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Institut für Zukunftsstudien und Technologiebewertung

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Sustainable Home Services in Germany

An Overview on Preconditions, Frameworks and Offers

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Kurzfassung

Der voliegende WerkstattBericht basiert auf den Ergebnissen des Projekts „Benchmarking Sustainable Services for the Housing Sector in the City of Tomorrow“[1], das sich mit dem Konzept nachhaltiger wohnbegleitender Dienstleistungen in Europa auseinandersetzte. Dienstleistungen „rund um das Wohnen“ spielen in der Wohnungswirtschaft eine immer größere Rolle. Sie gelten als effektives Mittel zur Kundenbindung und -gewinnung, werden als Instrument für ein aktives „Sozialmanagement“ eingesetzt und können langfristig neue Geschäfts- und Ertragsfelder eröffnen. Beispiele gibt es mittlerweile viele: Umzugsservice, Geräteverleih, Mobilitätsdienstleistungen, Lieferdienste oder Internet-Marktplätze.

Im Vordergrund des Forschungsprojekts standen wohnbegleitende Dienstleistungen, die eine nachhaltige Entwicklung fördern. Das Angebot eines Anbieters ist dabei als nachhaltig zu bezeichnen, wenn ihr Service entweder nachhaltigen Konsum fördert oder auf eine nachhaltigere Art als übliche Alternativen erbracht wird. Anhand der beiden Fallstudien, Berlin als Großstadt und Kleinmachnow als Kleinstadt, wurden daher mögliche Effekte wohnbegleitender Dienstleistungen auf die soziale, ökologische und ökonomische Dimension der Nachhaltigkeit hin geprüft. Darauf aufbauend wurden Strategien entwickelt, die Verbreitung nachhaltiger wohnbegleitender Dienstleistungen zu fördern.

Der Berliner Wohnungsmarkt bietet hierbei relativ gute Konditionen für die Erbringung nachhaltiger wohnbegleitender Dienstleistungen, da aufgrund der hohen Bevölkerungsdichte eine kritische Masse an potenziellen Nutzern vorhanden ist und der hohe Anteil sozialer Wohnungsunternehmen ein breites Service-Angebot begünstigt. Zudem führen hohe Leerstands- und Fluktuationsraten dazu, dass die lokalen Wohnungsunternehmen zunehmend im Wettbewerb zueinander stehen. Wohnungsunternehmen können hierbei wohnbegleitende Dienstleistungen effektiv als Marketinginstrument einsetzen, um sich Wettbewerbsvorteile zu sichern. Dass es in Berlin vergleichsweise gute Rahmenbedigungen für die Erbringung wohnbegleitender Dienstleistungen gibt, spiegelt sich auch in dem breiten Angebot kommunaler Wohnungsunternehmen und Genossenschaften in diesem Bereich wieder.

Der Wohnungsmarkt in Kleinmachnow ist hingegen vom Kauf und Verkauf von Eigentumswohnungen und Einfamilienhäusern geprägt. Der Anteil an selbstgenutztem Wohneigentum beträgt etwa 85 %. Neben dem einzigen kommunalen Wohnungsunternehmen sind somit Bauträger und Immobilienmakler die wichtigsten Akteure auf dem Kleinmachnower Wohnungsmarkt. Der Mangel an Wettbewerb auf

[1] Das Projekt wurde von der Europäischen Kommission (Research Directorate General) innerhalb der Key Action „The City of Tomorrow and Cultural Heritage“ gefördert. Weitere Projektpartner waren das Institut für ökologische Wirtschaftsforschung (IÖW) in Wien / Österreich, das Environmental Research Institute of Amsterdam / Niederlande (IVAM), Prospektiker - European Institute for Futures Studies and Strategic Planning in Zarautz / Spanien, die Helsinki School of Economics (HSE) in Helsinki / Finnland sowie das Centro para Desenvolvimento Empresarial Sustentável (INETI/ Cendes) in Lissabon / Portugal

dem Mietmarkt und die hohe Konkurrenz auf dem Eigentumsmarkt repräsentieren eher ungünstige Bedingungen für die Erbringung wohnbegleitender Dienstleistungen, was sich auch in dem beschränkten Angebot offenbart.

Die beiden Fallstudien repräsentatieren beispielhaft die Rahmenbedingungen für das Angebot wohnbegleitender Services in Deutschland. Da wohnbegleitende Dienstleistungen insbesondere für den Mietermarkt geeignet scheinen, sind soziale Wohnungsunternehmen und –genossenschaften die dominanten Akteure für nachhaltige „Home-Services“. Die Unternehmen bieten hierbei insbesondere Services an, die die Kundenbindung erhöhen oder infrastrukturelle Defizite im sozialen Bereich ausgleichen sollen und die somit nur indirekt finanzielle Vorteile für das Unternehmen bieten.

Während Wohnungsunternehmen als Vermieter stets wohnbegleitende Services erbringen, gelten kommunale, gewerbliche oder gemeinnützige Institutionen nur als Anbieter von wohnbegleitenden Dienstleistungen, wenn sie bestimmte Services oder Dienstleistungskomponenten vor Ort beim Verbraucher erbringen. Kommunale Institutionen erbringen nachhaltige, wohnbegleitende Dienstleistungen eher indirekt über finanzielle Förderungen oder ergänzende Beratung zu bestehenden Angeboten von Wohnungsunternehmen oder Nichtregierungsorganisationen (NGOs). Das Hauptbetätigungsfeld kommerzieller Anbieter ist die vor-Ort-Beratung zu ihren Produkten und Dienstleistungen sowie mobile Services (persönliche Pflege, Haushaltsdienste etc.). NGOs sind schließlich neben der Wohnungswirtschaft die wichtigsten Anbieter nachhaltiger wohnbegleitender Dienstleistungen, da sie auch in Bereichen aktiv werden, die keinen finanziellen Profit versprechen. Dementsprechend werden in Deutschland die meisten ökologisch, sozial oder ökonomisch nachhaltigen Services von oder in Zusammenarbeit mit Nichtregierungsorganisationen erbracht. Wohnungsunternehmen arbeiten dabei in gewinnbringenden Bereichen häufig mit kommerziellen Anbietern zusammen, während sie bei sozialen, weniger lukrativen Dienstleistungen mit NGOs kooperieren und auf öffentliche finanzielle und personelle Förderung zurückgreifen.

Um eine wohnbegleitende Dienstleistung hinsichtlich ihres Beitrags zur nachhaltigen Entwicklung besser beurteilen zu können, wurde innerhalb des Projekts ein Tool entwickelt, mit dem die direkten und indirekten Wirkungen des Services über ein Indikatorenset eingeschätzt werden können. Mittels dieses Tools können Anbieter von Dienstleistungen ihr Portfolio in Relation zu möglichen Erbringungsalternativen bewerten und so eine Diskussion innerhalb des Unternehmens anregen, um ihr Angebot nachhaltiger zu gestalten. Eine weitere Strategie zur Verbreitung nachhaltiger Dienstleistungen ist es schließlich, Good Practices nachhaltiger, wohnbegleitender Dienstleistungen in ihr Angebot zu integrieren.

Abstract

This report results from the project “"Benchmarking Sustainable Services for the Housing Sector in the City of Tomorrow"[2] that aimed at promoting the idea of sustainable home services. Home services can be defined as services complementing housing conditions and as sustainable, when enhancing sustainability of housing. Based on the approach that many key factors for sustainable consumption are closely connected to the context of housing, the IZT analysed housing conditions and relevant home service providers in two German case studies - Berlin as a big city and Kleinmachnow as a small town. This analysis finally resulted in strategies for the promotion of sustainable home services in Germany.

The housing situation in the “tenants city” Berlin represents comparatively good conditions for a sustainable home service provision, as a high population density secures a critical mass of potential customers and the dominating social housing companies have a considerable interest in home service provision. Furthermore, the surplus of rental housing and high vacancy rates lead to a competitive pressure, with the consequence that the Berlin rental market is undergoing a change from a providers market to a customers market. This incites housing companies to improve their service performance in order to gain marketing benefits. These good conditions for a home service provision is actually reflected in a varied home service supply offered by social housing companies and cooperatives.

On the opposite, Kleinmachnow is dominated by owner-occupancy and detached houses. Nearly 85% of the proprietors are private individuals, so most important actors for home service provision are real estate managers and building promoters that concentrate on the sale of property. However, these actors are hardly interested in a long-term provision of home services. Moreover, the only social housing company in Kleinmachnow benefits from serving exclusively the high demand for rental housing. Since the housing situation in Kleinmachnow consequently represents comparatively disadvantageous conditions for a home service provision, there is a need to develop new models of home service provision for private single customers living in owner-occupied dwellings. There is indeed no relevant home service offer in Kleinmachnow.

The analysis of the case studies reflects the German situation in general, which means that rental housing dominated markets provide best conditions for a sustainable home service supply. Therefore, housing companies and cooperatives are the main home service providers in Germany. As only few home services have the potential to raise profits, most housing companies and cooperatives concentrate on services that support customer relationships as well as on social services in neighbourhoods marked by social and infrastructure deficiencies. Housing companies and cooperatives furthermore tend

[2] The project was funded by The European Commission Research Directorate-General (H) within the "The City of Tomorrow and Cultural Heritage” Key Action.

to provide directly services that are closely connected to the core business of renting and maintenance, as they possess the according knowledge.

Public, commercial and non-governmental institutions are only regarded as home service providers, when providing certain service components on site. Public institutions are mainly supporting a sustainable home service supply by consulting and funding sustainable initiatives of NGOs or housing companies. Apart from housing companies and cooperatives, non-governmental organisations are the most important actors for a dissemination of sustainable home services in Germany, since they complement the whole range of home services by activities that are demanded by the public, but do not promise financial profits. The main field of action of commercial home service providers is consulting on their products and services, as well as personal comfort services that relieve residents of uneasy activities or supports entertainment.

Typical cooperations in the German housing sector are collaborations between housing organisations and commercial service providers in profitable service fields on the one hand, and between housing, public and non-governmental organisations in non-profit service fields on the other hand. Both NGOs and housing organisations furthermore integrate residents in service provision.

In order to assess sustainability effects of home services, we developed a sustainability assessment tool within the project that provides a set of indicators for estimating direct and indirect impacts of home services. Applying the tool on their home service portfolio, home service providers are able to relatively assess their service portfolio and initiate discussions in their company. On this basis, home service providers can develop strategies to make their home service portfolio more sustainable. Furthermore, home service providers can integrate home services in their portfolio with good sustainability performances.

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1 Introduction

This report results from the project “"Benchmarking Sustainable Services for the Housing Sector in the City of Tomorrow" funded by The European Commission Research Directorate-General (H) within the "The City of Tomorrow and Cultural Heritage” Key Action. The goal of the project was to promote the idea of sustainable home services. In this regard, home services can be defined as services complementing housing conditions and as sustainable, when enhancing sustainability of housing (cp. chapters 1.1, p. 15 and 1.2, pp. 16). Based on the approach that many key factors for sustainable consumption are closely connected to the context of housing, the IZT analysed European homeservice markets and according potentials in cooperation with five other European institutions in Austria, Spain, Portugal, the Netherlands and Finland[3].

However, depending on the consumption cluster (e.g. nutrition, mobility, housing), households alone have only limited possibilities on influencing their consumption patterns, as the local housing situation and service offers set the frame for consumption choices. In other words, the provision of sustainable home services is dependent on local housing conditions that determine demands of service providers, residents and relevant national actors. In order to find out more on this relationship, we analysed two German case studies (cp. chapter 1.3, pp. 17) – Berlin as a big city and Kleinmachnow as a small town.

Apart from housing conditions and demands for sustainable home services, home service providers are core actors that enhance the sustainability of housing (cp. chapter 3, pp. 60). In this context, local authorities, landlords and proprietors determine, for instance, the scope of a sustainable housing environment. In addition, cooperation of housing organisations and service providers set the limits within residents are able to use home services.

But how can home service providers contribute to sustainable development? Previously, sustainability of services has mainly been discussed from an eco-efficiency perspective rather than from a more holistic sustainability point of view. In the sustainable service literature, the social aspect of sustainability tends to be neglected at the cost of environmental and economic arguments. Considering equally all sustainability dimensions, the project approach is based on two strategies for a better sustainability performances of home service portfolios (cp. chapter 4, pp. 84): Making popular home services more sustainable on one hand (cp. chapter 4.1, pp. 84) and making good

[3] IÖW Institute for Environmental Management and Economics, Vienna Austria; IVAM Environmental Research Institute of the University of Amsterdam, Amsterdam; Prospektiker European Institute for Future Studies and Strategic Planning, Zarautz Spain; HSE Helsinki School of Economics, Department of Management and Organisation, Helsinki Finland; INETI/Cendes Centre for entrepreneurial sustainable development, Lisbon Portugal.

practices of sustainable home services more popular on the other hand (cp. chapter 4.2, pp. 89). The guiding questions underlying both strategies can be formulated as follows:

- Ecological dimension of sustainability: In what ways can home services potentially contribute to reduction of materials and energy use in the housing sector?
- Social dimension of sustainability: How can they potentially increase well-being of residents/households?
- Economic dimension of sustainability: How can home services be organized so that they would be economically feasible both for providers and users, as well as society at large?

The following chapters introduce the conceptual background of the project by defining the term of sustainable home services.

Note: This report is a summary of former analyses and intends to show general tendencies for non-German readers. So, the detailed derivation of our statements was ranked behind the readability. Interested readers are welcome to ask for more detailed information. Moreover, most data sources were published by the according regional statistical office (German Federal Statistical Office, State Statistical Office Brandenburg, State Statistical Office Berlin). In order to avoid permanently repeating notes, we abstained from constantly referring to the source, unless other sources than the Statistical Office were used. Last but not least, we like to apologize for linguistic deficiencies, as the text was not written by native speakers.

1.1 What is a home service?

Services differ from products in four main respects (Baron and Harris 2003, Zeitham and Bitner 1996, Payne 1993):

1. Services are intangible;
2. In many service operations, production and consumption cannot be separated. Customers are involved and participate in the production process (e.g. energy counselling).
3. Different customers experience services differently. This means that customers can better distinguish different service provisions, such as repairing a TV set, than physical goods, e.g. the TV set of the same production line.
4. Finally, services cannot be stored.

Home services distinguish from other service fields in complementing housing conditions. Although, housing is a broad term contacting nearly all spheres of living, it is restricted to a local reference regarding the resident's home and its environment. Housing conditions are determined by e.g. local infrastructure, housing market, home service providers, socio-spatial conditions or legal frameworks. Services are defined as home services when improving housing conditions for the residents.

According to Heiskanen and Jalas (2000, p. 23), a service represents an added value for the customer, which replaces the customer's own labour with activities conducted by the service provider - either personally, automatically or in advance by planning and design. Particularly in the housing sector, products are generally connected to services, while services usually are based on tangible elements, e.g. by delivery of goods or rent of premises (Heiskanen and Jalas 2000). This difficulty of making clear distinctions can be illustrated by Shostack's classical tangibility continuum, that classifies products and services based on the amount of tangible and intangible elements (based on Baron and Harris 2003, Payne 1993):

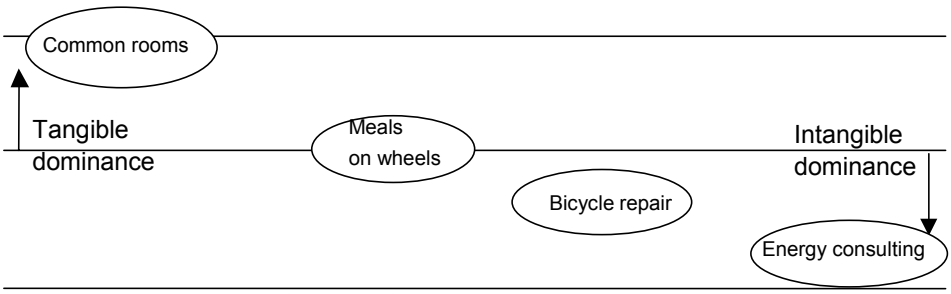


Figure 1-1: Tangibility continuum adapted to home services

In the analysis context, it is helpful to define the intangible part of the service as home service, considering the fact that most home services are based on a tangible component like rooms or energy-efficient building facilities. Consequently, home services do not consist in the mere existence of according facilities rather than in rental activities or accompanied information and counselling for the residents. Although definitions remain indistinct to a certain degree, activities must feature an added value compared to the general practice to be identified as home services.

1.2 What is a sustainable home service?

The guideline of sustainable development was defined in 1987 by the United Nations Commission on Environment and Development (Brundtland Commission, WCED 1987) as follows:

In essence, sustainable development is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are all in harmony and enhance both the current and future potential to meet human needs and aspirations.

The ways in which services are expected to promote a sustainable development vary between the exponents of service thinking. Some of them see the 'service solution' from an economic perspective: structures of industrial production turn from manufacturing dominated to information-intensive service models and therefore de-link economic growth and environmental burden (Bell 1976, Jänicke et al. 1989). Others expect that in order to reduce environmental impacts of economic systems, models of production and consumption must include considerations on eco-efficiency of services (Lovins, Lovins and Hawken 1999). Apart from that, services are core aspects of the present debate on restructuring social and welfare systems in a sustainable way. During the last years, both discussions on welfare services and eco-efficient services have gained an increasing importance in all European countries.

Still, these discussions tend to remain separate. For instance, in the eco-efficient service discussion, social aspects are limited to statements that certain services contributing to eco-efficiency may also have social or economic sustainability impacts (Heiskanen and Jalas 2000). Consequently, the concept of "sustainable home services" is yet to be discovered and defined.

One possible approach could be the sustainability assessment of services. The Brundlandt commission emphasised that sustainability is based on three equal principles: environmental health, social equity and economic development.

Moreover, the Brundtland report described seven strategic imperatives for sustainable development (Brundtland Commission, WCED 1987):

- Reviving growth;
- Changing the quality of growth;
- Meeting essential needs for jobs, food, energy, water, and sanitation;
- Ensuring a sustainable level of population;
- Conserving and enhancing the resource base;
- Reorienting technology and managing risks and
- Merging environment and economics in decision-making.

Regarding sustainable home services, it is possible to identify a number of requirements according to these strategic imperatives. For instance, meeting essential needs of residents will require services for elderly residents in order to make it possible for seniors to pursue an independent lifestyle. Conserving the resource base claims that services restrict resource and energy consumption. Particularly the environmental dimension is crucial for sustainable housing, as more than a quarter (28 %) of the total German final energy consumption derives from private households. In company with traffic (28 %), private households consequently thus entail the highest final energy consumption. In this respect, heating is the most important factor, as about three quarter of the primary energy consumed in private households derives from heating (Brohmann et al 2000).

Services may offer a solution to alleviate environmental and socio-economic problems in the housing sector. Still, a definition of sustainable home services is restricted to the mere fact that they firstly are home services and secondly contribute to sustainable development. Therefore, an important scientific goal of the present analysis is to further define and describe the concept of sustainable home services in order to contribute to sustainable urban development in general.

1.3 The case studies of Berlin and Kleinmachnow

Berlin is a typical example of a German city that is dominated by rental housing, whereas Kleinmachnow shows typical features of a small town, such as a high proportion of owner-occupied dwellings and single houses. Both extremes span the analytical framework for the survey on tenants' and owner-occupied housing in Germany.

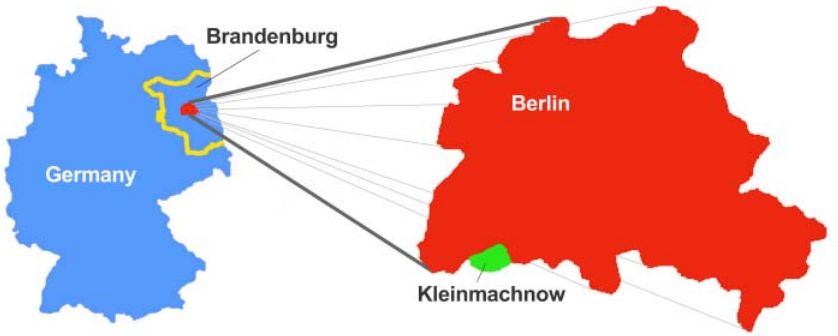


Figure 1-2: Germany, Brandenburg, Berlin and Kleinmachnow

Table 1-1: General socio-economic data

	Germany	Brandenburg	Berlin	Kleinmachnow
Area in km² (2004)	357 031	29,053	891,69	11.91
Population (2004)	82,531,671	2,574,521	3,388,477	17,309
Population growth (1992-2002)	3.7%	2.0%	-2.1 %	+ 47%
Households (2004)	39,122,000	1,218,000	1,891,000	7,176
Multi-dwelling buildings/ detached houses/ miscellaneous (* = 2000, ** = 2001)	54.4%/45.6%/ 0% **	67.6%/ 31.6%/0.8% **	87.7%/9.3%/ 3% **	31%/69%/0% *
Proportion of jobs in the service sector in comparison to total jobs (2004)	66.9%	70.7%	81.9%	~ 79%
Unemployment rate (2004)	10.5%	18.7%	17.6%	5.9 %
Proportion of single households (2004)	37.2%	33.4%	50.1%	24.2%

1.3.1 The case study of Berlin

The German capital Berlin is situated in the Northeast of the country and surrounded by the State of Brandenburg. It is the biggest city in Germany – both by land (891 km^2) and population (3,388,477 inhabitants). 36 % of the total Berlin city area is covered by green space (11.5% recreation space, 17.9 % forest, 6.6 % water).

Berlin symbolically reflects German history throughout the centuries. As the capital of the first German Reich that united all German States in 1871, it flourished to one of the most important European metropoles at that time. After World War II, the city was divided and West Berlin remained as an island of West Germany in the new-formed German Democratic Republic. After the Reunification in 1990, both parts of the city reunited again after 40 years of separation.

Berlin population amounted to 3,388,477 inhabitants in 2004. Due to suburbanisation processes after the Reunification, its population diminished by about 2.1 % from 1992 to 2002. Half of the total Berlin 1,891,000 households are single households. This is typical for big cities, but a high rate compared to the German average of 37.2 %.

In 2004, 0.7 % of the total Berlin employees worked in the agricultural sector, 17.4 % in the industrial sector and 81.9 % in the service sector. So the proportion of people working in the service sector is far more than the German average of about 59.7 %. At the same time, the unemployment rate of 17.6 % in Berlin was much higher than the correspondent German average of 10.5 %. This is mainly due to common deindustrialisation processes. Moreover, subsidies for West Berlin were abolished and the employment situation in East Berlin is still marked by restructuring processes from socialism to capitalism.

The housing market of Berlin is characterised by rental housing and multi-dwelling buildings that constitute about 90 % of the total dwelling. Correspondingly, the property rate is relatively low at about 23 %. Berlin rental housing addresses to a considerable extent to households with low income: 13.1 % of all Berlin households obtained housing aid in 2002. In 2001, the Berlin Senate determined 14 municipal housing companies that managed a stock of 365,000 dwelling units. So the State of Berlin had an influence on about 20 to 22.5 % of the total dwelling. However, as local authorities began to sell complete housing companies to foreign investors, their influence in the housing market diminishes continually. Another approximately 10% of the Berlin dwellings (180,000 dwelling units) are provided by housing cooperations.

The main problems of the Berlin housing sector are high vacancy rates of about 8.5 % and a high portion of residents with low income. Both facts contribute to the debasement of the social housing companies' financial situation. Due to the surplus of dwellings, Berlin housing organisations started offering home services as an instrument to bind their tenants and to attract new customer groups. As most of the home services do not promise financial profits, they are rather provided to improve local living conditions and the company's corporate image. In this context, main fields of action are services for elderly and services that support regeneration processes such as the organisation of local meetings or various types of local consultation.

Berlin early committed officially to sustainable development by signing the Charta of Berlin in 1992 and the Charta of Åalborg in 1994. However, practical processes actually started by establishing a Berlin-Brandenburg round table for sustainable development in 1997, which aimed to integrate NGO's, trade associations, politics and science in the Agenda 21 processes. As a result, the "Agendaforum" was founded in July 2000 to coordinate Agenda 21 projects of NGOs, local or municipal initiatives on one hand and to draft a Berlin LA 21 on the other hand. The most important step on the LA 21 level was the founding of the Enquête-Commission "Sustainable Berlin" by the Berlin parliament in 1998. The commission's goal was to survey present agenda processes and to outline most important requirements e.g. by deciding that every governmental resort had to determine a LA 21 agent and establish an official LA 21 office. Moreover, further initiatives such as the "Project Agency" that is financed by the Lotto Foundation and managed by the IZT support the process by supporting LA 21 projects.

1.3.2 The case study of Kleinmachnow

Kleinmachnow belongs to the Brandenburg state district "Potsdam-Mittelmark" and borders directly on Berlin in the Southeast. Due to its proximity to the capital, Kleinmachnow became a typical suburban garden city after the Reunification. More than half of the land is used for settlements and traffic as well as for commercial space, whereas agricultural land amounts to nearly 9 %. A third of the Kleinmachnow land is covered by forests (Landesumweltamt 2002).

Until 1910, Kleinmachnow was a small rural village with only 400 inhabitants near Berlin. During the 20th century, several investment companies developed mostly upper-class settlements to attract Berlin citizens to establish their weekend residences or to settle down in Kleinmachnow. Consequently, the Kleinmachnow population amounted to 6.000 residents in 1935 and to 12.000 in 1938 (Haase 1999, S.10). During the GDR-period, Kleinmachnow was a popular domicile of prominent people that were "loyal to the party". The Kleinmachnow district "Seeberg" for instance, was home for the SED-Party-Academy and the government's official guesthouse that accommodated guests like Fidel Castro or Michail Gorbatschow. After the Reunification, the strong move in of West Germans initiated ongoing conflicts between long-time East German residents and the new West German population. This conflict was intensified by the restitution of formerly expropriated buildings bought by West German newcomers. At the same time, prices for homes rose from 50,000 GDR-Mark (~ 13,000 € according to official rates of the currency union) to often more than 200,000 €. Consequently, a big number of former residents had to leave their previous homes: In total, more than 50 % of old-established inhabitants left Kleinmachnow after the Reunification (Kühn 2002, S. 86).

In 1990, Kleinmachnow population amounted to 11,565 inhabitants and roughly held steady during the following six years. Due to strong suburbanisation processes after the Reunification in 1993, Kleinmachnow grew rapidly to 16,507 inhabitants in 2001, which corresponds to a population growth of 47 % since 1992. As mostly families from Berlin and the former capital Bonn settled down in Kleinmachnow in the last ten years, the proportion of young people is relatively high: In 2001, 17.6 % of the Kleinmachnow population was under 15 years (according German average = 15.7 %).

The economy in Kleinmachnow is dominated by services. In 2001, jobs amounted to about 2,730 in total, of which a half is assigned by five big employers with more than 50 employees: E-bay, the Augustinum housing estate for elderly people, Schwedt Pipeline Construction, Krüger-Kowalke Building Company and the municipality (cp. Hoffmann und Leichter 2002). Moreover, there are 1103 reported trades in Kleinmachnow of which a quarter is part of the commercial sector and about 11 % of the crafts sector. As three quarter of the trades are declared as one-man-companies, one can assume a high amount of service companies located in Kleinmachnow.

In Kleinmachnow, the unemployment rate is remarkably low at about 5.9 % - which is only a quarter of the corresponding average of the State of Brandenburg (18.7 %). This

is mainly because Kleinmachnow never had an industrial economy that underwent broad transformation processes resulting in high unemployment rates during the last decades. Moreover, considerable real estate prices for a suburban settlement attracted mostly people with a medium and stable income.

The housing market of Kleinmachnow is dominated by property. More than two thirds of the dwellings in Kleinmachnow are situated in detached housing. Another 2 % of all dwelling units is located in row houses and in 6 % so-called “city villas” with four to six dwelling units. The only municipal housing company, the GeWoG - Gemeinnützige Wohnungsbaugesellschaft Kleinmachnow mbH, offers social rental housing as well as free market housing in Kleinmachnow and its surroundings. The company was founded in 1991 and owns a total of 1,200 dwelling units; of which 866 dwellings are located in Kleinmachnow. Consequently, the GeWoG stock amounts to nearly 12 % of the total Kleinmachnow housing stock. Apart from that, the GeWoG manages another 1,400 dwelling units for private proprietors. Furthermore, the Augustinum Ltd. provides 269 high quality apartments and according services for elderly people.

In Kleinmachnow, the private Augustinum residence provides home services for elderly people as well as by single commercial providers or local NGOs such as “Caritas”. Although the Augustinum services mainly refer to the estate residents, cultural offers (e.g. theatre, music, lectures) is also open for the public.

The Kleinmachnow Local Agenda 21 was founded in 1997 on the basis of a municipal resolution. In 1998, the mayor and the chairman of the municipal council (Gemeinderat) called up for an open council. As a result, seven task forces were established to work on subjects like mobility, urban development, nature protection or landscape conservation. Whereas some initiatives e.g. for the protection of the municipal “Bannwald” forest ended when reaching its goal, others such as the initiative for mobility, environment, energy, youth or “hiking and tourism” are still active. Kleinmachnow local authorities support the LA 21 initiatives financially and by manpower.

2 Local conditions for sustainable home service provision

In order to acquire all relevant aspects that determine local housing conditions, the project is based on two national case studies (one small town and one big city) analysed regarding housing situation (cp. chapter 2.1) and social conditions (cp. chapter 2.2). Consequently, we first analysed the housing situation in our case studies according to good and disadvantageous conditions for a home service supply in order to gain information on potentials for a sustainable home service provision. In addition, we portrayed social conditions in Berlin and Kleinmachnow that are relevant for sustainable home services, as they set the scope for the customer's demands.

2.1 The housing market in Berlin and Kleinmachnow

In this chapter, we characterise the different housing markets in Kleinmachnow and Berlin in order to detect potential home services providers. Firstly, we present the local situation according to the building structures and housing occupancy (s. cp. 2.1.1, pp. 22). Subsequently, we give an overview on the regulation structures of the housing market in Germany (s. cp. 2.1.2, pp. 25) in order to explain the national framework. Finally, we portray the main actors on the housing market (s. cp. 2.1.3, pp. 29).

2.1.1 Building structure and occupancy

In Berlin, the number of dwelling units amounted to a stock of 1,869,865 in 2002 and composed of 1,434,900 rented and 429,000 owner-occupied dwellings (Mieterschutzbund 2003). The average Berlin apartment size was 69,2 m² respectively 3.6 rooms in 1999, which is less than the German average of 84.3 m² or 4.4 rooms (Statistisches Jahrbuch 2001, pp. 244). Another typical metropolitan characteristic is a high rate of apartments with one or two rooms (15.4% of the dwelling in comparison to the German average of 8.4 %).

Table 2-1: Building types and housing forms

	Germany	Brandenburg	Berlin	Kleinmachnow
Total dwelling units (* = 2002, ** = 2000)	37,984,298*	1,251,223*	1,869,865*	7,297**
increase of dwelling units from 1990 to 2000 (total/ proportional)	11.2%	120,000/ 10%	127,000/ 7%	1600/ 21,9%
dwelling units per 1,000 inhabitants (2001)	460	483	548	462
average occupied room per resident (2001)	39.3 m²	34.5 m²	36.4 m²	42,9 m²
average flat size (2001)	86.7 m²	75.3 m²	69.5 m²	91.8 m²
vacancy rate (* = 1995, ** = 2001)	10.6%(3.2%W, 18.0%E) **	5,7% *	8.5% **	~ 2%

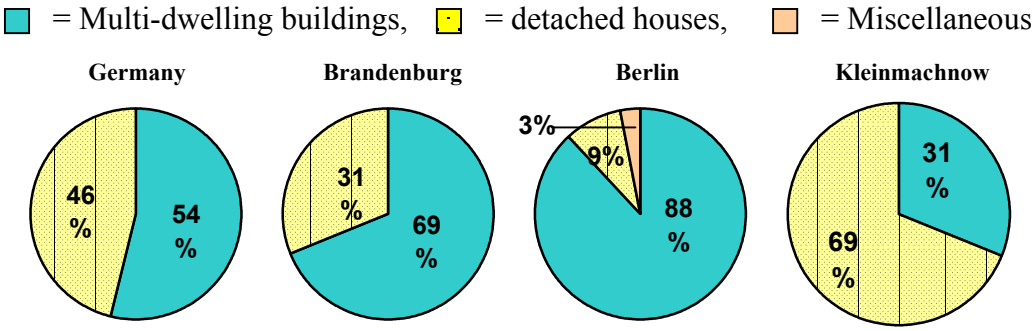


Figure 2-1: Building structure

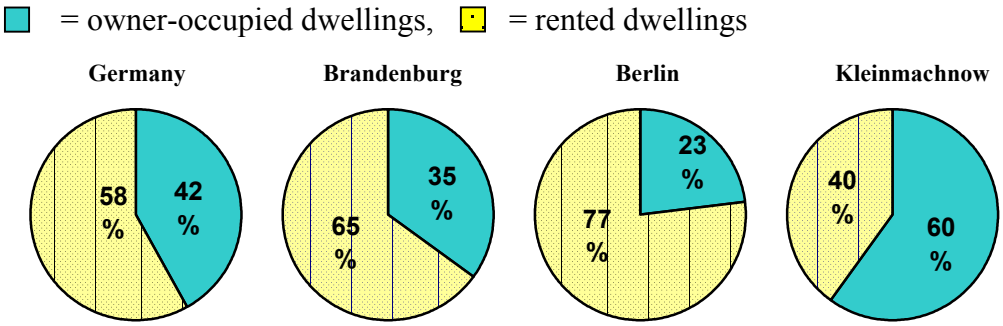


Figure 2-2: Occupancy

As 20 % of rented apartments in West Berlin and 12 % in East Berlin were converted to condominiums in 2000, the former rate of property of 11 % in 1999 has risen to a rate of 23 %. However, it is still only half of the German average of 41,7 %. In 1999, Berlin's 1,838,762 dwelling units were mainly situated in multi-dwelling buildings (90.6 % or 1,666,553 dwelling units in 141,265 buildings) followed by single houses (7.1 % or 131.141 dwelling units) and double houses (2.2 % or 41,068 dwelling units). Apparently, most property consists of condominiums (21 %), as only 9 % of the Berlin dwellings is located in detached houses. Summarizing these key figures, the Berlin housing situation is defined by following proportions:

Table 2-2: Dwelling distributions in Berlin in 1999

	Total dwelling units	rented dwelling units	owner-occupied dwelling units
Detached houses	9 %	~ 2 %	~7 %
Multi-dwelling buildings	91 %	~ 75 %	~16 %
Total	**100 %**	**77 %**	**23 %**

The Berlin housing market is characterised by a surplus of dwelling, indicated by a high rate of dwelling per capita (0.55). Moreover, the vacancy rate amounted to an average

of 8.5 % (140.000 dwelling units) in 1998, which is nearly twice as much as the corresponding rate in 1993 (4.4 %). The Berlin Senate for Urban Development expects that about 100,000 to 150,000 (5 - 7,5%) apartments will constantly be vacant (Tagesspiegel 2001). Main reasons for vacancy are a steady surplus of dwelling as well as on-going suburbanisation processes. Furthermore, poor building conditions (multi storied buildings, poor apartment quality, lack of services, etc.) in the Eastern part of Berlin result in higher vacancy rates (11.1 %) than in the Western part (6.9 %). Equally, the tenants' turnover rate has risen from 7.8 % in 1991 to 12.6 % in 1999 (Berliner Mieterverein 2001, Marktreport Wohnen 2000). Thus, landlords got into a market pressure for renting apartments after decades of dwelling shortage. As another consequence, building activities for housing reduced on a minimum (about 7,099 new dwellings in 2001 compared to 22,744 new dwellings in 1996).

As the Kleinmachnow population grew fast by 47 % in the last ten years, building activities followed the demands for new single and double homes as well as interests of development agencies. Nearly 2,700 new dwelling units were built between 1991 and 2000. In the same period, the proportion of single and double homes diminished from nearly 80% to 69% (Landesumweltamt 2002), while 51,7% of new housing was built as condominiums in multi-dwelling units. The proportion of new buildings to the total stock is 17 % for single homes and 18 % for multi-dwelling buildings. The following table illustrates building activities in Kleinmachnow from 1994 to 2000 (Landesumweltamt 2002):

Table 2-3: Building activities in Kleinmachnow

	1994	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**Total 1995-2000**
Proportion of detached houses on total dwelling (%/	79,8	75,3	74,1	71,5	70,2	70,1	69.0	
Dwellings in detached houses	3,819	3,879	3,998	4,208	4,428	4,773	5,023	
Dwellings in multi-dwelling buildings	967	1,272	1,397	1,678	1,880	2,036	2,256	
New dwellings in detached houses		60	119	211	220	345	249	1,203
New dwellings in multi-dwelling buildings		305	125	280	202	156	221	1,290
Total	**4,786**	**5,151**	**5,395**	**5,886**	**6,308**	**6,809**	**7,279**	

Empirical observations revealed that there are at least 51 buildings with more than eight dwellings in Kleinmachnow. As these premises contain nearly 1,700 dwellings, the number of dwellings in "city villas" with four to eight dwelling units can be estimated at about 440. The following table illustrates premises and according distributions (Landesumweltamt Brandenburg 2000):

Table 2-4: Dwellings in Kleinmachnow

Dwellings in…	**Absolute number**	**Proportion**
…detached houses	5,023	69 %
…buildings with more than 8 dwelling units	1,673	~ 23 %
…row houses***	70	~ 1 %
…"city villas" with 4 to 8 dwelling units	500	~7 %
Total	**7,279**	**100%**

As condominiums have a proportion of about 10 % on the total dwellings in Germany and half of them are owner-occupied, we estimated same proportions for Kleinmachnow (Bundesministerium für Finanzen, p. 52). Assuming that 90 % of the single and double homes are owner-occupied, as well as about half of the condominiums, the rate of owner-occupied dwelling will result in approximately 70 %. The following table resumes the assumptions of premises' distributions in Kleinmachnow:

Table 2-5: Dwelling distributions in Kleinmachnow

	Total dwelling units	**Rented dwelling units**	**Owner-occupied dwelling units**
Detached houses	69 %	<7 %	>62 %
Multi-dwelling buildings	31 %	<24 %	>7 %
Total	**100 %**	**<31 %**	**>69 %**

Strong building activities in the last ten years concentrating on property (see Table 2-3, p. 24) reflect the demand of families to settle down in Kleinmachnow. Hence, the Kleinmachnow housing market is determined by the purchase of homes and condominiums. Due to the high proportion of property, each resident averagely occupies with 42.9 m² comparatively much living space, while the average dwelling unit of 92.9 m² is also bigger than the German average of 86.7 m².

2.1.2 Regulation of rents and property prices

Regarding the determination of rents in Germany, the privately financed (free) market has to be distinguished from the subsidised (social) housing market. The following table illustrates rent restrictions on different market segments of the housing sector:

Table 2-6: Regulation of rents and property prices

a) Free market pricing		Increasing intensity of state-control on pricing of rents
Purchase prices of housing and commercial property; rents for commercial space	unrestricted and negotiable	
Rents of new buildings on the free market	Restricted by the local rent review (no exceeding of more than 50 %)	
Rents of stock on the free market	Increase only allowed in case of extraordinary low rents or after modernisation	
b) State-controlled pricing		
Pricing of social housing	rent is determined by real costs for the landlord	

In Germany, property prices are determined by the free market principle of supply and demand. However, official commissions control the land market by analysing all land transactions and by publishing average prices as standard land values. These values are predominantly detected to determine inheritance and property taxes.

Rents on the free rental market are determined by an official local rent review that lists average rents according to the location and to building and apartment features. The rent review is published by housing providers, who analyse new and existing tenancies. If the rent is 20 % higher than the local rent review, tenants can legally effect a reduction. Moreover, landlords that exceed the local rent review by more than 50 % are charged with extortionate pricing and can be legally prosecuted. In addition, the new Tenancy Act of 2002 determines that in any case, landlords are only allowed to raise their rents by a rate of 20 % within three years and must not exceed the local rent level determined by the rent review. This should avoid extortionate rent rises.

Social housing is based on federal, state or local authorities' subsidies either to support people with low income (subject level, housing aid) or to support the creation of social housing estates (object level). Regarding object subsidies, investors are legally bound to agreements with the subsidies disposer who e.g. must assent to rent increases. As rents must not exceed regular recurrent expenses of the landlord, he is obliged to expose these costs by an official calculation operation to the sponsor. Regarding subject subsidies, the resident directly obtains housing aid from federal authorities. Housing aid is determined by a maximum amount that is defined by household size, age of the building, features of the apartment and municipal rent levels (I to VI).

Federal subsidies for property

Since social rental housing is constantly restricted in Germany, subsidies for property development proportionally gained importance over the last ten years. In West Germany, the proportion of property subsidies to total housing subsidies increased from a third in 1993 to nearly two thirds in 2001. Simultaneously, it has risen in East Germany from 37 % in 1994 to nearly 70 % in 2001 (BMVBW 2002).

The main instrument for state-subsidised property is the federal property benefit that is paid for new construction (full amount), stock property (half amount) and also partly for modernisation. It can only be obtained once in a lifetime and was restricted to

households that gained less than 81,800 € per year and a basic fund of 20,450 € (plus 6,153 € per child and 2000 € for eco-buildings) until 2002. The property benefit is paid annually within 8 years. As federal expenses for the property benefit amounted to 2.94 billion € in 2000, the government planned to restrict it to families with children and a sum of 8,000 € plus 800 € per child. Due to strong objections on the part of the population, these plans were withdrawn, but remain constantly on the political agenda. Another subsidy for property development is the so-called housing bonus that amounted to 0.5 billion € federal expenses in 2000.

In Germany, construction costs are comparatively high. The average costs for building a single home were 152,000 € and 78,000 € for an apartment in 1999. This amount does not include costs for land (500 to 1,000 €/m²), building experts (architects, statistician etc.), surroundings and charges, which in total account for up to 50 % of the building costs. Accordingly, subsidies for property consist of about 9 to 14 % of the total construction costs.

Apart from that, state authorities support the purchase of property by temporary programs e.g. by special conditions for building land after reappropriations in East Germany or reduced loans for ecological infrastructure such as solar heating (BMVBW, Bauen für die Zukunft 2002, p. 15).

Social housing subsidies

In the German constitution, housing is defined as an existential value that shall not be regulated by capitalistic rules of free-market economy alone. Consequently, German tenants can claim subsidies according to their income position (subject subsidies) and federal, state and local authorities are obliged to provide economically priced housing (object subsidies).

Regarding subject subsidies, the main support for tenants is the housing aid that is either paid on the basis of a standard sum or a table rate. The standard sum is restricted to people that get social aid and it is limited by a certain index (~ 7 % of the rent). Table rates address households with low income and are determined by the family income, the rent level and the size of the household. Summarizing, housing aid on a standard sum is an instrument for social policies whereas housing aid at table rates is a classical instrument of housing policies.

In 2002, 3.1 million German households obtained housing aid – which is about 3.8 % of the total German population (Deutscher Bundestag 2001). In Berlin, 257,344 households (13.7 %) obtained housing aid in 2003. Public expenditure for housing aid amounted to 4.5 billion € in Germany and to 368 million € in Berlin in 2003.

With regard to object subsidies, the investing company or individual can apply for a state subsidy for building and management activities in order to create economically priced dwellings. The created dwellings are reserved to tenants with low income and are legally bound to fixed rent rates that are connected to the actual costs of the landlord.

For many decades, subsidies were calculated on basis of the difference between the real expenses of the social landlord and a virtual limit called "cost rent" resulting from an assumption on future market rents. This form of subsidy was the most important instrument to create social housing settlements after World War II. After expiration of the contract between the landlord and the local authority (usually after 15 or 30 years), the social housing premises are regarded as free market housing.

Unfortunately, the assumption on the cost rent was wrong: Free market rents did not rise as high as assumed and even remained under the expected cost rent. Moreover, the combination of subsidies with expenses did not encourage social landlords to build economically and care for decent housing that meets the residents' demands. The following figure illustrates the related financial estimations:

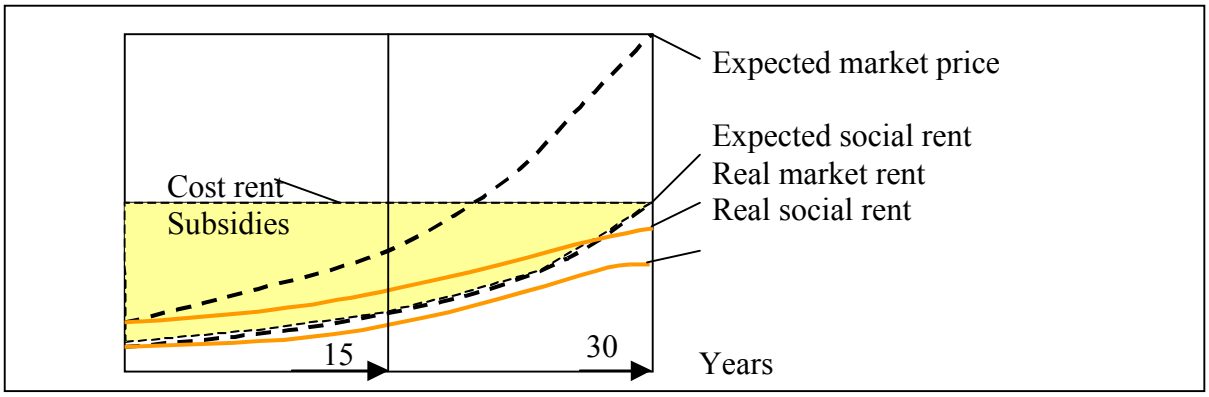


Figure 2-3: German social housing subsidy system

Consequently, this subsidy system resulted in extraordinary costs both for the social landlord and the municipality. So, for example, real market prices of a social housing dwelling in Berlin amounts to nearly 20 €/m², whereas social rents should not exceed 3.50 € to correspond to free market prices. Affording the difference of about 16.50 €, Berlin expenses for social housing amounted to 1,5 billion € in 2002 (DIW 2003, Wochenbericht). Moreover, subsidised dwellings are reserved to tenants with low income[4], who cannot afford higher rents that could fill this financial gap. As local authorities could not finance the long-term subventions any more, this subsidy system was abolished by the new Housing Support Act in 2003.
In consequence, agreements became more flexible and commitments were made for only 7 to 10 years. Apart from that, object subsidies can be based on contracts dedicated to single rented condominiums and detached houses. The idea behind that is to address private individuals to support social housing by offering subsidies or tax benefits. Rents in these dwellings amount to 5 - 7 € and the income of the tenant can be 60 % higher than in social housing financed by contracts based on the "cost rent".

[4] Less than 11,760 € for a single household respectively. 17,077 € for a double household plus 4,090 € for every other person.

Although there are still many premises subsidised by old contracts, social housing diminishes steadily in Germany: Whereas 3.9 million apartments were subsidized in Germany in 1987, only 1.8 million were subsidised in 2000 (Mieterbund 2003). Equally, subsidies for new construction decreased by 11.5 % on a total of 23,310 in the Old States and in the New States even by 36.9 % on 4,634 in 2000.

2.1.3 Actors on the housing market

There are four main actor groups in the housing market: Public authorities, housing providers, housing associations and intermediaries. The first group of actors are federal, state and local authorities that set the framework of social housing by financing programs, housing providers and vulnerable people. The second actor group of housing companies segments in social housing companies providing social housing and private individuals or companies focussing on the profit-orientated housing market. Both segments have in common, that they usually own and let their dwellings. The third actor group are housing associations that generally represent their members, i.e. housing companies, tenants, condominium owners and proprietors. Finally, the fourth group of actors are propriety related service providers offering management, construction or sale services. These service providers are defined as intermediaries in the project context.

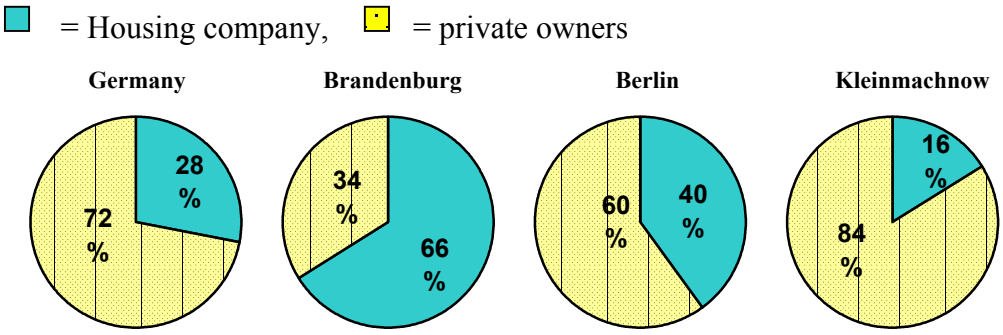


Figure 2-4: Proprietor types

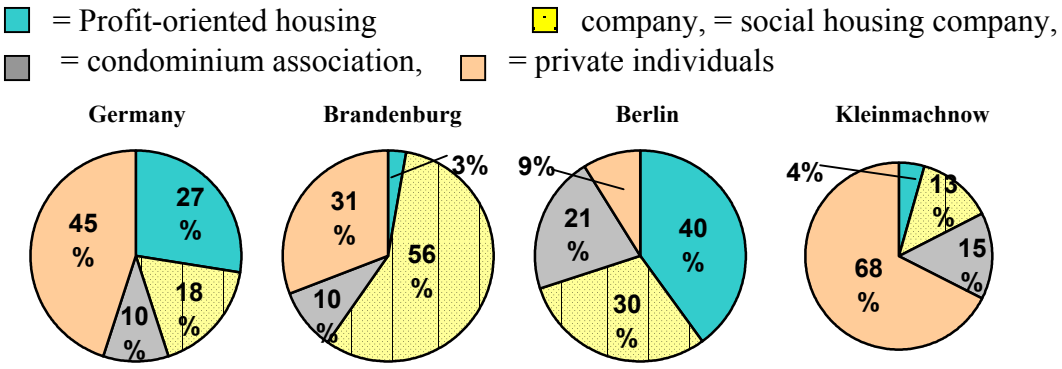


Figure 2-5: Housing management types

Federal, state and local authorities: The federal ministries as well as the state parliament are responsible for the legal framework for housing and building. Apart from working out legal frameworks, an important activity of the federal institutions is to provide subsidies for property development and to support social housing. Furthermore federal institutions are responsible for providing civil servants' housing.

German state authorities also have an influence on federal legal frameworks. On one hand, they are responsible of promoting affordable housing on the object level by providing subsidies to municipalities and housing organisations. On the other hand, the states are in charge of providing subsidies on the subject level to support tenants with low income by housing aid. Property development is influenced by the control of local building activities and by defining objectives for regional development. Consequently, the states' decisions set also certain limits on profit-oriented building activities.

Last but not least, local authorities are the most important institution for the housing market. Responsible for providing housing for disadvantaged people, most local authorities founded municipal housing companies to build and let affordable housing. Moreover, subsidies are given to private and commercial investors to take care of this task, which was the most common form of promoting social housing for many decades. Furthermore, local authorities have to provide direct housing subsidies for people with low income and to care for social welfare including rent. Another major role of local authorities is the development of building land and the examination of building projects.

Housing companies: Social housing organisations differ from private landlords by addressing underprivileged target groups. This responsibility is generally defined in the social companies' regulations. Particularly in the decades of reconstruction after World War II, local authorities founded *social housing companies* in order to fulfil their responsibility of providing housing for disadvantaged people. Until 1990, these companies were non-profit organisations by law. In 1990, the Non-Profit Housing Act was restricted with the consequence that these organisations lost many of their concessions. Although their general mission did not change, social housing companies achieved the ability to invest in profit-orientated fields like service provision, condominium management or property development. Another group of social housing providers are *foundations* that were established either by Christian institutions or on basis of private individuals' donations. As corporations for public utility, they usually address special target groups such as the handicapped, former prisoners or single mothers.

Finally, *cooperatives* play an important role for social housing in Germany. Cooperative property of range from one building to whole settlements. The prerequisite to move to cooperative dwellings is to buy a certain cooperative share. Although the shareholders basically have a tenants status, they are involved in important decisions e.g. concerning modernisation measures. The main mission of cooperatives is to provide adequate housing for their members. A cooperative can be managed by the members themselves or by a professional chairman. The chairman underlies the same duties as in any other

housing organisations. Particularly small cooperatives have three principals of particular interest. The first principle of cooperatives is self-help, which requires active participation in common construction or social activities. The second principle is self-administration with equal rights for every member of the cooperative. The third one is common responsibility. All principles meet four characteristics of cooperatives: supporting individuals instead of raising capital, fulfilling demands instead of profits, similarity of user and provider, and common property instead of private property.

In Germany, *private housing companies* were founded as a section of industrial companies in order to house their employees. After the decline of industry, most of them were outsourced and concentrated on housing business. Some of the most important German profit-orientated housing companies such as Veba Immobilien AG or WCM had their origins in managing employees' housing.

Private individuals own most of the dwellings in Germany and are therefore the most important actors in the housing market. In 1999, private households built 60 % of the total 460,546 new dwellings, whereas housing organisations built 144,332 and non-housing companies 25,747 new dwellings. While owners of detached houses or bigger estates act individually, condominium owners are organised in condominium associations (see next section).

When receiving social housing subsidies, private investors are also legally bound to most of the duties of social housing organisations, such as complying with certain rent levels or accepting only tenants with special needs or low income. Unless they obtain subsidies, private companies and individuals are only restricted by local rent reviews. Therefore, they are more flexible than social housing companies in investing in profitable fields such as the sale of premises or the rent of office buildings. However, the loss of the status of public utility allowed some social housing organisations to invest in trade centres, hotels or the sale of condominiums as well.

Housing associations: Different associations for housing organisations, tenants and proprietors form the third actor group. The GdW – Federal Union of Housing Companies is the federal representative of 3,117 housing organisations that provided 6,51 million dwellings to 15 - 16 million residents in 2001. Furthermore, housing organisations are organised in 15 independent regional unions. Berlin and Brandenburg housing organisations are members of the regional Berlin-Brandenburg Housing Companies' Federation BBU. The BBU represents 396 housing organisations with nearly 1,2 million dwellings. These dwellings cover about 40 % of the total premises in Berlin and 43 % in Brandenburg. Another important housing union on federal level is the BFW – Federal Union of Free Housing companies. It represents 1,800 private housing organisations with 3,6 million dwellings. The BFW is also divided into regional associations like the State Union of Free Real Estate and Housing Companies Berlin/Brandenburg. The spectrum of members is broader than in the GdW and includes also construction companies, urban development agencies, consultants and banks.

Members of this union deal with more than 300,000 dwellings as well as 7 million m² of office and business premises in Berlin.

The most influential German tenants' associations is the DMB – German Tenants' Federation that is divided into regional associations such as the State of Brandenburg Tenants' Association or the Berlin Tenants' Association with more than 150,000 members. Moreover there are regional division of the Tenants' Protection Union.

When selling apartments in a multi-dwelling building, it is required by law to divide it into separate condominiums and all condominium owners must join a condominium association managing all housing activities. The main association for proprietors is the House and Land Germany – Central Union of German House, Condominiums and Land Proprietors. This association is also subdivided in regional associations, which include more than 1,000 local associations. The number of members amounts to more than one million. Most of the members are private individuals who own rented dwellings.

A common mission of all associations is lobby work for their members, including the participation in development and modification of housing related laws. All associations aim at protecting their members against legal restrictions with obvious disadvantages. Therefore all associations participate in this process by presenting expert reports and comments in public hearings of the federal and state committees. Another common mission of all associations is to inform their members on relevant news. This is mostly done by medias (reports, periodicals or internet) as well as by individual consultation of their members e.g. on legal matters. A further common mission of housing associations is to control rent reviews.

The mission of condominium associations is furthermore to manage the common property of the house community. When contracting another company for management, maintenance and modernisation, the condominium association is still responsible for all operations dependent on the condominium owners' decisions. Further missions depend on the association form. So, housing organisation associations often offer training workshops on certain fields or negotiate special conditions with resource providers.

Intermediaries: The fourth group of actors on the housing sector can be described as intermediaries that are particularly important for (future) proprietors. Usually not owning premises, housing management companies mainly manage the stock of private individuals and of condominium associations. Building promoters play a dominant role for property of detached houses. Their professional field is to buy and develop building land, raise a building and offer it for purchase.

Finally, real estate and housing agents procure tenancies as well as the purchase and sale of property. For tenancies, they get usually get a provision of three monthly rents, which is paid by the new tenant. When procuring the sale of a home or a condominium, they usually get 5 to 10 % of the purchase price from the new owner. The mission of these intermediaries is to make profit.

Actors on the housing market in Berlin

The housing market of Berlin is marked by a high rate of social tenants' housing provided by municipal housing companies. Accordingly, one of the most important actors of the Berlin housing market is the Land of Berlin. In 2001, the Berlin Senate determined 14 municipal housing companies that managed a stock of 365,000 dwelling units (Abgeordnetenhaus von Berlin 2001). Another 58,000 dwellings are subsidised with state funds. Consequently, the Land of Berlin has an influence on 22.7 % of the total housing (Berliner Senatsverwaltung für Stadtentwicklung 2003, Mieterfibel). Although estimations vary[5], this rate is extremely high in comparison to other cities such as Munich or Cologne that have a proportion of about 13 %. However, the Berlin Senate announced that until the end of 2002 54,000 dwelling units would be exempted from subsidies and another 110,000 until 2010. In 2014, there will be a remainder of only 176,000 subsidised apartments in West Berlin (Berliner Senatsverwaltung für Stadtentwicklung 2000, Stadtentwicklungsplan Wohnen, p.69). The following table lists the biggest Berlin social housing organisations (Berliner Senatsverwaltung für Stadtentwicklung 2003):

[5] The BBU - Berlin and Brandenburg Association of Housing Companies assumed only 325,000 subsidised dwelling units in 1997.

Table 2-7: Dwellings owned by municipal housing organisations

Company	Full name and subsidiary housing companies	Dwellings (parliament information)	Dwellings (company information)
DEGEWO	Deutsche Gesellschaft zur Förderung des Wohnungsbaues gAG	30,319	
	KÖWOGE Köpenicker Wohnungsbaugesellschaft mbH	16,409	
GeSoBau	Gesellschaft für sozialen Wohnungsbau g AG	44,064	
	Wohnungsbaugesellschaft Pankow		
	Wohnungsbaugesellschaft Weißensee mbH		
GEWOBAG	Gemeinnützige Wohnungsbau-AG Berlin	24,105	
	WIR Wohnungsbaugesellschaft in Berlin mbH	19,124	
	WIP Wohnungsbaugesellschaft Prenzlauer Berg mbH	12,963	18,000
GSW	Gemeinnützige Siedlungs- und Wohnungsbaugesellschaft Berlin mbH	58,470	
HOWOGE	HOWOGE Wohnungsbaugesellschaft mbH	22,813	26,410
	WBL Wohnungsbaugesellschaft Lichtenberg	25,975	
Stadt und Land	Stadt und Land Wohnbauten Gesellschaft mbH	31,649	
	Wohnungsbaugesellschaft Hellersdorf mbH – WoGeHe	22,279	17,000
	Wohnungsbaugesellschaft Treptow		
WBG Mahrzahn	Wohnungsbaugesellschaft Marzahn mbH	32,012	
WBM	Wohnungsbaugesellschaft Mitte mbH	9,474	12,000
	Berliner Wohn- und Geschäftshaus GmbH BEWOGE	15,287	15,248
	Wohnungsbaugesellschaft Friedrichshain mbH		18,000
GEHAG	Gemeinnützige Heimstätten-Aktiengesellschaft**		13,000*
Total		**364,943**	

Another approximately 10% (180,000) dwelling units are provided by cooperatives. Whereas 22 of them own nearly 58% of the total cooperative stock, the rest is owned by a multitude of small cooperatives that often own only one building. The following table lists the biggest housing cooperatives, managing from 3,000 to 10,500 dwellings (Berliner Senatsverwaltung für Stadtentwicklung 2003):

Table 2-8: Berlin cooperatives

Cooperative	Dwellings
WGLi Wohnungsgenossenschaft Lichtenberg eG	10,500
Charlottenburger Baugenossenschaft eG	6,600
Berliner Baugenossenschaft	6,500
Berliner- Bau und Wohnungsgenossenschaft von 1892 eG	6,200
BWV Beamten-Wohnungsverein zu Berlin EG	6,200
wbv Wohnungsbau Verein Neukölln eG	5,800
Wohnungsbaugenossenschaft Friedrichshain eG	5,300
Beamten Wohnungsverein zu Köpenick	5,200
EVM Erbbauverein Moabit	5,000
Wohnungsbaugenossenschaft Vorwärts eG	4,900
Wohnungsbaugenossenschaft Treptow-Nord eG	4,400
Baugenossenschaft Ideal eG	4,300
Wohnungsbaugenossenschaft DPF eG	3,700
Erste Wohnungsgenossenschaft Berlin-Pankow	3,600
Märkische Scholle Wohnungsunternehmen eG	3,600
Wohnungsbaugenossenschaft Berolina eG	3,550
Gemeinnützige Wohnungsgenossenschaft Neukölln eG	3,300
Wohnungsbaugenossenschaft Humboldt-Universität	3,300
Wohnungsbaugenossenschaft Köpenick eG	3,300
Wohnungsbaugenossenschaft Weißensee eG	3,300
Total	98,550

About 21 % of the Berlin dwellings are condominiums, of which approximately a third (~ 7 % of the total dwellings) is rented. Precise data on charitable housing organisations, mainly housing foundations in Germany, are not available. Assuming that nearly all single homes (9 % of the total dwelling) are privately owned and mostly owner-occupied, these residents are not organised in any institution. From this, it follows that the rest of the dwelling (up to 40 %) must be regarded as profit housing provided by private companies or individuals.

The Berlin rental market is marked by high vacancy and tenants' turnover rates that urged a change from a providers market to a customers market. The consequence is that landlords got into a competitive situation. This competition is enforced by the high financial pressure on social housing companies deriving from the strong indebtedness of Berlin that forced local authorities to use a legal gap by dismissing 15-year-old subsidy contracts that were originally intended for 30 years. Continually reducing subsidies for social housing, federal authorities urged many social landlords into high indebtedness that cannot be substituted by rental income from their predominantly low-income customers. The consequence is that social housing companies often have to sell a part of their housing assets or are completely sold to free market investors. So many former municipal housing companies have to survive under free market rules that were not yet relevant for them. Usually owning a stock that is mostly not competitive with private stock, they furthermore tend to lose affluent residents and gain increasingly tenants with low income.

In consequence of the competition on the rental market, Berlin housing organisations are forced to balance premises' deficits by strengthening customer relationships and raising the housing quality in their premises. One of the most popular instruments to reach this goal is to provide home services that meet the resident's demands. Although underlying financial restrictions, many housing companies started offering a broad range of home services that span from specialized counselling to neighbourhood renewal activities or social infrastructure measures.

On the opposite, the Berlin property market is marked by a strong deficit of detached housing and high property values provoking a competition on the limited remaining building land. Thus, building promoters and real estate agencies compete for attractive locations to develop new urban settlements, although property in the suburbs is available for comparatively moderate prices.

Actors on the housing market in Kleinmachnow

Kleinmachnow has only few dominant local actors on the housing market and is distinguished in many aspects from Berlin. Nearly two thirds of the dwellings consist of detached houses that are predominantly owner-occupied (s. cp. Table 2-5, p. 25). Most rental housing is located in buildings with more than 8 dwelling units, which constitute about a third of the total housing in Kleinmachnow. The half of these buildings (= 12 % of the total dwellings) belongs to the local housing company GeWoG that focuses on economically priced dwelling. As the GeWoGe is the exclusive provider of social housing in Kleinmachnow, the company has a high importance for this market segment and its vacancy rates are low.

The GeWoG moreover manages another 15 to 20 % of the total dwelling in Kleinmachnow including condominiums, the stock of a local company and buildings of uncertain ownership (Sommerfeldsiedlung). In addition, there are three additional building complexes with condominiums – Kiebietzberge, Eichenhof and Schillertstraße. The Kiebitzberge settlement is partly owner-occupied and partly rented, whereas the condominiums in the Eichenhof building are predominantly rented. Summarizing, about 15 % of the Kleinmachnow dwelling is owned by private condominium owners.

The Augustinum Ltd. in Kleinmachnow runs a residence for elderly people that comprises about 3.7 % of the total Kleinmachnow dwelling. It is part of the Augustinum group, a nationwide acting social service company. Living in an Augustinum apartment is comparatively moderate (about 53 €/m² plus a security of nearly 19,500 €), as rents include fulltime services (e.g. daily meal, weekly apartment cleaning, swimming-pool, cultural events) and temporary services (medical care, laundry, optician, medicament service).

In the future, the GSW, the biggest Berlin housing organisation, will be another important housing company in Kleinmachnow, as they are currently developing a new settlement called "Seemannheimsweg" with about 70 row houses. Furthermore, there are plans to develop a settlement called "Arbeiten und Wohnen" (Working and Living)

with nearly 240 single and double houses. Apart from that, most of the new buildings were privately built by various small building companies and by prefabricate building companies.

Building promoters such as Condor-Wessels Mark Brandenburg AG, Fuchs Immobilien, Bien-Zenker or Fischer currently dominate the market for detached houses. The Dutch company Condor Wessels developed most of the building land on the basis of contracts with the municipality. They build estimate 200 to 400 dwellings (single, double and small row houses) in the last years and expect to build another 270 dwellings soon.

The rising number of new single homes or condominium buildings and simultaneously rising property values reflect the demand for Kleinmachnow premises. Due to its popularity among quite affluent people, Kleinmachnow is a strongly increasind market for all types of building activities. Accordingly, the property market is marked by a high competition. Due to this competition, some actors in the property market expand their offer by providing services that support the purchase of property such as counselling on financial issues or on insurances. Still, these services are only supplement offers to the core activity of building promotion including the whole process from building land development to the sale of homes and condominiums.

2.2 The socio-economic framework in Berlin and Kleinmachnow

Socio-economic data allows assumptions on residents' demands for home services. In this context, the demographic situation (s. cp. 2.2.1, pp.37) can give a hint on demands for social services, while housing costs (s. cp. 2.2.2, pp.42) set the framework for environmental services as well as for potential financial resources of the households. Furthermore, we analysed local mobility patterns in order to explore demands for mobility services, as mobility has considerable environmental impacts and is therefore important for potential reductions of CO^2 emissions.

2.2.1 Demographic situation

The Berlin population accounts for 3,388,477 residents in 2004. The Berlin population diminished from its After War maximum in 1993 (3,475,392) by 86,915 or 2.5 % during the last decade. However, the population density remains high at a rate of 3,800 people per km², which is due to the fact that about 90 % of the dwelling is situated in multi-dwelling buildings. In addition, Berlin households increased by 7.2 % to a number of 1,891,000 from 1991 to 2004. Half of them (50.1 %) were single households that increased by 4.1 % from 1991 to 2000 (Statistisches Landesamt Berlin 2003). At the same time, 2-person households increased by 1.4 % while households with three or more people decreased. The average number of residents per household was 1.92 and therefore far below the German average of 2.2. Summarising, nearly 80 % of the Berlin households are 1- and 2-person households.

Table 2-9: Demographic key data

	Germany	Brandenburg	Berlin	Kleinmachnow
Population (2004)	82,531,671	2,574,521	3,388,477	17,309
Population growth (1992-2002)	3.7%	2.0%	-2.1 %	+ 47%
Households (2004)	39,122,000	1,218,000	1,891,000	7,176
Proportion of single households (2004)	37.2%	33.4%	50.1%	24.2%
Average household size (2001)	2.2	2.2	1.9	2.3
Unemployment rate (2004)	10.5%	18.7%	17.6%	5.9 %
Low income population (0 –15,499 €, 1994)	32.2 %	37.2 5	45.4 %	n.a.
Medium income population (15.500 – 24.999 €, 1994)	27.9 %	30.5 %	25.8 %	n.a.
High income population (more than 25.000 €, 1994)	35.3 %	30.5 5	26.7 %	n.a.
Children per Day-care centre (2002)	95.9	55.1	76.0	n.a.
People over 65 per Day-centre for elderly1	1622.3	1691.7	1731.0	n.a.
Rate of foreign residents …of EU citizens …of non-EU (all) / turkish citizens	8.9 % 2.3 % 6.6 %/ 2.4 %	2.5 %	13.1 % 2.0 % 11.1 %/3.6 %	n.a.

The unemployment rate of Berlin of 17.6 % is by far the highest of all European capitals and is only topped by East European small towns. Moreover, 12,8 % of the Berlin population is defined as poor (Armutsbericht 2002). A third of them are immigrants, a quarter receives unemployment aid and a fifth social aid. Nearly 18 % of the poor are single parents. Although Berlin's housing market is characterised by a high proportion of social housing, low-income residents still have problems to find adequate accommodation.

Accommodating 1,386 inhabitants per km² in 2001, Kleinmachnow is one of the densest districts in Brandenburg, which has an average population density of 88 inhabitants/km² in 2001 (LDS Brandenburg 2003). Since 1992, the number of inhabitants increased strongly by 47.0 % due to the fact that many families seized the opportunity to move from formerly enclosed Berlin to the surrounding villages in Brandenburg. In addition, Kleinmachnow became a favoured location of federal employees who moved from Bonn to Berlin after Berlin became capital of Germany. Due to its suburban character, Kleinmachnow is mainly a residential settlement. The proportion of families is comparatively high in Kleinmachnow, which affects an average household size of 2.3 people. Consequently, the number of households results in 7,176.

In Kleinmachnow, the purchasing power with an index of 109.8 (100 = German average, HVB Expertise 2002) is one of the highest of all German municipalities. The high proportion of single homes and the high rate of property gives evidence of an affluent population that can afford considerable prices for property in Kleinmachnow. According to official statistics, there are more than 2,700 jobs in Kleinmachnow. There is

no data on labour force participation rates for Kleinmachnow, but estimates can relate to similar employment conditions in other German states. As for instance the unemployment rate in Bavaria corresponds to the situation in Kleinmachnow, the Bavarian labour force participation rate of 48.4 % (Statistisches Bundesamt 2001) will probably be similar in Kleinmachnow as well. Consequently, about 8,000 jobholders live in Kleinmachnow, so it is obvious that at least 70 % (or 5,300 employees) commute to Berlin as well as to the surrounding cities such as Potsdam or Teltow. As half of the jobs are reported as self-employment, there are only 1300 jobs left that could be offered to local residents.

Social isolation in German cities

In Germany, main problems of social isolation concentrate on big cities, as middle-class families with a considerable financial background tend to move to smaller towns or suburbia. This tendency corresponds to relating statistical indicators such as the number of single households in 2001: 50.9 % of the Berlin households are single households, whereas in the rural state of Brandenburg single households amount only to 31.2 % (Destatis 2003).

Similarly, the rate of single parents is higher in Berlin (43.6 %) than in Brandenburg (38.2 %, Statistik Berlin – Brandenburg 2003). Although this does not directly indicate social isolation, it is proved that children in single parents households spend on average more time on their own than children that live with their parents. The following table illustrates that single parents are moreover more often dependent on additional external support (www.statistik-berlin.de):

Table 2-10: Families receiving social-educational support in Berlin in 1993 and 2001

	1993	**2001**
Absolute number of juveniles	1546	2964
Thereof family status in %		
Parents	36.0	26.5
Parent plus stepparent	17.6	14.0
Single parent	46.4	58.4

Apart from that, particularly senior citizens risk social isolation as familiar contacts gradually diminished in Germany during the last decades. Moreover, the rate of single households strongly rises according to the age and sex (www.statistik-berlin.de):

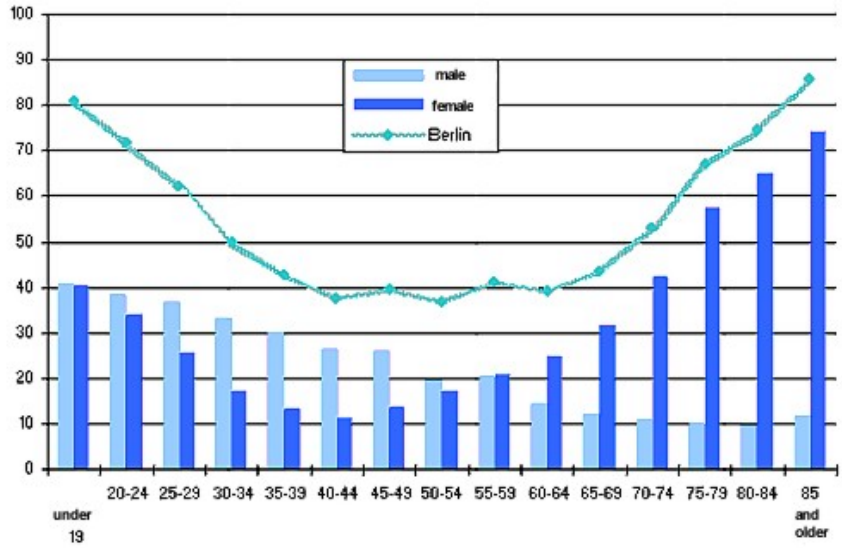


Figure 2-6: Single households according to age and sex (2001)

This figure illustrates that in particular, elderly women tend to live alone, which can be explained by the lower life expectancy of men. Although the overall tendency reflects a general situation in Germany, according rates tend to be a little bit lower in rural areas, where elderly people more often live in the same house as their family members.

Summarizing, defining social isolation as a lack of social contacts, senior female residents and children of single parents in urban areas are more likely to spend more time on their own compared to other resident groups. Housing organisations respond to this by providing care and leisure time services for children and elderly residents.

Social tensions in the neighbourhood

In Germany, the tendency of social polarisation is regarded as one of the core problems of urban development. Polarising tendencies on the labour market are characterised by a growing gap between employed and unemployed, between high salaried jobs and underpaid jobs as well as between people with safe jobs and those who work under precarious conditions. Consequently, consumption patterns and life styles polarise as well (Schmidt 1996). Simultaneously, the increasingly differentiated housing market enables solvent tenants to abandon stigmatised neighbourhoods, and financial restrictions on the social housing market support an increasing dominance of free market conditions that leave only a narrow margin for people with low income to choose their personal living conditions. Consequently, polarising tendencies on the job market are reflected by an according spatial polarisation between living conditions in social housing districts and those in middle or upper class settlements. Although these

tendencies differ regionally, nearly every German city states a constant social and physical degradation of social housing districts during the last decades.

The German federal and state authorities responded to these developments in 1999 by launching a program called "The Socially Integrative City" that aims at revaluating stigmatised neighbourhoods by a variety of constructional and social activities. According to this programme, so-called "Districts With Special Development Needs" are defined by indecent conditions of housing environments and recreation spaces, high emission and noise nuisances, a lack of community facilities and infrastructure as well as a high proportion of poor people. Consequences are vandalism, a considerable number of crimes and tensions between different resident groups (migrants and Germans, elderly and youth). Generally, residents vulnerable to poverty such as migrants, drug or alcohol addicted, long-term unemployed, housing aid recipients or youth with a substandard education concentrate in these neighbourhoods as well. In Berlin, 17 districts are considered as "Districts With Special Development Needs": 15 of them since 1999, two since 2001. So, Berlin has a comparatively high rate of "participating" districts compared to e.g. German' second biggest city Hamburg that registered only 7 districts for the programme.

In Kleinmachnow, there are no equivalent social disparities such as in Berlin social housing districts. Here, social tensions basically consist in neighbourly conflicts between old-established residents and new resident groups that resulted from the rapid change of population after the Reunification.

Deficiencies in infrastructure

During the GDR era, many East German regions suffered from structural deficiencies and low housing standards. As new mobility opportunities emerged after the Reunification, disadvantaged locations became marked by strong depopulation processes since 1989. These tendencies affected particularly indecent housing settlements, i.e. large GDR housing estates. Although some Western municipalities show similar tendencies of depopulation, the situation in the East is far more precarious. So the Federal Ministry of Building, Housing and Transportation delivered a programme called "Urban Reconstruction East" (Stadt-Umbau Ost) to prevent further problems in large GDR-housing estates by urban renewal programmes. This programme predominantly supports the deconstruction of indecent prefabricated settlements that suffer from vacancy for many years yet and thereby impair the quality of the surrounding districts.

Equally, indecent housing conditions in Berlin focus on such large housing estates predominantly in the Eastern part of the capital. The following table shows vacancy rates according to building types in Berlin (Statistisches Bundesamt 2000, Pfeiffer et. al 2000):

Table 2-11: Housing stock and vacancies in Berlin

Building type	Total stock	Vacant dwellings	Total vacancy rate	Stock East Berlin	Vacancies East Berlin
Detached buildings	170,000	12,240	7.2 %	55,000	7.7 %
Suburban multi-dwelling buildings	82,000	7,872	9.6 %	31,000	15.0 %
Central multi- dwelling buildings	634,000	76,714	12.1 %	211,000	19.2 %
New multi- dwelling buildings	98,000	8,918	9.1 %	52,000	7.8 %
Miscellaneous	56,000	n.a.	n.a.	n.a.	n.a.
Total/ average	1,820,000	151,764	8.3 %	675,000	11.2 %

Since in general particularly indecent housing is affected by vacancy, these rates reflect building conditions that have changed in some market segments during the last years. But while vacancy in some old central multi-storey buildings and single homes decreased after refurbishment and restitution processes, apartments in large housing estates are still marked by high vacancy rates. In order to change their image, some of these stigmatised districts enhanced their marketing efforts and started providing home services in order to reduce further depopulation tendencies. As nearly 40 % of the Berlin housing is situated in multi-dwelling buildings that are predominantly affected by vacancy, the renewal of those neighbourhoods became the most important field of action for local housing authorities and organisations.

2.2.2 Housing costs

Property prices in Berlin and Kleinmachnow

Prices for building land spread wider in Berlin than in Kleinmachnow. In 2001, best locations in West Berlin amounted to prices of 1,000 €/m², whereas general locations had a value of 350 €/m² to 450 €/m². Prices for building land in East Berlin are lower at about 200 to 275 €/m² (Berliner Senatsverwaltung für Stadtentwicklung 2001). Prices for building land in Kleinmachnow spread from 220 €/m² to 260 €/m² on an average price of 230 €/m². Compared to the State of Brandenburg with an average price for building land of only 69 €/m², Kleinmachnow has an extraordinary high price level.

Table 2-12: Property prices

	Germany	Branden-burg	Berlin	Klein-machnow
Range of building land prices in €/m² (* =1999, **= 2002)	71 €/m²*	69 €/m²**	350-450 €/m² W**, 200-275 €/m² E**	205 – 260 €/m²**
Average price for detached homes in € (2001)	170,000 €	114,500 €	329,500 €	317,000 €
Range of condominium prices in €/m², (2001, *= average value)	1420 € W*, 1120 € E*	1,260 €/m²*	1,300-2,600 €/m²	1,850-2,450 €/m²

In Germany, average prices amounted to 166.000 € for new single homes (1,240 €/m²) and to 94,500 € (1,195 €/m²) for a condominium in 2000. Except for regions with a surplus of building land, prices for housing stock are usually lower than prices for new

buildings. Due to expensive building land and a lack of single homes, Berlin property prices have been the highest in Germany for decades. While single home values range from 2100 €/m² up to 5000 €/m², condominium prices range from 1,300 to more than 3000 €/m² (HVB Expertise Berlin 2002, p. 18). For instance, new condominiums of 133 m² in the popular Berlin district of Charlottenburg cost about 400.000 €, a luxurious same-sized condominium in Kleinmachnow costs about 250,000 € and a comparable house about 300,000 € (offer at www.immobilienscout 24.de). Usual prices for new condominiums in Kleinmachnow range from 2,000 to 3,000 €/m², while prices for homes range from 1,500 to 2,500 €/m².

Rental housing costs in Berlin and Kleinmachnow

Table 2-13: Rental-housing costs

	Germany	**Branden-burg**	**Berlin**	**Kleinmach-now**
Average rents (*2000*)	East 5.04 €/m² / West 5.71 €/m²	5.90 €/m²	East 3.65 €/m² / West 4.18 €/m²	7.20 €/m²
Range of rents per m² (2001, *= average value)	4.28 €/m²	4.79 €/m² - 12.54€/m²	2,47 €/m² - 8,71 €/m²	4 €/m² - 8,60 €/m²
Average social housing rent in €/m² (2000)	-	-	2.80 – 3.50 €/m²	5,00-8,00 €/m²
Average rent on the free market in €/m² (* = 2000, **= 2002)	5.56 €/m²*	4.70 €/m²*	East 3.65 €/m²* / West 4.18 €/m²*	7.75 €/m²**
Portion of rent in relation to income	20.0 %	22.0 %	21.6 %	n.a.
Portion of operating costs in relation to income	10.0%	11.0 %	10.8 %	n.a.
Portion of housing costs in relation to income	30.0 %	33.0 %	32.4 %	n.a.

In average, tenants have to spend about a third of their household income on housing related costs. The rent in social housing estates depends on the age and the duration of the according subsidy contract. Starting at about 2,50 €/m² and risen by annually 0,25 €/m², rents in social housing premises usually amount to free market prices after 10 or 30 years. Recent subsidy contracts already start at about 4,00 to 6,00 €/m².

Regarding rental housing in Germany, total housing costs of an average of 6.7 €/m² compose of the rent (4 €/m²) plus additional costs (1 €/m²), costs for electricity (0.7 €/m²) as well as for warm water and heating (1 €/m²). In Germany, the gross, so-called “cold rent” composes of the rent and operating costs for e.g. waste disposal, lifts or gardening, whereas the so-called “warm rent” also includes costs for warm water and heating. The tenant individually pays electricity. The following figure illustrates according proportions of housing costs:

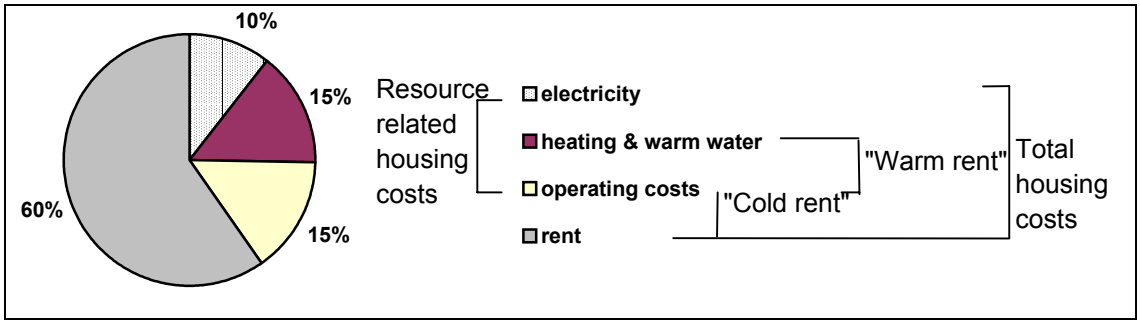


Figure 2-7 Composition of rental housing costs

In Berlin, the rent review varies from 2,47 €/m² for very basic apartments in stock buildings (construction before 1948) and simple locations to 8,71 €/m² for newly build, exclusive apartments at good locations. The same rates span from 4 €/m² to 8,60 €/m² in Kleinmachnow (HVB Expertise Kleinmachnow 2002), although some rents in particularly small apartments (of 15 to 30 m² space) amount to 12 €/m^2. These high prices are a result of a lack of rental housing in stock buildings in Kleinmachnow.

According to the German Federal Operating Cost Ordinance and the II. Ordinance of Calculation, landlords can transfer some positions of the operating costs to the tenant. Although this act relates to social housing, it is commonly applied on all rental housing. The following list presents the positions of the operating costs that are paid by the tenants as average monthly costs per m² (BBU 2002, S. 56):

- Public charges (Land tax) = 0.032 €/m²
- Water (Without gardening and building cleaning) = 0.233 €/m²
- Sewage (Without gardening and building cleaning) = 0.267 €/m²
- Heating = 0.555 €/m²
- Warm water = 0.186 €/m²
- Lift = 0.221 €/m²
- Street cleaning = 0.036 €/m²
- Waste disposal = 0.198 €/m²
- Building cleaning = 0.246 €/m²
- Gardening (playgrounds etc.) = 0.086 €/m²
- Lighting (staircase, surroundings etc.) 0.032 €/m²
- Chimney-sweeping 0 0.052 €/m²
- Insurances (Building and liability insurances) = 0.067 €/m²
- Janitor = 0.196 €/m²
- TV (Basic charge per dwelling unit) = 0.047 €/m²
- Snow and ice removal = 0.030 €/m²
- Miscellaneous (common facilities such as sauna or swimming-pool) = 0.021 €/m²

All positions amount to a total of 2.65 €/m² per month. The monthly payment of the operating costs is based on the previous annual calculation. At the end of every year, the proprietor has to adapt the operating costs to the real expenses and must present this calculation to the tenant in detail. All positions of the operating costs except of heating

and warm water form the so-called “cold operating costs” whereas the total is named “warm operating costs”. Electricity consumption and costs for ICT are principally paid individually and are therefore not included in the operating costs. In Germany, warm and cold operating costs depend strongly on regional conditions (e.g. taxes, suppliers). They usually amount to about 50 % of the rent and span from 0.48 to 2.60 €/m² in Berlin and Brandenburg.

In general, the house community shares the total “cold operating costs” according to the occupied room of each apartment. In case of special agreements, that have to be fixed in the tenancy contract, some positions (e.g. waste disposal, water provision, sewage) can also be calculated individually. Heating and warm water is commonly calculated by an individual and a common share. The individual share is measured by individual meters and generally accounts for 50 – 70 %. Although the essential part of the positions of the operating costs is related to the occupied room and therefore standardised within the house community, the mandatory (heating and warm water) and commonly (water and sewage) individually charged positions create the highest costs. Therefore, the final sum of the operating costs can be influenced by the tenant’s behaviour.

2.2.3 Energy and resource consumption for housing

The provision of environmental-friendly home services is connected to the use of final energy for housing. In Germany, the total residential final energy consumption per household amounted to 128.3 million t.c.e. or 3,720.7 PJ in 2001 (44.8 GJ per capita), subdivided into the following shares (VDEW 2002):

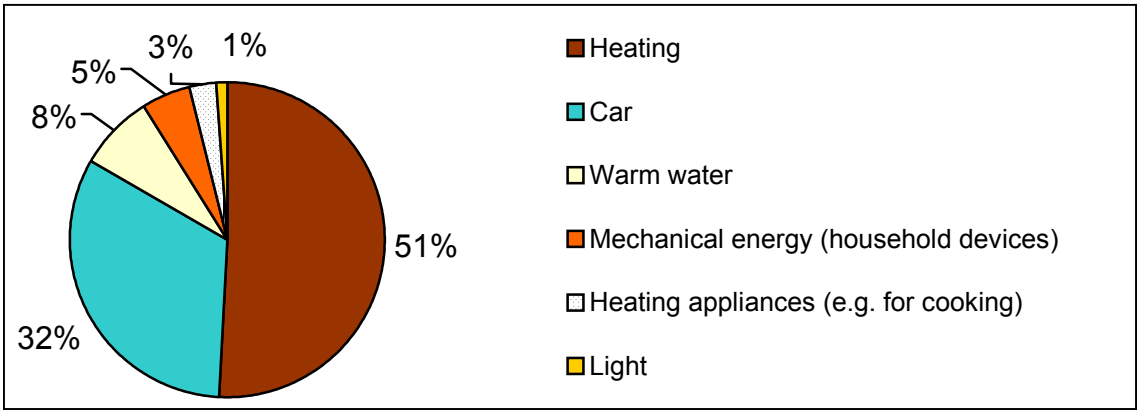


Figure 2-8: Residential final energy consumption per household

As this figure shows, more than 90 % of the residential final energy is consumed for heating, warm water and car use. Water consumption and waste production furthermore give a hint on resource sensitive consumption fields that potentially can be influenced by sustainable home service provision. As resource and energy costs are an important determinant for consumption patterns, we also analysed the pricing structures in the German housing market. The following table presents relevant resource and energy costs according to the average consumption:

Table 2-14: Overview on resource consumption and resource related housing costs

	Germany	Branden-burg	Berlin	Klein-machnow
Average occupied room per resident, in m² (2001)	39.3	34.5	36.4	42.9
Average daily costs for heating per capita (2001, average costs of 0.019 €/m², Mietermagazin 2003)	**0.73 €**	**0.66 €**	**0.69 €**	**0.82**
Daily water consumption per capita per day (2001)	128 l	80 l[6]	124 l	114 l
Water charge (consumption/ annual basic charge, 2001)	1.71 €/m³ incl.	1.71€/m³ incl.	1.76 €/m³ incl.	1.32 €/m³/ 64 €
Sewage charge (consumption/ annual basic charge, 2001)	2.18 €/m³ incl.	3.3 €/m³ incl.	3.21 €/m³ incl.	3.12 €/m³/ 92 €
Average daily costs for water and sewage per capita (2001)	**0.49 €**	**0.40 €**	**0.62 €**	**0.93 €**
Daily electricity consumption per capita (2001)	3,7 kWh	3,7 kWh	3.9 kWh	~ 3.7 kWh
Electricity charges for private customers (consumption/ annual basic charge)	0,16 €/kWh / 64 €	0,16 €/kWh / 64 €	0,16 €/kWh / 64 €	0,17 €/kWh 73,10 €
Average daily costs for electricity per capita (2001)	**0.76 €**	**0.77 €**	**0.80 €**	**0.83 €**
Annual household waste in kg per capita (2001)	330 kg	254 kg	318 kg	225 kg
Waste (price per l/ annual basic charge per capita)	~ 0.74 €/l incl.	~ 0.74 €/l incl.	~ 0.74 €/ incl.	0,32 € /m³/ 26,10 €
Average daily costs for waste per capita (2001) , average weight per l = 2,63 kg (Landkreis Landsberg 2001)	**0.25 €**	**0.20 €**	**0.25 €**	**0.14 €**
Total daily resource and energy related housing costs per capita (2001)	**2.23 €**	**2.03 €**	**2.36 €**	**2.72 €**

Single home proprietors individually pay all resource related costs. Regarding tenancies and condominiums, two thirds of the resource related housing costs are individually paid and one third is paid as a house community share:

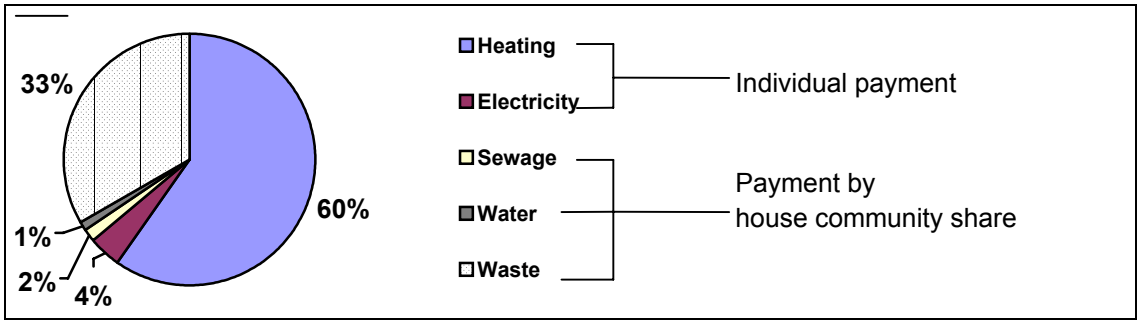


Figure 2-9 Composition of resource related housing costs in Germany in 2001

Costs for heating and warm water account for nearly two thirds of the total resource related housing costs. Although in comparison to the German, Brandenburg and

[6] According to the Brandenburg Ministry of Agriculture, Environmental Protection and Regional Planning.

Kleinmachnow average, residents in the urban area of Berlin pay more for most resources, they only spend half of the costs for heating, which can be explained by the dense building structures in Berlin. While costs for water and sewage are basically the same in the German, Brandenburg and Berlin average, they are twice as high in Kleinmachnow because of a high annual basic charge. Finally, the average costs for waste and electricity are more or less the same throughout Germany, although different regional average waste amounts result in different daily costs for waste disposal.

Regardless of rental or owner-occupied housing, there is a direct link between energy and resource consumption patterns of private households and the individual housing costs. Consequently, cost-cutting measures are a key incentive for reducing resource and energy consumption of private households. In order to detect potentials for environmentally sustainable home services, we therefore analysed consumption patterns (heating, electricity water and sewage, waste, mobility) as well as according price structures in Berlin and Kleinmachnow.

Resource consumption and costs for heating

About 80 % of the residential primary energy consumption is used for heating and warm water. In this context, environmental impacts depend strongly on the used heating material as well as on the total energy amount. In 1998, the German average energy consumption for heating was 195 kWh/m², but on a wide span between low-energy-buildings (70 kWh/m²) and insufficiently insulated stock (270 kWh/m²).

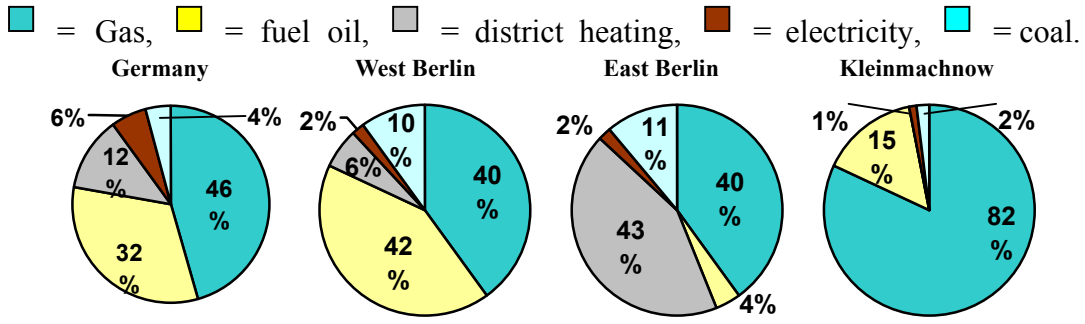


Figure 2-10: Heating forms in Germany, Berlin and Kleinmachnow

The choice of the according heating material is connected to the building type and the region. Whereas the environmental friendly district heating is only available in certain urban districts with a high population density, gas and fuel heating is preferred in detached housing settlements. Moreover, electricity heating was installed nationwide in West Germany during the 1970's. Therefore, with few exceptions, only buildings with original heating facilities from that period are still heated with electricity. Apart from

that, heating with coal was quite prevalent in the GDR. So in East Germany, there are still some coal-heated apartments that have not been modernised after the Reunification.

Presently, nearly half of the total dwellings are individually or centrally heated by gas in all German regions. It is by far the most used heating material for new buildings. Consequently, gas is the dominant heating material in East Germany, as nearly all buildings were refitted with new heating facilities after the Reunification. As Kleinmachnow is furthermore dominated by detached housing, the proportion on gas heated dwellings amounts to 82 %. Moreover, after the reunification, a new gas company widely developed the pipeline network in Kleinmachnow. So gas heating became the most popular heating form in the New States because of low prices and the necessity of exchanging former heating forms to reach a high comfort level. Used for a third of the households, fuel oil has a high importance as well, especially in West Berlin. Due to the high proportion of detached houses, fuel oil is also considerably important in Kleinmachnow and used by 15 % of the households.

Whereas environmental friendly district heating is used by 12 % of the German households, it has an extraordinary importance for East Berlin, as it was the main heating form in many socialist countries. Electrical heating is quite unimportant for the Berlin and Kleinmachnow heating market.

Coal is still used by approximately 10 % (up to 50% of the stock in East Berlin districts in 2003) of the Berlin households but diminishes continually because of comfort and environmental reasons (Berlin Senate 2003, Wärmeindex). In Kleinmachnow, only dwellings with undefined land tenures are still heated by coal.

Due to the dense building structure and accordingly low consumption rates for heating, Berlin residents pay only half of the average heating costs in comparison to the German or the Brandenburg average. In Berlin, the former municipal company “Bewag” provides district and electric heating, whereas the provision of gas is in charge of gas provider “Gasag”. Consequently, both companies cover roughly two thirds of the Berlin heating market. In Kleinmachnow, the company „Erdgas Mark Brandenburg GmbH“ is in charge of gas supply and consequently provides gas to more than 80 % of the households.

The following table illustrates providers of heating material and the composition of heating costs in Berlin and Kleinmachnow (according to provider information):

Table 2-15: Costs for heating in Berlin and Kleinmachnow in 2001

Material	City	Provider	Basic monthly charge	Consumption charge per kWh
Gas	Berlin	Gasag	3.50 €	0.57 €/kWh
	Kleinmachnow	Erdgas Mark Brandenburg	2.22 €	0.58 €/kWh
Fuel oil	Berlin	Private suppliers (e.g. Final Elf)	0.60 €	
	Kleinmachnow			
District heating	Berlin	Bewag	0.60 €	
	Kleinmachnow	/		
Electricity	Berlin	Bewag (main supplier)	4.59 € (nuclear power), 5.90 € (eco-power)	0.18 € (n.p.), 0.16 € (e.p.)
	Kleinmachnow	E.dis Energie Nord AG	4.60 €	0.18 €
Coal	Berlin	Private suppliers (e.g. RWE Rheinbraun)	0.05 €[7]	
	Kleinmachnow			

As nearly heating causes two thirds of the total operating costs, any measure to reduce energy consumption for heating will considerably reduce both primary energy consumption as well as housing costs. Accordingly, most federal or state subsidies for housing concentrate on promoting energy-efficient heating facilities or building insulation.

Water consumption and costs

German households consumed 128 l water daily per capita in 2001, which is 6 l less than in 1993 and the same as 25 years ago (Bundesverband Gas und Wasser 2003). Hence, there are big differences between the Old German States (136 l) and the New German States (93 l). In Germany, costs for supply and disposal of water are calculated by an annual basic charge and a charge according to consumption. In 2001, water was charged by 1.71 €/m³ inclusive basic charge and value added tax (Bundesverband Gas und Wasser 2003).

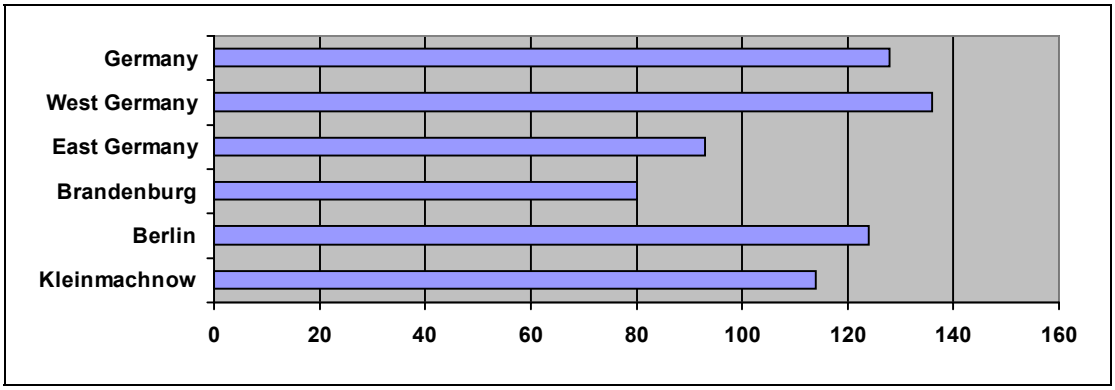


Figure 2-11: Daily household water consumption per capita (in l, 2000)

[7] Based on a 25 kg package of brown coal briquettes with a heat value of 5.5 kWh/kg for 6.60 €.

In Germany, costs for water and sewage have a proportion of about 3 % of the total resource and energy related housing costs. Whereas in other European countries, water prices are subsidized (e.g. up to 70 % in Italy) German households have to pay an extra charge, the so-called water withdrawal charge. This charge is extremely high in Berlin (17 % of the total costs in comparison to e.g. a proportion of 0,7 % in Saxony) and results in a price of 4.96 €/m³ in total for water and sewage in 2001. Since 2000, the sewage charge is moreover divided into a charge for actual household sewage and a charge for rainfall water that is calculated by the sealed land on the premises. In Berlin, the former municipal water supplier "Berlin Waterworks" was partly privatised in 1999 and integrated in the Berlinwasser Holding Inc. that cares for the capitals water supply ever since (http://www.berlinwasser.de/). The State of Berlin still possesses 50.1 % of the incorporation. The average daily consumption amounted to 124 l in Berlin in 2001 which was about 12 % less than ten years ago (140 l in 1991).

In Kleinmachnow, the water and sewage association „Der Teltow" is responsible for water and sewage management. 99.4 % of the households are connected to the public water infrastructure and 93.8 % of them to the sewerage. The total water consumption amounted to 716,925 m³ and 630,606 m³ for sewage in 2002 (the difference of 79,000 m² was used for gardening). From this follows an annual consumption of 41.8 m³ per capita, respectively a daily consumption of 114.4 l, which is less than the German average, but more than the average of the New States. In Kleinmachnow, the basic charge for water is 64 € and 92 € for sewage, while the consumption is charged by 4,44 €/m³ for water and sewage (according to company information). The water withdrawal charge has a proportion of 6.5 % of the total water costs in Brandenburg.

In summary, costs for water only amount to a small proportion of the total housing costs, but there are still considerable ranges for economy for each resident: If e.g. West German households reduce their water consumption on the East German level, this would result in savings of about 80 € a year. As in Berlin, the rainfall charge accounts for a quarter of the total water charge, unsealing ground can also reduce housing costs to a certain degree. In addition, water costs strongly increased by 17 % from 2001 to 2005, so technical facilities or services that aim at reducing water consumption will gain importance in future.

Electricity consumption and costs

The German electricity market was liberalised in 1998. Only 4 % of the households changed their former municipal supplier, but the liberalisation also enabled a quarter of the customers to change their conditions within their existent contract (Meller 2002, p. 3). Even though some small companies serve mostly niche markets e.g. solar or wind craft electricity, the market is dominated by former municipal suppliers, which merged to four large national companies that serve nearly three quarter of the whole electricity market. In Berlin, the former municipal supplier Bewag provides still 1.8 million households with electricity and therefore nearly every Berlin household in 2001.

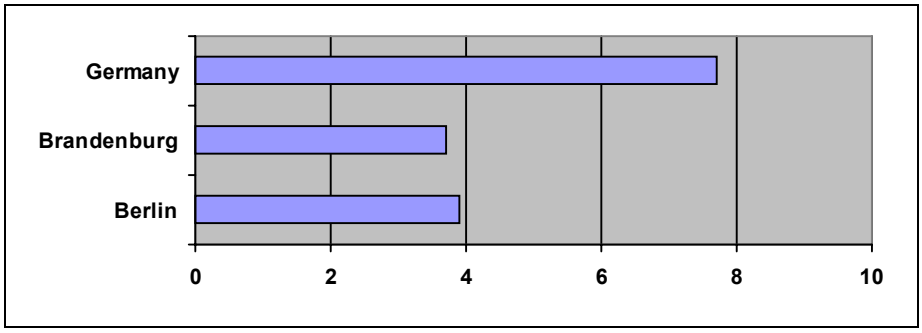


Figure 2-12: Daily household electricity consumption per capita (in kWh, 2001)

The annual German average electricity consumption amounted to 2,800 kWh per household in 2000, while electrical heating and heating water caused 26 % (Enquête-Kommission 2002, p. 174; Statistisches Bundesamt 2001, p. 63). Private households in Brandenburg and Berlin consumed only half of the German average.

Charges for electricity form a quarter of all costs additional to the rent respectively 10 % of the total housing costs. These high costs for electricity result from price rises due to the market liberalisation as well as rising electricity consumption because of new household devices. However, there are still many avenues of action to reduce electricity consumption, e.g. new energy efficient devices, changed behaviour etc. The main electricity supplier of Kleinmachnow, the E.dis Energie Nord AG, charges electricity consumption for a standard contract by 0,16 €/kWh (plus 64 € for the annual basic charge) and therefore exactly the same as the Bewag in Berlin.

Waste production and disposal costs

Household waste amounted to 36 million t in Germany in 2001, thereof 20 million t are disposed by recycling containers (13 million t), by compost (4 million t) and by removal services for bulky items (3 million t). Consequently, households are only directly charged for 16 million tons of waste, which is only 44 % of the total household waste amount.

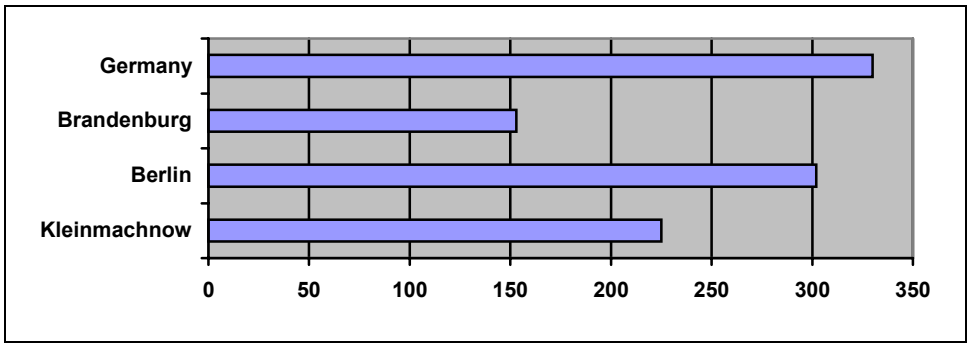


Figure 2-13: Annual household waste per capita (in kg, 2001)

In Berlin, the municipal company BSR (Berlin City Cleaners) manages the capital's waste disposal. In 2001, the total household waste amounted to 302 kg per capita, which is about

20 kg less than the German average. Kleinmachnow households produced 225 kg of waste in 2001, which is only a third of the German average (Landesumweltamt Brandenburg 2003). In Kleinmachnow, the rural district of Potsdam-Mittelmark is responsible for waste disposal and hence founded the APM Niemegk Company to fulfil their needs. The APM Niemegk charges for waste disposal an annual basic charge of 27.84 € and a consumption charge of 32.50 € /m³ (= 2.60 € for a dustbin of 80 l) per empty.

Charges for waste disposal amount to about 7.5 % of all operating costs. In Berlin, the consumption charge for waste disposal is about 6.9 €/m³ per empty (BSR Tarifpreise 2001). In Kleinmachnow, residents are charged 26,10 € for an annual basic charge and 31,50 € /m³ for the actual waste quantity.

Mobility patterns and infrastructure

Individual transport is one of the most determinant factors for emission nuisance in Western countries. In Germany, car mobility is responsible for about a third of the total residential primary energy consumption. Therefore, services providing alternatives for individual car transport such as car sharing or delivery services can have a considerable impact on the environment. In order to detect according demands for mobility services, we therefore analysed local mobility patterns in the case studies.

Table 2-16: Data on mobility patterns

	Germany	Branden-burg	Berlin	Kleinmach-now
Cars per 1000 inhabitants	517	540	362	n.a.
% of people who live and work in same city	n.a.	46 %	92.5 %	~ 30 %
Daily fluctuation = proportion of people commuting into / out of the city (2001)	-	-	11%/7.5 %	< 30 % />70%
Number of people who commute daily to work Leave city Enter city	24,386,560	799 831 365 083 250 805	304,540 114,910 189,630	~ 12,000
% people who use a car to go to work	64 %	~66 %	46.1 %	~65 %
% people who use the train to go to work	12 %	9 %	0.6 %	~ 0 %
% people who use the bus to go to work			38,2 %	~ 5 %

Although leisure traffic forms the most important position in private transport (a share of 31 % on the total traffic), commuting still amounts to 15 % of the total traffic in Germany (DIW 2002). Commuting patterns predominantly depend on the local transport infrastructure as well as on the regional spatial structures. While for instance employments concentrate in big cities such as Berlin, suburban areas such as Kleinmachnow are generally residential settlements. Consequently, suburban or rural residents are basically more dependent on commuting than urban residents.

Accordingly, 189,630 Berlin jobholders (11 % of relating total employees) commuted into the city, whereas 114,910 (7.5 % of total Berlin employees) commuted from Berlin

to the suburbs in 2001. Both figures show an increasing tendency (Berliner Morgenpost 2002) as on one hand, residents tend to move to the suburbs, while still working in Berlin and on the other hand, some people working in nearby cities such as Potsdam prefer to live in Berlin.

Regarding the transport mean, most of Berlin jobholders (44 %) take their car for going to work, 38 % of them use the public transport. Equally 7 % jobholders take their bike or walk to their work (Statistisches Landesamt Berlin 2001b). Regarding gender specifics, it is remarkable that far more women prefer the public to individual transport. While 55 % of the male employees commute by car and only 30 % use public transport, only a third (36 %) of female jobholders take their car and nearly the half (48 %) use buses and subways when going to work.

Berlin can be regarded as a city adapted to public as well as to individual transport. The broad transport network of buses, tramways, subways and inner city trains (S-Bahn) allows good and fast connections throughout the whole metropolitan area. Equally, big avenues and a central highway system make it easy to transit the city by car. Daily traffic jams as in other capitals such as London, Paris or Rome are rare and concentrated on few traffic junctions. Berlin suburban areas have as well a good connection to either public transport or city highways, which supports present decentralization tendencies. Based on a rough estimation, 70 % of the Kleinmachnow jobholders commute to Berlin as well as to the surrounding cities such as Potsdam or Teltow. As the public transport system does not meet these demands adequately, local mobility is dominantly based on car use.

Due to satisfactory mobility structures in Berlin, political efforts rather concentrate on funding ecological forms of mobility than on logistical improvements. One example is the program “1 000 Environmental Taxis for Berlin” that was launched by the Berlin and the Federal Ministry for Environment in 2000. The initiative provides grants to encourage the purchase of CNG-powered taxis and driving school vehicles. This program also supports the extension of the CNG filling stations network. In addition, several non-governmental organisations and Local Agenda 21 initiatives initiated projects such as “car-free” settlements or the acquisition of companies to provide public transport tickets for their employees.

Efforts of German housing organisations to support environmental friendly mobility behaviour is restricted to few offers such as negotiating discounts on public transport tickets or co-operating with car sharing companies. Due to a lack of demand and a surplus of commercial alternatives, housing organisations state that they can only provide services in the field of mobility when financial and personal expenses are minimised. As most alternative mobility providers such as car sharing companies or bike rentals operate their business on small financial margins, they are usually not able to offer discounts for housing organisations on a big scale. Consequently, main reasons of housing organisations for providing alternative mobility services are rather indirect factors such as the company’s social mission as well as positive public image benefits.

German residents cover an average distance of 44 km daily, which corresponds to total costs of 10.56 € in case of using a car (DIW 2002). In contrast, public transport fares amount to 5.70 € for a day ticket respectively a daily share of a year ticket of 1.52 € in Berlin and Kleinmachnow. So, from the financial perspective, public transport is far more attractive than individual car traffic. This could be an incentive for residents in suburban areas such as Kleinmachnow to use mobility services.

Scopes of reduction of residential resource and energy consumption

With regard to residential resource and energy consumption, important ranges of economy are based on technical measures as well as in the individual consumption behaviour. In this regard, reducing energy consumption for heating is the most important issue of environmental action, as heating causes about 60 % of the total housing costs and the half of the whole residential primary energy consumption of German households. Technical measures can reduce heating costs by up to 70% in total: Insulation of the building's facades can save about 30 %, upper heating value heating and double glazing about 10% each as well as 5 % by insulating roofs or basements (Enquête-Kommission 2002, p. 164). There are many good practice examples for renovations that amounted to a reduction of 50 kWh/m³ annually – which is a quarter of the average energy consumption for housing in Germany. However, these measures are expensive and dependent on the economical situation of the proprietor, which restricts the actors' flexibility. Consequently, technical measures aiming at reducing energy consumption for heating is usually only taken into account in in parallel with an upcoming modernisation.

With regard to energy-efficient buildings, federal authorities mainly determine the duties of the landlords. Concerning energy consumption reduction for heating, housing organisations are strongly affected by the new Act of Energy Saving that came to force in 2002 in Germany. In this act, it is required that new buildings must fulfil the low-energy-building standard and that stock must be adapted to these standards in case of refurbishments. The consequences mainly affect insulation (of basements, roof, plumbing) and the renewal of heating facilities. Unless installed after 1979, heating facilities must therefore be exchanged by 2006, as they are the most important source of energy wasting.

Furthermore, federal authorities financially promote benefits for technical measures in order to reduce resource consumption. The Energy Supply Act (EEG), for example, regulates profits for providers of solar energy who get 0.48 €/kWh by an annual reduction of 5 %. It is intended to produce 350 MW/a of solar energy by that. The „100,000 Roof Programme" also supports resource consumption reduction that guarantees grants at low interests by the KfW –Reconstruction Loan Corporation for investments in photovoltaic facilities or measures to reduce CO_2-emissions (e.g. by improving heating, insulation or windows). The State of Brandenburg supports as well techniques for efficient energy use and consumption by the REN-programme that is reserved to investors that do not obtain federal funds yet. In addition, the Federal

Consumer Counselling and regional tenants' association inform interested residents about energy saving possibilities by Internet, reports, newspapers and events.

In respect of owners' communities, residents have also an influence on decisions regarding costs determined by the condominium association as well as on investments on technical measures to reduce resource consumption. However, tenants can only save costs by a resource friendly behaviour, which can be supported by an individual pricing of consumption. As the most expensive positions of the operating costs (heating and electricity) are generally individually priced, savings up to 70 % are possible e.g. by heating less or using energy-efficient devices.

To provide more opportunity to the tenant in saving resources, the landlord can also install individual meters for water or waste. But this remains still a "favour" of the landlord to the tenants who cannot legally claim such technical measures. Regarding tenancies, there is a dilemma due to the tenants' duty to pay the operating costs and the landlord's duty to invest in technical measures for reducing resource consumption. Only in case of an acknowledged modernisation, the landlord can annually transfer 11 % of the costs e.g. for installing central heating on the tenant. However, most resource reducing measures such as insulation, new windows, chip-cards for waste separation or individual water meters, are not acknowledged as a modernisation measure and therefore always in charged to the landlord.

Regarding gas and district heating, German residents are dependent on the local public supplier, while they have a choice between local suppliers of physical heating materials such as coal or oil. Apart from the local pricing of heating materials, there are many opportunities to save energy consumption by changing the individual's heating behaviour. The Development Association Holz, for example, reports a reduction of 25 % by heating a room only on 20° C instead of 22° C (GRE Inform 1997, p. 83), whereas other studies assume a reduction of 6% per 1° C (Taurus 1999, p. 20). Although values differ in different studies, a mere reduction of 6 % would result in an annual amount of about 66 € (average consumption = 195 kWh/m², average occupied room for a household = about 80 m²). Further energy-saving behaviour, such as turning off the heating in unused rooms or while airing, also have a big influence on the actual operating costs.

Regarding water consumption, there are 6,500 public suppliers of water and sewage possessing roughly 18,000 waterworks (Wasser-Info-Team Bayern 2001) and 10,000 sewage-works (Lohaus 2002, p. 1). So there is a supply of 88 water suppliers for 1,000 inhabitants – a rate that is, for instance, nearly 20 times higher as in the Netherlands (4.4 suppliers per 1,000 inhabitants). Although this indicates quite differentiated structures, increasing market concentrations force big companies such as Berlinwassser in Berlin or Gelsenwasser and RWE in the Ruhrgebiet to assume control over the water supply for whole regions. On one hand, there are several advantages of the non-competitive German water and sewage market, such as a high drink water quality, a dense network and few losses because of damaged infrastructure. On the other hand, the monopolistic

structure also affects high costs for the consumer. As stated before, the Old German States consumes 42 l more water than the New German States. Assuming an average water price of 1.71 €/m³ (including basic charge and value added tax), a reduction on the level of the New States would result in savings up to 28 € - which is about a third of the total costs. The expenses for households without an extra cold water meter is about 37 € higher than in households with a regular warm water meter (Informationen für Wohnungseigentümer 2003).

Since April 1998, the electricity market is competively open, which allows residents to choose between several national, regional and local suppliers. The average electricity consumption was 2,800 kWh per household in 2000. As electrical heating is included in this rate and household equipment differs a lot, it is hard to detect realistic values. A study of the German UBA – Umweltbundesamt (Federal Environmental Agency) revealed potential savings of 1,343 kWh by exchanging usual household devices to new eco-efficient ones (cited by Enquête-Kommission2002, p. 174). At an average price of 0.16 €/kWh, people could save up to 215 € annually, although this is compensated partially by investments in new eco-efficient equipment. Moreover, residents can further reduce their electricity consumption by adapting energy-saving behaviour such as avoiding stand-by of devices or switching of light, if it's not needed.

In Germany, waste management (including organisation, pricing and ultimate disposal) is obliged to the municipalities that often contract private companies for waste transport. So there is no competition at all that could support a price reduction for waste disposal. Priced by volume, reducing waste can result in relevant savings.

Although individual mobility accounts for a third of household end energy consumption, transport related services leave only a minor margin for energy savings. This is mainly due to the fact that mobility patterns strongly relate to individual favours that are hard to change by service offers. However, good public transport infrastructure is certainly an incentive for residents to abstain from car use.

2.3 Summary: Local conditions for sustainable home service provision

Sustainable home service provision is determined by the local conditions in the housing market as well as by the socio-economic framework in terms of incentives and obstacles for customer demands. Energy and resource consumption patterns moreover give a hint on potential contributions to environmental goals of sustainable development.

Conditions in the housing market

The local conditions in the housing market depend on the local building structure and occupancy, the regulation of rents and property prices as well as on the local actors on the housing market. Building structures and occupancies define the local population density and the prevalent residential status that are relevant for determining according customer groups. In this context, it is important to divide between multi-dwelling buildings and detached houses as well as between rental and owner-occupied housing.

The national regulation of rents and propriety prices moreover give a hint on scopes of action for housing organisations as home service providers, as the residents' financial resources as well as spatial concentrations of social housing, free market rental housing and propriety dominated companies are determined by the federal subsidy system. As a consequence from the fast urban reconstruction after World War II dominated by local authorities, social housing has a high importance in Germany. In this context, federal, state or local authorities' subventions to support people with low income (subject level, housing aid) must be distinguished from building activities for social housing (object level). Regarding subsidies on the object level, investors are legally bound to agreements with the subsidies disposer. Subsidies on the subject level are paid by the federal ministries and determined by household size and income as well as the according rent.

Regarding relevant actors on the housing market, one can distinguish four different actor groups in the German housing market. The first group of actors are federal, state and local authorities that set the framework of social housing by financing programs, housing providers and residents with low income. Regarding eco-efficient housing facilities, public authorities moreover set the framework for investments in according building facilities. The second actor group segments in social housing organisations and private individuals or companies that focus on the profit-orientated housing market. Most important actors in this field are social housing companies, housing foundations and cooperatives for the social housing market as well as profit-orientated housing companies and private individuals for the free market. Different associations for housing organisations, tenants and proprietors that safeguard interests of owners and users of premises form the third actor group. The fourth group of actors on the housing sector can be described as intermediates that are particularly important for (future) proprietors as they mainly manage all activities from financing to building and purchasing premises. These four actor groups present the most important potential home service providers in Germany.

Socio-economic framework

The local socio-economic framework is important for detecting driving forces that incite landlords, commercial, non-commercial or public providers to offer home services for residents. With regard to social services, particularly disintegrative or demographic tendencies as well as deficiencies in the social infrastructure raise demands for care and leisure time services. Furthermore, the composition of housing costs sets the scope for investments in eco-efficient building facilities as well as for environmental-friendly consumption behaviour that directly effects resource related housing costs.

Social problems such as isolation and disintegration can be alleviated by community services, leisure time activities, urban renewal activities or care and supervision services. In this context, social isolation and tensions raise a demand for integrative activities. They are actually the main reasons for housing organisations to provide community services, leisure time activities, urban renewal activities or care and supervision services. In

Germany, these community services are mainly implemented in so-called "neighbourhoods with special development needs" in order to prevent vandalism, vacancy and fluctuation. Equally, inadequate housing conditions raise a demand for services that upvalue local infrastructure deficiencies such as neighbourhood meeting centres.

Resource and energy consumption

Rental housing costs consist to 60 % of the rent and to 40 % of operating costs. As environmental-friendly home services help to reduce residential resource and energy consumption, they present an important incentive for residents to reduce related housing cost.

Whereas some housing costs are fixed by the municipalities (chimney-sweeping, street cleaning, ground tax) or the housing organisation (house cleaning, gardening, house lighting, insurances, lift maintaining, administration) there are important variations in pricing individual resource consumption by technical measures (water meters, chip-cards for waste disposal) as well as by changing individual behaviour regarding water use, heating behaviour, electricity consumption and waste production. In this context, reducing energy consumption for heating is the most important issue of environmental reforms as heating causes about half of the total household energy consumption in Germany and can be reduced up to 70% by technical measures. With regard to energy-efficient buildings, federal authorities mainly determine the scope of action of the landlords by subsidy programs that aim at promoting insulation measures and the installation of new energy-efficient heating facilities. Apart from heating habits that can reduce heating costs by at least 66 € annually, environmental-friendly housing behaviour can considerably reduce costs for warm water and electricity that each account for 9 % of the total residential final energy consumption.

Although traffic is the prime cause of energy consumption and environmental pollution and cause a third of the total residential final energy consumption, transport services are not yet relevant for housing organisations in urban areas. Urban housing organisations reason that providing mobility services is considerably laborious and costly. Potentials for mobility services rather arise in owner dominated settlements such as Kleinmachnow, as residents living in suburban areas could have a certain demand for services related to commuting (teleworking offices, car pools etc.).

Conclusion: Conditions for sustainable home services in Berlin and Kleinmachnow

Berlin is a tenants city with a dense building structure as about 90 % of the dwelling is situated in multi-dwelling buildings. Furthermore, social housing has a big influence in the housing market: the municipality owns nearly a quarter of all dwellings and another 10 % is owned by cooperatives. Still, about 40 % of the Berlin dwellings is owned by private individuals or companies, while another quarter are owner-occupied condominiums or single homes. These characteristics of the housing situation in Berlin represents comparatively good conditions for a home service provision, as a high

population density secures a critical mass of potential customers and the dominating social housing companies have a considerable interest in home service provision. Furthermore, the surplus of rental housing and high vacancy rates lead to a competitive pressure, with the consequence that the Berlin rental market is undergoing a change from a providers' market to a customers' market. This incites housing companies to improve their service performance in order to gain marketing benefits. These good conditions for a home service provision is actually reflected in a varied home service supply offered by social housing companies and cooperatives.

Alternatively, Kleinmachnow is dominated by owner-occupancy and detached houses. Nearly 85% of the proprietors are private individuals, so most important actors for home service provision are real estate managers and building promoters that concentrate on the sale of property. However, these actors are hardly interested in a long-term provision of home services, but rather concentrate on initial services such as counselling on eco-efficient building facilities. Moreover, the only social housing company in Kleinmachnow benefits from serving exclusively the high demands for rental housing. Therefore, this company is not particularly interested in upvaluing its housing offer with home services. Since the housing situation in Kleinmachnow consequently represents comparatively disadvantageous conditions for a home service provision, there is a need to develop new models of home service provision for private single customers living in owner-occupied dwellings. There is indeed no relevant home service offer in Kleinmachnow. Still, the lack of jobs causes a high daily fluctuation that could raise demands for mobility services.

3 Sustainable home service providers

As sustainable home services are defined as overlap between home services and sustainable services, it is important to elaborate both the potential of home services to become more sustainable and the potential of sustainable service to become home services. Therefore, we analysed the home service offer of housing organisations (see chapter 3.1) as well as the existing sustainable service offer of public service providers, NGOs and commercial service providers (see chapter 3.2) that potentially can be offered as home services. Subsequently, we separately analysed common institutional arrangements for sustainable home service provision (see chapter 3.3) in order to obtain information on how to provide sustainable home services.

3.1 The housing organisation as home service provider

Managing nearly half of the total dwellings, housing companies and cooperatives are by far the most important actors regarding the provision of home services in Germany. Moreover, they are also actively interested in providing home services in order to complement their housing offer. Other actors in the housing market such as individual proprietors show no demand for home service provision yet. Therefore, we analysed all service related activities of housing companies and cooperatives in order to portray the home service market in Germany. The service activities of housing organisations can be distinguished by core (cp. chapter 3.1.1, pp. 61), mandatory (cp. chapter 3.1.1, pp.61) and complementary service activities (cp. chapter 3.1.3, pp. 62):

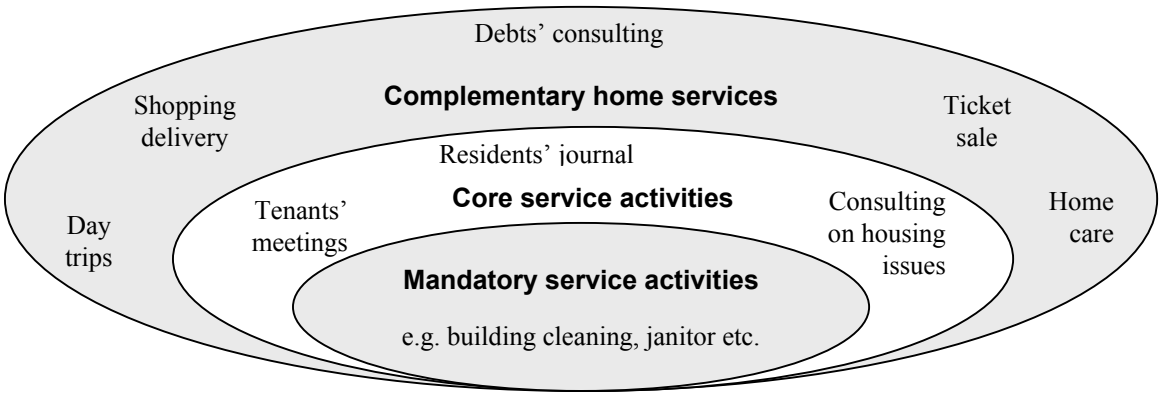


Figure 3-1: Complementary home services

Although only complementary service activities are commonly regarded as home services by housing organisations, it is still important to present all service activities, as boundaries are often indistinct. Finally, we present results from two actor group workshops that aimed at detecting the housing organisations objectives for home service provision (cp. chapter 3.1.4, pp. 64).

3.1.1 Mandatory service activities of housing organisations

German housing organisations are required by law to supply certain service activities such as securing a transparency on housing costs, maintaining apartments and housing environments, guaranteeing security in cases of emergency and providing playgrounds as well as parking facilities for cars, bikes and strollers.

The German Building Law requires one parking lot for each apartment. It is as well mandatory to build a playground for small children for buildings with two to five apartments (at least 30 m²) and a playground plus recreation space (at least 150 m²) for buildings with more than five apartments. Landlords are also required to create either indoor or outdoor storage facilities for bikes and strollers.

Furthermore, housing organisations must provide any information on additional housing costs to their tenants. Therefore, it is required to install cold water meters and separate water meters for watering green space to individually account water consumption. Moreover, landlords have to prevent danger in emergency cases by e.g. installing evacuation plans and fire alarm in big building complexes. They are as well required to provide emergency calls in lifts and a contact for emergencies, usually the telephone number of the local janitor. Apart from that, landlords are in duty to maintain all building and apartment facilities, including maintenance of heating, water supply and electricity, gardening, building and chimney cleaning. Although not mandatory, it is common to employ a janitor or building caretaker. In addition, condominium associations and cooperatives must organize regular residents' meetings.

Finally, German housing organisations do not regard mandatory offers as services but as a common requirement to fulfil. While owners' associations usually only fulfil their requirements, public and private housing companies and especially cooperatives expand their duties by providing services that fulfil additional residents' needs.

3.1.2 Core business related service activities of housing organisations

German housing organisations consider equipment, maintenance and renting of physical facilities as their central core activity. This includes special equipment of apartments or surroundings as well as technical installations such as video surveillance or the supply of cable TV and Internet. Common additional features for apartments are extraordinary applications adapted to handicapped or elderly, whereas common additional environmental features are sports facilities, tenants' gardens and common rooms in the neighbourhood. Moreover, the management of energy supply has become an important core activity of housing companies during the last decades. Therefore, many landlords expanded the use of renewable energy and the installation of energy-saving measures such as sophisticated facade insulation or water-saving applications. Apart from that, housing organisations regard marketing and communication strategies as a core activity, e.g. a tenants newspaper, residents' get-togethers or information on the company's homepage.

In general, housing organisations prefer to offer services that are connected to their core business in order to profit from internal resources and knowledge. Moreover, investments in physical environment such as tenants' gardens or sports facilities are profitable on a long term and upvalue the local housing stock. A good example of an additional core activity is a coordinated repair services, realised by contracting a local firm and outsourcing arrangements to the tenant. Tenants profit from this service by a direct contact to the repair firm, while the housing company gains personal resources by abolishing an intermediation between tenant and service provider that simplifies the workflow.

3.1.3 Complementary service activities of housing organisations

While mandatory or core service activities are regarded as usual part of the business, German housing organisations generally consider complementary activities as home services. Complementary home services span from social services such as consulting or organisation of neighbourhood renewal activities to technical services like renovation services or removal support. As home services have constantly gained importance for housing companies over the last years, there are plenty of projects to explore new fields such as services for elderly, ecological modernisation or multimedia appliances.

Regarding complementary service activities of housing organisations, the scope of action is concentrated on the service dimension in this paper, although most services are more or less connected to materials such as products, technical installations or rooms. In Germany, home service providers concentrate on following service fields (own composition):

Table 3-1: Complementary service activities of housing organisations

Field of action	Material related services	Personal services
Information & communication services	Internet based services, residents television, residents newspaper etc.	Debts consulting, consulting on loans and subsidies, intermediation of insurances etc
Technical building services	Tool rental, water saving facilities, guest apartments etc.	Renovation service etc.
Security services	Renting alarm facilities, installation of emergency facilities etc.	Concierges, watch guards etc.
Household services	Repair and maintenance services, rental of household devices etc.	Cleaning services, Removal services etc.
Social and health services		Care and support of residents with special needs (children, youth, seniors etc.)
Transport and delivery services	Car sharing, bike rental etc.	Meals on wheels, shopping delivery, medication delivery etc
Leisure time services	Sauna, sports room, toys and sports equipment rental etc.	Day trips, ticket sale, hobby workshops etc.

Information and communication services are additional service activities to general performances such as the provision of Internet access or information on housing costs. They are generally based on consulting on housing related issues. While financial and

personal investments are considerable, consulting services can have important effects on the housing company's marketing aims and goals. Therefore, most housing companies have expanded their service portfolio by consulting services on financial, environmental or social issues in order to support a public image as service provider.

Technical building services deal with all issues that complement the individual apartments' features. In this context, rental guest rooms for example enable residents with small apartments to accommodate guests. Moreover, the installation of additional apartment facilities (e.g. water saving fittings) or renovation services help to improve the according living situation.

Security services consist in all service activities that contribute to an increased feeling of safety. Whereas technical installations such as burglary prevention devices rather relate to the apartments security, personal security services like concierges or watch guards refer to a secure feeling in the building's environment.

Provision, maintenance and repair of household devices and household care services (like cooking, shopping or cleaning) represent typical household services. These services on the one hand address people with special needs such as handicapped or elderly. On the other hand, household services relate to residents for comfort reasons, as services such as a removal or a cleaning service help to relieve the resident of uneasy activities.

Complementary services offered by housing organisations were furthermore established to respond on social tendencies such as increasing social disparities or the ageing of society. As particularly social housing companies face concentrations of old, poor and foreign residents in their stock, they started several initiatives to support integrative activities in neighbourhoods. Apart from participating in integrated neighbourhood renewal strategies, social housing companies often establish services exclusively for their tenants.

Social and health home services provided by housing organisations range from common care services for elderly, children and youth to more specific individual aid such as debts consulting or home care. Moreover, most housing companies provide common rooms for social residents' initiatives. In general, German housing companies provide sophisticated social services e.g. continuous care taking of elderly or disabled residents in cooperation with local NGOs. In this case, the landlord intermediates services such as "meals on wheels", shopping delivery, visiting services or home care.

On the one hand, transport and delivery services, such as "meals on wheels" or pick-up services, can also be regarded as social services, as they often relate to more immobile residents such as elderly and handicapped. On the other hand, mobility related services address a broader customership in order to compensate infrastructural deficiencies regarding public transport, restaurants or shops. According services are for instance car or bike rentals or food delivery.

Leisure time services can also relate either to target groups with special needs such as children or elderly residents or to the whole neighbourhood. In addition, leisure time

services for all residents can be divided into individual or community services. In this context, individual leisure time services rather address single residents (e.g. sports facilities or ticket sale), whereas community leisure time services aim at community building with local common events or activities.

The most important precondition for the provision of complementary services is that financial and personal investments are held to a minimum as capacities both of social and commercial housing organisations are limited in times of a surplus of dwelling. For that reason, they fulfil the residents' demands of specific and/or sophisticated services by co-operating with local external service providers, namely non-governmental, public and commercial service providers.

3.1.4 The housing organisations' objectives regarding home service provision

The following statements concerning the perspective of German housing organisations are based on experts' interviews and the results from two actor group workshops on home services. As housing companies and cooperatives are the most important actors for the provision of home services in Germany, conclusions regarding housing organisations refer to them rather than to other actors such as real estate agents or condominium associations.

Accordingly, mainly housing companies and cooperatives' representatives participated in the German actor group workshops. The main target of the workshops was to define relevant subjects for housing organisations concerning home services. In November 2002, the first German actor group workshop was held as part of a national symposium on home service provision. An important result of this meeting was a ranking of important potentials and restraints of home service provision. The second German actor group meeting was part of a service-engineering workshop in Bielefeld in May 2003. In this context, the Bielefeld participants made a SWOT analysis to detect strengths, weaknesses, opportunities and threats of a home service provision for housing companies and cooperatives. Direct results from the German Actor Group Workshops in Mannheim (WS I) and Bielefeld (WS II) are emphasized.

German housing organisations are confronted with a surplus of dwelling as well as simultaneous tendencies of socio-economic polarization and pluralization of lifestyles. Therefore, the housing market is marked by an increasing competition between housing providers that results in a further differentiation of the housing offer. So providing home services has become very popular for housing organisations during the last years, as it represents an efficient mean to complement their housing core business. Similarly, most housing companies and cooperatives realized that they have to expand their product definition from "dwelling" to "housing" in order to keep customer groups that tend to acquire property or to move to free market alternatives. Therefore, particularly social housing companies started several initiatives to change their corporate image from a mere dwelling administrator to a full home service provider. Cooperatives moreover

traditionally regard their residents as shareholders of their common stock and particularly initiate services based on residents' participation.

Apart from public relation measures such as advertising and special events, many housing companies organise internal workshops in order to promote the service mentality of their staff or to develop new service fields. Moreover, most housing organisations regularly survey their residents to gain information on the customer satisfaction. However, tenants' surveys can only give restricted information on home services by interpreting special needs and transferring them to a service offer.

Instead of their engagement regarding home services, housing organisations are aware of market restraints. They point out that residents predominantly expect their landlord to manage and maintain building facilities properly. According to tenants' surveys, home services in fact represent an additional pleasure for the residents, while the building features determine the residents' general satisfaction. In some cases, residents that are annoyed e.g. by construction works even misinterpret service provision as a distraction from general deficiencies. Consequently, housing companies and cooperatives concentrate on rather unostentatious, simple services complementing building facilities or reacting on social problems. They assume that residents neither expect home services nor appreciate them except those residents who need particular help. Accordingly, residents with special needs, particularly elderly and residents with low income, outnumber other customer groups for home services. In addition, they represent the only customer group that actually has a strong demand for home services – but at the same time cannot afford to pay for them.

Thus, considering additional construction measures, housing organisations depend on federal or state subsidies, as in general, consequent increases of rent are legally restricted to a small percentage. Moreover, social landlords are dependent on cooperation with non-profit organisations and commercial providers to expand their service offer, as these partners feature the according service knowledge. Regarding NGOs and housing organisations, both parties are interested to co-operate as they each complement the other's business: While the housing industry lacks knowledge for social services, they represent the direct contact to relevant customers for NGOs. With regard to commercial providers, cooperation conditions are more unilateral for housing companies, as commercials tend to cooperate only in case of obvious financial advantages that housing organisations usually cannot provide. Still, housing organisations approach commercials in order to expand their home service offer by certain sophisticated services. Accordingly, they can be successful unless the cooperation entails additional investments for the commercial provider.

In general, housing organisations react by the provision of home services on present problem fields or challenges in the direct or indirect company environment.

They regard as most important challenges (WS I, descending order):

- Keeping customer relationships by supporting customer satisfaction
- Supporting the profile as service providers
- Improvement of the corporate image
- Cost reduction (operating costs, maintenance costs)
- Improvement of housing environments
- Optimisation of customer structures

Furthermore, German housing organisations regard following issues as most important problem fields (WS I):

- Vacancies
- Increasing number of tenants with low income
- Ethnic concentrations/ ghettos
- Demographic change / ageing tenants
- Economic changes / financial situation of the company

In fact, all home services provided or intermediated by German housing organisations refer to one of these problem fields or general challenges. According to these environmental aspects, housing organisations see the following opportunities for them in providing home services (WS II):

- Strengthening customer relationships
- Improvement of the company's financial situation
- Attraction of new customers
- Improvement of the rentability
- Additional profits
- Improvement of housing environments
- Social integration via social work
- Corporate image profits

In contrast, providing home services can also mean risks for a housing organisation (WS II):

- Additional investments with no benefits / lack of economic efficiency
- Deficiencies in financing / no willingness to pay for home services
- No acceptance of the home service on part of the residents

However, housing organisations have several market advantages for the provision of home services. Their strengths are (WSII):[8]

- Housing company's employees have a general service competence.
- Team working is common.
- Access to a broad customership and relevant customer data
- Experience with services

[8] Inconsistent statements result from the fact that weaknesses and opportunities relate to specific companies and estimates vary between different housing organisations.

Still, housing companies and cooperatives also express doubts regarding a provision of home services. They regard as their company's main weaknesses (WS II):

- Deficiencies in the employees flexibility
- No information exchange between different housing companies
- Deficiencies of the staff in practical experience
- Lack of customer acceptance
- No experience in service provision
- No demand for home services in a traditional social housing stock
- Deficiencies in capital assets
- No additional personal available in small companies
- Spatially spread premises

According to an external study, housing companies aim at supporting following fields of action by providing social services (Eichener, Schauerte 1999, p. 14):

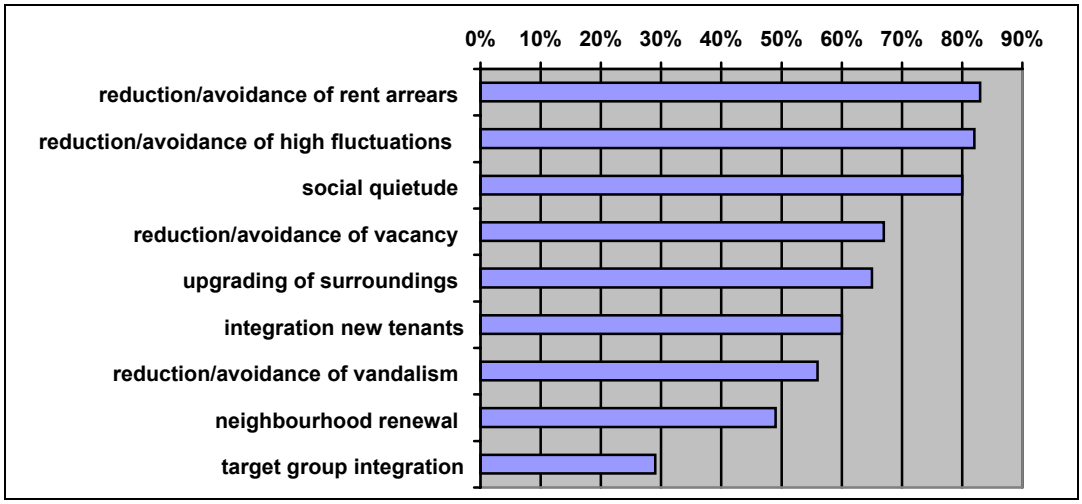


Figure 3-2: Objectives of social activities

As this figure illustrates, German housing companies expect to benefit indirectly from providing home services e.g. by improved customer relationships, by reduced losses due to rent arrears or by a reduction of vandalism. Therefore, most home services are not based on cash flow, but on non-profit provision.

3.1.5 Residents' demands

In accordance to the great importance of housing companies and cooperatives, tenants form the most important customer group for home services in Germany. Therefore, the following statements regarding residents' demands and expectations according to home services are based on a tenants' survey conducted by the Department of Marketing and Consumer Research at the University of Hanover (Hohm 2003). In the context of the project "Home Service Engineering"[9], the Department of Marketing and Consumer

[9] This project (2001-2004) was funded by the BMBF- Federal Ministry of Education and Research, lead by the IZT, conducted in cooperation with the Institute for IÖW –Institute for Environmental Management and Economics in Berlin and Heidelberg and the Department of Marketing and Consumer Research at the University of Hanover.

Research surveyed tenants of four different Hanover housing companies. The tenants' survey was sent to 8000 households and concentrated on resident's satisfaction with their housing condition as core factor for further home service engineering activities of housing organisations. Accordingly, the questionnaire included questions regarding: socio-economic data, satisfaction regarding apartment, neighbourhood, janitor, their housing company and home services and interests in particular home services (at moderate costs).

2482 households responded on the questionnaire, which corresponds to a return rate of 35.5 %. The residents' satisfaction with their housing condition was determined by various questions regarding apartment, direct housing environments, neighbourly relationships and ample housing environment. The survey approved the assumption that satisfaction with housing conditions depends predominantly on the apartment's features. Regarding their own apartment, most important features were the cost-performance-ratio, the apartment's equipment and design as well as sound insulation (Hohm 2003, p. 17). In relation to the housing environment, most important aspects for the resident's satisfaction were "gardens and green spaces", clean buildings, social structure of the neighbourhood and image of the district. Therefore, home services complementing local housing conditions should react on these aspects to meet the residents' demands. Finally, residents were asked on their interest for certain home services. The following figures present the participants' popular home services (Hohm 2003):

Figure 3-3: Most popular home services of German residents

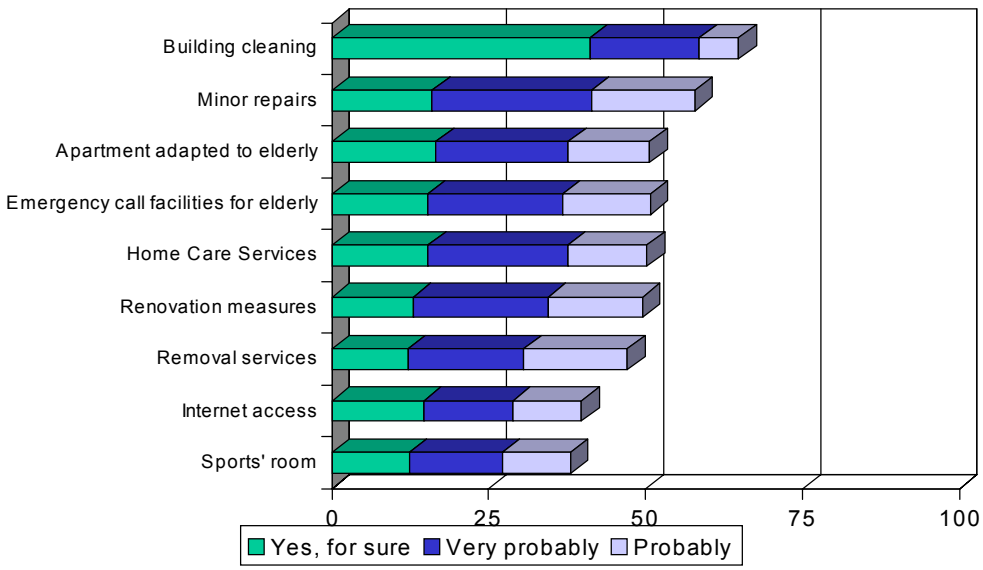
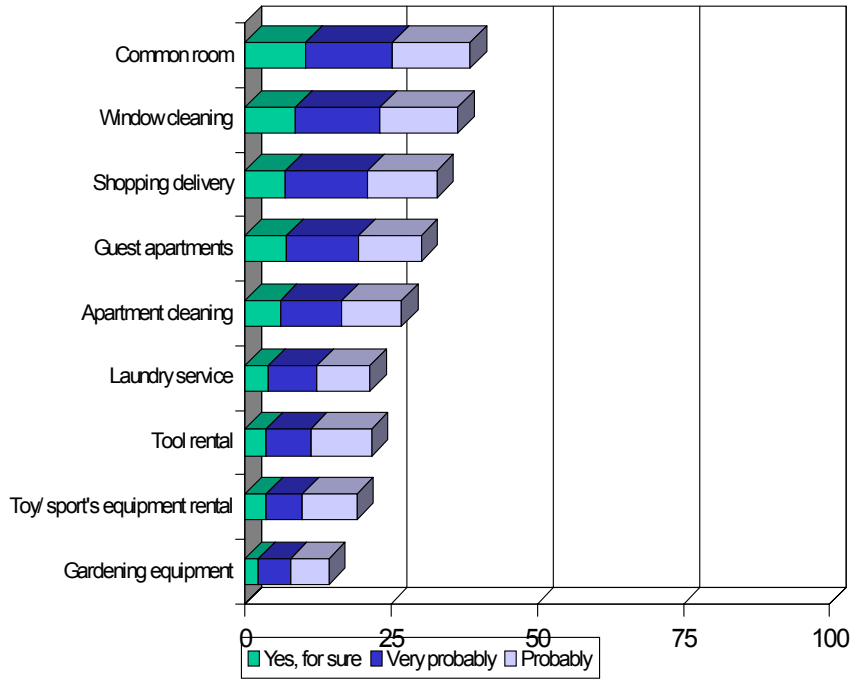


Figure 3-4: Popular home services of tenants



From this survey, we can draw the conclusion that most popular home services are repair and renovation services as well as home services for elderly (about 40 – 50 % of the interviewees). Consequently, residents prefer service fields close to the core business, i.e. technical building, household, social and health services. A quarter to a third of the residents are interested in additional housing facilities that improve quality of life in general such as Internet access, guest apartments, common and sports' rooms. Only a small percentage (less than 25 %) is interested in household services like laundry services, window or apartment cleaning. Thus, German residents' do not seem to be particularly interested in comfort services such as information and communication services, security, transport and delivery services or leisure time activities.

This result matches statements of German local actors that German residents have less interest in comfort services, but are interested in complementing services close to the core business such as renovation or building maintenance. Moreover, building cleaning as the most wanted service must be taken into account, unless the housing organisation centrally organises a cleaning service.

In addition, the tenants' survey revealed that residents are generally not willing to pay extra for additional home services, unless they are dependent on a service or act for conscience reasons. Apart from that, residents indeed pay for home services that promise savings compared to alternatives or savings on a long-term.

3.2 Public, commercial and non-governmental as home service providers

While the service offer of housing organizations is always related to housing to a certain extend, the service portfolio of public, commercial and non-governmental service providers includes only a small share of home services. The following figures illustrates this situation:

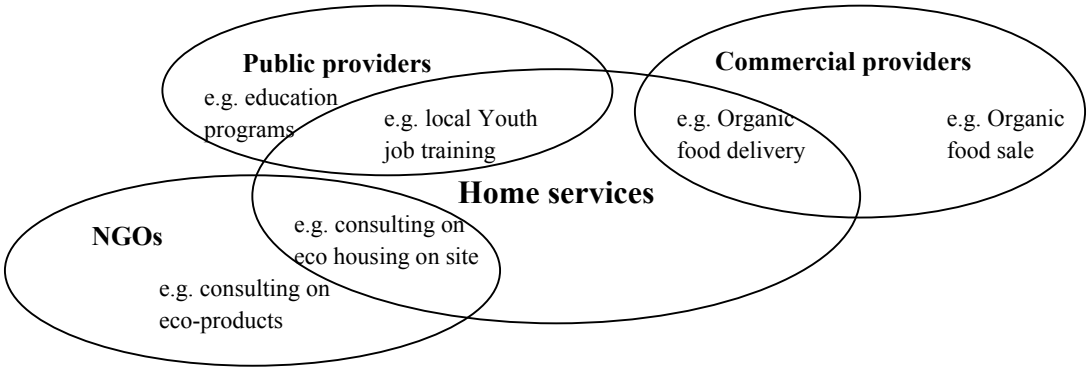


Figure 3-5: Home service offer of commercial, public and non-governmental providers

In the following chapters, we intend to give a general overview on sustainable service activities of public, commercial and non-governmental service providers that actually or potentially represent sustainable home services.

3.2.1 Public institutions as home service providers

In the project context, local authorities departments and municipal companies are defined as public service providers. Regarding consulting on housing and mobility matters, the Senate's Department of Urban Development offers several information services on subsidies, energy supply, and neighbourhood renewal management. In addition, public providers are responsible for leisure or transport infrastructure. Moreover, the Senate's Social Department provides consulting on social affairs such as subsidies and support for social initiatives.

Public authorities are required to provide public transport, energy supply, social and leisure time infrastructure. Thus, most of their services refer to supply and disposal as well as public to sports facilities. Consulting services relate mainly to social and financial aspects, but consist generally in basic information on public frameworks. Public energy and resource supply management as well as financial counselling are mainly in charge of outsourced municipal companies. However, particularly the supply of social and leisure infrastructure depends on the State's financial situation, which is often restricted such as in the case of Berlin. Furthermore, the KfW – Reconstruction Loan Corporation owned by the Federal and State Government consults interested residents and landlords on modernization, energy conservation and housing construction.

One of the most effective public service activities regarding housing is the Neighbourhood Renewal Management Program financed by European, Federal and Berlin authorities from 1999 to 2004. The program aims at revaluing urban areas by improving housing environments, supporting social and ethnic integration and neighbourhood communities. Youths that are excluded from the job market due to a substandard education can furthermore participate in several job-training programs. The neighbourhood renewal management program is based on bottom-up strategies and broad participation that e.g. allow residents' committees to decide on fund expenses. Apart from financial support, local authorities promote socially organized self-help and urban development projects by professional consulting on social, political, economic and environmental issues.

3.2.2 Non-governmental organisations as home service providers

Main non-governmental home service providers are environmental associations, welfare organisations and urban renewal initiatives. Whereas welfare institutions provide social services for young, elderly, disabled and residents with low income, environmental associations consult residents on diverse ecological subjects regarding plants, nutrition and sustainable consumer's behaviour. Urban renewal initiatives concentrate on a certain local area and provide a broad range of community activities such as mediation, debts' consulting or residents' participation.

Environmental associations furthermore support the protection of endangered species in urban areas by informing residents on nest boxes for bats or rare birds. In addition, they support residents in syndicating to act for their interests e.g. the protection of local biotopes. Urban renewal initiatives are also active in motivating residents for citizen engagement, which is a central factor of sustainable development.

In general, non-governmental organisations concentrate on services related to sustainable development and are often engaged in Local Agenda 21 initiatives as well. Therefore, they mainly act in service fields that refer to ecological, social and economic sustainability such as personal care, social leisure time activities, transport and delivery for immobile people or consulting on environmental and social aspects. The concentration of non-governmental organisations on home services with considerable sustainability effects is due to the fact that neither commercial nor housing or public organisations are particularly interested in promoting sustainable development. Consequently, non-governmental organisation are the most important actors for a dissemination of sustainable home services in Germany as they complement the whole range of home services by activities that are demanded by the public but do not promise political or commercial profit.

Many NGOs unite different dimensions of sustainable development in their service portfolio. For instance, main fields of action of the environmental association the Grüne Liga - Green League are:

- Nutrition: The Green League offers a consulting service on organic nutrition via telephone or personal on an organic market in the Berlin district Prenzlauer Berg twice a month. Moreover, they intermediate a subscription of organic vegetables that are delivered at home by the women's cooperative Die Bäuerinnen – The Peasant Women (www.baeuerinnen.de).
- Consulting for civic initiatives: In addition, the Green League consults citizens in the field of Local Agenda-21 activities, nature conservation and protection of endangered species. Accordingly, they help residents to protect and restore their natural environment e.g. by giving legal advice to initiatives that aim to preserve a biotope in their neighbourhood. Furthermore, they inform citizens on participation processes.
- Ecological Housing: Considering housing, the Green League supports sustainable development of neighbourhoods in giving advice on subjects such as ecological construction and renovation, rain water management, greening of backyards or domestic pollutants. Based on a situation analysis, they develop concepts and give advice on legal matters as well as possible subsidies. Another important activity of the Green Leagues is to protect urban biotopes as well as endangered urban species such as special birds or bats.

Non-governmental organisations generally concentrate on urban areas, as they are dependent on a broad citizen engagement that is hardly to realize in small communities. Consequently, services based on collaboration between NGOs and residents are particularly found in big cities. In contrast, residents in small towns can develop a more intensive commitment to citizen engagement due to less anonymous communities. Therefore, results of bottom-up strategies may not differ considerably between big cities and small towns.

3.2.3 Commercial companies as home service providers

Home services form generally only a small part of the business of commercial service providers, namely the part of the service portfolio that is decentrally provided. Therefore, commercial service providers can only be regarded as home service providers, if they provide services on the site, which assumes that delivery or decentral consulting service components are integrated in the service provision. However, commercial service providers increasingly integrate delivery and consulting services in their service performance, as customers increasingly demand decentral service offers nearby or at home. Consequently, commercial providers of ecological and technical products as well as of medical and financial services expanded their decentralised consulting and delivery activities in order to support customers' relationships.

An important field of commercial home service providers are personal comfort services that relieve residents of uneasy activities or relate to entertainment. As leisure time activities became increasingly important for customers, sports and entertainment facilities dispread broadly during the last years. Simultaneously, comfort services that

relate to obligatory activities such as apartment cleaning or child sitting have gained importance by residents who can afford them. Consequently, commercial service providers reacted on these demands by expanding wellness and leisure time services as well as household services.

On the one hand, commercial service providers gain competition advantages by exploring niches or by providing highly specialized services. On the other hand, tendencies of diversification are a typical feature of the service sector that is determined by constantly changing customer's demands. The provision of home services by commercial providers is influenced by both tendencies depending on the service's features: While specialized home service providers act predominantly in the construction, entertainment or consulting field, generalized providers offer service packages such as consulting and support for elderly residents.

However, compared to non-governmental service providers or housing organisations, commercial home service providers are predominantly specialized not only in one service area, but also in one service. This is mainly due to the fact that residents are willing to pay commercial specialists for sophisticated services and expect a higher quality from them than from housing companies or NGOs. With the exception of home care for elderly, social services are not popular for commercial service providers, as they relate to people with low income and do not promise financial profits. In contrast, there is a profitable market for environmental services referring to energy-efficient building facilities. Therefore, commercial service providers dominate this specialised market segment.

3.3 Institutional arrangements for home service provision

In Germany, most home services are provided by or via housing organisations. Thus, most active home service providers are social housing companies and cooperatives, followed by free market companies and condominium associations. In general, housing organisations offer a mix of directly provided services and services provided in cooperation with external service providers or residents. The following table illustrates common institutional arrangements for a home service supply (according to Fehr 2000, p. 253):

Table 3-2: Institutional arrangements for home service supply

Direct supply		Cooperation		Resident involvement	
Central supply	**Internal cooperation**	**Co-production housing organisation and external provider**	**Recommendation of external services**	**Organised by housing organisation, public provider or NGO**	**Organised by residents**
Centralised, e.g. consulting on energy saving	Third Party, e.g. gardening, maintenance	Contracted partners e.g. housing organisation with energy suppliers	Recommendation of local service providers e.g. shopping delivery	Provision of premises, gardens etc.	Residents meetings, parties etc.
Decentralised e.g. concierge services	Associated organisation e.g. insurance company	Non-contracted partners e.g. housing organisation with local energy consultants or tour operators for day trips	Sale of external services e.g. public transport tickets	Organisation of tenants activities e.g. renovation	Swap, shops, barter rings etc.

In case of a direct home service supply, the service provider has the possibility to outsource services to an independent external or associated organisation or to provide it directly by an internal central or decentral institution. In case of cooperation, the service provider can contract its partners or negotiate an informal agreement. This so-called co-production is relevant for services that are dependent on a long-term use as well as a considerable trust between service provider and consumer, e.g. home care, car sharing or supervision of children. Furthermore, service providers recommend services in order to meet specific residents demands or to complement infrastructure deficiencies. In case of recommendations, the recommending organisation gains less profit than the executing organisation compared to a co-production that is profitable for both partners.

In addition, housing organisations, NGOs and public institutions involve in some cases residents in service provision by transferring certain tasks to them (e.g. managing common rooms) or by initialising services completely conducted by the residents (e.g. swap shops). Particularly housing cooperatives traditionally involve their residents in common activities and services. Finally, external service providers such as NGOs, municipalities and commercial providers act as home service providers unless their services are locally available and relate to housing or housing conditions.

3.3.1 Direct home service supply by housing organisations

Although boundaries are indistinct, German housing organisations generally do not consider mandatory and core business service activities, but complementary service activities as home services. With regard to complementary service activities, housing organisations determine the institutional arrangement according to the service's character: While housing organisations prefer a cooperation with external partners in case of services that are only distantly related to housing, they mainly choose to directly provide services that are close to their core business.

In this context, material related services that refer to additional building or apartment facilities (e.g. a common sauna, water saving installations for the bathroom or a tool pool) are generally closely connected to the physical environment and therefore to the housing organisation's core business. Consequently, these services are predominantly provided directly by the housing organisation, although they may subcontract commercial partners for certain service components such as installing communication infrastructure or building leisure time facilities.

Unlike in free rental market or property dominated countries, construction intensive measures in housing environments are mainly in the responsibility of housing organisations in Germany. This is mainly due to the strong influence of public planning after World War II that required an integrative planning of new buildings, its surroundings and the local infrastructure. Whole settlements were owned and designed by a single public housing organisation that had to take care of about adequate traffic routes as well as recreation or commercial space. However, due to financial restrictions, recent construction intensive activities rather consist in reactions on obvious deficiencies, as they generally entail high costs. Therefore, they are only taken into account, if the accompanying measure is considered as urgent or can be combined with other measures, e.g. installing new ICT-infrastructure or a solar power plant during modernisation operations.

Although housing organisations tend to provide personal home services in cooperation with an NGO, a public or a commercial provider, some personal services that represent a supplement of core business service activities (e.g. marketing and communication activities) are also directly provided. So, for instance, some big housing organisations expanded the service of their insurance departments by intermediating private insurances for their residents. Another example for a directly provided personal service is consulting on energy saving by the technical department of the housing organisation.

With regard to the institutional arrangement, a direct supply can either be a central provision by the company's head office or a cooperation of head office institutions with internal partners (e.g. an outsourced business section). Within the central provision, the housing organisation can choose between a central department, such as the public relations section, or a decentralised section such as local district offices. An internal cooperation can be based on teamwork between the head office and an outsourced department (e.g. a subsidiary home service company) or on subcontracts with external service providers such as horticultural companies.

In general, the housing organisation's employees operate most home services additional to their main occupation. Still, there are some examples of outsourced "service companies" that concentrate on the housing organisation's service activities in Germany (such as ServiceHaus, http://www.service-haus.de). These examples have shown that establishing a central contact point for residents and consolidating all service related activities such as service marketing, management and assessment in a single institution is far more effective.

3.3.2 Direct home service supply by NGOs, public and commercial providers

All service activities of external, namely non-governmental, public and commercial service providers, can be regarded as their core business. Except of general legal obligations (e.g. safety requirements), external service providers do not have any mandatory duties to the residents.

Unless they act in cooperation with housing organisations, external service providers are only regarded as *home* service providers, if their service portfolio contains decentralised service components. Thus, home services directly supplied by external service providers always have a decentral component that can consist in product delivery, home visits or a regular local presence (e.g. local consultation hours or office branches).

In contrast to the wide spectrum of services offered by housing companies, external service providers concentrate on one service field. In this regard, non-governmental service providers exclusively offer personal services, while public providers are responsible for basic infrastructure and services for primary health and social care. Commercial companies provide both personal and material related services.

With regard to different characters of home services, commercial service providers only provide the profitable service alternative. They directly offer home services by integrating product delivery or home visits in their service portfolio. Furthermore, commercial providers of technical products tend to complement their core business by a related consulting. Consequently, there is a broad range of commercial home services ranging from shopping and medication delivery to home visits of hairdressers or insurance agents. Due to demographic changes, particularly home care became an important decentral service activity of commercial service providers.

Public services can be regarded as home services, if they are locally available, e.g. consulting hours on public affairs in a local library. Regarding consulting, they are confined to consulting citizens on public issues and legal matters within their responsibility. Public authorities moreover provide local public health and social infrastructures such as day care centres, libraries or sports facilities.

Finally, non-governmental institutions concentrate on social and consulting services. Therefore, personal knowledge in medical, social or environmental issues is the most important resource of non-governmental organisations. In general, non-governmental organisations furthermore initiate socially organized self-help as financial restrictions make them dependent on citizen engagement. Moreover, most NGOs particularly aim at activating residents to syndicate for their interests or to found social self-help initiatives. As public providers tend to withdraw from social fields, NGOs collaborating with citizens became one of the most important forces in pursuing sustainable development goals. Due to the often close cooperation with the residents, many NGOs tend to be present in a local district either by a small local office or a certain consulting hour in public buildings. In addition, according to the NGO’s mission, they provide certain

delivery services, e.g. for organic food, meals on wheels or ecological cleaning detergent.

Summarizing, due to their specialisation, external service providers predominantly directly offer home services by mobile departments of the head office such as delivery drivers or field staff. In general, public or commercial providers only subcontract third parties or associated companies for very specific service components that require certain experts. This is mainly the case in medical fields or repair matters.

3.3.3 Cooperation between housing organisations and non-governmental, public or commercial providers

In Germany, housing companies and cooperatives have acknowledged the importance of home services for their customer's relationships as the rental housing market is marked by high tenants' turnover rates and vacancies that result in a competition between housing organisations. In this context, housing organisations are dependent on cooperation in case of either financial restrictions or sophisticated service fields that need a specific knowledge and therefore actively initiate cooperation for home services demanded by their tenants by approaching relevant service providers executing the service. While they cooperate with NGOs and public authorities due to financial restrictions, housing organisations cooperate with commercial providers in sophisticated service fields such as home care. Although external service providers actually provide the service and housing organisations only procure the service, a cooperation implies that the housing organisation is responsible for the contact to the residents (e.g. management of orders and complaints, information, marketing etc.). While public and commercial providers generally form an inactive part and housing organisation must convince them by presenting their benefits of a cooperation, NGOs profit equally from those cooperation and often actively approach even small housing companies or cooperatives in order to reach a broader public. Public providers usually represent the cooperation partner by funding projects or initiatives.

As the core business of housing organisations relates to the physical housing environment, many of their home services are based on specific technical knowledge or products. Therefore, they often cooperate with commercial companies in all technical service fields, unless they can offer simple performances such as some repair or maintenance services as a direct offer. In this context, commercial companies are the housing organisation's most important partners for household care, security or mobility services, which are only provided by cooperation and not by direct supply. Apart from that, certain housing organisations also cooperate with commercial companies in profitable service fields in order to complement infrastructural deficiencies, for instance regarding professional home care in districts without medical care on the spot. Summarizing, housing organisations and commercial companies cooperate in all service fields except of social services that do not promise adequate profits for the commercial partner.

In times of a surplus of dwelling, soft human-oriented factors such as customers' relationships or the revaluation of stigmatised neighbourhoods are also important issues for German housing organisations. Consequently, personal services have simultaneously gained importance. With regard to personal services, the range of contents is wider than regarding material related services and benefits seem to be more obvious, as they address the individual and therefore directly influence the customers' relationship. Moreover, social housing companies that are bound by public order to support underprivileged residents dominate the German housing market, so they often fulfil this mission by providing personal services such as debts' consulting or care for elderly residents, although social services originally do not belong to the core business of housing organisations.

However, due to restricted personal and financial resources, social housing companies and cooperatives can realize most social services only on basis of cooperation with public authorities and non-governmental providers. One of the most effective collaboration of residents, NGOs and public institutions can be found in urban renewal strategies. It's main characteristic is the variety of actors working on different projects, while pursuing together the same goal of revaluing their neighbourhood. While public institutions support NGOs in their on-site activities, the strategy's success is dependent on the local residents' engagement on a long-term. Many districts with special needs participating in the programme "The Socially Integrative City" (cp. chapter 2.2.1) have shown that this bottom-up strategy prevented further degradation and segregation tendencies.

3.3.4 Residents' involvement

Counteracting the growing socio-spatial disintegration in German cities, many housing companies initiate social neighbourhood activities. These measures often demand a participation of the residents as well as of local initiatives to be accepted by local residents. On one hand, services "from tenant to tenant" fulfil the housing company's mission to participate their tenants' in local activities. On the other hand, socially organised self-help motivates tenants to take an active role in developing their own neighbourhood. So, usually services that are based on residents' participation aim at strengthening local networks by intensifying neighbourhood relationships and integrating minority groups such as migrants or handicapped. Apart from that, housing organisations involve residents' engagement due to financial restrictions, e.g. by founding a self-help network or residents' advisory boards.

As many NGOs are also dependent on citizen engagement because of financial restrictions, they often initiate self-help activities as well. In general, according housing organisations' and NGOs service activities relate to similar, namely social service fields. Typical services initiated by housing organisations or NGOs through residents' involvement are the organisation of local events as well as the support of groups with special needs by giving language courses or helping in handicapped or elderly residents' households. Whereas participation in singular events such as "district conferences" relates

to all residents and is temporarily organised, support services demand a continuous organisation form such as an association or advisory board. According to the diverse abilities of residents engaged in socially organised self-help, the range of services includes a broad range of simple activities that can help people to feel integrated in an neighbourhood network: visiting service, shopping delivery, hairdressing, tutoring etc.

3.4 Summary: Sustainable home service providers

Housing organisations as home service providers

German housing organisations are required by law to secure a transparency on housing costs, to maintain apartments and housing environments, to guarantee security in cases of emergency and to provide playgrounds as well as parking facilities for cars, bikes and strollers. In general, they do not regard mandatory activities as services but as a common requirement to fulfil.

German housing organisations consider equipment, maintenance and renting of physical facilities as part of their core business including additional equipment of apartments or surroundings as well as technical installations. Moreover, the management of energy supply has become an important core activity of housing companies during the last decades. Apart from that, housing organisations regard marketing and communication strategies as a core activity. In general, housing organisations prefer to offer services close to their core business in order to profit from internal resources and knowledge.

Complementary services can be divided in service fields to support customer relationships such as consulting services or the sale of discount tickets and social service fields to prevent social and spatial disparities. Whereas housing organisations tend to intermediate sophisticated complementary services such as home care, they directly provide less complex services e.g. consulting on waste prevention.

Consequently, strategies to promote sustainable home services should encourage housing organisations to cooperate with NGOs regarding complementary social and ecological services. Furthermore, state subsidy programs should support housing organisations in making their core and mandatory activities more sustainable.

Important goals of home service provision for housing companies and cooperatives are the improvement of customer relationships, additional economies and avoidance of social problems. As only few home services have the potential to raise profits, most housing organisations concentrate on services that support customer relationships as well as social services in neighbourhoods marked by social and infrastructure deficiencies.

The tenants survey revealed that tenants are generally only willing to pay extra for home services, if they really need the service (e.g. home care for elderly residents) or if they promise long-term savings (e.g. by reducing operation costs). Most popular home services are service fields close to the core business (i.e. technical building, household,

social and health services), while comfort services (i.e. laundry services or toy and sports equipment rental) are less important for residents.

External service providers as sustainable home service providers

Public, commercial and non-governmental institutions are only regarded as home service providers, when providing certain service components on site.

Public institutions are responsible for providing public transport, energy supply and social infrastructure. Thus, most of their services refer to supply and disposal as well as to public sports facilities. Public institutions generally outsource these activities to municipal companies. Consulting services relate mainly to social and financial aspects, but consist generally in mere information on public frameworks. In addition, social departments are also in charge of personal consulting on social legal frameworks, such as housing aid regulations.

Main actors on the non-governmental home service sector are environmental associations, welfare organisations and urban renewal initiatives. Whereas welfare institutions provide social services for young, elderly, disabled residents and for residents with low income, environmental associations consult residents on diverse ecological subjects regarding plants, nutrition and sustainable consumer's behaviour. Urban renewal initiatives concentrate on a certain area and provide a broad range of community activities such as mediation, debts' consulting or residents' participation. Non-governmental organisations are the most important actors for a dissemination of sustainable home services in Germany as they complement the whole range of home services by activities that are demanded by the public, but do not promise financial profits.

The main field of action of commercial home service providers is consulting on their products and services. In general, delivery and consulting services complement the commercial's core business as customers increasingly demand decentral service offers nearby or at home. So, commercial providers of ecological and technical products as well as of medical and financial services expanded their consulting activities in order to support the customer's relationships. Another important field of commercial home service providers are personal comfort services that relieve residents of uneasy activities or supports entertainment.

In general, commercial service providers are predominantly specialized not only in one service area but also in one service e.g. financial consulting or catering. This is mainly due to the fact that residents are willing to pay commercial specialists for sophisticated services and expect a higher quality from them than from housing companies.

Commercial providers generally offer similar services as public or non-governmental institutions, but intentions differ according to financial interests. Therefore, the nature of a service provided by commercials distinguishes enormously from those provided by non-governmental or public institutions: While e.g. a financial consulting service of banks aims to make profit, NGOs support the resident's interests. Similarly, commercial sports facilities relate to solvent customers while public sport fields are generally for

free use. Services provided both by NGOs and public institutions usually complement each other and often result from a common collaboration.

Institutional arrangements of home service provision

The following table presents an overview on home service fields and institutional arrangements (according to Table 3-1, pp. 62, own composition):

Table 3-3: Overview on service fields and institutional arrangements

	Institutional arrangement							
	Direct supply				**Cooperation**		**Residents' involvement**	
	Housing organisation	**Commercial provider**	**Public provider**	**NGO**	**HO – NGO-Public provider**	**HO - commercial**	**Housing organisation**	**NGO**
Information & communication services								
Environment and Energy	Information on eco-housing	Environmental consulting	Environmental consulting			Environmental consulting	Advisory boards	
Social aspects	Information exchange with resident	Medical consulting	Consulting on social issues			Medical consulting		
Financial matters	Information on housing costs	Financial consulting	Consulting on Subsidies			Financial consulting		
Technical building services								
Building/ apartment facilities	Rental facilities					Sale of facilities		
Apartment features	Renovation					Renovation		
Security services								
Apartment		Security/ safety facilities			Safety facilities	Security / safety facilities		
Surroundings		Watch guard		Concierge		Watch guard		
Household services								
Household devices	Repairs and maintenance			Swap shop		Repairs and maintenance	Swap shop	
Household care		Cleaning services	Non-profit household care			Cleaning services	Non-profit household care	
Social and health services								
Health services		Home care					Neighbourly help networks	
Social services	Community services		Neighbourhood renewal activities				Neighbourhood renewal activities	
Transport and delivery services								
Vehicle rental and sharing		Car/ bike rental, car sharing				Car/ bike rental, car sharing		
Delivery		Shopping delivery		Meals on wheels		Shopping delivery	Shopping delivery	
Leisure time services								
Individual activities	Residents' meetings	Entertainment	Sports facilities			Entertainment		
Community activities	Common rooms	Sports activities	Social events, meeting points			Sports activities	Social events, meeting points	

Institutional arrangements for home service provision depend on the service features, i.e. the service content, potential profitability and needed knowledge or technical facilities. In this regard, it is important to take into account that one service can have several characters. For instance, an environmental consulting can be provided by all kind of institutional arrangements. Whereas a direct supply by a housing organisation can consist in an information brochure, commercial providers rather consult on the company's environmental-friendly products (like water saving fittings). Accordingly, public providers mostly only provide information on related subsidies, whereas NGOs give individual advice on energy and resource saving in housing. An example of cooperation between a housing organisation and a commercial provider regarding environmental consulting is energy contracting. In addition, monitoring of eco-efficient construction measures is often realised by a cooperation of housing, public and non-governmental organisations. Last but not least, environmental consulting can be realised by residents' involvement. For example, an advisory board of energy consultants can be initiated either by a housing organisation (relating to tenants) or by an NGO (relating to local citizens). Summarizing, the service features determine the adequate institutional arrangement.

Housing organisations tend to provide directly services that are closely connected to the core business of renting and maintenance, as they possess the according knowledge. Except of services that require cooperation with a specialised commercial provider, i.e. in the field of transport and delivery, health and security services, housing organisations serve all service fields by direct supply. However, they often only provide basic services with a minimum on investments, e.g. an information brochure instead of individual consulting.

Commercial service providers also directly offer a broad range of home services throughout all service fields except of social services. The basic precondition for commercial service providers is that the service promises adequate profits. In contrast, NGOs generally directly offer the non-profit alternative of commercial services. Therefore, they rather concentrate on personal services that do not require investments in technical facilities, such as visiting services or meals on wheels. Finally, public authorities aim at fulfilling their responsibilities by providing primary health and social care infrastructure as well as information and consulting on public issues.

Typical cooperation in the German housing sector are collaborations between housing organisations and commercial service providers on the one hand and between housing, public and non-governmental organisations on the other hand. Housing organisations tend to cooperate with commercial service providers in all service fields. Though, they only cooperate, if the service is profitable for the commercial partner and if there explicitly residents' demands for the service.

Non-profit services are typically provided in cooperation of a housing, a non-governmental and a public organisation. In this context, public authorities mainly provide financial resources and basic work force, while housing organisations support

the service provision by marketing and communication activities as well as by disposing according rooms. In such a cooperative service provision, the participating NGO mostly actually executes the service and represents the expert for relevant social or environmental issues. The motive of housing organisations to cooperate with a non-governmental and a public organisation is to upvalue their housing stock.

Both NGOs and housing organisations integrate residents in service provision. But whereas NGOs usually initiate local citizen engagement in general, housing organisations participate residents due to either corporate aims and goals (e.g. cooperative) or financial restrictions (social housing company).

4 Strategies for better sustainability performances of home service portfolios

One strategy to improve the home service portfolio of housing organisations as well as of non-governmental, public and commercial providers is to optimise the relevant service provision chain. In chapter 4.1 we present potential approaches to optimise the individual service performance according to sustainable development goals.

Another strategy for home service providers is to include good home service practices in their service portfolio. In chapter 4.2, we therefore portray some good practice examples into order to give a hint on possible sustainable home service offers. Further European examples are presented on the project homepage www.sustainable-homeservices.com.

4.1 Strategy I: Making popular home services more sustainable

In order to find relevant potentials for a better sustainability performance, we developed a qualitative sustainability assessment tool for home services (see chapter 4.1.1). This tool should help home service providers to relatively assess their home service portfolio according to its contribution to sustainable development. Subsequently, we present a general overview on social, environmental and economic impacts of home services (see chapter 4.1.2 pp. 86).

4.1.1 Sustainability assessment of home services

As explained in chapter 1.2 (p. 16), sustainable home services can be regarded as sustainable if their contribution more to environmental health, social equity and economic development is higher than its general service alternative. But what does that mean in particular?

First of all, direct sustainability impacts of home services must be distinguished from indirect effects. In this context, direct sustainability impacts of home services mainly relate to combined environmental and economic effects, as resource and energy savings simultaneously reduce according housing costs. Apart from financial savings due to energy-efficient devices and facilities, financial counselling services also directly result in economic benefits for the resident. Prominent home services in this field are debts counselling or insurance intermediation for tenants. Direct impacts home services can generally be determined either by financial (in €) or environmental values (CO_2 emissions, waste amount, water consumption etc.).

However, home services predominantly have indirect sustainability impacts that are hardly measurable. Furthermore, it must be taken into consideration that social impacts are in general based on qualitative data. Nevertheless, some social activities that improve the quality of life in certain districts can be connected to reductions of general losses resulting e.g., from vandalism and vacancy.

In order to estimate both direct and indirect impacts on sustainability, we developed a simple sustainability assessment tool (for details see annex, chapter 5.1, p. 100). This tool represents a qualitative checklist for certain service features that have positive or negative impacts on the three sustainability dimensions. The criteria of the assessment tool were based on general existing sustainable development indicator sets, i.e. from the CSD – UN Commission on Sustainable Development, the HDI - Human Development Index of the UNDP, and the ISEW - Daly-Cobb Index of Sustainable Economic Welfare (UNDP 2001, UNDSD 2002, Mannis 1998), as coherent sustainability indicators have not been developed yet- neither for household consumption nor for related services (Lorek 2002). A further source for criteria was several studies on sustainability impacts of the different consumption clusters, such as indicators of household consumption developed by Spangenberg and Lorek (2002).

It is important to emphasise that the sustainability assessment tool criteria is not meant to provide absolute values, but rather qualitative estimations, indicating potentials for action to a positive direction, e.g. "increasing employment" or "promote environmentally friendly transport". Therefore, the purpose of home service assessment by the sustainability assessment tool is to roughly check a service portfolio in order to find potentials to optimise the service portfolio according to sustainable development goals. The following table presents the main indicator groups of the sustainability assessment tool:

Table 4-1: Project set of indicators for assessing sustainable home services

	Environment		Social		Economic
1	Material use	1	Equity	1	Employment
2	Energy use	2	Health	2	Financial situation of residents
3	Water use	3	Safety and Security	3	Regional products and services
4	Waste	4	Comfort	4	Profitability of the company
5	Emissions	5	Social contacts	5	Profitability of the economy / region / community
6	Space use	6	Empowerment	6	Information and Awareness

For relative instruments like the assessment tool, the point of reference is an important element. In the project context, the point of reference is the 'status quo' alternative, i.e. the usual service provision, which corresponds to the value 0. The following table presents the rating scale with one example indicator from each sustainability dimension:

Table 4-2: Example of rating the sustainability of a service

Durability (environmental): The effect of the service on the life span of related products -2 -1 0 1 2 NA Shortens the life span of related products — Lengthens the life span of related products
Promote social self-help (social): The effect of the service on the social self-help, barter shops and swap shops -2 -1 0 1 2 NA Less opportunities — More opportunities
Employment (economic): The effect of the service on the employment -2 -1 0 1 2 NA Less jobs/job opportunities lost — More jobs are created
2: a major positive change; 1: a substantial positive change; 0: the service does not make a change to status quo; -1: a substantial negative change; -2: a major negative change.

This methodology was applied in the project in order to assess home services according to their contribution for a sustainable development. It proved to be useful for service providers to roughly estimate their offer regarding sustainability aspects (for exemplary results for the German Good practices of sustainable service provision see annex, chapter 5.2, pp. 104).

4.1.2 Overview on general environmental, social and economic impacts of home services

This chapter aims at presenting general contributions of home services on sustainable development goals. It is therefore structured according to the three sustainability dimensions (environmental, economic and social impacts).

Environmental impacts of home services

In general, home services have only minor environmental impacts compared to their influence on economic or social issues. Nevertheless, construction measures are closely connected to energy and resource consumption, as construction measures entail high material, resource and energy consumption, but also set the course for energy saving on a long-term. Consequently, in case of an implementation of additional building facilities, according construction measures should be analysed and optimised in order to minimize the environmental impact both of the future service performance and of the construction measure. Therefore, counselling services aiming at planning and accompanying the implementation of environmental-friendly infrastructures (for e.g. water re-use, solar heating or solar power) are crucial for the environmental dimension of sustainable development.

While these services rather relate to proprietors and landlords and are only temporarily relevant in case of modernisations, they result in long-term savings of operating costs for the according resident. Therefore, some residents also engage in promoting environmental friendly building facilities e.g. by funding an advisory board on operating costs. Although individual scopes of action for residents are much smaller and rather relate to simple additional facilities in the household (e.g. water saving facilities

for the bathroom or energy-efficient household devices), these environmental counselling services can also result in considerable direct environmental and economic impacts. Water saving installations for showers can e.g. reduce the daily water consumption per capita by 60 l or respectively 70 %.

Further home services relating to material use aim at either reducing material consumption or supporting the use of less harmful materials. Whereas a reduction of material consumption is mainly supported by special waste disposal facilities (e.g. individually priced waste disposal) as well as consulting on waste prevention, consulting on environmental-friendly consumption promotes the use of recycled or renewable materials. In this context, waste disposal facilities, such as the so-called "Electronic Waste Sluice" (see annex, pp. 127), can effect that residents reduce their residual waste amount by 50 %.

There are further services that aim at inciting the use of environmental products or at abstaining the use of products that cause environmental damage. Most of these services are provided by commercials such as organic food providers or transport companies as well as by environmental NGOs. Housing organisations act mainly as intermediaries in this field, although some of their services such as workshop rooms or installations for individual waste billing help as well to make residents care about their consumption patterns. NGOs offer mainly consulting services for sustainable consumption, but also support organic food cooperatives by providing a neighbourhood food storage. Although, demands for ecological services and products increase, services supporting a change of consumption patterns are still a market niche and social or ecological effects are indistinct.

Particularly mobility services have ambivalent effects on total energy or resource consumption. During the last decades many studies revealed that delivery services do not prevent but aggravate traffic. Still, delivery services can have indirect ecological effects by changing consumer's behaviour through e.g. facilitating the consumption of ecological products. Moreover, services such as car sharing or bike messengers present environmental-friendly alternatives to car use.

In relation to German home services, effects on space use generally refer to revaluation of building environments rather than to new building facilities and land consumption. In this respect, urban renewal activities aim at restoring public places and courtyards, while environmental counselling promotes an ecological redesign of housing environments.

Summary of environmental aspects: Whereas consulting on environmental aspects has indirect effects on ecological issues, the environmental optimisation of construction measures directly reduces energy and resource consumption. Although mobility services are usually directly connected to environmental effects, German home services show ambivalent results: On one hand, housing organisations are not interested in intermediating alternative mobility offers such as car sharing or bike messengers, whereas on the other hand, customers demand delivery services that in general have ambivalent environmental effects.

Social impacts of home services

By providing social services, German social housing companies aim at maintaining a considerable quality of life even in big social housing estates that suffer most from an increasing common social gap. Therefore, providing help for neighbourhoods or individuals with special needs is the most important challenge for German social housing companies at the moment. Actually, most German home services refer to social effects by initiating common activities or integrative measures.

Confronted with financial restrictions on part of public institutions and an increasing diversification of housing forms, housing companies usually co-operate with public and non-governmental institutions to react on urban social deficiencies. In this context, care and supervision services such as home care or youth employment projects support individual integration, while leisure time activities such as support for local communities or urban renewal activities promote integrative neighbourhoods.

A prominent service example for individual integration is the adaptation of apartments for elderly or handicapped residents. Similarly, services relating to economic issues e.g. debts consulting or employment projects for unemployed can have indirect integrative effects for the residents involved. Finally, services that increase a feeling of safety and security predominantly relate to elderly people. In this context, consulting or accompaniment services provide mental help for seniors living alone, while safety measures for frail people help to prevent physical impairments.

Apart from that, nearly all care and supervision services as well as leisure time activities aim at strengthening social networks in the neighbourhood. The range of services spans from temporary events (e.g. an annual residents' meeting or a monthly neighbourhood renewal conference) to constant offers such as common meeting rooms or sports facilities. Particularly NGOs furthermore provide support for residents that like to syndicate for a special interest. These services empowering residents to act for their interests are moreover an important mean to operate local service offers on a non-profit level. Therefore, they are essential for stabilizing districts with special needs on a long-term.

Summary of social aspects: There are many social home services that have the potential to reduce individual and common social problems. The range of services spans from universal neighbourhood renewal strategies and meeting points for local self-help groups to individual debts' consulting and the supervision of children of single parents. To stabilize their social service offer, many housing companies and cooperatives therefore tend to initiate residents' engagement. In Germany, most home services aim explicitly or implicitly at supporting integrative neighbourhoods. Accordingly, social home services are successful when supporting social networks and reducing social exclusion.

Economic impacts of home services

Concerning possible economic effects of home services, relevant services aim either at reducing operating costs by resource saving measures or at improving the resident's financial situation by individual consulting. In addition, some services may indirectly affect the local job market by creating employments and diversifying the job offer.

However, in general, home services do not create new jobs on the first job market, as they complement an existing core business either in the housing or the service industry. Several examples of expanding home service offers also indicate that the provision of home services does not secure existing jobs on the housing market. Only specific job training programs for youths or long-term unemployed have relevant effects on employment.

As most home services are based on non-profit economy, they neither have positive or negative effects on the financial situation of the residents, with the exception of financial and debts' consulting that has obviously direct effects on the individual's financial situation. Employment projects moreover indirectly affect the income of participating residents while energy saving facilities reduces the total housing costs.

By using delivery services of food cooperatives, residents can directly support regional markets. Apart from that, local employment projects support a local district economy. Accordingly, establishing non-profit economic structures such as swap shops or volunteer jobs can provide alternative occupation possibilities.

Provided that investments are held to a minimum, home services are generally profitable for housing organisations as they have considerable effects on the customer satisfaction and are a successful means to keep customership. Moreover, they have an enormous impact on the neighbourhood atmosphere and therefore upvalue a housing estate.

Summary of economic aspects: German home services are generally based on non-profit economy. In order to promote a sustainable home service offer, housing organisations as main intermediaries must therefore realize these potentials rather than trying to compete with commercial service providers. Furthermore, employment projects for youths or long-term unemployed are successful instruments for social integration.

4.2 Strategy II: Making sustainable home services more popular

Apart from assessing existing home services according to their impact on sustainability, sustainable home service provision can be promoted by disseminating good practice examples. Therefore another project approach was to give a sample on good practice examples (see chapter 4.2.2) in different home service fields. The introducing scenario of "living with sustainable home services" (see chapter 4.2.1) should illustrate the wide

range of home services that can have direct or indirect effects on sustainable development.

4.2.1 Living with sustainable home services

Harriet P. heard a wheeze through her apartment's door and looked through the peephole. She saw that Polly O., her neighbour from the fourth floor, was standing on the first landing with a bunch of shopping bags, gasping heavily. "Oh dear, at her age she should really use the Relocation Service to get an apartment on the ground floor," she thought. Harriet P. breathed a sigh of relief that she had accepted the offer from her landlord, the S.H.C. – Social Housing Company, to change to a smaller, elderly appropriate apartment on the ground floor.

Although she had been living in her former apartment for 38 years and did not really want to move out, she changed her mind when she broke her arm by stumbling over her threshold in the kitchen two years ago. Fortunately, Mr. Cooper, the S.H.C. serviceman, was coming along to change a name plate, heard her cries and ran into his office to fetch Harriet P.'s keys from the emergency board. She had to spend six weeks in hospital, but Mr. Cooper engaged a "home-sitter" of the S.H.C. Tenants' Association who looked after her apartment, fed her cat, watered her plants and emptied her letterbox on a daily basis.

When she finally came home, he took her aside and gave her a brochure on the so-called "S.H.C. – Service Agency": "I strongly recommend you to look into the Elderly Relocation Service." Harriet P. looked at the brochure. "Huuh, what an offer: no steps and no thresholds in the whole apartment, handrails, grab-bars and toileting aids in the bathroom, moreover removal management, emergency calls, shopping delivery and …what are 'health information transmission capabilities'?" "You know," Mr. Cooper explained, "there is a new thing called 'remote health monitoring' which basically means that you wear a bracelet that constantly supervises your pulse and blood pressure. In case of a problem, the local social service gets a warning and tries to contact you. But Mrs. P., as far as I can see, you're still far too young for that." Harriet P. smiled flattered, but at the same time she thought that she could not afford such a sophisticated service. "Sorry, but I'm afraid that this will be too expensive for me." "If you would agree to live in a smaller apartment, you won't have any additional costs compared to your present rent," Mr. Cooper told her, "Besides, the social welfare pays a good share of the costs". He twinkled at her. "You're right. As my son has moved to Cologne, one and a half rooms are enough for an old woman like me. As long as I can stay in my neighbourhood, I'd like to use your wonderful Relocation Service!"

Then everything went quickly: Mr. Cooper accompanied her to the social welfare office the following week to apply for subsidies for a senior-friendly housing design modification. Afterwards the S.H.C. prepared a ground floor apartment for her that was only one block away from her former home. Moreover, the Elderly Relocation Service included a Removal Help that was organised by volunteers of the tenants' association. Some furniture that she did not need anymore in her smaller apartment was stored in the

local “storage room” until her son came the next time to pick it up. As she was so grateful for the volunteers that helped her at the removal, she donated another wardrobe and a table for the tenants’ association that allocates them to needy families.

When she finally got the keys of her new apartment, Mr. Cooper gave her another brochure of the S.H.C.-Service Agency called ‘Services for Seniors’: “You’ll find all services that are included in the Elderly Relocation Service on the green pages, the yellow pages are information about leisure activities in your neighbourhood. Some additional services are described on the blue pages - that can be interesting for you as well.”

Harriet P. sat down in her armchair to read through the paper. She was astonished that she could use a shopping or organic food delivery service every two weeks for free as well as a consulting on energy saving household appliances. She also found five coupons for small technical problems and ten for using the laundry delivery service. When she opened up the yellow pages, she could not suppress her astonishment “My gosh, I didn’t know that there is so much going on in my district!” Although she was often passing by the local neighbourhood centre, she always thought that there were only activities offered for children and young people since there were usually children playing in front of it or adolescents rushing in and out. But now she recognized that there were also regular Senior Coffee Parties on Mondays, a Senior Photo Club on Wednesdays and even a Senior Internet Club on Thursdays. Furthermore, she found the tenants’ association programme for seniors on the blue pages that offered boat-trips and day-trips to interesting cities nearby. “Oh, I always wanted to go to Prague, maybe I can still sign up for the trip?” And it wasn’t expensive either!

Since then, Harriet P. has tried a lot of services and leisure activities provided by the S.H.C.-Service Agency, the neighbourhood centre or the tenants’ association. Every two weeks, she orders cat litter, toilet paper and mineral water from the local supermarket as well as an organic food box from local farmers. She also used the “Energy- and Water-Reducing Package” which included the installation of water-saving installations and a new toilet tank as well as energy-saving lamps. She already saved so much water and electricity costs that this investment has nearly been paid off.

The last time, Harriet’s son came to visit her, she surprised him by buying tickets for a musical from the S.H.C.-Service Agency. She even hired a car at the local Car Sharing-Agency to get there comfortably. Harriet was a little bit proud, when her son noticed respectfully that she has become a lot more active in the last two years.

Harriet P. even joined the tenants’ association and founded with some new friends of the Senior Internet Club an “Adopt a grandparent”-service. Actually, it was more an “Adopt a child”-concept, as they offered to care for single parent’s children for very little money. Harriet has “adopted” two children, 9-year-old Sarah and 7-year-old Sergej that come every afternoon for two hours to her apartment. Harriet P. helps Sarah to do their homework and supports Russian Sergej to improve his language skills. Sometimes they also meet other “adopted” grandparents with their “grandchildren” in the

playground. When Sarah's mother comes to pick-up her child, she often stays for a coffee in Harriet's kitchen to have a chat.

"I haven't even noticed how much my life has changed in the last two years," she thinks, still listening to the sounds from the corridor. All of the sudden, Harriet grabs the brochure of the S.H.C.-Service Agency from her telephone cupboard, opens the door and hands it to Polly O.: "I really recommend you to have a look on the Elderly Relocation Service! By the way, would you like to come with me to the Seniors Coffee Party tonight?"

4.2.2 Good practice examples of sustainable home services

The presented scenario of a broad home service provision illustrates the wide range of sustainable services complementing housing conditions. There are different scientific approaches to detect relevant fields of action regarding a more sustainable home service supply. Previous studies on sustainable households focused on household functions or needs, such as shopping, cooking, eating, clothing, care, personal hygiene, food storage and preparation, leisure activities at home or transportation (Vergragt 2000, Gatersleben and Vlek 1998). Within these functions, researchers tried to design scenarios of "alternatives for a more sustainable household" and study their feasibility (Vergragt 2000).

Many of these service fields lie within the consumption clusters of households that are the most environmentally relevant: Spangenberg and Lorek (2002) found out that the total resource requirement of only three clusters, construction and housing, food and nutrition, and transport and mobility makes up for nearly 70 % of material extraction and energy consumption and than 90% of land use. In relation to the household consumption clusters, we described the following German good practice examples according to the general home service fields (cp. Table 3-1, p. 62, for more detailed information see annex, chapter 5.2, pp. 104):

- Information & communication services
- Technical building services
- Security services
- Household services
- Social and health services
- Transport and delivery services
- Leisure time services

Further information on the presented good practice examples is given in the annex (cp. chapter 5.2, pp. 104).

Information & communication services

Information and communication services are relevant for changing the residents' consumption behaviour towards a more sustainable lifestyle. Whereas Counselling on Eco Housing reduces environmental impacts, the Debts' Consulting and the Advisory Board on Operating Costs aim at improving the resident's social and economical situation.

Consulting on Eco Housing: The Berlin environmental association "Green League" supports sustainable development of neighbourhoods in giving advice on environmental issues such as environmental friendly construction and renovation, rain water management, greening of backyards or domestic pollutants. Based on a situation analysis, they develop concepts and give advice on legal matters or on possible subsidies. Another important activity of the Green Leagues is to protect urban biotopes as well as endangered urban species such as special birds or bats.

Debts Consulting: Financial losses due to rent arrears have risen constantly in the last years. As some tenants are only temporarily unable to pay their rent, e.g. because of short-term unemployment, housing companies do not profit on a long-term from simply enunciating a summary dismissal: On one hand, tenants usually do not pay their rent arrears after moving out and on the other hand, particularly a social housing company is dependent on residents with low income. Therefore, the Berlin social housing company GSW established the Tenants Social Service that provides debt consulting to sensitively find individual solutions in cases of rent arrears. As personal distresses are a common cause for rent arrears, Tenants' Social Service social workers deal individually with each case intermediating care for mentally disordered residents, applying housing subsidies for needy people and arranging an instalment. Debts' consulting is actually the most effective mean to reduce rent arrear losses as the Tenants' Social Service employees deal with the causes and do not just remove the symptoms. As residents that are not able to pay their rents often suffer from socio-psychological problems, the Tenants Social Service includes the according house community by informing them on their neighbour's condition, particularly in cases of odour or noise nuisances.

Advisory Board on Operating Costs: In 2000, the Berlin housing company WBG - Wohnungsbaugesellschaft Marzahn started a campaign called „Runter mit der zweiten Miete" („Bear down the second rent") to motivate their residents in saving operating costs by reducing their resource and energy consumption. After having modernised most of their 32,000 dwellings according to new energy-saving standards, the WBG Marzahn began to broadly inform their residents on methods to save resource related costs in order to make the construction measures effective. Apart from educating 50 employees to so-called "Operating Cost Skilled Consultants", the housing company established an "Advisory Board on Operating Costs" of volunteering tenants that analyse utility cost developments and inform other tenants on saving potentials. Thus, the WBG Marzahn faces up to a critical control of its management, but equally profits from an improved mutual trust on the part of its tenants.

Technical building services

Technical building services can have important environmental effects regarding energy and resource consumption. By saving energy and resources, residents furthermore benefit from reduced operating costs. The following examples show different approaches aiming at saving heating and electrical energy (Energy Contracting), reducing water (Rainwater Collector and Storage) and waste consumption (Waste Sluice).

Energy Contracting: The partnership between the Berlin housing cooperative (Wohnungsbaugenossenschaft) "Bremer Höhe" eG and the Berlin Energy Agency (www.berliner-energieagentur.de) is a good practice of energy contracting that generally aims at finding the financially optimal solution for installing energy-efficient building facilities. Since 2001, 455 cooperative dwellings are heated and powered by three combined heat and power units (CHPs) on the rooftop that reduce CO_2 emissions by over 40 % (450 t/a). Moreover, operating costs at the "Bremer Höhe" remain under the Berlin average. Simultaneous to the construction measures, the energy-consulting agency Prenzlauer Berg e.V. (www.energieberatung-pb.de) informed the residents individually about energy energy-efficient facilities.

Rainwater Collector and Storage: The Berlin housing company STADT UND LAND is the first German housing organisation that agreed to establish an environmental management as well as to an external evaluation according to the European environmental act EMAS II. In this context, they also realized sustainable water management concepts in three STADT UND LAND housing estates. This concept includes rainwater collector and storage facilities for gardening water consumption and a processing plant for grey water. Moreover, several construction measures reduced sealed land. Parallel to the construction measures, the company started a broad information campaign to inform their residents on sustainable water consumption.

Waste Sluice: An electronic ‚waste sluice' is an intelligent waste bin that enables to price waste amounts individually. In 2000, the WBG - Wohnungsbaugesellschaft Marzahn mbH (Housing Company Marzahn Ltd.) introduced waste sluices as part of a one-year pilot project that was initiated by the Berlin City Cleaners (Berliner Stadtreinigung). The project aimed at exchanging usual residual dustbins by waste sluices that are controlled by a magnetic chip card distributed to the residents. This chip card registers every waste unit of 10 l that is put into the solar powered waste sluice and therefore enables an individual pricing according to the household waste amount. As recycling goods are not recorded, residents are motivated to use the waste recycling system.

Security services

Security services mainly aim at enhancing the resident's well being. Although sustainability effects are indistinct in this service field, the demand for safety and security services strongly raised during the last years. Security services can consist in either personal surveillance (e.g. Concierges) or in technical measures (e.g. Emergency Call Systems).

Concierges: In contrast to other countries, German housing companies employ concierges in neighbourhoods with special development needs to increase a feeling of security in their housing complexes. Concierges actually fulfil similar responsibilities as janitors with the exception that they are permanently present in or nearby the dwellings. In several pilot projects, residents of anonymous pre-fabricated housing estates

appreciated the existent of a concierge that became moreover an important central contact institution in these settlements.

Emergency Call Systems: Emergency call systems enable elderly and frail residents to stay in their apartment as they represent a permanent connection to institutions helping in emergency cases. So for example, the Johanniter Social Service provides a mobile push-button, that directly sends a signal to the local service station. The relevant assistant can subsequently communicate with the concerned person via a hands-free telephone set.

Household services

Household services either relate to provision, maintenance and repair of household devices or to home care. There is a broad range of provision forms within the household service field, from direct supply by housing companies (e.g. Direct Repair Service) over commercial repair services to non-profit home care (e.g. "Help from Tenant to Tenant").

Direct repair service: In some of their housing estates, the Berlin housing company GSW provides a coordinated technical support that is based on a standard contract with a local repair firm. This contract defines a monthly standard payment of all repair jobs in one certain district. Consequently, tenants can directly contact the local repair firm in case of emergencies. This simplifies appointments and work flows both for the resident and the repair firm. Similarly, the housing company benefits from this arrangement as they save personal resources by outsourcing the workflow organisation to the tenant.

"Help from Tenant to Tenant": Activities of the Berlin housing company's "GSW Tenants' Association" predominantly aim at strengthening neighbourly relationships by organising common events and social help "from tenant to tenant" such as shopping delivery or haircutting for elderly residents. Concentrating on residents with special needs like frail, elderly or handicapped persons, the Tenants' Association supports an integration of people that often have less social contacts than usual tenants. As most services are for free, the offer of the Tenants' Association is open to all residents. This also enables needy residents to reach a considerable comfort e.g. considering personal care services such as hairdressing or pedicure.

Social and health services

Social and health services have predominantly indirect social, economical and environmental impacts on sustainable development. Social services generally aim at improving the neighbourhoods' quality of life by either providing community services that simultaneously fulfil superior sustainable development goals such as integration or revaluation of neighbourhoods (e.g. Neighbourhood renewal activities or BIG STEPS Service Stations) or health services (e.g. Senior Adequate Housing) that rather refer to individual needs.

Senior Adequate Housing: In cooperation with several social service stations, the Berlin housing company GSW provides a complete adaptation of apartments for elderly and handicapped residents. In this context, the social services offer a consulting on possible construction measures and subsidies. On part of the GSW, technical employees subsequently execute and manage the relevant measures. Apart from that, the GSW cooperates with several non-governmental home care institutions in order to follow the demand of elderly residents to stay in their apartment as long as possible.

BIG STEPS Service Stations: Damages caused by youth vandalism are one of the most essential problems in neighbourhoods with special needs. Equally, the number of young people that have a substandard education and no professional experiences increases continually in these districts. So the Berlin housing company GSW and the social association Jugendwohnen im Kiez e.V. (Youth housing in the hood) have initiated a project called BIG STEPS (abbreviation of **B**eschäftigung mit **i**ntegrierter **G**rundqualifizierung – Service-**St**ationen zur **E**ntwicklung **p**roblematischer **S**tadtteile, Employment with integrated basic qualification – service-stations for the development of problematic neighbourhoods). The predominant aim of BIG STEPS is to give adolescents a professional perspective and to socially stabilize districts with special needs.

The GSW established five so-called "service-stations" for the BIG STEPS project in selected neighbourhoods (Thermometersiedlung, Obstalleesiedlung, Wilhelmstadt, Zabel-Krüger-Damm and in the district „Grüne Stadt") that represent local centres for youth's events and activities. In every service station, craftsmen and social workers coach eight youth to learn a trade by simultaneously revaluating the appearance of their neighbourhood. Activities of BIG STEPS participants include elimination of graffiti, cleaning jobs, construction works and renovation of GSW apartments. Moreover, they organise local events such as street ball-competitions or a "seniors breakfast".

Neighbourhood renewal activities: The Berlin housing organisation GSW takes part in local neighbourhood renewal activities by initiating a systematic social management in nine selected districts. In this context, the GSW organises so-called "neighbourhood conferences", a network for all local initiatives to compile a common development strategy. On basis of the neighbourhood conferences' results, the GSW develops according services and construction measures. By providing financial support and meeting rooms, they for example initiated regular consulting hours by a local contact person as well as several tenants' activities (e.g. a tenants meeting point, a boat construction course, a craftwork atelier, a music project etc.) in the GSW social housing district 'Pulvermühle'.

Transport and delivery services

As traffic is the main causer of environmental pollution and energy consumption, this field of action is crucial for ecological aspects of sustainability. Although mobility and delivery services are comparatively unpopular for home service providers and have ambivalent ecological effects, they offer important potentials to enhance sustainable

development in general. Transport and delivery services provided by non-governmental organisations, such as the Organic Food Delivery, Meals on Wheels or pick-up services, follow social goals by helping residents with special needs (e.g. elderly or handicapped residents). Commercial alternatives of transport and delivery services, such as the Car Sharing Service, rather relate to all residents in order to compensate infrastructural deficiencies.

Car Sharing Service: The Berlin housing company GSW cooperates with the Berlin car sharing agency "Stattauto" in one of their settlements. GSW tenants profit from this cooperation by lower sharing fees and an extra local car sharing station on-site.

Organic Food Delivery: The Berlin environmental association "Green League" offers a consulting service on organic nutrition via telephone and a stand on the organic market in the Berlin district Prenzlauer Berg twice a month. Moreover, they intermediate a subscription of organic vegetables that are delivered at home by the women's cooperative Die Bäuerinnen – The Peasant Women (www.baeuerinnen.de).

Leisure time services

Similar to care and supervision services, leisure time activities aim to improve the quality of life in certain districts. While housing organisations provide leisure time services predominantly in order to enhance integration and community building in general (Common Rooms), commercial service providers rather address individuals with entertainment and sports' services (Activities for Elderly Residents).

Common Rooms: Particularly housing cooperatives possess common rooms for their members' use. So for example the Berlin cooperative bbg - Berliner Baugenossenschaft established a sports' hall as well as a children's playroom called "Playnest" ("Spielnest") in their big estate settlement "Ortolanweg". Subsequently, local residents began to organise in personal contribution several regular get-togethers in these premises. The self-organised service offer spans from senior coffee parties over children activities to a "women's gym club".

Activities for Elderly Residents: Elderly people run a risk to grow lonely when their partners have died or their family is not living in their vicinity. They particularly need social contacts in case of increasing frailty that constrict their accustomed lifestyle. Therefore the Augustinum residence for elderly people in Kleinmachnow opens up possibilities for single seniors to live in a peer community that motivates to actively take part in group events. The house theatre, drawing and potter studios, music rooms and a library are free to use for leisure activities. Moreover, residents can participate in organised activities such as French courses or Bridge Clubs. In addition, residents can use the Health Centre on the premises with swimming pool, sauna and physical therapy offer.

Neighbourhood services: Apart from 16 senior adapted, barrier-free apartments with common rooms, the "Bremer Höhe" estate provides many meeting points such as a barbecue terrace, a playground or a garden lounge. Moreover, the cooperative promotes socially organised self-help in organising festivities and common initiatives to save additional housing costs by e.g. common garden care. Furthermore, the "Bremer Höhe" provides discounts for organic food delivery and a barter shop for household devices. In addition, the cooperative plans to establish a "competence exchange" to intermediate services "from resident to resident" as well as a local concierge to act as a central contact person and offer all relevant home services demanded by the residents.

4.3 Summary: Strategies for better sustainability performances of home service portfolios

As construction measures accompanying a service (e.g. installing a waste sluice for waste reduction or counselling by installing a block heat and power plant) entail high material, resource and energy consumption, but also set the course for energy-saving and eco-efficient facilities, they are crucial for enhancing sustainable development. Consequently, in case of an adaptation of the stock to new demands or installing additional building features, modernisation measures should be analysed and optimised to minimize their direct environmental impact. Most important direct economic effects of additional building facilities are savings due to eco-efficient facilities that save energy and resources on one hand, but similarly save operating costs on the other hand. Furthermore, additional building facilities can have indirect social effects, when initiating social contacts (e.g. meeting rooms) or supporting residents with special needs in their lifestyle (e.g. apartments adapted to elderly or handicapped).

However, most home services have only indirect ecological impacts, but direct social effects. Generally organised on a non-profit basis, they also correspond to economic aspects of sustainability. Intermediating primary services of NGOs, housing organisations directly support integrative community activities. In addition to social benefits, housing organisations promote their positive public image and gain indirect economic benefits. Moreover, social activities that improve the quality of life in certain districts support customer relationships and therefore indirectly reduces the housing organisations losses due to vandalism and vacancy.

As energy-efficient and resource saving building facilities have remarkable effects on the energy and resource consumption, counselling on energy-efficient building facilities as well as on environmental-friendly consumer's behaviour are important sustainable home services. These services entail predominantly indirect environmental effects by providing incentives to use environmental products or to abstain the use of products that cause environmental damage. Apart from energy and resource saving, home services with positive environmental impacts can also relate to biological diversity in supporting e.g. the protection of endangered species or biotopes.

In Germany, home services with social impacts predominantly aim at increasing the residents' awareness for social issues and at supporting integrative neighbourhoods. By providing social services, German social housing companies managed to maintain a considerable quality of life even in big social housing estates that suffer most from an increasing common social gap.

With respect to economical impacts, sustainable home services concentrate on counselling on reducing energy consumption and consequently housing costs, as well as individual counselling e.g. by debts consulting. As most home services are based on non-profit economy, only exceptional examples have the potential to create minor profits.

In order to assess sustainability effects of home services, the sustainability assessment tool provides a set of indicators to estimate direct and indirect impacts. Applying the tool on their home service portfolio, home service providers are able to relatively assess their service portfolio and initiate discussions in their company. On this basis, home service providers can develop strategies to make their home service portfolio more popular. Furthermore, home service providers can integrate home services in their portfolio with good sustainability performances.

5 Annex

5.1 Sustainability Assessment Tool

The Sustainability Assessment Tool is a qualitative instrument for estimating potentials of optimising the institution's sustainability performance by checking its home services according to possible sustainability effects. The Tool is based on the following checklists.

5.1.1 Environment

Material use

In order to assess the effects of the service regarding materials use, consider the following questions:

What is the effect of the service on the quantity of materials used?

What is the effect of the service on the hazardousness of the materials used?

What is the effect of the service on shifting from non-renewable to renewable materials?

What is the effect of the service on promoting the use of recyclable/recycled materials?

The effect of the service on material use

	-2	-1	0	1	2	NA	
Worsens the situation regarding materials							Improves the situation regarding materials

Rationale for the evaluation, taking into account the above questions:

Energy use

What is the effect of the service on the quantity of energy used (incl. passengers and freight transport)?

What is the effect of shifting from non-renewable to renewable energy?

What is the effect of the service on the use of more energy efficient passengers and freight transport modes?

The effect of the service on energy use

	-2	-1	0	1	2	NA	
Worsens the situation regarding energy							Improves the situation regarding energy

Rationale for the evaluation, taking into account the above questions:

Water use

What is the effect of the service on the quantity of water used?

What is the effect of the service on the use of grey (reused)/rain water?

The effect of the service on water use

	-2	-1	0	1	2	NA	
Worsens the situation regarding water use							Improves the situation regarding water use

Rationale for the evaluation, taking into account the above questions:

Waste

What is the effect of the service on the quantity of waste generated?

What is the effect of the service on the hazardousness of the waste generated?

The effect of the service on waste

	-2	-1	0	1	2	NA	
Worsens the situation regarding waste							Improves the situation regarding waste

Rationale for the evaluation, taking into account the above questions:

Emissions

What is the effect of the service on the quantity of air emissions?

What is the effect of the service on the characteristics of air emissions, including from passengers and freight transport (e.g. CFCs, GEG, acid rain, smog, VOCs, etc)?

What is the effect of the service on the quantity of water emissions?

What is the effect of the service on the characteristics of water emissions?

The effect of the service on emissions

	-2	-1	0	1	2	NA	
Worsens the situation regarding emissions	☐	☐	☐	☐	☐	☐	Improves the situation regarding emissions

Rationale for the evaluation, taking into account the above questions:

Space use

What is the effect of the service on the amount of space use?

What is the effect of the service on the amount of constructed space?

What is the effect of the service on the quality of the green spaces and natural habitats?

The effect of the service on space use

	-2	-1	0	1	2	NA	
Worsens the situation regarding space use	☐	☐	☐	☐	☐	☐	Improves the situation regarding space use

5.1.2 Social

Equity

Does the service improve equality between people?

Does the service promote fair trade?

Does the service reduce social exclusion?

Does the service promote employment of the disadvantaged?

The effect of the service on equity

	-2	-1	0	1	2	NA[1]	
Reduce equity	☐	☐	☐	☐	☐	☐	Increase equity

Rationale for the evaluation, taking into account the above questions:

Health

Does the service promote (mental and physical) illness prevention and/or treatment?

The effect of the service on health is

	-2	-1	0	1	2	NA	
Worsens health	☐	☐	☐	☐	☐	☐	Improves health

Rationale for the evaluation, taking into account the above questions:

Safety and security

Does the service have potential to reduce crime?

Does the service have potential to reduce vandalism?

Does the service have potential to reduce the risk of injuries?

The effect of the service on safety and security is

	-2	-1	0	1	2	NA	
Less personal safety & security	☐	☐	☐	☐	☐	☐	More personal safety & security

Rationale for the evaluation, taking into account the above questions:

Comfort

Does the service help to save time?

Does the service increase convenience and/or luxury of the residents?

Does the service reduce annoyance: noise, odour and/or pollution?

The effect of the service on comfort is

	-2	-1	0	1	2	NA	
Less comfort							More comfort

Rationale for the evaluation, taking into account the above questions:

Social contacts

Does the service promote social self-help: e.g. barter shops and swap Internet sites?

Does the service promote communication (e.g. between the neighbours, residents and HO)?

Does the service improve neighbourhood atmosphere?

The effect the service has on social contacts

	-2	-1	0	1	2	NA	
Less contacts							More contacts

Rationale for the evaluation, taking into account the above questions:

Empowerment

Does the service increase opportunities of participation?

Does the service provide new channels to residents toward decision-makers (e.g. electronic ones)?

The effect of the service on residents' ability to influence decision making that effects them

	-2	-1	0	1	2	NA	
Less ability to influence							More ability to influence

Rationale for the evaluation, taking into account the above questions:

5.1.3 Economic

Employment

Does the service create new jobs?

Does the service secure existing jobs?

Does the service reduce long-term unemployment?

What kind of employment (part-time/full time/long term contracts/seasonal work) does the service promote?

The effect of the service on employment (or maintaining existing jobs, if they were endangered)

	-2	-1	0	1	2	NA	
Less employment							More employment

Rationale for the evaluation, taking into account the above questions:

Financial situation of the residents

Does the service help residents save money?

Does the service create more income for the residents?

Does the service lead to debt or tax reduction?

Does the service have social tariffs or funding?

The effect of the service on financial situation of the residents (in relation to the existing way to fulfil a specific need)

	-2	-1	0	1	2	NA	
Less money							More money

Rationale for the evaluation, taking into account the above questions:

Regional products and services

Does the service cause diversification of services supply?

Does the service create more opportunities for local producers and service providers?

Does the service cause marketing of regional products?

The effect of the service on regional economy

	-2	-1	0	1	2	NA	
Less regional products and services	☐	☐	☐	☐	☐	☐	More regional products and services

Rationale for the evaluation, taking into account the above questions:

Profitability for the company

Is the service profitable in the short and/or long term?

Does it create losses?

Is the service directly or indirectly funded?

Is it profitable due to the re-organisation of the service provision or because of better client relationships?

The effect of the service on the financial situation of the company

	-2	-1	0	1	2	NA	
Losses	☐	☐	☐	☐	☐	☐	Profit

Rationale for the evaluation, taking into account the above questions:

Profitability for the economy / region / community

Is the service profitable from a macroeconomic perspective (less costs for social and environmental damage)?

Does the economic efficiency of the whole service system improve?

The effect of the service on the financial situation of the economy / region / community

	-2	-1	0	1	2	NA	
Losses	☐	☐	☐	☐	☐	☐	Profit

Rationale for the evaluation, taking into account the above questions:

Information and awareness

Does the service increase training, awareness, and skills of the residents?

The effect of the service on knowledge, awareness or skills

	-2	-1	0	1	2	NA	
Less knowledge	☐	☐	☐	☐	☐	☐	More knowledge

Rationale for the evaluation, taking into account the above questions:

Summarized Sustainability Profile

Environment	Social	Economic
1 Material use	1 Equity	1 Employment
2 Energy use	2 Health	2 Financial situation of residents
3 Water use	3 Safety and Security	3 Regional products and services
4 Waste	4 Comfort	4 Profitability of the company
5 Emissions	5 Social contacts	5 Profitability of the economy / region / community
6 Space use	6 Empowerment	6 Information and Awareness
Total	Total	Total
Average	Average	Average

The *Total* is the sum of the numbers above without (NA). 0 means not relevant. NA means not available. The *Average* is the total divided by the number of indicators without those nominated (NA).

5.2 Good Practice Service Profiles

5.2.1 „ Residents' Meeting Places" at the bbg

Name of Provider	**bbg Berliner Baugenossenschaft eG**
Address	Pacelliallee 3, 14195 Berlin
Country	Germany
Number of Employees	26

Description of the service

Although originally a duty of public authorities, many social housing companies began to organise residents meetings in deprived neighbourhoods to prevent further degradation of buildings and surroundings in consequence of youth vandalism or other residents' neglects. In general, housing companies provide premises as well as financial and personal resources while motivating their tenants in organizing neighbourhood activities themselves. In less deprived areas, residents' meetings contribute to a more resident-friendly atmosphere in the neighbourhood.

The Berlin cooperative bbg - Berliner Baugenossenschaft has always been active in motivating their members in socially organised self-help. Although also initiating regular mother-children-meetings or leisure activities for youths, the bbg predominantly provides ground floor premises for self-organised neighbourhood activities. So the housing cooperation established for example a common residents' meeting place as well as a children's playroom called "Playnest" ("Spielnest") in their big estate settlement "Ortolanweg". Consequently, local residents began to organise in personal contribution several regular get-togethers in these premises. The self-organised service offer spans from senior coffee parties or children activities to a young digital photographers club that gives young residents an understanding of new technologies.

Organisation of the service

While the bbg – housing cooperation provides premises for the neighbourhood centre, local youth activities are organised by residents. A volunteering resident for example offers a young photographers club called „Ortoclick", while another tenant organizes the renting of the common residents' meeting place and the "Playnest" children room (Genossenschaftsforum 2002, p. 15). The local Berlin City Mission (Berliner Stadtmission) provides activities for younger children in the "Playnest" room.

Personal, material and financial resources

As the housing cooperative only provides the premises for the residents' meeting point and the "Playnest", the offer of neighbourhood activities is dependent on the residents' engagement that usually volunteer for some hours a week. The non-profit Margareta-

Spettmann association founded by bbg members purchased technical equipment for the digital imaging course and supported the cooperative in equipping the "Spielnest" play room.

Active cooperative members organise the occupation of the common rooms as well as certain activities such as a regular senior coffee party, a skat club or the young photographers' club. The Berlin City Mission organizes further activities for children from 7 to 14 years.

Origin of the service

The mission statement of the cooperative is to strengthen social networks and help underprivileged residents, therefore, facilitating neighbourhood activities follows the corporate philosophy. Moreover, big estate settlements such as the "Ortolanweg" estate often lack leisure space, so organizing activities for residents can compensate this deficiency. Neighbourhood centres are very common for cooperatives that particularly aim at supporting a corporate feeling among its members. So, all buildings in the "Ortolanweg" settlement are equipped with a ground floor common room that are used as laundries, saunas or residents' meeting points. Depending on the residents' motivation to volunteer for common activities, the offer of local neighbourhood activities changes throughout the years.

Potentials and restraints

The demand for residents' meeting points and neighbourhood activities increases in German big estate settlements as marketing problems became more and more obvious in the last years. Therefore, residents' meeting locations based on residents' participation became an efficient solution in settlements with infrastructural deficiencies by simultaneously stimulating community activities. However, as non-profit organisations or volunteers organize most of the local activities for residents, this service is dependent on the motivation of the integrated actors.

Sustainability Profile

Environmental Profile: A study from the Berlin Technical University ("WohnNach") found out that the strong social network supported by common activities in the district "Ortolanweg" promotes environmental-friendly consumers' behaviour. As residents know each other, they e.g. socially control their neighbours in separating their waste or organise common deliveries for organic vegetables. In deprived areas, residents' meeting places are as well a successful mean to support a corporate feeling and consequently promote an awareness of the common physical surroundings. Therefore, facilitating neighbourhood activities can indirectly contribute to preserve leisure space and building facilities by preventing neglecting behaviours or youth vandalism.

Social Profile: Residents' meeting and common activities predominantly help to strengthen neighbourhood networks. However, good neighbourly relationships

generally show indirect social effects that are hardly measurable. Although the estate "Ortolanweg" is not regarded as deprived area, organizing activities for children and youths is e.g. a good instrument to prevent youth vandalism and other consequences of an anonymous or family-unfriendly atmosphere. Apart from getting impulses for a job choice (e.g. in the sector of digital imaging), young people learn to integrate in social networks. Moreover, they can find friends in their neighbourhood and are supervised while their parents work.

Economic Profile: Big housing complexes that are often marked by fluctuation and vacancies characterize the bbg settlement „Ortolanweg". Therefore, residents actively organize common activities to improve social networks and the quality of life in these areas. This can result in a better public image of the neighbourhood, which equally contributes to upgrade the value of real estate. Moreover, self-organized activities for adolescents can promote abilities like team working and self-motivation as well as professional skills such as digital imaging. Apart from that, facilitating youth activities can furthermore directly affect profits for the housing organisation, as children of residents are more likely to remain in the neighbourhood as future tenants.

Summarized Sustainability Profile

Environment		Social		Economic	
1 Material use	0	1 Equity	2	1 Employment	0
2 Energy use	0	2 Health	2	2 Financial situation of residents	0
3 Water use	0	3 Safety and Security	1	3 Regional products and services	0
4 Waste	0	4 Comfort	1	4 Profitability of the company	2
5 Emissions	0	5 Social contacts	2	5 Profitability of the economy / region / community	2
6 Space use	0	6 Empowerment	1	6 Information and Awareness	2
Total	0	Total	9	Total	6
Average	0	Average	1.5	Average	1.0

5.2.2 „Energy contracting" at the Bremer Höhe

Name of Provider	Wohnungsbaugenossenschaft "Bremer Höhe" eG
Address	Schönhauser Allee 59b, 10437 Berlin
Country	Germany
Number of Employees	About 20

Description of the service

Energy costs have a considerable share in the total housing costs. Moreover, a third of the total German energy consumption is dedicated to housing. Therefore, energy contracting aims at efficiently reducing housing costs and emissions by integrated concepts for rational energy use. Providing a full service from consulting to the installation of heating facilities and constant cost management, energy contracting agencies offer an efficient lifecycle management to the housing organisation that effects sustained cost savings both for the resident and the housing organisation.

In general, energy contracting is based on an evaluation of the existing heating facilities and possible saving potentials by new contracts or techniques. Hereupon, the energy contractor intermediates between energy suppliers, producers of technical equipment and the housing organisation to negotiate good conditions for his customer. Finally, he manages all necessary construction measures and arranges legal frameworks to minimize current cost. In most cases, energy contracting allows such an enormous reduction of current heating costs that investments in eco-efficient techniques amortize soon.

The partnership between the Berlin housing cooperative (Wohnungsbaugenossenschaft) "Bremer Höhe" eG and the Berlin Energy Agency (www.berliner-energieagentur.de) is a good practice of energy contracting. Since 2001, 455 cooperative dwellings are heated and powered by three block heat and power plant on the rooftop that reduce CO_2 emissions by over 40 % (450 t/a) (Bremer Höhe 2002). Moreover, operating costs at the "Bremer Höhe" remain under the Berlin average. Accompanying the construction measures, the energy consulting agency Prenzlauer Berg e.V. (www.energieberatung-pb.de) informed the residents individually about energy energy-efficient facilities, as they have to assign to use exclusively the new facilities for heating or electricity.

Organisation of the service

The essential part of the service consists in developing an optimal long-term concept for heating and power facilities before starting modernisation measures. Thus, the Berlin Energy Agency convinced the cooperative and the Berlin Senate as fundraiser with a concept for installing a block heat and power plant on the rooftop of the cooperative buildings. They realized this concept in 2001 by contracting the Berlin Energy Agency for maintenance for 10 years.95 % of the residents purchase the local produced power and heat.

Personal, material and financial resources

The provision of the service consists mainly in preparing agreements between contractor, housing organisation, providers of heating and power facilities, energy suppliers and subsidy institutions. Subsequently, the contracted technicians install the according facilities. On a long-term, the contractor has to secure the maintenance of the facilities. On part of the housing organisation, decision makers negotiate the institutional arrangements with the contractor. Transferring the whole operation to the energy contractor, the housing organisation does not participate actively in the provision of the service, but rather facilitates the service.

As energy contracting does not result in intricate long-term duties, housing organisations do not create new employments. However, on part of the co-operators, energy contracting is a seminal, future-proof job field that entails further employment opportunities for subcontractors (e.g. technical specialists).

Energy contracting is strongly dependent on the according technical equipment. Block heat and power plants are the most efficient mean to reduce CO_2 emissions and resource consumption, if they are based on environmental-friendly heating and power production.

Using energy contracting, new energy-efficient technologies decentrally producing power and heat are mainly financed by optimising financial resources during the conceptual process. The Berlin Energy Agency therefore used commercial networks to achieve the least possible costs for installing a block heat and power plant. Nevertheless, these facilities are only profitable when most of the residents agree to purchase the locally produced energy. Consequently, the "Bremer Höhe" requested their residents beforehand to subscribe a relating commitment, so 95 % of them finance the current operation by purchasing power and heat from the local block power and heat plant. Thus, tenants profit from rents that do not exceed the rent in general central heated and powered buildings.

Origin of the service

In Germany, reduction of housing related resource consumption and CO_2 emissions is one the most urgent field of action for promoting sustainable development. However, implementing new technologies is often too expensive for housing organisation, as they are not entitled to transact these costs on the rent. Energy contracting promises to achieve a win-win-situation for the landlord and the residents by combining investments in efficient energy saving measures with optimisation of financial resources.

The Berlin Energy Agency was founded in 1992 as a public-private partnership equally by the State of Berlin, the Bewag AG and the Deutsche Ausgleichsbank in order to support energy saving and the implementation of renewable energy sources of public premises. Initially working for public institutions, the Berlin Energy Agency expanded their offer for private companies and housing organisations (Berliner Energieagentur 2003). Their mission is to identify energy saving potentials of buildings and to facilitate the implementation of renewable energy sources. During the last years, they specialised in this new field by developing concepts for public premises. Due to their experience, the cooperative "Bremer Höhe" decided to contract the Berlin Energy Agency in 2001 to work out a concept for energy saving heating and power facilities in their stock.

The cooperative "Bremer Höhe" was founded in 2000 in order to modernise 500 dwelling units in the Berlin district Prenzlauer Berg by participation of the residents. To save costs for installing and operation of new heating facilities, the cooperative decided to initiate a public call for tenders for an energy contracting. For contracting the Berlin Energy Agency, the "Bremer Höhe" cooperative used the energy-contracting standard contract called B.E.St. that was developed by the Berlin Senate to use for public energy contracting models.

Potentials and restraints

Energy contracting preconditions a complete change of power and heating facilities, so it is only profitable in case of an anyway upcoming modernisation. Moreover, as a new service, relevant actors still have a little knowledge about energy contracting. Furthermore, installing block power and heat plants is only profitable in big housing estates owned by one single institution.

Sustainability Profile

Environmental Profile: According to the Berlin Energy Concept, CO_2 –emissions shall be reduced by 4.1 mil. t until 2010, thereof the housing sector must save 70 % (3 mil. t). As most housing companies are marked by strong budget restraints, they can only invest in renewable energy supply by simultaneously saving costs. So, energy contracting is one of the most successful instruments to combine ecological and economical benefits in the housing sector. The combined heat and power units at the "Bremer Höhe" reduce CO_2 emissions by over 40 % (450 t/a).

Social Profile: Energy contracting combined with an individual energy consulting promotes the residents' awareness for environmental issues and for their contribution to reduce resource consumption. This can result in a corporate feeling concerning their neighbourhood.

Economic Profile: Transferring installation, initial operation and maintenance of the power and heating facilities to a single specialist, the energy contractor can guarantee heating and power at the least possible costs by optimising facilities and purchase prices. Residents at the "Bremer Höhe" pay about 0,67 /m² a month for heating and warm water which is less than the Berlin average. So both residents and landlord benefit from energy contracting. Moreover, energy contracting secures high-qualified sustainable jobs for the provider as well as for the subcontractors.

Summarized Sustainability Profile

Environment		Social		Economic	
1 Material use	2	1 Equity	0	1 Employment	1
2 Energy use	2	2 Health	1	2 Financial situation of residents	2
3 Water use	0	3 Safety and Security	0	3 Regional products and services	2
4 Waste	2	4 Comfort	0	4 Profitability of the company	2
5 Emissions	2	5 Social contacts	1	5 Profitability of the economy / region / community	2
6 Space use	0	6 Empowerment	0	6 Information and Awareness	2
Total	8	Total	2	Total	11
Average	0.8	Average	0.3	Average	1.83

5.2.3 „Green League - Network of ecological service providers“

Name of Provider	**Grüne Liga (Green League) Berlin e.V.**
Address	Grünes Haus, Prenzlauer Allee 230, 10405 Berlin
Country	Germany
Number of Employees	About 20

Description of the service

The Grüne Liga - Green League acts a network and portal for 29 member groups that offer social and ecologic services. Therefore its main task is consulting on relevant subjects in the field of housing as well as the intermediation of services that can support a sustainable consumer's behaviour. Main fields of action are (Grüne Liga 2003):

- **Nutrition:** The Green League offers a consulting service on organic nutrition via telephone or personal on an organic market in the Berlin district Prenzlauer Berg twice a month. Moreover, they intermediate a subscription of organic vegetables that are delivered at home by the women's cooperative Die Bäuerinnen – The Peasant Women (www.baeuerinnen.de)
- **Consulting for civic initiatives:** In addition, the Green League consults citizens in the field of Local Agenda-21 activities, nature conservation and protection of species. Accordingly, they help residents to protect and restore their natural environment e.g. by giving legal advice to initiatives that aim to preserve a biotope in their neighbourhood. Furthermore, they inform citizens on participation processes.
- **Ecological Housing**: Considering housing, the Green League supports sustainable development of neighbourhoods in giving advice on subjects such as ecological construction and renovation, rain water management, greening of backyards or domestic pollutants. Based on a situation analysis, they develop concepts and give advice on legal matters as well as on possible subsidies. Another important activity of the Green Leagues is to protect urban biotopes as well as endangered urban species such as special birds or bats.

Organisation of the service

The Green League is a network of East German environmental initiatives that is subdivided in state related divisions. The Berlin division is segmented in six East-Berlin district groups with 29 member groups in total. Presenting a central contact point, the administration is located in a central office called "Green House" that also accommodates other non-profit ecological associations. Supporting district networks for ecological and social activities, the Green League Berlin office focuses on management and organisation as well as public relations, while several district groups initiate own practical activities such as workshops or cultivation of biotopes.

Personal, material and financial resources

The Green League's Berlin office concentrates on consulting on ecological subjects and intermediates external service providers e.g. an organic food delivery. About 20 employees presently work in the Green League's Berlin office. Most employees have a

professional background in the field of environmental or social work and the original education of Green League employees spans from humanities or engineering to landscape architecture or environmental studies.

The Green League's central office building called "Green House" is an essential factor for joining all member groups and supporting their cooperation. Moreover it has an important function for the association's public relations.

Green League's employments are either financed by state employment measures or projects initiated by state institutions. Moreover, practical trainees and performers of a so-called "voluntary ecological year" work temporarily for the Green Leagues main office. Consequently, employments are dependent on the state's economic situation and usually temporary. As the Green League is a non-profit association, their services such as consulting on housing related subjects are not charged.

Origin of the service

In the first instance, the Green League's mission statement is based on principles stating a support of environmental and social initiatives. Moreover, as an explicit East-German union, the association turns to newly established initiatives that partly have other social, political or ecological focuses than long-established West-German initiatives due to different historical and economical backgrounds. Therefore, the Green League joins all small ecological initiatives founded in the former GDR and can more intensively care about special needs of small service providers that began comparatively recently to act on environmental subjects in East Germany.

Although the main founders of the Green League started ecological initiatives already before the Reunification, the official constitutional process did not begin until in 1989 as private initiatives were not favoured by the GDR-regime. After several meetings of different ecological consortiums, the network was officially founded in 1990 in the East German small-town Buna. In order to coordinate local initiatives and to act as a single legal body, five East-German state offices were established to support the "environmental development of the society". In 1994, the structural process of the Green League was determined by adopting corporate mission as well as the principles relating to environmental issues.

Since then, the Green League is accredited by the Federal Nature Conservation Law and therefore officially authorized e.g. to give legal advice relating to development plans. The regional office in Berlin has a wide offer of services concentrating on housing, information on Local Agenda-21 activities, nature conservation and protection of species as well as organic nutrition. All activities are dedicated to support ecological consumer behaviour and sustainable development.

Potentials and restraints

The most important restraint for the Green League's activities is that employments are dependent on public financial support. Therefore, own activities are limited to a minimum of investments. Declared as a non-profit association, the Green League does not aim at making profits. Thus, they do not charge their services.

Sustainability Profile

Environmental Profile

The Green League's consulting on ecological housing directly effects a reduction on resource consumption caused by housing e.g. concerning material or rainwater use. In addition, concentrating on local service providers and producers, it contributes to reduce emissions caused by transport of goods. Moreover, promoting organic agriculture helps to preserve natural resources by protecting land resources, plants and animals.

Social Profile

Connecting several local actors' groups, the Green League strengthens small networks of local service providers in the field of organic agriculture, environmental counseling or civic initiatives. Acting as their organ, the Green League supplies a central contact point to these service providers and therefore supports residents' environmental and political initiatives in realizing common activities. This can moreover indirectly support neighborly relationships.

Economic Profile

The Green League predominantly supports non-profit initiatives and sustainable company organisations. For example, the women's agricultural cooperative Die Bäuerinnen – The Peasant Women distributes organic local food and thus supports the regional Brandenburg agriculture. In addition, this cooperative is lead and run exclusively by women that are particularly vulnerable to unemployment in Brandenburg. Being a cooperative, the female employees participate in decision-making and have a stake in the cooperative profits.

Summarized Sustainability Profile

Environment		Social		Economic	
1 Material use	2	1 Equity	2	1 Employment	2
2 Energy use	2	2 Health	2	2 Financial situation of residents	0
3 Water use	2	3 Safety and Security	0	3 Regional products and services	2
4 Waste	2	4 Comfort	0	4 Profitability of the company	1
5 Emissions	2	5 Social contacts	2	5 Profitability of the economy / region / community	2
6 Space use	2	6 Empowerment	2	6 Information and Awareness	2
Total	12	Total	8	Total	7
Average	2	Average	1.3	Average	1.2

5.2.4 The GSW „ Tenants' Association"

Name of Provider	**GSW – Gemeinnützige Siedlungs- und Wohnungsbaugesellschaft Berlin mbH**
Address	Kochstraße 22, 10969 Berlin
Country	Germany
Number of Employees	About 1000

Description of the service

The GSW Tenants' Association runs a support program for young people, elderly and handicapped through the participation of volunteers. Further goals of the association are consumer's consulting and support of professional training. As most services are organised by volunteers, they do generally not entail costs for residents. The GSW Tenants Association program includes:

- Renting of guest apartments and community centres
- Organisation of day-trips and local events, e.g. information evenings on housing related subjects, computer courses, Christmas coffee parties etc.
- Intermediation of volunteer services such as mobile hairdressing, accompany service (e.g. for administrative visits), manicure etc.

Organisation of the service

In order to outsource an institution to care for tenants with special needs, the GSW decided to found a Tenants' Association that simultaneously acts as an organ of the residents. Although most members of the board are GSW employees, the Tenants' Association acts as an independent body. It addresses primarily members, but services are also available to non-members.

Services offered by the Tenants' Association are managed and intermediated via the central Tenants' Association Office in the Berlin district Lichterfelde Ost, where lectures, information meetings or coffee parties take place. Moreover, the Tenants' Association rents guest apartments in the same district. So, the Associations services tend to concentrate around the central office, although the Tenants' Association initially relates to the whole Berlin GSW stock.

Personal, material and financial resources

On one hand, volunteering residents provide comparatively simple services that are usually based on their personal skills. On the other hand, the Tenants' Association office employees coordinate these services and offer further services that need higher professional qualification such as organising lectures, day-trips, donations etc.

The GSW finances a full-time secretarial job for organising the Tenants' Association service offer. Another part-time employment organises the renting of guest apartments. Volunteering association members provides most of the services. The full-time GSW employee has to manage the association's marketing and secretarial work whereas the half-time employee organises the renting of guest apartments. To establish a central

contact point, the Tenants' Association Office in Berlin Lichterfelde Ost was completely equipped as an office including a common room for special events such as coffee parties or lectures. Except of the Internet Club, the generally social services are not based on technical appliances.

The GSW housing company supports the Tenants' association by personnel and financing of material costs. Committed members work as volunteers. Most services are free for the residents, only day-trips are charged by a small contribution. The GSW co-finances lectures or day-trips by company funds and by collecting donations. Guest apartments are rented at a cost price of 30 €.

Origin of the service

The GSW Tenants Association is required by its constitution to support residents with special needs such as handicapped, children, youth or elderly. Moreover, its mission is to inform its members on housing relevant subjects. Defined as a non-profit association, its service offer is available particularly for needy residents. Furthermore, organising GSW tenants, the association promotes participation in company relevant decisions.

The GSW Tenants' Association was founded in 2000 in order to meet the interests of its members and to integrate vulnerable resident groups such as needy elderly or handicapped. During the constitution process, active tenants cooperatively worked out a concept with GSW employees to form the official association's institution. After establishing a central Tenants' Association Office in the Berlin district Lichterfelde Ost, association members began to engage in providing unsalaried services.

Potentials and restraints

At the moment, most activities of the Tenants' Association concentrate on the district where the Association's office is located. Since financial resources are restricted, the Association's service offer is dependent on tenants' engagement as volunteers. The main problem of the association is that only few residents volunteer. Moreover, there are only few members yet, as the association was founded some years ago.

Sustainability Profile

Environmental Profile

As the GSW Tenant's Association pursues predominantly social goals, environmental effects are not relevant. However, social neighbourhood networks can support indirectly environmental-friendly behaviour, e.g. by controlling commonly waste separation.

Social Profile

Activities of the GSW Tenants' Association predominantly aim at strengthening neighbourhood relationships by organising common events and social help "from tenant to tenant". Concentrating on residents with special needs, like frail elderly or handicapped, the Tenants' Association supports an integration of people that often have

less social contacts than usual tenants. As most services are for free, the offer of the Tenants' Association is open to all residents. This also enables residents with special needs to reach a considerable comfort e.g. considering personal care services such as hairdressing or pedicure.

Economic Profile

Socially organised self-help contributes to strengthen local non-profit networks based on volunteering or swapping goods. Costs for residents are held to a minimum and often for free. Moreover, the Association tries to work out individual solutions e.g. when a person is not able to pay for a daytrip.

Summarized Sustainability Profile

Environment		Social		Economic	
1 Material use	0	1 Equity	2	1 Employment	2
2 Energy use	0	2 Health	2	2 Financial situation of residents	2
3 Water use	0	3 Safety and Security	2	3 Regional products and services	2
4 Waste	0	4 Comfort	2	4 Profitability of the company	0
5 Emissions	0	5 Social contacts	2	5 Profitability of the economy / region / community	1
6 Space use	0	6 Empowerment	2	6 Information and Awareness	1
Total	0	Total	12	Total	8
Average	0	Average	2	Average	0.75

5.2.5 The GSW "Debts Consulting"

Name of Provider	**GSW – Gemeinnützige Siedlungs- und Wohnungsbaugesellschaft Berlin mbH**
Address	Kochstraße 22, 10969 Berlin
Country	Germany
Number of Employees	About 1000

Description of the service

Financial losses due to rent arrears have risen constantly in the last years. As some tenants are only temporarily not able to pay their rent, e.g. because of short-term unemployment, housing companies do not profit on a long-term from simply enunciating a summary dismissal: On the one hand, tenants usually do not pay their rent arrears after moving out and on the other hand, a social housing company is particularly dependent on residents with low income. Therefore the Berlin social housing company GSW established the "Tenants Social Service" that provides a debts consulting to find sensitively individual solutions in cases of rent arrears. As personal distresses are a common cause for rent arrears, "Tenants' Social Service" social workers deal individually with each case intermediating care for mentally disordered residents, applying housing subsidies for needy people and arranging instalments. Debts consulting is actually the most effective mean to reduce rent arrear losses as the "Tenants' Social Service employees" deal with the causes and do not just remove the symptoms.

As residents that are not able to pay their rents often suffer from socio-psychological problems, the "Tenants Social Service" includes the according house community by informing them on their neighbour's condition, particularly in cases of odour or noise nuisances. So the "Tenants' Social Service" employees began to act as mediators in neighbourly conflicts and gradually extended their offer for the whole GSW clientele (GSW 2003).

Organisation of the service

Due to its specific field of activity, the „Tenants Social Service" operates quite independently from other GSW divisions. In opposite to the Neighbourhood Renewal Management that relates to a certain district, the "Tenants Social Service" acts citywide and employees operate each from an own decentralised sub office. In case of a rent arrear, a „Tenants Social Service" employee contacts the particular tenant to find out in several conversations, why he did not pay the rent. After analysing the resident's social situation, the social worker works out a concept to avoid further indebtedness and to settle his present debts. In cases of psychological distress, drug or alcohol addiction, he subsequently contacts non-profit institutions to organise a psychological care for the resident and to initiate public subsidies if possible. Other solutions to reduce individual expenses are for example moving into a smaller apartment or reducing operating costs. As the "Tenants Social Service" employees usually visit the residents at home, the former central office was exchanged to one-person divisions acting from different districts.

Personal, material and financial resources

As the most common causes for rent arrears are socio-psychological problems or sudden personal distresses, most "Tenants' Social Service" employees have a social work background. Apart from six full-time social workers, one office employee works for the "Tenants Social Service" that is also entitled to employ performers of alternative national service. In most cases of a resident's indebtedness, it is necessary to cooperate with institutions, mostly social service providers or public welfare offices. Internal cooperation usually consists in initial information about "problematic tenants" given by local customer consultants to the "Tenants Social Service".

A debts consulting is dependent on employees that have experience in social work, so housing companies should consider creating new employments for this field. The "Tenants Social Service" is located in a decentralised sub office that is completely equipped. Apart from that technical appliances and additional infrastructure is comparatively unimportant. The "Tenants Social Service" is completely financed by the GSW and does not obtain any public funds. However, as the debts' consulting service helps to reduce rent arrear losses from existing tenancies by 10 %, it is indirectly refinanced.

Origin of the service

Rent arrears are a major problem of the German housing industry: The BBU – Federation of Berlin and Brandenburg Housing Companies, estimated that total rent arrears amounted to a sum of 160 million € in Berlin and Brandenburg in 2000. Social housing companies are particularly affected by rent arrears, as they traditionally have a high proportion of tenants with low income. Furthermore, economic tendencies as well as the Reunification supported a further division between residents with or no low income in Berlin social housing complexes, as solvent residents tended to raise a single home in the suburbs. Social housing companies such as the GSW are bound by their mission statement to shelter particularly people with special needs and therefore have to find a way to react in cases of rent arrears.

Most common causes of rent arrears are socio-psychological problems, sudden unemployment and indebtedness as a consequence of private loans. In order to reduce rent arrear losses on a long-term without enunciating a summary dismissal, the housing company has to remove the cause of individual distress by analysing the tenant's social situation. In 1990, a GSW accounting clerk initiated the GSW debts consulting as a consequence of constantly increasing rent arrears. Gradually, the "Social Tenants Service" established as a central institution to care for indebted tenants as well as to settle neighbourly disputes. Formerly commonly working in a central office in the Berlin district "Siemensstadt", each "Social Tenants Service" employee operates from one of the five decentralised sub offices since 2002.

Potentials and restraints

As rent arrears have risen enormously during the last decades, the demand for individual solutions to help insolvent residents has simultaneously increased. From the company's point of view, social work often demands a time-intensive care of the according resident, while effects are usually indirect and only visible on a long-term. Particularly in times of shortages, this results in restrictions for social services, as social work is often regarded as an additional task with "doubtful" effects. Moreover, social workers and accounting clerks often have no common understanding of dealing with the situation, which results in a certain internal pressure of explanation for the "Tenants Social Service". This situation even sometimes causes contradictory activities e.g. enunciating a dismissal while initiating a meeting for a debts consulting.

Sustainability Profile

Environmental Profile

The „Tenants Social Service" debts' consulting is based on a total survey on the resident's income and expenses including costs for resource and energy consumption. As reducing energy and resource consumption can be a good mean to save expenses, a debt consulting could indirectly support an environment-friendly behaviour.

Social Profile

In opposite to financially motivated summary dismissals, debt consulting is a basic approach to analyse individually social causes of rent arrears than to deal with economic symptoms. Having a social work background, the "Tenants Social Service" employees sensitively reintegrate according tenants in social life as well as in their neighbourhood by common discussions or informing the resident as well as his neighbours. So, debt consulting can indirectly support to socially stabilise a house community. Moreover, by stabilising the tenant's situation, the social housing company follows its mission statement to care for residents with special needs.

Economic Profile

Debt consulting predominantly aims at enabling needy residents to overcome their personal financial and social distress. Consequently, those residents can stabilize their situation on a long-term, amortize their debts and reliably pay their rents in the future. Equally, the social landlord profits from solvent tenants, as they are dependent on tenants with low income to a certain degree and therefore often confronted with rent arrears. Housing companies have proved that debts consulting can effectively reduce rent arrears losses that are a main problem of social landlords.

Summarized Sustainability Profile

Environment		Social		Economic	
1 Material use	1	1 Equity	2	1 Employment	0
2 Energy use	1	2 Health	2	2 Financial situation of residents	2
3 Water use	1	3 Safety and Security	0	3 Regional products and services	0
4 Waste	0	4 Comfort	2	4 Profitability of the company	2
5 Emissions	1	5 Social contacts	2	5 Profitability of the economy / region / community	1
6 Space use	0	6 Empowerment	0	6 Information and Awareness	1
Total	4	Total	8	Total	6
Average	0.7	Average	1.3	Average	1

5.2.6 The GSW "Neighbourhood Renewal Management"

Name of Provider	**GSW – Gemeinnützige Siedlungs- und Wohnungsbaugesellschaft Berlin mbH**
Address	Kochstraße 22, 10969 Berlin
Country	Germany
Number of Employees	About 1000

Description of the service

As a consequence of segregation and migration tendencies as well as of a lack of public investments, districts that suffer from inadequate living conditions and social deficiencies increased in many German cities. So, federal, state and local authorities initiated strategies to stop a further degradation of these districts by systematic investments and stabilizing activities that are summarized as neighbourhood renewal management.

The essential goal of neighbourhood renewal management is to cross-link all neighbourhood activities to an integrated strategy as diverse private, commercial and public institutions started different activities to upgrade those neighbourhoods. Moreover, neighbourhood renewal management aims at initiating special initiatives to stimulate socially organised self-help and a dialogue between residents, commercials, landlords and local authorities. Housing organisations usually participate actively in this process by initiating local projects as well as providing financial support or meeting rooms.

The GSW takes part in neighbourhood renewal management by initiating construction measures and a systematic social management in nine selected districts. In this context, the GSW coordinates own measures and organises so-called "neighbourhood conferences", a network for all local initiatives to compile a common development strategy. On basis of the neighbourhood conferences' results, the GSW develops according services and construction measures. For example, they initiated a regular neighbourhood conference, consulting hours of a local contact person and several tenants' activities (e.g. a tenants meeting point, a boat construction course, a craftwork atelier, a music project etc.) in the GSW social housing district 'Pulvermühle' by financial support and the provision of meeting rooms.

In the 'Thermometer' settlement, the GSW renovated a central building for public use that became a central tenants' meeting locale for all kinds of residential activities. Essential goals of all neighbourhood renewal management initiatives are to support neighbourly relationships, e.g. by establishing professional conflict mediation, and to create special facilities and services for elderly, children and adolescents.

The neighbourhood "Kottbusser Tor" in the Berlin district Kreuzberg is the most famous neighbourhood with special needs in Berlin. Declared as one of the first German 'modernisation districts' in 1963 and known for street fights and resistance against political decisions during the 1970's and 1980's, there are still many social and architectural deficiencies. Since 1991, the GSW started several initiatives to upgrade physical appearance of the "Kottbusser Tor" neighbourhood and to support neighbourly relationships. They for example employed two conflict managers for this district, started an employment program for unemployed youth called "COMPANY" and created a central neighbourhood centre for common activities.

Organisation of the service

In general, neighbourhood renewal management activities start by working out a renewal concept with relevant local commercial, private and public actors on basis of a social and architectural survey. Subsequently, the GSW organised "neighbourhood conferences" to participate local residents in their decisions. In most districts, the GSW established simultaneously a neighbourhood contact centre occupied by a "neighbourhood coordinator" to intensify the communication with their residents.

As neighbourhood renewal management predominantly consists in a multitude of local initiatives, intensive public relations' activities are important to raise the awareness of both local actors concerned and the general public. All initiatives organised by the "neighbourhood coordinator" aim at integrating residents in organising initiatives such as street festivals, lectures or civic panels. All neighbourhood renewal activities are collected in an annual report for the Berlin Senate on the initiative's state of the art and perspectives.

Personal, material and financial resources

GSW employees actively participate in the local neighbourhood renewal management team. Team members should be qualified in communications (management, mediation, networking), public programs (employment strategies, fundraising etc.), social work (youth, migrants, initiatives etc.) and commercial consulting (particularly for SME).

Apart from the GSW employees (conflict manager, neighbourhood coordinator, social worker etc.), several public institutions (the Senate's Department for Urban Development respectively for Health and Social Issues, district authorities etc.), local non-profit associations (e.g. Stadtteilausschuss Kreuzberg e.V., Nachbarschaftsverein Kotti e.V., Kiezgrün e.V) and other local housing companies participate in neighbourhood renewal management.

As one main goal of the initiative is to upgrade buildings as well as their environment, construction measures moreover involve the housing company's technical section. In order to coordinate local activities, it appeared useful to establish a completely equipped central contact office in the neighbourhood concerned.

Neighbourhood renewal management is predominantly funded by the Berlin State's programs "Environmental Amelioration Measures" and "Social-oriented Urban Development: Implementing integrated district measures in neighbourhoods with special needs". Furthermore, the program gets funds from the Federal State program "The Socially Integrative City", employment promotion programs and several locally initiated programs (Dietrich 2001). The GSW co-finances their neighbourhood renewal management activities and supports it by manpower and premises. The total sum of funds amounted to 75 million € from 1999 to 2002, thereof 13,2 million € were paid by Federal authorities, 22,3 million € by the European Union and 39,5 mil. € by the State of Berlin (Senatsverwaltung für Stadtentwicklung Berlin 2002).

Origin of the service

Neighbourhoods with special needs are marked by a high concentration of socio-cultural deficiencies, traffic nuisance, a lack of leisure space, vandalism and segregation processes. Neighbourhood renewal management therefore aims at counteracting these tendencies by integrated strategies worked out by all relevant public, commercial and

private actors in order to prevent a further social and economic neglecting of the districts concerned.

The GSW predominantly participates actively in neighbourhood renewal initiatives due to economic reasons as vandalism, fluctuation, vacancies and rent arrears are a considerable economic problem in neighbourhoods with special needs. In addition, being a former public social housing company, their mission statement demands a support of vulnerable residents.

In 1999, the Berlin Senate passed a resolution on social urban development that represented the foundation of neighbourhood renewal strategies in 15 selected 'burdened' districts. Although the GSW provided social services for many decades, neighbourhood renewal management as a common concept of all local actors was subsequently introduced to this resolution. So the GSW was one of the first housing companies that engaged actively in neighbourhood renewal management and established local "neighbourhood renewal management offices" as they possess a considerable share of premises in 9 neighbourhoods with special needs (Quartiersmanagement 2003).

Potentials and restraints

Neighbourhood renewal management is extremely expensive and therefore dependent on European, Federal and State funds. Initialised in neighbourhoods with considerable social, economic and structural deficiencies, it is often hard to motivate residents to participate in common activities. Moreover, it is nearly impossible to provide services on even a small charge due to the high amount of poor people in these districts. Finally, the Berlin State as well as local social housing companies is in a financial crisis that restricts further activities on this field.

Sustainability Profile

Environmental Profile

As most neighbourhood renewal activities aim at revaluating public green spaces, the local natural environment is often considerably restored. As a consequence of new natural leisure space, residents could increase the awareness of their surroundings that often suffered from vandalism and neglecting for decades. For example, waste disposal on public places decreased considerably in neighbourhoods that were part of environmental amelioration measures.

Social Profile

The predominant goal of neighbourhood renewal activities is to strengthen neighbourly relationships as the selected areas are often marked by anonymous or even conflictive relationships. Another important goal is to integrate young people, children and elderly as well as to improve the relationships between migrants and German residents. Most

neighbourhood renewal activities such as street festivals or common sport activities obviously had positive effects on the local social cohesion.

Economic Profile

By stabilizing neighbourly relationships and revaluating their buildings and surroundings, the GSW predominantly aims at reducing costs resulting from vandalism, tenants turnover and vacancy. Several employment projects directly turn to unemployed tenants to prevent them from further exclusion and indebtedness, e.g. by special employment measures. Moreover, neighbourhood removal management can have a positive effect on the customers' relationships, as residents become aware that the GSW tries to counteract social and structural deficiencies.

Summarized Sustainability Profile

Environment		Social		Economic	
1 Material use	0	1 Equity	2	1 Employment	2
2 Energy use	0	2 Health	1	2 Financial situation of residents	1
3 Water use	0	3 Safety and Security	2	3 Regional products and services	1
4 Waste	1	4 Comfort	2	4 Profitability of the company	1
5 Emissions	0	5 Social contacts	2	5 Profitability of the economy / region / community	2
6 Space use	2	6 Empowerment	2	6 Information and Awareness	2
Total	3	Total	11	Total	9
Average	0.5	Average	1.8	Average	1.5

5.2.7 „BIG STEPS – Employment Project" of the GSW

Name of Provider	**GSW – Gemeinnützige Siedlungs- und Wohnungsbaugesellschaft Berlin mbH**
Address	Kochstraße 22
	10969 Berlin
Country	Germany
Number of Employees	About 1000

Description of the service

Damages caused by youth vandalism are one of the most essential problems in neighbourhoods with special needs. Equally, the number of young people that have a substandard education and no professional experiences increases continually in these districts. So the Berlin housing company GSW and the social association Jugendwohnen im Kiez e.V. (Youth housing in the hood) have initiated a project called BIG STEPS (abbreviation of **B**eschäftigung mit **i**ntegrierter **G**rundqualifizierung – Service-**St**ationen zur **E**ntwicklung **p**roblematischer **S**tadtteile, Employment with integrated basic qualification – service-stations for the development of problematic neighbourhoods). The predominant aim of BIG STEPS is to give adolescents a professional perspective.

Apart from the GSW, the European Commission, the housing administrator Optima, Federal Employment Office and the BBU – Brandenburg Academy for the Housing Industry e.V, support the initiator „Jugendwohnen“. The GSW established five so-called “service-stations” for the BIG STEPS project in selected neighbourhoods (Thermometersiedlung, Obstalleesiedlung, Wilhelmstadt, Zabel-Krüger-Damm and in the district „Grüne Stadt“) that represent local centres for youth’s events and activities. In every service station, craftsmen and social workers coach eight youth in learning a trade by simultaneously revaluating the appearance of their neighbourhood. Activities of BIG STEPS participants include elimination of graffiti, cleaning jobs, construction works and renovation of GSW apartments. Moreover, they organise local events such as street ball-competitions or a “seniors breakfast”.

Organisation of the service

The non-profit association “Jugendwohnen” manages most parts of the BIG STEPS project. The GSW assists in coordinating the project and provides relevant premises as well as materials. All BIG STEPS activities are decentralised planned and managed in five service stations that also fulfil a function as neighbourhood meeting points. The service station employees are in charge of different tasks: one coordinator manages the organisation and administration of the service-stations, two social workers care of the assisted youth and social problem fields in the district whereas two craftsmen instruct the youth professionally and are responsible for local maintenance and renovation jobs.

Personal, material and financial resources

The non-profit association “Jugendwohnen” employs the staff of each service-station (one manager, two social workers and two craftsmen), whereas the GSW finances them by contracting for renovation, cleaning or maintenance tasks. The participating adolescents predominantly fulfil these tasks. The whole project is co-financed by the European Commission, the housing administrator Optima, Federal Employment Office and the BBU – Brandenburg Academy for the Housing Industry e.V.

The BIG STEPS project involves five full-time employees and eight participating adolescents. Two full-time employees work as social workers, two as craftsmen and one as manager. The service stations are essential for the project as central meeting and information points for the local youths. Therefore according premises, infrastructure and equipment were a precondition for providing this service. BIG STEPS is partly financed by the Federal Employment Office and partly by the GSW that places housing related orders with the service station.

Origin of the service

Due to a lack of future professional perspectives youth vandalism became a considerable problem in neighbourhoods with special needs. Thus, some housing and non-profit organisations started initiatives to create employment and apprenticeship

possibilities for young people with a substandard educational background. The non-profit association "Jugendwohnen" initiated the BIG STEPS project in order to find efficient solutions to counteract increasing tendencies of youth unemployment and vandalism in deprived Berlin neighbourhoods.

Following the example of similar French youth projects in metropolitan suburbs, the association "Jugendwohnen" started the BIG STEPS project in cooperation with several Berlin housing companies in 1999. Supported by the Federal Employment Office, the association established seven service stations in housing companies' premises until 2001. Since then, the concept successfully expanded. Presently, the GSW maintains nine BIG STEPS service stations.

Potentials and restraints

As the number of youth with a substandard education increases constantly in German metropolitan areas, the demand of small employment projects like BIG STEPS rises as well. Nevertheless, in spite of an intensive supervision, some participants still fail in entering the job market after expiration of their one-year participation due to further personal problems. Apart from that, housing companies state that project participants are often little motivated, which sometimes impairs the quality of renovation tasks.

Sustainability Profile

Environmental Profile

BIG STEPS supports a revaluation of surroundings and facilities in neighbourhoods with special needs that often suffer from vandalism damages and neglecting. Green spaces as well as public places are upgraded and therefore can be reused as local recreation sites.

Social Profile

The predominant goal of the BIG STEPS project is to give young people a professional perspective and to prevent them from social exclusion. Furthermore, BIG STEPS supports integration and neighbourhood relationships as all residents can use consulting services and leisure activities of the service stations.

Economic Profile

Apart from skills in handcrafts, the participating youths are trained in social activities such as organising neighbourhood events, tenants' coffee shops or delivery services for elderly residents. Moreover, they participate actively in neighbourhood initiatives to counteract a feeling of being helpless and excluded. As most of the youths have a substandard education, a program like BIG STEPS is an important instrument to prepare a professional career in spite of disadvantageous preconditions.

Summarized Sustainability Profile

Environment		Social		Economic	
1 Material use	0	1 Equity	2	1 Employment	2
2 Energy use	0	2 Health	0	2 Financial situation of residents	2
3 Water use	0	3 Safety and Security	2	3 Regional products and services	1
4 Waste	0	4 Comfort	2	4 Profitability of the company	2
5 Emissions	0	5 Social contacts	2	5 Profitability of the economy / region / community	2
6 Space use	2	6 Empowerment	2	6 Information and Awareness	2
Total	2	Total	10	Total	11
Average	0.3	Average	1.7	Average	1.8

5.2.8 „Advisory Board on Operating costs“ of the WBG Marzahn

Name of Provider	**Wohnungsbaugesellschaft Marzahn mbH**
Address	Mehrower Allee 52, 12687 Berlin
Country	Germany
Number of Employees	165

Description of the service

In 2000, the Berlin housing company WBG - Wohnungsbaugesellschaft Marzahn started a campaign called „Runter mit der zweiten Miete“ („Bear down the second rent“) in order to motivate their residents in saving operating costs by reducing their resource and energy consumption. After having modernised most of their 32,000 dwellings according to new energy-saving standards, the WBG Marzahn began to broadly inform their residents on potentials to save resource related costs in order to make the construction measures effective. Apart from educating 50 employees to so-called “Utility Cost Skilled Consultants”, the housing company established an “Advisory Board on Operating costs” of committed tenants that analyse utility cost developments and inform other tenants on saving potentials. Thus, the WBG Marzahn faces up to a critical control of its management, but equally profits from an improved mutual trust on the part of its tenants (WBG 2000a).

Personal, material and financial resources

The Advisory Board on Operating costs presently consists of eight volunteering tenants that prove utility cost accountings, analyse consumption developments and compile further saving potentials. Apart from that, the board is a common contact institution for the residents in matters of resource and energy saving behaviour (WBG 2000b). As part of a broader utility cost strategy, 50 WBG Marzahn employees were educated as Utility Cost Skilled Consultants. Subsequently, they conveyed their knowledge to other employees and tenants as well as to the members of the Advisory Board on Operating costs by e.g. offering workshops in Marzahn or organizing a “Day of Operating costs”.

Apart from the volunteer members of the Advisory Board on Operating Costs, further employments are not necessary. Although the service is not based on technical infrastructure, most saving potentials were initiated by relating construction measures. For example, reducing water consumption is only effective in case of an individual water meter and reducing heating costs is mainly dependent on effective heating facilities.

Being WBG Marzahn tenants, the members of the Advisory Board are motivated to control the company's accounting of operating costs in order to reduce their own housing costs on the one side and to participate other tenants in their knowledge on the other side.

Origin of the service

During the last years, operating costs have risen constantly, while the income situation of households in social housing estates have impaired. So, the WBG Marzahn meets the needs of its residents in enabling them to individually reduce their housing costs. Moreover, as the biggest East-German social housing settlement, the Berlin district Marzahn is marked by high-stored pre-fabricated buildings and stigmatized as anonymous and inhospitable. So the WBG Marzahn has actively worked on changing the image of this district by extensive public relations, a broad service offer as well as a multitude of ecological and social innovations concerning housing issues.

In 2000, the WBG Mahrzahn started it's initiative "Transfer of energy and knowledge 2000" that was chosen as an official EXPO-project due to its innovative and sustainable character (WBG 2000c). Main part of this initiative was a campaign on operating costs that included an information week on this subject. During this week, some active tenants agreed to take part in a new founded Advisory board on Operating Costs.

Potentials and restraints

Establishing an Advisory Board on Operating costs demands a company's commitment to reveal their accounting processes. Representing the tenants' opinion, some advises of the Board could result in "unpleasant" consequences for the company. Therefore, many housing companies do not consider establishing a Board on Operating costs to avoid problems caused by this transparency on internal management structures.

Sustainability Profile

Environmental Profile

A main goal of the Advisory Board on Operating Costs is to reduce energy and resource consumption in order to simultaneously save relating costs. In addition, concomitant consultant activities aim at increasing awareness for energy and resource consumption. Considerable savings of operating costs and resource consumption in the WBG's dwellings proved that the Advisory Board on Operating Costs reached its goal successfully.

Social Profile

The customer-oriented concept of the Advisory Board on Operating Costs, which is based on volunteering tenants, supports the resident's awareness for local activities. Thus, this service contributes to strengthen neighbourly relationships and a community feeling. By disclosing the company's utility cost management, the WBG moreover participates their tenants in common decisions and therefore supports the individual's social empowerment.

Economic Profile

In the first instance, the Advisory Board on Operating costs is a financial instrument to save resource and energy related costs. Residents therefore profit from this service by reducing their housing costs in changing their consumer's behaviour. As the Advisory Board on Operating costs consists in volunteering tenants, it does not entail considerable financial investments on part of the company that furthermore profits from positive effects on the company's corporate image.

Summarized Sustainability Profile

Environment		Social		Economic	
1 Material use	2	1 Equity	0	1 Employment	0
2 Energy use	2	2 Health	0	2 Financial situation of residents	2
3 Water use	2	3 Safety and Security	0	3 Regional products and services	0
4 Waste	2	4 Comfort	0	4 Profitability of the company	1
5 Emissions	2	5 Social contacts	1	5 Profitability of the economy / region / community	2
6 Space use	0	6 Empowerment	2	6 Information and Awareness	2
Total	10	Total	3	Total	7
Average	1.6	Average	0.5	Average	1.2

5.2.9 The WBG Marzahn „Waste Sluice"

Name of Provider	**Wohnungsbaugesellschaft Marzahn mbH**
Address	Mehrower Allee 52, 12687 Berlin
Country	Germany
Number of Employees	165

Description of the service

An electronic ‚waste sluice' is an intelligent waste bin that enables an individual pricing of waste. In 2000, the WBG - Wohnungsbaugesellschaft Marzahn mbH (Housing Company Marzahn Ltd.) introduced waste sluices as part of a pilot project that was initiated by the Berlin City Cleaners (Berliner Stadtreinigung). The project aims at exchanging usual residual dustbins by waste sluices that are controlled by a magnetic chip card distributed to the residents. This chip card registers every waste unit of 10 l that is put into the solar powered waste sluice. As recycling goods are not recorded, residents are motivated to use more intensively the waste recycling system.

Personal, material and financial resources

The essential precondition for implementing waste sluices is to exchange the usual residual dustbins and to install a waste sluice system instead. Apart from installing and maintaining the waste sluice system by a commercial provider, current activities to provide the service are limited to measuring and billing of the waste. Using a magnetic chip-card, information can easily be registered to compile transparent bills for the residents. Using a waste sluice, residents are charged for every 10 l unit of waste that is registered on their personal chip card used for opening the residual dustbin. The according housing organisation has to invest in all costs for installing a waste sluice. There are no subsidies or other financial incentives available for implementing a waste sluice yet.

Origin of the service

Waste separation has a long tradition in Germany: Recycling container systems for glass and paper were already introduced nationwide in the 1970ies and the German law comprises 800 laws and nearly administerial prescriptions. In 1991, the Dual System was introduced in Germany in consequence of a new law that obliged producers of goods to be responsible for the packages' disposal, while 2003 the "tin deposit" was introduced to reduce the use of tinned beverages.

The waste sluice is an effective instrument to reduce waste in big housing estates that are not individually priced yet and consequently tend to produce more household waste than individually priced single home settlements. The usual pricing of waste is dependent on the household size and the total waste amount of a housing complex, so residents are not motivated to save waste as they "co-finance" their neighbours anyway.

The waste sluice was developed predominantly by the Zwickau WESOMA GmbH, which invented the Zwickauer-Müllschleuse ® in 1996 for big housing estates that represent two thirds of the total dwellings in Zwickau. The Berlin City Cleaners initiated a waste sluice pilot project in 2000. Three housing companies took part and were successful in reducing waste in the pilot project settlements.

Potentials and restraints

Waste sluices are only relevant for big housing estates, as waste is always individually priced in smaller estates and single home settlements. Although the pilot projects have shown good results, there is a risk that the anonymous atmosphere in these big estates could support that residents put their waste in recycling containers or dispose it in public places instead of using the waste sluice. This irresponsible behaviour was indeed the main reason why the housing companies did not decide to install waste sluices after expiration of the pilot project phase. Furthermore, housing companies are in charge of installation and maintenance of the waste sluices while having no direct positive effects as the residents pay waste costs anyway.

Sustainability Profile

Environmental Profile

In Germany, waste recycling is based on waste separation that distinguishes recycling of plastic and metal goods (Yellow Dustbin), paper, organic and residual waste. By introducing the waste sluice in Marzahn, the use of recyclable waste systems increased enormously: Waste in the Yellow Dustbin amounted from 24 % to 76 %, collected paper from 62 % to 89 % and collected organic waste from 13 % to 64 %. Moreover, the total waste was reduced by nearly 50 % from 386 kg/a to 196 kg/a per resident from December 2000 to September 2001. Still, 40 % in the residual dustbin is organic waste and 80% of the waste in yellow dustbins is paper, organic or residual waste.

Social Profile

The pilot project settlement Marzahn is known as the archetype of East Berlin settlements with enormous heights and dwelling densities. It was constructed by a consequent standardization and simplification of the prefabricated GDR dwelling series. In these dwellings, problems initiated by anonymous neighbourhood relationships accumulate, as people do not identify with their surroundings. So, vandalism or neglect of the buildings and surroundings are also a result of a lack of social relationships. Using the waste sluice supports a certain control of neighbourly behaviour and can increase the awareness for a community feeling.

Economic Profile

In principle, waste disposal in big housing complexes is more expensive than in single home settlements that are individually priced. So, some German housing companies established an individual pricing of waste by installing a waste sluice. A waste reduction of about 200 kg/a as reached in the Berlin Marzahn pilot project corresponds approximately savings of 40 €/a. So residents can directly save money by using the waste sluice.

Summarized Sustainability Profile

	Environment		Social		Economic	
1	Material use	2	1 Equity	0	1 Employment	0
2	Energy use	2	2 Health	1	2 Financial situation of residents	2
3	Water use	0	3 Safety and Security	0	3 Regional products and services	0
4	Waste	2	4 Comfort	1	4 Profitability of the company	1
5	Emissions	2	5 Social contacts	1	5 Profitability of the economy / region / community	2
6	Space use	0	6 Empowerment	1	6 Information and Awareness	2
	Total	8	Total	4	Total	7
	Average	1.3	Average	0.6	Average	1.2

5.2.10 „24-h-care" at the Augustinum Housing Foundation

Name of Provider	Augustinum Kleinmachnow gGmbH
Address	Erlenweg 72, 14532 Kleinmachnow
Country	Germany
Number of Employees	98

Description of the service

The Augustinum in Kleinmachnow is a residence for elderly people. It is part of the Augustinum group, a nationwide acting social service company. Living in one of the 269 Augustinum apartments costs about 53 €/m² plus a security of nearly 19.500 €, but rents include fulltime services (e.g. daily meal, weekly apartment cleaning, swimming-pool, cultural events, secretary service) and temporary services (medical care, laundry, optician, medicaments delivery service, accompany service, technical maintenance). Furthermore, the Augustinum service staff guarantees a 24-h-available technical and personal emergency call.

The house theatre, drawing and potter studios, music rooms and a library are free to use for leisure activities. Moreover, residents can participate in organised activities such as French courses or Bridge Clubs. In addition, residents can use the Health Centre on the premises with swimming pool, sauna and physical therapy offer. Most facilities e.g. hairdresser, supermarket, bank or medical services, are also open to external Kleinmachnow residents. Apart from that, the Augustinum offers some sophisticated services for special events that span from party organisation to renting of guest apartments or a home-sitting service.

As part of the non-profit Augustinum Wohnstifte gGmbH (Augustinum Housing Foundations Ltd.), the Augustinum Residence Kleinmachnow belongs to the non-profit Augustinum Group that manages 21 Housing Foundations, three clinics and two sanatoriums in all parts of Germany. The Christian Augustinum Stiftung (Foundation) acts as board of directors. The Augustinum Service GmbH an outsourced service company that operates all service offers and the residences catering, is in charge of the services management. Apart from this, the Augustinum Group operates schools for children with disabilities and "sheltered homes" for people with old-age dementia. The Augustinum group accommodates 7,200 elderly residents and is therefore the biggest German social service provider.

Personal, material and financial resources

The Augustinum staff is in charge of all services provided for the foundation residents. Dependent on their task, Augustinum employees are specialized in technical, medical or consultant professions. Due to the broad service offer, many external service providers are indirectly participating in providing the residential services, although in perspective of its residents, the Augustinum acts as a single full-service 24-h-provider.

Recently 98 people work for the Augustinum in medical professions such as nurses, physic-therapists etc. whereas 15 people work for Clarus GmbH that cares for all operational services. The medical staff includes people who perform alternative national service, the so-called "voluntary social year" and apprentices. In 2001, about a half of the total Augustinum employees worked part time (Augustinum 2002).

Apart from elderly adapted and barrier-free apartments, the Augustinum is equipped with sophisticated facilities such as a swimming pool or a sauna. Designed as a self-sufficient unit, the Augustinum also includes a hairdresser's, a self-service shop and a doctor's practice that demands appropriate infrastructure. In principle, a complete and intensive care for seniors is expensive, so the Augustinum group developed a "solidary model" to finance care and housing for a broad number of people. Residents have to pay a pension of 53 €/m² that includes rent, operational costs, temporary personal care services, consulting, a weekly apartment cleaning, lunch and use of all facilities and leisure activity offers. Additional non-current services such as renting guest apartments, hairdressing or laundry services are charged by an extra contribution. So the standard price for a 32 m² apartment is 1.706,33 € (1.771,07 € pension minus 64,74 € interest for a 19.429,09 € housing loan). Entitled as a non-profit organisation, the Augustinum is eligible for tax relief.

Origin of the service

Part of the Diakonisches Werk (Deaconry) of the Protestant Church of Germany (DWEKD), the Augustinum Group acts as a non-profit service providers according to social and Christian missions. Providing apartments, according facilities and services for elderly, the Augustinum follows its goal to enable frail seniors to lead an independent and self-determined lifestyle.

On the occasion of the 1600th birthday of Saint Augustin in 1954, Priest Georg Rückert founded an „Association for Constructing a School Home" to establish a school for disabled children. Nine years later, the Augustinum foundation opened their first residence for elderly in Munich. Since then another 20 senior residences were founded and the Augustinum became European market leader in the social service sector.

The organisational structure of the Augustinum Foundation changed in 2001 because of market pressures such as the new Home Law that distinguishes pensions for housing/catering from care/ service. Essentially, these changes resulted in founding the Augustinum Group that manages the Augustinum schools for children with disabilities (SchulCentrum gGmbH), the Augustinum housing foundations and medical institutions (Augustinum Wohnstifte gGmbH) as well as the service sector (Augustinum Service GmbH) that operates the Augustinum catering and service management.

Potentials and restraints

Due to social and demographic changes, the demand for all-round service packages for elderly is definitively growing. The most important restraint to offer similar services to a broader clientele is that a 24-h-care and an extensive service offer claims a lot of financial resources.

Sustainability profile

Environmental Profile:

As the Augustinum concentrates on social services and 24-h-care, their home service offer does not intend to have direct environmental impacts, apart from creating natural leisure spaces by e.g. planting domestic plants or building up rain water ponds.

Social Profile

Elderly people run a risk in growing lonely when their partners have died or their family is not living in the vicinity. They particularly need social contacts in case of increasing frailty that constrict their accustomed lifestyle. Therefore, the Augustinum opens up possibilities for single seniors to live in a peer community that motivates to actively take part in group events.

Economic Profile

As a Christian housing foundation on a non-profit status, rents in the Augustinum residence are kept to a minimum. In spite of a considerable rent of 53 €, living in the Augustinum is relatively affordable and particularly favourable compared to a comparative free market service offer. Apart from that, the Augustinum is one of the biggest local employers in Kleinmachnow and therefore contributes to diversify the local economy.

Sustainability Profile

Environment		Social		Economic	
1 Material use	**0**	1 Equity	**2**	1 Employment	**2**
2 Energy use	**0**	2 Health	**2**	2 Financial situation of residents	**-1**
3 Water use	**0**	3 Safety and Security	**2**	3 Regional products and services	**2**
4 Waste	**0**	4 Comfort	**2**	4 Profitability of the company	**2**
5 Emissions	**0**	5 Social contacts	**2**	5 Profitability of the economy / region / community	**2**
6 Space use	**0**	6 Empowerment	**1**	6 Information and Awareness	**1**
Total	**0**	Total	**11**	Total	**8**
Average	**0**	Average	**1.8**	Average	**1.3**

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