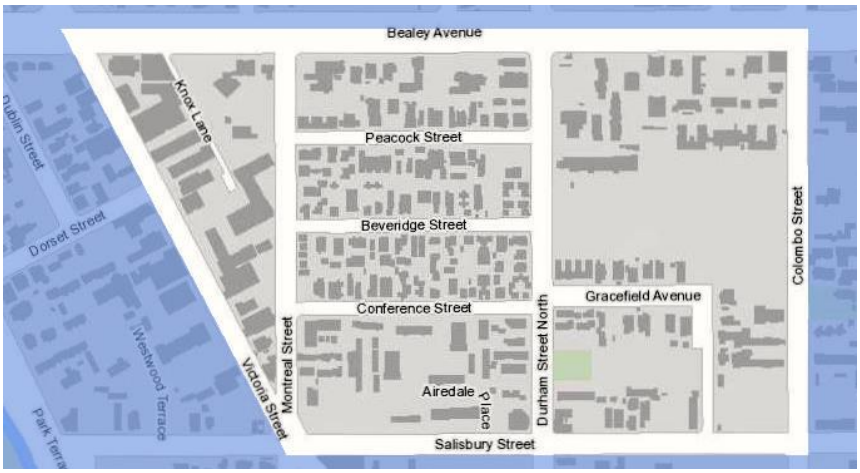
Plan Change 14: Presentation to the Independent Hearings Panel, 7 November 2023

Introduction to the Victoria Neighbourhood Association Inc (VNA)
Prepared by Marjorie Manthei (Membership & Consultation Coordinator)

1) Location: The Victoria Neighbourhood Association is one of six residents' groups in Christchurch Central City. Its boundaries are Victoria Street – Bealey Avenue – Colombo Street – Salisbury Street, which includes Airedale Place; Beveridge, Conference, Durham, Montreal and Salisbury Streets; Gracefield Avenue and Knox Lane. *See map below.*



2) Description of the area: This neighbourhood is one of the most established and densely populated of the residential areas in the Central City. Because of the rule requiring at least one dwelling for every 200m^2, brought in after the earthquakes, most of the sections now have two or more dwellings. In the past three or four years, multi-unit developments have been the norm.

The neighbourhood consists of:

- Original workers' cottages, small villas and bungalows, older style apartment buildings, new townhouses (mainly two-storeys, with a few three-storeys) and new small apartment complexes with no off-street parking;
- An increasing number of unhosted short-term / Airbnb units (between 38 – 45);
- A large CCC-owned social housing complex of five buildings (another two demolished after the earthquakes and not rebuilt);
- Two residential care facilities;
- 17 vacant sections, including the former Christchurch Women's Hospital site in the middle of the neighbourhood (Durham Street – Gracefield Avenue – Colombo Street);

- A variety of non-residential activities, including churches, social services, medical services and (on the more commercial boundary streets), cafes, restaurants, motels and hotels.

3) **Description of residents:** As with most neighbourhoods, there is a variety of people living here: superannuitants, working-age single people and couples, young people (primarily in small apartments, who usually do not stay long), some families and people who live elsewhere but own a property here for weekends or holidays. The VNA membership reflects this variety.

4) **Membership:** The VNA was formed in 1985 and incorporated in 2010, at which time membership was formalised and an annual membership fee set. Anyone who supports the Objectives of the Association and lives in or owns property in the neighbourhood is eligible to join. There are currently 184 financial members and another 60 on our contact list who are included in many of our activities. We contact other residents via letterbox drops. Since incorporating, there have been almost 300 members, counting those who have shifted (92), deceased (11) or did not renew their membership for various reasons (9).

5) **Objectives:** The VNA's primary objectives are to:

- Enhance and protect residential amenity in the neighbourhood;
- Ensure members and other residents are kept up to date on matters affecting them;
- Respond to consultations and surveys from at least the Christchurch City Council, our Community Board and ECan;
- Represent members' views in submissions and presentations; and
- Initiate or support social activities in or near the neighbourhood.

6) **Consultation methods:** We use a variety of ways to keep in touch with and consult with VNA members and other residents in the neighbourhood. We take consultation seriously and ensure that anyone with an interest in a particular issue or activity can have a say. We usually obtain 70-80% response rate (rarely less than 50%). Methods include:

- Regular newsletters (at least monthly) and other notices;
- Distribution of documents and consultation notices from CCC, our Community Board, ECan and other bodies;
- Recommendations from the VNA Committee about submissions on the above, including summary of main points, followed by distribution of draft submissions for feedback;
- Monthly or bi-monthly VNA meetings, with minutes distributed to all members, augmented by electronic meetings to ensure participation by those who cannot attend;
- Briefings organised with CCC staff and others, open to VNA members and other residents;
- Formal surveys of members/other residents undertaken to ensure the VNA continues to accurately represent the neighbourhood;

- Contact with other Central City residents' groups in particular to share ideas and information.

7) Consultation and preparation of our submission on Plan Change 14: All of the above methods were used. Consultation started in 2018, when the National Policy Statement-Urban Development was released. From that time, the VNA:

- Initiated open meetings, including one with MP Duncan Webb on 20/4/21, attended by 60+ residents, and one with CCC staff Mark Stevenson, Ike Kleynbos and Emily Allan on 2/5/22, also well attended;
- Participated in CCC briefings and webinars, and distributed notes via our newsletters and meetings;
- Kept members/other residents informed on PC 14, the National Policy Statement-Urban Development and the Enabling Housing Supply Bill via a series of topic-specific Updates;
- Received regular reports from the VNA subcommittee overseeing PC 14, summarised in minutes of VNA minutes and other communications;
- Prepared draft submissions on the above, which were distributed to members for feedback and/or endorsement before submitting;
- Attended the Hui Hui Mai Greater Christchurch workshop, provided questions before and feedback afterwards and distributed notes to VNA members/other residents;
- Maintained close contact with CCC staff and our elected Councillors, throughout this long process, to ensure we had accurate information and were accurately interpreting the massive amount of documentation.

Support for the VNA submission was overwhelmingly positive. *See Attachment 2, page 5 for consultation results.*

8) Delegation to speak on behalf of the VNA: The VNA submission on PC 14 was prepared by a team of VNA members, formed in April 2022 and coordinated by Geoff Banks. *See Attachment 1, page 4 for evidence of this delegation.*

Attachment 1: PC1 Delegations and Endorsements (2022 – 2023)

VNA minutes 11 April 2022: Item 5.4 Plan Change 14 re Height (Geoff Banks)

Background to this Plan Change was included with the agenda, with a portion of the CCC map showing '10 storey enabled' for most of our neighbourhood and 'unlimited height' on Victoria St and the CBD. The Pre-Notification stage (11 April – 13 May) is a short, more informal stage and the best opportunity to influence CCC recommendations before formal consultation begins in August.

Actions to date: **Geoff agreed to coordinate VNA's response, starting with analysing the available information and seeking clarifications from CCC staff as needed. A small group, including several Gracefield Ave residents, Lucy Alborn (Peacock St) and Don Elder (Beveridge St) will work with Geoff.** Their initial plan is to focus on (i) what is actually required by central government's legislation? (ii) what have Christchurch residents already said they wanted post-earthquake? (iii) what did CCC say in their submission to government, compared with what they are now recommending? and (iv) if significant differences, why?

Lucy will work on a communications plan to keep VNA members and other residents informed (probably with weekly updates). Marjorie has put her in touch with other Central City Residents' Groups, with intention of sharing and coordinating efforts.

Additional actions: Include preliminary info in next Newsletter, including links to CCC website, interactive map and details about e-briefings from CCC staff open to anyone who registers.

VNA minutes 30 May 2022: Item 4.2 PC14 Intensification

A sub-group was formed, as agreed at previous meeting (Geoff Banks, coordinator, with David Chambers, Rae James, Lucy Alborn, Bob Manthei, Bob Davison, Adele Childs and Marjorie Manthei 'in the wings'). Feedback submitted to CCC on 12 May (copy distributed with 21 May newsletter). Collation of messages from VNA members and other residents' groups forwarded to team with appreciation for their work. Consultation with members to start soon, in advance of final recommendations being publicly notified. **David updated the meeting on actions from the sub-group. The agreement of David, Geoff and Louise as spokespeople on behalf of VNA was endorsed and the committee supported the sub-group in pro-actively engaging with media on this issue.** It was also agreed it would be good to connect to other resident groups and to work together where possible. The St Albans and Merivale groups were suggested as key contacts. The Change It petition started by Greg Partridge was also discussed and agreed to include the link in the next VNA newsletter with members encouraged to support it. The committee thanked the sub-group for the work done on behalf of the VNA.

VNA minutes 20 February 2023: Item 5.1 Plan Change 14 update (on behalf of Geoff Banks)

- Because CCC did not publicly notify the first version of PC 14, the soonest any part of a final version can now be implemented is early 2024. Amended version to be discussed by Council on 1 March. CCC has considered the issue Geoff identified re sunlight, but details not released until 23 Feb.
- CRA also contacted new Minister Peeni Henare on 1 Feb, encouraging him to meet with Christchurch residents and Councillors re problems with government's approach to intensification here.
- In his latest update, **Geoff summarised key points from CCC's webinar held on 16 Feb.** Proposals re sunlight, recession planes, height, infrastructure and the former Women's Hospital site will be circulated to VNA members when details are published.
- **The meeting endorsed Geoff's recommendation that VNA continues to be involved, including making a submission on the amended Plan Change (likely deadline 3 May).** Actions: Geoff to coordinate submission; Individuals should also submit (only those who do will have any further involvement in the CCC process); **Marjorie to circulate notice re 1 March meeting and encourage members and others to attend.**

VNA minutes 14 August 2023: Item 5.1 PC14 Update on submissions and hearings

- Geoff Banks and Rae James attended the IHP's pre-hearing meeting on 1 August on behalf of VNA. See separate report and summary o f hearing process in our July Newsletter.
- Geoff spoke to his written report, including the following comments…….
- VNA likely to present after 14 October, so the sub-committee will start work on presentation now. **Anyone else wishing to join the group very welcome.** We have 13 issues to focus on. Aim is to give a general overview of why we submitted. Recession planes and sunlight still are issues.

See following page for results of VNA consultation

Attachment 2: VNA Consultation Results on Plan Change 14 issues

Some have shifted or deceased since our initial consultation.

Beveridge Street
Atkinson, Chris
Atkinson, Sarah
Bennetts, Amy
Blackmur, Brendan
Bowler, Kathryn
Bowler, Winston
Dawson, Desmon
Carter, Shari
Daley, Jan
Donnithorne, Jane
Donnithorne, Martin
Elder, Don
Estanque Kay, Maria
Estanque Kay, Victoria
Gorman, Michael
Hailstone, Sheila
Hazlehurst, Joan
Jack, Jenny
Jack, Robin
Kelly, Dave
Kelly, Lynn
Lassen, Nicola
Leighton, Di
Luff, Bill
McCallum, Katrina
McEvedy, Marg
Milne, Nadene
Neate, Albertine (Jr)
Neate, Robin
Tresilian, Tony

Conference Street
Cocks, Chris
Hoskins, David
Hoskins, Mary-Louise
Lowe, Joy
Lowe, Morgan
Lumsden, John
Martin, Lindsay
Moore, Whitney
Simes, Jan
Sinclair, Elizabeth
Sinclair, Stewart
Sutherland, Lorraine
Umbers, Lynne
Umbers, Richard
Ward, Jan
Watson, Alexis

Durham Street
Beck, Larry
Best, David
Bryant, Lucinda
Clarke, Gary
Copplestone, Jill
Cromey, Matthew
Dixon, Mark
Fisher, Glenis
Gillon, Gail
Gordon, Julia
Hall, Beverley
Hall, Richard
Hamer, Sue
Jones, Colleen
Jones, Robin
Lee, Justine
Menzel, Bill
Todd, Ken

Gracefield Avenue
Banks, Gaye
Banks, Geoff
Bryant, Alex
Burry, Barbara
Burry, Karen
Burry, Michael
Chambers, David
Davison, Bob
Davison, Delwyn
Fergusson, Wendy
Hair, Rod
Hogg, Katie
Huggins, Pauline
James, Rae
Johnson, Lew
Law Alexander
Law, John
Law, Karen
Law, Petra
Law, William
Logeman, Walter
Manthei, Bob
Manthei, Marjorie
O'brien, Patricia
Simpson, Jeanette
Simpson, Steve
Sweetman, Bridie
Tapley, Caroline
Tapley, Kate
Timms, Lorna
Timms, Malcolm
Tyler, Janine
White, Agnes
White, Graham
White, Ian

Montreal Street
Stylianou, Pamela-Jayne

Peacock Street
Alborn, Lucy
Allard, Sue
Bradley, Christine
Bradley, Geoff
Edwards, Louise
Hall, Philip
Hocking, Lyn
Hunter, Jenny
Kelly, Brigid
Kerr, David
Kerr, Deborah
McCormick, Alexandra
McCormick, Geraldine
McCormick, Stephen
McVicar, Heather
Richards, Dinny
Thompson, Mark
Thompson, Maureen
Wratt, Malcolm

Salisbury Street
Giles-Pain, Kevin
Jamieson, Murray
Mateara. Clare Hong Leng
Mateara, Mark Edward John
Prentice, Michael

Other supporters
Four more who did not want their names included.

Unsure = 11
Support PC14 = 2
Conflict of interest = 10
Did not reply = 35

Another 16 members *were not consulted because they were ready to shift or were very new to the neighbourhood.*

Urban shrinkage in Leipzig, Germany: Research report, EU 7 FP project Shrink Smart (contract no. 225193), WP2

Article · January 2011

CITATIONS
4

READS
1,416

5 authors, including:

Dieter Rink
Helmholtz-Zentrum für Umweltforschung
136 PUBLICATIONS **4,028** CITATIONS
SEE PROFILE

Matthias Bernt
Leibniz Institute for Research on Society and Space
103 PUBLICATIONS **2,135** CITATIONS
SEE PROFILE

Thomas Arndt
Bundesamt für Naturschutz
17 PUBLICATIONS **241** CITATIONS
SEE PROFILE

HELMHOLTZ
CENTRE FOR
ENVIRONMENTAL
RESEARCH – UFZ

UFZ-Report 01/2011

Urban Shrinkage in Leipzig, Germany

Research Report, EU 7 FP Project Shrink Smart (contract no. 225193), WP2

Dieter Rink, Annegret Haase, Matthias Bernt, Thomas Arndt, Johanna Ludwig

Helmholtz-Centre for Environmental Research – UFZ
Department Urban and Environmental Sociology

ISSN 0948-9452

Shrink Smart –
The governance of Shrinkage within a European Context

FP7 Research Project, May 2009 to April 2012
Workpackage 2

Urban shrinkage in Leipzig, Germany

Research report

Dieter Rink (✉)
Annegret Haase
Matthias Bernt
Thomas Arndt
Johanna Ludwig

Shrink Smart is a European Research Project financially supported by the European Commission's 7th Framework Programme, Theme 8 "Social Sciences and Humanities"; contract no. 225193

 Comments and enquiries should be addressed to: Prof. Dr. Dieter Rink, Helmholtz Centre for Environmental Research – UFZ, Leipzig, Germany. Tel: +49 341 2351744. Email: dieter.rink@ufz.de

Preface

This document represents a research outcome of the 7 FP project "Shrink Smart – The Governance of Shrinkage within a European Context" (May 2009 – April 2012). It summarizes information and data with respect to urban shrinkage, its characteristics and dynamics over time in the city of Leipzig. The report covers in general the time period between the late 1980s (to consider also the situation in the late GDR time) and today. It mainly uses municipal data; moreover, official planning documents and other reports issued by the city of Leipzig are used as well as scientific literature. The report represents, despite its embedment into the project logics of Shrink Smart, a stand-alone document which can be used independently from other project documents and deliverables.

It is the aim of project Shrink Smart to study the role of policies and governance systems in different types of shrinking urban regions. It is based on comparative case studies from seven urban regions throughout Europe with a focus on shrinking urban regions in eastern and southern Europe that will provide a basis for analyzing different trajectories of shrinkage, understanding main challenges for urban planning and elaborating alternatives for urban governance.

This research report was published first and foremost for the following reasons:

- to make the research results of the project accessible to a wider audience,
- to provide a collection of data and information on urban shrinkage in Leipzig in English language and
- to offer research evidence for a further discussion on shrinkage and its consequences in Leipzig.

Leipzig, January 2011

The authors

Table of contents

List of tables and figures

1 EXECUTIVE SUMMARY

Leipzig looks back on a long-term period of shrinkage that lasted from the 1960s to the end of the 1990s. The political change after 1989 led to a rapid deindustrialization and breakdown in employment and, as a result, a mass out-migration towards western Germany bringing about a dramatic acceleration of population losses. From 1989 – 1998, Leipzig lost about 100,000 inhabitants, that is, 20 per cent of its total population. The main reasons for the recent population losses were the (job-related) out-migration to western Germany (starting right after 1990), a state-sponsored and thus artificially initiated suburbanization (that had its peak from the early mid-1990s until 1997), and demographic ageing (decrease in birth rates – a continuous process). The main reason for out-migration was the loss of jobs due to deindustrialization (loss of tens of thousands of jobs in the industrial sector in the early 1990s). In 1999, Leipzig enlarged its administrative territory. In this way the city ceased to lose inhabitants due to these reforms; the reform coincided with the stabilization of the city in terms of population size bringing with it positive migration balances and a vibrant in-migration. After 2000, Leipzig saw a turnaround, that is, a re-growth of the population after decades of shrinkage. Since 2000, Leipzig has had positive migration balances with the hinterland and in general. Research speaks about reurbanization tendencies that are prominent in Leipzig as one of only a few big cities in eastern Germany (see below).

Although the population is no longer decreasing, Leipzig is still today faced with the consequences of urban shrinkage, and will also be faced with them in the future. The consequences are first and foremost housing and commercial vacancies, demolition, oversupply of infrastructure, brownfields and the perforation of the urban grid. Leipzig is characterized by the close neighbourhood of stabilizing and shrinking neighbourhoods in the city. Vacant and/or unused lots, wastelands and new forms of "urban wilderness" exist in many places all over the city. In other words: urban shrinkage continues to play a role within the city, but not all neighbourhoods or districts are affected by it. Moreover, Leipzig will face a new wave of urban shrinkage within the near future: after 2015, household numbers will start to decrease; additionally, the reservoir of current in-migration (age groups 20 – 40) will decrease due to ageing. Today, Leipzig is not a shrinking city anymore when one only looks at the total population numbers; but urban shrinkage is an important topic for the city (coping with its consequences, dealing with shrinking neighbourhoods within the city) and this will also be true within the near future (new wave of shrinkage due to ageing and decrease in households).

Since 1990, socio-spatial separation and segregation in the city have advanced and the widespread socio-economic mix of many residential areas has decreased. Segregation has, however, not reached extreme values yet. It is most visible in its socio-economic dimension (income, share of unemployed). Socially weak households are concentrated in different parts of the city, mainly in some traditional old built-up workers' areas as well as in parts of the prefab district Leipzig-Grünau. In the public debate, Leipzig is often mentioned as a "boom town" or "lightening house" within

the eastern German “ocean of shrinkage”. The public perception is mainly of the story of stabilization and reurbanization of the city after the losses in the 1990s. Subsequently, it becomes more and more difficult to discuss urban shrinkage although urban planners already know about the processes that will lead to new population losses in a few years.

The phenomenon of urban shrinkage is perceived in Leipzig mainly through the “lens” of the housing market perspective; its appearance relates to (residential and commercial) housing vacancies (which reached their peak in 2000 with 62,500 vacant flats or 20 per cent of the total stock). Housing vacancies are not a new phenomenon in the city, which already had a vacancy rate of about 10 per cent in 1989 (25,000 vacant flats). However, after the 1990s, vacancies grew due to oversupply and no longer due to the poor technical conditions, which was the reason for their existence in GDR times. Therefore, the city has a vibrant interest to make people stay in the city as well as to attract new residents to counteract the vacancies (apart from demolitions). In this vein, the city offers, for instance, suburban-like housing in the inner city (town houses) as an alternative to suburbanization. Housing vacancies are a very visible consequence of urban shrinkage, a fact that led to the programme *Stadtumbau Ost* (urban restructuring) in 2002. Other appearances of shrinkage are the oversupply of infrastructure and the high number of (inner-city) brownfields that have to be prepared for re-use (either commercial, residential, or recreational as parks, playgrounds or urban woodlands). Population losses were ignored by municipal planning and urban policy throughout the 1990s, although there were already voices pointing to the visible decline and rising numbers of vacant flats. Shrinkage as a term and debate became an issue in Leipzig only after the report of a federal commission in 2000 that highlighted the housing supply surplus as an urgent problem in the new German federal states. From that time onwards, Leipzig developed different strategies to cope with shrinkage and to adapt the built structures to the declining demand using federal subsidies to demolish vast numbers of vacant flats. The deconstruction of housing and infrastructure concentrates on prefab districts in the western part of the city although vacancy rates are still highest in the old built-up stock. At the same time, Leipzig pursues a strategy of “active” population policy to persuade people to stay in the city and to attract new residents. Among others, town houses are being built, ownership within the existing stock is financially supported, and interim uses are advanced to both maintain vacant stock and keep vacant lots “working”.

Concerning the future, Leipzig will be faced with contradicting trends: on the one hand, the city will try to sustain itself as a re-growing city with a positive migration balance and a young in-migration that counteracts the ageing process. Thus, a support of its role as a university city and an investment-friendly urban policy is probable; on the other hand, the city will see a new wave of population loss after 2015, that is, when household numbers will start to decrease regardless of in-migration. The potential in-migration groups will become smaller and smaller due to ageing – it is possible that the city will enforce efforts to attract older age groups as “reurbanites”, i.e. those who suburbanized in the 1990s and cannot get along with their daily wants and needs in suburbia because of a lack of amenities and services

there. This scenario could become true in one or two decades, i.e. exactly at a time when the quantitative resource of young in-migrants will significantly decrease; for the city it would bring about the need to adapt the urban space and services ever more to the needs of the elderly.

2 REASONS AND PREMISES OF URBAN SHRINKAGE

Introduction

This report describes the process of shrinkage as it has occurred within the city of Leipzig. It examines the reasons, dynamics and patterns of change as well as the consequences for different fields of urban development and planning. The period covered in the report runs from the 1980s to the present day; in particular cases, longer or shorter time periods are considered. Over this time, Leipzig has moved from a (more or less rapidly) shrinking city until the late 1990s to a point where its population stabilized and even returned to a slight growth during the last few years. Today, Leipzig is no longer a shrinking city. When one looks only at the total population numbers, Leipzig represents one of a few large cities in eastern Germany that have undergone reurbanization processes (Haase, A. et al. 2010). However, urban shrinkage continues to be an important topic for the city. The city is still facing the consequences of long-term shrinkage and will have to cope with it during the years to come. At the same time, shrinkage still affects some parts of the city and will also do so in the future. Moreover, Leipzig awaits a new wave of shrinkage due to ageing and a decrease in households after 2015.

Leipzig is the second largest city in the eastern part of Germany after Berlin. About 500,000 inhabitants live on nearly 300 square kilometres of land. Named the "mother of all trade fairs", Leipzig is a traditional centre of commerce (Figure 1.1). In recent years, the city has become an important site of the vehicle and automotive components industry (e.g. Porsche since 2002, BMW since 2005) and an international logistics node (European hub of DHL since 2007). Furthermore, Leipzig hosts a number of institutions of higher education (with about 37,000 students) and research. The university is the second oldest in Germany (founded in 1409, Figure 1.1). The city disposes of a broad cultural heritage and events (Gewandhaus Orchestra, Bach Festival, Wave Gothic Festival). The urban appearance of Leipzig is mainly characterised by more than 12,000 residential buildings with 110,000 flats (35 per cent of the total number) from the time between 1870 and 1918, the so-called *Gründerzeit* or *Wilhelminian style* building stock, which is seen as architectural heritage.

Leipzig looks back to a long-term period of shrinkage, which lasted from the 1960s to the end of the 1990s. The political change after 1989 that led to a rapid deindustrialization and breakdown in employment and – as a result – a mass out-migration towards western Germany brought about a dramatic acceleration of population losses. From 1989 to 1998, Leipzig lost about 100,000 inhabitants, that is, 20 per cent of its total population. Fundamentally there are two underlying causes

for Leipzig's population decline from the 1960s to the 1980s: firstly out-migration of population towards the new industrial development cities in the northern and eastern parts of the GDR (see also Kress 2008), and secondly the poor housing and environmental conditions due to dilapidation and neglect that drove people out of the city in the search for more attractive places to live. The main reasons for the recent population losses were the (job-related) out-migration to western Germany (starting right after 1990), a state-sponsored and, in this way, artificially initiated suburbanization (that had its peak from the early mid-1990s until 1997), demographic ageing (decrease in birth rates, a continuous process). The main reason for out-migration was the loss of jobs due to deindustrialization (loss of 10,000s of jobs in the industrial sector in the early 1990s). As a result of population decline, a housing surplus developed, and enormous rates of housing vacancies emerged (Figure 1.1).

Figure 2.0.1: Leipzig – images of a city: a) the city from a bird's eye view; b) dilapidation in Leipzig's city centre in the late 1980s; c) demolition of housing; d) vacant housing; e)) old, newly built and re-used structures in close proximity; f) re-structured industrial landscape with loft/attic housing and riverside

Source: Dieter Rink, Annegret Haase and Matthias Bernt, Armin Kühne

Materials and methods

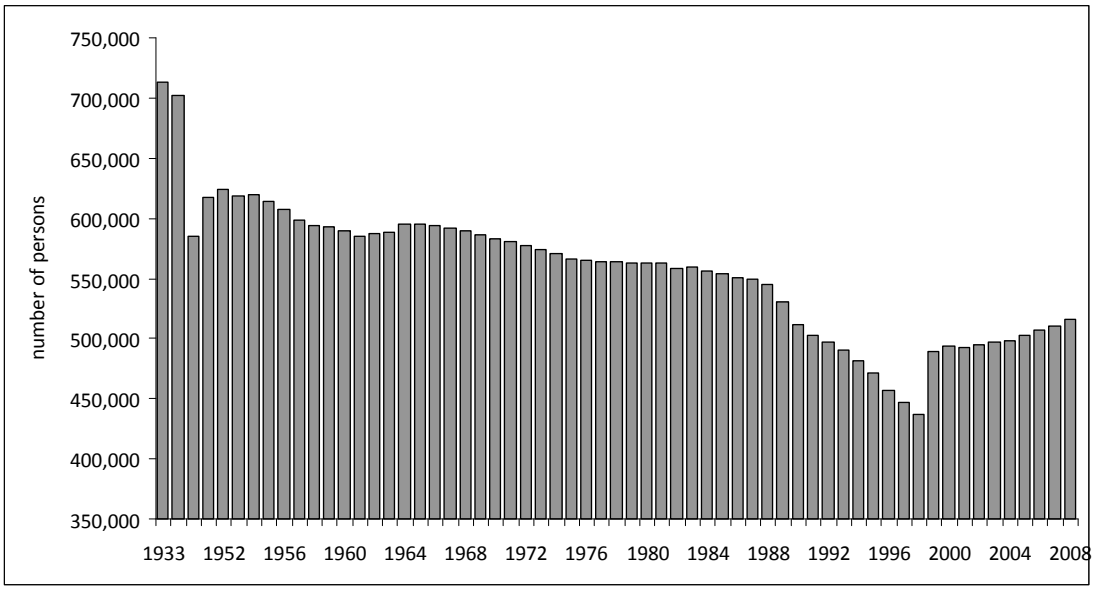
The report covers in general the time period between the late 1980s (to consider also the situation in the late GDR time) and today. To look back to the late 1980s it is necessary to correctly assess the impact of the political turnaround in 1989 and the German reunification in 1990. Depending on particular topics, the time period considered may vary and also cover longer or shorter periods. The report refers to the city of Leipzig as a whole and – in particular cases – to parts of the city, single districts or neighbourhoods. Since urban shrinkage affects single parts and districts of the city in a different way and we find growing and stabilizing areas close to those losing inhabitants and showing high vacancy rates, the view beyond the overall city level is necessary.

The report mainly uses municipal data. Furthermore, official planning documents and other reports issued by the city of Leipzig are used as well as scientific literature. In some cases, expert interviews were carried out to gather knowledge that was not available by using data and documents. In other cases, expert interviews helped to properly interpret and understand the data and documents. The references for the interviews are given in the report. A full statistical database is provided at the end of this document in the form of Tables.

2.1 Demographic development

Leipzig reached its maximum population in 1933 with 713,470 inhabitants. It saw a rapid population growth during the period of industrialization after 1880. At that time, the city prepared to become a city with a population over a million. This vision ended soon after due to the persecution of the Jewish population, the Second World War and out-migration to the western parts of Germany in the aftermath of the war (LCC 2009, A-12). It has only been very recently that Leipzig, due to municipal amalgamations, started to regain inhabitants. Figure 2.1.1 gives an impression of the population development in the last 75 years.

Figure 2.1.1: City of Leipzig – population development 1933-2008



Source: UFZ database

To describe and understand the development of population Figures from the 1960s to the 2000s, the history of Leipzig makes it necessary to consider three time lines: firstly, the period before the fall of the Iron Curtain in 1989, secondly, the period between 1990 and 2000 and thirdly, the period since 2001.

Long-term urban shrinkage in the second part of the 20th century

Before World War II, Leipzig was one of the five largest cities in Germany. As a result of the Second World War, the population decreased by more than 100,000. After the division of Germany and Europe as a consequence of the war Leipzig lost most of its former national and international economic importance. In the 1950s especially, young and qualified people in particular out-migrated to the western part of Germany. There was an almost balanced in- and out-migration after the establishment of the Berlin Wall in 1961. Yet between 1951 and 1989 Leipzig lost nearly 58,000 inhabitants by migration (32,800 people alone in 1989 and 1990) and more than 48,000 by the negative natural development (Table 2.1.1). To a large extent out-migrants went to the newly developing industrial cities in other parts of the former GDR. Birth rates were higher than in western Germany but – also due to the birth-rate slump caused by the pill in the end of the 1960s and liberal abortion politics – below replacement level.

Table 2.1.1: Natural population development and balance of migration of Leipzig 1951-1990

	1951-60	***1961-70***	***1971-80***	***1981-90***	***1951-90***
Natural population development	-6,700	-4,400	-26,200	-11,300	-48,600
Balance of migration	-21,200	-1,300	+4,800	-40,000	-57,700
Total population development	**-27,900**	**-5,700**	**-21,400**	**-51,300**	**-106,300**

Source: Kabisch, S. et al. 2008

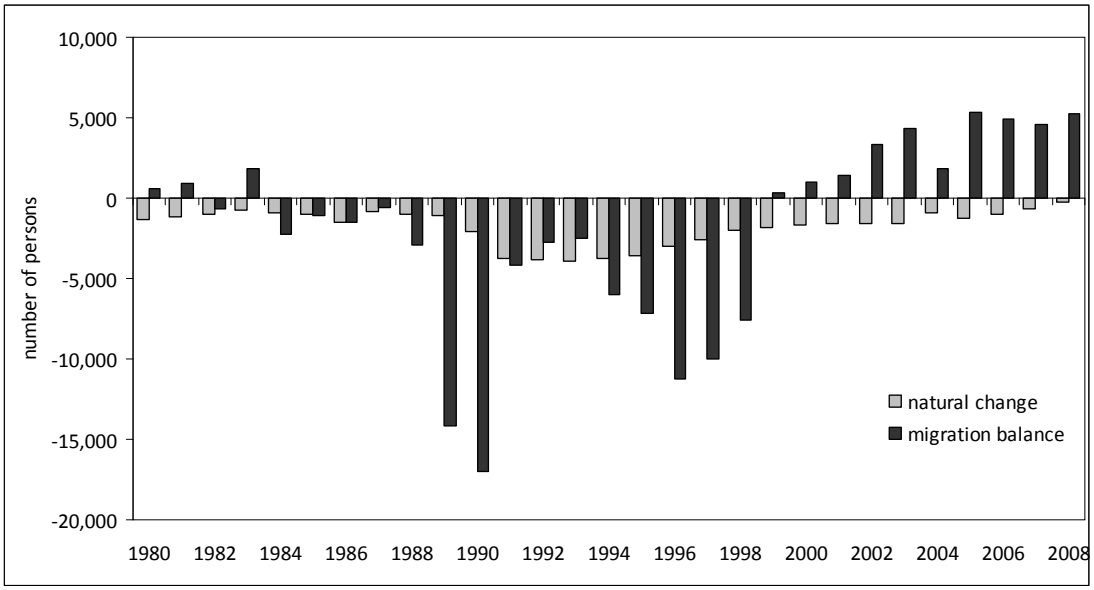
In comparison with the 1930s, by 1990 the city had lost a quarter of the inhabitants due to the German separation. At the beginning of the 1990s, there were 511,000 residents.

New dimension of urban shrinkage and ageing in the 1990s

The 1990s were characterized by a (further) dramatic decline in population (until 1998: loss of almost 100,000 people). The main reasons were the radical fall of the birth rate after the reunification of Germany, the constant migration to western Germany (due to the poor economic situation) and to suburbia. The population density declined from 3,600 inhabitants to 2,400 inhabitants per square kilometre. Figure 2.1.2 shows the population development from 1991 to 2000.

In the first half of the 1990s, 20,000 more people died than were born. In 1995, a Total Fertility Rate of 0.77 children per woman was measured in eastern Germany, which presented the world's lowest value (Federal Statistical Office Germany 2003). After the mid-1990s, also in Leipzig, the situation improved: by the millennium the number of live births increased up to 7.3 per 1,000 inhabitants.

Figure 2.1.2: City of Leipzig – natural population development and migration balance 1980-2008



Source: UFZ database

The ethnic composition changed decisively. In 1989, almost 20,000 foreigners (which is the official term in German statistics) had lived in the city, mainly from socialist countries like Vietnam, Mozambique or Angola. Most of them had to leave Germany after the reunification. While in 1990, just 9,000 foreigners lived in Leipzig, at the end of the 1990s there were nearly 27,000 foreigners (5 per cent of the entire population) mainly from Vietnam, the Ukraine, Russia, Poland and Iraq. While in- and out-migration during the second half of the 1990s were both at their highest level, even in this period of time the migration balance was moderate (Figures 2.1.4 and 2.1.5, see also Philipps and Rink 2009). In 2007, approximately 32,800 foreigners were living in Leipzig, which amounted to 6.4 per cent of the inhabitants (LCC 2008b, 5). In addition 10,000 ethnic Germans came from Eastern Europe to Leipzig who are not registered as foreigners. Subsequently, almost every 10th inhabitant (49,321 persons) had, independently from his/her nationality, in 2007 a migration background. The foreign population is, on average, 9 years younger than the German population; with 68 women to 100 men the gender balance is the opposite of that of the German inhabitants (LCC 2009, A-17; LCC 2008e, 72, 77-78).

In the first half of the 1990s, a massive suburbanisation process started too. The main period of suburbanization was short; it lasted from 1994 to 1997 (Figure 2.1.3 and 2.1.5; see section 2.3 of this report). From 1996 to 1998 almost 30,000 people left Leipzig for its surroundings (LCC 2001a). The situation changed in 1999. During the 2000s, Leipzig benefitted from a positive migration balance, which is mainly due to a higher in-migration, although suburbanization processes continue at a modest level (Nuissl and Rink 2005). In-migration (currently about 4 – 5,000 persons per year) is mainly borne by younger age groups (18 – 25 years, partly also 25 – 30 years), and, at a modest level, also by older age groups (65+). In-migrants stem mainly from other regions in eastern Germany and (at a more modest level) from abroad. The migration balance with the western parts of Germany continues to be negative although it no longer reaches the rates of the 1990s.

Due to the drop of the birth rate and the selective out-migration, especially of younger people, the ageing process gained a special dynamic. Since 1990 the proportion of children under 15 years (out of the total population) has been decreasing from 17 per cent to less than 10 per cent nowadays. At the same time the proportion of people aged 65+ increased from 16 per cent to nearly 22 per cent. Looking at the index of ageing (Table 2.1.2), it becomes obvious that while in 1990 there were 90 people of aged 65+ per 100 children, in 2006 the number was already 220. The average age of the population increased from 40 to almost 44.

Table 2.1.2: Demographic indicators of ageing for Leipzig 1990-2006

	1990	*1995*	*2000*	2006
Share of people 0-14	17.0	13.8	11.2	9.9
share of people 15-65	67.5	69.8	70.6	68.3
Share of people 65 and older	15.5	16.4	18.2	21.8
Youth dependency rate (0-14/15-64, per cent)	25.2	19.8	15.9	14.6
Age dependency rate (65+/15-64, per cent)	23.0	23.5	25.7	31.9
Index of ageing (65+/0-14, per cent)	91.5	118.3	161.7	218.7
Average age	40.0	41.8	43.8	43.9
Number of people aged 65-79	57,600	55,500	68,300	85,200
Number of people aged 80+	21,900	21,500	21,300	25,100
Number of people aged 65+	79,500	77,000	89,600	110,300

Source: Kabisch, S. et al. 2008

New direction of population development in the 2000s – stabilisation and "gentle" growth

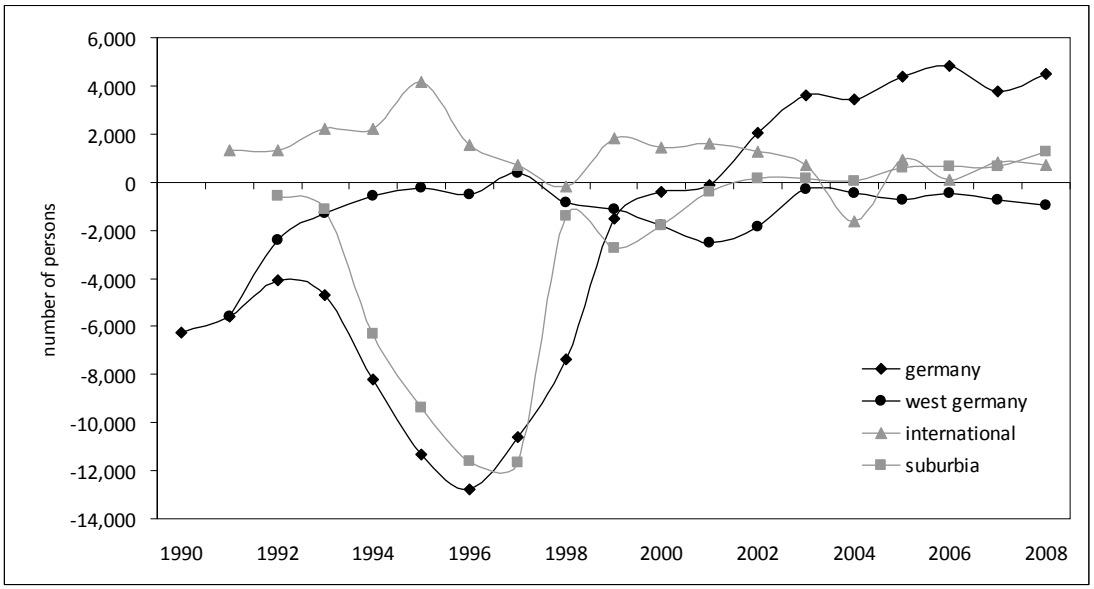
The administrative reform of 1999/2000 led to a considerable increase in the number of inhabitants. Since that time, Leipzig has seen a continuous growth of its population. In 2005, the city crossed – again – the border of 500,000 inhabitants. At the end of 2007, Leipzig had 510,512 inhabitants (LCC 2009, p. A-12).[1] The population density saw a further decline (from 2,400 inhabitants in 1998 to 1,700 in 2007) per square kilometre since the new territories were former suburbs of Leipzig and much less densely populated than the core city.

Since the mid-1990s the birth rate increased thus reducing the birth deficit, but the TFR is, nevertheless, very low with 1.2 children per woman (2007). The number of deaths exceeds the number of births, which brings about a negative balance of the natural population development (LCC 2009, A-13). The migration balance gradually became positive (Figure 2.1.2 above). Since 2002 migration has been compensating for the negative natural population development. Since 2006, however, also the number of out-migrations has increased again. During the mid 1990s, Leipzig faced big losses of population in favour of its hinterland. During the 2000s, the dynamics of suburbanization, however, considerably declined and became more and more

[1] To a certain degree this has also been the effect of the introduction of a new tax on second residences.

outweighed by a new in-migration from adjacent municipalities including a "back-to-the-city" movement of some suburbanites who left the city in the 1990s, or their children, for educational or professional purposes. This has led to a slightly positive migration balance of the city and its hinterland in recent years (LCC 2009, A-14).

Figure 2.1.3: In- and out-migration 1990-2008 according to target region

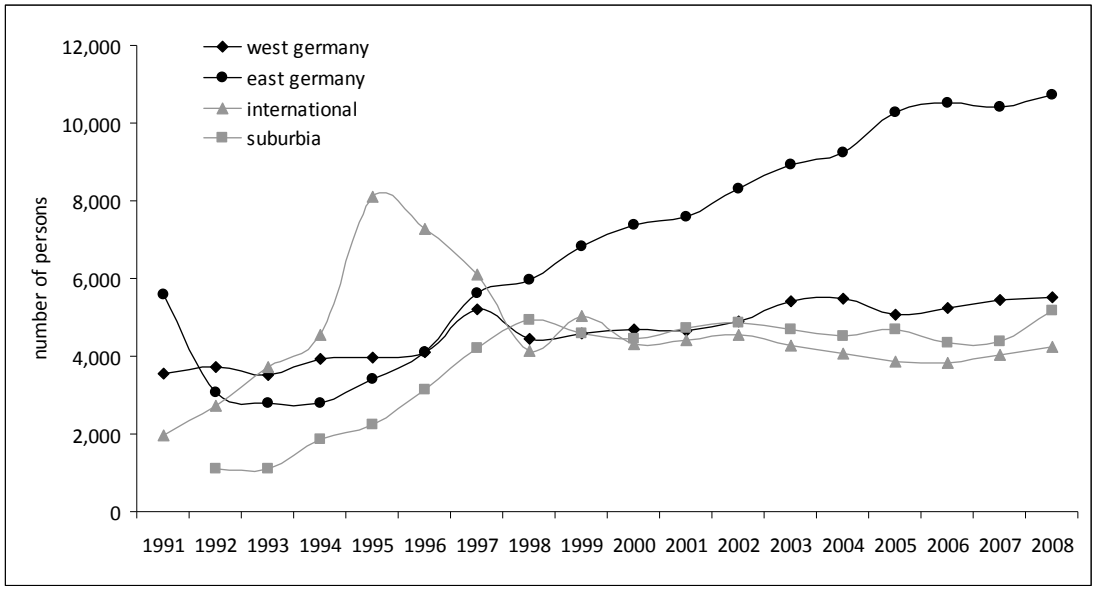


Source: UFZ database

Leipzig is growing mainly due to in-migration of people aged between 18 – 30 years from east German regions and the surroundings of the city (Haase, A. et al. 2010; Figure 2.1.4 and 2.1.6). The universities and schools of higher education are a major factor of attraction. The number of students increased between 2000/01 and 2006/07 from 31,000 to 37,000. This new trend of positive net migration has been slowing down the ageing process. While there is a continuous slight out-migration of people aged between 30 – 65 years (among them many family households with dependent children), there have been first signs of an in-migration of older age groups (65+) in the last few years. The average age is constant at around 44 years. Above all, inner-city areas profit from the growth in the younger population.

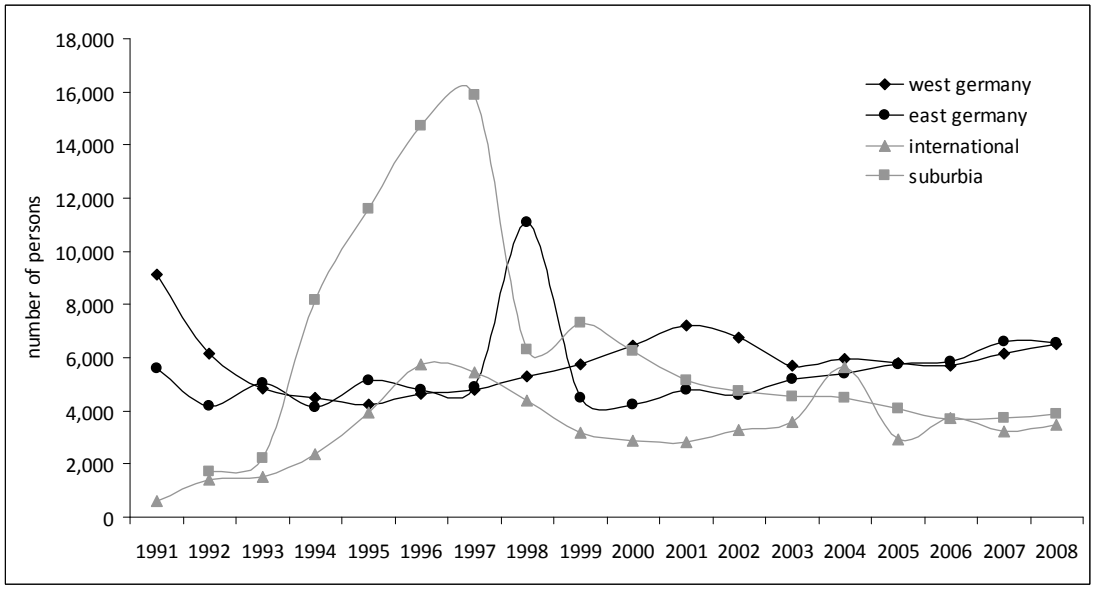
According to a questionnaire survey among in-migrants that was first carried out in 2007 by the city of Leipzig, in-migrants have an above-average educational level but, at the same time, many of them dispose of only at a limited income. This is due to their status as students or early-stage professionals. There is also a group of better-off households among the in-migrants that is (proportionally) higher than among the long-term inhabitants. The reasons for in-migration relate mainly to qualification, labour and private reasons but also to Leipzig as an attractive place to live. 18 per cent of the surveyed in-migrants represent "back-to-the-city" migrants, 30 per cent of them stemmed from hinterland municipalities of Leipzig (LCC 2009, A-17).

Figure 2.1.4: In-migration 1991-2008 according to target region



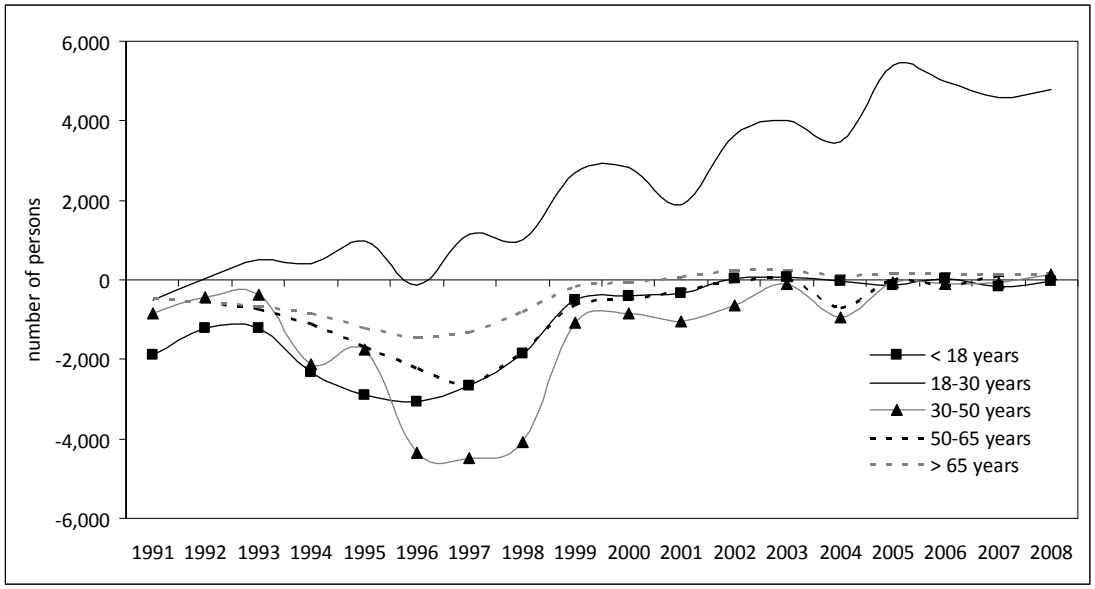
Source: UFZ database

Figure 2.1.5: Out-migration 1991-2008 according to target region



Source: UFZ database

Figure 2.1.6: In- and out-migration by age groups 1991-2008



Source: UFZ database

The future – moderate population growth and ongoing ageing

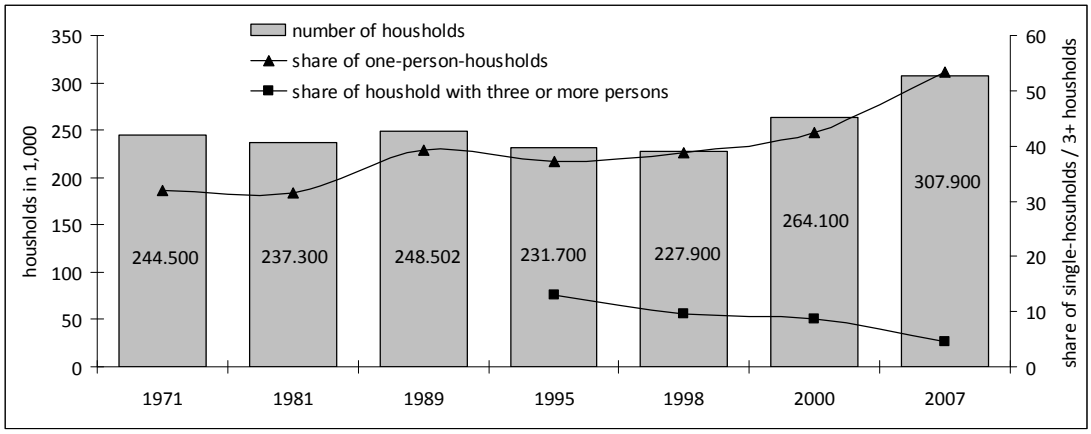
According to demographic projections, there will be a moderate population growth until 2020. Different forecasts suggest that the population will reach approximately 530,000 inhabitants. Demographic change in the surroundings of Leipzig and other regions, associated with the process of ageing and shrinkage, leads, however, to a decreasing potential of in-migration. The deficit of births in Leipzig cannot be compensated for by in-migration in the long term. In a mid-term period, the population of Leipzig will certainly decrease again. Yet the number of elderly people (80+) will decisively increase, alone between 2006 and 2020 from 25,000 to 44,000 people (LCC 2003d), which will comprise 8 per cent of the total population. Subsequently, the age rate will increase by 35 per cent in 2027. After that date, increase rates will be considerably lower. The youth rate will not decrease further; it will increase from the current level of 15 per cent to 18 per cent until 2017 and remain at that level during the following decade. The existing projections do not forecast a new wave of population decline in Leipzig in a mid-term perspective (LCC 2009, A-18). This has to be critically reflected set against the expected decline in household numbers and the decrease of in-migration potential due to ageing as well as the decline of the age groups that bear Leipzig's in-migration in the future.

Households

The number of households declined by 8 per cent from 1989 to 1998 (from 249,000 to 228,000 (see also Steinführer et al. 2009, Figure 2.1.7). Compared to the population decline (18 per cent) this is more moderate, which is mainly due to the downsizing of the mean size of households (from 2.1 in 1989 to 1.7 in 2007, Figure 2.1.8). The number of households increased again during the 2000s. Currently, the

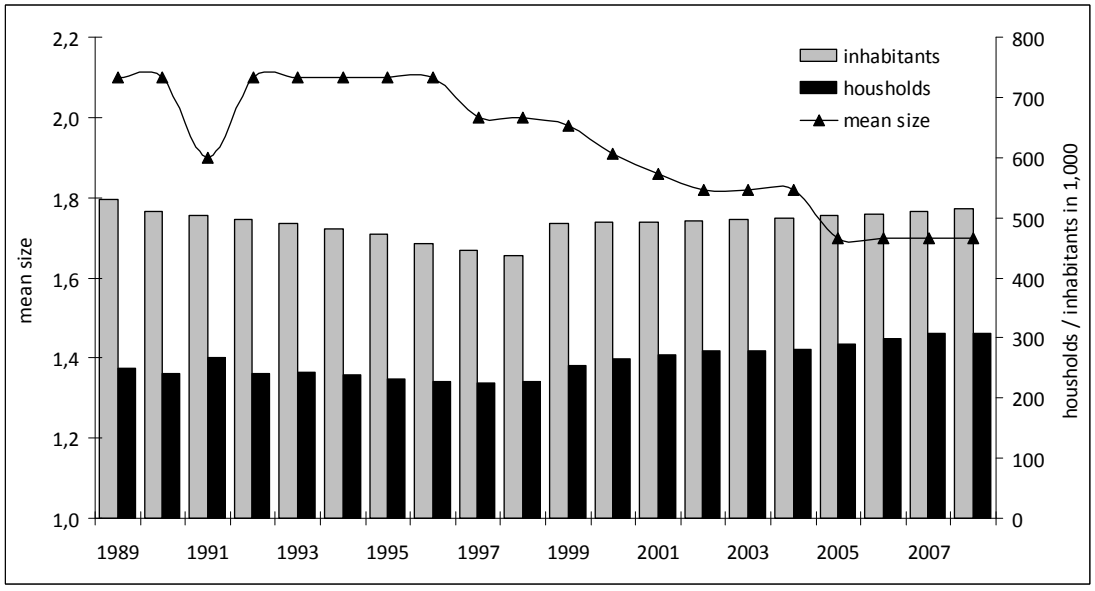
number of households is, with 308,000, considerably higher than in 1989 although the population is still lower (510,000 inhabitants instead of 530,000). Since 2001, the number of households has been affected by positive population development. The increase of one-person households is significant due to the growing number of young people (students, young professionals).

Figure 2.1.7: Development of households, single and 3+ households 1971-2007



Source: UFZ database

Figure 2.1.8: Development of population, households and mean household size 1989-2008

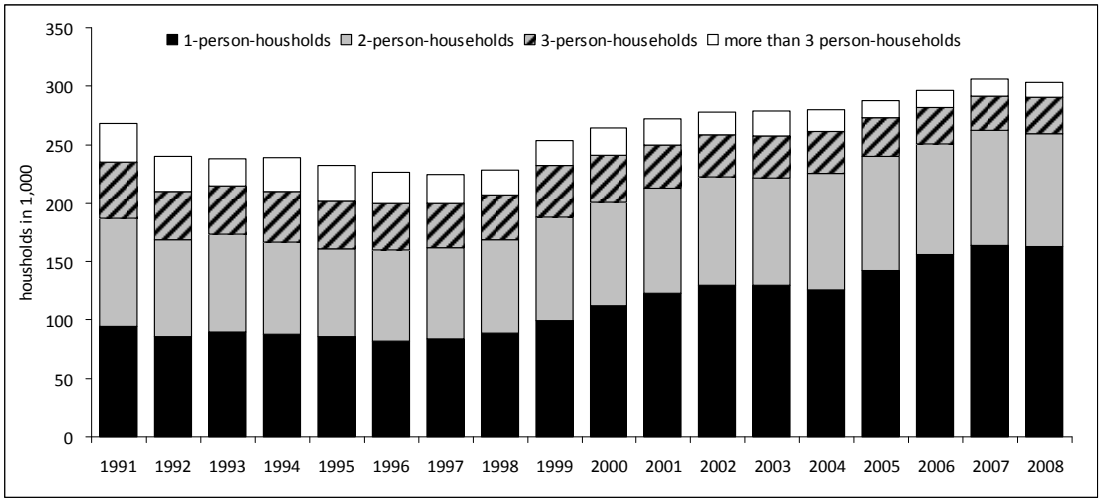


Source: UFZ database

As for the housing market, it needs to be pointed out that not all of these people actually live alone – among the younger age groups, flat sharing with typically one to three others is very common (Steinführer and Haase 2009). The statistic counts around 35,000 one-person households which were rented to people under the age of 35 in the year 2000 and more than 65,000 in the year 2006. In 2007, the proportion of one-person households was 53 per cent. The striking increase of one-person households since 1994 has to be seen also in relation to the reform of

unemployment and social benefit regulations (*Hartz IV*). The trend towards downsizing is reflected also by the continuously decreasing share of 3+ households.
The share of one- and two-person households has continuously increased and meanwhile exceeds 85 per cent (Figure 2.1.9). Whilst in 1995 31 per cent of Leipzig's inhabitants still lived in a household with 3 and more persons and 13 per cent in a household with 4 and more persons, these proportions decreased to 14 and 5 per cent by 2007 (LCC 2009, A-17).

Figure 2.1.9: Size distribution of households 1991-2008



Source: UFZ database

Summary

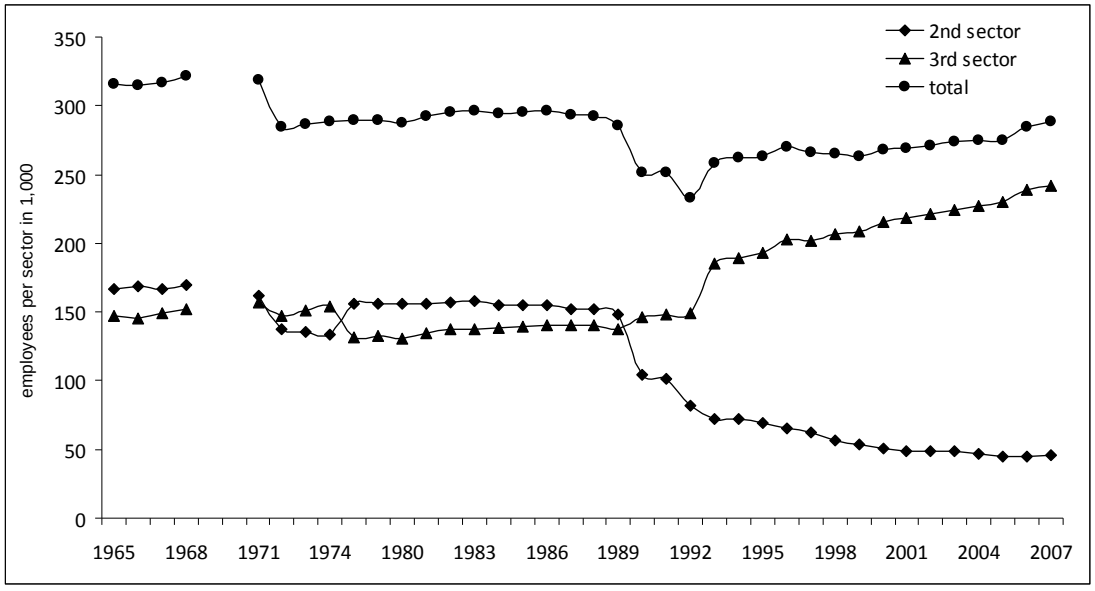
Seen from a long-term perspective, Leipzig has developed from a long-term shrinking city (from the 1960s to the late 1990s) to a stabilizing city with slight population growth that will be limited in time. It represents one of the most striking examples of a large shrinking city during the time of the GDR. Its loss of about 100,000 inhabitants between 1989 and 1998 (as a result of the systemic change) was mainly due to job-related out-migration and suburbanization. During the 2000s, however, this trend stopped: recently, Leipzig has seen population stabilization or even a slight growth by "young" in-migration, which builds on an education-related influx of people in the 18 – 30 age group, a potential that will decrease in the near future as a consequences of ageing. At the moment, the city represents, however, one of the most prominent examples of reurbanization of eastern Germany although its natural development has remained negative since 1989. The number of households decreased more slowly than the population. During the 2000s Leipzig again saw a growth in household numbers. The main reason for this was downsizing. Leipzig's ageing has been attenuated by young in-migration in recent years. Until today, there is, however, a coincidence of population losses and gains in particular districts, which pushes forward socio-spatial differentiation and increases levels of residential segregation (see section 3.1 of this report).

2.2 Economic development

The city of Leipzig has a long history as a centre of industry, administration, science and trade. Traditionally it was the location of the Leipzig trade fair which served large parts of Central Europe as well as being the location for publishers, the polygraph industry, foundries, machine building, and the textile industry and the fur trade. In the times of state socialism Leipzig remained one of the most important locations for industrial activities that accounted for about one tenth of the whole industrial production of the GDR. Besides already existing branches, mining and energy production as well as machine building (Baukema, Takraf), the electronic industry (RFT), and the chemical industry were expanded. Thereby, Leipzig hosted important control functions, as it housed the headquarters for 16 *Kombinate* (state companies with a usually dominant role for a particular branch).

As a consequence of German monetary union and the subsequent privatisation, nearly all of these existing functions were liquidated in a very short period of time, mainly between the summer and fall of 1990, and the economic basis literally disintegrated. Until the mid-1990s Leipzig's industry alone lost 80,000 jobs (Figure 2.2.1). As deindustrialisation was accompanied by "de-administration" (liquidation of administrative structures) the result of these simultaneous developments was an immense loss of jobs, which have not been able to be absorbed by new developments up to now. In addition to jobs, the liquidation of the planned economy also led to the loss of nearly all command and control functions and facilitated a dependent economic structure. Altogether this economic shock was decisive for the weak economic basis of Leipzig in the last two decades and has not yet been absorbed.

Figure 2.2.1: Development of employment according to sectors 1965-2007

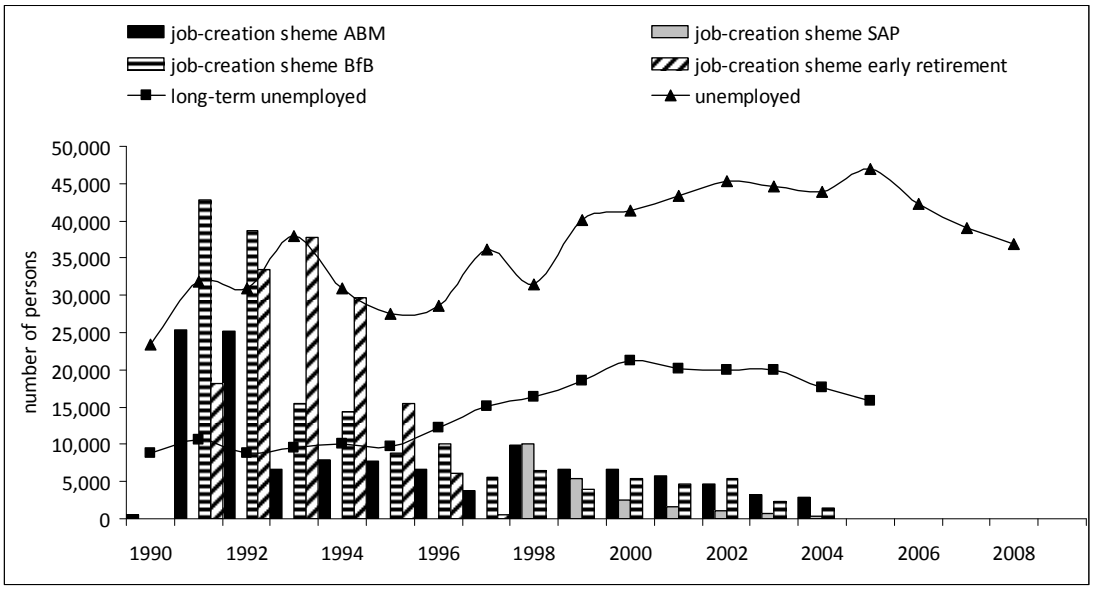


Source: UFZ database

The consequence is not only a downturn in the overall number of jobs available, but also a change from industrial to service-sector occupations. Interestingly, these

service sector activities are only connected to industrial activities to a very minor degree (no research etc.), but for the major part are very much dependent on public sector transfers (like with water suppliers, medical services, universities). Moreover, the secondary sector is to a large degree dominated by the construction industry, which held more than half of the jobs in the late 1990s. Since then, due to oversupply in the housing market, construction activities have considerably cooled down and the share was down to about one quarter. Nevertheless, it needs to be emphasized that altogether, those secondary sector activities that remained after the collapse of the industry in the early 1990s, are to a large extent characterized by low wages and precarious contracts. As a consequence, unemployment is nearly double the national average (usually between 17 and 20 per cent in the last decade). The official Figures were considerably reduced by a number of labour-market related policies (like job-creation schemes, early retirements, retraining measures), mostly in the early 1990s, but since these policies were considerably weakened unemployment even gained ground in the 2000s. This also led to an increase in the share of permanently unemployed persons, which has never fallen under 40 per cent of the unemployed since 2002 (Figure 2.2.2).

Figure 2.2.2: Unemployment and job-creation schemes 1990-2008



Note: The data series ends in 2004 not because of a termination of all measures but due to a lack of data as a result of social reforms including a restructuring of job-creation measures.

Source: UFZ database

Publicly applauded successes like the opening of a BMW branch, or the expansion of logistic services at the airport, thus only had a minor influence on the labour market and have been countered by ongoing job losses in the construction industry and from other employers. Also, the economic structure shows considerable differences. In Leipzig, construction firms, public health-, social and educational services, public administration and infrastructure suppliers hold the lion's share of the job market. All these branches are dependent on public transfers. High volume enterprises in Leipzig are the regional broadcasting station (MDR), the municipal utility company, the public water supplier, as well as the municipal housing company.

However, in the last decade Leipzig managed to attract some branches of West German companies, which can be seen as a sign of economic revitalization and reindustrialisation. Showcase examples of this are car producers like Porsche (400 jobs, and additional 400 jobs in supply-companies), BMW (2,500 jobs, adding up to 5,200 together with suppliers and partners). Moreover, closely connected to the airport and in close proximity to the highway, a logistics cluster has developed, with companies like Quelle, Amazon, and DHL. All these economic activities are concentrated at the northern fringes of the city. Although the establishment of these companies in Leipzig has been an undisputable success, it needs to be emphasized, that many of these activities have proved to be fairly vulnerable in the face of the current economic crisis. Both BMW and Porsche have considerably downsized their personnel, and Quelle is currently being completely liquidated. In addition to car-building and logistics, Leipzig has had some successes in other sectors too. Most of all, medicine, the university, and a number of scientific institutes play a key role in the local job market that has been expanded in the last years.

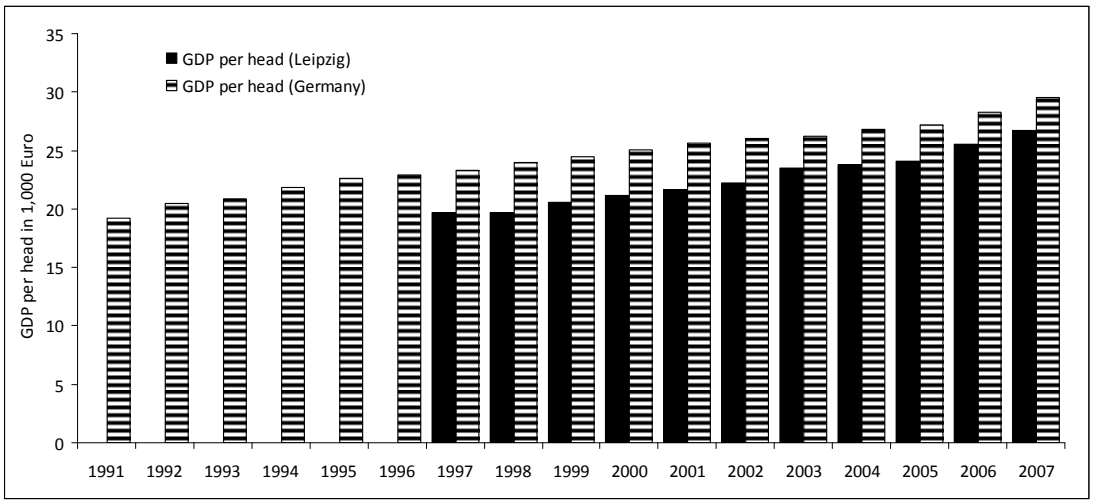
Table 2.2.1: Large investment in Leipzig and its region since 1990 (investments > 200 million Euro)

Project	Time period	Estimated total investment in Mio. €
Mainly public investments (urban fringe)		
Medical Scientific Centre including Heart Clinic	1992-1996	1,500
New Leipzig Fair	1993-1995	2,060
Leipzig airport	1993-2007	1,340
Mainly private investments (urban fringe)		
Quelle mail-order warehouse	1992-1995	500
Central German Office and Administration Centre, Schkeuditz	1992-1996	500
Porsche/car production	2000-2009	280
BMW/car production	2002-2005	1,400
DHL Logistics	2006-2008	300
Investments in inner Leipzig		
Deutsche Telekom, including district office	1992-1995	580
Technical infrastructure (gas, electricity, water)	1993-1994	1,000
Redevelopment and preparation of enterprise areas	1993-1996	1,200
Various media-related projects of urban renewal	1993-1996	900
Main station, Leipzig Mall	1996-1998	260
Media-city/MDR	1998-2002	250
University Leipzig, hospital	2004-2014	214
City-tunnel	2005-2012	900

Source: UFZ database

Despite all efforts to attract new investments, the GDP per capita in Leipzig is lower than the German average (Figure 2.2.3). The city and its region are not able to close the gap between the local level of GDP and the national average. The reasons for this are related to the fact that the regional economy is too weak and that there are too few innovative enterprises and R&D activities in the region.

Figure 2.2.3: GDP in Leipzig and Germany 1991-2007



Source: UFZ database

To summarise, it can be said that Leipzig's economy is still burdened with the collapse of the industrial basis in 1990. Yet important investments have been carried out, mainly with the help of public subsidies. The results, though, are split: On the one hand, the job-basis could be expanded with projects like the expansion of medical complexes and the university, the establishment of a headquarters for the regional broadcasting station, as well as the opening of numerous scientific institutes. On the other hand, notwithstanding population growth, the losses of the 1990s have not yet been absorbed, unemployment rates remain high and wages paid in large parts of the expanding service sector (i.e. logistics, supplier firms of BMW or Porsche car manufacturers, shopping complexes) are notoriously low. Leipzig thus represents a split labour market with a weak economic base that is, to a considerable degree, dependent on public transfers.

2.3 Settlement system

Leipzig represents a compact city with a comparably small territory. Most parts of the core city are densely built. The city centre is surrounded by a "first ring" of old built-up residential areas, which represent today the heart of Leipzig *Wilhelminian style* or *Gründerzeit* has built heritage. Leipzig saw a first wave of enlargements of its territory at the end of the 19th century when many of today's traditional working and middle class districts of the "second ring" became part of the city. During the period of industrialization in the second half of the 19th century, mixed zones of industrial and residential use emerged holding simpler flats for craftsmen and workers in the eastern and western parts of the inner city. From the beginning of the *Gründerzeit* (from 1870 up to the beginning of the First World War in 1914), Leipzig's population rose from 106,000 to 624,000. Most of these industrial outskirts were incorporated at this time, which considerably contributed to the growth of the city in terms of inhabitants and space.

During the time of the GDR, the city's territory saw a further growth, not in the form of suburbanization like in the western parts of Germany but in the form of the building of new residential settlements and – from the late 1960s onwards – large (prefabricated) housing estates on the outskirts of the city. The biggest of the latter is Leipzig-Grünau in the west of the city, on which building started in 1979 and it was planned for 100,000 inhabitants. Some western scholars have coined the building of large housing estates at the fringes of socialist cities as a "peculiarly socialist" form of suburbanization (see Couch et al. 2005). After 1989, postsocialist transition ushered in a period of subsidised suburbanization or even urban sprawl with several shopping malls, business parks and residential neighbourhoods spreading, in this order, into the city's outskirts and the suburban towns and villages. To understand this development, the period after 1990 will be described in the following in four phases (see Nuissl and Rink 2005).

1990 – 1992: The beginning of suburbanization

Immediately after the opening of the borders in 1989, thousands of investors came to the still existing GDR and endeavoured to gain a foothold in the emerging market. As far as the real estate, retail and housing sectors were concerned, their interest was mainly focused on the fringes of the major urban centres. This influx of capital affected, in particular, Leipzig's suburbia since it was part of a big agglomeration, and thus part of one of the most promising regional markets in eastern Germany (Nuissl and Rink 2005). The first suburban investments to arrive were shopping malls, soon to be followed by the costly but subsidised preparation of enterprise zones in almost every municipality around the city (Figure 2.3.3). The development of residential areas started a little later (Herfert 1996). This development led to the simultaneity of decay in the inner city and "new developments" in the surrounding areas (Doehler and Rink 1996).

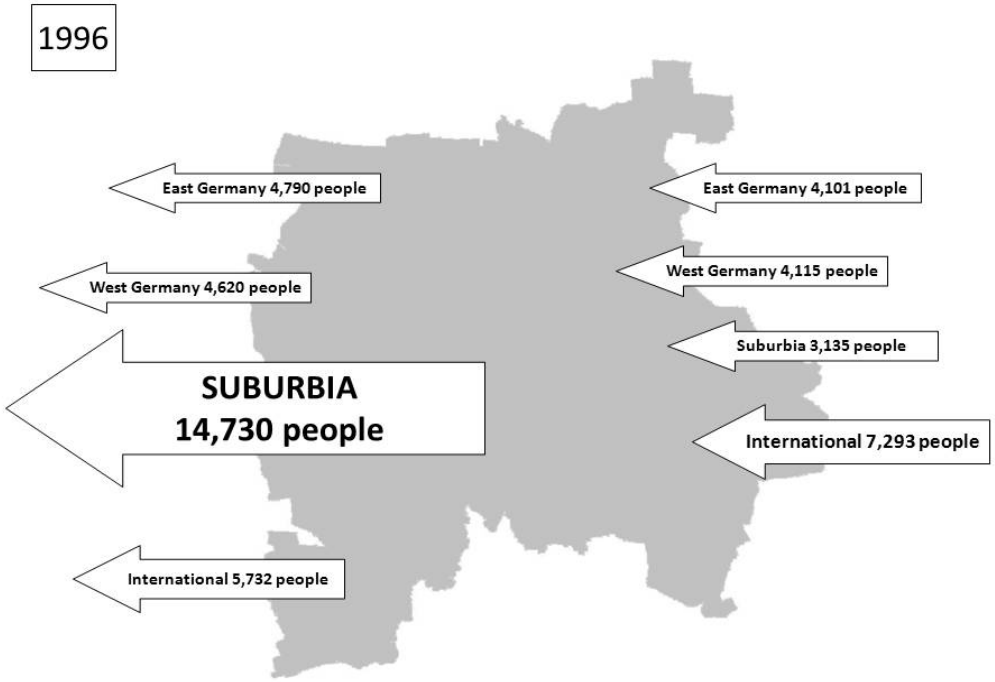
1992 – 1996: The rise of residential suburbanization

From 1992 onwards Leipzig experienced a period of considerable residential suburbanization which reached its peak by the end of 1996 (Herfert and Röhl 2001, Figure 2.3.1). This can largely be attributed to two influencing factors that diminished the quality of life in the inner city during that period. On the one hand, large parts of the old housing stock remained in a bad condition (partly due to restitution). As a result, there was still a lack of acceptable housing in the inner city and hence a considerable difference in rents for decent dwellings between the city and the outskirts. In particular, rents for the few refurbished homes were fairly high. On the other hand, although rapidly improving, the environmental quality was still low, especially in the inner parts of Leipzig (Nuissl and Rink 2005).

Residential sprawl was only possible because real estate companies and investment funds provided a growing supply of housing on the urban fringe, making suburbia a place where people could afford to instantly improve their standard of living. The

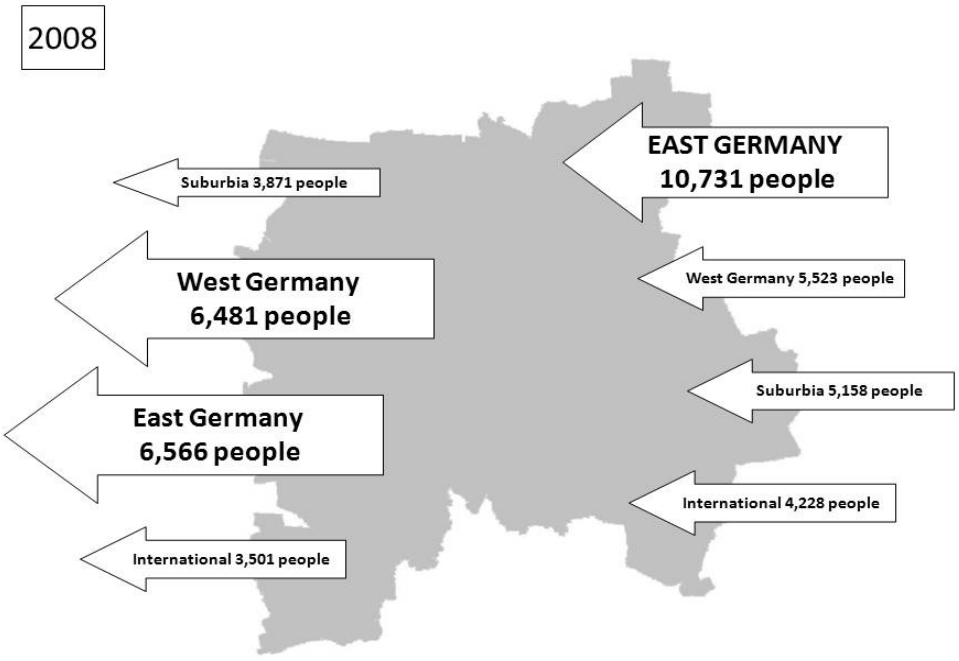
suburban dwellings are mostly still possessed by the investors; the rates of home ownership are unusually low. Apart from single-family houses, 2- to 4-storey apartment blocks became a typical suburban building (Figure 2.3.4). However, several "residential parks" characterised by this type of architecture were afflicted by a high rate of vacant housing from the outset (Herfert and Röhl, 2001). All in all, Leipzig, like the whole of eastern Germany, developed a type of urban sprawl that is rather different from the idea that the main driving force of urban sprawl is "suburbanites" fulfilling their desire to live in detached housing in a non-urban environment. It was not the suburban surroundings that were considered a pull-factor. It was the unattractiveness of the inner city that was considered to be a push-factor (Haase, A. et al. 2010). "The residents were not necessarily fleeing from the city into greener areas; they were forced into the surrounding areas due to a lack of alternatives [...]. Almost half of the Leipzig greater metropolitan area inhabitants changed their residence, even though they would have – under similar conditions – preferred to have remained in the city; this even refers to home-owners as well" (Herfert and Röhl 2001, 154). Both large housing estates as well as the *Gründerzeit* districts had been the origins of these suburbanites. Suburbanization was driven by young families and also by older households aged 50 – 65 years.

Figure 2.3.1: Pathways of suburbanization around Leipzig 1996



Source: Thomas Arndt (map) and UFZ database

Figure 2.3.2: Pathways of suburbanization around Leipzig 2008



Source: Thomas Arndt (map) and UFZ database

Figure 2.3.3: Commercial suburbanization: the Paunsdorf Centre

Source: Thomas Arndt

Figure 2.3.4: Residential suburbanization

Source: Thomas Arndt

1997 – 2000: The "comeback" of the core city

The short-term dynamic of residential suburbanization pulled back once again as early as 1997 (Herfert 2002). In 1997, for the first time since 1989 the flow of residential suburbanization no longer increased. Rather than occurring by chance, this development reflects the completion of the first round of transformational dynamics. Most importantly, temporary fiscal instruments and programmes, which had proved tremendously conducive to urban sprawl, ran out in the second half of the 1990s. In addition, municipal administrations and regional planning authorities managed to catch up on their planning backlog. Hence, the regulations imposed by planning authorities in order to contain the use of land for urban purposes became increasingly effective (Nuissl and Rink 2005).

In 1999 Leipzig enlarged its administrative territory. In this way, the city ceased to lose inhabitants and re-gained some of those who were lost through suburbanization in the mid 1990s. Furthermore, the ongoing resolution of restitution claims enabled the effective renewal of inner city districts, which, as of the mid-1990s, greatly improved the inner-city environment as a whole and increased the supply of refurbished inner-city dwellings. The successful (re-)establishment of a couple of shopping malls and one big department store (with another one currently under construction) in Leipzig's city centre contributed further to this resurgence of the inner city. Step by step, the construction and conditions of the residential environment improved in the second half of the 1990s in many inner-city

neighbourhoods, and they slowly began to attract inhabitants (Figure 2.3.5). Subsequently, the inner city became both a cheaper and a more attractive place to live and finding a good home there was no longer more difficult or more expensive than in suburbia. At the end of the 1990s, Leipzig entered the phase of reurbanization (Steinführer et al. 2009; Haase, A. 2008). A surplus of in-migration, mostly from other regions in eastern Germany, led to positive migration balances throughout the 2000s (Figure 2.3.2). From the end of the 1990s until the mid 2000s, most of the inner-city districts underwent processes of repopulation, rejuvenation and ethnic diversification (Table 2.3.1), processes that have endured until today. Consequently, the housing markets in the central and the peripheral parts of the urban region levelled out (Steinführer, 2004). At the same time, the character of residential development in suburbia began to change. The single-family house became predominant, as a slowly growing number of comparatively well off households had managed to accumulate the financial resources necessary to acquire property in the preceding years (Nuissl and Rink 2005).

Figure 2.3.5: Renovated inner-city housing

Source: Annegret Haase

Table 2.3.1: Socio-demographic indicators of selected inner-city districts of Leipzig

District	Part of the city	Mean age	Inhabitants < 40 years	Youth dependency rate	Age Dependency rate	Share of foreigners	Population development 1999-2005
Altlindenau	West	37.5	59%	15.3	16.6	7.5%	+12%
Lindenau	West	36.9	64%	13.6	16.4	9.9%	+14%
Plagwitz	West	40.6	56%	12.0	23.1	5.9%	+23%
Anger-Crottendorf	East	39.2	56%	16.7	22.7	7.0%	+15%
Neustadt-Neuschönefeld	East	37.2	60%	15.3	17.0	16.4%	+10%
Reudnitz-Thonberg	East	38.5	60%	13.5	20.4	7.6%	+6%
Volkmarsdorf	East	37.9	56%	16.7	17.6	14.8%	-5%
Schleußig	South-West	35.9	64%	19.2	14.1	4.4%	+26%
Südvorstadt	South	37.9	63%	12.8	19.1	4.5%	+26%
Gohlis-Süd	North	38.6	57%	16.3	19.0	7.7%	+28%
Leipzig	**-**	**43.1**	**47%**	**13.3**	**28.7**	**5.1%**	**+3%**

Source: Steinführer et al. 2009, updated

The last ten years: consolidation, re-growth or perforation?

After 2000, Leipzig saw a turnaround, that is, a consolidation of its population and even a slight re-growth after several decades of shrinkage. Since 2000, Leipzig has had positive migration balances with the hinterland and in general. Urban research speaks about reurbanization tendencies that are especially prominent in Leipzig as one of only a few big cities in eastern Germany).[2]

Accordingly, the flow to suburbia appears to have come to a halt. Migration between Leipzig and its hinterland is more or less balanced and, except for a few major investments (BMW in 2002 – 2005, Quelle in 1992), there have been no more peripheral development projects. Moreover, the population Figures of the inner city districts have been growing since the late 1990s, which brings Leipzig into its new role as an "island of stability" in a widely shrinking landscape of eastern Germany. Reurbanization tendencies are – compared with other East Germany cities – especially prominent in Leipzig (Herfert 2002; Haase, A. et al. 2010). At the same time, the population of some parts of suburbia has been declining in the last years. The demand for suburban housing has dropped considerably, leading to growing differences between the more and the less attractive segments of the suburban housing market. In addition, many suburban office blocks planned and built in the

[2] Reurbanization as an emergent process can be recognised in eastern Germany, particularly in some large cities which represent university and commercial hubs. It appears in the form of both increased in-migration into the city as well as decreased out-migration from the inner city. The in-migration from outside is dominated by students and early stage professionals. At the neighbourhood level, this is reflected in the high demand for young and, to a very high degree, non-conventional household types. This trend has stabilised in this regard since roughly 2000 (Haase, A. et al. 2010).

expectant times of the 1990s are still vacant, and some of them are shortly to be demolished (Nuissl and Rink 2005).

The abatement of urban sprawl in and around Leipzig is taking place against the background of a highly relaxed real estate and housing market and considerable rates of housing and commercial vacancies (see section 3.4 of this report). This oversupply makes investments to redevelop urban brownfields or to refurbish the decaying buildings that remain hardly economical. It has thus supported the onset of a process of "perforation" in the urban fabric (Lütke-Daldrup 2001): while some districts have stabilized and even gained population (recent research identified those districts as a "young reurban cluster", see Kabisch, N. et al. 2010), others are still losing population and face high rates of unused housing and urban land. In other words: "If there had not been so many developmental activities in suburbia creating a huge surplus of buildings and building land, the problem of urban perforation nowadays would be much less serious." (Nuissl and Rink 2005, 130)
To counteract suburbanization and high vacancy rates in the inner city, it was the intention of the municipality to make people stay in the city. Next to federal, state, and EU financial grants, a programme for subsidized owner-occupied housing in the inner city started in 2001 represented a case in point to show the top-down urban development. Originally intended as a strategy to support the formation of owner-occupied housing in the old building stock in need of renovation, the construction of new buildings developed over time, in the form of the "town houses", and became a visible trademark of the programme. By end of 2007, 312 households were supported and 153 new town houses and 159 condominium apartments had been completed (LCC 2008c, 49). The target of appealing to mostly families was for the most part realised – but not to keep potential suburbanites in the city. According to qualitative studies, the owner-occupiers in this specific housing stock) comprised city-minded dwellers for whom a move into the surroundings would never have come into question (Kausch 2007, 88-90). In this sense, the programme adds to the stabilisation and structural differentiation of the inner city. The numbers show that it represents no more than a niche-market, which is attractive and feasible only for families of middle to higher income groups.

Concerning the future, Leipzig will be faced with contradicting trends: on the one hand, the city will try to sustain itself as a "re-growing" city with a positive migration balance and a young in-migration that counteracts the ageing process. On the other hand, the city will see a new wave of population loss after 2015, that is, when household numbers will start to decrease regardless of in-migration and the potential (younger) in-migration groups will become smaller due to ageing (see section 2.1 of this report). The city will probably enforce efforts to attract older age groups as reurbanites, i.e. those who suburbanized in the 1990s and will face difficulties concerning their daily wants and needs in suburbia because of a lack of amenities and services there. This could become true in one or two decades (Haase, A. 2008; Köppen 2005; Glasze and Graze 2007). Finally, it has to be emphasised that the simultaneity of urban sprawl and shrinkage was a major challenge to urban policy-making and planning for cities like Leipzig, and will continue to be in the future (cf. Nuissl and Rink 2005).

3 IMPACTS AND CONSEQUENCES OF URBAN SHRINKAGE

3.1 Patterns of segregation and social cohesion

The specifics of Leipzig: "postsocialist segregation" and housing market supply surplus

To understand the development of socio-spatial differentiation and today's patterns of socio-spatial segregation in Leipzig[3], one has to consider two facts:

1. Leipzig's socialist past and its impact on segregation and
2. the specifics of its "supply surplus" housing market.

During the period of state socialism, as a consequence of the absence of both a private housing market as well as state controlled systems of housing provision, there was a low level of socio-spatial differentiation and segregation. Typical forms of segregation under socialism in Leipzig were the concentration of older people in the city centre, representatives of the socialist *nomenklatura* households in villa areas and some professional groups (teachers, technical intelligence) in prefab estates. The little community of foreigners who had jobs as contract workers from other socialist countries or who studied at Leipzig university was strictly separated from the locals in dormitories. The same was true for the Soviet soldiers and officers who lived in closed housing complexes and the barracks.

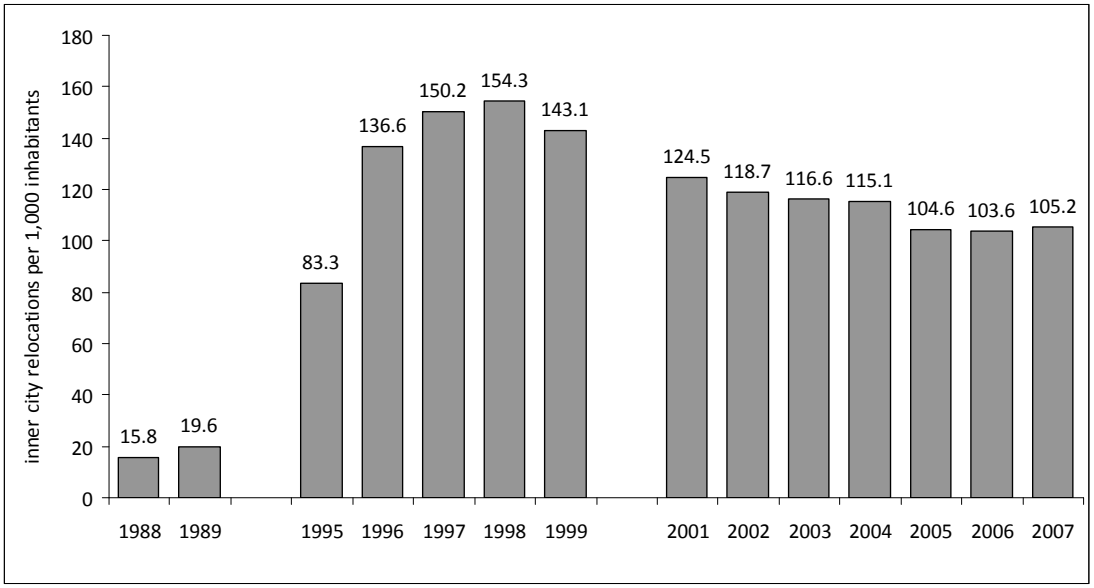
After 1989 the situation changed. As a consequence of population decline and an oversupply of flats due to renovation, newly built housing and increasing vacancies in the 1990s, Leipzig developed to be a housing market with a supply surplus (see also section 3.4. of this report). The emergence of housing vacancies led to falling rents/prices and a greater choice in terms of housing for a variety of residential groups. Subsequently, residential mobility increased and was at its highest level at the time when the housing vacancies reached their top numbers (in 2000). During the 2000s, residential mobility then decreased but remained at a level that is above that of comparable western German cities with a demand surplus housing market (Figures 3.1.1 and 3.1.2).

We understand supply surplus as a situation where there are more inhabitable dwellings than households available on the housing market. The supply is, subsequently, higher than the demand (Rink et al. 2010). Since most studies on socio-spatial segregation refer to the context of housing markets with demand surplus, the question whether supply surplus changes processes of differentiation and patterns of segregation has been under-researched up to now. The few existing studies are contradictory in their assumptions or conclusions and say either that the segregation under the conditions of supply surplus at the city level is stronger or that it is – in the same context – weaker. Some studies underline that the level of

[3] For the definition of processes of socio-spatial differentiation and patterns of socio-spatial segregation as a result of these processes see Rink (1997).

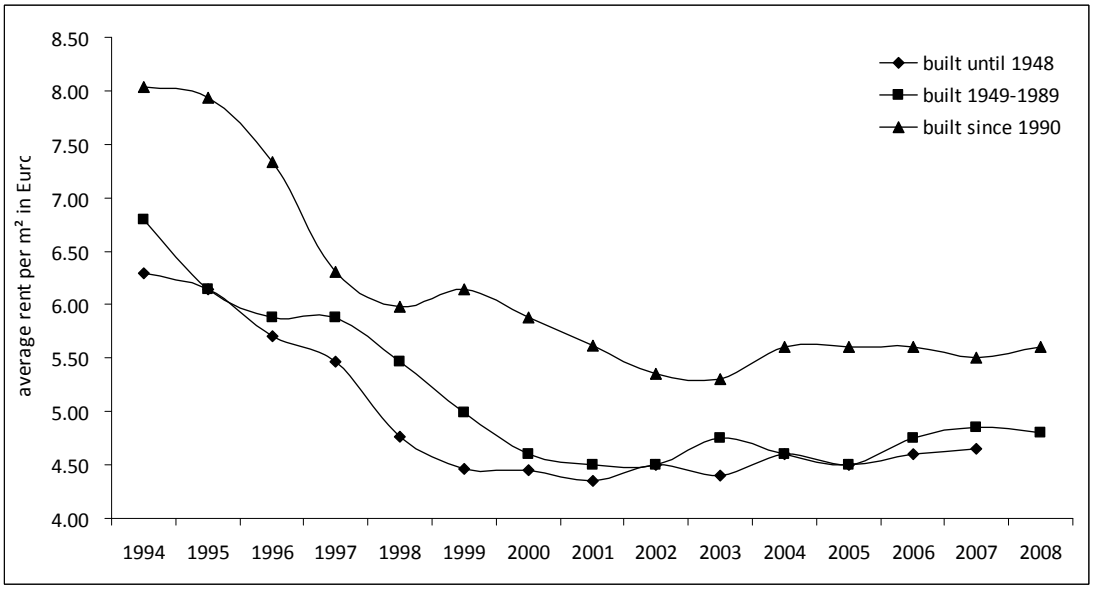
segregation of certain population groups (low income households, unemployed, older people, migrants) is more pronounced in cities with housing vacancies and a declining population.

Figure 3.1.1: Residential mobility in Leipzig 1988-2007



Source: UFZ database

Figure 3.1.2: Monthly net-rent in Leipzig according to date of construction 1994-2008



Source: UFZ database

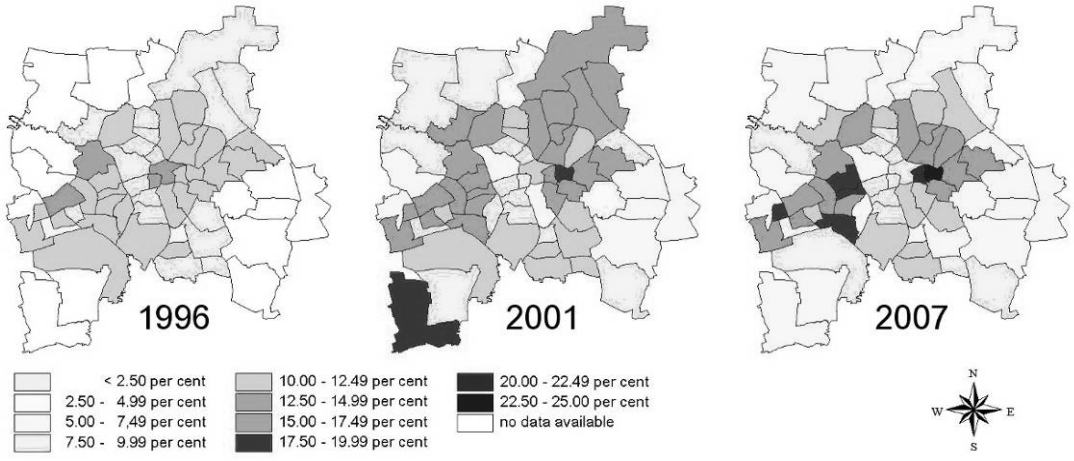
"Postsocialist" differentiation, re-arrangements and segregation

Looking at the period from 1990 to today, socio-spatial differences between the districts in Leipzig have increased (Rink 1997). These distinct processes of socio-spatial differentiation have not, up to now, produced a "clear" picture of "postsocialist" segregation in Leipzig. In the following, we present selected results of

research that has been carried out in the last few years (Rink et al. 2010, Großmann et al. 2009). We use maps and correlations at the district level and show indices of segregation for the total city level. The maps show the development of spatial concentrations of certain residential groups over time on the scale of urban districts; the correlations relate district values to each other. The segregation indices, finally, relate specific residential groups to the entity of all other residents of the city (based on urban districts). We are well aware of the limits of the applied approach: We cannot use them to picture small-scale differences, we can show aggregate data for urban districts but not for residential groups, the differences are limited to administrative boundaries and do not provide any explanation of causes and the logics or dynamics of the processes behind.

Residential segregation in Leipzig is strongest in its socio-economic dimension. Figure 3.1.3 shows that socio-economic segregation at the district level (operationalised through the unemployment rate) was already visible in the mid 1990s. In 2001, the (north-)eastern and western parts of the inner city as well as the large housing estate Grünau had developed as the foci of unemployment – those districts that also show high rates of housing vacancies (see section 3.4 and especially Figure 3.4.5 of this report). This picture was consolidated and strengthened until 2005. Generally, the difference between the districts became more pronounced up to today. While until 2005 unemployment also rose, the recent years have brought a decrease in unemployment, but not in the level of socio-economic segregation. The latter is increasingly impacted by selective in-migration as a consequence of a rising impact of the market and the renting policy of particular owners/housing companies as adjustment factors: while some areas with a high socio-economic status see a better-off in-migration, poorer people move to districts where there is already a concentration of low income households.

Figure 3.1.3: Social segregation (% unemployed) in Leipzig 1996, 2001, 2007

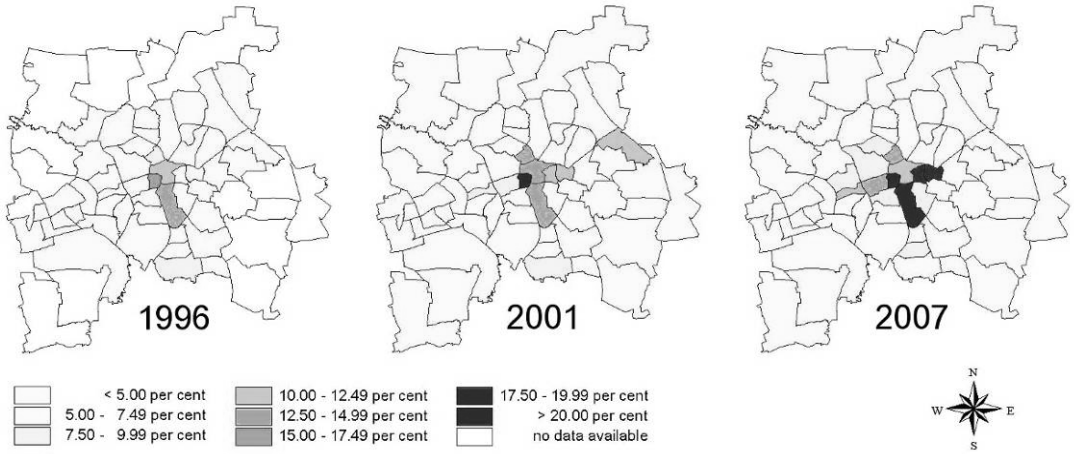


Source: Großmann et al. 2009

Socio-economic segregation is, in many cases, in line with segregation according to education. There is a considerable concentration of population with a low educational level in those parts of the city that are characterized by high shares of unemployment and low income households as well as high shares of housing vacancies (above-average proportion of pupils with learning difficulties or who stayed down a year as well as pupils at secondary modern schools/*Hauptschule*, below-average recommendations for the secondary school/*Gymnasium*, cf. LCC 2008e, 83-89).

Ethnic segregation shows both persistent and newly emerging patterns (Figure 3.1.4). The community of migrants – or foreigners as they are called commonly in the German debate – in Leipzig changed in the 1990s since some of the contract workers from the state socialist time left the city while others came. Since the mid 1990s, Leipzig has seen continuously increasing numbers of migrants; their share rose from 1990 to 2007 from 8,700 (1.7 per cent) to 33,000 persons (6.4 per cent, representing the highest share of migrants of an East German city except Berlin). Many of Leipzig's migrants are first generation migrants. We can observe two trends concerning the concentration of migrants in urban space: on the one hand, there is a continuation of socio-spatial patterns that already existed in the 1980s, i.e. the concentration of migrants in the city centre and the area south-east of the city centre with many students' residences. On the other hand, new socio-spatial patterns have emerged from the second half of the 1990s onwards, that is, the development of "migrants" areas' in the inner east of Leipzig where their share amounts to 18 – 20 per cent of the population. Migrants living in these areas stem mainly from Vietnam, Russia, Iraq, Ukraine and Poland. The spatial distribution over the city as a whole shows that there is a concentration of migrants and persons with "migration background" (see section 2.1 of this report) in the inner city as well as in the large housing estate Grünau (which is probably due to the precarious income situation of many households with migration background and the possibility of finding cheap housing in Grünau, cf. LCC 2008e, 73-75).

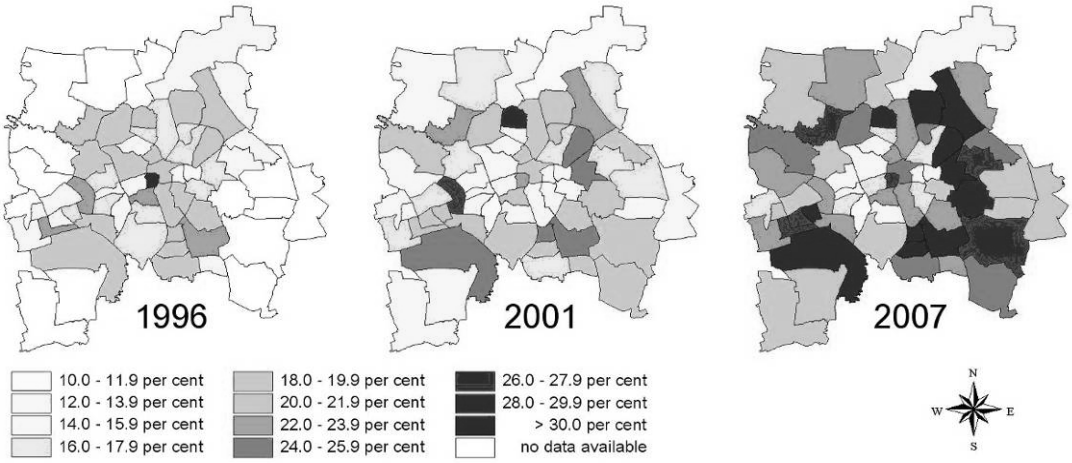
Figure 3.1.4: Ethnic segregation (% migrants) in Leipzig 1996, 2001, 2007



Source: Großmann et al. 2009

Looking at the age-specific segregation, one sees a changing pattern during the 1990s and 2000s, at least concerning the distribution of older people in the city (Figure 3.1.5). Generally, Leipzig is a rapidly ageing city (see section 2.1 of this report). The index of ageing (the relation 65+/0 – 14) increased from 91.2 in 1990 to 220.2 in 2006 (Kabisch, S. et al. 2008, 17). While in the early 1990s the city centre was the "oldest" district, all other districts did not show remarkable differences. This situation has changed during the 1990s and 2000s. The reasons are to be found in the overlap of two processes: on the one hand, a rejuvenation of the city centre and most of the inner-city districts (reurbanization) and, on the other hand, an advancing ageing of the residential areas of the "second ring" due to the out-migration of younger people to suburbia and the inner city (at a moderate level until today) and an advancing ageing in place in the affected districts, which show a share of 65+ population of >25 or even >30 per cent (LCC 2008e, 54). To put it differently: the pattern of the concentration of older people of the early 1990s no longer exists. There is a high dynamics of change, although the newly evolving pattern has to consolidate to really become a longer-term characteristic of the "second-ring" districts.

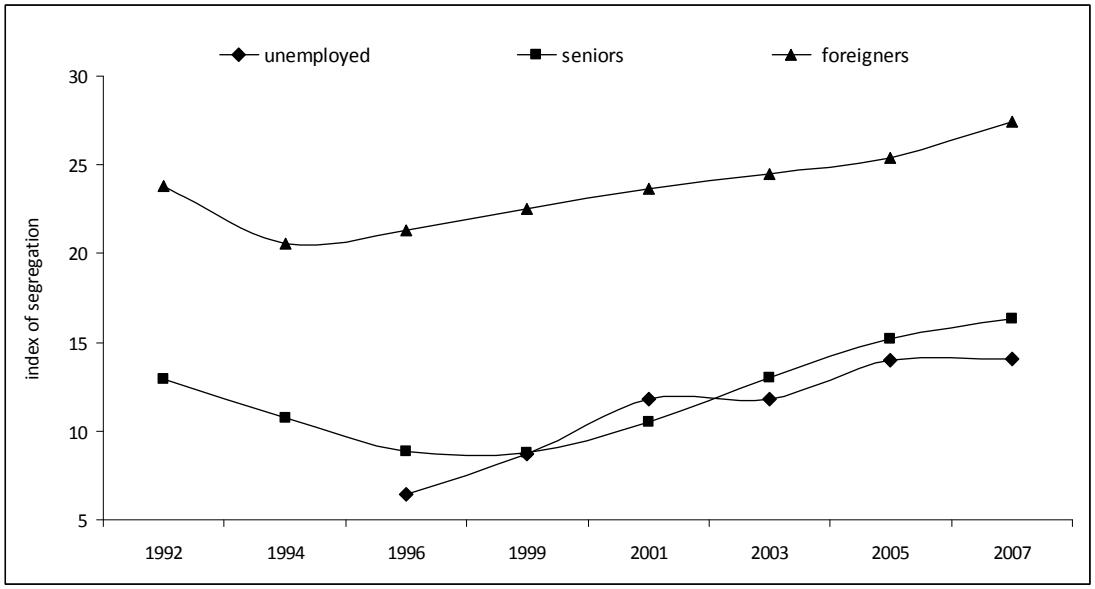
Figure 3.1.5: Age-specific segregation (% 65+) in Leipzig 1996, 2001, 2007



Source: Großmann et al. 2009

Figure 3.1.6 shows the development of segregation indices for Leipzig. The values neither show striking levels nor a high dynamic of growth or decline. It has to be emphasised that the values do not start with "zero" in 1990, which clearly shows that there was already socio-spatial segregation in the GDR. Compared to other European cities, the overall level of segregation is still moderate in Leipzig. There is an increasing value of the segregation of unemployed. Migrants, as a group, show the strongest segregation but this value has not dramatically changed since 1990. What the value does not show is, however, the character of the segregation of migrants that partly changed during the 1990s and 2000s (see above).

Figure 3.1.6: Segregation indices for Leipzig 1992-2007



Note: The data relate to the territory of the 48 districts Leipzig had until 1998. The enlargement of the city's territory due to an administrative reform in 1999 was not considered for this calculation.
Source: Arndt 2008

Impact of urban shrinkage on socio-spatial segregation

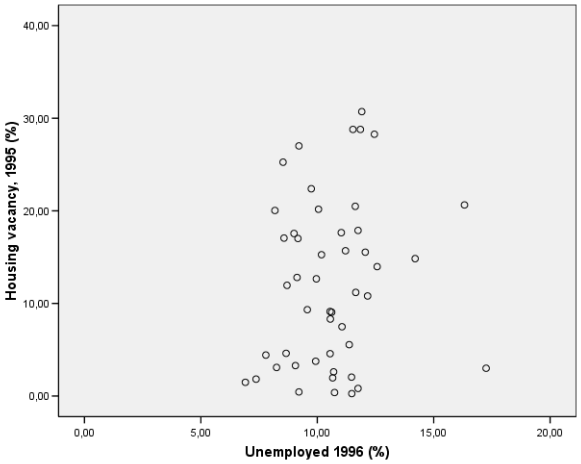
What impact does urban shrinkage have on the development of socio-spatial segregation? To assess direct impacts is not easy; we operationalized urban shrinkage by making an estimation of vacancy rates (including both buildings on and off the market) and correlated it with the share of unemployed, migrants and 65+ inhabitants to get an initial idea of its influence on socio-spatial inequality. Figures 3.1.7 a) and b) show that while there was no correlation between vacancy rates and the level of unemployment in 1996, in 2003 there was a clear connection (Pearson correlation 0,156 and 0,783**). Many unemployed people are living in urban districts with high vacancy rates and vice versa. It has to be clearly pointed out here that the above mentioned consolidation or up-grading of some areas of the (old built-up, inner) city led to the (exclusionary) displacement of low income households into those areas where they can find appropriate housing for moderate costs (see Marcuse 1985).

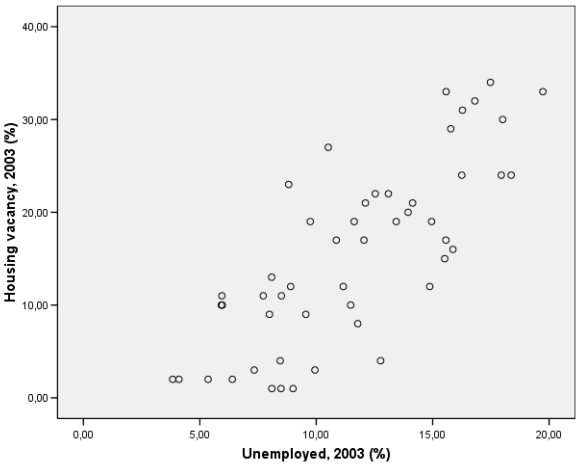
The correlation between the share of migrants and vacancy rates ranges around a middle level. One could conclude that in those districts where (relatively) many migrants are living we also find above-average vacancy levels and vice versa (Figures 3.1.7 c) and d)). However, compared with the first correlation, the significance of the values is much lower. In contrast to the group of unemployed, the value of the correlation did not change from 1996 to 2003 (Pearson correlation 0,334* and 0,441**). There is no correlation between the distribution of specific age groups of 65+ or 0 – 14 over the districts and the proportion of vacancies, either in 1996 or in 2003 (Pearson correlation -0,050 and -0,156). This means that although we have a clear concentration of 65+ population in the "second-ring" districts in the 2000s, this

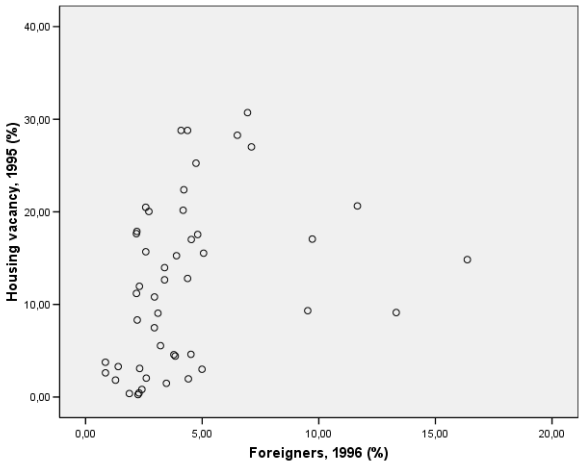
is more related to ageing and specific out-migration (of younger households) from these districts than to urban shrinkage as the former did not lead to high vacancy rates (Figures 3.1.7 e) and f)).

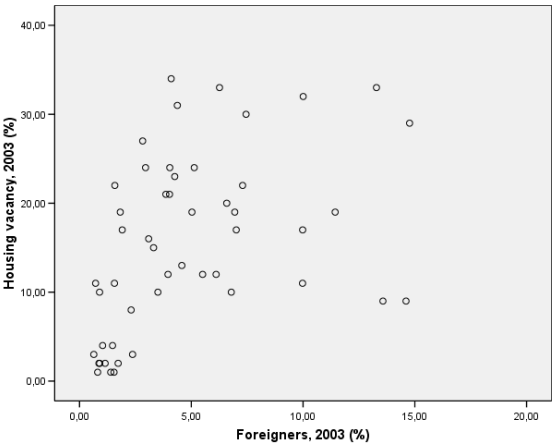
According to our current knowledge, we conclude that there is an impact of supply surplus on the dynamics of residential segregation, but not on all its dimensions. While the surplus of supply is strongest in the socio-economic dimension, we find both persistent and new patterns with respect to ethnic segregation and a high dynamism and changing patterns for the 65+ dimension of age-specific segregation. There is a certain postponement of the impact of housing vacancies on re-arranging or changing patterns of residential segregation since the supply surplus with its consequences (low housing costs and greater choice) had to be there before a rise in residential mobility could start. This means that although Leipzig is no longer a shrinking city, it shows the characteristics of a housing market with supply surplus and, because of this characteristic, urban shrinkage has an impact on the patterns of segregation and on processes of socio-spatial differentiation. Since today's differentiation is driven mainly by selective in-migration and no longer by selective out-migration like in the 1990s, attraction factors of the districts and their housing offers come more into the focus, be it in the form of choice or constraints. In the 2000s, the increasing segmentation of the housing market has led to housing shortages in particular areas or segments whereas supply surplus remains in others (not all areas have a supply surplus). Generally, the supply surplus context represents a dynamic one: whilst the 1990s were the phase of re-arrangement of the housing market, the 2000s were the phase of a certain consolidation of patterns that had evolved in the late 1990s as well as new restrictions (Rink et al. 2010).

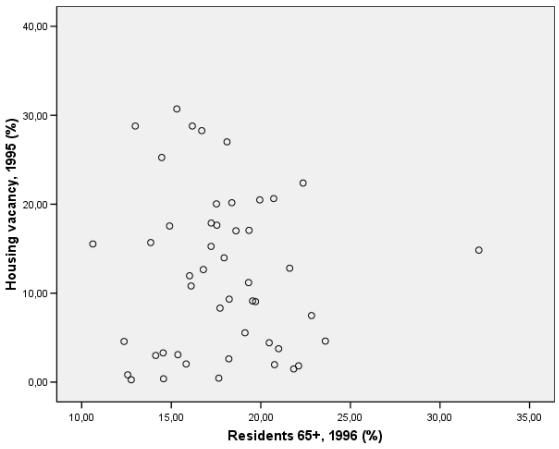
Figure 3.1.5 a)-f): Correlation between share of housing vacancies and share of unemployed persons (a) and b)), foreigners (c) and d)) and 65+ population (e) and f)) 1996 and 2003

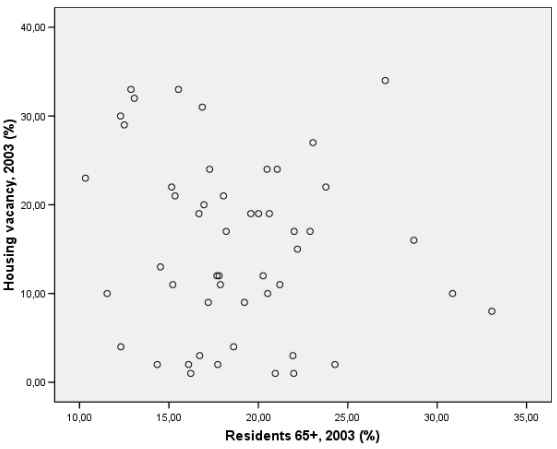










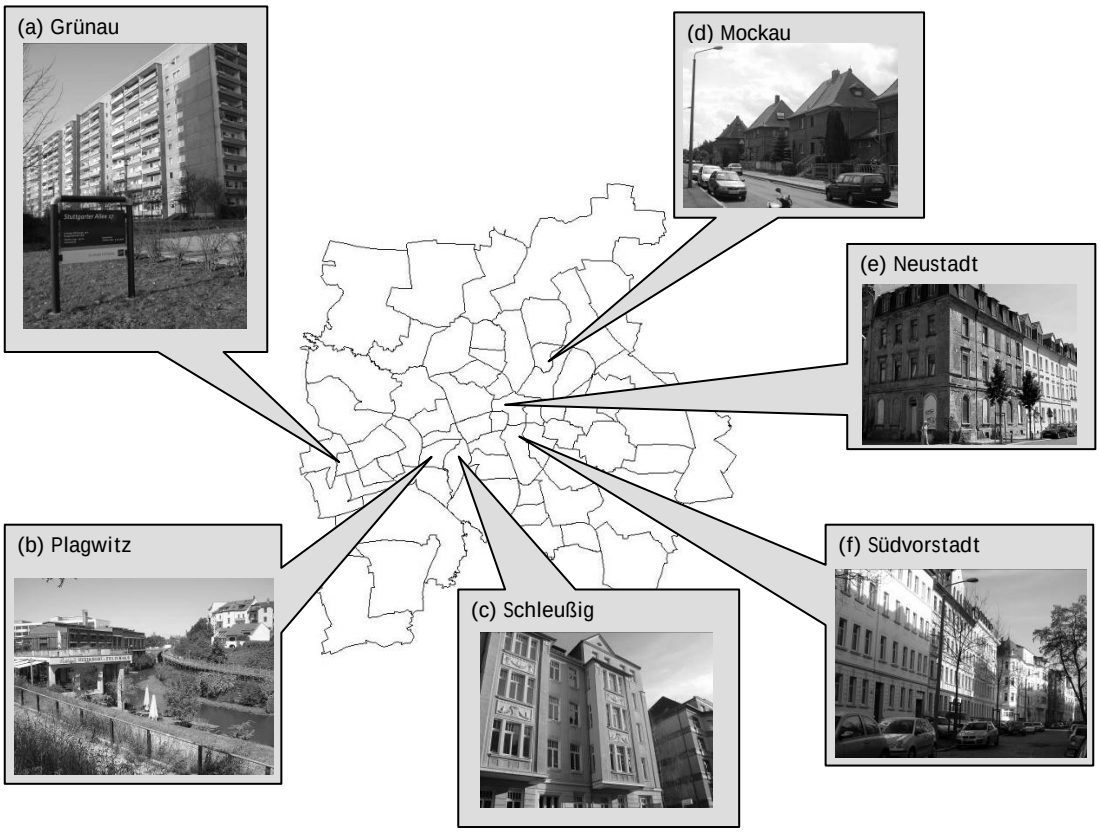


Source: Großmann et al. 2009

The district and small-scale level

Patterns of segregation are clearly visible at the district level. In some cases, they relate even to a more small-scale level (parts of districts, neighbourhoods) or go beyond the (administratively assigned) borders of districts. There are considerable differences between inner-city old built-up districts. While some of them (Waldstraßenviertel, Gohlis-Süd, Schleußig, Plagwitz) have undergone up-grading and gentrification processes, others (Neustadt-Neuschönefeld, Volkmarsdorf, Reudnitz) have become increasingly areas where low-income households, unemployed persons and migrants are concentrated. Districts where social exclusion plays a role are to be found not only in the inner city but also in the large housing estates (Leipzig-Grünau). In most cases, physical dilapidation, housing vacancies and demolitions go hand in hand with high proportions and concentration processes of low-income households. This is partly a result of municipal policies (about where to house social welfare recipients). Processes of "de- and re-mixing" are happening, either by ageing in place in many "second-ring" districts (Marienbrunn, Abtnaundorf, Sellerhausen, Mockau) and by repopulation and rejuvenation in districts undergoing reurbanization after massive losses in the 1990s (Südvorstadt, Connewitz, Neustadt-Neuschönefeld, Altlindenau). Figure 3.1.6 shows examples of such pathways of Leipzig's urban districts.

Figure 3.1.8: Districts of Leipzig – The map shows the administrative borders of Leipzig's urban districts and some examples of districts mentioned in the text: a) Grünau; b) Plagwitz; c) Schleußig; d) Mockau; e) Neustadt-Neuschönefeld; f) Südvorstadt.



Source: Thomas Arndt (map layout and photo d), Annegret Haase (all other photos)

3.2 Business and employment

This document follows the logics of the research of Workpackage 2 of the 7 FP EU project Shrink Smart which was mentioned in the introduction. In the project, the local economic development is discussed as a cause for urban shrinkage; local business and employment represent an arena of impact of urban shrinkage. With the aim to improve readability of this report, chapter 2.2 of this document discusses both the economic development of Leipzig as a causal factor for shrinkage, and the development of business in Leipzig as a consequence of shrinkage. Subsequently, chapters 2.2 and 3.2 go as one.

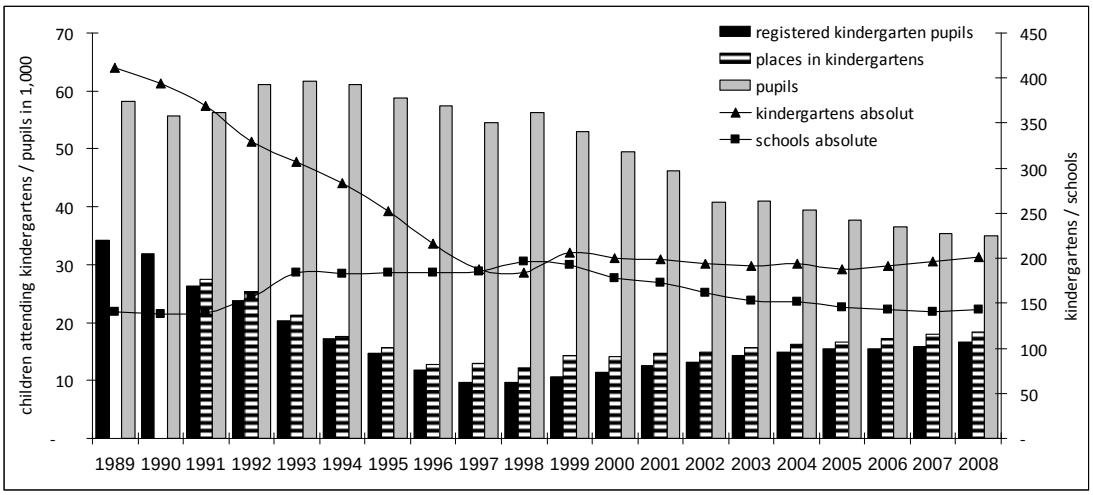
3.3 Social infrastructure and education

Urban shrinkage has an impact on the demand for social infrastructure: while the demand for social amenities decreases in areas with population outflow and high shares of housing vacancies, it increases in stabilizing and growing areas, mainly due to selective in-migration (e.g. of young families to particular districts, see also sections 2.1 and 3.1 of this report). Subsequently, the distribution of much social infrastructure is characterized by areas of under- and oversupply across the city's territory. Urban shrinkage does not generally mean supply surplus, it means, in the case of Leipzig, a selective pattern of district-related under- or oversupply. The main challenge for the municipality for the coming years will be to adapt the supply to the areas of demand.[4] The demand for schools decreased during the 1990s and 2000s; subsequently, several schools had to be closed.

The number of kindergartens decreased from 412 (1988) to 184 (1998). In 1999, it increased to 206 due to the administrative reform to decrease again to 202 in 2008 (Figure 3.3.1). The numbers include all kindergartens, both public and private. Private kindergartens have emerged only since 1989 and are possibly to be found mainly in better-off neighbourhoods. The number of places decreased from 27,000 (1991) to 18,000 (2008), and the number of registered children from 36,000 (1987) to 17,000 (2008). The supply of kindergartens differs over the city's territory and the fulfilment of demand differed in 2005 between 80 and 140 per cent in the individual districts. The social report (2008) distinguishes three types of districts: those with undersupply (below 90 per cent), those with balanced supply and demand (90 – 120 per cent) and those with oversupply (>120 per cent). While districts with undersupply are to be found mainly in the northern and southern districts of the inner city that see in-migration of a younger population (north-south-axis along the floodplain forest areas), the oversupply is concentrated in the prefabricated areas of Grünau and Paunsdorf in the west and north-east of the city where we have either high vacancy rates (in the case of Grünau) or an increasing concentration of social welfare recipients (in the case of Paunsdorf) (LCC 2008e, 35-37, Figure 3.3.2).

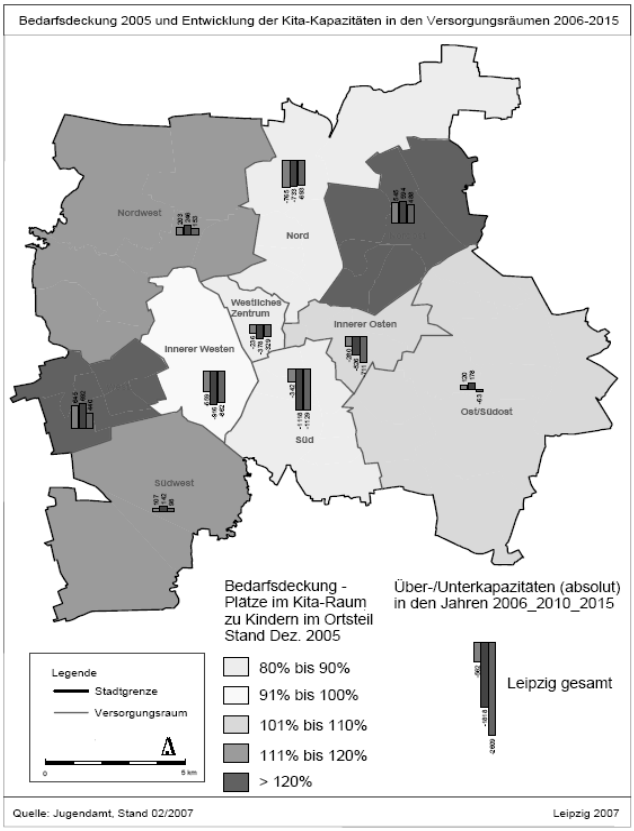
[4] This information is based on an interview with representatives of the urban planning unit of Leipzig in December 2009.

Figure 3.3.1: Places in and attendants of kindergartens and schools in Leipzig 1989-2008*



*From 2001, the number of kindergartens also includes nurseries at schools.
Source: UFZ database

Figure 3.3.2: Fulfilment of demand for kindergartens in Leipzig for the period 2006-2015



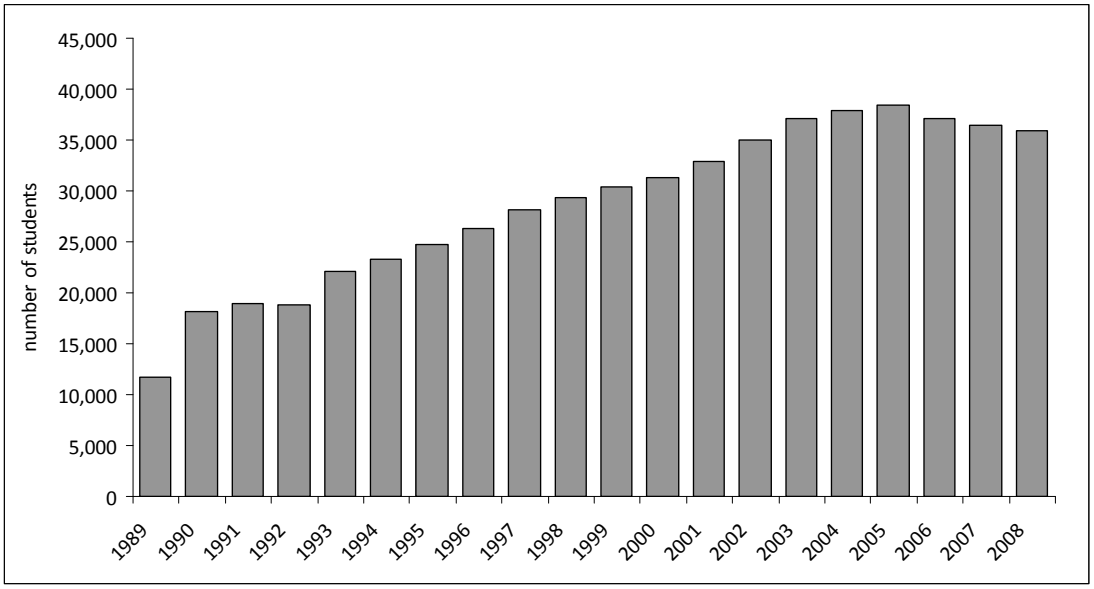
Source: LCC 2008e, 36

The number of pupils in Leipzig's schools decreased from 1989 (58,000) to 2008 (35,000), mainly as a consequence of out-migration and suburbanization (of families with dependent children) (Figure 3.3.1). The number of schools increased from 1985 to 1998 from 135 to 197 and decreased afterwards to 143 in 2008. Due to the decreasing demand, schools of different types (primary and secondary schools) had to be closed. In recent years, a slight increase in numbers of pupils in primary schools can be observed (LCC 2008e, 79-80). There is a considerable concentration of

education related problems in those parts of the city that are characterized by high shares of unemployment and low income households as well as high proportions of housing vacancies (above-average proportions of pupils with learning difficulties or who stayed down a year, as well as pupils at secondary modern schools/ *Hauptschule*, below-average recommendations for the secondary school/ *Gymnasium*, cf. LCC 2008e, 83-89 and section 3.1 of this report).

The number of apprentices increased during the 1990s and remained stable at about 25,000 during the 2000s. The share of adolescents who did not find an apprenticeship recently rose from 3 to 10 per cent from 2002 to 2007. Most of them attended the *Hauptschule* or *Realschule*. In line with the overall trend, the level of unemployment of the young in Leipzig has undergone a decrease during recent years. The number of students at Leipzig's university started to rise considerably after 1989, until this time it was approximately 12,000. In 2005, it reached a peak with 38,500 students, in 2008 the number slightly decreased to 36,000 (Figure 3.3.2). Since the 2000s, students and apprentices have constituted a considerable potential for inner-city reurbanization and population gains from in-migration in Leipzig (counteracting urban shrinkage) This potential will, however, decrease in the future due to fact that the age group 18 – 30 will decrease during the next years.

Figure 3.3.3: Development of number of students in Leipzig 1989-2008



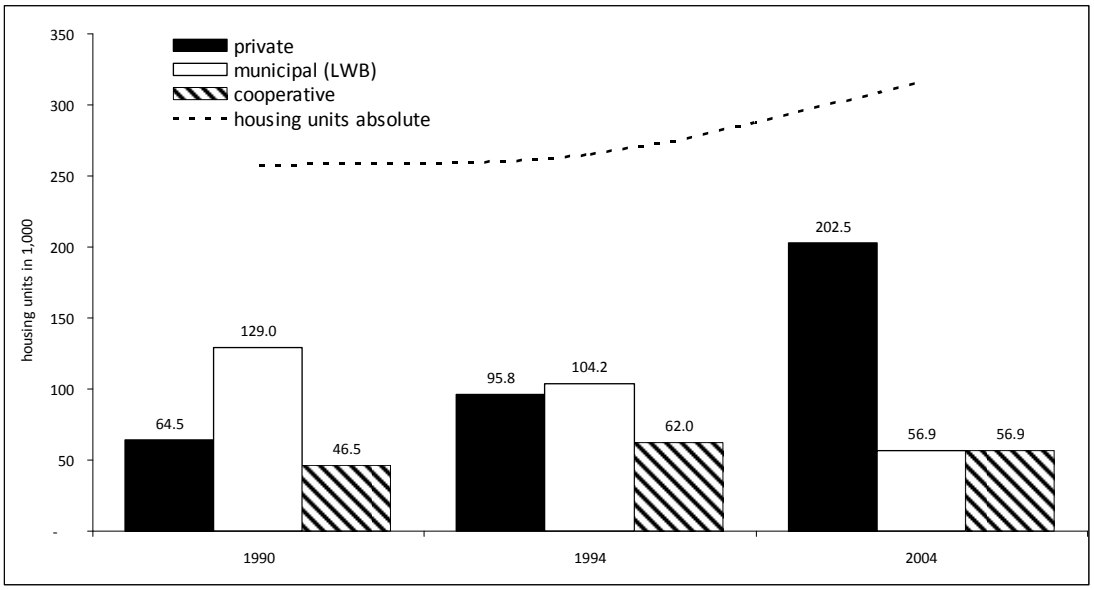
Note: The numbers relate to the respective winter term, e.g. 2005 = winter term 2005/2006.
Source: UFZ database

The number of doctors in private surgeries and hospitals increased from 1989 to 2008. The same is true for the number of surgeries – there was an increase from 568 in 1992 to 991 in 2006. At the same time, the supply of doctors as well as of surgeries improved with the number of doctors increasing from 4.2 to 5.7 (per 1,000 inhabitants) from 1988 to 2006, and the number of surgeries increasing from 1.1 to 2.0 from 1992 to 2006.

3.4 Housing

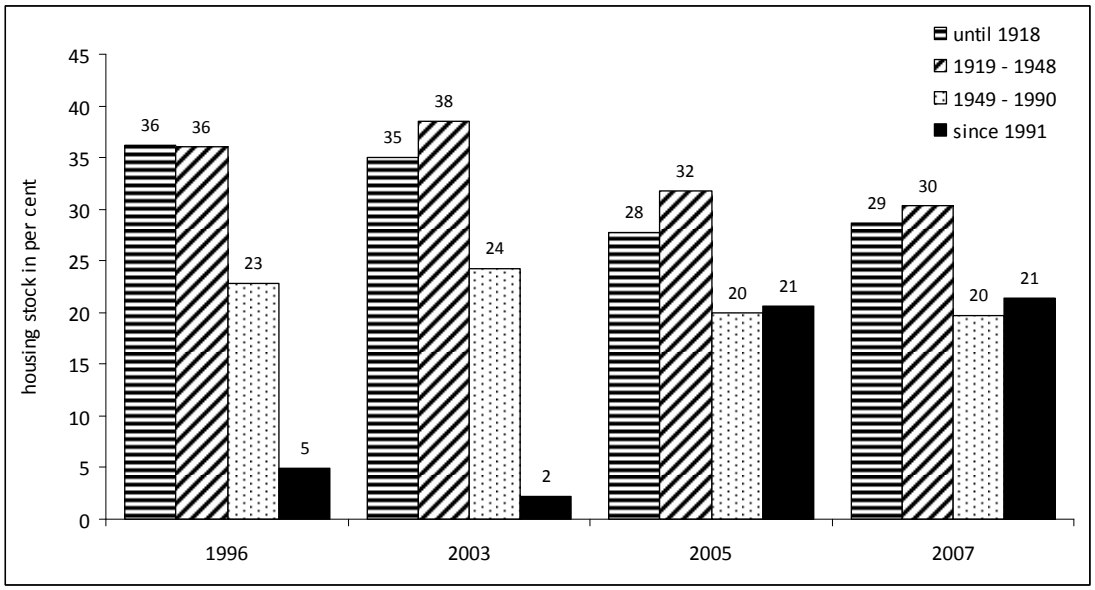
The discussion about shrinkage in Leipzig is dominated by the housing market perspective. Residential vacancies were the origin of any debate about shrinkage in East German cities – the term itself came largely into discussion in relation to housing vacancies or housing surplus. A federal commission dealt with that phenomenon in 2000. The mayor of Leipzig (at that time) was the head of this commission, which illustrates quite well the importance and scope of the vacancy problem, especially for Leipzig. Housing vacancies, and especially vacancies in renovated housing stock, became the talking points of urban shrinkage, not only in Leipzig but in the whole of eastern Germany. Research and planning speaks of "tenants' markets" (seen from the perspective of the demand side) or "housing markets with supply surplus" (seen from the perspective of both the supply and the demand side). Other dimensions of urban shrinkage are possibly underestimated because of the importance of the vacancy issue. Leipzig's housing stock is dominated by multi-family residential buildings, with the majority being built before 1948. The majority of houses are privately owned (64 per cent), 17 per cent belong to the municipal housing company, and another 17 per cent to less than a dozen housing cooperatives (Figures 3.4.1 and 3.4.2).

Figure 3.4.1: Leipzig's housing stock 1990-2004 according to ownership



Source: UFZ database

Figure 3.4.2: Leipzig housing stock 1996-2007 according to date of construction

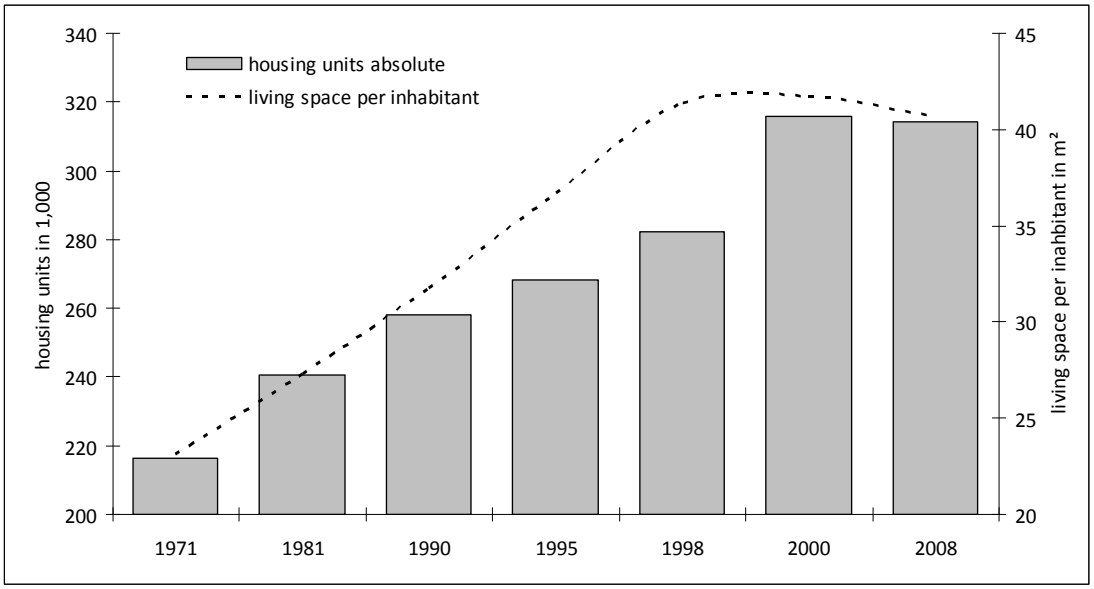


Source: UFZ database

Until the early 1990s, the housing market in Leipzig was characterised by an extreme lack of dwellings and very poor housing conditions. More than half of the buildings were built before 1918. Lack of maintenance was a severe problem and, until the 1990s, many apartments did not have a bathroom and a separate toilet. In 1989 about 10 per cent of the flats (25,000 in total) were vacant since they were not habitable. During the GDR time, the housing stock grew due to newly built housing on the outskirts of the city. From the late 1960s onwards, large-scale prefab housing estates were built; the largest of them being Leipzig-Grünau in the west of the city. Between 1970 and 1990 about 40,000 new dwellings were built in Leipzig (Figure 3.4.3), most of them in Leipzig-Grünau.

However, more and appropriate apartments were needed due to the rising number of households, increasing comfort needs, the shrinking size of households, and the dilapidation of the old housing stock (see above). This situation changed decisively after 1990. Supported by massive state-aid incentives, tens of thousands of old buildings were renovated and new dwellings built. In 2000, 14 per cent of all dwellings (43,000) in Leipzig were less than 10 years old. At the same time around 75 per cent of the old housing stock had been renovated.

Figure 3.4.3: Housing units and living space per inhabitant 1971-2008



Source: UFZ database

Since the population and, more importantly, also of the households decreased (see section 2.1 of this report), such a mixture was bound to go wrong. Thus a new gap between supply and demand emerged which resulted in an extreme increase in housing vacancies. In 2000, there were an estimated 62,500 unoccupied flats (more than 20 per cent of the entire housing stock), around 70 per cent of them in old built-up buildings (Table 3.4.2). The effects of such high vacancy rates are highly problematic – both for property owners and for the affected neighbourhoods. Thus, lack of maintenance, security problems, and perforation of the urban fabric proved to be among the top problems for old-building neighbourhoods, visible to everyone. Losses of profit, devaluation of vacant sites, lower prices, reduced mortgage values and greater marketing expenditures are keywords that describe the effects on real estate markets.

Interestingly, the allocation of vacancies over the city and the housing market segments is fairly unbalanced – though rather on a micro- than on a macro-scale. Contrary to public opinion it is not only peripheral prefabs that are subject to high vacancy rates, but moreover vacancies are also concentrated in under-maintained historical buildings, simple structures and along main roads, even if these are located in favourable neighbourhoods. Furthermore, property structures play a crucial role in dealing with vacancies. The main instrument in dealing with residential vacancies has become a public subsidy scheme called *Stadtumbau Ost* (urban restructuring "East") which has supported the demolition of vacant houses since 2001 (see also Bernt 2009). With the help of this programme 10,211 apartments were demolished between 2001 and 2007, most of them (70 per cent) in buildings in large housing estates that had been built during the GDR time (Table 3.4.1). At the same time, new constructions were completed in the city and its surroundings so that housing surplus was only partly resolved by demolitions. From the end of the 1990s onwards, the population of Leipzig has increased and consequently housing demand is growing, especially in central historic areas. As a consequence, vacancies have

decreased to a level of around 43,000 apartments (60 per cent of these being on the market).

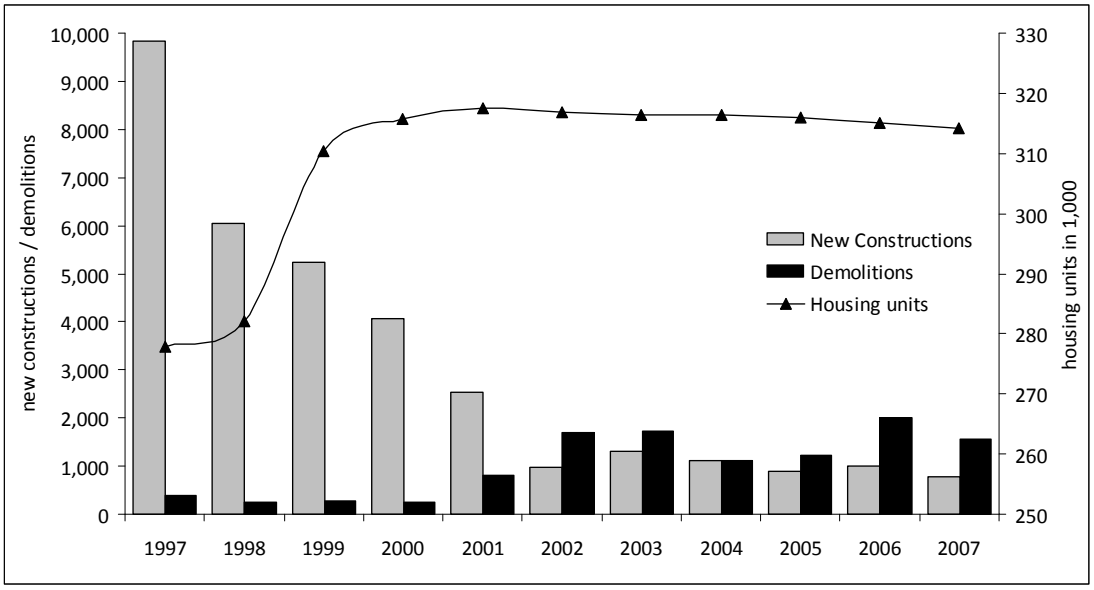
Table 3.4.1: Development in Leipzig's housing stock 1997-2007

	1997	1999	2001	2002	2003	2004	2005	2006	2007	1997 to 2007
Housing units total	277,812	310,329	317,439	316,763	316,358	316,358	316,027	314,223	314,223	+36,411
New constructions	**13,891**	**9,086**	**n.a.**	**2,124**	**n.a.**	**2,429**	**1,935**	**1,948**	**1,347**	**+32,760**
in Leipzig	9,845	5,236	n.a.	984	n.a.	1,112	881	1,016	782	+19,856
in the region	4,046	3,850	n.a.	1,140	n.a.	1,317	1,054	932	565	+12,904
Demolition	**400**	**288**	**798**	**1,687**	**1,731**	**1,128**	**1,231**	**2,080**	**1,556**	**- 11,390**
vacancies	57,000	68,000	68,000	64,000	60,000	57,000	53,000	48,000	43,000	n.a.
per cent	25.5	21.9	21.4	20.2	19.0	18.0	16.8	15.2	13.7	n.a.

Source: UFZ database

The supply surplus led to a decreasing scope of building completions, but only in the mid 2000s. The number of building completions, that had reached high levels up to then, considerably decreased from 1997 – 2001 (from 10,000 to 2,500 units per year, LCC 2008e, 17). During the 2000s it remained at a very low level (around 1,000 units per year) and was exceeded in scope by demolitions that amounted to over 1,000 units per year and reached over 2,000 in 2006.

Figure 3.4.4: Housing units, new constructions and demolitions in Leipzig 1997-2007



Note: The increase of the number of housing units in 1999 was a result of an administrative reform that enlarged Leipzig's territory
Source: UFZ database

In Leipzig's suburban zone, the number of building completions decreased after 2001 and remained at a very low level until the end of the 2000s (below 1,000 units per year). Demolitions in the suburban areas, by contrast, saw an increase from 2002 onwards. In some years their number even exceeded the number of building completions (LCC 2008c, 12-13). While the stock of multi-storey buildings decreased from 2001 – 2007 by 2.3 per cent, the stock of detached houses increased by 12 per

cent. This clearly shows the focus on demolitions and the on-going suburbanization (although a percentage of detached housing has also been built within the city).

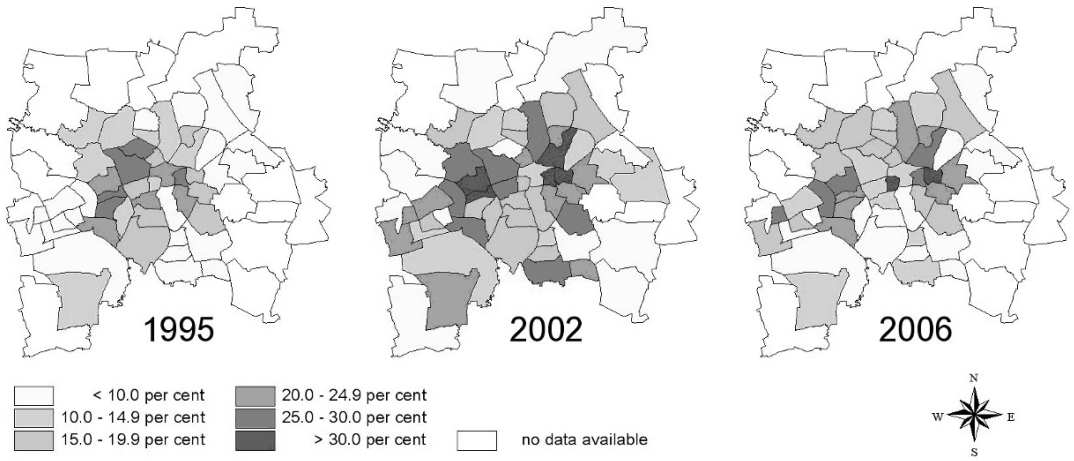
While demolition took place mainly in prefab housing areas, newly built housing was erected on the outskirts of the city; the housing stock in most of the pre-war inner-city areas remained unchanged. Newly built housing there was mainly due to inner-city detached housing (*Stadthäuser*). Urban shrinkage never affected the whole territory if the city in the same manner (see also LCC 2008e, 18).

Table 3.4.2: Development of housing vacancies in Leipzig 2002-2007 in relation to construction age

	Housing stock		Vacancies 2002		Vacancies 2007		Change 2002-2007		
Date of construction	2002	2007	Total	Per cent	Total	Per cent	Total	Per cent change	Per cent of stock
Until 1948	175,000	171,813	47,000	27	32,000	19	-15,000	-32	-8
1949 - 1990	100,228	95,631	15,000	15	9,500	10	-5,500	-37	-5
Since 1991	46,535	51,779	2,000	4	1,500	3	-500	-25	-1
Total	321,763	319,223	64,000	20	43,000	13	-21,000	-33	-6

Source: UFZ database, Monitoringbericht 2008, 15

Figure 3.4.5: Vacancy rates in Leipzig's districts 1995, 2002, 2006



Source: Arndt 2008

On analysing statistics some important characteristics about the development of Leipzig's housing stock become clear. Firstly, contrary to the development of households, the housing stock was expanded by more than 36,000 flats (which made up 11.6 per cent of the total stock in 2007) in the time examined. Secondly, the peak of new constructions occurred in the late 1990s when these were heavily subsidized. Since 2000 construction activities have considerably decreased, yet more so in the city than in its surroundings. Moreover, it is only very recently that more new housing units have been built inside the city than outside (which can be interpreted as a trend of reurbanization). Thirdly, although demolitions helped to tackle oversupply, they hardly matched new constructions. In the period from 1997 to 2007 newly constructed housing units comprised 174 per cent of the number of

demolished ones. If new constructions in the region are added, nearly three times as many flats have been built as demolished (Figure 3.4.7).

Figure 3.4.6: Vacant housing

Source: Annegret Haase

As a consequence of both population decrease and housing stock increase, Leipzig represents an urban housing market with a sustaining supply surplus. The period where housing vacancies reached the highest percentages was also characterized by the highest level of housing mobility in the city, a housing mobility that was much higher than in western German cities that have no supply surplus housing markets (Steinführer et al. 2009). Around 2000 – due to many vacant flats also in newly renovated buildings and moderate rents – it was possible for a wide range of residential groups (including those with a limited income) to move and look for appropriate housing.

The problem of housing vacancies does not affect all parts of the city. While some districts do meanwhile have almost next to no vacancies, others continue to suffer from shares of more than 30 per cent vacancies. In some neighbourhoods, whole streets, parts of streets or neighbouring buildings or blocks are vacant (see Figure 3.4.5 and 3.4.6). In many cases, the districts hit by vacancies also represent those with a high presence of low income groups and high levels of unemployed persons and other disadvantaged social groups. This “coincidence” of social and urban or built patterns has consolidated over the 2000s (see Figure 3.4.5 above and section 3.1 of this report). Or, to put it differently, urban shrinkage relates to particular patterns of segregation of the urban space, building stock and residing population.

Figure 3.4.7: Demolition of Housing

Source: Matthias Bernt

Housing vacancies do not only represent one of the most dramatic and visible impacts of urban shrinkage in Leipzig. This also presents one of the top priorities to be solved or improved for local urban planners. The city of Leipzig tries to counteract the housing vacancy problem with different counter-strategies, although they refer to specific places and residential groups and cannot be seen as a general alternative to demolition as the main instrument to balance the housing market. Some examples of these strategies are:

- The municipality supports instruments that encourage people to stay in the city and counteract a further out-migration into the suburban zone. The support of owner-occupied housing in old built-up stock or newly built detached housing in the inner city forms a part of this reurbanization policy (the so-called *Selbstnutzer* programme, see section 2.3 of this report). It is mostly better-off households (families and couples) who benefit from these incentives, and according to research, most of them never did plan to move to the suburbs. Most of the programme sites are located in attractive inner-city districts, only few of them are to be found in areas especially hit by urban shrinkage. Therefore, the *Selbstnutzer* strategy has to be seen as a niche project that will not be the solution for mass vacancies in Leipzig (Steinführer et al. 2009; Bernt 2009).

- In 2004, the city and a civic association (*HausHalten e.V.*) cooperated in order to maintain vacant buildings along big streets. The flats in such "guardian" houses are given to associations and initiatives that use the rooms for their activities. One flat is continuously inhabited by a "guard" who cares for the house. In this way, the buildings are kept in a habitable state and do not run the risk of dilapidating further and being demolished. Currently 12 "guardian houses" exist in Leipzig, mostly along big streets in western, eastern and northern inner-city districts particularly hit by urban shrinkage and housing vacancies.

- Some years ago a model was developed in Leipzig about how to keep vacant plots from further dilapidation: the so-called *Gestattungsvereinbarung* is an agreement between the owner of the plot and a user who uses the plot for a given time with the acceptance of the owner (see in more detail section 3.6 of this report).

According to the results of the municipal survey in 2007, the mean living space per person increased to 44.4 square metres. Compared with 1993, it increased by almost 10 square metres per inhabitant or by 27 per cent. The main reason for this increase relates to the downsizing of households. A consequence during the last few years was a constant rise of the expenditures for housing in relation to the monthly income from 17 per cent in 1993 to 34 per cent in 2006 (LCC 2008e, 19-20).
The problem of residential vacancies is closely connected to other trends which characterize more recent developments in Leipzig's housing market:

- As the population shrinkage goes hand in hand with an aging of the population providing adequate housing is becoming a more severe problem. Due to the different age structure of neighbourhoods, this is especially the case in prefab neighbourhoods of the 1960s and 1970s – which at the same time have become the focus of demolitions and housing market renewal.

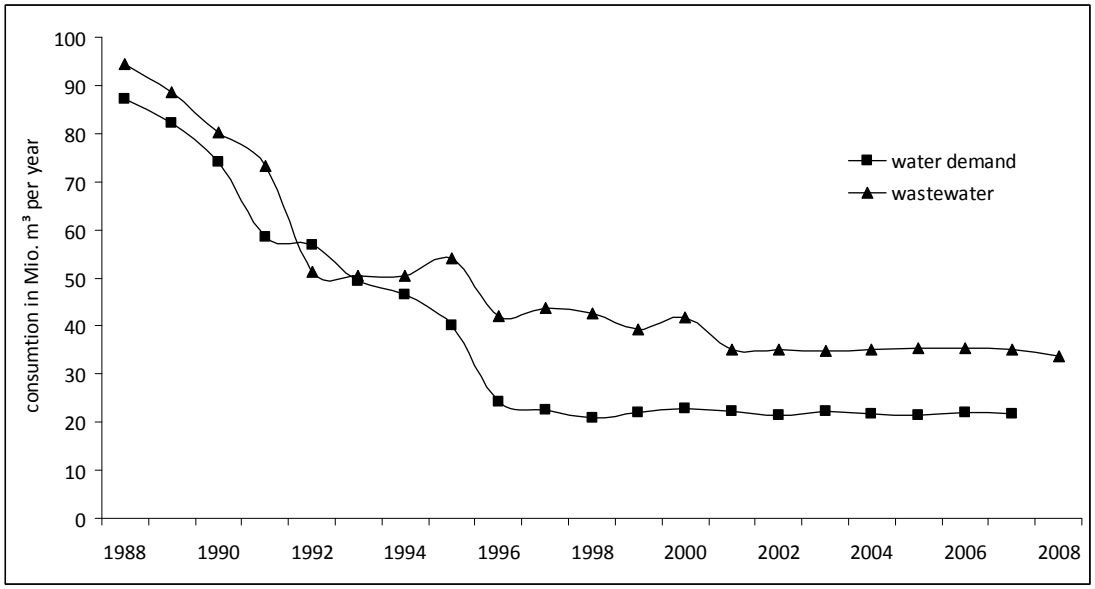
- The number of poor households has increased tremendously in the last couple of years. Altogether 79,000 households (28 per cent) are estimated to be poor, and thus the demand for small and inexpensive apartments has increased. As these are more concentrated in peripheral prefab areas, social segregation is becoming a more relevant problem.

- The scope of housing vacancies and related processes of socio-spatial differentiation in the city (see above) was driven mainly by out-migration in the 1990s. Since 2000, it is mainly in-migration that drives further socio-spatial differentiation between the urban districts. Subsequently, the housing policy of owners comes more and more into focus as a driver of the allocation occupancy of stocks in terms of socio-economic characteristics of the tenants and processes of social streamlining and exclusion. This will have implications for the housing market policy and urges a further observation of stocks, their owners and interests.

3.5 Technical infrastructure

The consequences of population losses in Leipzig are not only widespread housing vacancies, but also a falling demand for water, as well as wastewater and garbage disposal, central heating and public transport. Water demand has thus fallen from 87 Mio m^3 per year (1988) to 21 Mio m^3 (2007), residual waste disposal from 187,300 tons to 79,082 tons in the same period, the number of public transport passengers per day has reduced by nearly two thirds, the demand for central heating has gone down from 2,212 Gwh/year (1990) to 1,554 Gwh/year (2008). Together with more modern technologies, population loss has thus effectively reduced the demand for infrastructural amenities (Figure 3.5.1).

Figure 3.5.1: Water and waste water demand 1988-2008



Source: UFZ database

However, the situation is fairly complex and can only be understood against the background of the historic development of the city. The essential parts of Leipzig's infrastructural grid were built at the beginning of the 20th century, at a time when population growth was taken for granted and an increase in the number of inhabitants to a level of one million was expected. Moreover, as described above, Leipzig experienced a dramatic change of its settlement structure in the 1990s, with considerable consequences for infrastructure provision:

- deindustrialisation led to the closure of existing industries with an inner-city location, new companies tended to open in peripheral rather than in central locations,
- new constructions were for the most part placed in suburban locations,
- large-scale sales structures also tended to be built at the fringes, often in close proximity to freeways.

Thus, the collapse of large industrial customers together with better technologies and population losses has reduced the overall consumption of water to less than a quarter in the course of one decade. As both the length and the diameters of the

piped networks have been dimensioned to manage the peak water consumption, this leads to a situation whereby the utility system is considerably oversized in relation to recent consumption. Additionally, the grid to be managed by the water companies grew enormously and the networks for piped drinking water and wastewater increased from 3,607 km (1988) to 5,748 km (2007). To quote a planner from Leipzig's municipal water company: "We have the demand of 1945, with a network of the 1990s."[5]

This situation leads to numerous technical problems (Koziol, 2004, 122-123) and presents a danger for the quality of the water supply. In order to maintain technical and hygienic standards, additional technical measures, such as flushing, a reduction in the tubes' diameter, pressure increase, makeshift pipes, etc., are necessary. In the face of imminent quality problems, the adjustment of plants and networks becomes more and more urgent. Although these adjustments are technically unproblematic in most cases, they cause serious problems from an economic point of view. They generate high additional expenses, while revenues have declined. Moreover this need for additional expenses comes at a time when water suppliers have just made huge investments in the last decade. Since the 1990s investments have not yet been depreciated, a high number of companies and associations find themselves in a situation in which they have to put up with both a reduction in profits as well as having to pay off high liabilities. Moreover, often the peripheral prefab housing estates, hence the areas with younger, better maintained and less depreciated networks are often the focus of large scale urban renewal programmes that include demolitions, whereas inner city areas with significant maintenance backlogs have to be maintained. At the same time, suburbanisation leads to a lower consumer density, which increases the fixed costs of the supply companies.

The situation is especially problematic in Leipzig because the water network has, at least in the central parts, reached an age where the end of the usage period has been reached and considerable investments are needed to make sure that future requirements can be met. Paradoxically, the need for redoing the existing grid is thus most pressing in those areas that are to be consolidated in the future, whereas the network in the peripheral prefab estates (that was mainly built in the 1970s) is still functioning effectively. Against this background the uncertainty about future settlement structures becomes an immense problem for infrastructure suppliers who need to place investments within a very long-term perspective. Moreover, connecitivities play an immense role in piped networks, so that large-scale planning, instead of piecemeal incremental changes is necessary from a technical point of view. Infrastructure suppliers, and within them most of all the water and wastewater company, thus regularly call for more coordination and long-term planning. In practice this has, however proved to be hard to achieve.

[5] The interview was hold in 2007.

3.6 Land use and environmental quality

New land uses in the city of Leipzig and the surroundings

The city of Leipzig is a compact city – compared to its number of inhabitants, it has only a small territory and is, therefore, densely built. This brings about consequences for the land use. The city experienced only little urban sprawl in the post-Second World War period, except for the building of a few big housing estates on the urban fringes. These estates are very densely built and they are well connected with the city centre via public transport. During the 1990s, the creation of a number of small- and medium-scaled as well as some big residential and commercial extensions occurred at the urban peripheries and in the wider surroundings. Subsequently, the city sprawled despite its considerable population loss (see sections 2.1 and 2.3 of this report, Nuissl and Rink 2005). Generally speaking, the share of the built environment increased in comparison to the situation before 1989. More space was dedicated to housing and commercial purposes.

Table 3.6.1: Land use in Leipzig over time

Year	Total area	Built-up areas and related open spaces	Recreation areas	Municipal traffic areas	Arable Land	Forest	Water
1996	29,173	7,165	1,238	3,004	13,651	1,795	611
2000	29,754	7,718	1,455	3,297	13,176	1,631	559
2004	29,760	8,244	1,680	3,476	12,183	1,703	551
2008	29,736	8,393	2,434	3,505	11,298	1,938	849

Source: UFZ database

As the Table shows for the period 1996 – 2008, the land use structure changed over time (Table 3.6.1). One can observe an increase in built-up and traffic areas, whereas the share of arable land decreased. The changes of the built-up areas in relation to the period before 1996 were remarkable, especially between 1996 and 2000 as well as between 2000 and 2004 (7 and 6 per cent). At the same time, the share of forests and water surfaces increased too, mainly due to the conversion of former opencast mines into lakes and recreational areas.

Emergence of brownfields in the city

At the same time – as a consequence of the deindustrialisation process – a high number of brownfields emerged in the city. On the one hand, these are brownfields that result from the breakdown of industry in the western and northern parts of the city. These constitute especially industrial brownfields, but commercial, railway and military brownfields as well (Figure 3.6.1). For the past several years brownfields have appeared, on the other hand, as a result of the demolition of houses in the inner city too, especially in the prefab housing estates but also in inner-city old built-up districts (Figure 3.6.2). In the course of urban restructuring, approximately 30 ha of brownfields have emerged since 2000 as a result of the demolition of housing. As

a result of these processes, Leipzig faces a high number of brownfields. The city is, subsequently, forced to find solutions for a new use or re-use of them. As Figure 3.6.3 shows, an increasing number of urban brownfields came into new or re-use during the last years. In 2007, about one third of all existing (former and current) brownfields was under new use. There are various forms of re-use both for the long-term and interim uses.

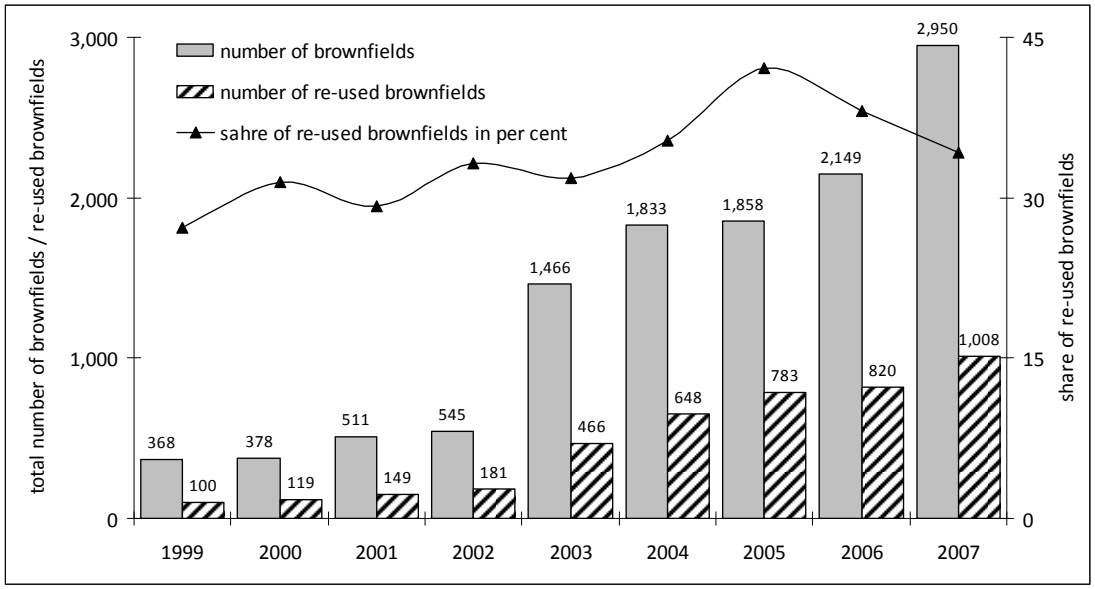
Figure 3.6.1: Post-industrial brownfield

Source: Dieter Rink

Figure 3.6.2: After-demolition brownfield

Source: Dieter Rink

Figure 3.6.3: Brownfields in Leipzig 1999-2007



Source: IGNIS Leipzig 2010

As a consequence of the above mentioned processes, the urban fabric of Leipzig has become more disperse or, to use a new term which was brought into the debate by eastern German urban planners from Leipzig, “perforated”. That also means that the urban fabric is becoming less dense and heterogeneous and that unused urban lands are to be found at many places within a city’s boundaries. The term perforation itself was used in this way during the debate about shrinking cities in eastern Germany (Lütke-Daldrup 2001). The idea of perforation implies that urban areas with strong demographic decline are however sprawling (Haase, D. et al. 2008; Nuissl and Rink 2005). Thus, a heterogeneous mosaic of growing, stabilising and declining urban structures is developing. Perforation affects mainly those areas where there are the most brownfields, be it as a consequence of deindustrialization or demolition of housing stock, for instance in the industrial belt in the west of the city (Plagwitz and adjacent districts) as well as the large housing estate Grünau. In inner-city residential areas, perforation emerges along some main roads where housing stock has been demolished (mostly true for some parts of the inner east of Leipzig).

In general the city of Leipzig follows the vision of the “compact city” and tries to organise the restructuring as a phase out from the periphery to the core. Additionally, the city tries to combine a reduction of land consumption with an improvement of the quality of life. Concerning the new or re-use of urban brownfields, Leipzig gives priority to a “twofold inner-development” instead of to an outer-development (cf. Muschak et al. 2009). This means that generally developments should be concentrated within the city’s boundaries in the form of re-use, redevelopment and densification. There are two strategies for the restructuring of urban brownfields: on the one hand, brownfields are planned to be revitalized. For this purpose, different ideas were developed: loft-housing in former industrial structures, the erection of town houses (detached housing in inner-city locations - *Stadthäuser*) and the interim use of vacant housing and plots (*Gestattungs-*

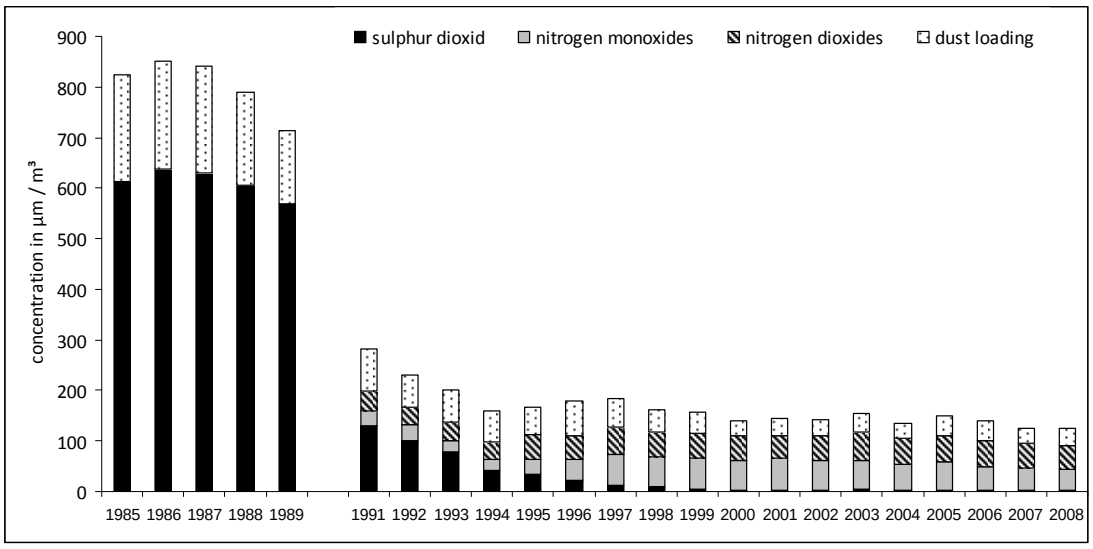
vereinbarungen, *Wächterhäuser*, see also section 2.3 of this report). The *Gestattungsvereinbarung* enables landlords to improve their brownfield areas and to make them accessible to the public for a certain time with financial support from the municipality. On the other hand, some of them should be renaturalized. In this vein urban parks have been created on the sites of former industrial and railway brownfields (Figure 3.6.1). A very recent initiative tests the acceptance of "urban forests" on vacant lots at different places in the city. This idea supports the goal of an improvement of open space services and the urban ecology according to the vision "more green, less density." As a result of all these initiatives, a dynamic system of new open spaces has emerged in Leipzig, which is steadily changing due to new supplies of and demands on urban land. Obviously, the population losses in the last few decades did not lead to a reduction of land consumption in a general manner but rather to a diverse pattern or mosaic of densities and perforation which demands site-specific actions.

Environmental quality

The quality of the environment in Leipzig and the surrounding region was appalling during the period of the GDR. Air pollution was severe due to the regional industries (especially the chemical and energy industries) and the Leipzig-Halle conurbation was one of the most badly polluted regions in Europe. The maximum air-pollution limits for almost all relevant chemicals were by far exceeded. Nowadays, this problem has almost completely disappeared: the level of pollution significantly decreased due to almost complete deindustrialisation (Figure 3.6.4; see also section 2.2 of this report). At the same time, the structure of environmental loads changed significantly: whereas today "classical" pollutants such as sulphur dioxides and particulates no longer cause severe problems, traffic-related pollutants such as benzene, soot, nitrogen oxide and ozone merit critical attention. This is also true for carbon dioxide, although emissions have decreased enormously since 1990 due to deindustrialisation and improvements in both the energy sector and transport technologies. This relates to the considerable increase ("explosion") in the motorisation rate in eastern Germany where car traffic more than doubled after 1989. At the same time, noise pollution caused by traffic has become a problem in the residential areas along and close to the main roads.

Leipzig's population benefited as a whole from the decreasing pollution rates. The new environmental burdens caused by traffic have led to new foci of pollution on a small scale: it is mainly people living along the main transport axes who suffer from these new atmospheric loadings. This has led to two consequences: due to the supply surplus in housing, many flats along the main roads are vacant and quasi un-lettable because of the traffic and noise pollution. If they are inhabited, then it is by low-income households or social benefit recipients who have only a limited choice of where to live.

Figure 3.6.4: Environmental pollution in the city of Leipzig 1985-2008



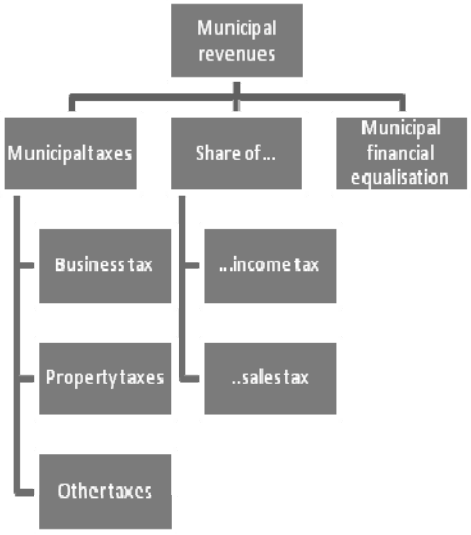
Source: UFZ database (measuring point: Leipzig city centre)

3.7 Municipal finances and budget

Municipal budgets

In Germany, the structure of municipal budgets is fairly formalized, so that opportunities and restrictions are pretty much the same for different cities in relation to shrinkage. In this system main revenues come from three sources (Figure 3.7.1):

Figure 3.7.1: Municipal revenues in Germany



Source: authors' work

Thereby the own revenues can mainly be generated from business taxes (whose structure was changed in favour of municipalities in the early 2000s) and property taxes. Other taxes (entertainment tax, dog tax, fees and concessions) play a minor role. A major part of municipal revenues stems from equalisation schemes that work in the context of the federal state. Thus municipalities receive a share of income and business taxes (which is set in relation to their taxing capacity) and they profit from both committed and uncommitted allocations of funds from upper levels of government (state and federal government), which is calculated by complex codes. Especially for economically weak municipalities these allocations make up for a lion's share of their budget. They are calculated on the basis of population Figures, student numbers, and equalised in relation to the taxing capacity of the particular federal state (*Bundesland*) and the centrality of the respective place.

From this short overview it follows that, although the system of financial equalisation is set effectively reducing the differences in revenues between economically strong and economically weak municipalities, population losses and deindustrialisation severely impact on the revenues of shrinking cities. Business taxes and property taxes, as the main sources of autonomous taxes, are highly sensitive to economic downturns and financial equalisation schemes are (to a large degree) based on population Figures and student numbers. Thus, cities that lose population and economic functions nearly unavoidably lose tax revenues too. This is especially problematic because East German cities are faced with a number of problems on the expenditure side of their budgets. Here, four aspects for the most part form interrelated burdens (Mäding, 2004, 88-89):

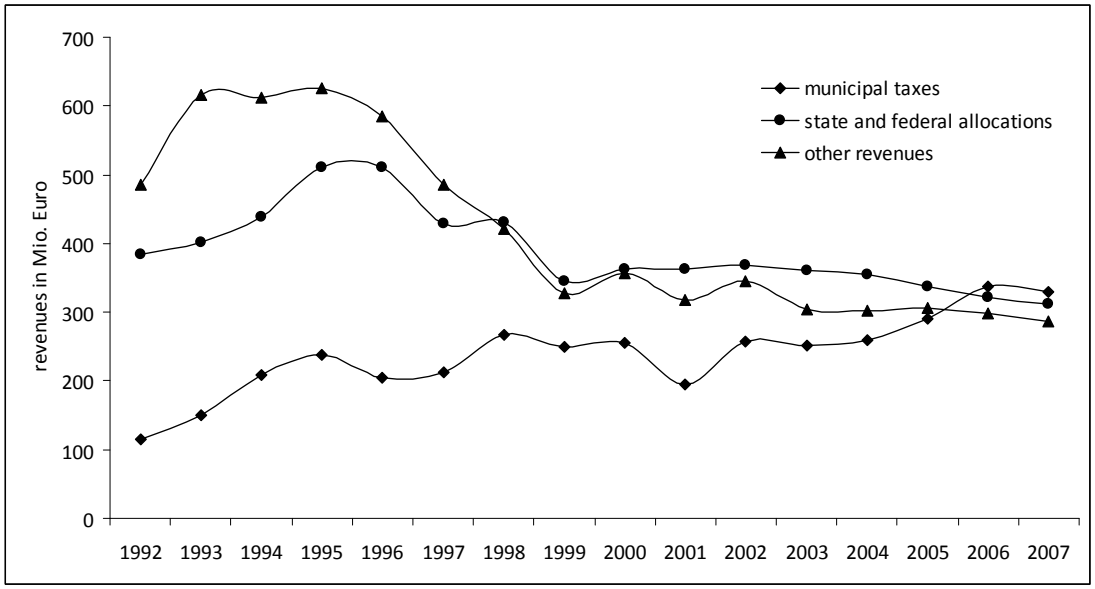
- persistence of expenditures in the event of a dwindling population,
- rising per capita spending owing to the effects of demographic structural changes (ageing, heterogenization, individualization);
- supplementary spending owing to the effects of internal migration (East-West, suburbanisation);
- additional spending in pursuit of an "excessive" attractiveness policy in "cut-throat" competition for residents.

In addition to these factors, municipalities have a legal obligation to provide several services (*kommunale Pflichtaufgaben*), like social welfare, that are required by law and make up the lion's share of expenditures. In this context, the last few years have been characterized by a continuous shifting of obligations for the provision of compulsory services from upper state levels towards municipalities. Most of all welfare benefits have had to be paid by municipalities since the welfare reforms (*Hartz IV*) in 2003. Thus, in addition to "shrinkage-specific" expenditures, municipalities with high unemployment figures are burdened with growing social spending too. Altogether, deindustrialization and population losses thus not only lead to problematic expenditure structures, but, on top of this, they lead to additional costs which the municipalities affected can hardly avoid.

Leipzig's municipal finances: Revenues and expenditures

This situation is nearly paradigmatically reflected in Leipzig's municipal budget all through the years since 1992 (Figure 3.7.2). No data on the budget is available for the time before 1991. The most striking characteristic of the budget in respect to the revenue-situation is that budget appropriations (by the federal government and the state of Saxony) from tax equalisation schemes form the most important source of revenue making up between a quarter and a third of the whole budget. Thereby fund allocation has considerably decreased, by about one third since the early 1990s. At the same time autonomous municipal revenues have increased considerably, both as a consequence of economic recovery and a change in tax laws concerning business taxes.

Figure 3.7.2: Revenues in Leipzig's administrative budget 1992-2007



Source: LCC 1990a-2009a, own calculation

In addition to continuous revenues, Leipzig has enormously profited from earmarked allocations of funds from upper state levels which, nearly every year since 1991, made up around 100 million Euro of Leipzig's spending and were used for the refurbishment of existing infrastructures as well as for large scale projects like construction of a new railway-tunnel, the rebuilding of the university campus, or the renovation of historic monuments. However, incoming revenues hardly matched necessary expenditures throughout the analyzed period. Here, the biggest single items are personnel costs and social welfare. Despite immense wage increases in the period from 1991 until now, the city has managed to reduce the expenses for personnel by one third. This has only been possible through a dramatic reduction of public service personnel, through reorganization of existing administrations, outsourcing, and service-cuts.

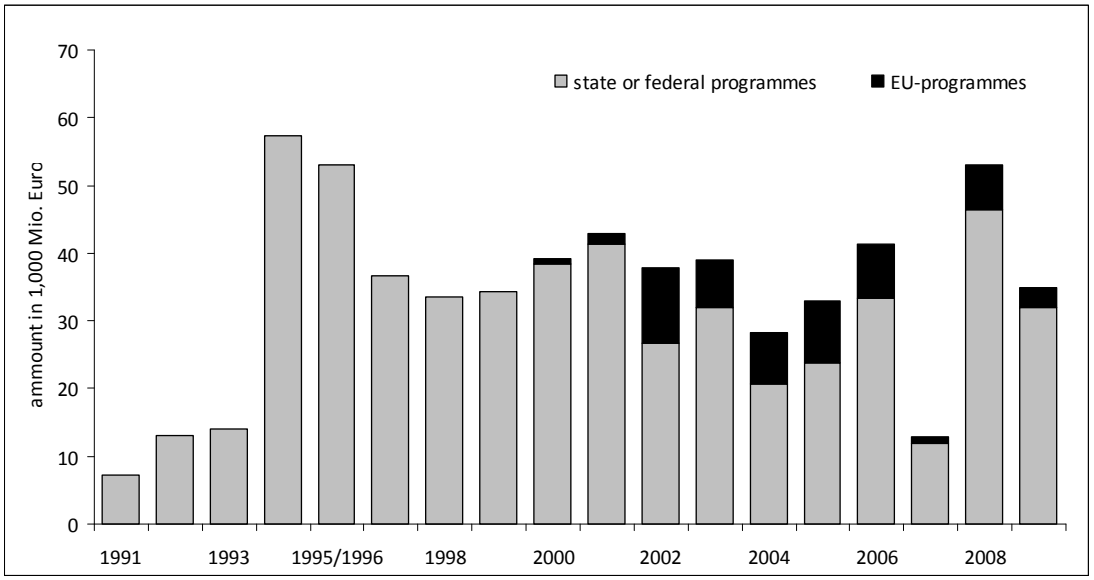
The expenditures for schools have nearly halved, as a consequence of decreasing student-numbers and school closures. Construction expenses have been reduced

extremely. Quite in contrast, expenditures for social welfare remain on a high level. They were particularly high in the early to mid 1990s when unemployment rates rocketed, and since the federal welfare reforms in 2003 when the obligations towards the unemployed were shifted from the federal state towards the municipalities. Altogether, municipal expenses have been considerably reduced from a peak of 1.9 billion Euro in 1995 to a recent level of 1.1 to 1.2 billion Euro. This has been made possible by service cuts, an adjustment of existing infrastructures, and personnel lay-offs. Leipzig is structurally dependent on support from upper state-levels, and regular transfers make up more than one third of the budget. Yet, neither the own tax income, nor the allocations from the federal state, are sufficient to close the gap between expenditures and revenues. As a consequence, Leipzig has had to downgrade public services, as well as take loans and engage in all sorts of bidding procedures and other financial activities (see below).

Utilisation of subsidies

Leipzig has been fairly active in all kinds of bidding procedures for public subsidies and has thus managed to make use of a plethora of programmes for its urban development issues. Figure 3.7.3 shows the usage of altogether 19 programmes from the EU, the federal state, and the state of Saxony that have been applied in the sector of urban development in Leipzig. Altogether the volume of these subsidies makes up about 609 million Euro in the period 1991 – 2009. Compared to the overall volume of spending for construction activities in the same period (3 billion), it is obvious that gaining earmarked subsidies in specific programmes has become "business as usual", without which crucial parts of Leipzig's development could not be financed.

Figure 3.7.3: Funds from programmes for urban development in Leipzig 1991-2009



Source: LCC 2009, authors' calculation

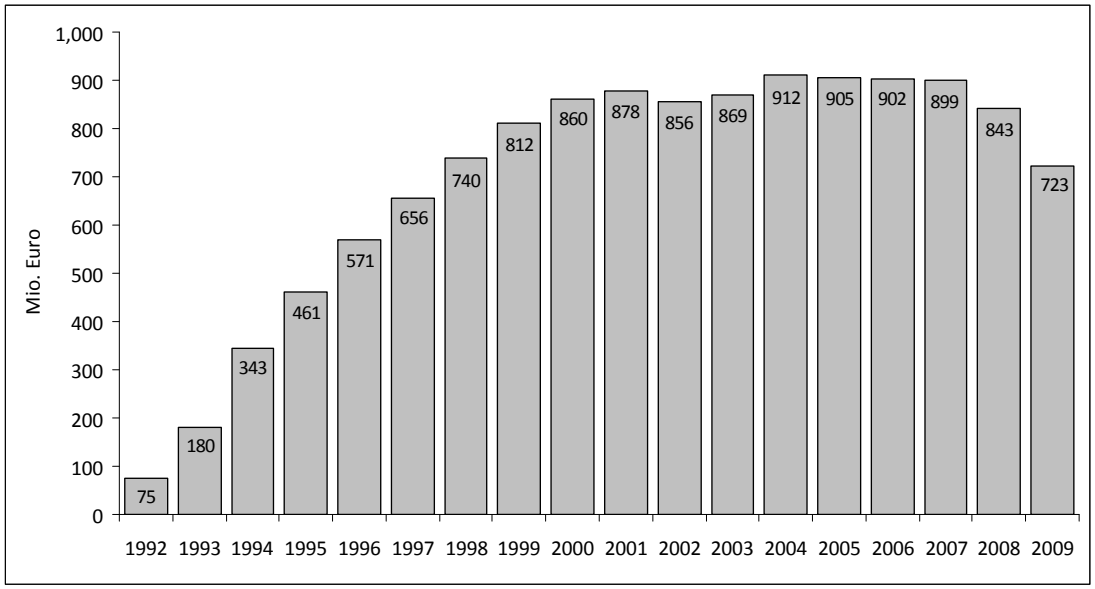
The difficulty with building on external subsidies is, however, twofold: a) as grants are earmarked and subject to complicated bureaucratic and political procedures,

agenda-setting power is shifted towards upper levels of statehood, b) many of the programmes require a co-financing by the municipality, so that, given the tight budget, gaining public subsidies goes hand in hand with additional expenses.

Borrowing and debts

As neither tax equalisation schemes, nor additional subsidies were sufficient to close the gap between revenues and expenditures, Leipzig started as early as 1992 to take loans, primarily for infrastructure projects (like the renovation of schools and hospitals, the construction of streets and bridges). At this time the necessity to go into debt was mainly justified by the immense backlog in nearly all sectors of public life and the need to catch up to the standard of western cities. Thus, until 1996, infrastructure projects were financed using a mix of public grants, own revenues, and municipal loans (Stadt Leipzig 2009, 3). Starting in 1997, this form of financing replaced allocations from the state of Saxony that had been earmarked for the financing of particular infrastructure.
Since that time loans have been primarily used for financing economic development projects, like the New Leipzig Trade Fair (Neue Messe), or the expansion of the airport. As a consequence, the debt load increased continuously between 1992 and 2004 (see Figure 3.7.4), Since the beginning of the millennium, partly as a result of demands from supervising regional agencies and the state of Saxony, Leipzig changed towards a course of strong fiscal austerity and managed to reduce its liabilities. As a result of both considerable municipal borrowing and decreasing population numbers per-capita debt has tremendously increased in the analyzed period. With a per-capita debt level of 1,648 Euro (2008) Leipzig lies at place 5 in the inter-municipal comparison of the twelve biggest German cities and is in the top range (ibid., 8).

Figure 3.7.4: Development of dept level 1992-2009



Source: UFZ database

With the aim of meeting liabilities and making leeway for necessary projects, Leipzig has not only continued to take loans but, moreover, municipal administrations and companies have used innovative, and often highly risky, financial instruments to acquire additional capital. Most of all, Cross Boarder Leasing agreements (CBL) have been used intensively and municipal infrastructure like hospitals, tram-lines, and water pipes have been sold to and leased back from global financial investors. It is only very recently, in the wake of the global financial crisis, that it has become clear that many of the existing contracts imply serious risks – mostly to the disadvantage of the participating municipality.

To summarize, the following conclusions can be made:

- Notwithstanding the system of financial equalisation and allocations of revenues, both autonomous taxes and funds received from upper levels of government are seriously affected by a population decline.

- At the same time expenditures remain on a high level. This is mainly due to an increase in social spending, as a consequence of the miserable economic situation and a number of additional tasks that are caused by shrinkage.

- Thus, a structural gap between falling revenues and high expenditures emerges. Although Leipzig decreased expenditures with the help of strong politics of budgetary discipline, cuts on all sorts of spending and a reorganization of the administration, municipal efforts have proved to be unable to close this gap.

- As a consequence, Leipzig is in strong need of acquiring external resources to finance its projects. Within this context mainly three sources have been used: a) borrowing, b) participation in subsidy programmes from state, federal and EU-levels, c) new financial instruments (CBL), often connected with high risks.

4 ANNEX: DATABASE

The following annex lists all data the Figures in the text are based on (UFZ database).

Figure 2.1.1: City of Leipzig – population development 1933-2008

Year	Inhabitants	Year	Inhabitants
1933	713,470	1979	563,225
1939	702,155	1980	562,480
1945	584,593	1981	562,266
1950	617,574	1982	557,923
1952	624,070	1983	558,994
1953	618,433	1984	555,764
1954	619,830	1985	553,660
1955	613,707	1986	550,641
1956	607,523	1987	549,230
1957	598,909	1988	545,307
1958	593,902	1989	530,010
1959	592,821	1990	511,079
1960	589,632	1991	503,191
1961	585,258	1992	496,647
1962	587,226	1993	490,851
1963	588,135	1994	481,121
1964	594,880	1995	471,409
1965	595,660	1996	457,173
1966	594,099	1997	446,491
1967	591,538	1998	437,101
1968	589,064	1999	489,532
1969	585,781	2000	493,208
1970	582,885	2001	493,052
1971	580,711	2002	494,795
1972	577,495	2003	497,531
1973	574,432	2004	498,491
1974	570,972	2005	502,651
1975	566,630	2006	506,578
1976	564,596	2007	510,512
1977	564,306	2008	515,469
1978	563,980	2009	n.a.

Sources: LCC 1991a-2009a; Staatliche Zentralverwaltung für Statistik, Bezirksstelle Leipzig: Statistische Jahrbücher des Bezirks Leipzig (1970, 1973, 1975).

Figure 2.1.2: City of Leipzig – natural population development and migration balance 1980-2008

Year	Natural balance	Migration balance	Year	Natural balance	Migration balance
1980	-1,293	548	1997	-2,551	-9,983
1981	-1,170	956	1998	-1,998	-7,556
1982	-969	-682	1999	-1,843	315
1983	-766	1,837	2000	-1,676	1,012
1984	-957	-2,272	2001	-1,609	1,453
1985	-1,021	-1,083	2002	-1,584	3,330
1986	-1,537	-1,482	2003	-1,547	4,292
1987	-831	-580	2004	-912	1,843
1988	-1,033	-2,890	2005	-1,218	5,353
1989	-1,107	-15,801	2006	-1,012	4,939
1990	-2,064	-16,403	2007	-664	4,592
1991	-3,745	-4,143	2008	-265	5,221
1992	-3,793	-2,751			
1993	-3,919	-2,484			
1994	-3,726	-6,005			
1995	-3,580	7,167			
1996	-3,025	-11,228			

Sources: LCC 1991a-2009a; Staatliche Zentralverwaltung für Statistik, Bezirksstelle Leipzig: Statistische Jahrbücher des Bezirks Leipzig (1970, 1973, 1975).

Figure 2.1.3: In- and out-migration 1990-2008 according to target region

Year	Germany	Western Germany	International	Suburbia	Total
1990	-6,270	n.a.	n.a.	n.a.	-17,016
1991	-5,564	-5,574	1,345	n.a.	-4,143
1992	-4,076	-2,427	1,305	-575	-2,751
1993	-4,685	-1,320	2,201	-1,121	-2,484
1994	-8,201	-555	2,196	-6,305	-6,005
1995	-11,323	-248	4,156	-9,365	-7,167
1996	-12,789	-505	1,561	-11,595	-11,228
1997	-10,585	388	683	-11,683	-9,983
1998	-7,345	-847	-211	-1,385	-7,556
1999	-1,531	-1,149	1,846	-2,727	315
2000	-415	-1,802	1,427	-1,777	1,012
2001	-139	-2,524	1,592	-422	1,453
2002	2,068	-1,830	1,262	151	3,330
2003	3,594	-273	698	125	4,292
2004	3,454	-444	-1,611	37	1,843
2005	4,403	-720	950	596	5,353
2006	4,835	-483	104	659	4,939
2007	3,780	-714	812	669	4,592
2008	4,494	-958	727	1,287	5,221

Sources: LCC 1991a-2009a; Staatliche Zentralverwaltung für Statistik, Bezirksstelle Leipzig: Statistische Jahrbücher des Bezirks Leipzig (1970, 1973, 1975).

Figure 2.1.4: In-migration 1990-2008 according to target region

Year	Germany	Western Germany	East Germany	International	Suburbia	total
1990	8,149	n.a.	n.a.	n.a.	n.a.	13,277
1991	9,146	3,550	5,596	1,950	n.a.	11,172
1992	7,932	3,730	3,086	2,707	1,116	10,659
1993	7,434	3,519	2,797	3,735	1,118	11,169
1994	8,540	3,916	2,778	4,557	1,846	13,097
1995	9,638	3,975	3,415	8,113	2,248	17,751
1996	11,351	4,115	4,101	7,293	3,135	18,644
1997	15,014	5,191	5,604	6,107	4,219	21,077
1998	15,350	4,453	5,962	4,151	4,935	19,501
1999	15,982	4,579	6,833	5,033	4,570	21,015
2000	16,521	4,676	7,384	4,319	4,461	20,840
2001	16,956	4,664	7,572	4,409	4,720	21,365
2002	18,090	4,903	8,317	4,552	4,870	22,642
2003	19,015	5,405	8,937	4,259	4,673	23,274
2004	19,253	5,492	9,234	4,053	4,527	23,306
2005	20,026	5,078	10,272	3,852	4,676	23,878
2006	20,126	5,236	10,531	3,843	4,359	23,969
2007	20,227	5,434	10,405	4,023	4,388	24,250
2008	21,412	5,523	10,731	4,228	5,158	25,640

Sources: LCC 1991a-2009a; Staatliche Zentralverwaltung für Statistik, Bezirksstelle Leipzig: Statistische Jahrbücher des Bezirks Leipzig (1970, 1973, 1975).

Figure 2.1.5: Out-migration 1990-2008 according to target region

Year	Germany	Western Germany	Eastern Germany	International	Suburbia	total
1990	14,419	n.a.	n.a.	n.a.	n.a.	29,680
1991	14,710	9,124	5,586	605	n.a.	15,315
1992	12,008	6,157	4,160	1,402	1,691	13,410
1993	12,119	4,839	5,041	1,534	2,239	13,653
1994	16,741	4,471	4,119	2,361	8,151	19,102
1995	20,961	4,223	5,125	3,957	11,613	24,918
1996	24,140	4,620	4,790	5,732	14,730	29,872
1997	25,599	4,803	4,894	5,424	15,902	31,060
1998	22,695	5,300	11,075	4,362	6,320	27,057
1999	17,513	5,728	4,488	3,187	7,297	20,700
2000	16,936	6,478	4,220	2,892	6,238	19,828
2001	17,095	7,188	4,765	2,817	5,142	19,912
2002	16,022	6,733	4,570	3,290	4,719	19,312
2003	15,421	5,678	5,195	3,561	4,548	18,982
2004	15,799	5,936	5,373	5,664	4,490	21,463
2005	15,623	5,798	5,745	2,902	4,080	18,525
2006	15,291	5,719	5,872	3,739	3,700	19,030
2007	16,447	6,148	6,580	3,211	3,719	19,658
2008	16,918	6,481	6,566	3,501	3,871	20,419

Sources: LCC 1991a-2009a; Staatliche Zentralverwaltung für Statistik, Bezirksstelle Leipzig: Statistische Jahrbücher des Bezirks Leipzig (1970, 1973, 1975).

Figure 2.1.6: In- and out-migration by age groups 1991-2008 (balance)

Year	<18 years	18<30 years	25-30 years	30-50 years	50-65 years	>65 years
1991	-1,871	-510	-395	-830	-469	-463
1992	-1,214	27	-16	-423	-559	-582
1993	-1,225	507	290	-377	-730	-659
1994	-2,335	391	-39	-2,109	-1,104	-848
1995	-2,903	382	24	-1,742	-1,701	-1,203
1996	-3,058	-131	-353	-4,355	-2,223	-1,461
1997	-2,650	1,137	-76	-4,479	-2,597	-1,313
1998	-1,849	1,004	86	-4,073	-1,830	-808
1999	-511	2,698	818	-1,073	-645	-154
2000	-400	2,833	632	-841	-502	-78
2001	-321	1,872	-452	-1,032	-277	59
2002	42	3,643	813	-630	-42	227
2003	83	4,016	1,002	-96	44	245
2004	-28	3,462	792	-953	-723	85
2005	-144	5,407	1,378	-59	-13	162
2006	29	4,979	1,328	-100	-122	154
2007	-170	4,599	893	-82	98	148
2008	-36	4,795	893	133	151	178

Sources: LCC 1991a-2009a; Stadt Leipzig, Amt für Statistik und Wahlen (2008): Zuwanderung nach Leipzig 2007.

Figure 2.1.7: Development of households, single and 3+ households 1971-2007

Year	Number of households	1-person-housholds (%)	3+ households (%)
1971	244,500	32.1	n.a.
1981	237,300	31.4	n.a.
1990	248,500	39.4	n.a.
1995	231,700	37.2	30.7
1998	227,900	38.9	25.9
2000	264,100	42.5	23.9
2007	307,900	53.3	15.2

Source: Mikrozensus, Stadt Leipzig: Statistische Jahrbücher 1991-2008.

Figure 2.1.8: Development of population, households and mean household size 1989-2008

Year	population	Households	Mean size
1989	530,010	248,502	2.1
1990	511,079	239,614	2.1
1991	503,191	268,100	1.9
1992	496,647	240,200	2.1
1993	490,851	243,500	2.1
1994	481,121	238,600	2.1
1995	471,409	231,700	2.1
1996	457,173	226,200	2.1
1997	446,491	224,700	2.0
1998	437,101	227,900	2.0
1999	489,532	253,800	2.0
2000	493,208	264,100	1.9
2001	493,052	272,100	1.9
2002	494,795	278,100	1.8
2003	497,531	278,500	1.8
2004	498,491	280,100	1.8
2005	502,651	290,100	1.7
2006	506,578	298,700	1.7
2007	510,512	307,900	1.7
2008	515,469	306,700	1.7

Sources: LCC 1991a-2008a; Staatliche Zentralverwaltung für Statistik, Bezirksstelle Leipzig: Statistische Jahrbücher des Bezirks Leipzig (1970, 1973, 1975); Mikrozensus, Stadt Leipzig: Statistische Jahrbücher 1991-2008.

Figure 2.1.9: Size distribution of households 1991-2008

			One-person households		2-person households		3-person-housholds		4+ person households	
Year	Total	Mean size	Total	Per cent	Total	Per cent	Total	Per cent	Total	Per cent
1991	268,100	1.9	94,700	35.32	92,200	34.39	47,700	17.79	33,500	12.50
1992	240,200	2.1	85,400	35.55	83,500	34.76	41,000	17.07	30,300	12.61
1993	243,500	2.1	89,700	36.84	84,000	34.50	40,400	16.59	24,000	9.86
1994	238,600	2.1	87,900	36.84	79,200	33.19	42,600	17.85	28,800	12.07
1995	231,700	2.1	86,200	37.20	74,400	32.11	40,900	17.65	30,200	13.03
1996	226,200	2.1	81,900	36.21	78,100	34.53	39,400	17.42	26,700	11.80
1997	224,700	2.0	83,500	37.16	78,800	35.07	37,700	16.78	24,700	10.99
1998	227,900	2.0	88,500	38.83	80,400	35.28	37,400	16.41	21,600	9.48
1999	253,800	2.0	99,900	39.36	88,300	34.79	44,000	17.34	21,600	8.51
2000	264,100	1.9	112,200	42.48	88,900	33.66	39,900	15.11	23,100	8.75
2001	272,100	1.9	122,700	45.09	90,300	33.19	36,700	13.49	22,400	8.23
2002	278,100	1.8	129,500	46.57	93,000	33.44	35,700	12.84	19,900	7.16
2003	278,500	1.8	129,400	46.46	91,600	32.89	36,800	13.21	20,700	7.43
2004	280,100	1.8	125,900	44.95	99,200	35.42	35,900	12.82	19,100	6.82
2005	290,100	1.7	142,400	49.09	97,500	33.61	33,500	11.55	14,000	4.83
2006	298,700	1.7	156,000	52.23	94,800	31.74	31,300	10.48	14,100	4.72
2007	307,900	1.7	164,100	53.30	97,700	31.73	30,000	9.74	14,100	4.58
2008	306,700	1.7	162,800	53.08	96,800	31.56	31,300	10.21	12,600	4.11

Source: Mikrozensus, Stadt Leipzig: Statistische Jahrbücher 1991-2008.

Figure 2.2.1: Development of employment according to sectors 1965-2007

Year	1st Sector	2nd Sector	3rd Sector
1965	1,334	167,084	147,460
1966	1,349	168,181	145,447
1967	1,311	166,444	148,820
1968	n.a.	n.a.	n.a.
1969	n.a.	n.a.	n.a.
1970	330	n.a.	n.a.
1971	373	161,389	156,602
1972	n.a.	137,703	146,784
1973	29	135,169	151,319
1974	479	133,390	154,198
1975	1,664	156,354	131,196
1978	1,295	156,196	132,406
1980	1,199	156,155	130,556
1981	1,245	155,953	134,818
1982	1,232	157,177	137,013
1983	1,218	157,985	137,523
1984	1,239	155,065	138,285
1985	1,221	155,113	138,945
1986	1,210	154,712	140,005
1987	1,222	151,939	140,766
1988	340	152,051	140,574
1989	329	148,496	137,040
1990	200	104,400	145,900
1991	2,500	101,100	148,300
1992	1,600	82,300	148,800
1993	725	72,396	184,886
1994	587	72,347	188,857
1995	1,200	69,000	193,300
1996	1,600	65,700	202,400
1997	1,700	62,300	202,100
1998	1,300	56,700	207,100
1999	1,400	53,200	208,600
2000	1,100	50,800	215,900
2001	1,200	49,100	218,300
2002	900	48,700	221,300
2003	900	49,000	224,100
2004	900	46,900	227,500
2005	800	45,100	229,600
2006	800	44,700	238,700
2007	900	45,500	242,000

Sources: LCC 1991a-2008a; Staatliche Zentralverwaltung für Statistik, Bezirksstelle Leipzig: Statistische Jahrbücher des Bezirks Leipzig (1970, 1973, 1975), own calculations.

Figure 2.2.2: Unemployment and job-creation schemes 1990-2008

Year	Unemployed	Long-term Unemployed	Job-creation scheme ABM	Job-creation shame SAP	Job-creation shame BfB	Job-creation shame early retirement
1990	23,371	n.a.	512	n.a.	n.a.	n.a.
1991	31,913	n.a.	25,435	n.a.	42,862	18,090
1992	30,936	n.a.	25,112	n.a.	38,699	33,442
1993	37,905	8,852	6,569	n.a.	15,544	37,730
1994	31,003	10,560	7,864	n.a.	14,458	29,728
1995	27,466	8,893	7,714	n.a.	8,742	15,519
1996	28,625	7,402	6,717	n.a.	10,015	6,060
1997	36,148	10,062	3,708	n.a.	5,545	593
1998	31,559	9,801	9,972	10,138	6,523	n.a.
1999	40,038	12,142	6,606	5,452	3,910	n.a.
2000	41,399	15,167	6,734	2,556	5,427	n.a.
2001	43,402	16,372	5,681	1,624	4,735	n.a.
2002	45,376	18,524	4,683	1,101	5,396	n.a.
2003	44,627	21,162	3,216	644	2,313	n.a.
2004	43,957	20,213	2,854	434	1,464	n.a.
2005	46,870	19,898	n.a.	n.a.	n.a.	n.a.
2006	42,273	20,025	n.a.	n.a.	n.a.	n.a.
2007	39,089	17,701	n.a.	n.a.	n.a.	n.a.
2008	36,808	15,865	n.a.	n.a.	n.a.	n.a.

Sources: LCC 1991a-2008a.

Figure 2.2.3: GDP per head in Leipzig and Germany 1991-2007

Year	GDP per head in Euro (Leipzig)	GDP per head in Euro (Germany)
1991	n.a.	19,186
1992	n.a.	20,431
1993	n.a.	20,872
1994	n.a.	21,871
1995	n.a.	22,636
1996	n.a.	22,909
1997	19,677	23,346
1998	19,740	23,960
1999	20,600	24,511
2000	21,156	25,095
2001	21,641	25,664
2002	22,222	25,984
2003	23,484	26,222
2004	23,751	26,798
2005	24,064	27,190
2006	25,506	28,229
2007	26,695	29,518

Sources: Statistisches Jahrbuch des Freistaats Sachsen, LCC 1991a-2008a.

Figure 2.3.1: Pathways of suburbanization around Leipzig 1996 and 2008

	Year	Germany	Western Germany	Eastern Germany	International	Suburbia
In-migration	1996	11,351	4,115	4,101	7,293	3,135
	2008	21,412	5,523	10,731	4,228	5,158
Out-migration	1996	24,140	4,620	4,790	5,732	14,730
	2008	16,918	6,481	6,566	3,501	3,871

Sources: LCC 1991a-2008a; Staatliche Zentralverwaltung für Statistik, Bezirksstelle Leipzig: Statistische Jahrbücher des Bezirks Leipzig (1970, 1973, 1975).

Figure 3.1.1: Residential mobility in Leipzig 1988-2007

Year	Intra-city relocations per 1,000 inhabitants
1988	15.8
1989	19.6
1990	n.a.
1995	83.3
1996	136.6
1997	150.2
1998	154.3
1999	143.1
2000	n.a.
2001	124.5
2002	118.7
2003	116.6
2004	115.1
2005	104.6
2006	103.6
2007	105.2

Sources: LCC 1991a-2008a; LCC 2001c-2008c.

Figure 3.1.2: Monthly net-rent in Leipzig according to date of construction 1994-2008

Year	Built until 1948	Built 1949-1989	Built since 1990
1994	6.29	6.80	8.03
1995	6.14	6.14	7.93
1996	5.70	5.88	7.34
1997	5.47	5.88	6.31
1998	4.76	5.47	5.98
1999	4.47	4.99	6.14
2000	4.45	4.60	5.88
2001	4.35	4.50	5.62
2002	4.50	4.50	5.35
2003	4.40	4.75	5.30
2004	4.60	4.60	5.60
2005	4.50	4.50	5.60
2006	4.60	4.75	5.60
2007	4.65	4.85	5.50
2008	n.a.	4.80	5.60

Data are given until 1999 in DM, afterwards in Euro.
Sources: LCC 1991a-2008a; LCC 2001c-2008c; LCC 2007e: 21.

Figure 3.1.4: Segregation indices for Leipzig 1992-2007

Year	Index of segregation - foreigners	Index of segregation - seniors	Index of segregation - unemployed
1992	23.81	12.93	n.a.
1995	20.56	10.77	n.a.
1996	21.31	8.83	6.41
1999	22.55	8.79	8.69
2001	23.62	10.53	11.80
2003	24.51	12.98	11.77
2005	25.39	15.22	13.97
2007	27.46	16.30	14.04

The data relate to the territory of the 48 districts Leipzig had until 1998. The enlargement of the city's territory due to an administrative reform in 1999 was not considered for this calculation
Source: Arndt 2008

Figure 3.3.1: Places in and attendants of kindergartens and schools in Leipzig 1989-2008

Year	Places in kindergartens	Registered children	Kindergartens absolute	Pupils	Schools absolute
1989	n.a.	34,319	412	58,77	140
1990	n.a.	31,954	394	55,734	138
1991	27,423	26,365	369	56,205	139
1992	25,289	23,747	330	61,168	157
1993	21,309	20,247	307	61,722	184
1994	17,541	17,241	284	61,151	183
1995	15,740	14,668	252	58,868	184
1996	12,858	11,707	216	57,373	184
1997	12,868	9,630	188	54,452	185
1998	12,239	9,592	184	56,245	197
1999	14,215	10,652	206	52,965	193
2000	14,039	11,490	200	49,550	178
2001	14,619	12,548	199	46,174	173
2002	14,814	13,224	194	40,819	162
2003	15,578	14,378	192	40,914	153
2004	16,187	14,921	194	39,353	152
2005	16,574	15,383	188	37,758	145
2006	17,278	15,448	192	36,481	143
2007	17,920	15,879	197	35,402	140
2008	18,305	16,537	202	35,028	143

Source: LCC 1991a-2008a.

Figure 3.3.2: Development of number of students in Leipzig 1989-2008

Year	Number of students
1989	11,762
1990	18,153
1991	18,885
1992	18,874
1993	22,054
1994	23,343
1995	24,774
1996	26,258
1997	28,204
1998	29,277
1999	30,415
2000	31,260
2001	32,950
2002	34,997
2003	37,092
2004	37,953
2005	38,469
2006	37,136
2007	36,469
2008	35,966

The numbers relate to the respective winter term, e.g. 2005 = winter term 2005/2006.
Sources: LCC 1991a-2008a; IGNIS database.

Figure 3.4.1 Leipzig's housing stock 1990-1994 according to ownership

Year	Housing units absolute	Private	Municipal	Cooperative
1990	257,928	64,482	128,964	64,482
1994	265,367	95,844	104,218	61,990
2004	316,358	202,469	56,944	56,944

Sources: LCC 1991a-2008a; LCC 2001c-2008c.

3.4.2 Leipzig's housing stock 1996-2007 according to data of construction

Year	1996	2003	2005	2007
Until 1918	13,914	15,758	15,252	15,901
1919 - 1948	13,851	17,315	17,471	16,836
1949 - 1990	8,794	10,923	10,953	10,957
Since 1991	1,889	9,980	11,332	11,896

Sources: LCC 1991a-2008a; LCC 2001c-2008c.

Figure 3.4.3: Housing units and living space per inhabitant 1971-2008

Year	Housing units total	Living space per inhabitant (m^2)
1971	216,551	23.1
1981	240,568	27.3
1990	257,928	31.8
1995	268,247	36.7
1998	282,186	41.4
2000	315,701	41.7
2008	314,402	40.7

Sources: LCC 1991a-2008a; LCC 2001c-2008c.

Figure 3.4.4: Housing units, new constructions and demolitions in Leipzig 1997-2007

Year	Housing units	New Constructions	Demolitions
1997	277,812	9,845	400
1998	282,186	6,031	238
1999	310,329	5,236	288
2000	315,701	4,079	253
2001	317,439	2,525	798
2002	316,763	984	1,687
2003	316,341	1,298	1,731
2004	316,358	1,112	1,128
2005	316,027	881	1,231
2006	314,973	1,016	2,080
2007	314,223	782	1,556

Source: LCC 2008c.

Figure 3.5.1: Water and waster water demand 1988-2008

Year	Water demand m³ per year	Wastewater m³ per hour
1988	87.27	94.44
1989	82.11	88.64
1990	74.23	80.22
1991	58.53	73.32
1992	56.88	51.34
1993	49.29	50.39
1994	46.41	50.41
1995	40.19	53.96
1996	24.15	42.10
1997	22.60	43.80
1998	20.98	42.50
1999	22.12	39.20
2000	22.93	41.80
2001	22.31	35.20
2002	21.52	35.20
2003	22.26	34.90
2004	21.83	35.00
2005	21.57	35.50
2006	21.92	35.30
2007	21.81	35.10
2008	n.a.	33.60

The water supply to the end user is given until 1995 in m³/year (calculation: supply divided through 365.5 days 1000; 1m³ = 1,000 litres). The amount of waste water was given until 1996 in m³/hour; calculation: 365.5 days*24hours = 8,772.
Source: LCC 1991a-2008a.

Figure 3.6.3: Brownfields in Leipzig 1999-2007

Year	Number of brownfields	Number of re-used brownfields	Share of re-used brownfields in per cent
1999	368	100	27.2
2000	378	119	31.5
2001	511	149	29.2
2002	545	181	33.2
2003	1,466	466	31.8
2004	1,833	648	35.4
2005	1,858	783	42.1
2006	2,149	820	38.2
2007	2,950	1,008	34.2

Source: LCC 1991a-2008a; IGNIS database.

Figure 3.6.4: Environmental pollution in the city of Leipzig 1985-2008

Year	Sulphur-dioxide* µg/m³	Nitrogen-monoxides µg/m³	Nitrogen-dioxides µg/m³	Respirable dust** loading µg/m³
1985	613.00	n.a.	n.a.	210.70
1986	638.00	n.a.	n.a.	213.20
1987	630.60	n.a.	n.a.	210.80
1988	606.80	n.a.	n.a.	182.70
1989	570.10	n.a.	n.a.	142.30
1990	n.a.	n.a.	n.a.	n.a.
1991	129.17	29.33	40.08	82.50
1992	101.67	30.50	33.58	65.00
1993	77.92	23.50	36.75	62.58
1994	42.44	20.55	35.27	60.64
1995	34.25	30.45	48.64	52.67
1996	23.25	39.58	47.75	68.27
1997	12.45	60.64	53.73	57.50
1998	9.27	58.25	49.42	44.67
1999	5.92	60.50	47.92	43.83
2000	3.00	58.27	48.00	29.40
2001	3.50	62.00	45.17	33.60
2002	3.67	56.75	49.50	32.40
2003	3.73	58.67	55.58	37.10
2004	2.98	50.75	50.75	31.40
2005	3.48	56.00	51.42	38.00
2006	3.10	45.00	53.18	37.34
2007	2.43	44.00	48.42	31.35
2008	2.30	43.00	46.00	34.00

The given values represent mean values per annum based on mean values per months; *1985-1989 the density of emission was given in tons/km² (see LCC 1991a: 141).**the measurement point was the city centre of Leipzig (main railway station). Until 1992 the pollution was calculated in mg/m³ (conversion factor 1mg = 1000 µg); **The values are given for respirable dust loadings with grain sizes <10 µm; from 1993-2001, they represent airborne particles without grain size limits; the measurement point was Leipzig city centre (main railway station).
Source: LCC 1991a-2008a

Figure 3.7.2 Revenues in Leipzig's administrative budget 1992-2007

Year	Municipal taxes in Mio. Euro	State and federal allocations in Mio. Euro	Other revenues in Mio. Euro
1992	114.6	383.9	484.8
1993	150.6	401.8	615.4
1994	207.8	439.1	611.9
1995	237.7	509.9	625.0
1996	203.8	509.9	584.7
1997	212.7	429.9	485.0
1998	268.0	430.2	421.6
1999	249.7	344.8	326.7
2000	255.7	362.3	356.5
2001	195.9	362.4	317.5
2002	257.0	369.0	345.9
2003	251.5	360.0	303.4
2004	258.6	354.7	302.0
2005	291.1	338.3	305.3
2006	336.6	321.3	298.7
2007	329.8	311.7	285.7

Source: LCC 1990a-2009a, own calculations.

Figure 3.7.3 Funds from programmes for urban development in Leipzig 1991-2009

Year	State or federal programmes in Mio. Euro	EU-programmes in Mio. Euro
1991	7,250	n.a.
1992	12,971	n.a.
1993	14,110	n.a.
1994	57,339	n.a.
1995/1996	52,982	n.a.
1997	36,605	n.a.
1998	33,484	n.a.
1999	34,240	n.a.
2000	38,373	875
2001	41,415	1,425
2002	26,726	11,172
2003	31,938	7,030
2004	20,607	7,569
2005	23,796	9,207
2006	33,270	8,064
2007	11,953	950
2008	46,434	6,530
2009	32,060	2,867

Source: LCC 2009, authors' calculations.

Figure 3.7.4 Development of debt level 1992-2009

Year	debt in Mio. Euro
1992	75
1993	180
1994	343
1995	461
1996	571
1997	656
1998	740
1999	812
2000	860
2001	878
2002	856
2003	869
2004	912
2005	905
2006	902
2007	899
2008	843
2009	723

Source: LCC 1990a-2009a

5 REFERENCES

Arndt, T. (2008): *Segregation unter Schrumpfungsbedingungen. Sozialräumliche Differenzierungsprozesse auf gesamtstädtischer Ebene und auf Ortsteilebene: Dargestellt am Beispiel der Stadt Leipzig und des Ortsteils Leipzig-Mockau*. Diploma thesis, University of Leipzig (FRG), Institute of Geography (unpublished).

Bernt, M. (2009): Partnerships for Demolition: The Governance of Urban Renewal in East Germany's Shrinking Cities. In: *International Journal of Urban and Regional Research*, 33.3: 754-769

Couch, C., Karecha, J., Nuissl, H., Rink, D. (2005): Decline and sprawl: an evolving type of urban development – observed in Liverpool and Leipzig, *European Planning Studies*, 13.1: 117-136.

Doehler, M., Rink, D. (1996): Stadtentwicklung in Leipzig: zwischen Verfall und Deindustrialisierung, Sanierung und tertiären Großprojekten. In: Häußermann, H., Neef, R. (eds.). *Stadtentwicklung in Ostdeutschland. Soziale und räumliche Tendenzen*, Westdeutscher Verlag, Wiesbaden (FRG), 263-286.

Glasze, G. and Graze, P. (2007): Raus aus Suburbia, rein in die Stadt? Studie zur zukünftigen Wohnmobilität von Suburbaniten der Generation 50+. *Raumforschung und Raumordnung* Bonn (FRG) 65: 467-473.

Großmann, K., Haase, A., Rink, D., Steinführer, A. (2009): Segregation under conditions of housing markets with supply-surplus, paper presented at the conference "*Leeres Land und bunte Stadt? Räumliche Differenzierung im Zeichen des demographischen Wandels"*, 7-8 may 2009, Berlin.

Haase, A. (2008): Reurbanisation – an analysis of the interaction between urban and demographic changes as a comparison between European cities. In: *Die Erde* 139.4: 309-332.

Haase, A., Kabisch, S., Steinführer, A., Bouzarovski, S., Hall, R., Ogden, P. (2010): Emergent spaces of reurbanisation: exploring the demographic dimension of inner-city residential change in a European setting. In: *Population, Space and Place* 16.5: 443-463.

Haase, D., Seppelt, R., Haase, A. (2008): Land Use Impacts of Demographic Change – Lessons from Eastern German Urban Regions, In: Petrosillo, I., Müller, F., Jones, K.B., Zurlini, G., Krauze, K., Victorov, S., Li, B.-L., Kepner, W.G. (eds.): *Use of Landscape Sciences for the Assessment of Environmental Security*. Springer, The Netherlands, 329-344.

Herfert, G (1996) Wohnsuburbanisierung in Verdichtungsräumen der neuen Bundesländer. Eine vergleichende Untersuchung im Umland von Leipzig und Schwerin. In: *Europa Regional* 4.1: 32-46.

Herfert, G. (2002): Disurbanisierung und Reurbanisierung: Polarisierte Raumentwicklung in der ostdeutschen Schrumpfungslandschaft," In: *Raumforschung und Raumordnung* Bonn (FRG) 5-6: 334-444.

Herfert, G. and Röhl, D. (2001): Leipzig – Region zwischen Boom und Leerstand. In: Brake, K., Dangschat, J. S. and Herfert, G. (eds.) *Suburbanisierung in Deutschland. Aktuelle Tendenzen*, Opladen, Wiesbaden (FRG), 151-162.

Kabisch, S., Steinführer, A., Haase, A., Großmann, K., Peter, A., Maas, A. (2008): *Demographic change and its impact on housing*. Final report for the EUROCITIES network, Brussels and Leipzig (FRG).

Kabisch, N., Haase, D., Haase, A. (2010): Evolving reurbanisation? Spatio-temporal dynamics as exemplified by the East German city of Leipzig. In: *Urban Studies* 47.5: 967-990.

Kausch, F. (2007): *Reurbanisierung in Leipzig durch Selbstnutzer. Anspruch und Wirklichkeit*, Diplomarbeit, Rheinische Friedrich-Wilhelms-Universität Bonn (FRG), Geographisches Institut.

Koziol, M. (2004): Folgen des demographischen Wandels für die kommunale Infrastruktur, In: *Deutsche Zeitschrift für Kommunalwissenschaften*, 43.1: 69-83.

Köppen, B. (2005): Zurück in die Stadt oder Schrumpfung überall? Reurbanisierung und Schrumpfung in ostdeutschen Städten. Städte im Umbruch 3, www.schrumpfende-stadt.de/magazin/0503/6Koeppen.htm Web. Retrieved on June 4, 2009.

Kress, C. (2008): Schrumpfungsprozesse versus Wachstumsparadigma in der DDR, In: Lampen, A., Owzar, A. (eds.): *Schrumpfende Städte. Ein Phänomen zwischen Antike und Moderne*, Böhlau, Köln (FRG), 237-278.

Lütke Daldrup, E. (2001): Die perforierte Stadt. Eine Versuchsanordnung, In: *StadtBauwelt*, 150: 40-45.

Marcuse, P. 1985: Gentrification, abandonment and displacement: connections, causes and policy responses in New York City. *Journal of Urban and Contemporary Law* 28: 195-240.

Muschak C., Weiland, U., Banzhaf, E. (2009): *Brachflächen in Stadtentwicklung und kommunalen Planungen am Beispiel der Städte Leipzig und Stuttgart*, Leipzig (FRG).

Nuissl H., and Rink D. 2005. The 'production' of urban sprawl in eastern Germany as a phenomenon of post-socialist transformation. *Cities* 22: 123-134.

Philipps, A., Rink, D. (2009): Zuwanderung und Integrationspolitik in einer ostdeutschen Stadt: Das Beispiel Leipzig, In: Gesemann, F.; Roth, R. (eds.): *Lokale Integrationspolitik in der Einwanderungsgesellschaft*, VS Verlag, Wiesbaden (FRG), 399-413.

Rink, D. (1997): Zur Segregation in ostdeutschen Großstädten, In: Kabisch, S., Kindler, A., Rink, D.: *Sozialatlas der Stadt Leipzig*, Leipzig (FRG), 26-46.

Rink, D., Großmann, K., Haase, A., Steinführer, A. (2010): Segregation in an atypical context: *Socio-spatial differentiation under the conditions of supply surplus Unpublished typescript*, Leipzig (FRG).

Steinführer, A. (2004): Wohnstandortentscheidungen und städtische Transformation. Vergleichende Fallstudien in Ostdeutschland und Tschechien. *Stadtforschung aktuell* 99, Wiesbaden (FRG).

Steinführer, A., Haase, A. (2009): Flexible–inflexible: socio-demographic, spatial and temporal dimensions of flat sharing in Leipzig (FRG), In: *GeoJournal* 74.6: 567-587.

Steinführer, A., Haase, A., Kabisch, S. (2009): Reurbanisierungsprozesse zwischen Planung und Realität. Das Beispiel Leipzig. In: Kühn, M., Liebmann, H. (eds.): *Regenerierung der Städte. Strategien der Politik und Planung im Schrumpfungskontext.* VS Verlag, Wiesbaden (FRG), 176-194.

Leipzig City Council (Statistics and reports)

LCC 1990a-2009a

Stadt Leipzig, Amt für Statistik und Wahlen: *Statistisches Jahrbuch. 1990-2009*, Leipzig.

LCC 1993b, 1995b; 1997b; 2000b; 2002b; 2004b; 2006b; 2008b

Stadt Leipzig, Amt für Statistik und Wahlen: *Ortsteilkatalog 1993-2008, Strukturdaten der Ortsteile und Stadtbezirke*, Leipzig.

LCC 2001c-2008c

Stadt Leipzig, Dezernat Stadtentwicklung und Bau: *kleinräumiges Monitoring der Stadtentwicklung in Leipzig, Monitoring Bericht 2001-2008*, Leipzig.

LCC 2003d

Stadt Leipzig (2003): Konzept der Seniorenarbeit Leipzig. 2. Altenhilfeplan 2003. Leipzig

LCC 2007e

Stadt Leipzig, Dezernat Jugend, Soziales, Gesundheit und Schule: *Sozialreport 2007*, Leipzig.

LCC 2008e

Stadt Leipzig, Dezernat Jugend, Soziales, Gesundheit und Schule: *Sozialreport 2008*, Leipzig.

LCC 2009

Stadt Leipzig Dezernat Stadtentwicklung und Bau Arbeitsgruppe SEKo (2009): *Integriertes Stadtentwicklungskonzept Leipzig 2020 - Zukunft gestalten!*, Leipzig.

Subject: FW: VNA Submitter 61 - Lay Evidence - Recovery Strategy - Mahere Haumanutanga o Waitaha
Sent: 1/11/2023, 12:36:13 pm
From: Geoff Banks<geoff.banks@bfe.nz>
To: IHP Info
Attachments: recovery-strategy-for-greater-christchurch-Copy2.pdf

---

Hello Jo.

Attached is another document the commissioners may be interested to see in advance of our oral submission. However, I'm aware that it may have already been included and viewed in evidence or references by others.

It refers to the collaborative document formed by councils and Te Runanga o Ngai Tahu for post-earthquake recovery and was referenced in our written submission on PC14 at Topic 11 section 1.3.3.2.

I will refer to it in our oral submission.

At this stage, I'm not expecting to forward any other documents in advance, but will be bringing other documents as hard copies (x10) on the day of presenting.

Nga mihi nui.

Geoff Banks
58 Gracefield Ave, Christchurch 8013
VNA PC14 Subcommittee

E geoff.banks@bfe.nz

From: IHP Info <info@chch2023.ihp.govt.nz>
Sent: Thursday, October 26, 2023 7:05 PM
To: Geoff Banks <geoff.banks@bfe.nz>
Subject: RE: VNA Submitter 61 - Lay Evidence - VNA Background and Consultation

Kia ora Geoff

Thank you for sending this information through.

We will collate documents that are sent through in support of the VNA appearance and make them available to the Commissioners. If you are bringing hard copies of any lay evidence/tabled documents to the hearings, electronic versions would be appreciated within two days of the presentation.

Ngā mihi
Jo

Jo Daly
IHP Director
Plan Change 14 – Housing and Business Choice

Phone: 03 941 8581
Email: info@chch2023.ihp.govt.nz
Website: chch2023.ihp.govt.nz

From: Geoff Banks <geoff.banks@bfe.nz>
Sent: Tuesday, October 24, 2023 3:00 PM
To: IHP Info <info@chch2023.ihp.govt.nz>
Subject: VNA Submitter 61 - Lay Evidence - VNA Background and Consultation

Hello.

We understand you require electronic copies of Lay Evidence as well as 10 hard copies.

Please find attached our first evidence item – a background to the VNA and consultation processes.

Nga mihi nui

Geoff Banks
Chair, VNA PC14 Subcommittee
58 Gracefield Ave, Christchurch 8013

E geoff.banks@bfe.nz

Recovery Strategy for Greater Christchurch

Mahere Haumanutanga o Waitaha

CERA
Canterbury Earthquake Recovery Authority

Recovery Strategy for Greater Christchurch

Mahere Haumanutanga o Waitaha

Citation
Canterbury Earthquake Recovery Authority (2012). *Recovery Strategy for Greater Christchurch Mahere Haumanutanga o Waitaha*. Christchurch: Canterbury Earthquake Recovery Authority.

Acknowledgement
This Recovery Strategy has been developed in consultation with Environment Canterbury, Christchurch City Council, Selwyn District Council, Waimakariri District Council, and Te Rūnanga o Ngāi Tahu.

ISBN 978-0-477-10359-6 (print)

ISBN 978-0-477-10361-9 (online)

Published in May 2012 by

Canterbury Earthquake Recovery Authority

Christchurch, New Zealand

Contact

Canterbury Earthquake Recovery Authority

Private Bag 4999, Christchurch 8140

info@cera.govt.nz

0800 7464 2372 toll-free

www.cera.govt.nz

Ministerial Foreword
He Kōrero Whakataki

The recovery of greater Christchurch from the Canterbury earthquakes provides both challenges and opportunities of a scale and complexity unprecedented in our history. Meeting the challenges and realising the opportunities is the Government's number one priority.

It is no small task ahead of us and it is critical to New Zealand's future wellbeing that we succeed. Success means making the most of the opportunities resulting from the terrible events that have happened.

I am heartened that Cantabrians are already doing this. The way people have responded and the enormous efforts already made mean that as time has passed since 22 February 2011, the recovery is making solid progress.

The Recovery Strategy set out in these pages will guide not just the Government, but also individuals, groups, clubs, communities, politicians, councils, iwi, charities, businesses, the public and private sector, and government agencies that have a role in recovery. Success will be measured by how we work together and maximise the opportunities to restore, renew and revitalise greater Christchurch.

The impacts of the earthquakes are well documented. The economic cost is likely to exceed $20 billion. The social costs – the lives lost, injuries suffered, grief, stress, disruption, lost heritage and lost opportunities – are beyond measure. It is important to remember and learn from these losses.

Already progress is clear. Around greater Christchurch workers are fixing roads, and sewer, water and wastewater mains. The city has normal reticulated water supplies. There are hundreds of workers in the CBD red zone every day repairing and demolishing what is necessary to make the central city safe.

CERA continues to work hard to provide property owners in greater Christchurch certainty about the future of their properties. More than 180,000 home owners have been confirmed in the residential green zone. More than 6,000 home owners have been zoned red and can progress Crown offers to buy their properties and re-establish their lives.

Economic indicators show economic activity in Canterbury is building. Recent successive growth statistics for Canterbury are clear evidence of recovery. They will continue to improve as reconstruction gains momentum.

Recovery will be a long journey with hard work ahead. Future generations of Cantabrians and New Zealanders will reap the rewards of the decisions we make now. We must work together as quickly and as positively as we can, putting people and greater Christchurch first.

Together we will make greater Christchurch even greater.

Hon Gerry Brownlee
Minister for Canterbury Earthquake Recovery

Message from the Chief Executive

Nā te Pou Whakahaere

The Canterbury earthquakes have forever changed our lives, our city, our province and our country. The challenges and opportunities we now face together in restoring greater Christchurch are the biggest in our history.

We must meet the challenges together, seize opportunities and move forward quickly. We do this not just for ourselves, but for those who have been before us and those who will live here long after us.

It is not just people that are important, but also their ideas. The earthquakes have challenged conventional thinking, changed the way many of us work and transformed our daily lives. We must retain and build on the good that has come from these changes. The comments made on the draft strategy have already strengthened our work.

This strategy is a key milestone in the recovery and rebuilding of greater Christchurch. The recovery programmes that flow from this strategy – covering leadership and integration, economic, social, cultural, built environment and natural environment – set out the way forward. Ultimately they will ensure a strongly performing Canterbury plays its vital part in New Zealand's future success.

The pace of recovery is important. We must balance the need to make good decisions quickly against the need to take this unique opportunity to get things right. We need to create certainty as quickly as we can, to allow people, communities and businesses to make their own decisions and move on.

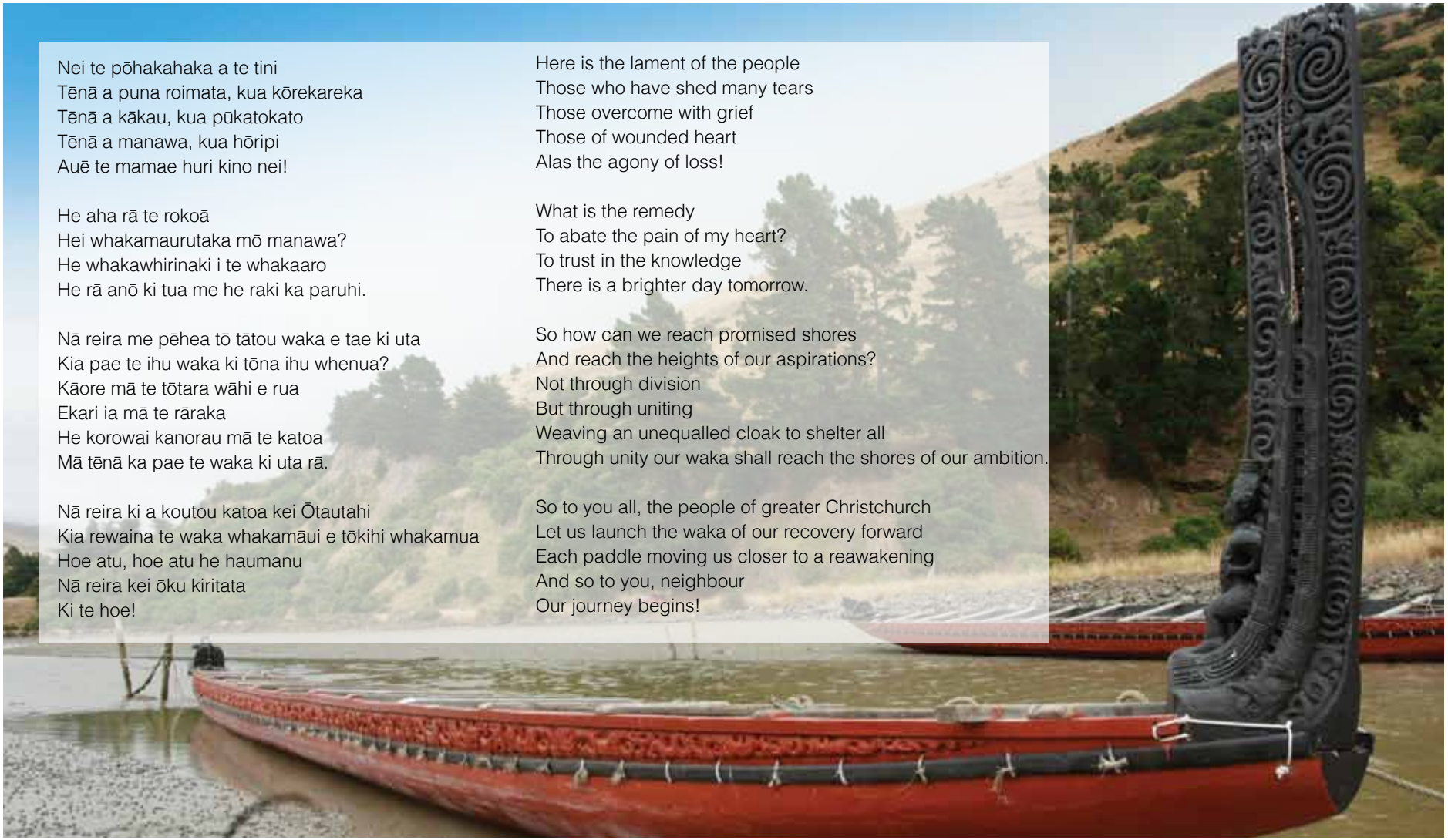
Together, we have a job to get on with. The hard work will continue, and hard decisions will need to be made. I will work hard to lead and help coordinate the ongoing recovery effort.

We will focus not just on business recovery, but on restoring local communities and making sure the right things are in place for rebuilding effectively and in a timely manner. We are working closely with our strategic partners – the Christchurch City Council, Environment Canterbury, the Waimakariri District Council, the Selwyn District Council and Te Rūnanga Ngāi Tahu – acknowledging our Treaty of Waitangi obligations. We are engaging with the private and business sectors, with people and with local communities and are keeping them informed.

Together we are committed to achieving the best possible result for the people of greater Christchurch now, and for the generations who will follow us.

Roger Sutton
Chief Executive
Canterbury Earthquake Recovery Authority

Mihi Whakatūwhera



Nei te pōhakahaka a te tini
Tēnā a puna roimata, kua kōrekareka
Tēnā a kākau, kua pūkatokato
Tēnā a manawa, kua hōripi
Auē te mamae huri kino nei!

He aha rā te rokoā
Hei whakamaurutaka mō manawa?
He whakawhirinaki i te whakaaro
He rā anō ki tua me he raki ka paruhi.

Nā reira me pēhea tō tātou waka e tae ki uta
Kia pae te ihu waka ki tōna ihu whenua?
Kāore mā te tōtara wāhi e rua
Ekari ia mā te rāraka
He korowai kanorau mā te katoa
Mā tēnā ka pae te waka ki uta rā.

Nā reira ki a koutou katoa kei Ōtautahi
Kia rewaina te waka whakamāui e tōkihi whakamua
Hoe atu, hoe atu he haumanu
Nā reira kei ōku kiritata
Ki te hoe!

Here is the lament of the people
Those who have shed many tears
Those overcome with grief
Those of wounded heart
Alas the agony of loss!

What is the remedy
To abate the pain of my heart?
To trust in the knowledge
There is a brighter day tomorrow.

So how can we reach promised shores
And reach the heights of our aspirations?
Not through division
But through uniting
Weaving an unequalled cloak to shelter all
Through unity our waka shall reach the shores of our ambition.

So to you all, the people of greater Christchurch
Let us launch the waka of our recovery forward
Each paddle moving us closer to a reawakening
And so to you, neighbour
Our journey begins!

Table of Contents
He Rārangi Upoko

SECTION 01

What is the Recovery Strategy?

He aha te Mahere Haumanutanga?

1.1 Why have a Recovery Strategy?

Greater Christchurch has a population of just under 460,000 people, and it includes New Zealand's second largest city. It is the gateway to the South Island, and is its most significant centre of economic activity. The series of earthquakes that began in September 2010, especially the 22 February 2011 earthquake, caused significant death and injury, seriously damaged buildings, infrastructure and services, and continues to disrupt the lives of people in the greater Christchurch area.[1]

Much of greater Christchurch functions effectively and safely and is open for business. The international airport and Lyttelton's sea port remain busy. Businesses have relocated, schools have shared facilities, and temporary housing has been constructed. Despite ongoing significant aftershocks, the city is now moving out of the immediate response phase, where the emphasis was on meeting people's basic needs, demolishing unsafe buildings and determining which areas are suitable for rebuilding. It is important to look to the future and coordinate the efforts of all the organisations and individuals helping greater Christchurch to rebuild and recover. Opportunities for investment, innovation and job creation need to be maximised, and the wellbeing of the community should be kept at the heart of the recovery.

Achieving recovery will be a joint effort between the public and private sectors, non-governmental organisations (NGOs) and the wider community. The Canterbury Earthquake Recovery Authority (CERA) is coordinating the rebuilding and recovery of greater Christchurch through an efficient and effective programme of action involving local and central government; iwi; businesses; community groups and individuals; land owners and developers; house-builders; infrastructure providers; and the insurance and finance sectors. As part of this coordination and leadership role, CERA is required to develop a Recovery Strategy. This overarching, long-term Strategy will guide the reconstruction, rebuilding and recovery of greater Christchurch (see sections 11–15 of the Canterbury Earthquake Recovery (CER) Act).

He aha te mea nui o te ao? He tangata, he tangata, he tangata!

What is the most important thing in this world? It is people, it is people, it is people!

1.2 Purpose of the Recovery Strategy

This Recovery Strategy is the key reference document that guides and coordinates the programmes of work, including Recovery Plans, under the CER Act.

The Strategy sets out a shared vision and the Government's overall approach to recovery. It:

- defines what "recovery" means for greater Christchurch;
- establishes principles to guide how CERA and other agencies will work together towards recovery;
- describes in broad terms the pace and phases of recovery;
- identifies work programmes, and which organisations will lead specific projects;
- identifies priorities for recovery efforts;
- sets up governance structures to oversee and coordinate the work programmes and links them to wider initiatives; and
- commits to measuring and reporting on progress towards recovery.

The Strategy aims to:

- provide overall direction to all those individuals and organisations who have a role in recovery activities;
- coordinate recovery activities by helping individuals and organisations to identify the interests they have in common and to understand they need to work together in their recovery activities;
- give the community confidence that recovery is well-planned and progressing; and
- take every opportunity to restore, renew and revitalise and enhance greater Christchurch.

[1] *For more information about the earthquake context, a map of greater Christchurch, the extent of the damage, and a discussion of lessons learned visit www.cera.govt.nz*

The Recovery Strategy will help guide and coordinate decisions on rebuilding in the short term while more detailed recovery programmes and plans are being developed.

When the CER Act was passed in April 2011, it was thought that the Recovery Strategy might address:

1. the areas where rebuilding or other redevelopment may or may not occur, and the possible sequencing of rebuilding or other redevelopment;
2. the location of existing and future infrastructure and the possible sequencing of repairs, rebuilding, and reconstruction;
3. the kind of Recovery Plans that may need to be developed and the relationship between the plans; and
4. any additional matters to be addressed by Recovery Plans, and who should lead their development.

The Strategy has not been able to address all of these issues, partly because of ongoing seismic activity. It is also a huge and complex task to make decisions about land zoning and the location and timing of rebuilding. Similarly, it is not yet clear where Recovery Plans – which are statutory documents with the power to overwrite a range of planning instruments – will be the most appropriate and effective way to provide direction. The Recovery Strategy therefore focuses on identifying work programmes which will make it easier to see where Recovery Plans are needed.

1.3 Status and effect of the Recovery Strategy

The Strategy's approach to recovery will guide and coordinate the work of all central government agencies involved in recovery activities, and the strategic partners. The Strategy applies to greater Christchurch, which under the CER Act means the districts of the Christchurch City Council, the Selwyn District Council and the Waimakariri District Council. It also includes the coastal marine area next to these districts.

Under section 15 of the CER Act, the Recovery Strategy is also a statutory document that will be read together with, and forms part of, certain documents created under other Acts (that apply to any area in greater Christchurch).

The following documents and instruments, as they relate to greater Christchurch, must not be interpreted or applied in a way that is inconsistent with the Recovery Strategy (see sections 15 and 26 (2) of the CER Act available on the CERA website):

- regional policy statement, regional plans, and city and district plans (Resource Management Act);
- annual plans, long-term plans, and triennial agreements (Local Government Act);
- regional land transport strategies, regional land transport programmes and NZTA recommendations for Police activities under section 18I (Land Transport Management Act);
- regional public transport plans under section 9 (Public Transport Management Act); and
- general policies, conservation management strategies, conservation management plans and management plans (Conservation, Reserves and Wildlife Acts).

These documents come from Environment Canterbury, Christchurch City Council, Selwyn District Council, Waimakariri District Council, New Zealand Transport Agency (NZTA) and the Department of Conservation. If they are inconsistent with the Recovery Strategy in any way, the Recovery Strategy prevails.

Only sections 3 to 8 of this document are the statutory Recovery Strategy. The rest of the document provides additional information. It covers the context for the strategy, governance arrangements, financial and funding issues, and the programmes of work through which the Strategy will be implemented.

Earlier laws have already set down general expectations and obligations for public sector organisations. For example, legislation already covers the Treaty of Waitangi, sustainable management (in the Resource Management Act) and sustainable development (the Local Government Act). The Strategy deliberately does not repeat these existing provisions, or introduce new general obligations that are not directly related to the recovery.

Map of greater Christchurch

1.4 Components of recovery

The Strategy contains six components of recovery. These are:

- **leadership and integration**
  research and information, communication, funding and finance, and the governance, coordination and project management of recovery activities
- **economic recovery**
  investment, businesses, labour, and insurance liaison
- **social recovery**
  education, health, and community support services
- **cultural recovery**
  the arts, culture, heritage buildings and places, and sports and recreation
- **built environment**
  land use, housing, buildings, transport, infrastructure
- **natural environment**
  air quality, biodiversity, the coast, land, groundwater and surface water quality, and natural hazards

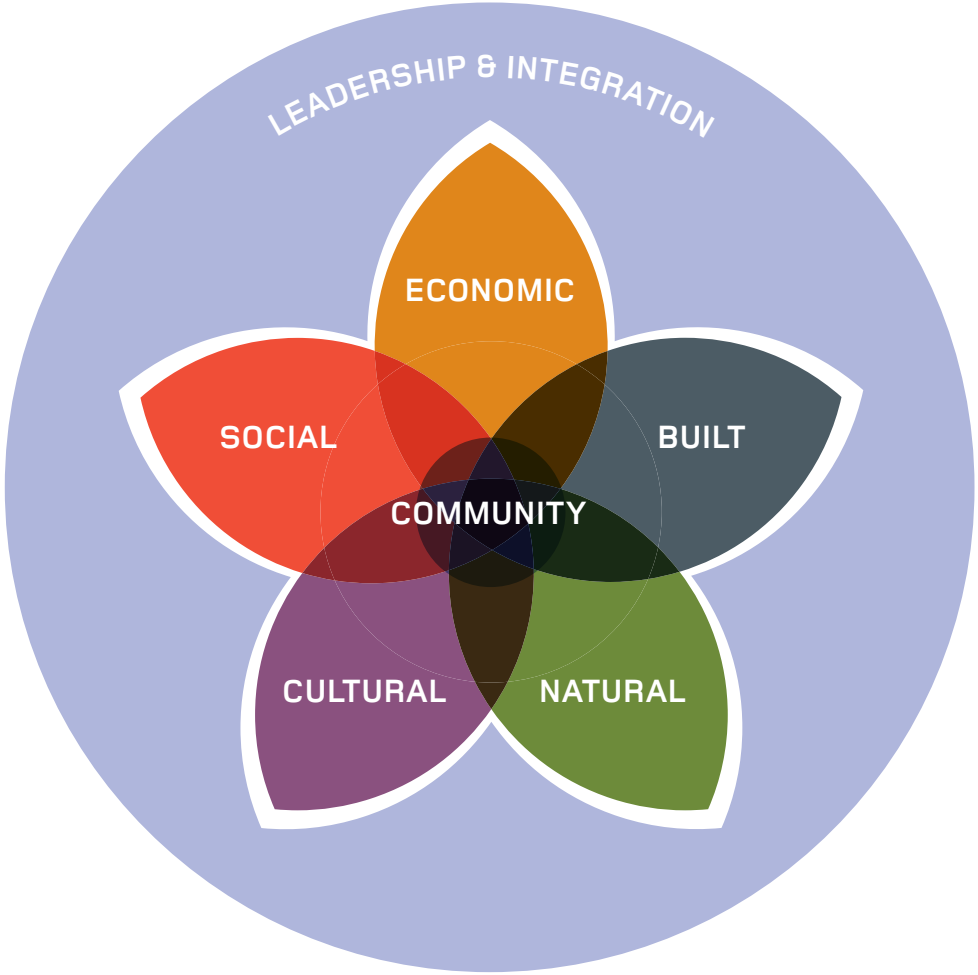
The components all link together so should be read as a whole. For successful recovery there must be leadership and integration across the five other components, with the community central to all.

Ka oi Rūaumoko, ara ake Waitaha

Despite the heaving earth, Canterbury will rise again.

Section 4 of this Strategy sets out goals for each of the six components of recovery. Recovery programmes contain the detailed actions and methods for achieving those goals. They deal with the recovery of our houses, streets, neighbourhoods, communities, businesses, education, the arts, sports and recreation, heritage, the natural environment and other aspects of life in greater Christchurch. CERA is coordinating the development of the recovery programmes, as well as of their plans and activities. Sections 12–17 of this document summarise these programmes. For more information on the programmes and how to participate in their development, visit the CERA website.

The components of recovery



1.5 Development of the Recovery Strategy

The Recovery Strategy was developed in consultation with the strategic partners: Te Rūnanga o Ngāi Tahu, the Christchurch City Council, Selwyn and Waimakariri District Councils and Environment Canterbury. Government agencies and the wider community were also consulted. Lessons and outcomes from strategic planning previously undertaken by local government agencies, central government initiatives and community and private sector actions have both informed and now complement the direction in this Recovery Strategy.

Hundreds of specific ideas, suggestions and feedback have helped create this document. In developing the draft Recovery Strategy, meetings with communities and stakeholders were held in June and July 2011. Then in September and October 2011 CERA invited people to respond in writing to the draft Strategy. Four hundred and sixty three written comments were received over seven weeks. CERA worked with government agencies and strategic partners to consider this feedback and make recommendations for changes.

Respondents showed general support for the vision and principles of the draft Recovery Strategy. The level of support for the different goals proposed in the draft Recovery Strategy varied. Some asked for strong leadership, better communication, more attention to the natural environment and opportunities to stay involved in the recovery. Other concerns related to insurance and the need to quickly attract investment. Many respondents prioritised community wellbeing and sport and recreational opportunities. All comments have been summarised and analysed. They are now informing the direction and content of all the recovery programmes and plans being developed.

SECTION 02

Guiding Principles

Ngā Mātāpono me te Mahi-ā-rōpū

This section outlines the principles that underpin this Recovery Strategy. These principles, along with normal public sector requirements and obligations, will provide guidance at a strategic level. CERA, its strategic partners and other government agencies will refer to them as they plan and implement recovery activities together. The principles are not designed for detailed decision-making; for example, they should not be used as a test for resource consent applications.

- **Work together**
  Recovery is a collaborative effort. It is essential to have constructive relationships between the private sector, NGOs, local and central government agencies, and the wider community.
- **Take an integrated approach**
  Links between different recovery initiatives will be identified so that together they achieve the greatest benefits.
- **Look to the future**
  Development and recovery initiatives will be undertaken in a sustainable manner. They will meet the needs of future generations, taking into account climate change and the need to reduce risk from natural hazards. They will also ensure community safety and wellbeing now and in the future. If the process of repair reveals a way of enriching people's quality of life, that opportunity will be taken.
- **Promote efficiency**
  Resources will be used wisely so that the recovery is timely and affordable, and delivers value for money.
- **Use the best available information.**
  A wide range of information, including spatial information, will be collected and shared. This information will help decision-making, improve transparency, promote best practices and enable the public to participate in the recovery effectively.
- **Care about each other**
  Recovery initiatives will take account of people's psychological, physical, spiritual and social needs. They will promote equitable outcomes and connected communities and recognise diversity.
- **Innovate**
  Creative, cultural and resourceful solutions to recovery issues will be encouraged.
- **Aim for balanced decision-making**
  Decisions will balance action and certainty with risk. They will consider the need for positive action, speedy responses and certainty; and the risk of short-term economic, environmental and social hardship and of compromising long-term objectives.
- **Keep it simple**
  Communication must be clear and stick to the facts. It must give land owners, residents and businesses the information they need.

Ka oi Rūaumoko,
ka piri a Waitaha.

Despite the heaving earth,
Cantabrians unite.

SECTION 03

What is Recovery?

He aha tēnei mea te Whakaara?

The CER Act defines recovery as including both restoration and enhancement. Recovery is inherently future focussed and there will be opportunities to "build back better" when repairing damage caused by the earthquakes.

Opportunities for enhancements should be considered, including where:

- they lead to increased resilience and/or functionality; or
- are cost-effective according to life-cycle analysis

provided that they do not come at the expense of the repair or replacement of essential infrastructure and services elsewhere.

For the purposes of this Strategy, "recovery" does not mean returning greater Christchurch to how it was on 3 September 2010.

Individuals and organisations are likely to view what recovery means in different ways. Their views will be shaped by how the earthquakes have affected them, how they view the social, cultural, economic and environmental impacts on the greater Christchurch area, and their hopes for the future.

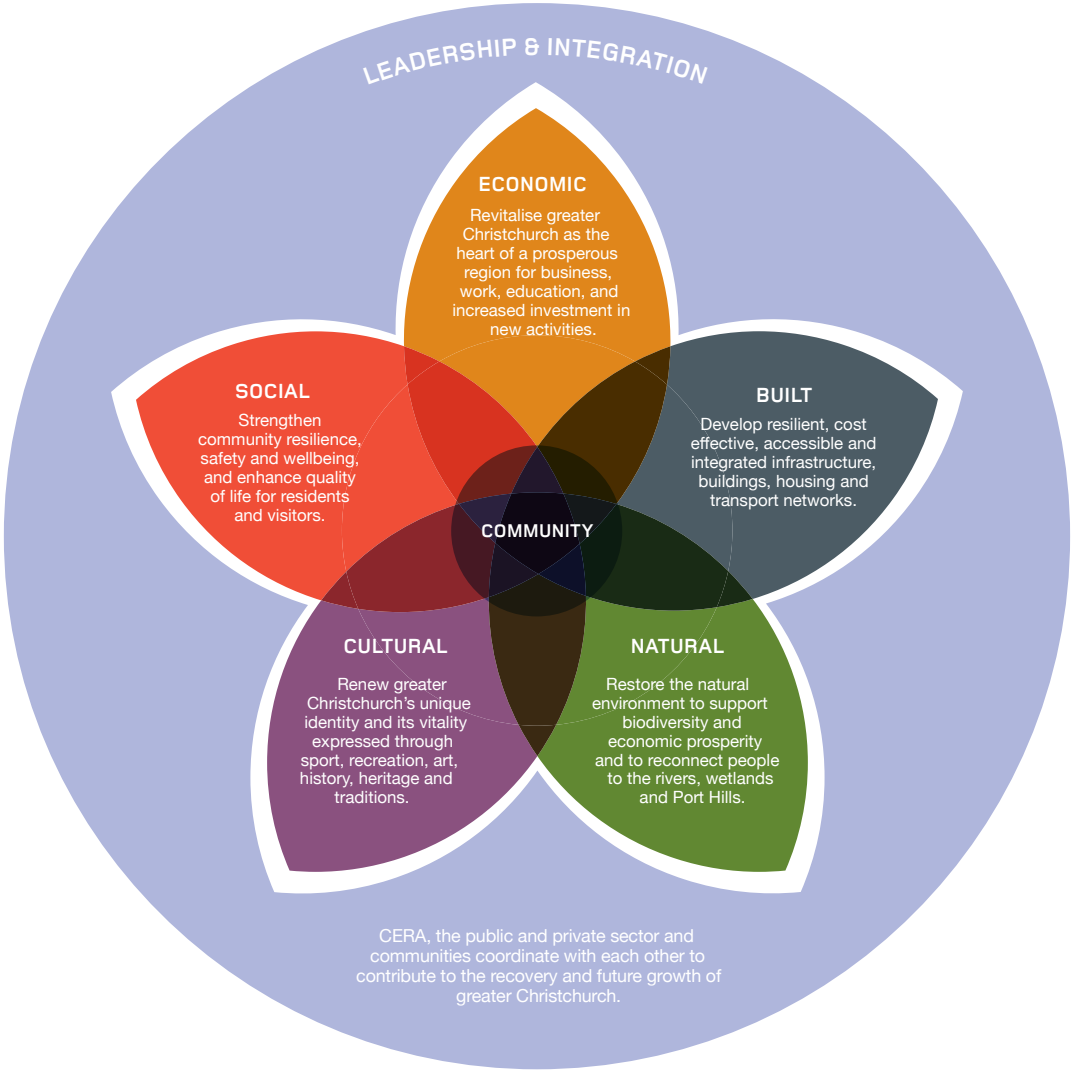
Vision and Goals for the Recovery
Ngā Wawata

Vision

Greater Christchurch recovers and progresses as a place to be proud of – an attractive and vibrant place to live, work, visit and invest, mō tātou, ā, mō kā uri ā muri ake nei – for us and our children after us.

Supporting this vision are the following goals, which relate to the six components of recovery.

The community is at the heart of the vision and the success of recovery.



LEADERSHIP AND INTEGRATION

1. CERA, the public and private sector and communities coordinate with each other to contribute to the recovery and future growth of greater Christchurch - by:

1.1 facilitating a timely and efficient recovery, including intervening where necessary to remove impediments, resolve issues and provide certainty;

1.2 considering the effects of ongoing seismic activity;

1.3 reporting and communicating how recovery work programmes are delivering integrated recovery;

1.4 facilitating engagement that will result in constructive and enduring governance, partnerships and relationships for recovery;

1.5 delivering smarter council and government planning and services;

1.6 ensuring that public sector investment and expenditure are transparent;

1.7 identifying opportunities to leverage the significant investment needed for new and upgraded infrastructure; and

1.8 providing research and knowledge that will help to make well-informed decisions for a robust and enduring recovery.

ECONOMIC RECOVERY

2. Revitalise greater Christchurch as the heart of a prosperous region for business, work, education, and increased investment in new activities - by:

2.1 planning for a well-functioning Christchurch central city, thriving suburban centres, flourishing rural towns and a productive rural sector;

2.2 leading and working with strategic partners and both the public and private sector;

2.3 restoring the confidence of the business sector and the insurance and finance markets to enable economic recovery and growth;

2.4 renewing the region's brand and reputation as a safe, desirable and attractive place to live, study, visit and invest;

2.5 identifying and facilitating increased opportunities for early and substantial local and international investment;

2.6 ensuring a range of employment options to attract and retain a high-calibre, appropriately skilled workforce;

2.7 collaborating with the private sector and government agencies to address obstacles to economic recovery and to match supply with demand for resources;

2.8 enabling a business-friendly environment that retains and attracts business;

2.9 aligning provision of education and training to support long-term economic growth;

2.10 ensuring science, technology and innovation supports recovery and growth; and

2.11 facilitating the recovery and development of the Central Business District.

SOCIAL RECOVERY

3. Strengthen community resilience, safety and wellbeing, and enhance quality of life for residents and visitors - by:

3.1 enabling and empowering local communities to shape and lead their own recovery;

3.2 growing capacity, knowledge and skills within the community to build resilience;

3.3 delivering community, health, education and social services that are collaborative, accessible, innovative and inclusive;

3.4 supporting people, in particular those facing hardship and uncertainty, by providing quality housing, education and health services; and

3.5 supporting communities as they go through the processes of resettlement.

CULTURAL RECOVERY

4. Renew greater Christchurch's unique identity and its vitality expressed through sport, recreation, art, history, heritage and traditions - by:

4.1 acknowledging and celebrating the rich and diverse Ngāi Tahu, colonial and other heritages and connections;

4.2 resuming cultural, community and sports events and activities;

4.3 encouraging participation in a range of entertainment, cultural, recreational and sporting activities;

4.4 restoring historic buildings, where feasible, for the benefit of the community; and

4.5 acknowledging losses and creating spaces to remember, while embracing necessary changes to the city's character and urban form.

BUILT ENVIRONMENT RECOVERY

5. Develop resilient, cost effective, accessible and integrated infrastructure, buildings, housing and transport networks - by:

5.1 coordinating and prioritising infrastructure investment that effectively contributes to the economy and community during recovery and into the future;

5.2 supporting innovative urban design, buildings, technology and infrastructure to redefine greater Christchurch as a safe place built for the future;

5.3 rebuilding infrastructure and buildings in a resilient, cost-effective and energy-efficient manner;

5.4 developing a transport system that meets the changed needs of people and businesses and enables accessible, sustainable, affordable and safe travel choices;

5.5 zoning sufficient land for recovery needs within settlement patterns consistent with an urban form that provides for the future development of greater Christchurch;

5.6 having a range of affordable housing options connected to community and strategic infrastructure that provides for residents participation in social, cultural and economic activities; and

5.7 drawing on sound information about ongoing seismic activity and environmental constraints, including other natural hazards and climate change.

NATURAL ENVIRONMENT RECOVERY

6. Restore the natural environment to support biodiversity and economic prosperity and to reconnect people to the rivers, wetlands and Port Hills - by:

6.1 ensuring recovery activities value, protect and sustainably manage the sources of our water;

6.2 ensuring ecosystems are healthy and functioning;

6.3 improving the quality and function of estuaries, waterways and wetlands to support the unique biodiversity that is endemic to Te Waipounamu;

6.4 providing public access to and opportunities for outdoor recreation, cultural, social and economic activities;

6.5 enhancing air quality through managing recovery activities that impact on air quality, such as heating, transport, demolition and construction; and

6.6 storing, sorting and processing waste in an environmentally safe and effective manner, including minimising and recycling construction and demolition wastes.

SECTION 05

Priorities
Ngā Whāinga tōmua

This strategy identifies the following priorities to address and promote social, economic, cultural and environmental wellbeing.

People's safety and wellbeing by:

- enabling people, particularly the most vulnerable, to access support;
- addressing the risk to life posed by unsafe buildings and from natural hazards;
- providing options for repairing housing and temporary or replacement housing;
- deciding whether land is suitable for residential use and providing a process for purchasing affected residential property; and
- repairing and maintaining essential services to all homes and businesses until major infrastructure is completed and/or land use decisions are finalised and implemented.

Investment conditions in greater Christchurch to support the rebuild and development of the area.

Permanent repair or rebuild of infrastructure in areas identified for redevelopment and development in the short to medium term. This strategic and horizontal infrastructure includes lifeline utilities, major transport routes, public transport services and electricity and communication networks.

Supply of land for recovery needs through efficient consenting processes and timely provision, restoration or optimisation of infrastructure. This enables developers to provide a mix of quality housing options that are connected to services and infrastructure (for example, schools, communications, shopping and transport networks) and new business developments.

Coordinate work across central government, iwi, local authorities, insurers and the private sector to:

- establish and facilitate clear arrangements for governance and work programming;
- align and sequence work including the early identification of risks and removal of obstacles to the rebuild;
- respond to housing needs; and
- encourage the provision of a variety of accommodation that is sufficient for residents, including temporary construction workers and people displaced due to the rebuild.

Communicate and engage with communities including youth so that they understand and can participate in recovery activities and inform the development of recovery programmes.

Regulation, standards and other information to support the rebuild and repair of housing to a quality that meets the technical requirements for the land categories and building standards. One of these requirements is that:

- when making a resource consent application or a request for a plan change for the subdivision of land, the person proposing the subdivision must address the risk of liquefaction. As a minimum, that person must provide the local authority with a geotechnical assessment in accordance with the *Guidelines for the geotechnical investigation and assessment of subdivisions in the Canterbury region* (Department of Building and Housing, 14 November 2011).[2] [This requirement does not apply where a building will not be permitted as a result of the subdivision of land.]

A functioning Central Business District, suburban areas and rural towns that provide opportunities for local businesses and economic activities to relocate, maintain services and grow.

Opportunities and facilities for sporting, recreational and cultural activities.

[2] *This requirement applies unless the Resource Management Act is changed to address how natural hazards are considered when subdividing land. "Person" has the same meaning as in section 2 of the Resource Management Act.*

SECTION 06

Phases of Recovery and Milestones

Ngā Wāhanga me ngā Tohu o te Whakaara

Many actions are needed to support the community early in the recovery; other activities can be undertaken only after investigation and planning. Recovery activities can be organised into typical phases that indicate what to expect as the community moves from the emergency response to short-term recovery and then medium- to longer-term recovery.

As seismic activity continues in greater Christchurch, progress through these recovery phases may be complex. If there is another earthquake, it may be necessary to return to a previous phase to deal with immediate recovery needs.

The following table outlines typical recovery phases and some key milestones for greater Christchurch. For more information about the timeline and achievements to date, see the CERA website.

Copyright Neil MacBeth, licensed to the Stronger Christchurch Infrastructure Rebuild Team.

Typical phases of recovery

IMMEDIATE

Repair, patch and plan

- Provide basic human needs and support services.
- Address health and safety issues.
- Make safe or demolish unsafe and damaged buildings and structures.
- Investigate, scope and initiate recovery programmes and initiatives.
- Plan for land use and settlement patterns so land can be made available for displaced residents.
- Conduct ongoing programme of investigation and research to understand the geotechnical issues and seismic conditions. Use this information to guide recovery activities and decisions on land suitability for rebuilding.

SHORT TERM

Begin to rebuild, replace and reconstruct

- Engage both established and new communities and inform them about rebuilding and future planning.
- Establish new social and health support and service delivery models.
- Continue demolition of damaged buildings.
- Continue repair and rebuild.
- Deliver early projects to instil confidence.
- Planning and supporting community resilience.
- Begin replacement activity.
- Begin restoration and adaptive reuse of heritage features.
- Continue, monitor and review recovery.

MEDIUM TO LONGER TERM

Construct, restore and improve

- Continue to build resilient communities.
- Continue reconstruction.
- Major construction projects are underway.
- Complete restoration and adaptive reuse of heritage features.
- Phase out recovery organisations.
- Economy is growing and businesses are sustainable.
- Labour market is active and attracting employees.

Indicative recovery milestones for greater Christchurch

SEPTEMBER 2010 TO DECEMBER 2011

Repair, patch and plan

- Support, assist and provide information to communities and individuals.
- Stronger Christchurch Infrastructure Rebuild Team (SCIRT) Alliance assesses damage and starts repairs to infrastructure.
- Restore non-chlorinated water supply to residents and declare beaches safe for swimming.
- Decide on suitability of land for rebuilding. Establish green and red residential zones.
- Government makes offer to purchase residential red zone properties and settlements begin.
- Begin to demolish dangerous buildings.
- New Building Act Guidelines establish new standards for buildings.
- Earthquake Commission (EQC) and insurance companies undertake damage assessments and payouts are underway.
- Greater Christchurch residents engage with government and local government on the future of the central city and the nature and coordination of recovery activities (draft Recovery Plan for the CBD and draft Recovery Strategy).
- Facilitate the release of land for new subdivisions.

2012 TO 2014

Begin to rebuild, replace and reconstruct

- Approve Recovery Strategy to direct and coordinate recovery activities and agencies involved in recovery.
- Restore access to and transportation networks in central city.
- Establishment of the Christchurch Central Development Unit (CCDU).
- Finalisation of the Recovery Plan for the CBD.
- Rebuilding of the CBD starts.
- Complete decisions on land zones and geotechnical issues.
- Continue repair of infrastructure and make decisions about long-term repair and provision of infrastructure.
- Finish demolition of larger commercial buildings.
- Government and statutory partners undertake recovery programmes.
- Complete settlements and land clearance for residential red zone properties.
- EQC and insurers undertake residential repairs and rebuilds.
- Establish new residential subdivisions.
- Find facilities for sporting and cultural activities.
- Construct temporary buildings for entertainment and retail in greater Christchurch.

2015 TO 2020 AND BEYOND

Construct, restore and improve

- Government and strategic partners continue to implement recovery programmes.
- Continue rebuilding and construction.
- EQC and insurers complete residential repairs and rebuilds.
- Major sporting and cultural facilities are under construction.
- Recovery responsibilities are transferred when necessary. Put new arrangements in place.

Note: Ongoing seismic activity in greater Christchurch may mean return to a previous phase to deal with immediate recovery needs.

SECTION 07

Recovery Programmes

Te Huanui Angitu

CERA has worked across government and with strategic partners to develop programmes to implement the Recovery Strategy. These programmes deal with each of the six components of recovery and are interconnected. They include activities, projects and larger programmes of work and will seek to achieve multiple goals where appropriate.

Government-led recovery programmes should:

- be consistent with the Recovery Strategy, particularly the goals and principles;
- integrate activities to achieve multiple goals of the Recovery Strategy where possible;
- investigate opportunities for risk reduction and enhancement to build a stronger and more resilient community and region;
- use appropriate impact assessment methodologies and tools;
- identify programme targets and objectives; and
- identify pre-earthquake baselines and expectations for the components of recovery (social, economic, natural environment, cultural and built environment). These baselines can then be used when measuring the success of the recovery programmes.

Recovery programmes will be implemented in a number of ways. For example, some agencies will coordinate with each other on new initiatives and others will reorient or adapt business-as-usual work. Some programmes may use the statutory tools provided by the CER Act (such as Recovery Plans and Orders in Council) or other Acts such as the Resource Management Act 1991 and the Local Government Act 2002.

7.1 Recovery Plans

In some cases a programme of work may need a Recovery Plan. Recovery Plans can be developed under the CER Act. This Act also identifies the need for the Recovery Plan for the CBD (known as the Central City Plan). Recovery Plans impact on other regulatory plans created under other laws. They need to be carefully considered and consulted on before they are finalised.

Why might a Recovery Plan be developed?

- A Recovery Plan is appropriate if statutory intervention is needed to undertake a particular programme of work. Sections 23 and 26 of the CER Act provide for this intervention.
- A Recovery Plan may be appropriate when usual methods of work cannot achieve the required intervention because of the type of work or timeframe involved.

At this stage, several Recovery Plans are being scoped. Part of preparing any Recovery Plan will be to consider any existing Treaty of Waitangi obligations. To integrate activities, connect the components of recovery, and implement the goals of this strategy, the preparation of Recovery Plans will use impact assessment methodologies and tools, such as the Integrated Recovery Planning Guide (June 2011).

SECTION 08

Monitoring, Reporting and Review of the Recovery Strategy

Te Aroturuki me te Arotake

8.1 Monitoring

CERA will develop a monitoring plan by the end of June 2012, in consultation with the strategic partners and government agencies. This plan will coordinate and outline responsibilities for monitoring and reporting on the recovery's progress. Monitoring will track recovery over time and make information available to decision-makers and the community. If any recovery activities are not effective, this process will also help identify the required changes.

The plan will address three levels of monitoring and reporting.

1. **Monitoring indicators for the Recovery Strategy goals.** In collaboration with the strategic partners and other agencies, CERA will develop baseline indicators for the Strategy's goals. These indicators will be used to measure progress towards recovery, including outcomes for iwi. For example, social recovery indicators may relate to trends in education, health, housing and demography, and may be analysed in terms of age, ethnicity, employment status and gender. A few key indicators, such as for community and economic wellbeing, will be linked to more detailed monitoring that closely tracks progress.
2. **Monitoring progress towards the goals.** Recovery programmes for the six components of recovery will identify targets and objectives that will be used to measure progress towards the goals.
3. **Financial monitoring and reporting by central government and local authorities.** Financial reports make the spending of public funds accountable and transparent. They also provide information about future work programmes.

    a) Central government produces quarterly financial reports on Vote appropriations. Information includes programme and activity spend (actual and projected) on the greater Christchurch earthquake recovery.

    b) Local authorities produce financial reports under the Local Government Act 2002 on their programme and actual and projected activity spend.

8.2 Reporting and review

CERA will review and report publicly on the implementation of the Recovery Strategy, recovery programmes and progress towards milestones. Reporting will show where outcomes are, or are not, being achieved and where conditions have changed – for example, because knowledge has changed or there is ongoing seismic activity. Reports will be posted and updated on the CERA website.

CERA provides available research and information (for example, on land decisions and liquefaction, tsunami and rockfall risk) through its website and updates via Facebook and Twitter.

The Recovery Strategy will be reviewed as required to keep it current and relevant.

In particular, a review may be required for any of the following reasons.

- Another significant earthquake or aftershock forces changes to the longer-term approach to recovery.
- Monitoring shows a need to change approach, or to address an ongoing market failure.
- Other influences or risks have a significant impact on recovery activities - for example, there are changes to the availability of finance or to other strategic documents that influence the recovery.

In addition, the Minister for Canterbury Earthquake Recovery will review the CER Act in terms of its operation and implementation and will report on it each year (see section 92 of the CER Act).

SECTION 09

Pace of Recovery

Te Waihoe

Many factors can influence the pace of recovery. Recovery activities need to be sequenced carefully to avoid bottlenecks and minimise frustrations. Although a fast recovery is desirable, going too fast can create further problems. It creates competition for resources between projects, drives up costs and creates pressure on existing services and facilities. It may also not produce the best outcomes in the long term. As the aftershocks are continuing, time is needed for the land to settle down or be remediated. It is important to obtain the right information, including scientific data, and take a considered approach to planning and developing robust solutions before implementing them.

Influences on phasing and pace include:

- the nature of, and the risks posed by, ongoing seismic activity;
- the availability of sufficient land for rebuilding and infrastructure services provided to this land (e.g. for greenfields developments);
- whether skilled construction workers and machinery are available;
- the timing and nature of insurance settlements;
- the capacity of building industry professionals to design, build and inspect developments;
- the preparation of quality consent applications and council processing of resource and building consents; and
- whether there is sufficient funding and insurance cover for recovery activities.

At the moment there are not enough skilled construction workers and machinery in greater Christchurch to work on all recovery tasks at the same time. Additional training courses are already available in Christchurch through the Skills for Canterbury package. Increasing the number of trade workers may speed work up but would also increase the pressure on temporary accommodation and other services. CERA is liaising with insurers and their project managers, councils and representatives from engineering and other professions involved in the rebuild about this issue. In this way it is developing a clearer understanding of the requirements of the rebuild in terms of timing and the demand for labour, skills and building materials, and consenting and professional advisory services. Closer working relationships on the rebuild will help to identify and resolve any risks or unintended consequences that may interfere with the recovery of greater Christchurch.

Projects that create impetus for additional services or investment to stimulate recovery have been successfully used by other cities recovering from disasters. CERA, its strategic partners and the private sector will identify and progress these kinds of projects. Two examples are the Re:START Cashel Mall and the Christchurch Stadium, both now completed.

SECTION 10

Financial Impact and Funding

Te Pūtea

The cost of earthquake damage in 2010 and 2011 is currently estimated to exceed $20 billion (see the table below). The earthquakes reduced New Zealand's GDP by an estimated 1.5 per cent in 2011. Financial impacts will continue into the future as resources will be used to rebuild, rather than grow, the capital stock. While business activity has continued at a high level, damage has been made worse by ongoing seismic activity. The rebuild will boost economic activity in greater Christchurch, but as a result of the earthquakes, some people have already suffered a drop in wealth and living standards.

Current damage estimate

Sector	Residential	Commercial	Infrastructure	Land remediation	Total
Recovery cost (billions)	$10.5B	$4B	$3B	$2.5B	**$20B**

Insurance

EQC, private insurance companies and international reinsurers will cover a significant proportion of the financial cost of the damage and subsequent rebuild. Timely settlement of insurance claims and the ability of households, businesses and government agencies to obtain insurance cover in future are important factors in the recovery process. Insurance premiums will be higher than before the earthquakes, and insurance may be more difficult to obtain and could include changed terms and conditions, such as excess levels. Over time, the insurance market can be expected to settle to a "new normal" in which insurance premiums and conditions reflect the earthquake risk of the region, as well as risk management initiatives. CERA will liaise with insurers to monitor and encourage timely settlement of claims and to help create the right conditions for the insurance market to flourish in future.

Crown

The Crown will contribute more than $8.8 billion to the recovery in the period to 2015. It has allocated $5.5 billion of core expenditure through a notional fund, the Canterbury Earthquake Recovery Fund (CERF).[3] Another $3.3 billion is estimated to be required for the State-owned enterprise and Crown entity sectors.

Overall, the Crown's contribution to the recovery must be balanced with other important demands for funding outside of greater Christchurch. The Crown will use funding in ways that maximises value for money and catalyses funds from other sources.

Investment proposals seeking Crown funding will be assessed against Treasury's Better Business Cases (BBC) guidelines.[4] Public sector investment early in the recovery process is vital to re-establishing infrastructure and building community and economic confidence.

Local government

Local government is also contributing financially to the recovery by sharing the cost of repairing and reinstating water, sewerage, road and transport infrastructure and other council facilities. Councils are also making significant investments in social recovery. Local government will wish to use capital efficiently so that they can keep rates contributions for the recovery at a reasonable level. CERA will work closely with strategic partners and will explore a full range of financial options to support the recovery through the development of the *Funding and Finance Recovery Programme.*

Private sector

Private capital is essential for funding the aspects of recovery that insurance and central and local government funding do not cover. Establishing confidence among businesses and investors is therefore critical. To develop this confidence, the Government can help create an environment that attracts private capital. Without the right level of appropriately priced private sector investment, recovery will not occur in a timely manner, potentially leaving many of the community's goals and aspirations for greater Christchurch unrealised. Naturally, government's funding strategy will seek to leverage private sector investment as much as is reasonably possible.

Private sector investment is expected to grow as the recovery progresses and to become the greater proportion of recovery investment. It will be used, for example, to create businesses, employment and housing. Public and private sector roles will be defined in the *Funding and Finance and Economic Recovery Programmes.*

The not-for-profit sector (such as charities and individual philanthropists) can provide funding and support for non-commercial projects. CERA will work closely with this sector as part of the *Funding and Finance Recovery Programme.*

[3] *http://www.treasury.govt.nz/budget/2011*
[4] *www.infrastructure.govt.nz/publications/betterbusinesscases*

SECTION 11

Implementing the Recovery Strategy

Ngā ara hei whakatutuki i te Mahere Haumanutanga

The rest of this document provides additional detail about how the Recovery Strategy is being implemented. Sections 12–17 discuss the rationale, goals and projects or programmes associated with the six recovery programmes. As many programmes are still in the planning stages, CERA will give updates on its website when more details are available about the specific projects, who is involved and key milestones. Visit www.cera.govt.nz to remain up-to-date on the Recovery Strategy and recovery programmes.

11.1 Collaboration and engagement

No one agency or group will be able to achieve recovery alone. Collaboration is essential to connect those who have a role in recovery, including those in the government, iwi, business, cultural and other non-government sectors. By establishing and maintaining constructive relationships, agencies will be able to take initiatives that are coordinated, timely and enduring.

CERA has been engaging with Christchurch residents since it was established. This includes information sessions and workshops for those affected by the zoning decisions as well as business and social recovery support.

Engaging communities extends well beyond the development of this Recovery Strategy. If the Strategy is to be implemented successfully, they must continue to be engaged in the recovery. Communities may be engaged in different ways during the development of the recovery programmes and plans. How they are involved will depend on what issues are being addressed and who is involved. The International Association for Public Participation (IAP2) Spectrum of Public Participation describes various tools for engaging the community, such as website information, written submissions, public meetings, stakeholder workshops and community forums. The Community Forum established under the CER Act provides information and advice to the Minister for Canterbury Earthquake Recovery.

In many instances communities, non-governmental organisations and neighbourhood groups have well-developed networks, initiatives or ideas which can inform recovery. Some communities organised themselves quickly to respond to the disaster, plan for the future and care for each other. Some community groups have developed neighbourhood plans which are useful for the community and can inform council-led planning processes such as master planning or emergency responses.

CERA has developed its Community Engagement Strategy in consultation with strategic partners and community stakeholders. The strategy commits CERA to work with people and communities to rebuild and revitalise greater Canterbury. It is available on the CERA website.

A range of communication tools are in place to provide more information about CERA's work programmes and progress on recovery. These include monthly updates distributed to households, information brochures and leaflets, media releases, public notices, email updates and the CERA website.

11.2 Relationship with existing strategies and plans

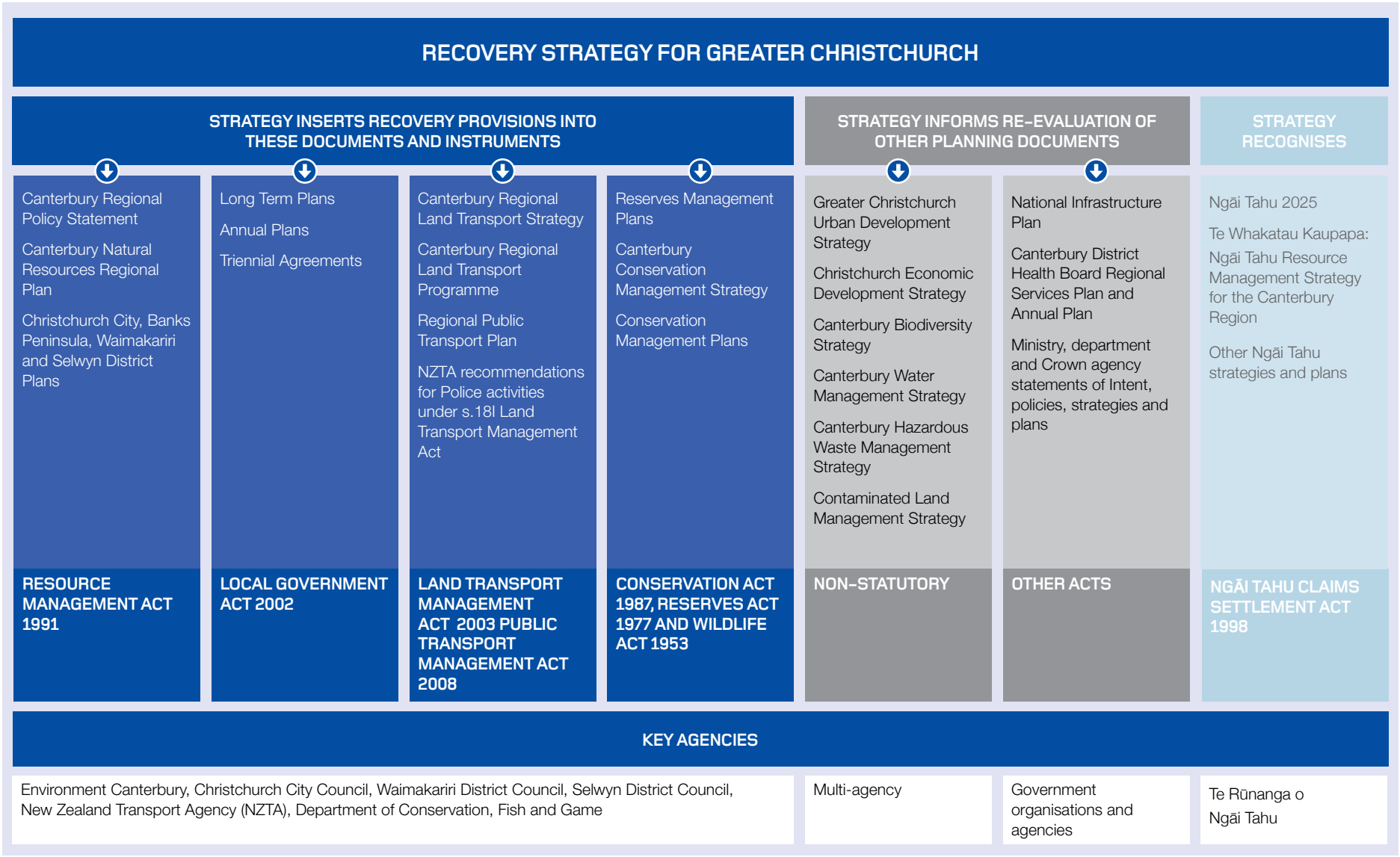
The Recovery Strategy sets the overall direction for the rebuild and recovery of greater Christchurch. It also inserts provisions necessary for the recovery into specific planning documents and instruments (sections 15 and 26 of the CER Act), as shown in the following diagram.

Strategies that were developed before the earthquakes to guide planning and growth in greater Christchurch will need to be re-evaluated in the light of recovery needs. The most significant of these is the Greater Christchurch Urban Development Strategy (UDS). This non-statutory strategy was developed under the Local Government Act 2002 by Environment Canterbury, the Christchurch City Council, Selwyn and Waimakariri District Councils and the New Zealand Transport Agency. The UDS is implemented primarily through a range of statutory planning processes—in particular, the Canterbury Regional Policy Statement, District Plans, Councils' Long Term Plans, and the Canterbury Regional Land Transport Programme. As all of these are required to be consistent with the Recovery Strategy, the Strategy will also influence any re-evaluation of the UDS.

Using the CER Act powers, the Minister for Canterbury Earthquake Recovery has fast-tracked changes to the Regional Policy Statement. These changes are set out in chapters 12A and 22 of the Regional Policy Statement. Further changes are possible as a result of any re-evaluation of the UDS.

Copyright Neil MacBeth, licensed to the Stronger Christchurch Infrastructure Rebuild Team.

The relationship between the Recovery Strategy and other strategies, policies and plans for greater Christchurch



Key: Direct effect

11.3 Governance

The New Zealand Government established the Canterbury Earthquake Recovery Act 2011 as the legislative framework to enable a faster recovery in greater Christchurch.

The CER Act requires accountability to the Parliament as the elected representatives of the New Zealand public. The Recovery Strategy is an important document in signalling the intentions of the Government and partners involved in recovery.

The role of the Minister for Canterbury Earthquake Recovery was appointed by the Prime Minister to coordinate the recovery effort at the executive government level. This role reports to Cabinet Committee on Canterbury Earthquake Recovery (CER), which was tasked to oversee and coordinate the government's response to support the recovery and reconstruction following the earthquakes.

The Minister works closely with CERA as the primary agency for recovery, however virtually all government departments are contributing to the recovery efforts. Other government agencies and departments are coordinated through a Senior Officials Group, chaired by the Chief Executive of CERA.

The Recovery Strategy is the primary document to coordinate action amongst government and strategic partners. A clear governance framework is supporting the work related to the Recovery Strategy and recovery programmes.

The framework provides for input and alignment at the political, advisory, strategic and technical levels. It:

- establishes clear accountability to the elected government and the Parliament;
- reflects both the greater Christchurch context, including existing frameworks (such as the UDS);
- establishes clear relationships both at the local government level and with central government agencies;
- reflects a collaborative and integrated approach to the development of recovery programmes through the establishment of effective working relationships; and
- enables a smooth transition in April 2016 when CERA is no longer an established entity.

The resulting framework covers all levels of governance (political, central government, local government and stakeholder/community).

Elected members, commissioners and leaders of the strategic partners are engaged through the Recovery Strategy Advisory Committee (RSAC). This committee will ensure an aligned approach amongst partners to the implementation of the Recovery Strategy.

This committee is supported by the Recovery Strategy Chief Executive Advisory Group (RSCEAG) which includes the Chief Executives of strategic partners and NZTA. Officials of all groups involved in the Recovery Strategy will work at management and technical levels to coordinate and align recovery programmes.

11.4 Transition

The State Sector (Canterbury Earthquake Recovery Authority) Order 2011 established CERA on 29 March 2011. On 19 April 2011 the Canterbury Earthquake Recovery Act 2011 came into force. It gave CERA the functions and powers to assist in the recovery and required the development of a Recovery Strategy. The CER Act expires five years after the day it commenced (i.e. on 19 April 2016).

A transition plan is required to deal with the time when CERA ceases to exist. Transition will not override or compromise existing processes resulting from other legislation. This transition plan will be developed in collaboration with strategic partners by April 2015. The aim will be to make a smooth transfer of responsibilities and maintain the recovery effort.

SECTION 12

Leadership and Integration

He Tātaki, he Mahi ngātahi

Mā te mahi tahi ka ora te iwi.

Working together the people will prosper.

CERA is leading and coordinating an efficient and effective recovery programme through involving strategic partners, stakeholders and sectors. This will include intervening where necessary to remove impediments and resolve any issues, for example by using the powers provided for in the CER Act.

As well as coordinating the governance and decision-making processes, CERA is collecting information, engaging with people, and planning or project managing on-the-ground action (for example, the demolitions, public bus tours and red zone information sessions).

The Christchurch Central Development Unit (CCDU) has been established to lead the rebuild of the Christchurch CBD. More information about the unit can be found at www.ccdu.govt.nz

Integrating action across the recovery components can achieve greater positive results. For example, a well-designed built environment can also improve health and cultural vitality, attract tourists and investors, and reduce harm to the natural environment. Careful planning and sequencing of recovery programmes can achieve multiple goals and reduce duplication of effort.

The pool of resources for the recovery is not unlimited. Therefore, approaches are needed to both expand and use the available funds as effectively as possible to maximise recovery outcomes. An attractive financing environment signals that greater Christchurch opportunities represent an attractive risk–return balance. To achieve such an environment and engage the private sector, the Government needs to promote the right framework of policy, institutions, legislation and regulations. Funding is improved when good decisions are made around investment priorities and sequencing. Other helpful measures are robust business case analysis, openness to selecting the best funding options from the full range of financing possibilities, effective procurement and delivery monitoring.

Quality scientific data and other information are needed to inform and make robust decisions. Property owners require clear information about the status of their land, homes and businesses so they can plan and move forward with repairing and rebuilding their properties. This information is particularly important for those dealing with severe land damage, flooding and disruption to services. Government is working with partners on science and information such as geotechnical issues including rockfall risks, cliff collapse, debris inundation and land movement. It is working to provide certainty to home owners as soon as practicable so as to improve confidence for home and business owners, insurers and investors.

For more information about land zoning, see Built Environment: Implementation (section 16.2).

12.1 Leadership and integration goals

1. CERA, the public and private sector and communities coordinate with each other to contribute to the recovery and future growth of greater Christchurch - by:

1.1 facilitating a timely and efficient recovery, including intervening where necessary to remove impediments, resolve issues and provide certainty;

1.2 considering the effects of ongoing seismic activity;

1.3 reporting and communicating how recovery work programmes are delivering integrated recovery;

1.4 facilitating engagement that will result in constructive and enduring governance, partnerships and relationships for recovery;

1.5 delivering smarter council and government planning and services;

1.6 ensuring that public sector investment and expenditure are transparent;

1.7 identifying opportunities to leverage the significant investment needed for new and upgraded infrastructure; and

1.8 providing research and knowledge that will help to make well-informed decisions for a robust and enduring recovery.

12.2 Implementation

Recovery Governance and Coordination led by CERA is establishing and supporting the recovery governance framework. It is also providing project management guidance to support the alignment, implementation and monitoring of the Recovery Strategy and the development, implementation and monitoring of recovery programmes and Recovery Plans.

The **Funding and Finance Recovery Programme** led by CERA is coordinating central government recovery spending. It is identifying funding and sequencing/timing gaps in all projects requiring capital across all classes of infrastructure, including hard-to-finance projects. The programme is also providing guidance to make the most of earthquake recovery funds; developing a macro-level portfolio approach to attract investment (including identifying sources of funding); and working on an investment prospectus to underpin business cases to give support and confidence to private investors.

The **Christchurch Central Development Unit** will provide leadership for the redevelopment of the CBD to deliver the vision of a distinctive, vibrant and green 21st century city. A blueprint for the CBD will provide greater certainty about the nature, location and timing of key anchor projects. It will build on the vision set out in the draft Central City Plan developed by the Christchurch City Council. The CCDU will work collaboratively with key partners such as the Christchurch City Council, Ngāi Tahu and stakeholders in the public and private sectors.

The **Iwi Māori Recovery Programme** led by Ngāi Tahu is ensuring that recovery issues specific to Ngāi Tahu, Ngā Papatipu Rūnanga and Māori in greater Christchurch are identified, analysed and implemented in an effective, integrated and innovative manner. The programme will cover issues such as housing and redevelopment on Māori land and reserves, potential development of cultural services and facilities or alignment with other initiatives (such as performing arts venues, sports facilities, and health services) and the restoration and recovery of the rivers and other significant natural features.

Many aspects of the programme will relate directly to Ngā Papatipu Rūnanga interests, but may also have relevance for the wider Māori community residing in greater Christchurch. Guidelines will be provided in the Iwi Māori recovery programme so that recovery programmes and plans:

- address the relationships and obligations derived from the Treaty of Waitangi;
- provide meaningful opportunities for Ngāi Tahu and Māori involvement in decision-making; and
- develop collaborative interventions and solutions to address Ngāi Tahu and Māori concerns and interests in recovery.

The **Natural Hazards Research Platform** is an ongoing programme of research to understand the geotechnical issues and seismic conditions. The research includes work to understand geotechnical issues, seismic conditions, liquefaction, rockfall risk, building and infrastructure performance, and the impacts on and resilience of society and communities. It is helping to inform decisions (such as zoning decisions) on where, when and how to rebuild in greater Christchurch.

SECTION 13

Economic Recovery

Whakaara Tahua

Nāu te rourou, nāku te rourou, ka ora te iwi.

"By your food basket and mine, we all will be satisfied." Cooperative enterprise succeeds where individual efforts are insufficient.

Economic wellbeing is essential to a high quality of life. In addition, the productivity of greater Christchurch contributes significantly to the economic output and wellbeing of the whole country and of the South Island in particular.

The foundations needed for economic growth include:

- a high-performing education sector;
- an active research and innovation environment;
- business-friendly and enabling institutions and services;
- effective investment capital and insurance markets;
- high-quality infrastructure;
- a healthy and plentiful natural resource base;
- a diverse productive and resilient business sector;
- collaborative and effective leadership;
- national and international connectivity;
- an attractive environment and social and cultural community;
- effective development of the areas of competitive advantage; and
- a highly skilled workforce and sufficient labour supply.

Together these foundations create an attractive environment for investors, businesses and individuals. They also help to create a flourishing commercial sector in which there are high-value opportunities for employment and business.

Economic recovery involves two streams of activity that depend on each other:

1. *reconstruction* of the central city and other damaged areas such as Lyttelton and Kaiapoi; and
2. *economic stimulus* to encourage sustainable growth in the local economy.

The reconstruction of greater Christchurch has already begun. Development activity will increase during 2012 as building projects get underway. Investment in reconstruction is driving short-term growth in local and national construction markets, and will enable long-term sustainable growth by providing the built environment greater Christchurch needs for the future.

Modern technology and communications infrastructure such as ultra-fast broadband are attractive to businesses as they enable growth opportunities in the technology sector and support business productivity.

Reconstruction and private sector investment will stimulate the economy. A stronger economy will enable local businesses to grow and develop, attract new businesses, create new jobs and add value to the local economy.

Local and central governments have important roles in economic recovery and are making significant investments. However, the bulk of the financial investment will come from the private sector. Therefore economic recovery must be collaboratively planned to establish solid foundations for economic growth.

Investing in greater Christchurch must be both a sound commercial decision and achieve quality outcomes for people.

13.1 Economic goals

2. Revitalise greater Christchurch as the heart of a prosperous region for business, work, education, and increased investment in new activities - by:

2.1 planning for a well-functioning Christchurch central city, thriving suburban centres, flourishing rural towns and a productive rural sector;

2.2 leading and working with strategic partners and both the public and private sector;

2.3 restoring the confidence of the business sector and the insurance and finance markets to enable economic recovery and growth;

2.4 renewing the region's brand and reputation as a safe, desirable and attractive place to live, study, visit and invest;

2.5 identifying and facilitating increased opportunities for early and substantial local and international investment;

2.6 ensuring a range of employment options to attract and retain a high-calibre, appropriately skilled workforce;

2.7 collaborating with the private sector and government agencies to address obstacles to economic recovery and to match supply with demand for resources;

2.8 enabling a business-friendly environment that retains and attracts business;

2.9 aligning provision of education and training to support long-term economic growth;

2.10 ensuring science, technology and innovation supports recovery and growth; and

2.11 facilitating the recovery and development of the Central Business District.

13.2 Implementation

Economic Recovery is led by CERA in partnership with economic stakeholders. Together they are working to ensure the foundations for economic wellbeing and growth are in place and to create the conditions that give greater Christchurch the strongest competitive advantage. The Partnership for Economic Prosperity and Recovery (PEPR) brings together a team of central government, strategic partners and business representatives to guide the development of the economic recovery programme. The programme will make the best use of the existing plans and capabilities of greater Christchurch's economic agencies and community organisations.

Economic recovery will include the following programmes.

Capital Investment Programme

- **Investment retention and attraction** will provide early and commercially attractive investment options for existing and new investors. This will include the compelling investment story, our brand and prospectus.
- **Anchor projects and significant projects** will identify and support a few significant projects that will stimulate other investment, as well as projects that will support long-term economic returns.
- **Assistance for the CBD Recovery Plan** is helping to implement the Recovery Plan for the CBD.
- **Insurance liaison** includes CERA and Treasury engaging with insurers and reinsurers to facilitate the resolution of any barriers to timely claim settlements and to monitor trends in the insurance landscape; and encourage sound risk management principles for recovery.

Photo courtesy of New Zealand Trade and Enterprise.

Business Environment Programme

- **Worst-affected sectors recovery** will work with industry sectors hardest hit by the earthquakes to assist them to recover and adapt.
- **Growth sectors** will focus on areas of competitive advantage and sectors that could increase their productivity for example through better use of modern technology and communicaitons.
- **Business support and networks** is ensuring businesses have access to responsive support and are well networked. It includes the support provided by Recover Canterbury.
- **Business-friendly environment** is ensuring that local and central government services are smart, responsive and helpful to business and commercial activity while maintaining quality regulation.
- **Innovation and knowledge environment** includes ensuring the conditions are in place to encourage and support innovation, entrepreneurship and technology transfer to support growth.
- **Monitoring, evaluation and reporting** is ensuring that economic wellbeing, conditions, barriers and opportunities are constantly monitored and reported. Where necessary, it will see that plans, projects and programmes are reviewed and adjusted.

Labour Market Programme

CERA is facilitating the Labour Market Programme along with stakeholders. Its purpose is to ensure that citizens have high-value employment opportunities and a skilled workforce is available to support business and growth. The programme will retain, attract, educate and train the skilled workforce needed for the rebuild and ongoing economic growth. It will also identify and remove any obstacles or barriers to the labour supply required for the rebuild.

SECTION 14

Social Recovery

He toko i te ora

Ruia taitea, kia tū ko taikākā anake.

"Strip away the sapwood and let the heartwood alone stand.' Be not concerned with what will not last, but concentrate efforts on quality and endurance.

People are likely to participate and flourish in the life of the region when they have access to quality housing, transport, education and health services and communities are inclusive. Restoring social wellbeing is a holistic and collaborative process. It empowers communities who are in transition as people leave familiar neighbourhoods and resettle in new areas.

Investment in community leadership and support is enabling community connections which helps strengthen personal resilience.

Integrated and community-led initiatives can help people to cope with stress and uncertainty. These initiatives can also minimise hardship, inequity and unnecessary disruption to housing, education and health services. As well as assistance, government and non-government health and social service providers are investigating how to reorient services and better reach out to people in need. Social service NGOs based in Christchurch have developed new ways of working and delivering services. With greater agency collaboration on social and public health recovery, services can be more efficient, improve public health and build the resilience of communities.

Education is a critical area for both social and economic recovery. It can contribute significantly to regional business and provide the workforce skills needed for the development of the region. The earthquakes have damaged land and education infrastructure, changed population and settlement patterns, and had social impacts on students, teachers and communities. Yet these same changes provide an opportunity to rethink the way education is delivered. The *Education Renewal Recovery Programme* will enhance educational services from early childhood to tertiary levels in a coordinated and timely way. These services will give people in greater Christchurch the new skills and competencies needed for long-term recovery.

14.1 Social goals

3. Strengthen community resilience, safety and wellbeing, and enhance quality of life for residents and visitors - by:

3.1 enabling and empowering local communities to shape and lead their own recovery;

3.2 growing capacity, knowledge and skills within the community to build resilience;

3.3 delivering community, health, education and social services that are collaborative, accessible, innovative and inclusive;

3.4 supporting people, in particular those facing hardship and uncertainty, by providing quality housing, education and health services; and

3.5 supporting communities as they go through the processes of resettlement.

14.2 Implementation

The **Community Resilience Programme** led by CERA aims to build capacity and empower local communities to lead their own recovery. It strengthens and supports collaborative initiatives already underway in greater Christchurch. It also engages with communities, including iwi, to encourage and support the development of further neighbourhood plans and initiatives. The programme is coordinating services that provide accessible and timely psychosocial support especially to vulnerable people.

The **Education Renewal Recovery Programme** is led by the Ministry of Education and Tertiary Education Commission. It is developing an innovative and cost-effective education network to establish strong learning foundations and lift educational outcomes for all learners. The programme will draw on the knowledge and expertise of educational leaders and teachers; youth, parents, families and whānau; Ngāi Tahu; and business and community leaders.

The **Residential Red Zone Programme** is coordinating and providing support to individuals and households in the red zones. The programme is implementing the government offer to purchase insured residential red zoned properties. It offers information and support to property owners so that they understand the options and can decide which offer is best for them. It also manages the acquisition and ongoing ownership of the properties sold to the government.

Effective Government Services is identifying, encouraging and embedding successful cross-sector innovations adopted locally after the earthquakes. It will also explore how Canterbury innovations can be replicated nationally, as appropriate.

The **Canterbury Wellbeing Index** is being developed with government agencies and city and district councils. It will measure and track recovery progress over time and inform the activities and priorities of CERA and other agencies.

The **Canterbury District Health Board Transition Programme** is fast-tracking work already underway to transform, deliver and fund health services by reorienting the Canterbury health system to improve health outcomes for the wider population. The programme's key priority is to manage demand by creating services and environments that support people to stay well.

SECTION 15

Cultural Recovery
Whakaara Tikanga

Cultural activities are an integral part of life in greater Christchurch and of our identity as a region. Cultural activities, including sport, art, recreation, and enjoyment of heritage, attract residents and visitors. There are many wāhi tapu and wāhi taonga of significance as a consequence of Ngāi Tahu's long-standing occupation of the region and use of natural resources. Heritage places, memorials and commemorative sites, museums and archives, performing and visual arts spaces, and sports and recreation facilities were significantly affected by the earthquakes. Iconic sport and recreation facilities are a significant part of the region's infrastructure and economy as they provide venues for participation and high-performance activities. By repairing or replacing lost facilities and maintaining events in the cultural sector, the many clubs and societies will continue to exist and bind communities together.

Greater Christchurch has lost much of the heritage that was one of its defining characteristics. Retention and conservation of restorable heritage buildings, places, archaeological sites and places of cultural significance, and restoration of access to heritage collections, will help recreate that distinctive sense of place and identity that has defined the region and contributed to its economic development.

The cultural recovery of greater Christchurch is vital for a functioning and liveable city. There are opportunities to consider cultural, sporting and recreational requirements as a whole. All partners can work together to identify community needs and, where appropriate, consider facilities that offer a range of cultural activities. New opportunities will be sought so cultural activities contribute to community wellbeing and economic growth.

Kia mau ki te kura whero.

Hold fast to the valued treasures.

15.1 Cultural goals

4. Renew greater Christchurch's unique identity and its vitality expressed through sport, recreation, art, history, heritage and traditions - by:

4.1 acknowledging and celebrating the rich and diverse Ngāi Tahu, colonial and other heritages and connections;

4.2 resuming cultural, community and sports events and activities;

4.3 encouraging participation in a range of entertainment, cultural, recreational and sporting activities;

4.4 restoring historic buildings, where feasible, for the benefit of the community; and

4.5 acknowledging losses and creating spaces to remember, while embracing necessary changes to the city's character and urban form.

15.2 Implementation

Cultural Recovery is led by the Ministry for Culture and Heritage, in partnership with sports and arts agencies. They are repairing and rebuilding facilities and events. They are also working to restore participation in activities to at least the level it was at before the earthquakes. There are three specific programmes.

The **Arts, Culture and Heritage Collections Programme** aims to ensure that people once again enjoy the full range of arts and cultural activities and have full access to heritage collections of national and local significance. It includes the contribution of cultural institutions to developing formal memorial spaces, as well as collecting and archiving earthquake stories.

The **Heritage Buildings and Cultural Places Programme** is ensuring heritage buildings and places remain an important part of greater Christchurch's identity. It considers a broad range of heritage such as buildings, archaeological sites, heritage spaces and landscapes and places of cultural significance to Ngāi Tahu, including wāhi tapu and wāhi taonga areas.

The **Sport and Recreation Programme** is working to recover the sport and recreation infrastructure so that people can participate in them at least as much as they did before the earthquakes. It will also support and develop the volunteers and paid professionals who deliver sport and recreation activities.

SECTION 16

Built Environment Recovery

He Whakatika i ngā Mea Hanga

The recovery of the built environment will leave the greatest legacy. Activities are already underway to recover and, wherever possible, enhance the built environment and infrastructure of greater Christchurch. The built environment includes land, land use, network infrastructure (energy, transportation, water and telecommunication) and the part of the natural environment that has been integrated into our lifeline networks (flood banks, rivers, the estuary and coastline). It also includes residential housing, commercial and significant buildings that make up our economic, community and social infrastructure such as schools, government offices, police stations and public buildings.

Well-designed, connected communities and buildings that are constructed to a high standard have benefits for health and wellbeing. These communities and buildings are also more energy efficient, increase use of active or public transport and work in harmony with the natural environment. During consultation people expressed strong support for taking the opportunity to make buildings and infrastructure more interconnected and resilient. With the rebuild it is now possible to rethink the form and integration of the built and natural environments so it increases economic productivity, strengthens community vitality and improves quality of life.

Studies of land damaged by the earthquakes have shown there are two critical factors that can delay and increase the costs of rebuilding. First, thin crust reduces the load bearing capacity of the land and increases the severity of liquefaction. It is both a cause and a result of falls in land levels. Second, lateral spread means the land splits and slides towards the weakest point – away from built or buildable areas (usually by waterways). As more information becomes available on the state of land and the performance of buildings and infrastructure, decisions are being made about where, when and how to rebuild.

Sufficient land is needed to house people displaced from the red zone and other locations, and for strategic infrastructure and community facilities. In addition, the additional workforce required for the recovery need accommodation. The Greater Christchurch Urban Development Strategy and statutory plans provide for a mix of land uses so that people can live in an attractive built environment within a compact urban form.

He waka kōtuia, kāhore e tukutukua ngā mimira.

A canoe that is interlaced will not become separated at the bow.

Photos courtesy of the Department of Building and Housing

16.1 Built environment goals

5. Develop resilient, cost effective, accessible and integrated infrastructure, buildings, housing and transport networks - by:

5.1 coordinating and prioritising infrastructure investment that effectively contributes to the economy and community during recovery and into the future;

5.2 supporting innovative urban design, buildings, technology and infrastructure to redefine greater Christchurch as a safe place built for the future;

5.3 rebuilding infrastructure and buildings in a resilient, cost-effective and energy-efficient manner;

5.4 developing a transport system that meets the changed needs of people and businesses and enables accessible, sustainable, affordable and safe travel choices;

5.5 zoning sufficient land for recovery needs within settlement patterns consistent with an urban form that provides for the future development of greater Christchurch;

5.6 having a range of affordable housing options connected to community and strategic infrastructure that provides for residents participation in social, cultural and economic activities; and

5.7 drawing on sound information about ongoing seismic activity and environmental constraints, including other natural hazards and climate change.

16.2 Implementation

Built Environment Recovery led by CERA will direct a coordinated and timely repair and recovery of the built environment. This programme will identify the priorities and provide sequencing timeframes for land and natural hazard remediation, residential housing rebuild, significant buildings and network infrastructure. Built environment recovery is organised into four programmes of work.

The **Built Environment Recovery Integration Programme** includes the following activities.

- **Integrated planning** will cover underground, on-ground and above-ground rebuilding programmes. This includes developing solutions to minimise risks that might constrain the rebuild such as the supply and demand of building materials and machinery. It will also develop indicators and measure progress to help monitor the recovery of the built environment. Opportunities will be identified to be smarter with our infrastructure including modern technology and communications infrastructure.
- **Strategic directions** for land use and infrastructure are being developed with UDS partners. These will guide and coordinate land use and infrastructure recovery planning; help realise opportunities arising from the earthquakes; and provide a strong foundation for the future development of greater Christchurch.
- **Stocktakes of built assets** will summarise the state of the built environment prior to the earthquakes and what has happened to it. Three stocktakes will be undertaken (for land and land use, buildings and infrastructure). They will describe the previous policy and regulatory frameworks; summarise the asset network for transportation, water, energy and telecommunications; summarise community, cultural and public service built assets that existed; state the levels of service that were available; and describe the strategic buildings that are regarded as crucial to recovery.
- **Action planning** will identify what needs to be done, by whom and when, based on the stocktakes above. Actions are likely to include policy and regulatory changes; temporary repair or replacement projects; and understanding and re-establishing levels of service and investigations. Actions such as modelling population and settlement patterns will provide information for all recovery components and help to integrate their activities. Opportunities will be sought to improve the design of buildings and infrastructure so they function effectively and contribute to economic, environmental and community outcomes across the recovery components.
- A **toolkit** will be developed for recovery and will include prioritisation and sequencing frameworks, blueprints for integrated recovery and 3D and 4D visualisation models to encourage integrated recovery.
- **Community engagement** will communicate progress and include communities in their local repairs. Local government consenting processes will apply.

The **Land and Land Use Programme** includes the following activities.

- **Land zoning decisions** – the Government is continuing to assess the state of the land damage across greater Christchurch. It is using this information to make policy decisions about the land on which rebuilding is practicable in the short to medium term.

  Red zones cover over 7,400 properties. In these zones there is area-wide land damage and an engineering solution to remediate the land damage would be uncertain; disruptive, and not timely and cost effective; and the health and wellbeing of residents is at risk.

  As of May 2012 over 180,000 properties have been zoned green. In these areas land is generally suitable to be repaired and rebuilt on. Some green zone properties may have had land damage but this can be repaired on an individual basis as part of the normal insurance process.

  Further geotechnical investigations are underway to determine the appropriate zoning decisions for the remaining 1,700 properties on the Port Hills (currently white). The Government is committed to making decisions about these properties as quickly as possible based on the best possible information.
- **Land supply** - CERA, working with councils, will monitor land supply for residential and commercial development and will remove constraints to bring suitable land to the market. To accommodate the

resettlement of people from damaged lands as well as future population growth, infrastructure and efficient planning and consenting processes are required.

- **Re-evaluation of existing planning documents** will take account of the residential red zone decisions, any changes in demand for types of housing and an increase in the short-term demand for housing. It will consider new land hazard information to confirm where residential and commercial building is and is not appropriate. Guidance will be provided on the conditions for land and building development so that homes and business premises are well-designed and more resilient to future natural hazards.
- **Residential red zone land clearance** is overseeing the clearance of residential red zone properties and the return of the land to open space. It consists of three stages over two to three years. The first stage is to remove built structures and services. The second will involve larger-scale land clearance and grassing. The final stage will be to liaise with utility providers to remove public infrastructure no longer needed. After that, Land Information New Zealand will manage the open space. Wherever possible, these activities will preserve significant trees and will keep options open for the way the land will be used in future.
- **Future long-term use of red zone land** will be considered once a substantial proportion of red zone land has been transferred to the Crown. CERA, on behalf of the Crown, will lead an assessment of future options for land use. The assessment will consider hazard risk, opportunities for economic return, natural features and ecology of the land and adjacent waterways. It will also consider any community input required as part of the process and look for consistency with urban growth policies for greater Christchurch. Land Information New Zealand and CERA will be responsible for interim land management.

The **Rebuilding Programme** includes the following activities.

- The **demolition and operations programme** is undertaking detailed engineering evaluations of all commercial and multi-unit residential buildings, and the demolition of dangerous buildings to enable the rebuild of greater Christchurch. The programme sets out the works for demolition and business restart projects overseen by CERA, and for the reduction of the cordoned area of the inner city. It covers buildings within the cordon and other significant buildings such as those over five storeys in the central city and commercial buildings outside of the city. It also deals with foundations and basements left after the national emergency and the removal of debris from demolition sites. CERA requires detailed engineering assessments so that there is clear information about the structural integrity of commercial and public buildings, and people can be confident about the buildings they work in or enter. Urgent demolitions take priority and may therefore disrupt planned work. The aim is to remove large areas of the central city cordon by July 2012.
- The **building quality programme** is improving understanding of the Building Act's seismic performance requirements for both residential and commercial buildings. It is also developing solutions to better meet those requirements. The Department of Building and Housing is leading this programme and has already provided updated guidance.
- The **housing recovery programme** is considering the market's response to the housing issues arising from the recovery; the opportunity to coordinate the range of central and local government housing activities; and the pace of the residential rebuild. For example, CERA, EQC, private insurers, the Department of Building and Housing and local government are working to identify and resolve issues to progress the green zone rebuild.
- **Buildings of strategic significance** will focus on planning and rebuilding community network assets open to the public. These assets include public service buildings such as schools, hospitals and courts as well as community facilities for sport and recreation, arts, culture and heritage. CERA will liaise with councils, across government and with the private sector on this programme.

The **Infrastructure Programme** includes the following activities.

- **Identify and reconfirm** existing infrastructure programmes that are still appropriate and required to help greater Christchurch to recover and grow in the longer term. These programmes (and associated infrastructure) are, or will be, incorporated in Council Long Term Plans rather than in specific recovery programmes. By rethinking about where assets are placed and what their function is, it is possible to enhance infrastructure networks as part of the recovery.

- **Transportation solutions** for recovery issues will be developed. This work will consider the changes to customer needs for public transport and the need to reinstate and repair damaged infrastructure. It will also identify opportunities to improve the resilience and sustainability of the transport system, such as by improving infrastructure to increase walking, cycling, and use of public transport and freight. Existing transport planning programmes will be considered and integrated to ensure the transport network operates seamlessly and is relevant to the post-earthquake environment.
- **Horizontal infrastructure repair and rebuild** work will be ongoing throughout the city for several years.
    - The Stronger Christchurch Infrastructure Rebuild Team (SCIRT) is repairing the city's roads, water supply, storm water, and wastewater systems that were damaged by the earthquakes. The SCIRT project is one of the largest and most complex civil engineering projects ever undertaken in New Zealand. SCIRT is an alliance of Christchurch City Council, CERA, New Zealand Transport Agency, City Care, Downer, Fletcher Construction, Fulton Hogan, and MacDow New Zealand.
    - Commercial infrastructure providers such as Orion, Telecom and Vodafone are rebuilding telecommunications and energy infrastructure systems. CERA and SCIRT will liaise with these providers to align and coordinate repairs where possible to minimise disruption.
- **Infrastructure standards and specifications** will be reviewed to ensure they are fit for the new seismically active environment and represent value for money.
- A **decision support tool** to decide how the infrastructure rollout will be prioritised will be developed by SCIRT. This tool will specify what infrastructure will be repaired, where and when. It will prioritise what is best from an engineering viewpoint, while taking into account efficiency and community needs. It will also consider other factors such as the concern to continue services important to the local economy. SCIRT will use the tool to coordinate the sequencing and timing of infrastructure projects across service and utility providers. In this way it will help them line up replacement or repair works and apply the "dig once and dig right" principle. The decision support tool will be reviewed periodically to ensure it remains fit for purpose.
- **Communications** for the network infrastructure repairs including providing information about the SCIRT programme in communities.

SECTION 17

Natural Environment Recovery

Whakaara Taiao

Greater Christchurch relies on its healthy natural environment which includes the air, coasts, water, land and biodiversity and the ecosystem services they provide. Recovery programmes need to be undertaken and sequenced in ways that do not harm the health and functioning of the natural environment. They should also consider how they can help the environment to adapt to global environmental issues such as climate change, sea level rise and resource scarcity.

Using existing mandates, local authorities are working hard to rebuild and enhance infrastructure and buildings. This work opens up a significant opportunity to: solve discharge issues; design our city structures to adapt to changes in our natural systems; and improve the natural environment. The flood-carrying capacity of rivers and stopbanking is being restored to pre-earthquake levels. Fixing sewerage and storm water systems has reduced discharges of raw sewage and other pollutants into the rivers and the sea. Actions to address land subsidence and silt inundation are improving the water quality and reducing the flood vulnerability of drains, waterways and rivers.

There are opportunities to enhance Ngāi Tahu cultural and environmental values through re-establishing or increasing the extent of indigenous flora and fauna as river banks are rehabilitated, and by creating river corridors, parklands and wetlands in appropriate areas. Biodiversity also benefits from all this work to address environmental degradation caused by the earthquakes.

Many of the recovery activities mentioned in the previous sections can improve the health and resilience of the natural environment so that it is better than it was before the earthquakes. Certain recovery activities and new developments may need to apply for resource consent. This process provides the normal safeguards for the environment as the effects of activities are assessed against existing Resource Management Act plans.

There is a lot more work to be done to restore the natural environment and improve its resilience and sustainable management. At this stage it is not clear whether a specific Recovery Plan is needed or whether the existing tools will be sufficient for this work.

Toi tū te marae o Tāne; Toi tū te marae o Tangaroa; Toi tū te Iwi.

When the domains of Tāne (land) and Tangaroa (water) are nurtured and sustained, so too will people prosper and flourish.

Photo courtesy of Environment Canterbury.

17.1 Natural environment goals

6. Restore the natural environment to support biodiversity and economic prosperity and to reconnect people to the rivers, wetlands and Port Hills - by:

6.1 ensuring recovery activities value, protect and sustainably manage the sources of our water;

6.2 ensuring ecosystems are healthy and functioning;

6.3 improving the quality and function of estuaries, waterways and wetlands to support the unique biodiversity that is endemic to Te Waipounamu;

6.4 providing public access to and opportunities for outdoor recreation, cultural, social and economic activities;

6.5 enhancing air quality through managing recovery activities that impact on air quality, such as heating, transport, demolition and construction; and

6.6 storing, sorting and processing waste in an environmentally safe and effective manner, including minimising and recycling construction and demolition wastes.

17.2 Implementation

Natural Environment Recovery is led by Environment Canterbury (in partnership with Te Rūnanga o Ngāi Tahu, Ngā Papatipu Rūnanga, Christchurch City Council, Selwyn District Council, Waimakariri District Council and CERA). **The Natural Environment Recovery Programme** will assess the extent of the damage to the natural environment and identify the best tools to help restore it. As part of this programme, studies are being undertaken to understand the effects of the earthquake on the natural environment and ways to remediate any harm and prevent damage in future.

Assessment will cover the following aspects of the natural environment:

- **air** – effects of insulation and heating choices in the residential rebuild, dust from central city and residential demolitions, and infrastructure recovery;
- **biodiversity** – the impacts on biodiversity arising from degraded air, land, freshwater and sea, and the changing land use patterns around the main waterways;
- **coasts** – coastal water quality and estuarine processes;
- **hazards** – new seismic risk profile, susceptibilities to rockfall, landslide and land damage, new flood risks to low-lying land arising from the individual and combined effects of sea level rise, altered river bed levels and intense rainfall events;
- **land** – future treatment and uses of land no longer suitable for urban, residential or commercial use;

Photos courtesy of Environment Canterbury.

- **waste** – the effective and sustainable management of all solid and liquid waste in order to avoid the contamination of land, surface water and groundwater during the recovery and beyond;
- **water** – quality of groundwater and surface water in rivers, streams and wetlands;
- **recreation** – safe recreational opportunities in outdoor spaces, parks and waterways by improving the above aspects of the environment; and
- **implementation tools** – the best means to achieve the recovery of the natural environment in tandem with social, cultural, economic and built environments.

Glossary
He Rārangi Kupu

CBD	Central Business District
CCDU	Christchurch Central Development Unit www.ccdu.govt.nz
CEDS	Christchurch Economic Development Strategy
CERA	Canterbury Earthquake Recovery Authority
CER Act	Canterbury Earthquake Recovery Act 2011
CERF	Canterbury Earthquake Recovery Fund
Community infrastructure	Buildings and infrastructure that benefit and are accessed by the community such as swimming pools, sports facilities (including sports fields) and community halls
EQC	Earthquake Commission
Greater Christchurch	The districts of the Christchurch City Council, the Selwyn District Council and the Waimakariri District Council, and includes the coastal marine area adjacent to these districts
Horizontal infrastructure	Infrastructure that runs horizontally including roads; storm water, drinking water and sewage pipes; telecommunications; and electricity
IAP2 Spectrum of Public Participation	The International Association for Public Participation's Spectrum of Public Participation was designed to assist with the selection of the level of participation that defines the public's role in any public participation process. The spectrum shows that each of the levels of participation is legitimate and the appropriate one depends on the goals, timeframes, resources, and levels of concern in the decision to be made. The levels of participation on the spectrum are inform, consult, involve, collaborate and empower. More information is available at www.iap2.org
Ngā Papatipu Rūnanga	The representative bodies of the six Ngāi Tahu Papatipu Rūnanga in greater Christchurch – Te Ngāi Tūāhuriri Rūnanga, Te Hapū o Ngāti Wheke (Rāpaki), Te Rūnanga o Koukourarata, Wairewa Rūnanga, Te Taumutu Rūnanga, Ōnuku Rūnanga
Ngāi Tahu	The iwi of Ngāi Tahu consisting of the collective of the individuals who descend from the primary hapū of Waitaha, Ngāti Māmoe and Ngāi Tahu, namely, Kāti Kurī, Kāti Irakehu, Kāti Huirapa, Ngāi Tūāhuriri and Kāi Te Ruahikihiki
NZTA	New Zealand Transport Agency
SCIRT	Stronger Christchurch Infrastructure Rebuild Team - comprises of CERA, the New Zealand Transport Agency, the Christchurch City Council, Fulton Hogan, Downer Construction, Fletcher Construction, MacDow New Zealand and City Care
Strategic infrastructure	Facilities, services and installations that are of importance beyond a local area and sustain the community. It includes horizontal infrastructure, strategic transport networks, port, airport, railway, defence facilities, strategic telecommunication facilities and the Electricity Transmission Network
Strategic partners	Te Rūnanga o Ngāi Tahu, the Christchurch City Council, Selwyn District Council, Waimakariri District Council and Environment Canterbury (TRONT, CCC, SDC, WDC and ECAN)
Te Rūnanga o Ngāi Tahu	The body corporate known as Te Rūnanga o Ngāi Tahu established by section 6 of the Te Rūnanga o Ngāi Tahu Act 1996
UDS	Greater Christchurch Urban Development Strategy
Vulnerable people	Vulnerable people include children, the elderly, people with disabilities, Māori and non-English speaking migrants and refugees

Young People's Vision of Recovery in Photos

In 2011, CERA invited schools in greater Christchurch to take part in a photography competition. Schools were asked to submit photographs that reflected their students' visions of recovery - what greater Christchurch will be like in the future. Students submitted photographs under each of the recovery areas identified in the draft Recovery Strategy and for the overall vision. The winning photographs are featured on these pages. All of the entries can be viewed online at **http://www.livingheritage.org.nz/Competition**

Leadership

WINNER - Rebuilding Christchurch Together
"If we do it together it might not take as much time."
By Eddy Stanton, Redcliffs School

Economic

WINNER - Willow Shoes is Back!
"The image shows the owner of Willow Shoes outside her new shop. Her old shop was destroyed on 4 September 2010 and it has been rebuilt the way it used to look."
By Liam Helleur, Heaton Intermediate

Natural

WINNER - All Abuzz
"This photo is of a dahlia flower being visited by a monarch butterfly and a bee. Christchurch getting back to normal with nature at its finest."
By Nikita Jacobs, Branston Intermediate

HIGHLY COMMENDED - Greening the spaces
"The earthquake knocked down our Selwyn Street dairy so Addington School decided to "green the spaces". We planted flowers where the rubble was cleared away and now we think it looks ataahua."
By Renalia Savello, Addington School

Social

WINNER - Rebuild our central city
"As a class, we decided that we wanted lots of areas to play in. It is important to have children come to the city so we have put really cool areas in place so this may happen. We feels that we need parks with trampolines, swimming pools, picnic areas and skate parks."
By Linwood Avenue School

Built

WINNER - Our vision. Our children's future.
"Low rise buildings with many green spaces are the key to rebuilding Christchurch. Roof top walkways and gardens for all to enjoy while moving around our city."
By Julia Coopens, Rose Siebuhr and Eva Weir, Redcliffs School

HIGHLY COMMENDED - The School Grounds
"Our school grounds have fallen down. I want it to look just flat so rocks don't fall."
By Bella Hansen-Ratter, Redcliffs School

Vision

WINNER - Hope Flower
"A daisy grows in the grass a the front of a fenced-off petrol station. The sun is shining and there is a rainbow in the corner beside the flower. It is a sign of hope for the people of Christchurch."
By Frances Zhang, Ilam School

HIGHLY COMMENDED - Ultimate Vision Goggles
"Room 17 made some vision goggles to look into the future."
By Room 17 Redcliffs School

HIGHLY COMMENDED - My Vision
"My vision goggles show me that Christchurch's future looks great!"
By Jaxon Skews, Redcliffs School

CERA
Canterbury Earthquake Recovery Authority

Private Bag 4999,
Christchurch 8140
0800 7464 2372

www.cera.govt.nz

New Zealand Government