking smart’ — could direct development, despite a growth-aspiring local mindset, towards managing shrinkage (Ivanov, 2022). Well-designed regeneration programmes could limit the effects of displacement and provide new infrastructure for surrounding areas (Ehrenfeucht & Nelson, 2020; Slach et al., 2020; Tighe & Ganning, 2016). However, the possibility of regrowth is notably differentiated between large cities, which have better chances of regrowth, and small/rural cities, which tend to manage shrinkage for the long-term, as a result of global processes and the availability of external investments (A. Haase et al., 2022; Kinossian, 2018; Leick & Lang, 2018). For medium-sized cities, the emphasis, such as in Germany, on basic living standards through ‘central places’ maintains the viability of their service provision infrastructure (Federal Ministry of Transport & Affairs, 2006), which, however, does not guarantee the attractiveness of the lower-level centres and a population recovery.

The spatial aspect of planning strategies is relatively under-researched. Shrinkage could impact the quality of life and image of wider areas in a vicious cycle, and drive population into the suburbs, leading to unsustainable sprawl development (Daniel, 2010; Prenner et al., 2020; Slach et al., 2019). It is therefore important to steer this process spatially city-wide, so that the deurbanised areas do not erode the function and quality of adjacent areas — notable approaches include compact (centralising) development, urban archipelago, and green infrastructure (Hollander et al., 2009; Schilling & Logan, 2008). However, compact city policy might be ineffective to achieve resource efficiency when it does not consider social factors, e.g. people’s residential preferences (Sakamoto et al., 2018) or the value of community culture (Lehtinen, 2018) and spatial factors, such as the spread-out structure of auto-oriented cities (Wiersma et al., 2017). Extreme resource centralisation, such as CBD redevelopment at the cost of spatial triage, can be questionable tactics with limited contribution to the quality of life of the broader population (Berglund, 2020b). Therefore, the spatial management of shrinkage must take a holistic approach. Meanwhile, within shrinking cities are in fact differentiated and/or fragmented spaces, which should not be generalised into one single shrinking entity (Silverman, 2018; Weaver et al., 2016). The sensitivity to local spatial diversity and connectivity is especially called for in the design of regeneration to positively influence the wider area (Slach et al., 2020; Tighe & Ganning, 2016).

Finally, there is relatively less research on how strategies are made or should be made in shrinking cities. One focus is on how policymakers come to address shrinkage through their perception or interpretation of population decrease (Ivanov, 2022; Pallagst, Fleschurz, & Said, 2017), or through policy windows — the alignment of problems, policies, and politics (Bernt et al., 2014). Strategic planning has been called for as an essential process for various stakeholders to find long-term orientation after the initial shock of shrinkage (Kühn, 2012). In many shrinking cities, there also lacks an overall spatial approach to manage the shrinkage and regeneration process (Strauß, 2012). Finally, Eraydin and Özatağan (2021) have applied resilience as a lens to evaluate shrinking cities policies. In this context, resilience has three key features — recovery / bouncing back, adaptation / re-orientation, and transformation and creative change — corresponding to absorptive coping capacity, adaptive capacity, and transformative capacity (ibid.). In the context of shrinkage, resilience as a frame could help planning to focus on the goal of regaining self-reliance and entering positive cycles, without dwelling on specific strategies (see Chapter 5 Section 1.2).

3.2 Strategic planning in organisations

Within the many theoretical schools of strategic planning and various taxonomic systems, the differences between two strategy-making models, the linear model and the adaptive model, are the most fundamental (Wiechmann, 2008b). In the linear model, strategic planning is about consciously making a centralised plan and implementing it in a top-down manner, based on a positivist understanding of rationality, comprehensive analysis of external and internal factors, and a relatively static picture of the environment in the process of implementation (Mintzberg et al., 2005). The rigidity and autocratic tendency of such planning are rejected on democratic principles (K. Popper, 1945, 1957) as well as the understanding of the 'bounded rationality' based on the lack of absolute knowledge and unlimited cognitive power (Simon, 1969). In real-world practice, this model does not capture imperfect implementations, abandoned plans, and improvised strategies. The adaptive model places less importance on predesigned plans, but rather, emphasises the orientation of decentralised actions with visions / frameworks, as well as collective learning to adjust to a dynamic world (Mintzberg et al., 2005). The stream of decisions of various actors in the process of doing is the formation of strategy, while the capturing of strategies in a salient form is a task for retrospective interpretation. As a more radical version of adaptive model, the disjointed incrementalism, or 'muddling through', abandons big plans and drastic innovations and focuses, instead, on limited aspects in complex or conflicting situations, to find out good policies through small, experimental adaptations of existing instruments (Braybrooke & Lindblom, 1963; Lindblom, 1959).

However, radical incrementalism as decentralised actions without the steering hand of a long-term vision could also mean inconsistency, leading in circles, and/or giving in to inertia. Therefore, many theories emphasise a mixture of elements from both models, combining the rational, deliberative approach with the decentralised, adaptive approach. Examples include 'mixed scanning', where various levels of strategy-making, from the fundamental decision-making to the incremental adjustment, complement and interact with each other (Etzioni, 1967) and logical incrementalism, where a central rationality observes and integrates the best elements emerging from decentralised actions, as a kind of strategy-management of the otherwise unsteered incremental process (Quinn & Voyer, 1998). In both the adaptive and the hybrid models, learning from acting is the essential link that enables adjustment of strategies to a dynamic world. It is not only about trial-and-error in the individual process, but also reflecting on decentralised actions of all actors to find out the best (possibly unexpected) patterns of actions to achieve the goal and then choose to enhance these patterns (Mintzberg et al., 2005).

It is important to note that strategic planning for cities cannot be equated to organisational strategic planning for at least two reasons (Liu, 2022). On the one hand, the limited spatial resources do not allow too much autonomous action or evolutionary emergence of a dominant course; to avoid fragmented development, a centrally formulated, long-term spatial logic is needed (Albrechts, 2016; Albrechts et al., 2003). On the other hand, urban governance structure, unlike organisations held together by legal statute and running operations, does not automatically exist. It is planning processes that bring actors together and keep them together through consensus- and trust-building, face-to-face interaction, co-production, and institutional design (Albrechts, 2015; Healey, 1997; Innes, 2004).

Finally, a narrower understanding of strategy is based on intentional action, resulting from cognitive information processing and calculation (Kühn, 2012; Raschke & Tils, 2007). However, organisations and cities do not have physical heads or biological cognitive processes. Organisations and public administrations have a leadership level, which can articulate and instruct the carrying out of strategies

with internally united intentions. But in cities, the private sector and the public sector are not always acting in unison. They may collaborate on a limited range of issues, whereas their other actions are not centrally integrated. The actions — or non-actions — might contradict each other or evolve into parallel paths, but nevertheless shape urban development (Liebmann & Kuder, 2012; Wiechmann, 2008b). The perspective of strategy as an emergent pattern is therefore important for the approach of this research, which goes beyond analysing officially articulated plans to find out the strategic patterns that shape the urban development.

3.3 Strategic planning for urban development

After the retreat from ‘big plans’ to project planning and formal planning in the 1980s, local levels started to take the initiative of strategic planning in the late 1990s, realising that long-term, strategic perspectives and integration of agendas are necessary for resource efficiency, cross-agency coordination, and competitiveness in a continental urban landscape (Salet & Faludi, 2000) (Albrechts et al., 2003).

The new form of strategic planning reinvented itself from the positivist paradigm of masterplanning with a new understanding of space. The positivist approach in the 1960s and 1970s sees space as a container for objects, with the linear, physical distance as its governing dimension (Davoudi, 2012; Graham & Healey, 1999). The relational view holds that — in the contemporary world of heightened mobility and information — space is inherently time-space, dynamic and always ‘becoming’, composed of processes and experiences across physical space, overlapped, interlaced, and/or colliding (Amin & Thrift, 2002; Graham & Healey, 1999; May & Thrift, 2003). To capture the fluid spatial dynamics, planning representations often employ metaphorical expressions rather than delineated, accurate geometry (Healey, 2004). Specifically, the following spatial concepts have been used as analytical concepts in Chapter 4:

- ‘Place’ is space given meaning, socially constructed through physical and social experiences, often contested by different groups, and shaped by its interactions with the outside world (Lefebvre, 1991; Massey, 2012).
- ‘Territory’, a bounded space, is criticised for being counterproductive for tackling fluid relations reaching across borders and scales (Graham & Healey, 1999), but is also necessary for anchoring institutional responsibilities in space (Allmendinger, 2017; Jessop et al., 2008).
- ‘Network’ discerns relation-sets that remain separate even though they stretch over the same physical space. A network connects certain places and groups while bypassing others; the global economic network often manifests at the local scale into fragmented development (Castells & Cardoso, 1996; Graham & Marvin, 2001; Massey, 2012).

Parallel to the above-described ‘relational shift’, another key ingredient for the reinvention of strategic planning is the understanding of planning rationality. From the once dominant positivist paradigm of rational planning, diverse other forms of planning figure prominently in contemporary practice: planning as communicative practice, as (organisational) coordination, and as frame-setting (Alexander, 2000). These planning paradigms fundamentally draw on one or more of the different types of planning rationality (ibid.). The plurality of rationality is also at the centre of strategic planning (Albrechts, 2004). With instrumental rationality (Weber, 1922), planners look for the best way to achieve goals. However, the formulation of substantive content, including goals and actions, is essentially based on communicative and value rationality. Communicative rationality (Habermas, 1984) requires actors and stakeholders to be incorporated into the planning process as strategy-makers and agents of change.

Value rationality (Weber, 1922) plays a key role in demanding and choosing changes because of their intrinsic values. The drive for change is closely related to strategic rationality for addressing the inclusiveness and empowerment of weaker groups (Flyvbjerg, 1996). The products are not uniform masterplans, but rather strategic elements with complementing levels of abstractness and temporal horizons, including long-term visions, orienting concepts, frameworks, institutional design, and short-term actions or strategic projects (Albrechts, 2004). Strategic spatial planning is as much about process, institutional design, and mobilisation as it is about the development of substantive theories (ibid.). This echoes the framing of strategy as institutional capacity building to temper boom-and-bust cycles (Van Assche et al., 2020) and strategy as institutional infrastructure for place development (Healey, 2009b).

These theories converge into two prominent normative characteristics of strategic planning. Firstly, the aims are place development. 'Place' mobilises attention to an urban area holistically, embodying 'its connectivities and the relation between its parts (people and groups, places and neighbourhoods) and the "whole" (the city, or urban region understood as an entity), and the relations with wider systems which flow through such an area' (Healey, 2009b). The qualities of a place describe the physical and social experiences of an urban area in a larger context, including the higher-order patterns of dynamics such as mental images, functions, and connectivities; they are important for quality of life, environmental well-being and economic vitality (Healey, 2007). Place development should be a communicative governance process of socially conceptualising shared identity, agenda-setting, and enacting changes (ibid.). Secondly, it focuses on long-term issues beyond day-to-day concerns, questions the status quo, and brings about 'deliberative paradigm change' or visions of a different future (Friedmann, 2004; Healey, 1997; Sorkin, 1984). Albrechts (2010) further expounded the ethical dimension of this fundamental change in the context of socio-ecological challenges of the 21st century in line with transformative theories. This echoes with the plea for going beyond sustainability as sustaining the traditional pattern of urbanisation and aiming for a better future, where people and the environment can flourish (du Plessis, 2012). On a more practical level, this research applies the term transformative development to describe changes in existing urban land use and functions to meet the needs for holistic urban development, which are often hampered by institutional inertia and private interest. Chapter 5 also uses 'transformative' to characterise a strategy that aims to influence the fundamental development conditions instead of focusing on problems on the surface.

However, the practice of strategic planning does not always reflect the same normative characterisations (Ziafati Bafarasat, 2015). In the German planning context, the 'strategic' is less about re-envisioning place futures and 'paradigm change' than it is about the 'integration' of sectoral instruments and collaboration across governmental units and external actors to create solutions for concrete problems (Franke & Strauss, 2010). The communicative rationality in the practice could be narrow, involving organisational units, or broad, involving diverse stakeholders — but still within the frame of the problem-definition and problem-solving. 'Place' as a word distinguished from 'space' does not exist in some languages; German, for example, expresses spatial development and place development with the same term (*Raumentwicklung*).

4. Line of inquiry

As explained regarding the development of research questions, this research has evolved in its focus and perspective. Therefore, it is not built up in a way to answer the research questions one by one. The overall conclusions presented at the end are also not a recapitulation of the findings of each research

step, but rather a synthesis stemming from reconsidering all of them together against the expanded pool of literature and my own experience over time (Figure 1.1).

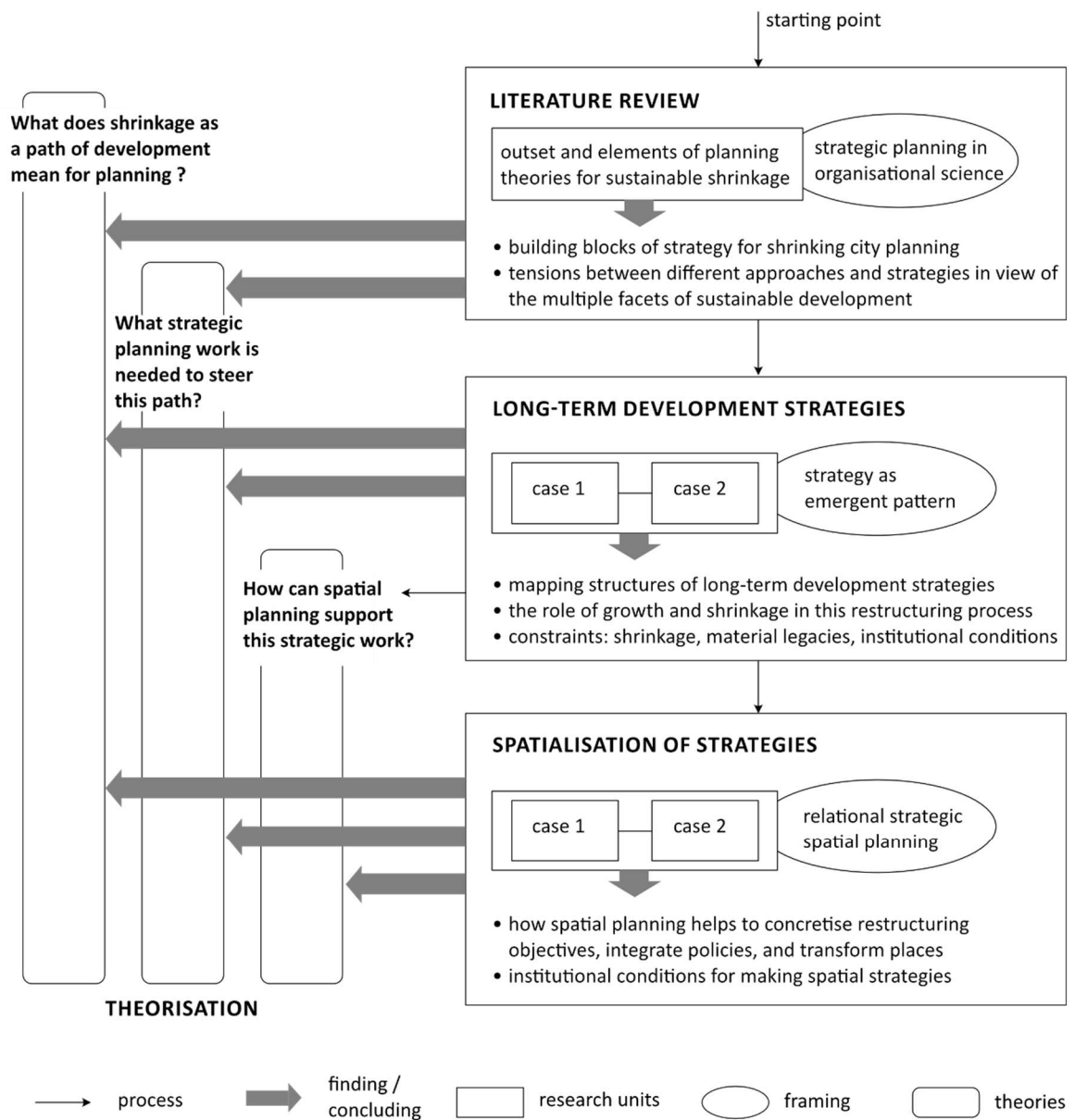


Figure 1.1 research framework

4.1 Understanding the 'paradigm shift'

I started by examining the outset and elements of the implied paradigm shift in shrinking cities research. The starting point is the position of the shrinking cities research community that planning strategies for shrinking cities should differ from those for growing cities. Yet this new 'paradigm' has not been captured in coherent theories in the literature and lacks a relation to strategic planning. At the same time, most of the studied policies of various urban actors could be understood as some kind of strategy that followed certain social, ecological or economic goals, which makes my research object, 'strategies', extremely broad; therefore, I conducted the literature review with a perspective of strategic planning from the field of organisational science. The reason to look in the field of organisational science is that theoretical concepts there capture various forms and elements in strategy planning as a general process, in

comparison to theories of strategic spatial planning. Specifically, I mapped elements of goals, objectives, principles and tactics, to understand the strategy-making roles of different theoretical elements in the theorised departure from the growth paradigm. The literature review also identified challenges for these potential strategies, especially the scale-free, sometimes contradictory goal-setting driven by the idea of sustainability.

4.2 Long-term development strategies

The existence of or the potential for the 'paradigm' identified in the previous step needed to be probed through case studies. I aimed at a holistic view of the development strategies of the two cities by analysing policies from the planning department and sectors that are affected by shrinkage, as well as policies / proposals of private actors. But soon it became apparent that these 'current' policies are a snapshot of a stream of policies, where the ones made a decade ago had been realised but the current ones were mostly still words on paper. Without accounting for the historical path and the future direction, it would be impossible to fully understand the meaning of the current policies for urban development. Therefore, I adjusted my focus to study long-term development strategies. This perspective drew on the theories of strategy as an emergent pattern over time, formed by different actors' actions (Wiechmann, 2007) as well as the idea of shrinkage as a developmental path.

I mapped the structure of development strategies for dealing with population shrinkage, including measures, objectives, long-term goals, and general approaches. The intention was to look beyond officially stated strategies to include the influence of tactics and routines, so as to more better understand local factors on strategies through both official and unofficial aspects. The case studies revealed how cities responded from diverse policy fields to stop their sustained shrinkage from worsening, much like in a crisis. Both embarked on downsizing their housing and other kinds of infrastructure, but one pursued restructuring the infrastructure — enhancing some aspects and reducing others — and holistic spatial development, while in the other city, decades of downsizing were not effectively accompanied by broader structural changes. The goal of exiting the crisis mode and developing into a more resilient city appeared to be concretised in the former case — with the medium-range objectives and a spatial framework — but not in the latter. The factors behind this were traced back to the pace and scale of shrinkage, institutional conditions, and material legacies.

4.3 Spatialisation of development strategies

The last research unit is aimed at understanding how spatial planning contributes to the strategy-making in these two cases. Due to my spatial planning and design background, I am familiar with how contemporary strategic plans order growth with structural visions of growth corridors, axes and strategic locations, but how would they spatially order a shrinkage process? At the same time, through the above case comparison, the different approaches to spatial planning and their role in overall strategic formation caught my eye. This step of research is therefore an extension of the previous case study, with the focus on the spatial aspect. New data were collected to update the old ones and to complement information, especially on the local scale.

To find suitable analytical concepts, I went back to the theories of relational strategic spatial planning. Although these theories were constructed for a time of general growth, they have never been exclusively about growth and even explicitly questioned the idea of development as linear growth (Healey, 2004). Nevertheless, few empirical studies on shrinking cities have addressed socio-spatial relations from a perspective of place development, which is, however, the very substance of strategic spatial planning.

Therefore, I analysed whether and how socio-spatial relations were addressed in strategies for shrinkage to identify spatial strategies for organising urban development. For each case, the strategies for shrinkage were analysed at two scales. At the scale of the city, coordinative spatial approaches and concepts as well as strategic projects were examined. The scale of the neighbourhood was examined to find out how growing and shrinking areas are developed and coordinated. The findings showed how spatial strategic planning can help to concretise restructuring objectives and integrate various policy dimensions into a coherent territorial vision, and how localised growth and shrinkage can be spatially leveraged to restructure the urban territory and to regenerate new place characters for urban spaces.

5. Structure of this dissertation

The first chapter, as the introduction to the dissertation, has explained the outset of this research in terms of understanding urban shrinkage as a path of development, the research gap that points to a perspective of strategic planning, and the build-up of the research framework through three publications.

The ensuing chapters will be the three publications themselves, focusing respectively on: the shrinking cities literature, the case studies of long-term development strategies, and the case studies of the spatialisation of strategies. Each publication represents a research unit with its own research questions and conclusions, as summarised above in Section 4.

The last chapter will connect the findings from all three publications to draw conclusions for the overarching research questions and summarise key takeaways for policymaking and future research.

2

Strategies for Sustainability in Shrinking Cities: Frames, rationales and goals for a development path change

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Abstract

Addressing the challenges and opportunities in shrinking cities requires approaches and strategies different from those that have been applied under growth conditions. Research on shrinking cities has generated a plethora of approaches and strategies for the shrinkage trajectory and has identified sustainability as a guiding principle. However, shrinking city development in practice either cannot confront the situation of shrinkage, or does so without an integrative, consistent approach, while the concept of sustainability has ambiguous meanings, giving rise to competing or contradicting rationales. This paper identifies the need for clearer directions for a re-orientation away from the growth-oriented approaches, in conjunction with a critical reflection on what sustainability means for different shrinking cities. Towards this end, it first assembles an overview of the strategic framings behind urban development ideas proffered in the shrinking city discourse, with a focus on the temporal, agential and spatial dimensions and the cross-cutting frame of higher-level interdependencies. Secondly, with a deeper reflection on the inner tensions of the sustainability concept, it distils the key rationales and proposes new strategy-making approaches for a development path change towards sustainable development that responds to different local situations.

1. Introduction

Urban shrinkage is an increasingly widespread global phenomenon (Martinez-Fernandez et al., 2016; Oswalt & Rieniets, 2006; Turok & Mykhnenko, 2007; Wolff & Wiechmann, 2018). Shrinking cities are driven by more than regional factors such as industrial migration and inter-city competition. They are embedded in ‘the great transition’ faced by the global society in the 21st century, including industrial transformation, demographic ageing, and the establishing of a global economic order (Martinez-Fernandez et al., 2016, p. 35). In addition to these trends reshaping the parameters of urban development, there is also the urgency to achieve global sustainability due to the coming end of fossil-energy-fuelled industrialisation, the crisis of cheap mobility, social polarisation and climate change (Audirac et al., 2010; Oswalt & Rieniets, 2006, p. 51). As a structural challenge driven by global processes, shrinkage is considered an increasingly normal trajectory of urban development rather than a temporary interruption of growth (Cunningham-Sabot et al., 2013; Sousa & Pinho, 2015). It presents challenges for urban sustainability (Fol, 2012; Moss, 2008; Slach et al., 2019), as well as opportunities for social-ecological sustainability (Dubeaux & Cunningham-Sabot, 2018; D. Haase, 2008; Siebel & Häußermann, 1987). The challenges behind urban shrinkage go beyond theories of urban decline and conventional planning limited by a growth-oriented mindset, knowledge and instruments. To effectively address the impacts of shrinkage and to steer development under shrinkage towards sustainability, researchers have called for a new planning ‘paradigm’, which includes acceptance of shrinkage as a development trajectory, innovative strategies and integrative, consistent approaches (Hospers & Syssner, 2018; Martinez-Fernandez et al., 2016; Müller & Siedentop, 2004; Pallagst & Wiechmann, 2004).

Over the last two decades, the shrinking city discourse has brought to the fore a plethora of innovative approaches and strategies across policy fields and planning levels, with a common focus on re-orienting away from growth impulses and moving towards sustainable development. However, there are challenges to achieving more impact on practice, especially the establishing of integrative, consistent

approaches. One of these challenges is conceptual: there is a lack of an integrative perspective to channel that abundance of new ideas into coherent strategic rationales; which is inseparable from the (lack of) consideration of the guiding principle. Sustainability, as this paper will argue, can have different policy implications when considered with different temporal, spatial and social parameters, giving rise to conflicting rationales. Systemic inertia for growth-oriented approaches is another challenge. It has been observed in institutional contexts, development mindset, political culture, technical models of development, lack of tools and expertise (Hall, 2009; Kreichauf, 2014; Müller & Siedentop, 2004). This challenges the shrinking city discourse to reflect on its coherence, implications and potential against the existing conditions of urban development.

Thus, this paper assembles an overview of the strategic framings behind development ideas in shrinking city discourse, in order to: firstly, explore the meanings of sustainability as a guiding principle for a re-orientation away from growth; secondly, extract from them clearer directions for a departure from the growth-oriented 'paradigm'; and thirdly, reflect on their coherence with one another and with existing development conditions.

Such an overview needs to take a holistic view of the strategies in the development process, to take up the perspective of local strategy-making, because the latter must integrate vertical and horizontal, formal and informal, and local and supra-local factors. It should also extend its consideration beyond the shrinkage end of the spectrum and connect to growth conditions. This is because, on one hand, growth and shrinkage can alternate in development trajectories and can be spatially concurrent (Wiechmann, 2008a). Thus, the impression of two types of local planning – one for shrinkage and one for growth – with the key strategic choice being a technical matter of switching at the right signals, would not be conducive to strategic thinking. On the other hand, shrinkage should stand alongside growth as a condition to development – which is not necessarily more problematic – therefore, planning should develop the competence to achieve progress under either condition (Hirt & Beauregard, 2019; Sousa & Pinho, 2015). The comparability between the two could be key to facilitating a proactive re-orientation in mainstream development discourses towards accepting shrinkage. Therefore, this paper develops a framework to describe local development strategies in multiple dimensions – instead of categories based on the growth or shrinkage orientation – so that it can capture a holistic picture of local strategies and support more detailed comparative studies.

Finally, the local level is the focus of this paper. This does not mean that the consideration of local actions should be limited to the local scale (see Section 4.4). Strategy-making at this level is challenged by the complexity of integrating diverse factors and is situated in the process of reshaping cities – from developing place qualities (Healey, 2007) to steering development in a long-term 'path' (Liebmann & Kuder, 2012). 'Path' is of key interest in shrinking city studies because it is a heuristic for understanding what has led cities to their current situation and for strategising how they can become more sustainable.

The structure of this paper is as follows: Section 2 reviews literature on challenges to shrinking cities' planning practices and sustainability as a guiding principle for re-orienting development; Section 3 clarifies the essential dimensions of urban development strategy. Based on these dimensions, Section 4 presents an overview of the strategic frames of sustainable shrinkage in contrast with the growth-oriented ones. Finally, Section 5 further distils the key strategic rationales and strategy-making approaches for a local strategic change, based on a deeper reflection on the inner tensions of the sustainability concept and the diverse development conditions of shrinking cities.

2. Departure from growth-oriented planning

Based on the observation of urban shrinkage, researchers have identified the unsustainable consequences and self-reinforcing dynamics of uncontrolled shrinkage processes and argued for policy and planning responses. Because shrinkage as a structural challenge often defies conventional regrowth strategies, without fundamental re-orientation, local responses could be ineffective or could even exacerbate problems. Meanwhile, sustainability – encompassing economic, environmental and social aspects – has emerged as a principle driving a departure from traditional planning.

2.1 Lessons from shrinking cities

Population loss can lead to unsustainable consequences. Firstly, under-utilisation of socio-technical infrastructures resulting from de-population and parallel sprawl development increases public spending and impairs service provision due to higher per capita costs (Hudeček et al., 2019; Moss, 2008; Siedentop & Fina, 2010; Slach et al., 2019; Walther, 2016). The combination of rising maintenance costs and falling incomes can plunge shrinking cities into a vicious circle of declining liveability. Secondly, the quality of the built environment is threatened as the deteriorating quality of life drives further outmigration and depopulation of the city. Decay of the building stock and public space ensues through disinvestment and abandonment (Bontje, 2004). Maintenance and conversion of the building stock are limited, which means its quality and typology no longer keeps up with consumption patterns and drives groups with higher mobility to relocate elsewhere (Schmidt et al., 2015). In time, demolition could become the fate of derelict buildings or entire neighbourhoods. Thirdly, population loss can have a high social cost. Outmigration as a selective process results in a diminished labour force, unbalanced demography and increase of vulnerable groups (Steinführer et al., 2014; Strohmeier & Bader, 2004). Economic decline and lack of liveability can lead to loss of trust in the government (De Groot, 2019; Ročák et al., 2016b). Finally, shrinkage can negatively impact environmental sustainability. The sprawl of urban settlements could continue even during shrinkage as cities compete for residents, leading to lower energy efficiency due to a decentralised spatial pattern and higher per capita dwelling areas, but local governments often lack the knowledge, instruments, means and/or political motivation to deal with this trend (Kroll & Kabisch, 2012; Kübler et al., 2012; Nuissl & Rink, 2005). In regions with already limited population growth, overall sprawl means infrastructure will be over-dimensioned at a regional scale, and new constructions will cause an equal amount of vacancy in other cities (Aalbers & Bernt, 2019; Mäding, 2004). Considering the built environment as a resource itself, the sprawl–depopulation–downsizing cycle is a form of collective wasting (Jakle & Wilson, 1992; Jessen, 2012).

Planning itself plays a role in the making of shrinkage and its unsustainable outcomes (Cunningham-Sabot et al., 2013; Annegret Haase et al., 2014). Under a neoliberal ideology that prioritises economic growth over social and environmental concerns, shrinkage associated with economic downturn is not easily accepted by policy-makers, let alone constructively confronted (Pallagst, Fleschurz, & Said, 2017; Schatz, 2017). The single-minded pursuit of economic development could intensify outmigration (Annegret Haase et al., 2014) and widen social inequality (Fol, 2012), whereas opportunities to make environmental and social progress in ways that growing cities cannot are left unexplored (Knoop, 2014; Siebel & Häußermann, 1987). Conventional strategies rely on external private investment as the main resource, and market mechanisms to regulate property development (Hackworth, 2014; Rydin, 2013); however, in shrinking cities, market mechanisms cannot guarantee essential life services or social justice, nor can they stop the race to the bottom in the housing market (Hackworth, 2014; Jessen, 2012), prevent unsustainable development patterns on a large scale (Kübler et al., 2012), or address the loss of culture

vitality and social cohesion (De Groot, 2019). It has been observed that competitiveness-building, a central objective in the pursuit of growth, drives heavy public investment in expansive strategies that could compromise broader goals (Strykiewicz et al., 2018), rationalises resource concentration on prime sites at the expense of other areas in need (Berglund, 2020b), and unreflectingly applies economic models from metropolitan cities to ordinary cities with diverse contexts (Kinossian, 2018).

Thus, shrinking city development strategies need to be formulated based on a critical reflection on the dynamics of shrinkage and assumptions underlying traditional planning. Research on planning and policy highlights five main lessons. Firstly, due to the stigmatisation of shrinkage, accepting the prospect of long-term shrinkage is the first step in dealing with its impacts (Pallagst, Fleschurz, & Said, 2017). Secondly, dealing with the impacts of shrinkage should start with sustaining the quality of life for the remaining population and making adaptations rather than prioritising competition for regrowth and external private investment (Hollander & Popper, 2011; Knoop, 2014). This requires both recognising the changing demographic and social profile (Steinführer & Haase, 2007; Strohmeier & Bader, 2004) and re-organising socio-technical infrastructures for the new socio-spatial patterns (Müller & Siedentop, 2004). Thirdly, it is essential to have an approach integrating economic, urban environment and social aspects to achieve sustainable development (Bernt et al., 2012; Bernt et al., 2014). Fourthly, planning should attend to social sustainability while dealing with shrinkage, because strategies of gentrification intensify social inequality (Berglund, 2020b; Miot, 2015) while top-down right-sizing could impair social justice (Audirac, 2018; Hollander & Németh, 2011). Finally, planning should make use of the opportunities in shrinking cities for social and ecological sustainability (Dubeaux & Cunningham-Sabot, 2018; D. Haase, 2008; Hall, 2009; Schilling & Logan, 2008) and place-based economies (Leick & Lang, 2018; Pallagst, Fleschurz, & Said, 2017) to create transformative visions in ways that growing cities cannot.

Some of these ideas share the same positions with (strategic) planning theories that are also concerned with sustainable development: planning for changing convictions and envisioning alternative futures (Healey, 1997, pp. 244-245); aiming for quality of life, distributive justice, environmental well-being and economic vitality (Healey, 2007, p. 1); addressing structural issues to achieve long-term goals (Friedmann, 2004); making integrative strategies and coordinating spatial impacts (Albrechts et al., 2019; Albrechts et al., 2003); inclusivity and co-production (Albrechts, 2015; Kunzmann, 2013). However, the experience of strategic planning is mostly with large, growing city (regions), and practice often falls short of these ideals. Meanwhile competitiveness-building, growth orientation and market reliance – key issues for shrinking cities – rarely come into question. The more recent transformative theory goes beyond procedural inclusivity, targeting “the structural problems of capitalist society viewed in a global context”, asserting that “the problems and challenges that regions, city-regions, and cities are confronted with cannot be tackled and managed adequately either on the basis of the neoconservative perspective or on the basis of the intellectual, technical-legal apparatus and mindset of traditional planning” (Albrechts et al., 2020, pp. 1, 3). Transformative practices are more directly critical of ‘the development-as-growth model’ (ibid.) and seek alternative development paths preserving ‘local self-sustainability’ (Hamilton, 2003; Magnaghi, 2005). This perspective shares much context with the shrinking city discourse, namely the global uneven development and the growth- and market reliance of traditional planning practices.

2.2 Sustainability as a guiding principle for shrinking cities

Neither growth nor shrinkage is the actual goal of planning; they are but the condition for development towards the goal. Here development means qualitative change rather than densification or expansion. The goal of planning is to achieve progress no matter which condition it works with (Hirt & Beauregard,

2019; Sousa & Pinho, 2015). Therefore, planning is not about switching between pursuing growth to accepting decline, but making progress guided by values consistent across growth and shrinkage conditions. The question is then: what counts as progress?

Pallagst and Wiechmann (2004) identified sustainable development as a principle driving the departure from conventional regrowth strategies in shrinking cities. This principle considers economic, environmental and social aspects; but operationalised in an era of overall growth, it is nevertheless growth-oriented (e.g. 'smart growth'), which means that the condition of shrinkage would call for a different operationalisation of sustainability principles – such as 'shrinking smart' (ibid.). However, the practice is often focused on physical downsizing, which has implications for social equity (Audirac, 2018) and lacks integration with other policy problems (Bernt et al., 2014). The 'Shrink Smart' reports (Bernt et al., 2012; Bernt et al., 2014) stressed the need to comprehensively address economic development, urban regeneration and social cohesion as keys to sustainable development. Herrmann, Shuster, et al. (2016) approached sustainability for shrinking cities with a complex systems perspective on social-ecological systems; but this view generalises shrinking cities into a type of complex system and speaks little of the context of global processes. Finally, views on 'opportunities' for alternative development accentuate the potential for enhancing ecological services, new green spaces, and alternative lifestyles (Dubeaux & Cunningham-Sabot, 2018; D. Haase, 2008; Siebel & Häußermann, 1987), which is aligned with considerations for global sustainability.

Exactly what counts as sustainability for shrinking cities is still up for debate. Social inclusion and equity is unquestionably a fundamental value in shrinking city planning (Audirac, 2018; Hollander & Németh, 2011), but in the current politico-economic environment, triage measures, and gentrification strategies seem inevitable for preserving the self-sustainability of the city (Kreichauf, 2014; Rousseau, 2009). In terms of economy, the concern for its stability (Herrmann, Shuster, et al., 2016) is overtaken by the debate on what economies there should be, because mainstream economy is often the driver of shrinkage and exclusion (Dax & Fischer, 2018). While some researchers recommend smart restructuring and long-term competitiveness-building (Zakirova, 2010), others realise that some deindustrialising cities may simply need to shrink down to a population sustainable by non-industrial economies (Constantinescu, 2012). Environmental quality can improve through greening after depopulation, but de-densified settlements have lower resource efficiency with high maintenance costs and energy consumption (Großmann et al., 2013, p. 224), contrary to planetary sustainability. Even when a city is socially inclusive and has resource-efficient infrastructures, converting a small town population's lifestyle to the consumptive urban lifestyle could still undermine planetary sustainability (Lehtinen, 2018).

There is no universal definition of sustainability, even though it is a universally embraced value. It works more as a framing device for strategic reasoning, channelling values and principles into specific contexts to generate strategic rationales; the more specific the situation, the more specific the rationales. However, this means a general theory on strategies for sustainability in shrinking cities difficult, because there are different temporal, spatial and social parameters to consider, which also change over time. This leads to different rationales, and these lead to different, even inconsistent approaches and strategies. This conceptual inconsistency side by side with the lack of planning levers, makes a decisive re-orientation with a consistent approach challenging.

Therefore, the following sections will firstly assemble an overview of the framings of urban development from the shrinking city discourse and will use it as basis for a deeper reflection on the multiple facets of sustainability in order to unpack the tensions between different approaches and strategies.

3. Reconceptualising local development strategy

This section develops a conceptual framework of local development strategy as an emergent pattern with temporal, spatial and agential dimensions. Its background is a need for comparative studies on shrinking city development strategies: on one hand, on a general, theoretical level, an overview of the approaches and strategies proposed for shrinking cities is needed to examine how they as a whole depart from growth-oriented approaches and strategies, and how coherent or contested they are – instead of taking the impression of a new ‘paradigm’ for granted. Pallagst, Fleschurz, and Said (2017) proposed a four-phase typology of shrinking cities’ strategies – decline as a vicious cycle, expansive strategies, maintenance strategies, and planning for decline. But more comprehensive reflections need to move beyond typologies. Großmann et al. (2013) suggested that urban policies can be classified based on objectives – growth-oriented or shrinkage-accepting/-mitigating policy responses – or based on a spatial focus, on areas of decline or on areas of growth potential. In addition, the capability of strategy-makers to steer development also fundamentally shapes strategies. On the other hand, there is a need for comparative research to understand specific cases of shrinking city development strategies more comprehensively and consistently for comparison, because shrinking city planning practices often employ mixed approaches rather than single orientations (Schatz, 2017). This two-fold need requires a framework with differentiated dimensions for strategic reasoning to allow for a more holistic and nuanced description of strategies.

Strategy is a course to achieve the fundamental goals of the acting organisation; and a development strategy is an emergent pattern owing to the social, spatial and temporal complexity of its processes (Wiechmann, 2008b). Strategy-making, especially from a descriptive point of view, is not limited to specific institutional arena or procedure, such as spatial strategic planning, because strategies at play in urban processes do not always trace back to this process. In other words, what ends up realised in action is often not what is planned or plannable beforehand (ibid.). A long-term strategy, such as an industrial-commercial path (Liebmann & Kuder, 2012) has different levels of abstraction and is complemented with situated tactics: it starts from the decision to pursue industrial and commercial sectors, but also includes half-planned or unplanned actions of transforming socio-spatial conditions and attracting businesses in response to market trends. Furthermore, in times of crisis, community self-help and co-production initiatives outside the usual channel of centralised strategy-making step in to fill the gap in organised responses, often bypassing plan-making; these actions could slowly become normalised practices facilitated by formal institutions (e.g. Haase et al. 2012; Murtagh 2016). Thus, the narrow definition of strategy as a calculated, predesigned plan of action does not describe strategies in urban development. The latter are products of complex processes characterised by contingencies, socio-material interactions, and distributed, reflexive, foresightful agency. It would help to conceptualise a path change by seeing strategy-makers as actors who steer emergent paths through learning, reflecting, continuously integrating and adjusting (Garud & Karnøe, 2003; Hay, 1995; Mintzberg, 1990; Quinn & Voyer, 1998), cultivating serendipity, constructing opportunity spaces to counteract path dependency (Garud & Karnøe, 2001; Grillitsch & Sotarauta, 2018).

The emergence of development strategies has three essential dimensions:

- The temporal dimension. Strategic planning in urban development is focused on long-term issues (Friedmann, 2004; Sorkin, 1984) and achieving alternative futures (Albrechts, 2015). In such large time frames, complex temporal dynamics shape strategies beyond the point of plan-making, and managing these dynamics is key to path development agency (Grillitsch & Sotarauta,

2018). Approaches to manage temporal complexity include examples such as ‘perspective incrementalism’ (Karl et al., 1993) and ‘mindful deviation’ (Garud & Karnøe, 2001). In short, strategy-making in the temporal sense seeks to shape impacts of different temporal scales into a path towards fundamental goals. Goals can be orientating concepts rather than only fixed targets (Bryson, 1988; Czarniawska & Gagliardi, 2003). Path creation focuses on how a path is observed, reflected upon and incrementally steered. It is not contradictory to transformative goals of a departure from the current path towards alternative futures, but instead of drastic changes, it considers persistent, incremental changes to counter systemic path dependency to achieve alternative futures (Gáspár, 2011).

- The agential dimension. The shift towards governance in development strategy-making is key to planning for complex urban areas because it harnesses the imagination of social framing and mobilises distributed agency (Healey, 2007). This approach leverages the power of communicative rationality, which emerges from multiple actors and creates strategies differently than individual rationality (Albrechts, 2004; Alexander, 2000). Furthermore, considered along temporal complexity, agency, instead of being predefined, changes with the dynamic socio-material circumstances (Garud & Karnøe, 2003; Garud et al., 2010). New paths can emerge through abilities given by new circumstances, choices to adapt visions, and redefining what counts as power. Such distributed and embedded agency can be fostered by more complex strategic approaches, for example the ‘bricolage’ model (Garud & Karnøe, 2003) and institutional capacity-building through transitional governance (Van Assche et al., 2020). Therefore, strategy-making is also about cultivating and channelling agency to drive urban development.
- The spatial dimension. Strategic spatial planning coordinates economic, environmental and social processes in their spatial manifestation to achieve more coherent and efficient spatial development, especially when there is high pressure from competing and/or conflicting demands over spatial resources (Albrechts et al., 2003). Because given time, distributed spatial changes could build up transformations of socio-spatial patterns (e.g. patterns of land use, density distribution, and segregation, and structures like centre–periphery, clusters and networks), and these result in the change of dynamism and potential of the city as a whole. Meanwhile, viewed in relation to the agency dimension, space as socio-material settings is not only a passive receiver of impacts, but also presents constraints and bottom-up forces, such as infrastructure legacies and their governance arrangements, socio-spatial profiles shaped by previous economies as well as endogenous natural and cultural resources waiting to be re-discovered (Liebmann & Kuder, 2012; Van Assche et al., 2020). Strategy-making on the spatial dimension is about negotiating changes between top-down and bottom-up forces and shaping their accumulated effects on the territory.

The three dimensions are inextricably intertwined in development strategies. Path dependency is rooted in the socio-material legacies found in the territory (Liebmann & Kuder, 2012). Path creation is constrained by the community’s sense-making of the past, the present and the future, knowledge, imagination, capabilities and resources, and distributed across diverse groups present in the territory (Healey, 2007). The territory, on the other hand, hosts the socio-material manifestations of former and co-existing paths created by the agency of changing regimes. Agency can be included or excluded by narratives, visions and agendas and can also change with local conditions. Transforming urban spaces, e.g. into forms of green spaces, can increase residents’ control of these spaces (Oswalt et al., 2013;

Schilling & Logan, 2008; Siebel & Häußermann, 1987); and the dominant approach of development often impairs such agency by reducing ‘dwellers to consumers, and the territory to a mere physical support’ (Albrechts et al., 2020). To sum up, the dynamics of the three dimensions continuously interact and offer windows of opportunity for path change.

In addition to these three fundamental dimensions, one cross-cutting mode of thinking is characteristic of contemporary development strategy-making, namely the embedding of local level strategies in the multiple layers of higher-level interdependencies. In other words, the local level makes strategies on local territory, but with the intention to react to or shape conditions on supra-local scales by leveraging relations with other places and levels. This kind of relational thinking is key to strategic planning and governance (Healey, 2007) and to competitiveness-building (Sorkin, 1984). For shrinking cities, this is necessitated by the global drivers of shrinkage (Martinez-Fernandez et al., 2012).

At different levels of emergence, strategies are captured or formulated with constructs of different levels of abstraction on the three dimensions (Table 1): on the temporal dimension, ranging from vision to tactics; on the agency dimension, ranging from institutional capacity to participation in specific projects; and on the spatial dimension, ranging from cohesion to land use re-purposing; and principles, which are scale-free.

Table 1. Different levels of emergence of strategy (with examples)

Levels of emergence	Temporal	Agential	Spatial
High	Path vision knowledge industry, ageing friendly city	Unspecific form institutional capacity, social capital	Overall character polarisation, cohesion
	Objectives / Milestones housing renewal, employment generation	Arenas of interaction service co-production arrangements, revenue, laws	Model / structure land use restructuring, inward downsizing
	Tactics DIY temporal use, tax incentives	Single form of relations participation in projects, earmarked funding	Single location changes land use re-purposing, building demolition
Low			
Scale-free	Principles liveability	Principles social inclusion	Principles efficient land use

4. Sustainable shrinkage and growth-oriented strategies

This section explores how shrinking city discourse translates into strategy-making frames, including three frames of the temporal, agential, and spatial dimensions and one cross-cutting frame of higher-level interdependencies (summarised in Table 2). To illustrate the main points in sustainable shrinkage strategies, this paper has named some contrasting points with growth-oriented frames. Admittedly, growth-oriented planning can also incorporate sustainability principles, but shrinking city discourse proposes something that can be more productive for development strategies. That is, to manage population shrinkage and its effects in turning the shrinkage trajectory into a sustainable development path, whereas growth-assuming and growth-conditioned rationales rely on growth as a precondition to achieving sustainability. Shrinking city discourse also does not assume that shrinkage-oriented approaches are automatically sustainable for a city, because the aim should be sustainability or other

concepts representing genuine progress (Sousa & Pinho, 2015). Therefore, the following comparison is not a 'symmetric' comparison such as between planning aimed for shrinkage and planning aimed for growth, but serves more to illustrate the thinking behind sustainable shrinkage strategies.

4.1 The temporal frame

In the temporal dimension, strategy-making is about arranging thoughts and actions of various time frames into a desirable path. The temporal logic of path-steering can be viewed in terms of time frames and cross-frame principles: objectives are structural transformations in the medium term, pulled by long-term vision and goals, and supported by actions creating a stable basis in the present while principles are directions that transcend time frames (Gáspár, 2011). Through these temporal strategic constructs, causal knowledge about internal and external conditions of development is channelled into strategies.

Strategic thinking in sustainable shrinkage recognises the global-level drivers of local structural change, including global economic processes, demographic transition and the transition to a low-carbon, more equal society (see Section 2.2). It embraces the vision of a city with a smaller, older population, which nevertheless has a higher quality of life and its own identity (D. E. Popper & Popper, 2002). Without the pressure to attract growth for development and to provide more services, shrinking cities can devote resources to improving the quality of public services and the built environment and make social progress (Hirt & Beauregard, 2019; Siebel & Häußermann, 1987; Sousa & Pinho, 2015). Growth-oriented planning, on the other hand, focuses on increasing the quantity of services, infrastructure and competitiveness assets, because it expects growth and takes it as a necessary condition for urban development. The linear growth model assumes that the population will keep growing and that fluctuation is correctable with further growth stimulation (Banzhaf et al., 2006), which fits in the historical development of urbanisation and de-ruralisation. The urban life-cycle model based on the dynamics of population flow between urban areas in a region (van den Berg et al., 1982; Wolff, 2018) views population change as a result of consumer choices based on each locale's attractiveness. Following this logic, cities should restructure themselves to be economically competitive – especially towards knowledge-based industries – in order to halt or prevent decline (Bontje, 2004; Wiechmann & Bontje, 2015; Zakirova, 2010). However, this model is ineffective for many shrinking cities due to global economic processes and differences in regional conditions (Cunningham-Sabot et al., 2013; Kinossian, 2018; Wolff, 2018).

In strategy-making processes, the point of the present is where pressure to take immediate action often undermines the effort to formulate well thought-through collective strategies and contributes to boom-and-bust cycles (Van Assche et al., 2020). Supporting liveability, social welfare and maintaining the quality of urban environment, can stabilise remaining population (Annegret Haase et al., 2014; Hartt, 2018; Pallagst, Fleschurz, & Said, 2017), which creates a stable basis for learning, experimenting and building up governance capacity; while knee-jerk reactions to reverse depopulation before the complex drivers are understood as often counter-productive (Hollander & Popper, 2011).

In the medium term, structural transformation needs to address social, economic and urban environment issues to achieve sustainable development (Bernt et al., 2012). It takes a different course than that traditionally applied to urban decline – propelling rapid development of competitive assets with capital injection, attracting creative class and external investments over slow endogenous socio-economic regeneration (e.g. Hartt & Warkentin 2017; Stryjakiewicz et al. 2018). For the many shrinking cities with limited resources and no large sums of external funding, restructuring needs to be a gradual change through social and cultural regeneration, social innovation and local agency (Kinossian, 2018). Reorganising socio-technical infrastructures is necessary to regain liveability in cases of substantial

depopulation, but right-sizing and redevelopment should not become a standard quick cure, because they could shift problems onto the vulnerable population (Audirac, 2018; Kirkpatrick, 2015) and undermine the search for more proactive strategies.

The approach of path-steering is inseparable from the structural nature of shrinkage. Firstly, structural transformation takes time, therefore continuous support for everyday liveability and social stability is an important basis of development. Secondly, the task of development is qualitative transformation, unlike in growth situations where solving quantitative shortages is always the challenge. Qualitative transformations involve more than just changes on urban space and require learning and reflection on existing approaches and strategies. Finally, given the long-term nature of the shrinkage trajectory, responding to short-term fluctuations requires flexible and experimental approaches to avoid wasteful developments (Van Assche et al., 2020; Wiechmann, 2008a).

4.2 The agential frame

In the agential dimension, strategy-making is about cultivating and channelling embedded and distributed agency to drive urban development. Such agency critically depends on means and instruments, social capital, and knowledge and tools. Shrinkage is often considered 'intractable' (Wiechmann & Bontje, 2015, p. 2), because these variables have dramatically changed from those under conditions of growth.

In a growth environment, planning can leverage private capital for public work, such as upgrading public facilities and expanding housing. Planning instruments are designed to restrict growth activities and negotiate planning gains (Crook et al., 2015; Logan & Molotch, 2007). Although these benefits are not always viable in the long term or enough to offset negative impacts of growth, the increasing number of jobs and local facilities create a favourable political environment, justifying growth-oriented strategies (Troutman, 2004).

In contrast, shrinking cities have diminished financial means because of shrunken revenue basis and rising per capita expenditure (Hudeček et al., 2019; Mäding, 2004). In addition to lack of means, political pressure to achieve regrowth is high, further preventing productively confronting shrinkage (De Groot, 2019; Mallach, 2017). Cities resort to 'classical strategies' of competing for businesses and middle class residents (Martinez-Fernandez et al., 2016), but these strategies compete for the limited resources also needed for supporting liveability and social welfare in order to stabilise the remaining population (Annegret Haase et al., 2014; Pallagst, Fleschurz, & Said, 2017). Therefore, financial support from higher-level government is essential for stemming a downward spiral and creating some room for adaptation. However, this does not mean that injecting large amounts of public capital in regeneration is necessarily the best strategy for the increasing number of shrinking cities: on the one hand, because public resources are limited and on the other hand, because speculative developments and economies without an endogenous basis could lead to another boom-and-bust cycle and future costs for adaptation (cf. Siedentop & Fina 2010; Kinossian 2018; Rink et al. 2012).

Therefore, financial means alone without strategic re-orientation are not enough. Knowledge of urban shrinkage is needed to confront the reality of shrinkage, create mobilising concepts and guide long-term development (Hall, 2009; Jessen, 2012; Pallagst, Fleschurz, & Said, 2017). Knowledge of sustainable development is key to operating urban regeneration projects; and learning agencies are often conducive to successful long-term development (Bernt et al., 2012). Without learning and conscious re-orientation, capital injection could undermine the path towards a sustainable future and draw growth-dependent

interests back into the planning process (Berglund, 2020b; Stryjakiewicz et al., 2018). Re-assessing existing planning instruments is also a key adaptation process and should include the information system for managing fixed assets, supply-focused land development planning, and instruments for coordinated downsizing and land re-purposing (Bernt, 2009; Hackworth, 2014; Jonsson & Syssner, 2018; Kübler et al., 2012).

In times of growth, involved actors possess capital for an agenda already set for growth. Everyday services are supplied through infrastructure. When growth pressure is lacking, the agenda can no longer be limited to growth and supply increases. Civil society can often play an instrumental role, given the difficult decisions in the right-sizing process (Elzerman & Bontje, 2015; Hollander & Németh, 2011), the need to solve problems with small stakeholders (Radzinski, 2018), the benefits of social solutions for liveability (A. Haase et al., 2012; Murtagh, 2016; Ročak et al., 2016a), and the challenge of building a self-sustainable future through local innovations (Grillitsch & Sotarauta, 2018; Kinossian, 2018). Thus, civic engagement goes beyond negotiating consensus on terms of growth. It also involves co-producing narratives, day-to-day solutions for quality of life, and long-term learning and innovation networks. But while the civic domain is adversely affected by shrinkage, there might not be much bottom-up power to contribute unless financial and organisational support are provided to activate social capital (A. Haase et al., 2012; Ročak et al., 2016a; Steinführer et al., 2014; Strohmeier & Bader, 2004).

4.3 The spatial frame

In the spatial dimension, strategy-making is about negotiating changes between top-down and bottom-up forces and shaping their accumulated effects on the territory. In contrast to ‘fetishization’ of growth and expansion in growth-oriented practices (Hamilton, 2003; Kirkpatrick, 2015, p. 272), planning for urban shrinkage requires planning for less – fewer people, fewer buildings, fewer land uses (D. E. Popper & Popper, 2002). This includes downsizing of over-dimensioned infrastructure, greening abandoned urban spaces and proactively restricting the amount of development. But in the long term, qualitative development is more important than quantitative targets. It can point to four things:

Firstly, it is about improving the experiential quality of urban living. Under population pressure cities have to provide more urban services at minimum standard but shrinking cities can use the opportunity to catch up in their quality of public services, affordable housing, green spaces, and cultural and social environment (Hirt & Beauregard, 2019; Sousa & Pinho, 2015). These objectives can also be found on a growth-oriented agenda (e.g. in smart growth). But in a growth-oriented, competitiveness-building logic, investment focuses on assets for quality of life in places that can attract more middle and creative classes, instead of on areas that are most in need.

Secondly, qualitative development is about restructuring the functions of urban spaces. While growing cities carry out use-intensifying and value-adding developments and accumulate attractive infrastructural assets, shrinking cities have to come to terms with the fact that their main trend is spatial development in just the opposite direction – for example, downsizing neighbourhoods, decommissioning industrial terrain, reducing residential and commercial use to green space use (Pallagst, Fleschurz, & Trapp, 2017). But the reduction in economic value should be considered alongside the increase of social and ecological value. The latter can offer a unique opportunity to improve cities in ways the growth context lacks (Schilling & Logan, 2008).

Thirdly, qualitative development is about remaking the spatial structure for more compact, more liveable cities. De-densification of settlement and/or sprawl development can impair the viability of socio-

technical infrastructure and liveability in the long term (Hudeček et al., 2019; Moss, 2008; Siedentop & Fina, 2010; Slach et al., 2019). Therefore, shrinking cities should build inward and enhance the spatial efficiency of existing urban areas and building stock, through more regulation, in-filling before expansion, and upgrading before replacing (Kübler et al., 2012; Müller & Siedentop, 2004). While compactness is also a principle for growth-oriented planning, it is often not the guiding goal, but is used to minimise the impact of expansions positioned based on economic potential.

Finally, qualitative change is about re-balancing the territory. This means not exacerbating socio-spatial inequality with selective (dis)investment and gentrification strategies (Aalbers & Bernt, 2019; Ehrenfeucht & Nelson, 2020; Fol, 2012). A city-wide framework is crucial to coordinating projects and eventually a balanced development (Strauß, 2012). Pointing out the danger of centralised, rationally planned downsizing and triage measures, researchers argue for neighbourhood self-determination for a socially sustainable downsizing (Hollander & Németh, 2011), and questions are raised about whether aggressive right-sizing as a quick cure, is necessarily the best model (Audirac, 2018; Kirkpatrick, 2015).

In neoliberal growth-oriented planning, the focus is on attracting external capital, and local territory is a receptacle for capital and a transplanted knowledge sector. But shrinking cities need to re-focus on local resources because they are disconnected from capital flows in the global economy (Martinez-Fernandez et al., 2012; Pallagst, Fleschurz, & Said, 2017). The local territory should be seen as active socio-spatial networks that host natural, social and cultural resources, and as a basis for quality of life, local innovations, and place-based economies (Kinossian, 2018; Ročák et al., 2016a; Schilling & Logan, 2008). The rediscovery of the bottom-up potential of the territory can open up pathways towards a more self-sustainable future (Albrechts et al., 2020).

4.4 The frame of higher-level interdependencies

Even as local planning is administratively bound to a specific territory, it must act strategically, keeping in mind its interdependencies with other cities and regions on higher levels. Thus, development strategy-making constantly involves the cross-cutting frame of higher-level interdependencies.

Interdependencies based on spatial adjacency are often addressed in strategic spatial planning. Physical processes that connect urban areas are manifestations of functional relatedness; therefore, these areas viewed together provide a crucial frame for balanced development (Davoudi, 2008; Healey, 2009a). Shrinking cities are embedded in functional (city) regions through their socio-technical infrastructure networks, and the task of re-organising these infrastructures can only be approached from this level (Müller & Siedentop, 2004). Centrality-based systems and inter-municipal sharing are used to plan service distribution so as to keep them sustainable and accessible, at least on the regional level (Melis, 2013; Rutgers-Zoet & Hospers, 2018).

Interdependencies of spatial adjacency can also be found in inter-city competition, which can pose a threat to sustainable land use. Competition under growth pressure can be 'healthy', but in times of population shrinkage, it can be 'ruinous' and a 'zero-sum game' (Kübler et al., 2012; Mäding, 2004; Nuissl & Rink, 2005). Realising this, cities in shrinkage-expecting regions make bottom-up regional agreements to distribute growth opportunities in order to reduce internal competition and development risks (e.g. Humer 2018; Provincie Noord-Holland 2017a, 2017b).

Many interdependencies of shrinking cities have no spatial adjacency. The relational view of places has made clear that many of the strongest change drivers go beyond the physical territory (Amin, 2004;

Massey & Massey, 2005) – for example, the cross-continental relation between shrinking Polish cities and the growing city of London (Bernt, 2016). The relation between growing and shrinking cities is a crucial one for strategic thinking, because growth and shrinkage are two ‘faces’ of the same ‘global’ coin: most contemporary urban shrinkage is a product of global processes (Cunningham-Sabot et al., 2013; Martinez-Fernandez et al., 2012). But also for the growth ‘face’, polarisation between shrinking and growing places causes concern for regional equality (Bock, 2019), territorial cohesion (De Groot, 2019; Rodríguez-Pose, 2018), and the environment carrying capacity and liveability of growing regions.

Shrinking cities’ relations with other shrinking cities are promising yet under-developed. Lobbying for top-down policies such as the German national programme ‘Stadtumbau Ost’ owes its effectiveness to the revealing of the scale and prevalence of shrinking cities (Bernt et al., 2014). Peripheralisation theories distinguish the peripheral shrinking cities as a group that need different development approaches (Leick & Lang, 2018). However, so far local initiatives to make strategic connections have concentrated on cultural movements such as the slow-food and other slow-world activities (Sousa & Pinho, 2015), while knowledge exchange and strategic alliances in areas of adaptive strategies, bio-economy, and local innovations have untapped potential.

In short, local strategic framing of interdependencies can help avoid place-centrism (Jessop et al., 2008), foster the development of more effective policy instruments and pave the way towards sustainability on multiple scales.

(Text continues after table)

Table 2. Comparing strategic frames of sustainable shrinkage and growth orientation

Dimensions		Sustainable shrinkage frames	Growth-oriented frames
Temporal	Function	Shaping thinking and actions over time into a desirable path	
	Accentuation	Quality under no growth	Competitiveness under growth
	Landing points	- Demographic transition, global processes and regional context; - Ordinary city, a smaller population, higher quality of life; - Structural transformations; - Supporting everyday life; learning; making collective strategies; - Flexible, learning- and community-based incremental change	- Technology and market trends, stories of successful big cities; - Competitive city, a larger, wealthier population, more economic assets; - Asset and capital accumulation; - Symbolic projects and marketing; learning; making plans; - Efficient implementation of projects and targets to match rapid changes
	Function	Cultivating and channelling agency	
	Accentuation	Inclusion of non-economic capital	Inclusion of growth-driving capital
Agential	Landing points	- Public funding; - Knowledge of sustainability, shrinkage and local resources; concepts framing shrinkage; downsizing instruments; - Broader agenda; participation beyond consensus-building	- Private capital; - Knowledge of market trends and successful growth models; concepts framing growth; planning gain instruments; - Growth coalition agenda; participation to negotiate terms of growth
Spatial	Function	Shaping accumulated changes on the territory	
	Accentuation	Reducing quantity; qualitative, balanced development; local resources	Increasing assets and supply; selective development; external resources
	Landing points	- Downsizing, stronger regulation; - Quality improvement for everyone; - Land conversion to lower economic but higher social and ecological value; - Building inward to make the existing city compact; existing stock upgrade; - Balanced, coordinated development; - Local resources drive development and place-based economies	- Increasing attractive assets; - More supply at minimum quality; higher quality for attractive sites; - Value-adding land conversion; - Developing new sites compactly; adding higher quality stock; - Focusing on prime sites; triage; - External resources drive development and economy
	Cross-cutting frame: Higher-level interdependencies		
	Function	Addressing relations with other places	
	Accentuation	Collaboration, compromise, local users	Collaboration, competition, desirable users
	Landing points	- In functional space, socio-technical infrastructure re-organisation; intra-regional agreement; - Stemming outmigration to growing regions by attending to local users; alliance with other shrinking cities	- In functional space, socio-technical infrastructure organisation; intra-regional competition; - Competing for desirable groups with other growing regions; shrinking cities as sources for growth pressure

5. Directions towards sustainability

The frames presented in the previous section summarise the main claims and reasoning underlying the proposed approaches and strategies in the shrinking city discourse, but what directions do they offer for a local strategic re-orientation? What strategy-making approach is necessary to bring transformative rationales and frames into action?

5.1 Rationales under a critical sustainability

This section explicates the multi-facetedness of sustainability to create a clearer perspective on the multitude of shrinking city strategies. Shrinkage is a trajectory for long-term development strategies and sustainability can be the guiding principle. However, despite being a universally embraced value, there is no universal definition of sustainability (Section 2.2). It works more as a framing device for reasoning, channelling values and principles into specific contexts to generate strategic rationales. Starting from different temporal, spatial and social parameters, one can arrive at different kinds of sustainability, and consequently, different strategic rationales and strategies.

The sustainability of everyday life is expressed in concepts such as liveability, equal living conditions, quality of life, and well-being (Hall, 2009; Hollander, 2011; Pallagst, Fleschurz, & Trapp, 2017; Slupina et al., 2019, p. 25). However, in what ways should they be supported? Should policies aim to return to the pre-shrinkage model of living, or models of other more competitive cities? The sole focus on basic needs for living is contestable from the perspective of the sustainability of the city as a place, because the latter also considers questions like how individuals are bonded in a community, how they are bonded to their city to form a sense of attachment and stewardship, and how the community exists and evolves. From the perspective of planetary sustainability, a critical reflection is required on the pre-existing model of consumption lifestyles conditioned by modern urbanity and capitalist economies (Huber, 2013; Lehtinen, 2018), a forced continuation of uniform living standards and ubiquitous infrastructure at the expense of resources and social justice (Graham & Marvin, 2001; Kirkpatrick, 2015), and the relations between humanity and nature that have been chronically sidelined in modern urbanisation history.

The sustainability of the city as a place stresses qualities that will allow the place to remain robust, such as place qualities, future strength, and self-sustainability (Albrechts et al., 2020; Bock, 2019; Healey, 2007). This view argues that only everyday liveability is not enough, because long-term issues such as opportunities for the younger generations, as well as human and social capital are key to the continued existence of the city. However, in a neoliberal politico-economic environment, to remain robust inevitably means to stay competitive in the inter-city competition (Kreichauf, 2014). This could collide with the other two facets of sustainability in shrinking cities, as difficult choices arise between investing in struggling neighbourhoods and investing in economic assets, between supporting disadvantaged groups and attracting creative classes, and between experimenting with new forms of economy and adopting existing models as fast solutions. Transformative positions stress the social and cultural qualities of the community, collective self-reliance, local innovation, and an alternative policy agenda instead of simply 'catching up' (Friedmann, 1987; Kinossian, 2018; Magnaghi, 2005; Moulaert et al., 2005). But what does transformation mean for the city? What essence of urbanity must be preserved – is it the lifestyle under a modern infrastructural ideal (Graham & Marvin, 2001), the places for production and distribution (Harvey, 2010), or communities of socio-cultural creativity (Jacobs, 2016)?

The sustainability of the (planetary) socio-ecological system is often discussed in terms of resilience, resource efficiency, social justice, and wider welfare which depend on fundamental societal changes in the models of economy, urbanisation, and consumption lifestyles (on transitional discourses, see Escobar 2015). Among them, degrowth and postgrowth tend to counter local political ambitions of making progress with conventional growth levers, such as attracting global industries, gentrification, infrastructure expansion, and neighbourhood redevelopments (Lehtinen, 2018; Schulz, 2018). For many shrinking city policy-makers, these levers are, however, the few available options to maintain quality of everyday life as well as individuals' livelihood and future prospects (Eisinger & Affairs, 1988; Kreichauf, 2014; Rousseau, 2009). Although shrinking cities could provide conditions for progressive ideas and communities and could become fertile ground for innovations towards planetary sustainability (Reverda et al., 2018), a drastic break away from existing economic and institutional models could jeopardise the other two types of sustainability under current economic, institutional and cultural circumstances, leading to the collapse of the community without giving it room to evolve. Therefore, the critical question for the local level is, where, when and how would the visions for the planetary interests be aligned with the interests of local lives and communities?

The concept of sustainability has multiple facets that can lay conflicting claims to strategy-making. However, this inner tension mirrors the tensions in the reality of local planning in shrinking cities, which makes it potentially an effective conceptual device for critical strategic thinking. Shrinking cities are found in diverse local contexts, with different needs for development despite their shared characteristic of losing population. A strategic approach to sustainability would be to pursue the kinds of sustainability favoured by circumstances, on the condition that this does not impair the possibilities of pursuing other kinds of sustainability. This paper proposes thinking in terms of a strategic connection between sustainability and local conditions: Shrinking cities' demographic and social profiles as well as their collective lifestyles are changing. Focusing on quality of life, especially for groups that have been overlooked in strategic processes, could create a unique living environment for the benefit of the people and the place.

Some shrinking cities experience large-scale spatial transformations of industrial, commercial, and/or residential areas. As a whole, the city's economic infrastructure shrinks, but that makes room for the growth of green and social infrastructures – infrastructure in both hard and soft forms that support multi-purpose public use and are managed by the public as a whole, including green spaces as well as social and cultural organisations. These can be coupled with the development of low-productivity sectors, “as a form of social organisation embedded in the community, working in harmony with nature to deliver the capabilities that allow us to prosper” (Jackson, 2016, p. 158). For example, green infrastructure (Schilling & Logan, 2008), social economy (Murtagh, 2016) and neighbourhood cultural centres (A. Haase et al., 2012). Thus, the transformations driven by global processes can be turned into alternative place developments and community resilience-building, but this requires recognition and support by higher-level policies.

Finally, shrinking cities can make contributions to sustainability on a larger scale in both place-bound and transferrable ways. By resisting conventional development logics, they can preserve unique natural resources, cultural heritage, and environment-friendly lifestyles (Kinossian, 2018). They can use their unique socio-spatial settings to generate social innovations, from new forms of socio-technical infrastructure to new forms of business adapted to the conditions and needs of a shrinkage trajectory, which would be valuable as alternatives to capital-driven urban development (Coutard & Rutherford, 2010; Murtagh, 2016). They can also, as a region, improve the local quality of life and stabilise the local

population and contribute to supra-regional sustainability by reducing pressure on growing regions' socio-ecological systems. These contributions can be turned into positive impulses that compensate the economic disadvantages of shrinking cities – if higher-level policies are made to acknowledge and support their value.

5.2 Approach to strategy-making

Shrinking cities face challenges that require not only new development rationales and strategies, but also new approaches to generate rationales and strategies. A strategy-making perspective (Section 3) can enrich the discussion on procedural aspects of transformative planning already started in governance and strategic planning theories.

Firstly, sustainable shrinkage ideology faces resistance from the practical side. The former stresses the need for 'accepting shrinkage', 'planning for decline', and prioritising liveability (Hollander & Popper, 2011; Hospers, 2014; Pallagst, Fleschurz, & Said, 2017). For some post-industrial cities, rather than relying on huge investments for survival, it may be more realistic to shrink to a population sustainable by a deindustrialised local economy (Constantinescu, 2012). The competitiveness-building model is questioned, especially in the context of non-core regions, where it might not work at all in attracting growth or benefiting the local community in the long run (Kinossian, 2018; Leick & Lang, 2018). However, the growth-oriented vision is aligned with residents' top concern – economic revival, rather than liveability-related and environmental policies, especially among young people (Panagopoulos et al., 2015). Residents and politicians fear losing public services if they do not regrow (Schatz, 2017). Clearly, 'accepting shrinkage' or 'degrowth' would be hard to accept for communities longing for improvement to their economic welfare. Compared to rural settlements, urban settlements have a higher density of population and more conflicting demands on urban resources, which can make collective actions more difficult (Aalbers & Bernt, 2019; Bernt, 2009). Under these conditions, it would be challenging to reach full consensus on a vision and agenda in the interests of all kinds of sustainability.

However, this does not mean strategies are not possible. In social strategy-making, actors do not always aim for a unified goal, but act on concrete issues where they can agree (Braybrooke & Lindblom, 1963). Avoiding contentious goal-setting may provide a window of opportunity to preserve an alternative agenda for sustainability in an overall neoliberal environment. Bernt (2009) reported how in cases of drastic shrinkage, when the need for intervention is aligned with financial instruments, local actors form coalitions for downsizing, but the difficulties in achieving implementable plans can eventually lead to the dissolution of such coalitions. In fragmented socio-spatial conditions, the 'perspective incrementalism' approach used for the post-industrial region Emscher provides a reference for incrementally generating large-scale transformations. It focuses on creating concrete projects, and uses an instrument-oriented instead of a programme-oriented approach, guided by an overall vision of comprehensive plans (Karl et al., 1993; Wiechmann, 2008b, pp. 53-56).

In regard to further turning good practices into positive momentum for change, Van Assche et al. (2020) propose institutional capacity-building through consciously experimenting, learning, and re-tooling, while maintaining a long-term perspective. The 'bricolage' process behind Danish wind energy infrastructure development (Garud & Karnøe, 2003) provides a possible model for governing bottom-up innovation: the path evolves through integration of distributed innovations and in turn becomes the environment of the actors, further enhancing the directions of development. This (meta) strategy critically depends on flexibility, communication, collective learning, and incorporating what is learned on

the institutional level. In this way, the institutional environment can become increasingly favourable for more substantial strategies for sustainability.

6. Conclusion and further research

Shrinking cities' strategy-makers could benefit from more clarity on the guiding principles for development in their situations and draw from strategic frames and rationales that put empirical ideas into perspective. Therefore, alongside the proliferating empirical work supporting the call for a change of orientation and approach, much work remains to be done on conceptualisation and theorisation.

Firstly, sustainability cannot be taken for granted as a set of self-explanatory, coherent principles. The sustainable development goal for cities and communities of the UN and EU are explicitly set in the context of urbanisation. Clearly, there is a lack of knowledge and reinterpretation of sustainability in shrinkage trajectories, even though shrinking cities have their own significance for (un)sustainability. The tensions between the three facets of shrinking cities mirror the complexity of the reality of local planning in shrinking cities. A more nuanced and critical interpretation can provide strategy-makers with a reasoning device to navigate between general theories and local conditions and to construct development rationales.

In terms of theorisation, more reflection with consideration of other non-shrinking-city perspectives and contexts is needed (Bernt, 2016). To make a first step towards such reflection, this paper synthesises an overview of empirically grounded frames of urban development in the shrinking city discourse. It takes up the action-oriented, integrative perspective of local strategy-making to capture the challenges of the task and the need for more sensitivity to complex processes and agency, and their interaction in space.

Furthermore, to operationalise critical sustainability thinking for shrinking city development, more knowledge is needed on how rationales for sustainability differ in shrinking cities with different trajectories. Meanwhile, research needs to identify potential landing points in existing institutional processes for reinterpreting sustainability principles, renewing rationales and frames, and creating new strategy-making approach. Strategic spatial planning for example, needs to be tailored to the situation at hand (Albrechts 2015) because it has historically focused on growth contexts. With a lack of growth pressure and substantial external investment, planners need to reformulate their strategic frames, the focuses of planning (spatial assets, social groups, and ecological services), the approaches for more flexible strategies, and the instruments for information gathering and implementation.

Finally, development strategy-making is ultimately about 'deliberative paradigm change' – the "shifting and reshaping convictions" (Healey, 1997, pp. 244–245). In this sense, strategic concepts have major roles to play in de-stigmatising shrinkage through discourse and action. Therefore, research should engage in more active production of strategic concepts that channel academic knowledge into practice in order to drive a 'paradigm change'. But instead of expert-based conceptualisation, researchers need to draw from the social production of strategic concepts (van Duinen, 2013) in order to accelerate an 'organic' social process to 'pack' sustainability values, strategic frames, and locally contextualised strategic rationales into concepts.

3

Long-Term Development Perspectives in the Slow Crisis of Shrinkage: Strategies of coping and exiting

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Abstract

As a slow crisis, shrinkage is a situation where if actions are not taken to change things, a downward spiral or a long-term decline could happen. The complex, long-term nature of this crisis underlines the importance and potential of strategic approach. However, the conceptualisation of development strategy remains abstract, attributive, or focused on sectoral policies, lacking a view of their roles in the overall development. Against this context, this research investigates (1) how cities that have acknowledged shrinkage strategically organise degrowth, non-growth, and growth-promoting instruments in dealing with shrinkage, (2) what long-term development perspectives emerge out of their policies, and (3) what factors in the local context constrain their strategies. The empirical basis is a cross-national comparative case study between Den Helder and Zwickau, a Dutch and German midsize city, with a cross-sectoral view and a focus on the long-term aspects to reveal the conceptual structures of their strategies. This approach captures how and explains why the cities, as regional centres with similar attitudes towards shrinkage and comparable economic levels, adopt many similar policies but lean towards contrasting long-term perspectives—one strives to exit the crisis, the other has routinised coping with shrinkage and lacks the vision of a different future. Their differences stimulate reflection on the context and parameters for revitalisation, and their shared challenges underlines the need for theory development based on situated policymaking challenges and a more strategic approach in the development of shrinking cities.

1. Introduction

Shrinking cities have become a persisting phenomenon in many world regions, driven by global and regional trends such as demographic change, global economic processes, political change, and suburbanisation (Martinez-Fernandez et al., 2016; Oswalt & Rieniets, 2006; Wiechmann & Bontje, 2015). Substantial loss of population can negatively affect various urban systems, including socio-technical infrastructure, the residential environment, and public finance, causing decline in liveability and reinforcing outmigration (Bontje, 2004; Carbonaro et al., 2018; Hackworth, 2014; Mäding, 2004; Moss, 2008). The selective nature of outmigration can also lead to concentrated social vulnerability and economic disadvantage for the city (Fol, 2012; González-Leonardo et al., 2021; Strohmeier & Bader, 2004). Thus, shrinkage can trigger widespread problems in the city through feedback loops and interdependencies (Hartt, 2018). It poses challenges for urban sustainability, through lower resource efficiency as a result of underutilisation of infrastructure (Kabisch et al., 2018a; Moss, 2008; Siedentop & Fina, 2010; Slach et al., 2019) as well as the loss of social cohesion through economic impact (De Groot, 2019). Although the problems of shrinkage develop slow compared to pandemics and natural disasters, it constitutes a crisis, nonetheless, where if actions are not taken to change things, a downward spiral or a long-term decline could happen. There is no quick cure because growth-seeking policies that ignore larger-scale drivers and local structural conditions can exacerbate problems (Annegret Haase et al., 2014; Pallagst, Fleschur, & Said, 2017; Schatz, 2010; Wiechmann, 2009). In short, neither shrinking uncontrolled nor a quick return to growth is a reliable option; therefore, strategic approach is needed to address this crisis as a complex, long-term challenge.

It has been proposed that paths of development under shrinkage offer opportunities to enhance social and ecological sustainability (Herrmann, Shuster, et al., 2016; Hirt & Beauregard, 2019; D. E. Popper & Popper, 2002; Reverda et al., 2018; Sousa & Pinho, 2015). However, further than that, the 'paths' becomes unclear. On one hand, there are a growing number of policy practices that achieved the restoration of liveability with social and ecological innovations (e.g. converting vacant lands into green amenities and ecological infrastructure (D. Haase, 2008; Herrmann, Schwarz, et al., 2016; Schilling & Logan, 2008), citizen co-produced public services (A. Haase et al., 2012; Tomay et al., 2014), and social economy (Murtagh, 2016; Schlappa, 2017). On the other hand, sober critique have pointed out contradictions between growth-oriented instruments and the aim of development under shrinkage, and the limited impact of bottom-up tactics on the overall, long-term development of cities, given that the larger capitalistic economic context remains unchanged (Berglund, 2020a; Bock, 2019; Dubeaux & Cunningham-Sabot, 2018; Hackworth, 2018; Kreichauf, 2014; Mallach, 2017). The centre of the issue is a long-term perspective beyond maintaining liveability: if the path of shrinkage is supposed to lead eventually out of the crisis, so that the city becomes stable and self-sustainable, then are shrinkage-managing instruments enough to achieve this goal? Meanwhile, some cities engage in mixed strategies of going for growth and managing decline (Schatz, 2017). Certain policies associated with growth strategies and negative perception, such as gentrification, may be leveraged by local development in a bigger framework to revitalise neighbourhoods and benefit local communities (Ehrenfeucht & Nelson, 2020; Tighe & Ganning, 2016). This indicates that degrowth, non-growth, and growth-promoting instruments might all play a part in the long-term development of shrinking cities, where the question is how they are strategically organised. Strategy is about long-term orientation, navigating local conditions, mobilising actors and resources, driving actions, and accumulating incremental transformation into development and qualitative change (Albrechts, 2004; Healey, 2009b; Innes, 2004; Karl et al., 1993; Wiechmann, 2008b). Therefore, to understand the challenges and potentials in steering the long-term development of shrinking cities and possibly to devise better strategies, the existing strategies, especially the long-term perspectives for the crisis of shrinkage, need to be studied.

However, existing research on shrinking city development is often focused either on the overarching values or on the specific policies. The conceptualisation of the middle layer, strategy, remains as yet abstract and attributive, such as 'pro-growth' or 'managing decline' (Großmann et al., 2013; Schatz, 2017), 'integrative' (Bernt et al., 2014; Martinez-Fernandez et al., 2016), and planning culture typology (Pallagst, Fleschurz, & Said, 2017). These abstract features are not fine-grained enough to be related to the variation in physical and institutional local conditions. This has resulted in disproportional emphasis on changing growth-oriented mindset, overshadowing the agency through strategy-making. Empirically, research needs to go beyond sampling specific sectors and explicit strategies. The focus on separate dimensions and sectors limits the understanding of how population interact with other issues of urban development and how policies are (not) strategically organised holistically to achieve development of the whole (cf. Bernt et al., 2014; Döringer et al., 2019). The focus on explicit strategies omits the strategic patterns that emerge out of an array of physical dependencies, habits, and institutional conditioning to shape the course of development (Couch et al., 2011; Liebmann & Kuder, 2012; Wiechmann, 2008b).

This research aims to contribute to practice and theorisation in shrinking city development by investigating (1) how cities that have acknowledged shrinkage strategically organise degrowth, non-growth, and growth-promoting instruments in dealing with shrinkage, (2) what long-term development perspectives regarding the crisis of shrinkage emerge out of their policies, and (3) what factors in the local context constrain their strategies. The case study is set up as a cross-national comparison between Den Helder and Zwickau, a Dutch and German midsize city, with a holistic approach to reveal implicit

strategic patterns stemming from institutional and physical dependencies. It is found that the cities, as regional centres with similar acknowledging attitudes towards shrinkage and comparable economic levels, adopt many similar policies, but lean towards contrasting development goals and long-term perspectives—one strives to exit the crisis in the future with comprehensive urban transformation policies, the other has routinised coping with shrinkage and lacks the vision of a different future. Main contributing factors are found in their different shrinkage dynamics, material legacies, and institutional conditions. The study leads to a conceptual framework of urban development strategy with relation to factors in the local context.

This article is structured as follows: Section 2 provides a literature review on two strands of knowledge: development strategies in shrinking cities and strategy-making in urban development. Section 3 explains the methodology and process of the research. Section 4 presents the comparative case study of Den Helder and Zwickau, focusing on the policies, the long-term perspectives behind, and the factors causing the differences between the cases. The conceptual structure behind their comparison is summarised into a preliminary model. Finally, Section 5 discusses the theoretical and policy implications of the findings and future directions for research on this topic.

2. Literature review

2.1 Development Strategies in Shrinking Cities

The research on shrinking city development in the last two decades made an essential distinction for development policies in shrinking cities, organised into two opposing, value-laden concepts: going for growth and adapting to shrinkage. Through these concepts, the development policies in shrinking cities were examined, exposing the ineffectiveness of strategies based on growth assumptions and highlighting the need for managing and accepting shrinkage (Hall, 2009; Liu, 2021; Pallagst, Fleschurz, & Said, 2017; Sousa & Pinho, 2015; Wiechmann, 2008a). In particular, cities seeking to reverse shrinkage with extravagant ‘flagship projects’ rather than maintaining social support and improving urban environment can end up wasting resources and even greater outmigration due to deteriorating local liveability (Annegret Haase et al., 2014; Hartt & Warkentin, 2017; Knoop, 2014). How cities adjust their strategy in times of shrinkage also has implications for sustainability. The fiscal and land offer competition among cities for residents and businesses can create unsustainable land use patterns and increase the over-dimensionality for a region with population decline (Kroll & Kabisch, 2012; Kübler et al., 2012; Nuisl & Rink, 2005). Pursuing short-term growth with speculative housing developments in long-term shrinking regions can lead to future costs and wasteful boom-and-bust cycles (Siedentop & Fina, 2010; Van Assche et al., 2020; Wiechmann, 2009). Responses to financial problems with austerity policies and neighbourhood triage, or uneven development, can have severe impact on social sustainability (Berglund, 2020b; Fol, 2012; Hackworth, 2015; Kirkpatrick, 2015).

Nevertheless, the dichotomy between ‘shrinkage accepting’ and ‘growth-oriented’ is insufficient for understanding and planning the complex long-term development in shrinking cities. To begin with, shrinkage-managing policies are not enough to steer the overall urban development. Some policies deal with specific areas of urban development and are based on specific conditions, and need to be combined to address holistic issues. For example, ecological measures can provide amenities and help with stormwater management (Herrmann, Schwarz, et al., 2016). Green infrastructure as a shrinkage-managing tool has more impact on spatially contracting cities (Schilling & Logan, 2008). Civic action for

liveability solutions requires a vital and supported civil society and cannot replace public actions (Hospers, 2014). Others, implemented alone, could lead to unbalanced outcomes. Downsizing alone without accompanying policies can have implications for social justice (Hollander & Németh, 2011; Kirkpatrick, 2015) and is insufficient for broader development goals (Bernt, 2009; Bürkner et al., 2005). Green regeneration, intended as a tool for better quality of life and reusing vacant land, could trigger green gentrification under the influence of market forces (Ali et al., 2020). Mallach (2017) thus criticised the over-simplified understanding of the economic context behind the hope of revitalisation through bottom-up movement. Hackworth (2018) and Kreichauf (2014) concluded that meaningful development under shrinkage still has to take the political and economic forces of capitalist urbanisation into consideration. In this politico-economic climate, shrinking cities are faced with contradicting needs for more residents to maintain local amenities and for managing shrinkage, thus resorting to mixed strategies (Schatz, 2017). Meanwhile, some researchers find potential in traditional development instruments, such as residential attractiveness, gentrification, place marketing, for halting the population haemorrhage and brain drain, strengthening the financing of local infrastructure, countering suburban sprawl, etc., given proper policy design, such as employment integration, social housing, public transport, and pedestrian and cycling accessibility (Ehrenfeucht & Nelson, 2020; Hospers, 2011; Miot, 2015; Rousseau, 2009; Slach et al., 2020; Tighe & Ganning, 2016).

In other words, the long-term nature and complexity of structural transformation in shrinking cities make development more than a question of values and applying best practices. It is a question of strategy, which combines knowledge of the situation, available resources, instruments, and diverse actors to address complex and long-term issues with a cross-sectoral view. This is supported by recent theories in urban sustainability, which argues for a holistic approach (du Plessis, 2012; Vojnovic, 2014). As Brugmann (2012) points out, the development of sustainability as a concept has revolved around contradictions between normative views, while the sectoral approach to policymaking and the failure to view the city as a system in its own right, with local crisis and inertia as well as unique competences, make sustainability policy fall short of addressing complex local challenges and opportunities. Thus, he argues that policymaking needs to view the city as steerable, re-engineerable systems towards socio-ecological conditions for global sustainability, i.e., ‘a domain of strategy’. With shrinking cities becoming a widespread phenomenon, the complex challenges for sustainability in the shrinkage context deserve more attention, considering that the sustainability concept evolved out of a growth context (Liu, 2021).

Shrinking city literature sheds light on the question of strategy in several aspects. Firstly, the perception of shrinkage largely determines whether shrinkage can be constructively tackled. Typologies of strategies has been developed, linking ‘ignoring’ and ‘not accepting’ shrinkage to a lack of measures or even counter-productive measures, and used to argue that acceptance is the precondition to confronting the problems and stabilising the population (Hospers, 2014; Pallagst, Fleschurz, & Said, 2017). Among the shrinkage-accepting strategies, ‘shrinking smart’ is a concept for proactively and comprehensively restructuring the city while improving socio-economic conditions (Bernt et al., 2012; Wiechmann & Pallagst, 2012). Secondly, the style with which measures are deployed is identified as another crucial element for effectively dealing with shrinking, including integrativeness and consistency (Bernt et al., 2014; Martinez-Fernandez et al., 2016), flexibility for the uncertainty in migration trends (Wiechmann, 2008a), and spatial coordination (Strauß, 2012). Besides these strategic qualities, research has also made progress in relating strategies to locally specific conditions. The policy models vary according to different national economic context and the local material legacies (Couch et al., 2011). The material legacies—housing stock structure, urban spatial structure, transport infrastructure, etc—are both the target and constraint of development (ibid.). Finally, institutional dependency is a strong factor when one looks at

the long-term development. For example, Bernt (2009) discerned how the selective nature of urban regeneration policies in east Germany stemmed from the institutional conditions, cautioning that the grant coalitions shaped by the state-subsidised downsizing programme lack the capacity to 'implement any meaningful urban development strategy'. Liebmann and Kuder (2012) investigated the institutional path dependency in shrinking cities' economy-led development, revealing a pattern of contradiction and a lack of strategic focus. In summary, strategy is a significant component of shrinking cities' development because of the course changing effect they can have, but actors might be limited by local conditions and unawareness to make most of its potential.

2.2 Strategy-making in Urban Development

Given the importance of strategic approach to shrinking city development, the study of strategy as well as policy(making) evaluation in shrinkage context could greatly benefit from the theoretical concepts and research approaches in strategic planning literature, without taking strategic planning as a norm for policymaking. The re-emergence of strategic planning in Europe in the late 1990s was motivated by a need to coordinate policies, integrating investment for sustainable development, and actively steer the distribution of opportunities (Albrechts et al., 2003; Healey, 2004). Traditional planning tools serve technical planning and passive regulating, but strategic spatial planning enables strategic thinking and co-production of urban transformation (Albrechts, 2004, 2016), which enhances the effectiveness and legitimacy of spatial planning (Salet & Faludi, 2000). Strategic thinking looks beyond day-to-day concerns, updates knowledge of external trends and internal conditions, so as to fundamentally reassess the course of development, most ideally resulting in a 'deliberative paradigm change' (Healey, 1997; Sorkin, 1984). A long-term frame can integrate agendas to promote efficient land use, provide a context to identify and organise short-term, mid-term, and long-term actions (Albrechts, 2004), and help actors to position their activities in the overall development (Healey, 2009b). Integrativeness is inseparable from a holistic view stemming from the relational view of geography, in which an urban area is not just the sum of physical features in a bounded space, but processes of uses and experiences of different temporalities and scales, and socially constructed identities based on these processes. Relational conceptions of socio-spatial phenomena make a more potent basis to absorb the mental images and material realities of people and businesses, and channel their imagination into the qualities of the area (Healey, 2004, 2007). Finally, the co-production of strategies mobilises the social imagination, knowledge, and creativity, contributes to social equity by providing a channel for citizens to shape the future of their community, and builds up a governance structure and toolset needed for long-term tasks (Albrechts et al., 2020; Healey, 2009b; Innes, 2004; Kunzmann, 2013).

However, strategic planning as semi-structured procedures to create strategic concepts and/or actions endowed by participants within a limited time frame is only one of many avenues to strategy-forming. In recent organisational science and thereby inspired works in planning, there have been many reconceptualisations of strategy and efforts to design processes to facilitate its formation. In some situations, predesigned strategies can be closely followed and result in desired changes, but in complex situations, the classical linear model of strategy-making is often impractical for its reliance on knowing and controlling all variables, and can be detrimental because it excludes feedback-adaptation iterations (Mastop & Faludi, 1997; Mintzberg et al., 2005; Pressman & Wildavsky, 1984; Wiechmann, 2008b). It is impossible to plan in complex situations with traditional rationality, and the course of change often results from incremental steps of 'muddling through' or satisficing (Lindblom, 1959). Here, the circumvented plan is less of a strategy than the tactics on the ground. There might also be no fundamental changes at all, if actions are fragmented, react only to symptoms, contradict each other,

and lead in circles (Etzioni, 1967), in which case, the tactics are ineffective as strategy. Many approaches to strategy-making are aimed to combine merits of deliberate, predetermined orientations with flexible, adaptive, and/or distributed actions so as to accumulate distributed changes into a desired course, such as 'mixed-scanning' (Etzioni, 1967), 'bricolage' (Garud & Karnøe, 2003) and 'perspective incrementalism' (Karl et al., 1993). To sum up, both the making and studying of practical strategies need to mind the gap between plans and realisation, and the criterion that strategy should provide movement towards the goal. Broadly, it can be said that strategy is an emergent course towards a fundamental goal of the acting organisation (Wiechmann, 2008b), although qualities to focus on, emerging over how large a scale, and on what dimensions can differ according to intention of the observer. Eventually, the point of a more accurate description of strategies can serve better the purpose of reflexive learning, retrospective sense-making, and adaptation (Mintzberg et al., 2005).

In strategic spatial planning literature, the increasing attention to framework and orientations, and the building of 'collective actor' (Healey, 2004) resonates with the above emergence-inspired strategic planning approaches. However, strategic planning for cities cannot be equalled to organisational strategic planning for at least two reasons. First, the limited spatial resources do not allow too much autonomous actions or evolutionary emergence of a dominant course; to avoid fragmented development, a centrally formulated, long-term spatial logic is needed (Albrechts, 2016; Albrechts et al., 2003). Second, urban governance structure, unlike organisations held together by legal statute and running operations, does not automatically exist. It is planning processes that bring actors together and keep them together through consensus- and trust-building, face-to-face interaction, co-production, and institutional design (Albrechts, 2015; Healey, 1997; Innes, 2004).

3. Methodology

3.1 Objectives and Methods

This research aims to shed light on the questions 'what is the emergent development strategy of shrinking cities' and 'what factors give rise to the different strategic patterns'. As indicated in the literature review, strategy as a pattern is a complex emergent phenomenon. They can be described as strategic systems with elements of different levels of abstraction, ranging from goals to measures, as well as some level-free elements, such as 'approach' and 'principle' (Liu, 2021). For shrinking city development, the variables and qualitative concepts are not fully identified and systematically related in order to capture this phenomenon. Therefore, the main method of this research is an in-depth and comparative case study, because a case-based method allows a holistic approach to understand the multiple dimensions of the phenomenon in the context of urban shrinkage, and comparison highlights the variation and suggests causal factors. The study is not about statistically assessing the prevalence of a phenomenon with a sampling logic; rather, it follows a replication logic for testing or developing theories based on selectively differentiating conditions and observing the outcome (Yin, 2017). In other words, the case study here is an explorative first step to identify the concepts for describing 'emergent strategy' in the context of urban shrinkage, in order to provide a descriptive model for further studies. As such, the case study tasks itself to draw conclusions that satisfy describing the variation between two cases and give insight to the research questions.

The 'case' here is defined as the current development policies and policy ideas in response to shrinkage—the ideas are justification of or opposition to policies, or proposed policies without realisation. Firstly,

development is understood here as qualitative change resulting from a series of socio-spatial transformations of the urban environment. Secondly, the focus is not any strategies for development that take shrinkage as a condition, but development strategies intended to respond to the current or anticipated effects of shrinkage, namely, strategies for (dealing with) shrinkage. Finally, this study focuses on public actors' and their partners' actions and does not directly involve private actors' actions, because (1) given the definition of strategy as 'a course towards a fundamental goal of the organisation' (Wiechmann, 2008b), and that dealing with the whole city's shrinkage can be seen as a fundamental goal of the former group but not necessarily the private actors', it makes more sense to seek in their actions strategies towards this goal, and (2) the private actors' activities are considered results of public actors' regulation (or the lack thereof).

The selection of cases follows a logic similar to the 'most-similar' setup (Gerring, 2016): cases are 'similar in all respects except the variables of theoretical interest' so as to isolate the causal effects of these variables on the outcome. In this case study, development strategies are considered as the outcome, and the aligned variables are three: the experience and willingness (municipalities have acknowledged and been since long dealing with shrinkage), comparable development tasks (the cities are midsize regional centres), and financial capability (the cities have a stable economy and receive state subsidies). Past research indicates that acknowledging shrinkage is a precondition to addressing it in development (Pallagst, Fleschurz, & Said, 2017), and that stability of public finance is essential to local determination of responses to shrinkage (Audirac, 2018; D. Rink et al., 2014). Small, peripheral cities have fewer extra-local functions (employment, facilities, and infrastructure) than regional centres, and often shrink in a more passive way than the latter (cf. Domhardt & Troeger-Weiß, 2009; D. Rink et al., 2012). The assumption of this comparative set-up is that with all these three fundamental constraints absent, the local actors can engage in more strategic thinking and actions, and if these turn out to be different, the factors lie in local conditions and perception.

The process of analysis is based on the grounded theory method, but with some key differences. Grounded theory procedures focus on developing concepts based on systematically interpreting and categorising data, and data collection guided by working theories (Corbin & Strauss, 1990). The concepts are increasingly developed in that they become more defined and interrelated, with abstract concepts identifying their common dimensions, so as to form a conceptual system that can account for all the incidents observed in the data, becoming a theory of explanatory power (ibid.). The data collection proceeds alongside analysis to drive the developing of the conceptual system so that the concepts are representative of the incidents collected and the theory is consistent with the data (ibid.). Existing literature can provide 'sensitizing concepts' to orient initial data collection and analysis (Bowen, 2006). The development of concepts in this study does not rely solely on the researcher labelling 'facts', but leverages the sense-making of situated subjects as 'knowledgeable agents' (Gioia et al., 2013) to interpret facts and propose working theories. This method allows the researcher to approach the data without preconceived categories and is suited for this research topic. Gioia et al. (Gioia et al., 2013) demonstrated a procedure of developing concepts through first- and second-order coding, and identifying aggregated dimensions: first-order coding uses informant-centric concepts and second-order coding theory/researcher-centric concepts, in order to develop increasingly generalised, theory-relevant concepts and dimensions. This study applied this logic and structured the analysis in three stages: the policy level, the emergent/long-term level, and the model level.

The comparative perspective here is combined with the grounded theory generation. In the process of analysis, the significance of concepts was judged from (aside from being evidenced by key incidents

across sectors, as described in following sections) how well the concept/relation help to account for the differences between the cases, in order to generate ‘inference to the best explanation’ (Haig & Evers, 2015). For example, in lieu of a theory about how much pre-existing vacancy constrains a city’s strategy, the contrast between the two cases—hundreds of vacant units against thousands—the local argument that there lacks fundamental transformation because policy making is occupied with downsizing is plausible.

Contextual factors giving rise to the variation in strategies are of interest in this research. Because multiple variables are investigated with a small number of cases and cannot be one by one tested over a larger pool of cases, accurately understanding them depends on the holistic approach to the case study. Therefore, this case comparison sought to retain ‘the integrity of the entire case’ as precondition to comparing ‘within-case patterns across the cases’ (Yin, 2017). According to grounded theory methodology, the generalisability of a grounded theory is not in its applicability to the wider population, but in that specifying the conditions giving rise to variations are specified by the theory (Corbin & Strauss, 1990), which means here, the theorisation seeks to understand the contrast between two cases but is not for direct application to other cases.

3.2 Data Collection and Analysis

Data collection took place between March 2020 and December 2021. The primary data sources were official documents, statistics, and interviews of those who are directly involved in (formal and informal) policymaking and implementation. Because strategies written in the documents are not always realised, interviews were especially used to find out about the reality, explanations, and different opinions. Official statistics were used to understand the case setting, such as demographic, social, and economic conditions. The cases—the body of development policies and ideas for dealing with shrinkage—needed to be identified first. A set of preliminary sources informed by existing literature was selected: the current integrative planning documents, policy documents in housing, economy, and social aspects, and actors involved in making or implementing these policies. The documents were searched for development policies/ideas dealing with the social and demographic conditions (fewer residents, change in demographic or social groups, etc.) produced by shrinkage and the interviewees were asked about the same topic. In this way, the identification of policies did not rely on local understanding of ‘shrinkage’. Based on what was found in these documents, the sectoral and temporal scopes extended for data collection to understand directly relevant measures (e.g. on road infrastructure) or the context leading to the current ones (e.g. policy lessons). Furthermore, the comparative approach means when certain policies were accentuated in one case but not in the other, the under-accentuation would be investigated as a policy. Finally, the primary data sources were: 30 official documents and 24 semi-structured interviews (in average 90 min long except for 2 written interviews) with municipal policymakers in planning, economy, and social departments, superordinate-level policymakers, representatives of housing corporations, and civic actors in key policy processes. Secondary sources, such as media coverage, policy research, and industrial reports were used to ascertain claimed implementation and effects, and to find out policies that are not officially mentioned because, e.g. they have become routines. Finally, although desk research is useful for systematic analysis of data, it has certain limitations for urban and planning research, especially for understanding the material context in each city, such as the scale of places and implementation of policies, as well as local atmospheres reflecting the synergy of social elements and physical assets. This is why on-site observation was also conducted for each case.

The data analysis followed an iterative, three-level structure with cross-case comparison at each level

(Figure 1). Firstly, the data was coded within each case to identify relevant policies and highlight local sense-making. Sense-making included actors' framing of shrinkage, justification of policies, overarching rationales about policies, etc., and provided focuses in the identification of main policies. Then, the main policy points were compared between two cases to redefine the codes to that policies could be categorised with the same fewest codes, which were used to recode the relevant policies of both cases. This led to the first-level concepts that name the main policies. Secondly, the policies were further analysed and coded within each case, informed by the local sense-making (e.g. 'making small changes but no substantial transformation' from an interview) to develop concepts that describe emergent features of strategy. Follow-up correspondences and desk research supplied more information to help develop these characterisations. Then, the concepts were compared across cases to align and simplify the set of codes and recode the involved segments. This led to the second-level concepts that characterise emergent features in the policies, which are grouped into 'long-term perspectives', 'transformation approach', etc. To connect these characteristics to contextual factors, explanations were searched in local sense-making, and new data was sought to corroborate those. These factors were also compared across cases, in order to create aligned categories and grouping. Finally, the aggregated dimensions of strategy-describing concepts and the factor-identifying concepts were related to one another in one model, organised with the level of abstraction and differentiation between strategy and constraints. Their inter-relations were examined in the codes and coded segments to make adjustments for consistency. It should also be pointed out that the observed 'lack' of certain policies or thinking in the following sections is not meant as absolute absence, but to reflect their less rigorous implementation or emphasis in comparison to the other case. The analysis led to 83 codes, 1587 coded segments in total (see Appendix 2).

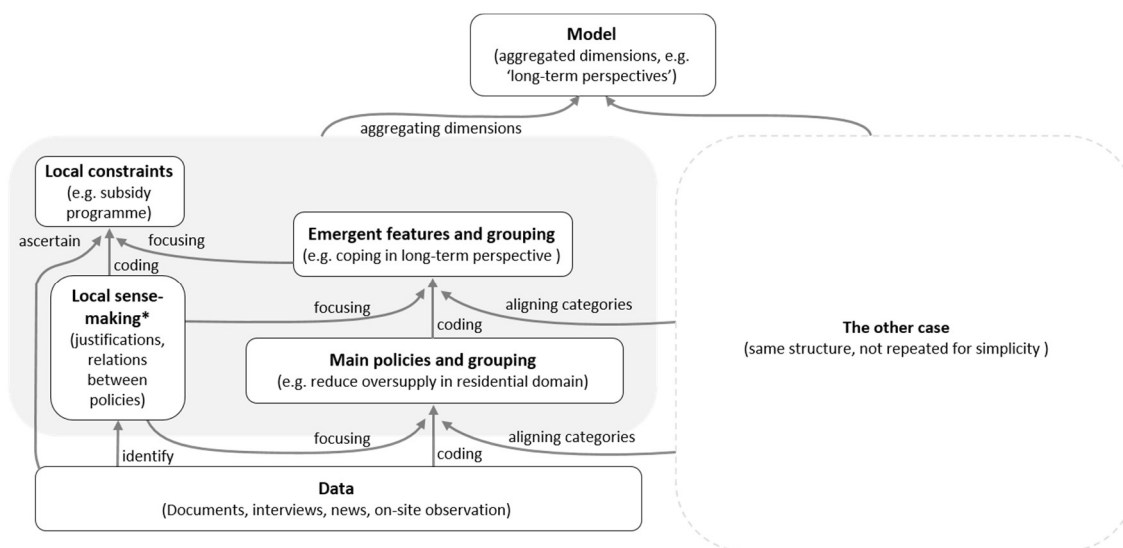


Figure 1. Structure of data and analysis. (The 'sense-making' is saved with temporary codes to inform analysis about the context of policies and is later selectively categorised in relation to emergent features.)

4. Case Study

This section first introduces basic situations of the two cities, and then summarises their current shrinkage-responding development policies/ideas, with cross-case comparison and pointing out the

factors causing the contrast. Then, the emergent features (the rationales, objectives, and approaches) are examined, compared between the cases, and the factors behind the contrast are identified. Finally, the structure of the findings is summarised into a conceptual model to make explicit the strategic patterns of the two cases and the contributing factors.

4.1 Case settings

- Geographic background

Den Helder is a Dutch port city with a population of 55,600, 65 km north to the nearest growth pole Amsterdam. It is known for its maritime culture, coastal tourism, offshore industry, and the base of the Dutch royal navy. Zwickau is a German city with a population of 89,540, 70 km south to the growth pole Leipzig. Formerly part of the GDR and a coal-mining city, it is now known for its car manufacturing industry, with Volkswagen Sachsen GmbH as the key global player. As the centres of their regions (NUTS 3), both cities are the engines of economy, research, and education, and host to the central administrative, healthcare and leisure facilities.



Figures 2-3 (up) Den Helder: the recently renewed city centre and the outskirt neighbourhood with recent 'tiny house' redevelopment in Nieuw Den Helder; **Figures 4-5** (down) Zwickau: the city centre, renewed in the 2000s and the site of a de-densified outskirt neighbourhood in Eckersbach; all Photos by author.

- Duration of shrinkage (See Table 1 and Figure 6)

Den Helder shrinks at a relatively steady and slow pace of 0.33% per year, driven by the outmigration of young groups, while the household number increases. Its region displays a contrasting growth in both

indicators, but is projected to start shrinking in the next decade (Provincie Noord-Holland, 2017a). Zwickau's population shrank drastically in the years following the German Reunification, but the pace has stabilised at an average -0.58% per year, driven by negative natural balance—due to the unbalanced demographic structure shaped by the earlier mass outmigration—and ameliorated by recent refugee intake (Timourou, 2017). It is predicted to become more severe in the next decade (Statistisches Landesamt des Freistaates Sachsen, 2020). Even households have recently started to shrink. Although Den Helder shrinks more slowly, its demographic structure is changing more dramatically than Zwickau's.

- Experience in tackling shrinkage

Den Helder was experiencing neighbourhood depopulation and social problems from the late 1980s and eventually demolished an area of 372 apartments ("Den Helder gaat Falgabuurt na overlast slopen," 1998). The city's single-minded pursuit of quick regrowth during the 1990s and early 2000s, combined with a series of economic, social, and political struggles, led to the Deetman–Mans report (Deetman & Mans, 2010) commissioned by the state, which admonishes: either 'continue on the current path' to end up with 'further decline', 'destruction of capital' and upholding liveability with extra investments, or focus on the real economic potential—the port—and the improvement of the city to regain stabilisation (quotes translated by author). This shifted the economic focus from theme park tourism to the port industry and consolidated a policy framework that comprehensively addresses urban environment quality. Nowadays, the explanation of shrinkage focuses less on the navy budget cut than the lack of attractiveness of the city, while the previous aim of regrowing to pre-2000 level was given up as a starting point of policymaking. In Zwickau, the wave of outmigration after the German Reunification reduced 16.5% of the population during the 1990s (Statistisches Landesamt Sachsen). In this period, private lower density developments and commercial facilities followed a sprawl tendency. However, the vacancy reached 40% by 2002 in the large industrial housing estates on the outskirts and had to be countered with area-wide demolitions as part of the state subsidised Stadtumbau Ost programme (BMW SB, 2021). Meanwhile, substantial measures were taken to restore the inner-city building stock to make up for the lack of building maintenance during the socialist regime and achieved liveable quality in most parts of the inner city. Investments in the tram system established the backbone for urban public transport, securing the connectivity between the outlying shrinking districts to central facilities.

- Economic and financial situation

The cities have comparable economic development. Den Helder experienced economic decline due to the navy budget cut after the end of Cold War, and after losing two thirds of navy jobs, what remains nowadays still accounts for more than a quarter of total local jobs (Gemeente Den Helder, 2016b). The city has been searching for replacement economic pillar and in recent years the offshore renewable energy sector has become the main target of policies. Currently, the state-supported Regional Deal for maritime economy and the increase in national defence budget create further hopes for economic growth. In Zwickau, the shrinkage started with the decline of coal industry since the 1980s, and the decade after the Reunification saw many local manufacturing factories go under, leaving vast vacant industrial areas behind. The settlement of Volkswagen Sachsen and the related supply industry following the Reunification was a critical lifeline, since the corporate tax is a big part of local revenue. Currently, the Volkswagen's electric car new production line and the growing international education at the local university bring further (albeit cautious) hope for economic opportunities. Currently, both cities have similar levels of regional GDP per capita, spendable household income per capita (See Table 1), and improvement in welfare—decrease in the unemployment rate and low-income households, and increase

in labour participation (according to CBS and Bertelsmann Stiftung). Public finance in both cities has a positive annual balance, although Den Helder clearly has more extra resources—per capita positive balance 110 Euros, compared to 33 Euros of Zwickau (Bertelsmann Stiftung; Gemeente Den Helder).

Table 1. Statistics of two cities ¹

	Den Helder	Zwickau
Population	55,600; peak 64,000 (1985) ² –0.33% p.a. in the last decade Households: 26,770, +0.11% p.a.	89,540; peak: 138,880 (1950) ³ –0.58% p.a. in the last decade Households (Stadt Zwickau, 2009–2019): 49,329, +0.19% p.a., but in the last five years –0.22% p.a.
Regional population	Population 375,659, +0.2 % p.a. Households 165,902, +0.6 % p.a.	Population 317,531, –0.9% p.a. Households 166,300, –0.77% p.a.
Demographical structure	Structural changes: Over 65 from 15.8% to 23% 25–45 from 26.1% to 22.5% Under 25 from 28% to 25% Ten-year natural demographic balance: –235; 12% of shrinkage	Structural changes: Over 65 from 25.8% to 28.8% 25–45 from 24.4% to 22.7% Under 25 from 20.5% to 19.7% Ten-year natural demographic balance: –5500; 103.4% of shrinkage
Economy	Local jobs: 63 % in Branches O–U ⁴ , incl. c.a. 36.7% in the navy ⁵ Regional (average of last five years): GDP per capita €29,070; spendable income of households per capita €18,800 ⁶	Local jobs: 29% in Branches O–U, 33% in Branch B–F Regional (average of last five years): GDP per capita €30,000 (Bertelsmann Stiftung); spendable income of households per capita €20,300

1 By default, numbers stand at 2019 and changes are calculated for the last decade and sources are CBS (the Dutch Central Bureau of Statistics) (CBS) and Statistisches Landesamt Sachsen (Statistisches Landesamt Sachsen).

2 Archived webpage Gemeente Den Helder (accessed on 2 March 2021)

3 Stadt Zwickau (2006)

4 Based on NACE Rev. 2 of the European Commission, Branches O–U are mainly public services and B–F are industries, including manufacturing and utilities.

5 based on Gemeente Den Helder (2016b) and CBS data

6 This entry only exists for the German database ('Absolut Verfügbares Einkommen der privaten Haushalte je Einwohner' [absolute spendable income of private households per capita]); for Den Helder, it is calculated by dividing average private household spendable income (from <https://cijfers.noord-holland.nl>) with average household size (CBS).

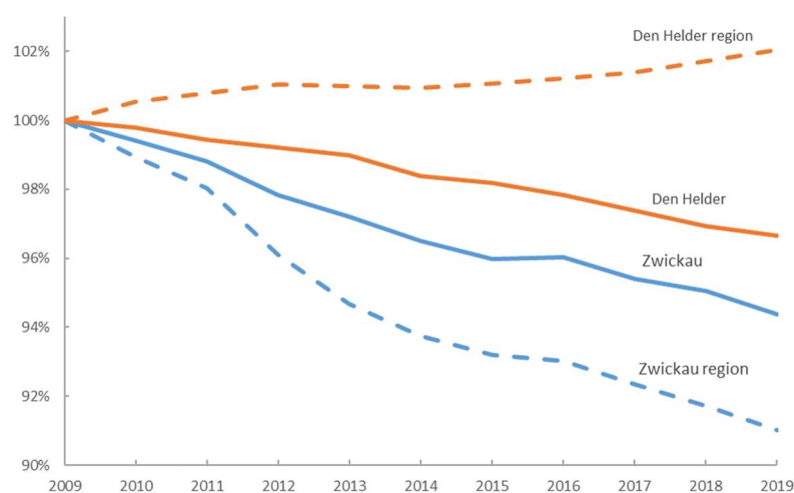


Figure 6. Relative population change of the two cities and their regions (2009–2019).

4.2 Development Policies

The shrinkage-relevant policies are identified and grouped into four categories based on their themes: residential infrastructure, social infrastructure and amenities, economic infrastructure, and transport and green infrastructure. In each category, the policies are described for each city and then compared to reveal factors behind their differences.

- Residential domain

Both cities hope to achieve a better fit with market demand by expanding higher-value and affordable higher-quality segments, and systematic downsizing lower-quality ones. However, in Den Helder, the downsizing is a precondition to expansion, because the latter must stay under the province-imposed and regionally negotiated quantitative limits, introduced to prevent vacancy (Provincie Noord-Holland, 2017a, 2017c). The forms of expansion range from acupuncture redevelopments to reconstruction on vacant site and construction of whole new neighbourhoods. The oversupply of social housing is estimated at 3,300 (Gemeente Den Helder, 2016a). This pool of housing is to be sold or replaced with demolition to meet new demand for qualities such as senior accessibility and larger room size. Among the replacement is also new social housing, which provides higher quality and adjust spatial distribution of social housing. With this approach, the city has managed to keep residential vacancy at 2% in a stock of 28,060 units (CBS, 2020). Spatially, the inner city is being comprehensively redeveloped and densified; the outskirts receives lower-density units, including the less luxurious off-the-grid tiny houses, to replace the demolished apartments by a ratio of 1:3; and the nature-near periphery continues a controlled, single-family house expansion. In Zwickau, downsizing is an end in itself, and regeneration a de facto secondary objective. The objective of downsizing lower-quality rental apartments in the industrial housing estates on the outskirts has stayed the same since the state-subsidised demolition programme *Stadtumbau Ost* started in 2002. Actors pointed out that due to the negative natural balance behind depopulation, the spatial pattern of vacancy is quite distributed and hard to steer. Despite the continued efforts, vacancy out of the total 57,383 units was still at 11.5% by the latest survey (Timourou, 2017). New products are generated in very limited amounts through small developments and refurbishment in the downsizing neighbourhoods. The lack of single-family housing is emphasised by public and private actors alike, but expansions are against the 'inner development before outer development' principle. Seeking more effective measures to catch up with the market demand, public planners hope to create a new neighbourhood at the occasion of the university's expansion on the outskirts. The differences also include Den Helder's accentuation on unique residential setting, which includes atmosphere, social environment, public services, and neighbourhood identity, essentially developing the neighbourhood itself as a marketable product. One of the strived-for residential settings is the vibrant and convenient central locations, and actors in Den Helder rigorously promote urban housing types in conjunction with the city centre renewal. In contrast, actors in Zwickau focus resources on the outskirts.

These differences can be attributed to shrinkage dynamics, regional housing market, inherited housing stock structure, local governance, and long-term planning. The still growing household number in Den Helder's region along with the housing shortage and rising income allows for the increase of the total value to finance the downsizing. In Zwickau, the existing vacancy, the scale of the vulnerable stock (one third of the total housing stock), and their near-half senior resident population proportion together make downsizing an ongoing priority. In Den Helder, the agreement between the public and the housing corporation, envisioning how many units are needed in the future and where what types could be located seems to facilitate the converging efforts to renew housing and residential environments, while

a collaboratively produced vision is missing in Zwickau. The lack of ideal inner-city locations for redevelopment goes hand in hand with the hampered ambition of inner-city renewal—the obstacles include, for example, the prefabricated high-rise apartments in the city centre from GDR times are well-occupied by lower-income groups due to their convenient location, and housing corporations continue to draw good revenue from them. Lastly, there lacked planning in earlier demolition to create suitable spatial conditions for the redevelopment of lower-density types, as public actors observed.

- Public services

Both cities strive to maintain their position as the regional centre with city- and region-level facilities, by (re)building the city library, the theatre, and the new town hall. However, Zwickau has inherited a larger cultural and sport infrastructure—including several concert halls, stadiums, swimming pools, and gymnasiums for regional and district levels, which are subsidised for operation and facility renewal—and is still making new, professional-standard addition. Some question such a policy, in view of other tasks that require resources. Both cities also work on consolidating neighbourhood-level services, but public planning in Den Helder appears to steer service infrastructure development more effectively. Den Helder's strategic plan outlined the idea of a 'service package' tailored to each area's social and demographic profile. Its effectiveness remains unclear, because firstly, it came as part of a larger public spending reduction process under the concept of 'self-help capacity' (as opposed to state-dependence) and is viewed critically by civic actors; secondly, the rationale of 'tailoring' is challenged, as even in senior-dominant neighbourhoods, wishes for more amenity for the youth are voiced in participatory process. Still, the accentuation on not spreading all the envied facilities evenly (Gemeente Den Helder, 2012) contrasts with Zwickau's unconscious approach, where, for example, large sports facilities are evenly distributed since the past. In Den Helder, institutional and commercial services are systematically tackled: daily facilities are clustered around subcentres; integrated school is introduced to deal with the decrease of pupils; and community centres for all districts are explicitly a strategy, which is shared among social organisations and act as neighbourhood governance contact points. Social and ecological solutions for service supply are increasingly emphasised: the use of public and green space is promoted for sport to improve citizen health as well as reduce facility costs, and civic organisations are involved especially in providing daily care services. In Zwickau, the neighbourhood planning emphasis is on securing service supply nodes, which mainly speaks of supermarkets, then again, lacking planning instruments to regulate retail development (see next subsection). To bridge the gap of service, innovations were explored, such as e-scooter stations to enhance seniors' mobility and access of facilities (project 'Zwickauer Engergiewende Demonstrieren') and converting ground-floor apartments to business space and converting vacant plots into playgrounds and parks. However, there still lacks systematic approach to liveability and service provision in neighbourhoods. Social facilities and green spaces are planned by corresponding departments and there lacks neighbourhood contact points for residents to reach the government on governance matters.

These differences are related to material legacy, political culture, planning approach, and institutional structure. Although Zwickau's inherited sport and cultural infrastructure is under pressure for decreasing users, there is fear for loss of image if existing facilities are given up (Stadt Zwickau, 2013, p. 110), discouraging any ideas of merging, sharing, substituting, etc. The stakeholder-engaging strategic processes are key to Den Helder's neighbourhood-level adaptations, but in comparison, Zwickau lacks the personnel resources for neighbourhood-level governance.

- Inner-city economy

Both cities face oversupply of manufacturing facilities from previous inner-city industrial era as well as retail facilities. In Den Helder, converting the decommissioned navy shipyard next to the city centre has been a priority since the first strategic plan. The availability of a large sum of state compensation combined with the lack of development know-how fuelled the failed attempt to develop it into a theme park as a quick economic solution to navy budget cut. This was learnt as a lesson and the current policy is to gradually absorb the vacant properties into leisure and office sectors with the precondition that no competition is posed to the city centre (Gemeente Den Helder, 2007). The retail facilities in the city centre had a vacancy of 13% (ibid.), which was seen as a serious image problem. This triggered a comprehensive city-wide restructuring process, especially aimed to consolidate the city centre and subcentres, where the absorption of oversupply and the preventive modernisation of facilities are combined. This includes facilitating businesses to modernise their facilities, upgrading public space, restricting the establishment of new locations, relocation business, and converting outlying shops in the centre to residences. In Zwickau inner city, the former coal mining site was developed into a shopping centre, which, along with several others that emerged on the outskirts around the 2000s, is seen to have weakened inner-city retail (K. Friedrich & Hahn, 2013). There the vacancy is around 25–30%, for which traffic pollution is another main driver (ibid.). The numerous car-friendly, large-scale shopping facilities around the outskirts have a higher economic efficiency and cater for regional consumers but has also exacted a cost on inner-city vitality and neighbourhood liveability. Based on the population trend, the viability of the already oversized retail infrastructure was pointed out as a top urgency in 2011, and spatial restriction, active steering, and urban design upgrade was recommended (GMA, 2011). However, the public actor is yet to undertake systematic measures (K. Friedrich & Hahn, 2013), while they observed that the permit-granting by the city council contradicts their own support of the 2011 recommended strategy.

The ineffective regulation of new locations in Zwickau is related to lack of legal instruments and inconsistent decision-making by the city council. The lack of regulation and collaboration appears to be a political culture, where the public should refrain from intervening in the market. However, the complex problems surrounding inner-city economic infrastructure call for comprehensive changes, which makes them a planning issue that public actors are uniquely in a position to tackle with spatial coordination, regulation, and stimulation of new forms of uses and use mix.

- Large-scale infrastructure

Large-scale infrastructure such as transport and green infrastructure is the basis of urban development activities due to their large-scale and distributed nature. Both cities have identified structural spatial issues that pose fundamental limitation on the inner-city attractiveness for residents and investors.

In Den Helder, the pollution from tourist car traffic was seen as a negative factor for the city centre residential environment and was addressed by relocating the ferry port. At the first stage of urban renewal, a city-axis park was created to connect the train station, the city centre, the seafront, and the adjacent neighbourhoods. Land uses were restructured to make room for this park. The transformation was aimed to fundamentally enhance the environmental quality and connectivity to the city centre for further development. The introduction of green space where there was little before also contributed to the microclimate and user experience of the area. This green-space-led approach was applied again to the redevelopment of a demolished outskirts neighbourhoods for lower-density housing types. In Zwickau, public actors are mainly concerned with road maintenance/renewal tasks but stalled with

structural transformation. The size of road infrastructure per capita is twice of that in Den Helder (CBS; Statistisches Landesamt Sachsen), which poses continual maintenance challenges—and given the local car dependence, captures the political attention over topics like traffic pollution (Stadt Zwickau, 2016), even though the latter is a major driver of residential and retail vacancy in the inner city. The solution for the latter takes a second ring road to reroute car traffic but involves complex measures. This ring road, going past the train station, should be spearheaded by the train station forecourt restructuring, which reconstructs road and tramline connections to the station, bringing the benefits of better connectivity between the station and the city, and lower long-term costs of tram operation. To sum up, this strategic project could strengthen the city in many aspects, but since articulated in the 2013 integrative plan, it has not been implemented, not least due to political indecision (G. Friedrich, 2020). Although green spaces have been added to the inner city, they are not mixed into the existing urban fabric, thus lacking impact on the spatial and environmental quality in the latter. So, the differences between the two cases also lie in approach: whether the restructuring of these large-scale infrastructure drives land use or functional changes.

The active structural transformation in Den Helder is linked to the planning understanding that a mixing green into the inner city is not only for direct user experience but also for long-term economic and social benefit, and the implementation is based on extensive negotiation work in land acquisition. In contrast, Zwickau faces more challenges with its larger-size transport infrastructure and car-dependent lifestyle, paralleled with a lower prioritisation of structural spatial transformation for long-term benefits in the decision-making circle.

4.3 Long-Term Perspective and Approach

Based on the above-described policies and thoughts offered by actors and planning documents, the analysis found the following emergent, long-term qualities about the strategies:

Policies in Den Helder mainly aim to regenerate the demographic and social structure by attracting and retaining the (young) skilled labour force, the families, and the higher-income by creating their preferred housing products and place qualities (and to a smaller extent, image-building public facilities). Local actors emphasise that regeneration is aimed at structural adjustment, not quantitative growth. The aspired place qualities are based on local conditions and identities, so that development does not turn into wasteful growth tactics and go beyond local character. The policies may be aimed at hopes of attracting and retaining target groups, but the implementation, maintenance, and social benefits does not depend on the realisation of those ambitions. The pursuit of regeneration are linked to three things: firstly, the city is perceived to stand a realistic chance of regeneration with the upwards regional population and housing market, and economic prospects for its port infrastructure; secondly, the rapidly changing demographic structure has sounded the alarm of labour shortage for maintaining social infrastructure and economic development; and finally, the politically authoritative Deetman–Mans report warned the city of the consequences of doing anything less than a comprehensive regeneration (Section 4.1).

Den Helder also makes preventive adaptation of urban assets to enhance their fit with the expected demand and reduce their economic vulnerability to future shrinkage. Policies are about adapting infrastructure for the ageing population, proactively reducing housing oversupply and limiting land intake, and shifting to less a resource-demanding service configuration. The last point includes restructuring institutional and commercial facilities spatially and organisationally, and increasing ecological and social solutions with green infrastructure, and co-production arrangements. These

adaptations often depend on the effective regulation of spatial development, collaboration with the housing corporation and service providers, and area-oriented, integrated approach. Not everyone is happy with all the adaptations especially when it concerns reducing state dependence of neighbourhood organisations, but currently the city is directing more efforts at public-participatory development with the instruments of neighbourhood vision. This is supported by neighbourhood-level governance platforms, and a rotation system that focuses on a limited number of neighbourhood at a time (Boverhoff & Rus, 2018). Thus, planning instruments, governance, and planning approach are significant factors to this strategy.

Policies in Zwickau are characterised by ‘coping’ with the impacts of shrinkage, in that they focus on critical problems rather than chronic problems and struggle to keep up with long lists of tasks with no strategy for prioritising. The foremost critical problems are the oversupply of housing, unstable service supply in some depopulating neighbourhoods, and the renewal of non-commercial infrastructure (such as roads and sport facilities). Costly issues such as the inner-city road restructuring to reduce traffic pollution tend to be postponed, and complex problems such as retail vacancy and neighbourhood images are not concretely articulated in policy. The high negative natural balance and a substantially one-sided housing stock, as well as other oversized infrastructure, are certainly defining conditions in terms of resource allocation. Other urgent issues tend to be argued with political values, such as from car-dependent groups and civic organisations asking for support; however, as one actor admits, satisfying every need is not achievable with limited resources. This coping mechanism tends to concrete tasks but diverts resources and attention from more structural issues.

Still, there is much aspiration for regeneration. As described in previous sections, single-family houses are highly emphasised, albeit without substantial implementation, and the public planners are aiming for a strategic residential project in connection with the university expansion for higher-income families. However, neither substantially reshapes the housing stock structure or the qualities of urban spaces—without long-term policies driving development in certain directions. Meanwhile, the city’s political commitment to more, better, newer public facilities for social and leisure activities has preserved the local foundation of social fabric, achieved satisfaction among the citizens (Stadt Zwickau, 2016), and attracted in-migration from the hinterland. However, to some actors, this is not enough. Zwickau 2050, the expert-led, informal visioning process, asserts that the city centre is the most valuable asset for attractiveness, and needs to be re-shaped to secure a prosperous future. However, housing corporations are unenthusiastic about the idea of redeveloping their city-centre stock, with their own assets requiring constant downsizing and upgrade. Moreover, some policies ambivalently affect the striving for attractiveness, e.g. allowing large retail developments around the outskirts to cater for the hinterland consumption has a negative impact on inner-city retail and neighbourhood nodes, and the deprioritisation of inner-city road restructuring allows traffic pollution to drive residential and retail vacancy.

There are also some elements of a preventive strategy. The principle of ‘inner development before outer development’ has made it more difficult for sprawl developments, although land consumption is still relatively high. Responding to the ageing trend, housing corporations have turned to partial demolition to create buildings of fewer floors, so that even lacking the capital to outfit the buildings with elevators, these buildings can become more senior-friendly. However, in general, shrinkage-accommodating adaptations are different from the preventive strategy in Den Helder: the upgrade in neighbourhoods is more for restoring/maintaining existing functions than reconfiguration and the consolidation of neighbourhood centres is hampered by the lack of regulative instrument. The wide application of

participatory neighbourhood development seen in Den Helder is also difficult for Zwickau, due to the lack of personnel (the city has one official for gathering public input on development, compared to district teams and managers in Den Helder). To sum up, the adherence to, and the inability to depart from coping, is also related to the political culture, the economic context, and planning approach and resources.

It is found that policies in Den Helder are articulated with a strong spatial awareness, namely, policies from different sectors are often integrated through their area orientation. The planning stresses the unique identity of an area and its role in the whole city, so that areas complement each other to support a city-wide, diversifying development. For the areas, policies are organised around collaboratively produced, holistic visions of the physical forms, atmosphere, functions, social profile, etc., thus integrating sectoral policies and coordinating actors' measures. Zwickau's sectoral policies are not integrated around holistic concepts from what this study can identify—despite one area-oriented project integrating downsizing with comprehensive neighbourhood development, which is, however, not embedded in a city-wide development framework. Measures are aimed at 'improvement' with inexplicit criteria rather than at visions. The relations between urban areas, giving rise to the city as a whole, are also not reflected in official documents. Explicitly, sectoral labels which describe both the status quo and the aspiration, such as 'city of shopping', 'city of diverse forms of residence', 'culture, sport and tourism centre', etc., provide little 'movement' into the future.

Another finding is that the transformation approach contributed considerably to the different courses of development. Den Helder's approach is crucial for the aspired regeneration: the holistic, area-oriented approach allows it to (re)generate unique residential environments; there is strategic coordination in terms of temporal sequence, city-wide spatial framework, and collaboration among actors; and strategic projects are identified to spearhead transformation, where existing uses are proactively restructured. In contrast, Zwickau lacks a fully developed spatial structure strategy; temporally, follow-up uses are not envisioned during downsizing planning to prepare the right spatial conditions; and most actors identify a lack of exchange among them. Its current policies focus on transforming outskirt areas and designate inner-city areas for 'improvement without restructuring'. These differences have deeply shaped the extent to which the two cities have been able to transform their urban environments and create synergy between different urban assets. Den Helder's city-wide framework guides the development of 'complementary' places. Negotiating changes of existing land uses allows the city centre and subcentres to be reinvented with better mix of retail, cultural and green amenities. Arguing for such an approach, the city centre masterplan (Zeestad, 2008) contended: 'Den Helder will not recover economically with a strategy of perfunctory measures and ad hoc projects' (translated by author). Zwickau 2050 advocates similar transformative logic, involving restructuring the city centre to connect to the riverfront and to the largest urban park so as to improve environmental quality of the whole area. However, the ideas are yet to enter the policymaking scene.

It should be observed that in Den Helder there are essential institutional conditions that are missing in Zwickau. Knowledge-wise, Den Helder was supported with research commissioned by the state, and later since the centre renewal, the province plays the role of 'investment partner' and is constantly closely involved. This differs from Zwickau's relation to the state as a subsidy-receiver. Financially, Den Helder receives state subsidy in one stream and has a higher level of certainty, self-determinability, and flexibility, while Zwickau's state subsidies need to be applied per type of measures and are limited to delineated areas. The cities' own financial decision-making also differs, as Den Helder established a long-term strategic reserve for implementing urban renewal and Zwickau's city council makes budget decisions on

a project-to-project basis. Implementation-wise, Den Helder has the effective instruments to regulate private developments and the organisational instrument, Zeestad, to operate the acquisition, negotiation, and contracting processes so that the implementation can be disentangled from politics (Rekenkamercommissie Den Helder, 2012). In contrast, Zwickau's public planners lack the regulative power and struggle to unite opinions within governmental departments and with property owners. Finally, the strategic processes for establishing new orientations, concretising ideas into development logic, and mobilising actors are deemed too costly by public actors in Zwickau.

Figures 7 and 8 illustrate the above emergent qualities in connection to the policies and show how they content-wise and structurally differ between the two cities. The relations between the strategic elements are not represented in arrows because, taking the emergent nature of strategy as well as the learning-adaptation process into consideration, one cannot say that the abstract concepts direct the concrete measures (as in traditional strategy-making logic), or that the concrete measures spontaneously self-organise into coherent logic without any intentional design. Thus, this analysis views their relations in terms of consistency.

(Text continues after table)

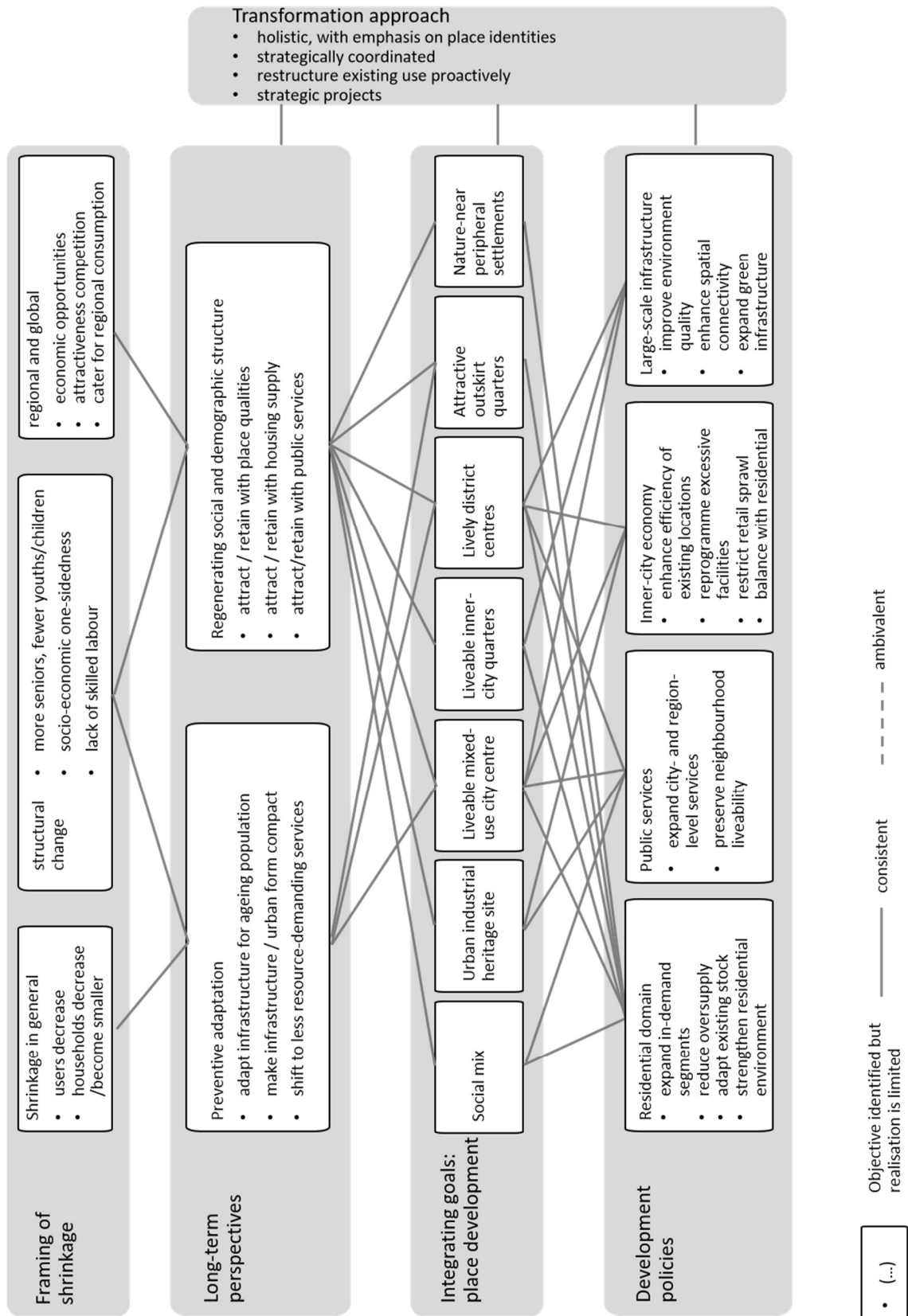


Figure 7. Structure of development strategy in Den Helder

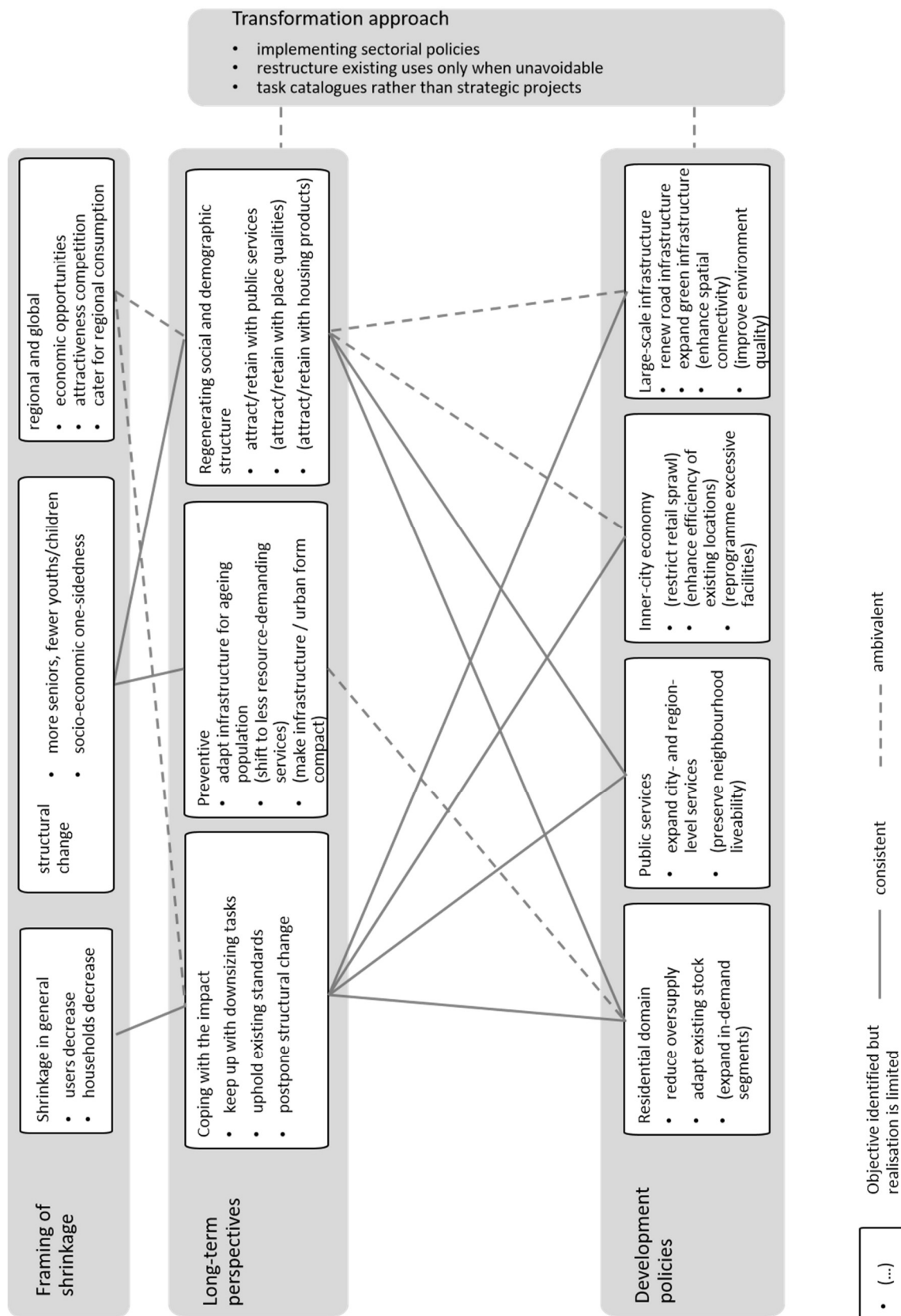


Figure 8. Structure of development strategy in Zwickau

4.4 Summing-Up: Preliminary Model

The conceptual structure underlying the above analysis can be abstracted into a preliminary model for understanding development strategies for shrinkage (Figure 9). Five variables are used to capture the variation found in the two strategic courses, from measures up to long-term perspectives and to the socio-economic framing of shrinkage. The relations between strategic elements, as found in the case study, can contradict or support one another. On the constraint side, to limit the complexity of the model, only locally present constraints to strategy-making are represented, including shrinkage dynamics, institutional conditions, and material legacies. The regional and global economic trends are considered to influence strategies through perception and framing, whereas the locally present conditions influence strategies even without being perceived. These locally present conditions are also shaped by strategy itself, e.g. development measures can transform the local shrinkage patterns and material conditions, and the comprehensive renewal approach applied in Den Helder led to institutional changes for more effective implementation. The links between the variables reflect important relations found in this case study.

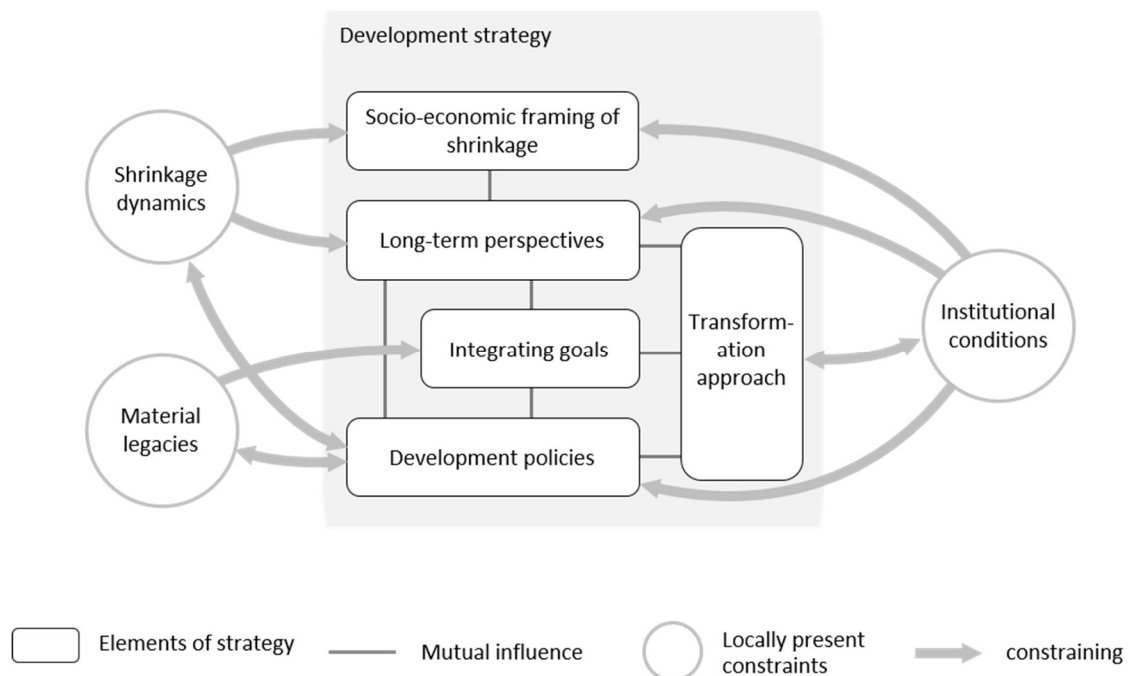


Figure 9. Model of development strategy for shrinkage

5. Discussion

Shrinking city studies generated important knowledge on how population decrease impact the complex urban system, the implications for sustainability, treating and prevention of overdevelopment, etc. However, it still requires more research and theorisation regarding how population decrease translates into planning and how instruments are strategically organised to deliver urban transformations so that this knowledge can play a bigger role in the long-term development of cities. In this context, this research has investigated cases in two cities that have extensive experience in responding to shrinkage and that stand in contrast to the stereotypes of shrinking, declining cities reacting to dire crises. The two cases are interesting because their stories of handling slow crisis in balance of long-term goals for the city as a

whole show a diverse range of possibilities and strategic rationales. Such complex pictures have the promise of addressing particularly two issues towards a 'theory of shrinkage' (cf. Dieter Rink & Kabisch, 2009; Sousa & Pinho, 2015).

Firstly, although researchers cautioned against a 'one-size-fits-all' approach to explain and respond to urban shrinkage (Bernt, 2009; A. Haase et al., 2016; Schatz, 2010), the approach is often implicit in the single-variable conceptualisation of shrinkage and empirical work on 'shrinking cities' that fall short of distinguishing the varieties and different needs of shrinking cities and linking them to policy implications (Bernt, 2016; Olsen, 2013). In other words, shrinking city research still needs to clarify what shrinkage means and how to go about it. Typologies of shrinkage may help identifying research dimensions or policy themes (e.g. Bertelsmann Stiftung, 2020; Wiechmann & Pallagst, 2012; Wolff & Wiechmann, 2018) but knowing which type their own city belongs to is not enough for local policymakers entangled in the local context to make development strategies. This research supports this view, showing that when population shrinks, economy can grow, capital has not deserted the city, public infrastructure can expand, housing (or at least specific segments) can expand, etc., and all for good reasons from local points of view. Behind the development are the varied sense-making and action rationales of policymakers situated in different contexts and planning cultures. For example, Den Helder public actors said 'we will be around 50,000, give or take, it won't make much difference' (to the real task of improving the one-sided social structure through attracting well-educated young people); and, putting it more entrepreneurially, 'well... there is shrinkage, and *shrinkage*', explaining why *their* population shrinkage warrants well-targeted expansions, because the growth of economy and national housing shortage can help attract certain groups to regenerate the local demographic and social structure. Planning in Zwickau follows a forecast approach, systematically calculating need for prefabricated apartment demolition while omitting to talk about the size and types of future demand (except for single-family houses). While in Den Helder, the decreasing size of labour force translated into comprehensive policies to create vibrant environments and housing options for young people, in Zwickau it meant more attention to family friendliness and larger homes despite shrinking household size.

In both cases, the point of strategies is not (only) to reduce the sum of supply itself, but to create a content-wise and spatially different supply structure for changing societal needs and for self-sustainability. Den Helder displays a stronger tendency to exit the crisis of shrinkage with regenerative and preventive strategies and a holistic, transformative approach. Contrastingly, Zwickau has routinised coping with the impact of shrinkage and opted for public-subsidised infrastructure for some degree of regeneration but lacks strategy towards a different future where the urban systems can be sustained by the local community and practises weaker spatial transformation and policy integration. However, the successful implementation of regeneration in Den Helder is critically related to its shrinkage and economic parameters. The half-committed regeneration in Zwickau may turn out to be a better option than rigorous investment, and a systematic preventive adaptation may require a slower pace of shrinkage and less social vulnerability (cf. Hollander and Németh (2011)). So, the logic of coping might be waiting for the right circumstances. Thus, no conclusive evaluation can be formed on which strategy is eventually better within each city's own situation. Tackling the conceptual complexity of 'urban shrinkage' can be advanced by examining complex planning situations, and research can also help practice make sense of shrinkage in connection with other variables and connect this sense-making to perspectives and alternatives that are more context-specific than accepting, downsizing, and maintenance.

The second issue is, if strategies cannot be evaluated simply with results due to different contexts of shrinking cities, how can their strategy-making then be improved? This concerns the role of public planning in shrinking cities. This research indicates that for public actors, doing what needs to be done is no longer sufficient strategy-making logic. Behind the coping tendency found in Zwickau are an overwhelming number of urgent tasks, planning objectives contradicted by trends in reality, and a lack of consensus among actors regarding the best course of action. One can hardly allow existing facilities to fail or ignore the call for equal treatment from struggling organisations and neighbourhoods, but 'to satisfy every need all at once is not achievable', to quote an interviewee. Similar struggle took place in Den Helder in the 2000s, with the city going from 'one political crisis to another' (interviewee) and numerous plans made but little implemented (Rekenkamercommissie Den Helder, 2012). This could be a shared challenge for shrinking cities, not only because the adaptation to shrinkage has less financial leverage in the still growth-dominated economic context for development (Hackworth, 2018), but also because the municipalities can be overwhelmed by increasing tasks as rule maker, investor, and operator, as private capital dwindles and systemic infrastructure crisis unfolds.

While public actors are preoccupied bridging the gaps and fixing problems, they could lose sight on issues, to which they are uniquely in a position to attend. Such issues include: (1) City-wide coordination, because 'you should not rely on one project to revive the whole city' and it takes 'a systematic approach', according to a Den Helder interviewee. Coordination involves spatiality (Strauß, 2012) and temporality (such as duration, tempo, sequence, and timing) (Hutter & Wiechmann, 2022). Strategic projects such as the city centre renewal in Den Helder and the proposed 'train station forecourt' project in Zwickau belongs to such coordination as 'short-term actions' (Albrechts et al., 2003; Bürkner et al., 2005) embedded in a larger transformative framework. 'A dynamic flow can only happen when it [effort] is channelled and bring the whole city forward, and not here and there a little bit better [but the whole is still not much different]' (a Zwickau interviewee). (2) Sustainable use of land, because with changing societal needs and growing economy, new uses and programmes emerge, but without intensifying the uses of existing areas like the city centre and 'recycling' areas with unattractive image (Viganò, 2012), there will be increasing pressure to expand despite shrinkage. However, spatial regulation and proactively channelling investments and use into existing locations by creating attractive conditions in these locations, including changing the image of an area, requires public-led efforts. (3) Changing mindset and organising new approaches, which is strategic planning work (Healey, 1997; Kunzmann, 2013). Rather than dwelling on traditional, infrastructure-intensive ways of life, areas with (predictable) decreasing population density can be approached with a shift to less resource-demanding infrastructure, namely nature-based amenities, citizen co-produced service supply, with digitally enhanced accessibility, as well as new forms of housing. Here public actors can create the conceptual, organisational, and institutional conditions. The self-sufficient 'tiny house' experiment in Den Helder and the senior mobility experiment in Zwickau both bear some signs in this direction. The approach of adapting user behaviour when urban-level infrastructure cannot be sustained by population density, in order to achieve a different, but not lower, quality of life, resonates with thinking in degrowth and social ecological sustainability (Herrmann, Shuster, et al., 2016; Hirt & Beauregard, 2019; D. E. Popper & Popper, 2002; Reverda et al., 2018; Sousa & Pinho, 2015). To sum up, in addition to what should be done and what can be done (with accessible resources), public actors must act upon what they are uniquely in the position to do, as a strategy-maker, condition-shaper, mobiliser, and coordinator. This underlines that a 'theory of shrinkage' should address the holistic, strategic aspects of development to contribute to local development and shrinking city sustainability.

6. Conclusions

Urban shrinkage is a complex, long-term challenge for policymaking and planning for sustainable development. It requires a strategic approach in making sense of shrinkage in the local context, employing diverse instruments from degrowth to growth-promoting for holistic progress in urban development, and mobilising and coordinating actions. In argument for this, this research studied with a cross-sectoral view the emergent strategic elements and conceptual structure of development strategies in two cases. It is found that even cities with similar willingness, experience, and economic stability to address shrinkage, can have very contrasting long-term perspectives alongside many similar policies. While the merit of their perspectives—to exit the crisis with in-depth transformation or coping with the impact of shrinkage without a vision of a different future—cannot be assessed by the results of development, they stimulate us to reflect on social and economic parameters of revitalisation and the constraints for strategy-making in the local demographical, material, and institutional conditions.

This research can serve as a pilot project to test out the conceptual structure, the variables, and the methodology for extracting relevant concepts. Because of the limited cases studied, and the reliance on contrast to make inferences, certain qualities (or the lack thereof) and their corresponding concepts in one case might have been more emphasised than they would have otherwise been, were the other case selected differently. Furthermore, the categories in model of shrinking city strategy could also be enriched by especially studies of more dissimilar cases. For example, in regions where population development is shaped by migration rather than demographic structure, perhaps a volatile shrinkage–regrowth trajectory influences development strategy less through ‘long-term perspectives’, than through something such as ‘contingency plans’ (cf. Wiechmann (2008a)).

Finally, the research shows that studying the strategic aspects of shrinking city development can make unique contribution to theory development and policymaking. Examining complex planning situations can help tackle the conceptual complexity of ‘urban shrinkage’, and conversely, research can help practice make sense of shrinkage in connection with other variables and connect this sense-making to perspectives and alternatives for formulating comprehensive strategies. Especially, for the sake of sustainable development, it is important that public actors engage in strategic issues that only they as the strategy-maker, condition-shaper, mobiliser, and coordinator can address.

4

Spatialising Strategies for Shrinkage in Medium-Sized Shrinking Cities: The role of urban planning

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Abstract

While the need for shrinking cities to adapt their infrastructure to a smaller population is widely recognised, there is still a lack of understanding on how such policies translate into spatial strategies. Different approaches for urban spaces as well as coordinative strategies at the city scale remains to be clarified through the perspective of urban planning. To understand the spatialisation of strategies for shrinkage, this study investigates the cases of two medium-sized cities and identifies their strategies with spatial characteristics at different scales. The findings also show local factors that are key to the spatialisation of strategies for shrinkage and how localised growth and shrinkage are leveraged for long-term development. Urban planning can therefore play a unique role in managing urban shrinkage through its competences in terms of spatialisation and spatial visions.

1. Introduction

Population shrinkage has implications for infrastructural efficiency, social stability, and economic development through its impacts on infrastructure supply and the labour market (González-Leonardo et al., 2021; Hackworth, 2014; Kabisch et al., 2018b; Moss, 2008). Shrinking cities research has revealed the inefficiency of growth-oriented policies (Hirt & Beauregard, 2019; Sousa & Pinho, 2015; Wiechmann & Bontje, 2015), identified alternative socio-ecological approaches to urban development (Herrmann, Shuster, et al., 2016; Matyushkina et al., 2023; Murtagh, 2016), and examined instruments to adapt urban infrastructure to shrinkage (Bernt, 2009; Wiechmann & Pallagst, 2012). Compared to the study of ‘urban shrinkage’ as a geographical phenomenon, ‘shrinking cities’ evokes a holistic, integrative, and place-based conceptualisation of urban development (e.g. Bernt et al., 2014; Haase et al., 2014; Pallagst et al., 2017) that draws attention to the challenges for local policymaking.

An under-researched aspect of local policymaking for shrinking cities is spatial planning. While the need for shrinking cities to adapt their infrastructure to a smaller population is recognised, there is still a lack of understanding on how such policies translate into spatial strategies for a heterogeneous territory. Shrinking cities do not shrink evenly across their territories (Couch et al., 2011; Moss, 2008; Wiechmann, 2008c). Areas of shrinkage and areas of growth can co-exist under an overall trend of shrinkage (Silverman, 2018; Slach et al., 2019). Where do planners counter shrinkage, and where do they adapt to shrinkage? Where do they ‘restore’ spaces and where do they fundamentally re-imagine them? Finally, other goals for urban development next to adapting to shrinkage, such as revitalisation and regeneration, also play a role (Bernt, 2009; Sousa & Pinho, 2015), but how do they integrate into spatial transformation?

The importance of the spatial dimension has been highlighted in many studies. Unsteered shrinkage could lead to sporadic erosions of the urban fabric (Daniel, 2010). Centralisation policies might not apply to car-dependent cities (Wiersma et al., 2017), or could have a negative impact on social sustainability (Kirkpatrick, 2015). The degrowth alternatives to traditional use-intensifying development, given their conflicts with urban development capital, only work in specific contexts (Hackworth, 2018). Addressing shrinkage in one area affects its neighbouring areas, accelerating their decline (Strauß, 2012), or bring the benefits of renewed infrastructure (Ehrenfeucht & Nelson, 2020; Slach et al., 2020; Tighe & Ganning, 2016). New ecological functions generated in the shrinkage process also need to be integrated at multiple levels to be effective (Herrmann, Shuster, et al., 2016). However, despite the attention to the spatial

dimension, there is still a gap for theorisation between the empirical results and utilising them for strategic spatial planning.

Against this background, this research aims to find out through a qualitative, comparative case study: (1) How does urban planning in shrinking cities spatialise strategies for shrinkage? (2) How do spatial strategies leverage growth and shrinkage to achieve planning goals? (3) What is the (unique) role of urban planning in making spatial strategies?

2. Literature review

2.1. Shrinking city planning

The challenges of urban shrinkage are rooted, firstly, in the supply of public services and infrastructure, where the mismatch between a smaller population and the established pattern of infrastructure threatens the financial viability of the infrastructure (Moss, 2008), which could trigger a downward spiral, where shrinkage and the declining quality of infrastructure reinforce each other (Annegret Haase et al., 2014; Hartt, 2018). The second source of challenges is the structural change of the local population due to the selective nature of outmigration, leading to a 'brain drain' for the economy as well as demographic and social vulnerability, with an increasing percentage of elderly and lower-income groups (González & Vigar, 2010; Strohmeier & Bader, 2004). Policy responses that offer more, cheaper infrastructure and land, or that launch 'flagship projects' to attract businesses and residents often prove counterproductive (Hartt & Warkentin, 2017; Hospers, 2014; Pallagst, Fleschurz, & Said, 2017). 'Smart' approaches to manage shrinkage are downsizing, consolidating existing infrastructure, and substituting with other less resource-intensive forms of service supply (Herrmann, Shuster, et al., 2016; Murtagh, 2016; Pallagst & Wiechmann, 2004).

The form of urban development under shrinkage should not be taken for granted. Certain transformations of local spaces aimed at dealing with shrinkage might lead to gentrification or long-term burdens on the public finance (Fol, 2012; Montgomery, 2015; Dieter Rink et al., 2012; Slach et al., 2019). Innovative forms of development could achieve ecological and social sustainability that is needed in a global context of sustainability transition (Herrmann, Shuster, et al., 2016; Hirt & Beauregard, 2019; Reverda et al., 2018). Yet these new forms of development cannot replace existing forms of development overnight (Hackworth, 2018). Therefore, the form of development needs to be strategically considered within the existing socio-spatial dynamics of urban development.

In view of this, spatial planning as a multi-scale instrument is important for shrinking cities to steer the transformations of local spaces as well as the transformation of the overall urban spatial structure. For example, the sole focus on prime sites for economic development might have negative impact on other areas and social groups (Berglund, 2020b; Kirkpatrick, 2015). When uncoordinated, the improvement of some areas might destabilise other less attractive areas (Strauß, 2012). The redevelopment of one area could benefit surrounding shrinking areas with its new infrastructure if the connections between them are strengthened (Tighe & Ganning, 2016). Thus, there is a need to discuss the local transformations in the context of coordinative strategies to seek out a more balanced approach.

2.2. Strategic spatial planning and strategy-making

To address spatial planning in a context of shrinkage, one needs to understand ‘spatial strategies’. What sets strategic planning aside from day-to-day planning work is that it selectively addresses the key issues that have a long-term impact (Albrechts & Balducci, 2013; Friedmann, 2004; Sorkin, 1984). To approach these decisions, the planning process considers the latest internal and external factors, systematically evaluating the situation and reframing perspectives (Albrechts, 2004). True strategic planning brings about a ‘paradigm change’ by critically questioning conventional paths and assumptions (Healey, 1997). Spatial strategies are:

- based on relational conceptualisation of space. Space is conceptualised as socio-spatial relations rather than as objects defined by physical dimensions and density (Healey, 2004). The experienced qualities of urban environment are as important to planning as physically measurable attributes.
- not rigid blueprints. They allow for flexibility and social co-production (Albrechts & Balducci, 2013). The products of strategic planning — goals, visions, (metaphorical) concepts, images, etc. — mobilise and fix the attention of diverse actors and provide ‘frames of reference’ and ‘justifications for coherent actions’ (ibid.).
- action oriented. Strategies bridge an abstract framework to short- and long-term actions, including the creation of institutional instruments and strategic projects whose results could showcase the intended changes to convince actors (Albrechts & Balducci, 2013). It is therefore essential to find ‘effective connections between political authorities and implementation actors’ (ibid.).
- results of social processes. Strategies integrating participants’ values, agendas, knowledge, and resources, enable the integration of investments and agendas to avoid fragmented urban development (Albrechts et al., 2003; Healey, 1997). Through this public interest can also be directly involved (Albrechts, 2006).
- innovative and transformative. Not only can strategic planning be used to create change by traditional planning actors, it can also be used by new actors to contest mainstream visions (Albrechts, 2015; Kunzmann, 2013).

However, strategic planning is not the only avenue for making (spatial) strategies. In practice, strategies of large organisations come from different actors and streams of decisions over time, without ever being centrally integrated into a coherent framework (Mintzberg, 1994). In other words, strategies of a group of actors are actions from different levels, sectors, public and private domains, etc. guided by shared fundamental goals — in other words, a pattern emerging over time (Wiechmann, 2008b). This conceptualisation of strategy broadens the scope for the study of strategies beyond articulated official strategies that are made within a given arena and for a given time frame.

3. Research method

3.1. Set-up of the case study

A qualitative, case study method is used to answer the research questions, leading with: how does urban planning in shrinking cities spatialise strategies for shrinkage? This question is further broken down into, on one hand, describing their strategic rationales and their spatial characteristics, and on the other hand, identifying the local factors key to their spatialisation.

For each case, the strategies for shrinkage were analysed at two scales. At the scale of the city, coordinative spatial approaches and high-priority strategic projects were identified. The scale of the neighbourhood was examined to describe more concretely how these approaches/projects have been realised. Both scales were examined to account for ‘emergent patterns’ of strategies (Wiechmann, 2008b). To focus the analysis, not all neighbourhoods of the city were in-depth analysed. Here the second research question regarding localised growth and shrinkage led to the selection of two focus areas where the most population dynamics were observed, namely the city centre and a large housing estate on the outskirt.

The reason to compare two cases is to find out, firstly, if the description of spatiality works for various strategies across different cases, and secondly, what local factors are key to the spatialisation of strategies. The cases should have partial similarity to isolate the variable of interest (Gerring, 2016). Therefore, two cases with a similar spatial structure and internal population trend, but a contrasting severity of shrinkage were selected to show various strategies for different situations of shrinkage. The research was conducted with the awareness of their other differences in, for example, national planning systems and local actor constellations, which were balanced with a holistic, context-sensitive approach (Yin, 2017). The factors that turned out to be relevant for spatial planning could thus be identified. The case selection did not consider large cities, or cities in polycentric metropolitan areas because their spatial structure is too complex for a qualitative comparison. Another important criterion for the purpose of this study is the willingness of local administration to acknowledge and plan for shrinkage, since the acceptance of shrinkage is a critical factor for carefully considered, informed strategy-making in shrinking cities (Pallagst, Fleschurz, & Said, 2017). The cases selected here are cities with long-lasting shrinkage, where policy-learning cycles have shaped a strategy-making with shrinkage as the outset of urban development.

The cases of Den Helder (The Netherlands) and Zwickau (Germany) are studied here. Both cities have a long experience of planning under shrinkage, with a relatively ‘synchronised’ timeline: they have undergone steady shrinkage since before the 1980s, which became more pronounced after the end of the Cold War in the 1990s. The cities started to address the issue with city-wide policies from around the year 2000 and established the latest spatial frameworks in the early 2010s. They have a similar spatial structure, where the city centre grows and the outskirts shrink. Finally, the two cities have contrasting paces of shrinkage.

	Population (2020)	Population change (2010–2020)
Zwickau ^[1]	88,690	City absolute: 94,340 to 88,690; relative: -0.6% p.a. Centre absolute: 3,280 to 3,474 ^[3] ; relative: 1.0 % p.a. Outskirts (peripheral, detached settlements excluded) absolute: 29,338 to 25,485 ^[4] ; relative: -1.3 % p.a.
Den Helder ^[2]	56,305	City absolute: 57,403 to 56,305; relative: -0.2% p.a. Centre absolute: 1,175 to 1,405; relative: 2.0% p.a. Outskirts (peripheral, detached settlements excluded) absolute: 22,230 to 21,705; relative: -0.2% p.a.
[1] Unless otherwise specified, Statistisches Landesamt Sachsen; [2] unless otherwise specified, the Dutch Central Bureau of Statistics (CBS); [3] statistics only available for 2010–2016, from the city (Statistische Information 2010-1 and 2016-1); [4] statistics only available for 2009–2019, from the city’s 2021 update to the housing downsizing plan.		

Table 1 Basic statistics of the two cities

3.2. Data collection and processing

Data was collected from late 2019 to early 2022. Firstly, official statistic portals and regional planning documents were used to understand the demographic and socio-economic context for local planning. Secondly, 30 local documents including planning frameworks and sectoral plans relevant to the quality of the urban environment were analysed (Appendix 3), complemented by publications, news articles and official statistics on specific areas. The document analysis focused on the spatial strategies for shrinkage and the transformations of focus areas. Specifically, the analysis first identified the policies aimed at (1) addressing the results of shrinkage and (2) proactively addressing the demographic challenges in the future. Then the spatial aspects of these policies were analysed. In addition to this conceptual level, the transformations of the focus areas were examined to reveal their effects. In parallel to the document analysis, 21 actor interviews were conducted with public planners, representatives of housing corporations, and civic actors (for further details see Appendix 3). The interviews were intended to (1) guide the search for and interpretation of the textual data, and (2) find out about actors' perceptions of urban development under shrinkage, which were used to aid the reflection on the findings. The interviews were first recorded and then transcribed to be analysed as texts. The consent of the interviewees was obtained using consent forms that clarified the objectives of this project, the use of their data, and participants' rights. Finally, field trips lasting one-and-a-half weeks were conducted for Den Helder in October 2021 and for Zwickau in July 2021 with a focus on the selected areas to observe the local conditions and the effects of spatial transformations.

4. Case study

4.1. The case of Zwickau, Germany

4.1.1. City-level policies

Zwickau is home to a car manufacturing industry with Volkswagen as the local leader, and an applied sciences university. A decade of drastic shrinkage driven by the outmigration of young people took place here after the German Reunification in the 1990s. Currently, the urban shrinkage is slowed down by the in-migration from the hinterland. However, the previous loss of a young generation is now manifested in the negative natural balance, indicating a further sustained shrinkage process.

In the 2013 integrated plan of development 'INSEK' (Stadt Zwickau, 2013), the city-level spatial strategy is a differentiated approach to three types of areas (Figure 1): (1) 'restructuring' areas, where spatial and functional changes are on the agenda due to severe shrinkage; (2) 'consolidating-worth' areas, where only physical improvements but no functional changes are necessary because of a milder shrinkage; and (3) 'consolidated' areas, where the need for intervention is limited because the population is stable or even increasing. The approach originated from the 2006 urban spatial plan 'SEKo', when there was a city-wide vacancy of 18.8 percent, which mainly affected the properties of local housing corporations. As a result, the city and the housing corporations drew up the 2006 plan based on vacancy and population development trends and updated the plan in 2013. This plan was necessary for the application for state subsidies. In other words, the plan represented more of an agreed allocation of resources than a future vision. The swift downsizing and restructuring paid off: by 2019, the city-wide vacancy rate had been brought down to 12.1 %.

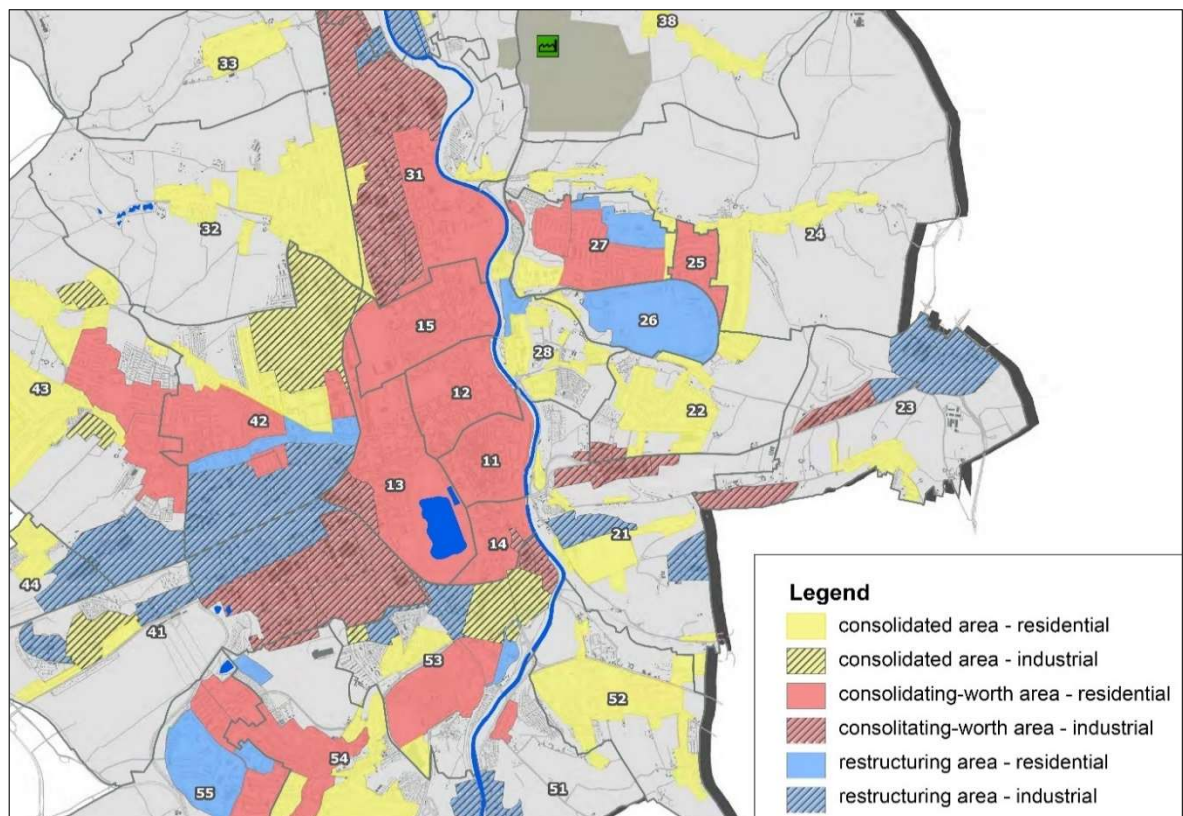


Figure 1 a zoomed-in section of the plan for urban development strategy from the year 2013, with the city centre as Area 11 and Eckersbach E5/2-3 as Area 26; legends translated by author

The 2016 housing report drew attention to the extremely low stock renewal rate of 0.03 percent, whereas normally 1 percent is expected to sustain the existing stock. Besides consistent downsizing, a diversification and qualitative development of the housing stock were recommended, such as modern floorplans, senior-friendliness, and energy efficiency. The report also highlighted the vacancies and signs of blight in the inner city due to traffic pollution and recommended engaging in partial building downsizing in view of the dispersed pattern of vacancy driven by ageing. While a monitoring and guiding role was recommended to the city, housing developers complain that locations for higher-quality development in the inner city were lacking, indicating the urban environment in general needs strengthening. Instead, the housing corporations have diverted their energy to their existing stock in the large housing estates, where they have been gradually adding higher-quality units to their stock by refurbishing housing units in partially downsized buildings. The slow pace of regeneration is viewed by public planners as a wasted opportunity for retaining higher-income employees of the local industry. Finally, the 2021 update to the housing downsizing plan revealed severe future challenges for the large housing estates on the outskirts, namely one-third of the city's housing stock. There, the vacancy rate was 17 percent on average and 46.5 percent of the population were over 60 years old. This just reaffirmed the common priority for all actors: further downsizing in these areas.

Retail and urban centre development is visibly a major challenge to the city. Shops near the city centre have a high vacancy rate (ca. 30 percent) due to poor building conditions and traffic pollution (K. Friedrich & Hahn, 2013). Abandoned shopping facilities are present in many housing areas, caused by decreasing revenue as the population shrinks. The retail planning report (GMA, 2011) found a 33 percent oversupply of retail floor space, counting five shopping centres, six district shopping zones, and the city centre

shopping zone. The car-oriented shopping centres on the outskirts could offer a more attractive shopping environment and are positioned to profit from wealthier customers from the hinterland (ibid.). However, a lack of effective instruments for actively reducing the oversupply of retail space and revitalising retail space in the inner city has been observed by local planners. Instead, the municipality could mostly promote public events and beautification of the public space to make the urban centres more attractive and preserve the inner-city economy.

4.1.2. Areas of growth and shrinkage



Figure 2 (left) the city centre characterised by its restored heritage architecture;
Figure 3 (right) the recreational space in Eckersbach E5/2-3 created through the demolition and some remaining buildings

A typical ‘restructuring’ area is Eckersbach E5/2-3. It is owned by large local housing corporations and had a vacancy rate of 42 percent in 2001. Its unpopularity was attributed to poor design — cramped layout, minimal green space, and out-of-date floor plans. Measures in the 2000s included reducing over six out of the original seven thousand housing units. The freed-up space was turned into playgrounds or renaturalised. A fast connection to the city centre by public transport was created. In the nearby ‘consolidating-worth’ parts of Eckersbach, whole buildings were also demolished to make space for new parking lots and green space. For part of the empty fields in E5/2-3, the city soon found a new use — a new football stadium was built here by the city’s housing corporation, paradoxically, expanding the sport infrastructure given the trend of shrinkage, because restoring the old one would cost more. Later, the public planners initiated a strategic project to create a new, energy-efficient neighbourhood on the almost empty land, motivated by the expected expansion of the university nearby and state subsidies for energy-efficient housing. This development would supply single-family houses, modern apartments, and knowledge facilities. External experts argued against it, because for a compact shrinkage, the inner city needs redevelopment more than the outskirts. The city council declined it, but naming the high vacancy rate in general as the reason.

In the first decade after the Reunification, the city centre underwent a comprehensive renewal: infrastructure provision, removing industrial contamination, building restoration and modernisation, public space improvement, etc. Since then, several high-profile projects have introduced more urban qualities, including the creation of a riverside park by rerouting a federal road with an underpass, as well as the conversion of a former grain storage warehouse into the city library. The area has since become the centre of retail and service businesses, cultural facilities, university campus, and heritage architecture — albeit against a dissonant background of large housing estates developed in the soviet

time. Residential vacancy dropped from 27.2 percent to 9.8 percent (2000–2012). This has lowered the priority status of the area in the new ISEK agenda, but an expert-led visioning process, Zwickau 2050, argues for further use-intensifying transformations. The experts are critical of how public investment is mainly focused on the outskirt districts and see a redevelopment of the city centre as the fundamental solution to revitalising the inner city, increasing urban attractiveness, and driving a compact shrinkage. Although the visioning process was supported by the municipality, the results are controversial, mainly due to the fear of displacing lower income groups living in the large housing estates. The therein involved loss of income and difficult tenant relocation would be unacceptable to the housing corporations, whose main strategy for this area has been preservation.

4.2. The case of Den Helder, The Netherlands

4.2.1. City-level policies

Den Helder is home to a maritime and offshore industry as well as coastal tourism. The Dutch navy operates a base here and plays a vital role in its economic development as an employer and contract giver. The city started to shrink towards the end of the Cold War due to the defence budget cut. In the last decade, the shrinkage has stabilised at a moderate rate, driven by the outmigration of young people, but the number of households has not yet decreased. The city has been regarded as a ‘problem case’ because the whole region grows. The loss of young people combined with a coming wave of retirement in the baby-boomer generation is perceived as a serious future problem for the social infrastructure and the labour market.

The strategic visions of the years 2000 and 2007 emphasised population regrowth targets and a quick economic revival. In the wake of a critical report commissioned by the state (Deetman & Mans, 2010), policymaking looked beyond population goals in their next strategic planning (Gemeente Den Helder, 2012). The framework defined three ‘domains’ for strategic urban development — the residential domain, the maritime domain, and the visitors’ domain. Each domain is analysed based on its connections to global or regional networks and the relevant local spaces — areas, nodes, and connections — that together form the basis for the domain function (see Figure 4 for example). Projects transecting domains are identified as strategic projects for the city. As such, the framework clarified the spatial structure for long-term development and key measures. Various other policies refer to the spatial framework in the design of their measures.

The housing policies were first established in 2003 and regularly updated until the last housing vision in 2016. The essential spatial strategy is de-densifying the outskirts and densifying the inner city, with the goal of achieving a compact form under shrinkage. A main objective for the housing stock is diversification and modernisation, especially with regard to senior-friendliness. A particular target was the downsizing of outdated social housing stock that could not be cost-efficiently modernised. A minimum amount of social housing supply is to be maintained based on socio-economic statistics. A further objective is improving and diversifying the residential environment to create place attachment in residents. Another main objective is to strengthen ‘social mix’. New housing for higher-income groups was introduced into areas previously dominated by lower-income groups, and new social housing was realised at widespread locations all over the city to prevent a concentration of vulnerable groups. The housing supply for young people and career starters was promoted with a spatial focus on central locations. Much of these policies has been realised through the cooperation with city’s largest housing corporation Woningstichting Den Helder (WSDH).

Retail policies were first established in 2007 and updated over time but remained unchanged in essence. The main spatial approach has been consistently the restriction of retail activities to central locations, which was backed up by regulative instruments. Accompanying this is the investment in improving business environment in these zones. The policies give the highest priority to the city centre, which should be strengthened and made more compact. Other areas with business functions, for example, the de-industrialised former shipyard must design their programmes to pose no competition with the city centre. Within the existing retail zones, expansion and restructuring for economic efficiency and experience-oriented shopping are promoted.

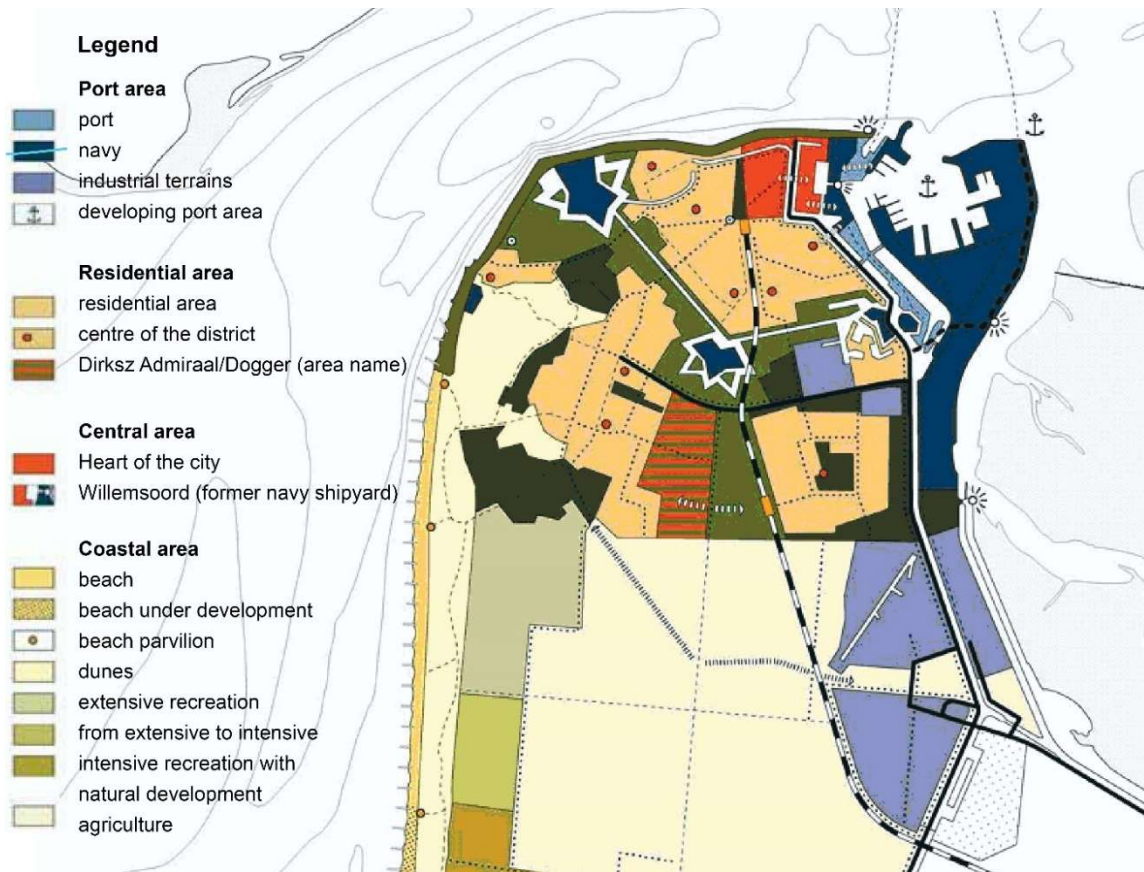


Figure 4 a zoomed-in section of the spatial vision from the year 2012; legends translated by author

4.2.2. Areas of growth and shrinkage



Figure 5 (left) a renewed shopping street in the city centre; **Figure 6** (right) the landscape created as part of a redevelopment after demolition in Nieuw Den Helder Oost

The city centre is surrounded by diverse urban functions: the train station, the redeveloped shipyard with cultural and office buildings, the seafront, and residential areas. In the 2000s, it had one of the highest vacancy rates in the city. A fifteen-year-long project was launched in 2008 to transform the spatial structure, functions, and public space. Firstly, the main streets and the train station square were renovated. Secondly, retail and catering were gradually concentrated into the pedestrian zone near the train station by converting peripheral shops to residential units. Lastly, a park was built on the vacant plots left behind by several relocated public facilities to form a green axis that connects the centre to the seafront. The projects on public space have strengthened spatial connections to surrounding areas and functions. The improvement of the city centre has also been seen as a contribution to the local quality of life through its impact on leisure and shopping experiences. The city centre has also been addressed as a key residential location. Specifically, the city and WSDH planned for the period of 2016–2022 some 380 new housing units, with 27 percent being social housing. Between 2013 and 2020, the housing vacancy has dropped from 16 percent to 10 percent, while the number of homes has grown by 12 percent. The next stage is the development of a compact neighbourhood on the seafront side, with mixed-use blocks containing two to three hundred housing units.

Nieuw Den Helder Oost, a district on the outskirts primarily consisting of large housing estates, is designated as the place to ‘capture shrinkage’. In the 1980s, the district was already an island of severe population shrinkage and social problems. This decline was attributed to the densely built, low-quality housing stock and the social structure. At the end of the 1990s, the most problematic blocks (372 units) were demolished. In 2012 as part of housing planning, some 1,000 unpopular social housing units were identified for long-term downsizing. The following redevelopment was built at one-third of the original density, making room for a generous amount of park landscape. Old blocks and new developments were bonded through the new green infrastructure. Furthermore, in a gesture of degrowth, plots where once hundreds of apartments used to exist, were leased out for a dozen autonomous tiny houses with large gardens. This attracted new middle-class residents as an economical alternative to classical suburban houses with also a good connection to urban infrastructure. Meanwhile, the district centre and social infrastructure have been renewed, while the renovation of the remaining industrial housing continues. As a result, the vacancy rate has been reduced and stabilised at 6 percent, while the population has slightly increased since 2015.

5. Analysis and findings

5.1. Planning goals

The rationales in the two cases as to why substantial measures are necessary for shrinkage can be grouped under two main planning goals:

- Adaptation to shrinkage as the 'defensive' goal — reducing and adjusting infrastructure supply to the shrinking population size as well as the decreasing consumption capacity. A byproduct of such adaptations is higher environmental quality; but a key characteristic differentiating this goal from the other goal is the relatively little further investment to develop and shape new urban functions and qualities in the space freed up through downsizing.
- Revitalisation as the 'offensive' goal — transforming urban spaces in order to create or enhance functions and attractive qualities that go beyond those, to which the existing population is accustomed. The reason for this is that, as planners in both cities emphasise, a revitalisation under shrinkage must be based on social revitalisation, i.e. attracting and retaining younger people and people with higher income with higher-quality urban environment.

5.2. Strategic area transformations

In both cities, strategic projects are one main approach to regenerate urban functions and spatial qualities in an area. One reason for this, as actors in both cities indicated, is the need for 'model projects' to showcase that new standards are possible in a community with stagnated development — in other words, a local paradigm change.

Some strategic projects are embedded in a broader urban development strategy, and integrate objectives from different policy sectors, in order to foster the overall urban attractiveness. For example, the city centre renewal in Den Helder gave critical impetus in issues such as regional connection, public space network, retail space restructuring, and housing restructuring. The transformations of Nieuw Den Helder reduced the housing quantity to balance out the growth in the city centre, while exploring a degrowth form of residential development in a pilot project.

Other strategic projects are relatively isolated in the sense of strategy-making, such as the idea of a new neighbourhood in the post-demolition area in Zwickau. Other than attracting new residents, it would not have a broader impact on urban infrastructure and overall environment. The redevelopment of the city centre suggested by Zwickau 2050, has the potential to revitalise the inner city and an important node in the public space network, thereby improving an important aspect of the local quality of life and visitors' experiences.

The ongoing downsizing on the outskirts of Zwickau are a continuation of previous strategies (for good reason). The increasingly routinised characteristic is the opposite to the 'paradigm change' that Healey (1997) emphasised as part of strategic planning. This shows how severe shrinkage can diminish the room for innovative strategy-making. Yet given the expected scale and sporadic pattern of shrinkage under demographic ageing, the downsizing routine could increasingly struggle to keep up with the emerging vacancies.

5.3. Coordinative strategies

The coordinative spatial framework in Zwickau is a system of downsizing zones. There are no interactive elements between the areas, which means they are not viewed as a relational network with synergy. The strategies are determined by the severity of shrinkage — the most urgent present issue — rather than holistic spatial goals for the city. With the advantage of less severe shrinkage, Den Helder coordinates measures based on a vision of spatial structure, aimed at stronger urban functions and a compact urban form, proactively increasing the resilience against further shrinkage.

To address the retail infrastructure, a systematic, relational approach is applied in both cities. It takes inventory of retail facilities and the declining overall consumption capacity and clarifies the interactions among different shopping locations. The aim is to concentrate businesses and consumption in urban centres, in order to reduce vacancy and to maintain (commercial) service supply and public space. In Den Helder, this policy means, on one hand, long-term investment in the urban centres to increase the ‘pull’, and on the other hand, restrictions outside urban centres to exert the ‘push’. Both instruments are lacking in Zwickau.

Den Helder also approaches housing and social development with the ‘social mix’ strategy. The strategy is not only about increasing more expensive housing in lower-income neighbourhoods but also about distributing social and affordable housing into higher-income neighbourhoods as well as areas with good infrastructure. The strategy is implemented as strategic projects, where properties are acquired and redeveloped by a capable partner. In Zwickau, housing development is not guided by a city-wide framing. Housing corporations admit that they cannot strategically plan more than five years ahead. Introducing housing of better quality is a matter of tactics, whenever and wherever resources are available. The deconcentration of housing for lower-income households is not specifically mentioned.

6. Conclusion

This research aims to answer the three questions: (1) How does urban planning in shrinking cities spatialise strategies for shrinkage? (2) How do spatial strategies leverage growth and shrinkage to achieve planning goals? (3) What is the (unique) role of urban planning in making spatial strategies?

The answer to the first question can help fill up an important research gap: the vast range of empirical findings on strategies for shrinkage need to be framed with spatial thinking to be systematically considered for spatial strategic planning, because cities are more complex (multiple scales) than areas where specific policies are studied (single scale). The case studies above have demonstrated how, aside from strategic concepts such as goals, means, and actors, strategies can be systematically described in their spatiality with spatial concepts (scale, bounded space, place, and network) — in other words, a tool for studying and conceptualising spatial strategies for shrinkage.

However, not all strategies that are conceived come into implementation, or, for the lack of prospects of implementation, some strategies are not conceived at all. One key factor constraining the spatialisation of strategies is the severity of shrinkage. The constantly growing scale of housing vacancies, compounded by a sporadic pattern as a result of the ageing process, poses tricky challenges for making long-term visions and paradigm changing strategies. Other goals, such as social development, quality of life, and inner-city environmental quality might become secondary criteria in a city-wide planning perspective. Furthermore, two institutional factors essentially constrain urban planning:

- Development competences at the city scale. In Den Helder, the urban development company, Zeestadt, and the housing corporation WSDH represent such competences, investing in respectively the public and private aspects of the urban environment city-wide. In contrast, the local housing corporations in Zwickau are interested mainly in their properties on the outskirts. The lack of such competences and partners with whom to make strategies, hampers the making of coordinative strategies at the city scale.
- A lack of political perception of the need for new urban qualities. The main argument in the political debate against building new housing units based on high vacancy rates indicates that decision-makers might not have considered the difference between quantitative growth, which exacerbates vacancies, and qualitative growth, which aims to diversify the stock and improve place qualities. Meanwhile, younger residents migrate out of the city to seek an attractive environment elsewhere, making the political support for qualitative regeneration even less.

This brings up the second research question. Shrinkage and growth in local planning need to be viewed with more nuance and as interlocked socio-spatial dynamics that can be leveraged by strategic planning for spatial transformations:

- Growth in terms of use-intensifying development, when carefully designed, can introduce housing and public space of better quality for the existing community. Strategic projects could inspire other property owners to improve their properties and set off further positive development. The scale and pace of such a development have to be carefully planned to prevent gentrification (Tighe & Ganning, 2016).
- Shrinkage plays a key role in renewing spatial resources. On the vacated plots new visions can emerge. But whatever new functions — be it landscape, a tiny house settlement, or a new compact neighbourhood — need to be integrated into the urban environment and community based on a spatial framework.
- Localised shrinkage could be accelerated by growth developments elsewhere, as residents willingly move to the new locations. Such a process can reduce displacement and conflicts to make the area available for future restructuring.

To the third research question, the case study has illustrated how urban planning plays a key role in spatial strategy-making in shrinking cities, if it is enabled to fulfil its potential. Here the role of planner is meant generally as contributions of anyone who employs relational planning thinking, i.e. not restricted to professional planners.

- Identifying and shaping innovative forms of development to improve the resilience of urban spaces to shrinkage. Because strategic projects and experiments (even degrowth projects) need to be positioned in specific local context to succeed and thrive, planners play a unique role in the selection of, connection to and further cultivation of the urban context to support these innovations.
- Coordinating localised growth and shrinkage for greater spatial sustainability. Relational planning leverages the interactions between urban spaces for synergy and finds the suitable spatial context for innovations such as degrowth experiments. Spatial frameworks as the coordinative instrument not only integrates different policies but also channel them into concrete projects.
- Reframing the task of urban development to bring about a ‘paradigm change’ to direct attention towards addressing spatial shrinkage. Such a paradigm change can regard functions and qualities of a local area as well as the spatial structure of the city. As the

example of Zwickau 2050 demonstrates, conceptual strategic planning can provoke dialogues on the long-term spatial strategies of the city, encourage hopes and dreams, and challenge existing knowledge (Kunzmann, 2013; Albrechts, 2015).

Finally, a main limitation of this case study is the focus on medium-sized cities with a population trend of centralisation. The findings about strategic content could differ if researchers were to look at large cities with complex spatial relations that extend beyond the local scales, or spread-out American cities with less distinct urban centres, where the inter-dependencies between areas and processes might be configured differently. The description of spatial strategies should be tested in these cases. On the other hand, the above findings might not fully apply to cities with a trend of hollowing out — whether the spatial vision of compact shrinkage should/can be realised against the growth of suburbs remains to be studied. Furthermore, both cases studied here are situated in Western European countries with state-subsidised local development. To sum up, studying this topic in cities of a different spatial structure, a different type of shrinkage and/or a different institutional context in the future can help build up a more comprehensive theory of spatial strategies for shrinking cities.

5

Conclusions

Through the research underlying the three publications, I gained insight into the overarching research questions of my PhD project:

- What does shrinkage as a path of development mean for planning?
- What strategic planning work is needed to steer urban development under shrinkage?
- How can spatial planning support this strategic work?

The following sections will elaborate on these conclusions (illustrated in Figure 5.1). They are based on the two case studies and broad literature research, therefore are not formed through inductive reasoning based on statistical generalisation or deductive reasoning with preexisting theories. Instead, they are developed through abductive reasoning as theories in these three overarching aspects that could explain the success, challenges, and differences in the case studies.

1. Shrinkage as a path of development

1.1 Accept, but set the terms of shrinkage

Shrinking cities appear to be caught in a permanent struggle conditioned by the loss of population and industry in the overbearing globalisation process. Downsizing of housing and infrastructure often becomes necessary to prevent a collapse, but the worst part is that this process does not pay for itself as the growth process does. Then, population exodus over generations plants the seed of population ageing. The recently seen wave of regrowing long-term shrinking cities appears limited to major, European-level cities, whose regrowth is primarily driven by external investment (A. Haase et al., 2022), which might not be available for most medium- and small-sized cities.

However, the two medium-sized cities in this research were far from being hopeless. This is because the unfolding of the many dimensions of shrinkage is desynchronised. For example, the local industry stabilised in both cities, thanks to national policies and despite population shrinkage, their unemployment lowered, and investments in urban development slowly resumed alongside the public investment in urban renewal. Another example is housing infrastructure, which might grow despite population shrinkage, because the shrinkage of households begins much later. In Den Helder, the growth of households is still driving a moderate growth of housing infrastructure, which the city uses to implement urban transformations. This indicates that shrinking cities, with the right help, have a good chance of setting the terms of their shrinkage. Therefore, ‘accepting’ shrinkage should not be passive, but instead coupled with strategically planning the course of shrinkage.

1.2 The two tasks of urban development

Population shrinkage is a dynamic process that demands constant adjustment from urban infrastructure systems. The long-term shrinkage is like a slow crisis, where if nothing is done to change things, the situation can go into a downward spiral. Therefore, shrinking cities have to prioritise the downsizing-adjustment of infrastructure, in order to stay ahead of — in some cases, catch up with — population shrinkage.

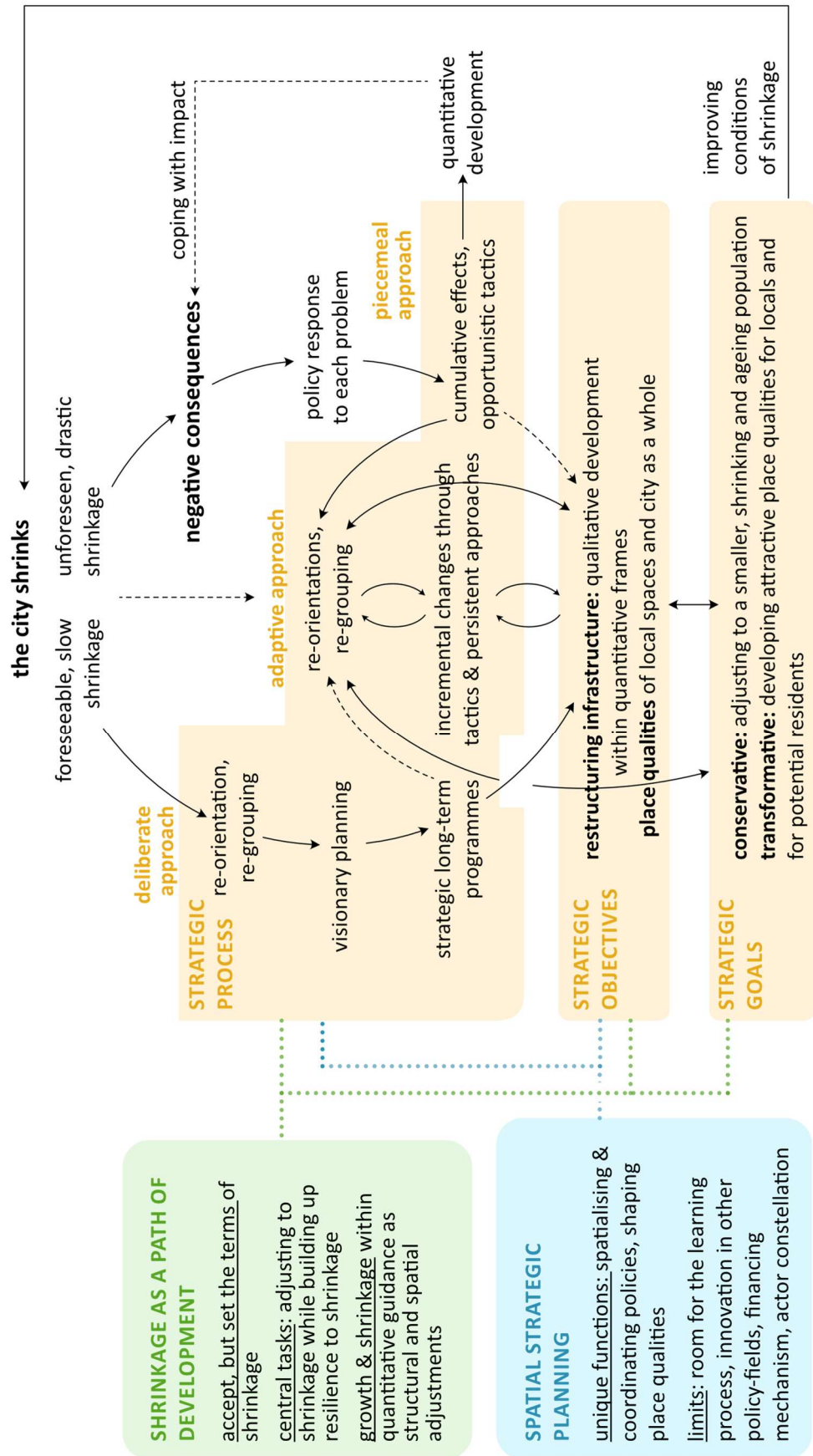


Figure 5.1 main conclusions on the research subject

However, urban development should not be content with just sustaining the existing pattern of urbanisation. Instead, it needs to aim for thriving (du Plessis, 2012) and transforming (Albrechts et al., 2020). This means that shrinking cities need to build up resilience to the process of shrinkage, in order to eventually become self-reliant and enter a positive cycle of development (Eraydin & Özatağan, 2021). The studied cases have shown coping capacity and adaptive capacity, but the transformative capacity appears to be the most challenging, and according to local policymakers, it is most critical in the long term. Because under the trend of shrinkage, the selective outmigration could eventually weaken the urban 'software' and drain the workforce to the point where cities cannot staff their essential social infrastructure or govern and adapt their technical infrastructure (Hospers, 2013; The European Commission, 2023). In contrast, a smaller city with social vitality and the ability to service itself is structurally alive and still in a position to adapt its infrastructure to the challenges of shrinkage. Therefore, shrinking cities need to attain social, cultural, and institutional resilience to shrinkage in the long term, in order to remain in a position to adapt to challenges and to transform themselves in a positive cycle. Social resilience means the social part of socio-technical infrastructure underlying urban systems continues to function and adapt itself with public and civic resources as well as the local workforce to maintain quality of life. Cultural resilience is the capability of local initiatives to maintain a positive culture of the place, or self-image (Hospers, 2013) and the cultural life of the community (Matyushkina, 2021) to create a sense of quality of life and social cohesion despite the selective outmigration. Institutional resilience is a strategic adaptation of guiding policies, actor constellations, and instruments to respond more efficiently to ongoing shrinkage, and limit the impact of future population fluctuations (Van Assche et al., 2020).

Urban development under shrinkage is, therefore, like riding a bike while navigating. The adjustment of urban systems must be kept going, like peddling, to keep the bike from toppling. At the same time, efforts have to be made to achieve long-term, transformative goals, so that the city becomes resilient against future challenges as well as a better place for its inhabitants.

1.3 Growth and shrinkage as zigzagging

Growth as horizontal expansion outside of urbanised areas is a burden on nature and public finance in the future (Siedentop & Fina, 2010). However, use-intensification (re)development of inner-city areas can be justified with the efficiency of infrastructure and improvement in quality of life, because the decay of such historically matured, mixed-use areas threatens service supply and the social functions of public space. A simplistic downsizing here would do more harm than downsizing monofunctional residential areas. Therefore, cities counter the trend of shrinkage in these central areas by improving the attractiveness of these areas and promoting redevelopment there. The use-intensification of redevelopment owes to the contemporary economics of urban development, under which, as Hackworth (2018) pointed out, degrowth does not pay for itself. These developments, as localised growth, could restore the vitality of the infrastructure clusters and benefit the surrounding areas. But instead of traditional growth tactics that woo the creative class and global businesses with exclusive infrastructure spaces that lead to fragmented urban development and spatial inequality, such regrowth must be customised to local and regional needs and integrated into urban spaces.

At the same time, if central areas were to be stabilised or even regrow, other areas would be shrinking (given that the city is overall shrinking), partly in the form of voluntary intra-city migration, and partly due to the uneven distribution of in-migration (Strauß, 2012). The shrinkage in other areas can thus be anticipated and prepared for with long-term restructuring strategies. Interestingly, private capital has

not 'deserted' shrinking cities in the sense that Hackworth (2018) meant it, and may have renewed interest in response to public investment. The local development in Den Helder has demonstrated that de-densification development could be economically viable by combining profitable segments with affordable and social housing. In Zwickau, the unmet demand for low-density settlement goes hand in hand with the forbiddance of follow-up development of downsized areas for a decade under national funding conditions. Quantitatively, these are downsizing measures, but when coupled with strategies for follow-up functions, they could create better environmental quality, social infrastructure, and locally needed housing, while generating economic profit as an incentive for the private sector.

Growth and shrinkage are thus necessary urban development dynamics to realise urban transformations along the path of shrinkage. It is like a path going uphill, where going higher requires zigzagging. Cities should strategically steer these dynamics to pave the way for revitalisation and socio-ecological progress.

2. The strategic planning work for shrinking cities

When strategy is understood as an emergent pattern from a dynamic, multi-actor process, strategic planning does not have to result in the formulation of strategies to be effective. Due to uncertainties or a lack of consensus, the strategic elements as elaborated in the following sections might not be conclusively formulated in strategic planning. Nevertheless, the process of planning draws attention to these important matters, helps identify challenges and unclarities, inspires strategic thinking and action among actors, and fosters mutual understanding to pave the way for effective future collaboration (Bryson, 1988; Mintzberg, 1994). Important is the conversation and thought process to clarify these points and the repeated reflection on local development to achieve more clarity, until a confident strategy can be identified and perpetuated multi-laterally. Therefore, the aim of this section is not to spell out a norm of how to plan for shrinking cities, but rather to propose the strategic work that needs to be done to achieve a fruitful transformation process under shrinkage.

2.1 The conservative and transformative strategic goals

For long-term strategies, goals are not about setting a finishing line. Instead, their function is to drive actions and help to reflect on the direction of progress regularly. This research has found that socio-ecological values of sustainability are often too general and scale-fuzzy to be used as strategic goals. These values are aimed at progress at such large scales that they cannot clearly address the more immediate challenges and local interests. A better way to mobilise them is to embed them as general principles to urban transformations that follow shrinkage- and place-specific goals. Quite often, the aims of these two overlap — what is socially progressive often helps to revitalise urban spaces — but 'city' as the strategy-making entity must 'think' from its own position and set goals that drive its actions. From the understanding of the two tasks of urban development under shrinkage (Section 1.2), two kinds of goals can be identified:

The conservative goal is about adaptation — making sure the infrastructure does not become too oversized and collapse, leaving part of the population without basic living conditions. Structural adaptations targeted at liveability for elderly people are also needed in the housing and social infrastructure, which is often necessitated by long-term population shrinkage. Although aimed at solving immediate problems, these adaptations are not about 'short-term' goals, because this process lasts as long as the population develops.

The transformative goal is about actively changing the conditions causing challenges. This means developing positive place qualities for current residents to reduce the outmigration, and at the same time attracting potential residents, so as to mitigate shrinkage and improve the increasingly one-sided social and demographic structure. These two trends temper the impacts of shrinkage and help the city build up resilience. A strategic approach to this goal bundles constraints from different dimensions to meet the needs of the present and achieve progress for the future, which means the synergetic use of limited resources, including the built environment. The opposite of this is a single-minded focus on direct solutions driven by quantitative growth targets or financial gains, which often fail or create their own problems. Therefore, the transformative goal must seek to combine meeting the local needs and attracting potential residents. On the one hand, cities should strive to create an attractive urban environment, even when something is deemed sufficient in traditional political discourse. On the other hand, the attraction or retaining of potential residents should not serve its own separate goals — such as quantitatively increasing population or consumption capacity — but instead, also benefit the local community. Instead of wooing high-income families or branding the knowledge economy, shrinking cities can choose to attract hand workers, teachers, and socially engaged artists to bring skills and ideas to the local economy and strengthen social infrastructure, as demonstrated by the case of Den Helder, where the development strategies emphasise skilled workers and career starters with the agenda for affordable housing and social strategies.

The integration of the local needs into the formulation of the transformative goal is in line with the communicative approach to strategic planning. The locals who experience the negative qualities of the urban environment in their daily lives are more likely to demand transformative development. Instead of putting their wishes aside with arguments of financial limits or lack of instruments, strategic processes can incorporate them into a transformative vision and lay the foundation for change. However, the involvement of stakeholders must also account for the structural feature of the population development in shrinking cities: selective outmigration and the increasing one-sidedness of the local population. The agenda is likely also one-sided, if determined only by the dominating private interests and the majority that is content to stay.

2.2 The objectives: restructuring and place qualities

Abstract goals need to be interpreted into ‘objectives’ about what changes need to be made in the objects, namely, the urban infrastructure systems. The focus of this research is on the city level, but some urban systems, especially industrial infrastructure and rail systems, are addressed at the regional level, and local governments can only have limited influence on them. Other systems, such as housing, retail and cultural infrastructure, can be planned through regional cooperation (for example see Section 4.4 in Chapter 2), where more clarity on local strategies can help cities participate more effectively.

Structural objectives are found to be important to bridge the long-term goals with specific measures/projects, because they indicate what segments of infrastructure should be enhanced, reduced or combined with each other within limited resources. As such, they also help to reflect on the progress made by accumulated measures. Without spelling out structural objectives, various actors follow their interpretations of the goal, or do simply what meets their immediate needs, and as a result, the measures could lead to oversupply across the city or in localised areas, neglect of certain segments, and/or lack of innovation to preserve certain functions through combination.

Under the conservative goal of adapting to shrinkage, quantitative objectives often play a dominant role. The rationale is straightforward: downsizing of infrastructure to fit a smaller population. However,

qualitative decisions must be made about which segments of infrastructure to reduce, where, and whether they could be transformed into other, more needed segments. The quantitative rationale falls short of providing these answers. That is why downsizing objectives should be applied as a framing condition, while the realisation must be guided by rationales of qualitative development — stemming from the transformative goals related to place qualities and broader social needs — about what a resilient composition of future infrastructure would be, and which reduction, addition, and opportunities of co-production can lead to such a structure. The real objective, ‘restructuring’, is a combined result of the conservative and transformative goals. This combination is essential to achieve a resilient future. For example, in Zwickau, the supply of elderly homes — part of the conservative strategy — reached such numbers that the city announced oversupply and tried to halt some projects. In comparison, Den Helder accentuates rather ageing-proof homes in its housing programme, which serves more than one goal.

The spatial structure is an essential part of infrastructure restructuring. The spatial structure of the city preconditions where different urban systems converge and provide favourable conditions for each other’s transformation, regeneration, innovation, etc. A more holistic term for points of transecting socio-spatial relations is ‘place’, which also captures the social experience of urban spaces. Place qualities and unique place characters can in themselves be considered an asset for the quality of life and urban development. These qualities can only be addressed by viewing the restructuring of socio-technical infrastructure as a whole with a social and experiential dimension. This perspective is about making sure that impacts of shrinkage do not leave urban spaces as dysfunctional spaces, and that active restructuring results in positive place qualities. The qualities of the whole city as a place should also be considered in the spatial organisation of downsizing and regenerating, because these changes over time could redefine the local distribution of population, spaces of social vitality, and cause spatial mismatch of infrastructure.

The formulation of structural objectives requires a certain level of expertise and control over the targeted infrastructure. This means citizen participation at a vision-building level is usually not sufficient to produce actionable objectives. Green infrastructure, as a type of less technical infrastructure, is an exception. Nevertheless, in housing restructuring, the active participation of large housing corporations or homeowner organisations is indispensable to address the housing stock as a whole. In the case of Zwickau, the lack of interest on the part of large housing corporations in inner-city development is a major factor in the spatial distribution of development measures in the outskirt. In the case of Den Helder, besides a strategic partnership with a local housing corporation, the public-funded urban development agency exercises this competence by carrying out its own redevelopment projects. This shows the importance of building a governance structure as well as institutional design in forming realisable structural objectives.

2.3 The approaches to strategic processes

In long-term strategies, policy design must be understood as a strategic process and not a technical implementation. This is because plans are seldom so comprehensive that they capture all the interactions among sectoral policies, and seldom so perfect that they could be carried out as they have been laid out.

The cases in this research can be characterised relatively to each other on a spectrum between two extremes: the deliberative approach that implements predesigned plans based on comprehensive analysis and agenda-setting, and the approach of disjointed incrementalism, characterised by piecemeal tactics without long-term goals, successive adaptation to problems without radical changes, and the

focus on immediately available options (Alexander, 2017; Wiechmann, 2007). The latter also shares elements with the rationality of 'satisficing', where problems are countered with solutions that just suffice for solving the problem (Simon, 1947), which could limit the added value in problem-solving when the problem definition is too narrow.

The case of Zwickau is closer to the approach of satisficing and incrementalism / piecemeal. The main strategy for shrinkage was the downsizing of peripheral settlements. Although this was planned as a long-term strategy, it was largely routinised and responded to a limited range of challenges spatially concentrated in certain urban areas. Beyond the downsizing, the objectives of qualitative development — e.g. which segments should be strengthened, where and to what degree — were rather left to actors' own tactics. There was little strategy for other infrastructure — green space, retail, sport and culture, etc. — and the overall urban spatial structure. The underlying assumption was that the nature of the areas that are not targeted for downsizing should remain the same. The spatial limit of urban restructuring contrasts with how shrinkage impacts the city and its future as a whole. The case of Den Helder is closer to the deliberative approach. Through the reorientation with the help of the ministerial inspectors, the city set up a political committee, an implementing organ, a strategic fund for urban redevelopment, and established a spatial strategic framework, with a long-term programme for the city centre and other strategic projects around the city. The objectives for different infrastructure were generally transformative and integrated into the framework. The key measures have been largely carried out as planned. Planning flexibility is made for strategies in cooperation with other actors, which are formed through regular strategic talks and dynamic objectives.

The distinct 'ingredients' of the latter's approach are qualitative structural objectives, integrated planning, and institutional design to provide effective instruments. However, the risk of such an approach is the instability of external factors, such as unforeseen population fluctuations (Wiechmann, 2008a). The success of this approach, therefore, depends on a stable pace of shrinkage and early intervention before shrinkage unfolds in all its dimensions (e.g. number of households). The approach of incrementalism has the distinct ingredients of resource prioritisation and the flexibility to discontinue measures, should external factors change. But the weakness of this approach is that the accumulated effects of tactics and routines might not lead to desired structural changes towards a resilient shrinking city. A middle approach would be to combine the long-term vision with incremental, but persistent changes. It would allow for adjustments through continual reflection on realised measures with reference to the goals and the objectives, so as to keep the development on course towards the vision, as many of the theories combining the linear and the adaptive models suggest. Eventually, the mixture of these ingredients should be adjusted to the level of stability, resource availability, and institutional capacity of shrinking cities. However, even when all these factors limit the capacity for long-term perspective and commitment, actors should still strive to identify together basic values, structural weaknesses, the risks of various courses of (non-)action, current and potential conflicts, and their institutional limits, so as to make policies in the future with more awareness and allow strategy to emerge from strategic actions.

3. Spatial strategic planning as instrument

3.1 The unique functions

Spatial planning helps spatialise the abstract objectives of infrastructure restructuring, concretising them into measures in urban spaces. This is because, on the one hand, large-scale infrastructure and networks exert spatial constraints on urban development. Strategies such as restructuring road systems, green infrastructure, service supply network, etc., could have a long-lasting effect for achieving a more compact shrinkage. On the other hand, the existing spatial structure of the city determines where different urban systems converge and provides favourable conditions for each other's transformation and regeneration. This means spatial planning can help achieve spatial synergy in the restructuring process, whether it is in the direction of use-intensification or de-densification. The function of spatialising is often enacted in the form of developing an integrative framework, which is a distinct strength of strategic spatial planning. It integrates strategies and constraints from different fields of policy into coherent spatial strategies, as well as strategies of various temporal horizons — from strategic projects, to structural objectives, and to long-term visions (Albrechts et al., 2003). It should, however, be noted that 'integration' can have different levels of strength vis-à-vis the contribution to the overall strategic-ness (Kühn, 2012). At the lower level, it can be the listing of the desired projects from different sectors in one schedule to avoid conflicts in timing and resource allocation. At the higher level, it means the 'synthesis' of interests and agendas in a manner of framing into new categories that capture their spatial synergies and impacts on place qualities (Healey, 2007; cf. Mintzberg et al., 2005). To achieve this, the next aspect, place development, is a necessary emphasis in the planning process.

The cultivation of place qualities as an effort to steer the holistic outcome of urban restructuring is a unique task of strategic spatial planning, because, compared to traditional masterplanning or statutory zoning, it is open to abstract input and pluralistic visions (Healey, 2017). It allows planners and stakeholders to (1) articulate what they view as negative qualities about their city without having to resort to accurate definitions and solutions, (2) reimagine shrinkage-resilient, attractive urban spaces, and (3) do so from diverse perspectives. This allows problems and potentials to be recognised, which would otherwise remain hidden because they lie outside of existing problem-definition or institutional competences, advancing a more holistic development agenda. The communicative dimension also highlights a special aspect of planning for shrinking cities: how a shrunken city can still be an inclusive place for all its inhabitants. Because when (often peripheral) urban areas are decommissioned, former residents often have to move into a new living environment and rebuild their daily social and spatial networks. Considering the foreseeable internal dynamics, shrinking cities must think about the place qualities of their urban spaces as a whole and ask whether stable areas, without further improvements, present disappointing or attractive new homes to the displaced population. The social sustainability of the shrinking process depends on this, because if what remains after shrinkage is destined to be a disappointing living environment for a certain part of the population, the inclusiveness of the city is reduced. This would essentially mean that everyone has a stake in the transformation of the inner city, even if they currently live there or not, and its improvement must be considered a parallel task to the downsizing in the outskirt. This makes a city-wide strategy involving stakeholders from different local spaces all the more important.

It is important to bear in mind that strategic spatial planning is a semi-structured planning process deployed on certain occasions and culminating in certain products (Albrechts, 2004). It does not and cannot encompass all the strategic work, especially the incremental strategy-forming dynamics. But it is

also essential for effective and innovative strategy-making, as a level where long-term thinking, fundamental orientation, and action framework are formed. It could be the long-term scanning in the mixed scanning approach (Etzioni, 1967) and a medium for the strategy management in the logical incrementalism approach (Quinn & Voyer, 1998).

3.2 The limits of strategic spatial planning

In Den Helder, the strategic spatial framework from 2012 successfully integrated different policy fields, strategic projects, and long-term goals to guide development across the city. In Zwickau, the actual strategic spatial planning that proposed an integrative, structural spatial vision was the unofficial one led by the local architect chamber around 2015. It sketched out a spatial structure for long-term development as well as the city centre as a strategic project, but was deemed by other actors as radical and financially unrealistic. What, in terms of strategy-making, led to such different fates of the two strategic spatial visions?

- Collective learning process. In Den Helder, there has been a series of integrative strategic visions since 2000, where fundamental rethinking was done — albeit without accepting shrinkage. The acceptance followed the negative review of ministerial inspectors. This shows an institutional commitment to transformative goals. This process of social learning was not in the case of Zwickau, where the workshops behind the strategic vision had to focus on results — representations giving voice to planners' ideas and expertise.
- Preexisting strategies committed to transformative changes in different policy fields. The strategic spatial planning is, despite all the ideals about it, a process limited in time and breadth, where the character of the output depends on that of the input. In Den Helder, the strategic framework was preceded by restructuring strategies from different policy fields, such as retail, housing, social services, and the renewal of the city centre. In Zwickau, policy fields were mostly separately addressed and lacked effective instruments to form their own transformative strategies.
- Institutional framework for the distribution of resources. In Zwickau, the use of national subsidies was restricted to predefined continuous areas and for predefined catalogues of concrete measures. An ideal, city-wide strategic framework was therefore impossible to back up with resources under the rules of financing. In contrast, the urban development company in Den Helder, funded by the province and the city, acted as the organ to channel resources to measures around the city. Theoretically, Zwickau could create multiple subsidy zones under an umbrella framework, but this vision-oriented, strategic work would be too 'costly' (according to the interviewee) for the administration, without any direct benefits to justify itself.
- Aligning divided interests. In Den Helder, a most important supporter for the strategic vision is the local housing corporation, while in Zwickau, the greatest critic. Somehow, the housing corporations did not see great potential for rigorous interventions in the city centre or its surrounding areas. Small property owners were not much represented in strategic discussions, although the perforated inner city was most at stake. Yet strategic spatial planning might not be sufficient to develop institutional arrangements to reconcile the different interests and build up a governance structure.

Therefore, for the application in shrinking cities, the effectiveness of strategic spatial planning, as a defined arena with a limited time span, depends on the above aspects, which it cannot resolve. In the case of Zwickau, the strategic planning was not intended for realisation, but rather to provoke discourses

on the future of the city (Kaza, 2019). Yet its values would be lost if serious discussions between different interests do not happen as actual strategy-making. However, in situations where consensual agenda-setting is difficult due to a lack of common ground or willingness to compromise, strategic spatial planning, in its limited position, can still raise awareness and motivate institutional changes from other policy circles: clarifying the causes for difficulties and use scenarios to make clear consequences of different strategies — including doing nothing — in a manner of visions and anti-visions. Eventually, strategic planning needs to be viewed as an instrument to strategy-making, which must unfold on a broader playing field and over a larger time frame.

Finally, it is important to note that strategic spatial planning depends on the national planning system to play an effective role. In the Netherlands, a long-term spatial vision (*Structuurvisie*) at the municipal level is required by law (Spatial Planning Act, 2006; since 2024, replaced by Environment and Planning Act). In Germany, the law does not require long-term, vision-oriented planning. Municipalities make integrated urban development plans (*Integriertes Stadtentwicklungskonzept*, ISEK for short) often because it is a prerequisite for national subsidies, the *Städtebauförderung* (Franke & Strauss, 2010). The emphasis of 'strategic-ness' also lies in different aspects. The spatial vision is set up as a strategic framework for the entire territory to ensure a coherent long-term spatial development of urban infrastructure and natural spaces (Needham, 2014). The emphasis of ISEK is primarily not on spatial coherence or strategic paradigm shift, but rather the 'integration' of sectoral instruments and collaboration across governmental units and external actors to create solutions for concrete problems (*ibid.*). The actual development of coherent, long-term strategies that shrinking cities and regions sorely need is hampered by various institutional factors, ranging from politics to governance capacity and to lack of resources (Kühn, 2012). Therefore, it is less firmly institutionalised than its counterpart in the Netherlands, where local actors and administrations would have to find a consensus in order to fulfil their legal obligations.

4. Key takeaways for policymaking and research

Shrinking cities should accept the trend of population shrinkage and make strategies to change the terms of their shrinkage actively. Despite population shrinkage, cities can attain a level of social, cultural and demographic resilience, so that they can be self-reliant in governing and transforming their socio-technical infrastructure towards better place qualities and thrive as a community.

The window of opportunity for this progress lies in leveraging the solutions to current problems to achieve transformations for the future. This means that cities need to view quantitative downsizing objectives as a framing condition within which the qualitative development of the urban environment to meet local needs occurs. Part of this qualitative development is about organising the spatial distribution of infrastructure and localised shrinkage and growth. A holistic perspective for place qualities needs to accompany the process, in order to channel efforts of different actors and measures from different levels and sectors into a synergetic process over the long term to improve areas and the city as a whole.

Shrinking cities' strategic planning work lies in, on the one hand, clarifying long-term strategic goals through collective learning, structural objectives of infrastructural and spatial restructuring, and integrating them into a coherent framework customised to place development. On the other hand, public planning cannot assume full control of the development process, which means it needs to

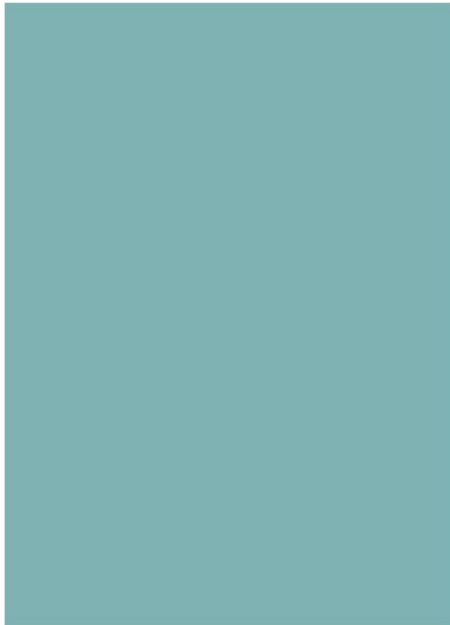
adaptively steer the development process strategically, with flexibility and constant re-evaluation of the accumulated effects. Even when consensus is hard to reach due to diverse interests, the endeavours to clarify strategic elements can foster mutual understanding among the stakeholders and pave the way to future collaboration. The degree of control by the public-led constellation in steering urban development depends on the stability of population development, resource availability, and institutional capacity; therefore, a proportion of strategies must be flexible, and some strategies aim at building up institutional resilience against population fluctuations.

Finally, shrinking cities need sufficient support from higher-level governments in order to make strategies at the minimal level that is required to pursue long-term strategies for resilience-building. Otherwise, their piecemeal tactics might not effectively lead to the necessary structural changes, and as a result, their dependence on external aid would continue, while their vulnerability to shrinkage would remain. Such support is not only about financial aid, but also about enabling self-help: industrial policies to restore some level of economic stability, and strategy-making assistance, especially in clarifying structural objectives, synthesising sectoral strategies into spatial strategies, and institutional design.

Based on this PhD research, I find it important for future research aimed at helping shrinking cities regain self-reliance and build up resilience through local governance processes to address two research gaps.

To begin with, this research has focused on the substantive aspects to demonstrate how political (re)orientation, governance structure, planning instruments, innovation in and integration of policy fields, and financing are factors in the strategic development of shrinking cities. Further research from a processual strategy-making perspective is needed to pinpoint the factors giving rise to transformative agendas and feasible strategies. Here, it is also important to take the outmigration into account as a structural loss of planning stakeholders, and explore how this impacts the emergence of a transformative agenda — especially given the influence of politics and public participation on the strategic planning process — as well as how the place attachment of the outmigrating groups might be related to it (Bock, 2019; Panagopoulos et al., 2015).

Furthermore, the spatial scenarios of place development under different spatial approaches should be explored and understood in the local context. Because of the historical core of many European cities, it is assumed that sustainable shrinkage is inward development. However, as the German case shows, the historical growth into modern cities has weakened the irreplaceable position of the one city centre, and local opinions differ as to where to focus development efforts. The 'edge' effect due to hinterland consumption demand could even make peripheral clusters strong contenders in terms of quality-of-life infrastructure and social life. And some cities (re)built after the war lack a historical centre embedded in their place identity. So, what should shrinking cities look like after decades of transformations — must they stay mono-centric spaces, or can they become urban archipelago, corridors, or evenly de-densify urban fabrics without losing critical functions? It is a question for infrastructure sustainability (cf. Hollander et al., 2009; Kawaguchi & Murayama, 2016) as well as democratic decision-making. The results could increase awareness of the long-term impact of current approaches on spatial quality and liveability and urge local policymakers to find clarity.



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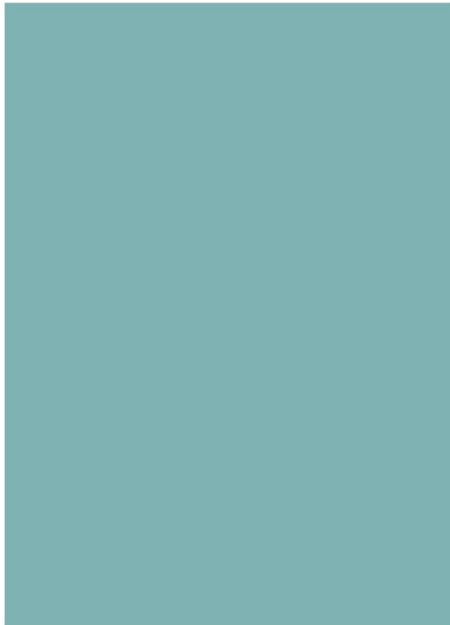
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Appendices

Appendix 1 Data availability statement and list of analysed documents (Chapter 3)

The 30 analysed documents are listed below, followed by the publishing institution and source. Some of them are from too long ago and were provided as digital documents by the respective institution upon request. Any request for this part of the data should be directed to the institution. The content of the 24 interviews is not available in order to preserve anonymity of the interviewees.

Den Helder

- Strategisch Plan Den Helder 2015; Gemeente Den Helder; provided by the municipality
- Strategische Visie 2020; Gemeente Den Helder;
https://depot03.archiefweb.eu/archives/archiefweb/20100215134706/http://www.denhelder.nl/index.php?menu_id=400
- Krimp of Niet; Gemeente Den Helder; gemeenteraad.denhelder.nl
- Helder zicht op Zeestad; Gemeente Den Helder; gemeenteraad.denhelder.nl
- Structuurvisie Den Helder 2025; Gemeente Den Helder; denhelder.nl
- Nota Wonen Den Helder; Gemeente Den Helder; denhelder.nl
- Nota Wonen Den Helder 2010–2015; Gemeente Den Helder; denhelder.nl
- Woonvisie Den Helder 2016-2020; Gemeente Den Helder; denhelder.nl
- Prestatieafspraken gemeente Den Helder 2016-2021; Gemeente Den Helder; denhelder.nl
- Regionaal Actie Programma 2017-2020; the Region of Kop van Noord-Holland; noord-holland.nl
- Sociale Structuurvisie: Sociaal en Integraal – Perspectief en Kapstok; Gemeente Den Helder; denhelder.nl
- Uitvoeringsplan Helden perspectief; Gemeente Den Helder; gemeenteraad.denhelder.nl
- Helden Sociaal Beleid: Het sociale verhaal van Den Helder; Gemeente Den Helder; gemeenteraad.denhelder.nl
- Beleidskader sport 'Den Helder beweegt vooruit'; Gemeente Den Helder; gemeenteraad.denhelder.nl
- Kadernota Detailhandel: Naar kwaliteit en dynamiek; Gemeente Den Helder;
https://depot03.archiefweb.eu/archives/archiefweb/20100215134706/http://www.denhelder.nl/index.php?menu_id=429
- Uitwerkingsplan Stadshart; Zeestad; <https://zeestad.nl/>
- Omgevingsvisie Julianadorp; City of Den Helder; gemeenteraad.denhelder.nl
- Bestemmingsplan Nieuw Den Helder centrum 2013; Gemeente Den Helder; gemeenteraad.denhelder.nl/
- Prognose 2017-2040: Bevolking, huishouden en woningbehoefte; the Province of Noord-Holland; noord-holland.nl

Zwickau

- Landesentwicklungsplan 2013; Sächsisches Staatsministerium des Innern; landesentwicklung.sachsen.de
- Integriertes Stadtentwicklungskonzept (INSEK) Zwickau 2030; Stadt Zwickau; zwickau.de
- Zwickau 2050 Projektbericht; Initiative Zwickau 2050; zwickau2050.de

- Städtebauliches Entwicklungskonzept (SEKo) 2020; Stadt Zwickau; provided by the municipality
- Flächennutzungsplan 2025: Entwurf; Stadt Zwickau; zwickau.de
- Komplexmaßnahme: Innenstadtangente, Querspange Straßenbahn, Bahnhofsvorplatz; Stadt Zwickau; zwickau.de
- Wohnbedarfs- und Wohnbau- Flächenprognose (Wohnkonzept 2018); Stadt Zwickau; zwickau.de
- Wohnungsrückbau in Stadtumbaugebieten: Fortschreibung; Stadt Zwickau; zwickau.de
- Handlungskonzept Wirtschaft Zwickau 2025; Stadt Zwickau; zwickau.de
- Einzelhandels- und Zentrenkonzept Zwickau 2010; Stadt Zwickau; zwickau.de
- Schulentwicklungsplanung Landkreis Zwickau; Landratsamt Landkreis Zwickau; landkreis-zwickau.de

Appendix 2 Qualitative analysis by coding: code system, frequency and relations (Chapter 3)

As is shown below, the codes are concepts that form the strategies of the two cities (Figures 7 and 8). The code frequencies give a rough idea of the differences between the cases, but they cannot be used numerically for ranking the significance of the concepts, because of the nature of the data and the limitation of the analytic tool. On one hand, heterogeneous data was selected to help understand or ascertain the different policies of urban development rather than provide statistical samples. For example, civic actors address restructuring in outskirt neighbourhoods more than the renewal of mixed-use city centre, not because the latter as an issue is less important but because the actors' involvement is more in the traditional neighbourhoods. Some policies are not explicitly articulated but coded from a series of measures, while codes of more concretely articulated policies are statistically 'disadvantaged'. On the other hand, because of the need for case comparison and limitation of the tools, the texts underlining the lack of a certain quality had to be coded under the code for that quality so as to limit the number of codes to an operable level. The coding was done in MAXQDA, and the statistics were exported and reformatted.

Code System	Coded Segments		Coded Segments %	Code Relations (Inter-Sections)
	Case Den Helder	Case Zwickau		
Case setting	0	0	0.0%	0
acceptance of shrinkage	11	11	1.4%	14
regional position	6	3	0.6%	16
experience in tackling shrinkage	8	3	0.7%	14
financial and economic	3	5	0.5%	7
driver of shrinkage	9	4	0.8%	13
Framing shrinkage	0	0	0.0%	0
Shrinkage in general	1	1	0.1%	3
users/consumers decrease	7	7	0.9%	16
households decrease/become smaller	5	7	0.7%	6
structural change	3	0	0.2%	10
more seniors, fewer youths/children	37	29	4.1%	119
socio-economic one-sidedness	33	3	2.2%	50
lack of skilled labour	28	6	2.1%	45
regional and global	3	2	0.3%	4
economic opportunities	15	8	1.4%	14
attractiveness competition	33	6	2.4%	48
cater for regional consumption	5	5	0.6%	25
Transformation approach	0	0	0.0%	0
holistic/ area-oriented approach / identity	15	7	1.4%	30
strategic coordination	7	16	1.4%	46
restructuring existing uses/space	4	8	0.7%	31
strategic projects	4	9	0.8%	17
Long-term perspectives	0	0	0.0%	0
Regenerating	16	9	1.6%	37
attract/retain with place qualities	24	12	2.2%	52
attract/retain with housing products	8	15	1.4%	45
attract/retain with public services	8	12	1.2%	36
Preventive	0	3	0.2%	2
adapt infrastructure for ageing population	6	10	1.0%	41
shift to less resource-demanding services	16	10	1.6%	42

make infrastructure / land use compact	7	5	0.7%	16
Coping	0	2	0.1%	4
keep up with downsizing tasks	0	9	0.6%	15
uphold existing standards	0	16	1.0%	29
postpone structural change	0	31	1.9%	65
Integrating goals	5	8	0.8%	22
Social mix	10	3	0.8%	12
Inner-city industrial heritage	8	0	0.5%	22
Mixed-use city centre	25	18	2.7%	80
Inner-city quarters	18	13	1.9%	55
District centres	11	11	1.4%	31
Outskirt quarters	4	7	0.7%	21
Periphery settlements	7	3	0.6%	15
Development policies	0	0	0.0%	0
Residential domain	10	2	0.7%	18
expand demanded segments	25	20	2.8%	59
owner-occupied	11	7	1.1%	38
medium-high segment	17	20	2.3%	64
affordable quality	17	1	1.1%	36
age-adapted housing	16	11	1.7%	60
innovative forms	5	4	0.6%	10
reduce oversupply	17	35	3.2%	85
adapt existing stock	9	18	1.7%	56
strengthen residential environment	40	22	3.9%	81
Public services	5	4	0.6%	14
expand city- and region-level services	2	1	0.2%	8
healthcare infrastructure	6	4	0.6%	23
admin, cultural facilities	10	14	1.5%	34
high-standard sport facilities	4	19	1.4%	29
preserve neighbourhood liveability	9	0	0.6%	4
service supply	11	11	1.4%	31
schools and daycare	2	18	1.2%	20
amenities	25	6	1.9%	40
co-production	14	7	1.3%	25
Inner-city economy	14	3	1.1%	11
balance with residential quality	2	2	0.2%	5
reprogramme excessive facilities	8	13	1.3%	28
enhance efficiency of existing locations	9	14	1.4%	22
restrict retail sprawl	8	21	1.8%	28
Large-scale infrastructure	0	0	0.0%	0
expand green infrastructure	7	6	0.8%	27
renew road infrastructure	0	17	1.1%	42
improve environment quality	5	25	1.9%	55
enhance spatial connectivity	1	15	1.0%	18
Context, constraints	0	0	0.0%	0
shrinkage dynamics	5	11	1.0%	24
institutional conditions	3	2	0.3%	10
neighbourhood interface	9	3	0.7%	18
superordinate level involvement	30	2	2.0%	38
decision-making and implementation	25	35	3.7%	86
financial instrument	25	19	2.7%	53
material legacies	5	31	2.2%	42
Sum	821	780		
	1587		100.0%	2412

Appendix 3 Information over data sources (Chapter 4)

Interviewee statistics

case	total	Gender		Seniority of Position ^[1]		
		male	female	low	medium	high
Zwickau	10	70%	30%	40%	50%	10%
Den Helder	11	64%	36%	73%	9%	18%
[1] Low: project or programme managers or manager of single facilities Medium: leadership positions which coordinate and direct multiple teams and projects as well as senior advisors to the executive board High: members of the municipal council or the executive board						

List of analysed official Documents

Case	Policy sector	Title	Year	Source
Zwickau	Integrative	Landesentwicklungsplan (LEP) 2013	2013	Government of the State of Sachsen
		Zwickau 2050 Projektbericht	2015	City administration
		Städtebauliches Entwicklungskonzept (SEKo) 2020	2006	City administration
		Integriertes Stadtentwicklungskonzept (INSEK) Zwickau 2030	2013	City administration
	Housing	Wohnbedarfs- und Wohnbau-Flächenprognose	2018	City administration
	Housing	Wohnungsrückbau in Stadtumbaugebieten: Fortschreibung	2021	City administration
	Economy	Handlungskonzept Wirtschaft Zwickau 2025	2017	City administration
	Economy	Einzelhandels- und Zentrenkonzept Zwickau 2010	2010	City administration
	Demo-graphy	7. Regionalisierte Bevölkerungsvorausberechnung für den Freistaat Sachsen 2019 bis 2035: Datenblatt Gemeinde Zwickau, Stadt	2020	Statistical office of the State of Sachsen
	Area planning	Komplexmaßnahme Bahnhofsvorplatz, Querverbindung Straßenbahn, Innenstadttangente	2020	City administration
		Beschlussvorlage: Erstellung eines energetischen Quartierskonzeptes „Südlich Sternenstraße“, für die mittel- bis langfristige Stadtentwicklung in Eckersbach einschließlich Masterplan (BV/168/2021)	2021	City council

		Niederschrift über die Sitzung des Stadtrates - öffentliche Sitzung	2022	City council
Den Helder	Integrative	Strategisch Plan Den Helder 2015	2000	City administration
		Strategische Visie 2020	2007	City administration
		Krimp of Niet	2010	City council
		Helder zicht op Zeestad	2012	Audit Committee Den Helder
		Structuurvisie Den Helder 2025	2012	City administration
	Housing	Nota Wonen Den Helder	2003	City administration
		Nota Wonen Den Helder 2010 - 2015	2010	City administration
		Woonvisie Den Helder 2016-2020	2016	City administration
		Prestatieafspraken gemeente Den Helder 2016-2021	2016	City administration
		Regionaal Actie Programma 2017-2020	2017	the Region Kop van Noord-Holland
	Social	Sociale Structuurvisie: Sociaal en Integraal – Perspectief en Kapstok	2011	City administration
		Beleidskader sport 'Den Helder beweegt vooruit'	2020	City administration
		Helders Sociaal Beleid: Het sociale verhaal van Den Helder	2020	City administration
	Economy	Kadernota Detailhandel: Naar kwaliteit en dynamiek	2007	City administration
		Helders Perspectief: Van krimp naar groei!	2019	City council
	Demo-graphy	Prognose 2017-2040: Bevolking, huishouden en woningbehoefte	2017	the Province of Noord-Holland
	Area planning	Uitwerkingsplan Stadshart	2008	Zeestad (city development company)
		Bestemmingsplan Nieuw Den Helder centrum 2013	2013	City administration