

## WHAT DRIVES PLANNING IN A SHRINKING CITY? TALES FROM TWO GERMAN AND TWO AMERICAN CASES

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### Abstract

*Current debates in urban development display a rising awareness that several cities in Europe and the US have to deal with challenges of long-term urban shrinkage. However, on an international scale it is still not clear if and how planning paradigms, planning systems, planning strategies and planning cultures are changing when shrinkage and decline are taking place. This paper investigates how planning is transformed in view of shrinking cities. For this purpose, the paper introduces four cities' storylines framed by shrinkage. Particular focus lies on the question if and how dealing with decline and shrinkage led to changes in urban planning and brought about different planning styles.*

**Keywords:** planning cultures; shrinking cities; comparative planning

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### 1. Introduction

Urban shrinkage and economic downsizing in structurally weak areas – e.g. in old industrialized ‘rust belts’ or in peripheral rural areas – are most commonly symptoms of transformations that can be observed in Europe and the US likewise (Pallagst & Wiechmann, 2005), and current debates in planning demonstrate alertness of the phenomenon of shrinking cities. Many cities around the globe have to deal with challenges of long-term demographic and economic changes leading to urban shrinkage associated with housing vacancies, underutilised infrastructure and other negative impacts, often triggered by the effects of globalization pressures (Pallagst, Wiechmann, & Martinez-Fernandez, 2013).

However, extent and spatial distributions of population decrease differ significantly between Europe and the US. In Germany, declining birth rates and the effects of the German reunification are main triggers of shrinkage. Due to the overall population growth generated by immigration, many cities in the US have to provide for redevelopment in shrinking areas and growth-related development at the same time (Pallagst, 2008).

In current planning debates the term ‘shrinking city’ usually describes a densely populated urban area that has on the one hand faced population losses in large parts and is on the other hand undergoing economic transformations with some symptoms of a structural crisis (Pallagst, 2008).

The research presented here sets a basis for identifying traces of paradigm shifts, and possible changes in planning systems, planning styles, and planning cultures by means of comparative evidence based urban research. However, planning cultures is a new field when it comes to evidence based research, as in the field of comparative planning studies no systematic conceptual framework exists (Othengrafen, 2010, p. 86) Moreover international comparative work on the topic planning cultures is lacking a concise methodology (Fürst, 2009). In this respect, the paper combines the topics shrinking cities and planning cultures in a research approach that is new and experimental.

## **2. Identifying changes in planning for shrinking cities – defining an analytical frame**

The following paragraphs will briefly introduce contemporary shrinking cities-research and define an analytical framework for case studies on shrinkage and changing planning styles derived from the research of planning cultures.

The existing body of literature on shrinking cities has well documented that the loss of urban population is not entirely a new phenomenon (ARL, 1995, p. 1010; Göb, 1977, pp. 151, 162; Häußermann & Siebel, 1987, p. 29; Oswalt, 2004, p. 20). What is new, however, is the extent to which shrinkage occurs on a global scale, and the complexity of its causes (Pallagst, Wiechmann, & Martinez-Fernandez, 2013). Meanwhile, shrinking cities have become a worldwide multi-dimensional phenomenon appearing in many post-industrialized societies.

Meanwhile, the policies and strategies applied when it comes to dealing with shrinkage are manifold. An interesting fact is that how shrinkage is perceived and accepted largely influences the choice of planning approaches in shrinking cities. Here, two directions can be distinguished: either growth or non-growth is adopted as a path for future development.

In order to investigate changing planning strategies and planning policies for shrinking cities, the correlation between perception and strategies might be helpful. In search of this correlation, the authors merged two typologies for shrinking cities: one based on phases of perceptions of shrinkage (Farke 2005, p. 179), the other based on types of strategies (Danielzyk et al. 2002, p. 25). Farke’s typology suggests four stages of perceptions of shrinkage: ignoring, observing without acceptance, certain acceptance and acceptance, Danielzyk reveals the following typologies decline as vicious circle, expansive strategy, maintenance strategy, and planning for decline. Interestingly, both typologies correspond with each other as displayed in figure 1. Nevertheless, since shrinkage is a very complex problem, it is difficult to distinguish sharply between planning strategies and the underlying perceptions (see figure 1).

Figure 1: Strategies to cope with shrinkage depending on the perception of shrinkage

Strategies to cope with shrinkage in dependence with the perception of shrinkage			
perceptions of shrinkage			
phase of ignoring	observation without acceptance	certain acceptance with or without limited public communication	acceptance
<b>Decline as vicious circle</b>	<b>Expansive strategy</b>	<b>Maintenance strategy</b>	<b>Planning for decline</b>
Without goals	Keep population within city borders	Maintain attractiveness and spatial structure	Orderly shrinkage, development of qualities
Hope for regional planning or financial support	Substantial expansion of residential areas	Development of existing land use, target groups programmes	Adaption and reduction of infrastructure, development of recreational areas
<b>passive strategies</b>	<b>active strategies</b>		

Sources: Own design based on Farke, 2005; Danielzyk et al, 2002

In search of planning strategies to deal with shrinkage, policies, plans and projects have been applied with different contents i.e. substitute industries, master plans, urban regeneration, urban redevelopment, urban renewal, or greening. These measures can either serve as part of a planning strategy for expansion as well as a strategy for managing decline. The common denominator is their focus on improving the quality of life in the respective area. However, measures taken on local level, often with financial support by the national governments cannot always be credited to one specific policy or strategy.

In order to investigate how planning is changing in view of shrinking cities, the authors turned to the research sphere of planning cultures. Research work by Othengrafen (2010) specified the criteria for defining planning cultures. Table 1 distinguishes the following criteria:

- *General context* displays the basis of a planning culture comprising more general understandings,
- *Planning context* displays the values and beliefs of the planning profession,
- *Planning toolset* refers to the strategies and applications at hand.

The authors of this paper have modified this list in two ways in order to use it as a basis for comparative research on planning for shrinking cities: Firstly, some of the terms were redefined, including an addition of the factor of change. Secondly, in order to broaden this typology for a possible applicability for shrinking cities, the authors introduce ‘shrinking context’ as a new criterion (see table 1).

The new category, ‘shrinkage context’, comprises aspects which most likely trigger change within a planning culture. In this respect and based on the definitions of shrinkage laid out earlier, criteria for mapping the shrinkage context of a planning culture are defined by demographic change, post-industrial transformations, and the perception of shrinkage. ‘Demographic change’, a factor highly influencing the shrinkage of German, Italian or Japanese cities, was selected in order to display changing population. ‘Post-industrial transformations’, visible in countries all over the world (Pallagst,

Wiechmann, & Martinez-Fernandez, 2013), include economic change and possible structural crises. The variable ‘perception of shrinkage’ demonstrates the selection of policies and strategies in order to deal with shrinkage.

Table 1: Criteria for defining planning culture’s facets and layers

Shrinkage context	General context	Planning context	Planning toolset
<ul style="list-style-type: none"> <li>• Demographic change</li> <li>• Post-industrial transformations</li> <li>• Perception of shrinkage</li> </ul>	<ul style="list-style-type: none"> <li>• Socio-economic or socio-political societal models</li> <li>• People’s respect for and acceptance of planning</li> <li>• Social equity, planning ethics and values</li> <li>• Consideration of environmental aspects</li> <li>• Stakeholders in planning</li> </ul>	<ul style="list-style-type: none"> <li>• Major planning paradigms</li> <li>• Objectives and principles planning is aiming at</li> <li>• Traditions and history of planning</li> <li>• Scope and range of planning</li> <li>• Legal framework</li> <li>• Planning system and governance</li> <li>• Adaption to change</li> </ul>	<ul style="list-style-type: none"> <li>• Urban design and structures</li> <li>• Urban plans, programs and policies</li> <li>• Urban and regional development strategies</li> <li>• Planning Law</li> <li>• Decision making process</li> <li>• Communication and participation</li> <li>• Financial tools and incentives</li> </ul>

Source: Own design based on Othengrafen, 2010, p. 93

In the next step of the research, the authors applied the analytical framework by selecting and examining case studies of shrinking cities. The authors selected Germany and the USA as planning cultural areas of investigation, as vast experience with shrinking cities has been made in these countries. Four case studies were selected for this comparative research: two cities from Germany (Zwickau and Kaiserslautern), and two cities from the USA (Flint/MI and Youngstown/OH). The choice of cities is based on the following attributes: All cities are comparable in the number of inhabitants, all cities have applied strategies to counteract shrinkage, and three of them share a history of car-manufacturing. All four cities demonstrate wide-ranging planning approaches regarding shrinkage processes, and thus can be considered as appropriate testing grounds for changing planning styles and cultures.

Case-study analyses carried out by the authors focused on exploring literature, archival records, data bases, and planning documents regarding planning and rebuilding activities in the selected case study cities. A stakeholder-based analysis (by means of surveys and interviews) is the main part of the research work. This aimed at gathering in-depth knowledge about experiences with steering planning and development of four shrinking cities, Zwickau, Kaiserslautern, Flint, and Youngstown.

The following paragraphs will highlight how shrinkage affected the four cities mentioned above, and point at the cities’ struggle with addressing the problems of shrinkage. In terms of the analytical framework displayed in table 1, particular emphasis is placed on the criteria ‘shrinkage context’ and ‘planning toolset’.

### 3. In search of evidence for changing planning styles: Four case studies

As mentioned before, the four cases represent different planning cultural realms of shrinking cities, and a large number of tested and applied planning approaches. The next paragraphs will briefly introduce the cases (3.1), showcase their shrinkage context in terms of trajectories of population

development and decline (3.2), and in particular present policies and planning tools for dealing with population decline and shrinkage (3.3).

### **3.1 Brief introduction to the cases**

#### *Zwickau: A shrinking East German city*

Shrinkage in East Germany is a well-known phenomenon in the national and international discourse of the field. Smaller cities like Zwickau are struggling with the effects of German reunification and the demographic changes affecting population development, as much as the prominent cases Dresden and Leipzig.

The city of Zwickau is among those not so well known examples of East German shrinking cities. It is the fourth largest city in the state of Saxony in Germany and located in the metropolitan region ‘Mitteldeutschland’ in proximity with the cities Dresden, Leipzig and Jena. Zwickau’s former growth and prosperity were related to coal-mining, manufacturing and development of the automobile industry. Today the city’s population extends to 93,750 inhabitants (Bertelsmann Stiftung 2012a).

#### *Kaiserslautern: Post-industrial transitions*

The city of Kaiserslautern is located in the German state Rhineland-Palatinate, within the district of Kaiserslautern. The city is undergoing economic transformations since the 1970s. Moreover, like most cities in Germany, Kaiserslautern has to deal with the effects of demographic change and an aging population. During the postwar period up to the 1960s the region was prospering due to the high level of industrialization in the manufacturing sector. Today, from an economic perspective, the city is one of the weakest areas in West-Germany with an unemployment rate of 11.2% in the city of Kaiserslautern as of April 2013. The city also ranks number one on the list of the most indebted German cities since 2012. Interestingly, despite the severe economic transformations the city’s population remained relatively stable for the last 40 years.

#### *Flint: Motor-town collapse*

Flint is one of the showcase examples of shrinking American industrial medium-sized cities: according to the local government’s website, the town ‘was the most publicized example of the effects of the 1970s collapse of the US auto industry on surrounding communities’ (City of Flint, 2013). The city is located in the North of the United States, in the state of Michigan within Genesee County, in close proximity to the city of Detroit. In the beginning of the 20th century Flint emerged as an automotive town with General Motors being Flint’s principal economic pillar: in the 1970s, GM employed almost half of Flint’s population, but ever since the company has downsized jobs in the area by 90% (Badenhausen, 2011).

#### *Youngstown: A Rust Belt classic*

Youngstown, located in Mahoning County in the state of Ohio, is another typical US example of a medium-sized city affected by industrial decline. Youngstown emerged in the 1800s as an industrial town, based on coal and iron processing. From the early 1900s, the industry base shifted towards steel processing and Youngstown became a major site for steel production in the US during the first half of the 20th century (Aley, 1950, p. 43), followed by a downturn from the 1950s on.

### 3.2 The shrinkage context: Trajectories of population development and recent paths of decline

Based on the investigation of the shrinkage context (see table 1), the following paragraphs will display paths of shrinkage in terms of demographic change, post-industrial transformations, and perceptions of shrinkage for the four cases.

Population growth and decline of all four case study cities is compiled in table 2, which is followed by a description of the cities' individual paths of growth and decline. Major turning points in population development are highlighted in bold. For all cities a turning point in post-industrial development can be detected in the range 1950s to 19606. For Zwickau a second major turning point can be traced with the German reunification around the year 1990.

Table 2: Population development of the case study cities

<b>Zwickau</b>												
Year	1900	1910	1920	1930	1940	<b>1950</b>	1960	1970	1980	<b>1990</b>	2000	2010
Population*	55,8	73,5	73,5	71,7	85,4	<b>138,8</b>	129,1	127,0	122,1	<b>123,6</b>	103,0	93,5
<b>Kaiserslautern</b>												
Year	1900	1910	1920	1930	1939	1950	1960	<b>1970</b>	1980	1990	2000	2010
Population*	48,3	54,6	56,2	61,5	65,8	62,7	86,2	<b>99,6</b>	98,7	99,3	99,8	97,5
<b>Flint</b>												
122,1	1900	1910	1920	1930	1940	1950	<b>1960</b>	1970	1980	1990	2000	2010
Population*	13.1	38.5	91.5	156.4	151.5	163.4	<b>196.9</b>	193.3	159.6	140.7	124.9	102.4
<b>Youngstown</b>												
Year	1900	1910	1920	1930	1940	<b>1950</b>	1960	1970	1980	1990	2000	2010
Population*	30,6	79	132,4	170	167,8	<b>168,3</b>	166,7	139,8	115,4	95,8	82	66,9

\* rounded in thousands

Sources: for Zwickau: Bertelsmann Stiftung 2012b; for Kaiserslautern: Stadtverwaltung Kaiserslautern 2012, p. 30; For Flint and Youngstown: US Census Bureau 2012;

#### *Zwickau's shrinkage context*

Zwickau's population growth was attributed to times of industrialization. In the 1950s, the flourishing coal mining industry led to an in-migration of people to the city, and the population peaked at a number of 135,751 inhabitants in 1955 (Stadt Zwickau 2006, p. 19).

But, the population of the city has changed in recent history. Main factors of shrinkage in Zwickau are the structural transformations of political and economic nature, which most East German cities experienced after German reunification in 1989/1990. Before 1989, the loss of population was induced by economic structural changes in the mining industry and the supporting branches. Due to the political and economic system, the outmigration was not as extreme as in the years after the reunification but still significant. Only two months after the opening of the border, 2.835 people or 2.4% of Zwickau's inhabitants had left the city. By the end of 1990 more than 7.000 people had out migrated from Zwickau. During the following ten years, a tremendous loss of population took place until the year 1999 (see table 3).

The increase in population in 1999 of 5.4 % to 104.146 inhabitants was only achieved by incorporating surrounding villages and towns into the city of Zwickau and its administrative borders (Stadt Zwickau, 2006, p. 19). However, this did not change the main trend of population decline the city has to face. Based on population figures of 2007, forecasts estimate a number of 84,860

inhabitants for the city in the year 2020, and only 75.990 in 2030, which resembles losses of 20.7% (Bertelsmann Stiftung 2012b). In addition to economic decline, suburbanization to surrounding towns and villages set in. These changes were motivated by out-migrating younger residents looking for new job opportunities in West Germany, and new chances of a suburban lifestyle.

The alertness for shrinkage turns out to be high as Zwickau is embedded in the East German context where vast transformations placed shrinkage on the federal agenda. In relation to the typology in figure 1, shrinkage is accepted.

#### *Kaiserslautern's shrinkage context*

The city's population growth becomes significant after 1850, when industrialization brought new jobs in the manufacturing of textile, machines and metal processing (Statistisches Landesamt Rheinland-Pfalz 2012). Today almost all companies involved in Kaiserslautern's growth of population during industrialization are either bankrupt or have significantly reduced their number of employees.

In the year 1969, Kaiserslautern incorporated several smaller municipalities, which led to a growth in population over 100.000 inhabitants giving it the administrative status of a major city (Stadtverwaltung Kaiserslautern, 2012, p. 30; Stadt Kaiserslautern – Chronik 2012)<sup>1</sup>. Structural changes started to take effect during the 1970's. After that the city slowly started to lose inhabitants (see Table 4). Compared to other industrial cities, Kaiserslautern was not affected by an immediate loss of jobs like e.g. cities in the Ruhr Area. The reason for this can be seen in the fact that Kaiserslautern's industry showed a stronger diversification to the branches of textile, car manufacturing, and consumer goods.

Kaiserslautern is affected by both industrial transformations and demographic change. The perception of shrinkage is somewhat given, though not largely accepted. In relation to figure 1, the perception of shrinkage can be labelled as 'observation without acceptance'.

#### *Flint's shrinkage context*

From 1900 until 1930 Flint's population increased from around 13.000 to more than 150.000 people demonstrating the enormous pull factor the developing automotive industry presented. Since the 1960s, however, a constant loss in population can be observed (see table 5).

Unemployment rates in Flint range at 9.1%, a figure near the present Michigan state average of 8.5%, yet they are exceeding the US average of 7.6% (US Bureau of Labor Statistics, March 2013). Apart from unemployment, major problems in Flint involve high vacancy rates and depopulated urban areas, safety risks for citizens (e.g. Manzella, 2011) and a diminishing tax base for basic municipal services such as police or garbage collection (Janz, 2011).

The city of Flint does not only showcase an example of a city depending on one industrial branch, but also one of a corporate town, tied to the fate of one single company. With General Motors downsizing, the city was destined to share this company's misfortune. Genesee County however, has not suffered a similar loss of population over the last 30 to 40 years. The rapid decline of the city is also attributed to urban sprawl and suburbanization processes accompanying the industrial shrinkage (Gilotti & Kildee, 2009, p. 141).

After decades of denying shrinkage, the city has reached a point of acceptance of shrinkage as a fact to be dealt with actively when looked at the typology of perceptions in figure 1.

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<sup>1</sup> This status allows the city to receive a higher share in funding from the state, in return the city is required to provide services for the city and its surrounding areas in terms of culture and education, which is one of the reasons for the high debts of the city.

*Youngstown's shrinkage context*

The wave of plant shutdowns which started in the late 1970s entailed a loss of 50,000 manufacturing jobs in the city of Youngstown – equating to over one third of the city's population at that time (Linkon & Russo 2002, p. 131). Moreover, this represented a loss of \$414 million in personal income and of 33-75 percent in school tax revenues (Bruno, 1999, p. 10). Current unemployment rates in Youngstown and surrounding suburban areas are as high as 8.4%, well over the Ohio state average of 7.0% and higher than the US average of 7.6% (US Bureau of Labor Statistics, March 2013). The city's population peaked in the 1950s, from then on it declined continuously (see table 6). In the year 2009 around 4.500 buildings and 22.000 sites were abandoned leading to the highest rate of vacancies in the USA (Mahoning Valley Organizing Collaborative, 2011, p. 13).

Youngstown's shrinkage problems sound familiar, deriving from unemployment and out-migration and they induce high crime rates and hence a negative city image (Linkon & Russo, 2002, p. 235). Social segregation is increasing and land management due to under-populated areas and under-used infrastructure places a challenge. Moreover, the provision of both private and public services is threatened due to a narrowing tax base.

Youngstown was among the first US cities to publicly announce that shrinkage is accepted as a fact. Perception and awareness of shrinkage in terms of the typology in figure 1 are high.

### **3.3 Policies and planning tools for dealing with population decline and shrinkage**

This section presents the planning toolset applied in the case study cities in connection to the typologies of strategies presented in figure 1: expansive strategy, maintenance strategy, planning for decline.<sup>1</sup>

*Zwickau*

The city government recognized shrinkage as a challenge and fait accompli for the city of Zwickau, which is expressed in the range of strategies and planning tools applied in the city.

Maintenance strategy: Image and attractiveness

As for the strategies until 2002, the city focused on increasing its attractiveness by renovating buildings in the centre, in particular in order to strengthen the retail sector. Despite these efforts, including the development of an inner city mall in the year 2000, large area retail businesses opened up on the edge of the city by the end of the 1990's. As a reaction to the ongoing sprawl, the state of Saxony passed a new law banning the development of malls and retail business on the edge of cities in the year 2012, yet most edge city-type business parks had already been created until then (Interview with Mr. Spanger, IHK Chemnitz, Regionalkammer Zwickau, September 6, 2012).

The inner city developments were also supported by the state of Saxony after Zwickau's participation in the contest 'Ab in die Mitte! Die City-Offensive Sachsen' [engl.: Back to the centre! The Saxon City Initiative] in 2006. Within this program the city tried to further strengthen the inner city by establishing public services like a library and a new city hall. Despite the efforts to strengthen the inner city particularly for retail businesses, developments like malls on the edge of the city make it difficult to achieve positive results.

Planning for decline: Right-sizing

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<sup>1</sup> The type 'decline as vicious circle', which is also mentioned in figure 1 does not apply to the selected case study cities.

Due to ongoing suburbanization and high vacancy rates in the older settlement areas, in particular pre-fabricated housing (Plattenbausiedlungen), strategies shifted towards demolishing these buildings and as a result towards adapting to a smaller and compact city model. Before the federal program ‘Stadtumbau Ost’ (Rebuilding the City – East) started in 2002, more than 16.000 vacant housing units had cropped up in Zwickau. The main target for the federal program was to demolish vacant buildings and stabilize the real estate market as well as reduce maintenance costs for underused infrastructure. In 2010, approx. 5.060 housing units were demolished in Eckersbach and approx. 1.900 in Neuplanitz, the areas with the highest vacancy rates. In general, the East German right-sizing strategies do not only include demolition actions, but also solutions like partial dismantling, which means reducing the height of buildings of five or six floors to two or four floors. In addition, strategies aim at stabilizing older residential areas by improving the social environment, the transformation of vacant areas to green spaces, and reusing some buildings for different functions e.g. as kindergartens, medical centers, or senior citizens’ clubs (Bundestransferstelle Stadtumbau Ost, 2012).

Planning for decline: Comprehensive planning strategies

The city tried to develop several plans in order to deal with the aspects of shrinkage; the first one was the integrated urban development concept of 1997. This concept did, however, not succeed in fulfilling its targets as it was lacking a detailed urban strategic plan (Pfefferkorn, 2003, pp. 83f). Another concept was developed in 2006. The ‘SEKo ZWICKAU 2020’ is an integrated development concept that takes into account not only specific aspects of urban development. In order to deal with the economic and demographic development of the city, strategies and measures have been enacted with regard to demolition of underused structures and to revitalizing the city centre. (Stadt Zwickau, 2006, p. 73). Another plan developed most recently was the integrated urban development concept 2011 ‘INSEK Zwickau 2025’ (Stadt Zwickau, 2012).

In addition, as a result of an estimated vacancy rate of 15% in 1997, urban planners and housing companies arranged a ‘Housing Policy Forum’ (‘Wohnungspolitisches Forum’) in May 1997. The results included impeding the development of new urban land-use plans for multi-story apartments and the development of a concept to improve the social environment in existing housing areas.

Maintenance strategy: Substitute industries

The West Saxon University of Applied Sciences of Zwickau (WHZ) was already established in the year 1897. Today it plays an important role as an employer as well as a think tank for the city. WHZ can be considered a small university with only about 5.200 students (Westsächsische Hochschule Zwickau, 2012), yet it is embedded in the city’s policy against shrinkage.

*Kaiserslautern*

Expansive strategy: Incorporations

For the last 40 years, Kaiserslautern was able to gain enough people to balance the low birth rate and keep its population on a constant level. Since 1975 the migration balance of Kaiserslautern shows only small differences between around +1000 people and -500 people (Stadtverwaltung Kaiserslautern 2012, p. 32). This was possible because the city of Kaiserslautern incorporated a number of surrounding smaller villages.

Another significant strategy for population increase was tax regulations for secondary residences installed in the year 2009. The new tax regulations made swapping to a status of primary residency more attractive, in particular for students. This encouraged a net growth of almost 2200 inhabitants (Statistisches Landesamt Rheinland-Pfalz, 2012).

Maintenance strategy: Substitute industries and redevelopment

The University of Kaiserslautern was founded in 1970 by the state of Rhineland-Palatinate which brought new employment opportunities to the city and laid the foundation for several economic developments, such as spin off companies or large research centres.

One major factor for employment in the city and in the region was and still is the military presence by US and French forces installed after World War II. Military bases, however, are continuously phasing out, and the French forces are no longer present at Kaiserslautern. The reduction of their military bases caused not only job losses and a loss of purchasing power, but at the same time it opened up new development opportunities for the city. Beginning in 1997 a former military site was developed as a new business centre on the edge of the city. The redevelopment can be seen as a success, as today there are about 90 small businesses located in this area. Many of them are spin-offs from the Technical University and belong to the high-tech sector. In total about 3.000 jobs were created. However, military downsizing is quite unpredictable, and with the latest cutbacks in the US military budget it is likely that further reductions of employees on the remaining military bases will take place.

Another substitute industry area was established in 2002 on the site of a former freight rail terminal close to the university campus. This redevelopment project was aimed at further strengthening the scientific potential of the city, and large research facilities were established here, which was part of a national competitive process of research excellence. These developments were facilitated by the scientific reputation and networks established by the University of Kaiserslautern (WFK 2012, p. 12).

Nevertheless it must be noted that the overall success in managing structural change stands in sharp contrast to the high rate of unemployment in Kaiserslautern and the entire region. Although a large number of jobs were created in public and private services, the job losses in manufacturing account for the enduring unemployment (IAB Rheinland-Pfalz-Saarland, 2007, p. 11).

### *Flint*

Maintenance strategy: redevelopment and small enterprises

By the end of the 1970's the city's development focused on private investments supported by federal funds in form of Urban Development Action Grants (UDAG) and Community Development Block Grants (CDBG). Flint was successful in receiving federal funding for certain projects, mainly focusing on downtown redevelopment with private investment. However, the majority of these projects could not achieve their intended goals (Gilman, 2001, p. 57). During the 1980s the city turned towards supporting small businesses in order to improve the desolate job situation. These efforts were partly successful, but the number of jobs which were created was far too small compared to the ongoing layoffs in the automotive industry (Gilman, 2001, p. 58).

Planning for decline: land banking

Recent efforts concentrate on land banking as a tool for managing shrinkage. In 2003, Michigan passed one of the most progressive land banking laws in the US, based on the work carried out in Genesee County, in particular the city of Flint. With the tool of the county-based land bank, Genesee County was able to adopt a brownfields redevelopment plan which utilizes a tax increment financing strategy. This enables the Land Bank to redevelop its properties in a highly effective way (Gilotti & Kildee, 2009, p. 144). Before the land bank was in place, abandoned properties were either sold to private investors or transferred to the state of Michigan. Options for the city to influence this process were limited thus hindering a strategic approach to manage the growing number of vacancies (Phaneuf, 2012). With the land bank as the managing institution for vacancies in Flint, the foreclosed properties now offer a chance for urban development instead of being a part of the problem.

Planning for decline: Comprehensive planning strategies

In 2010, the city of Flint received a Sustainable Communities Challenge grant from the U.S. Department of Housing and Urban Development (HUD) for developing a comprehensive master-plan.

The new master-plan was developed in a bottom-up collaborative process involving numerous suggestions by the citizens. The plan proposes several aims capitalizing on Flint's citizens by encouraging small businesses, developing community assets and strengthening neighbourhoods. Based on existing vacancy rates a set of designated place types was mapped out, laying out which areas of the city will remain as built up areas in the future (for residential and commercial uses), and which areas will be designated for right-sizing and tear-downs mainly of residential areas. The latter are declared as 'Green Innovation Areas' where former residential areas will be transferred to urban agriculture. In particular green infrastructure is supposed to strengthen Flint's position as an employment centre on neighbourhood level.

*Youngstown Actions for dealing with population decline and shrinkage*

Expansion strategy: Economic growth projects

After the loss of so many jobs within a small period of time, several projects were initiated to re-gain employment for the local population. There were for example plans to restore the economy by means of investments like a riverboat casino, a NASCAR race track or a car factory, which were intended to bring back jobs in huge numbers. Also a branch of the Pentagon (US Ministry of Defense) was intended to relocate to the city. These plans were, however, not implemented or failed their expectations e.g. in case of the car factory. Also it was not clear if these enterprises would have generated jobs for the local population which mainly consisted of low skilled workers, or if it would have attracted new people to the city better suited for specialized work. This development might in turn have increased social segregation, yet it never materialized.

Maintenance strategy: Substitute industries

The city is slowly shifting towards a service-based economy, while employment is also provided to some extent in the automotive and steel processing industries (Youngstown-Warren Regional Chamber, 2008). The jobs created were however much fewer than the ones lost with the decline of the steel industry and could not combat the rising out-migration.

Substitute industries took a peculiar path in Youngstown. During the 1990's the County turned the increasing crime rate in the area into a business plan and gave permission to build four prisons in the area (Linkon & Russo, 2002, p. 234), three of which are still in use. This development helped to support the local economy and to improve public finances, but the city's image degraded during this process (Linkon & Russo, 2002, p. 235).

Another popular substitute industry is education, and Youngstown followed this path with an expansion of Youngstown University by the end of the 1990's. This development was planned close to downtown in order to support this highly distressed part of the town. Youngstown's downtown improvement, much due to private capital investment, is connected to the relocation of the university campus to an adjacent site and to the setting of the new business incubator. Several start-up companies are located here and interestingly Youngstown was labelled one of the 'best 10 cities to start a new business' by 'Entrepreneur Magazine' in 2009 (Zeller, 2012).

Planning for decline: Right-sizing

Due to the high vacancy rates in the city, the costs for maintaining infrastructure and public services like roads, sewage systems and waste disposal were increasing beyond the city's financial capacities. These situation lead to drastic solutions. Abandoned buildings were bulldozed and unnecessary roads were removed. In addition, people in sparsely populated areas were offered to move, so entire neighbourhoods could be demolished (Christie, 2008).

Planning for decline: Comprehensive planning strategies

A new master-plan (named ‘Youngstown 2010’), was initiated in the late 1990s. ‘Youngstown 2010’ was developed as a process of collaborative planning and strong participation of the local community. The main feature was the agreement that Youngstown would not regain its former population but instead would stay a smaller city in the future. The aim was to improve the quality of life for the current population (City of Youngstown, 2011). Following the efforts of the plan, some neighbourhoods remain stable – benefiting from the Youngstown Neighborhood Development Corporation, an NGO set up under the ‘Youngstown 2010’ framework. However, the downsizing of larger neighbourhoods remains one of the most problematic aspects of the plan, meeting difficulties with absentee owners as well as opposition from both political actors and residents.

### 3.4 Overview on the four cities’ planning toolset for shrinkage

Table 3 shows an overview of planning tools and styles utilized in the case study cities as it was revealed in the analysis and interviews with stakeholders. This is not a display of all planning tools enacted in the cities, but those who are particularly intertwined with shrinkage. The table is derived from the analytical frame for shrinking cities and planning cultures presented in table 1. The purpose here is to highlight the many effects shrinkage has had on planning instruments, styles and culture in the case study cities. From the four cases it is difficult to derive any general trends, however, an active embrace of shrinkage seems to take place in Zwickau, Flint, and Youngstown.

Table 3: Overview on planning tools used in the case study cities

	Zwickau	Kaiserslautern	Flint	Youngstown
<b>Financial tools</b>				
Local tax incentives for secondary residences	-	+	-	-
Federal funds:				
<i>‘Hardest Hit Funds’ for demolitions</i>	-	-	+	+
<i>Federal ‘We can’t wait’ initiative</i>	-	-	+	+
<i>‘Stadtumbau Ost’ [Rebuilding the City East]</i>	+	-	-	-
<i>‘Social City’</i>	+	+	-	-
<b>Urban and regional development strategies</b>				
Brownfield management and conversion	-	+	+	+
Substitute industries-> high-tech; university spin-offs; ‘eds and meds’	+	+	+	+
Urban gardening and green infrastructure	-	-	+	+
Collaborative and participatory approach as planning strategy	(+)	-	+	+
Coping strategies/flagship projects: e.g. casino, prisons; downtown mall	-	+	-	+
Modernise public transport systems; facilitate car parking	+	-	(+)	-
Reuse buildings for different functions (kindergarten, medical center etc.)	+	-	+	-
Integrated urban development concept	+	-	+	+
Revitalization policies	+	(+)	-	(+)
<b>Planning law; legal instruments</b>				
New masterplans	(+)	-	+	+

Law for banning the development of malls/retail on the edge of cities	+	-	-	-
<b>Urban design; urban fabric</b>				
Right sizing: demolitions of housing and infrastructure	+	-	+	+
Increase attractiveness by renovating buildings in the centre	+	-	+	+
Redevelopment of vacant land	-	+	+	-
<b>Communication and participation</b>				
Housing companies; private property owners take part in planning process	+	-	+	(+)
Public involvement in decision-making processes	+	-	+	(+)

Source: own design 2015

#### 4. Conclusions

This paper presents a starting point for identifying changes in planning styles and tools when faced with shrinkage based on an analytical frame. While the four cases display insight in similarities and differences of shrinking cities' planning styles, the authors are well aware that – based on their specific paths and localities – the four cases can only represent a short glimpse of the situation shrinking cities in Germany and the USA. Nevertheless, they help to better understand the shrinking cities phenomenon which might in turn lead to further developing innovative ideas for dealing with shrinkage.

In terms of the individual cases, the following observations could be made:

##### Zwickau

Only a few years after the German reunification, Zwickau's government realized that the situation would not improve and out-migration as well as strong economic competition will be the future trend. Zwickau's planning style applied the brakes to growth oriented planning and focused on adapting to a smaller footprint. For Zwickau, right sizing seems to be a major factor in combating shrinkage, as well as comprehensive and strategic planning. In addition to local strategies the city's administration recognised that in order to keep up with the growing competition also with neighbouring cities of similar size, it is important to be part of a larger network of regional, national and even international partners.

##### Kaiserslautern

The city of Kaiserslautern is an exceptional case because – despite the loss of jobs and the increasing influence of demographic change in Germany – the number of residents remains stable in this city. One possible explanation might be that in general the German system of unemployment benefits reduces the pressure to find a new job in a short time. In addition the city of Kaiserslautern provides a large amount of public services while living costs are comparably low. Both aspects could be the reasons why people stay in this city even when unemployed. But, the high level of service provision is the reason for the soaring debts the city administration has to face. For the future development of the city it will be important how the chances and risks of further downsizing e.g. of military bases can be utilized for the urban and economic development of the city, and if and how former industrial areas can be redeveloped.

##### Flint

The example of Flint demonstrates the vulnerability of cities with a mono structured economy. Like in other cities the somewhat unexpected decline of the leading industry placed city officials and the population in some kind of ‘structural shock’. Today, planning for decline is the key, where right sizing and redeveloping residential neighbourhoods is essential for Flint’s future development path. The change of legislation in favour of land banking offers a radical yet feasible approach for dealing with the large changes in the urban fabric. In addition it becomes clear that the city is embracing its new and smaller footprint: With the ongoing process of implementing the new master plan, Flint has at least a new perspective for its future development.

#### Youngstown

Much as the path of Youngstown has been praised for being realistic, it shows the struggle over the years to adjust to a smaller footprint. Now that this insight has been delivered, the city can embrace new paths of development, some are experimental, but based on collaboration and serving Youngstown’s community and neighbourhoods. In the long run, growing smaller might be the only chance to regain liveability for a city such as Youngstown.

#### Comparative reflections on the cases and lessons learned

All of the examples showcased in this paper demonstrate that industrial transformation affects manufacturing towns to a large extent, both in Germany (East and West) and in the USA, inducing unemployment, housing vacancies, and population losses – the usual downward spiral.

When it comes to shifts in planning, all of the cases show that substitute industries play an important role, although they can differ from location to location: today high tech, prisons, education, urban farming and others are the new pillars of the economy. In fact, the presence of a university proves to be a strong motor for development as demonstrated in Kaiserslautern, Zwickau, Flint, and Youngstown.

Moreover, all of the cities have meanwhile applied some sort of a comprehensive planning strategy in order to offer a vision or guideline for future development, but also as a basis for community building. Still it appears that redeveloping vacant land is probably the main opportunity for shrinking cities to adapt to past and future challenges. This might be facilitated by tools such as land banking, or comprehensive planning strategies.

When looked at the types of strategies to cope with shrinkage, most cities (Zwickau, Flint, and Youngstown) have found their way past the phase of ignoring shrinkage and – except for Kaiserslautern – are in an intermediate state of maintaining the urban fabric and actively planning for decline. For these shrinking cities it is a fact that planning has changed to a dramatic extent from growth as the main focus to reusing abandoned land and managing vacancies. Yet, due to the large extent of economic, social and urban fabric related problems, shrinking cities’ challenges will be intertwined with the cities’ planning and development paths as long term phenomena.

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