Cohousing – social impacts and major implementation challenges

Local social networks are in decline, and housing is growing increasingly expensive. These are but a few of the current challenges in the field of housing. One possible solution is cohousing projects: these form local communities, create affordable housing, and contribute to a sustainable economy. Nevertheless, diffusion of cohousing remains slow. Transforming the housing sector is possible only as part of a larger political or social movement.

Ulrike Hacke, Kornelia Müller, Elisabeth Dütschke

Cohousing – social impacts and major implementation challenges
GAIA 28/S1 (2019): 233 – 239

Abstract
This paper builds on outcomes of the *TransNIK* project which analysed sustainable innovations in the fields of energy, water and housing. The focus here is on innovative cohousing initiatives contributing to a supportive environment for seniors and families and providing social mixing and rent reduction in the long term. The case study of four multi-generation and two *50plus* projects through document analysis, interviews, expert workshops and a survey has highlighted social benefits, economic and ecologic above-standard-solutions, but has also demonstrated that the implementation of such projects is full of preconditions. The implementation rate of cohousing projects shows little dynamics. Therefore, a systematic presentation of success factors, barriers and difficulties to transformation processes is given. However, cohousing projects are dependent on support, and there are indications that politics and sections of the housing industry are gradually becoming more open to these ideas. In addition, we are witnessing the slow growth of a consulting infrastructure.

Keywords
case study, cohousing projects, housing for the elderly, neighbourhood, social innovation

Ulrike Hacke, Dipl.-Soz. | +49 6151 290449 | u.hacke@iwu.de

Kornelia Müller | k.mueller@iwu.de

both: Institut Wohnen und Umwelt GmbH (IWU) | Rheinstr. 65 | 64295 Darmstadt | Germany

Dr. Elisabeth Dütschke | Fraunhofer Institute for System and Innovation Research ISI | Competence Center Energy Technology and Energy Systems | Karlsruhe | Germany | elisabeth.duetschke@isi.fraunhofer.de

© 2019 U. Hacke et al.; licensee oekom verlag. This Open Access article is published under the terms of the Creative Commons Attribution License CC BY 4.0 (http://creativecommons.org/licenses/by/4.0).
https://doi.org/10.14512/gaia.28.S1.10
Submitted December 12, 2018; revised version accepted June 27, 2019.

Potential pathways towards sustainability call for a change of practices in many areas of life. This paper explores innovative initiatives in the field of housing. Cohousing projects are promising experiments in building local social networks. Some of them show how low-cost housing is possible in the long term. However, their diffusion faces a range of obstacles.

The paper builds on research from the project *Transitionsgestaltung für nachhaltige Innovationen – Initiativen in den kommunal geprägten Handlungsfeldern Energie, Wasser, Bauen & Wohnen (TransNIK)* – one of the projects exploring a sustainable economy funded by the German Federal Ministry of Education and Research (BMBF). *TransNIK* considered sustainable innovations in the domains of energy, water and housing – all closely connected with the municipal level (Dütschke et al. 2019). In the following, we outline the main challenges in the housing sector and introduce cohousing as a social innovation. We provide more detail on six cohousing projects and examine their effects, especially with regard to the desired social networking. We analyse and discuss the factors affecting their diffusion, and draw conclusions.

Current challenges in the field of housing

The housing market in growth regions, in particular in the bigger cities, is affected by above-average new and re-letting rents. In the period from 2005 to 2011, the number of districts with rising rents increased from 25 percent to 77 percent (BBSR 2012). The development of the real estate market is similar: it became more expensive by about one fifth between 2010 and 2015 for both residential real estate and building land – again with strong regional variation (price index of the Federal Statistical Office). These price developments, together with the development of incomes, are making it increasingly difficult for certain populations to acquire adequate housing on the open market. According to calculations by the German Institute for Economic Research (DIW), income has fallen in real terms in the lower 40 percent of the income distribution between 2000 and 2012, while it has stagnated in the middle, and has risen by more than 15 percent in the top tenth of the income distribution (Goebel et al. 2015). >

TABLE 1: Overview of the six cohousing projects.

PROJECT	LEGAL FORM	INITIATION	FLATS	AGE MIX	SUPPORTING ORGANISATION/PROJECT DEVELOPER AND ITS MOTIVATION
Generationenhof Landau	one-house cooperative	bottom-up	37 rental flats	young + old	wohnprojekt+ beratung und entwicklung GmbH small consulting firm specialised in consulting project initiatives
Torfwiesen-Au Heikendorf	one-house cooperative + homeowners association	bottom-up	30 owner-occupied, rental and subsidised rental flats	young + old	conplan Betriebs- und Projektberatungsgesellschaft mbH project developer with a large catalog of services, primarily mixed forms of ownership; many own developments
Haus Mobile Stuttgart	umbrella cooperative + homeowners association	bottom-up	24 owner-occupied, rental and subsidised rental flats	young + old	pro... gemeinsam bauen und leben eG small cooperative, offers itself to existing groups as a service provider, primarily property development business, rental apartments are "loss-making business"
Ginkgo 1 Langen	homeowners association in cooperation with a housing company	bottom-up	26 owner-occupied and rental flats	50+	Gemeinnütziges Siedlungswerk GmbH communal housing projects as a small complementary business, already implemented six projects; proven participation model
Wogeno-Haus Caroline-Herschel-Straße München	umbrella cooperative	top-down	28 rental and subsidised rental flats	young + old	Wogeno eG small cooperative with expansive business model for a speculation-free and welfare-oriented housing management
Gemeinsam älter werden und Wohnen unter einem Dach Wilhelmshaven	traditional cooperative	top-down	11 subsidised rental flats	60+	Bauverein Rüstringen eG traditional cooperative with strong neighbourhood reference, senior project was "experiment", currently no repetition planned

Societal development is characterised by individualisation and pluralisation of lifestyles. The change brings with it an older resident population, smaller households and a declining number of multi-generation households (Statistisches Bundesamt 2015, 2016).

Kinship networks are getting thinner and make, together with a changed role of women and dispersed living, everyday support through the family more difficult (Schubert 1990). At the same time, other traditional relationships are losing their importance. This also applies to neighbourhoods; urban relationships are increasingly built on friendship and spatially dispersed (Friedrichs 1995). Both increase the lack of locally available relationship networks.

New forms of housing intend to fill that gap (Häußermann 2009). Cohousing projects have developed since the 1970s (Brech 1999), but they currently only constitute a small share in Germany, with an estimated 2,000 to 3,000 projects (Wohnbund 2015).

Cohousing projects are characterised by separate flats as well as shared space, a certain degree of self-organisation and the intention to foster neighbourly relationships (Ginski et al. 2012). The respective motivation of such initiatives may vary, but they can be understood as experiments for the conscious construction of local networks. In light of an ageing society we focus on projects (also) addressing people over the age of 50. The interest of the elderly in new forms of living increased in the last years (Hugentobler and Otto 2017). This trend could continue due to an increasing proportion of milieus with higher openness and willingness to engage (Hallenberg 2017).

Case selection and methodological approach

The six projects studied represent different types with specific organisational and implementation requirements (Hacke et al. 2017) (table 1). They were selected from a list of 104 identified multi-generation projects and 38 50plus projects. They should have been inhabited for at least three years and needed to be of a certain size (20 respectively ten flats) in order to allow for a certain degree of social dynamics. Integrating income groups who are not able to acquire property seems to be important for a wider diffusion. Therefore, projects were chosen that also include rental flats. Furthermore, the extent to which professional partners are involved and the legal form chosen play a role in coping with implementation problems. Hence, the choice fell on two autonomous civic projects (Landau, Heikendorf) and two projects initiated by citizens, but realised in cooperation with housing providers (Stuttgart, Langen) as well as two top-down projects initiated and realised by housing cooperatives (Munich, Wilhelmshaven).

For each case study, two to three guided interviews were conducted on the motives, obstacles and success factors in the planning, realisation and use phase. Interview partners were groups of founding members, other residents and external cooperation partners involved.

The reported obstacles to implementation were compared with an expert report on cohousing projects from Denmark (Tornow 2017). In addition, case selection and results were discussed with consultants of projects (Müller et al. 2017).

A written survey of the residents' expectations before and experiences after moving in was conducted for all the projects (Baumann

et al. 2018), with a response rate of 20 to 50 percent per project. The total of 103 participants lived in the projects for seven years on average. Almost two-thirds were already involved in the implementation phase. 61 percent were retired and 13 percent had children under 18.

Short history of the cohousing projects

Landau, Rhineland-Palatinate
The citizens' initiative took more than ten years to move into the facility with privately financed cooperative flats and a shared flat for those requiring care. The financing concept and the land were major obstacles that were finally overcome with the help of a difficult-to-find project manager and the city council.

Heikendorf, Schleswig-Holstein
Over the course of its eight-year implementation process, the initiative changed concept from a "pure" cooperative to a mixed legal form. The success of the project is attributed to the support of a consultancy office specialised in group-housing projects. A project-related development plan of the municipality protected the group from competitors for the property.

Stuttgart, Baden-Wuerttemberg
Immediately after its creation, the citizens' initiative joined a small cooperative set up to help implement cohousing projects in the region. The city provided the land at low cost. In the rental flats public funding from the city and state could be combined. As a property developer, the cooperative mainly builds owner-occupied flats, but also manages the subsidised rental flats of various mixed projects.

Munich, Bavaria
The small umbrella cooperative (see below) initiated and moderated the group in obtaining a leasehold property from the city based on a binding reduction of car ownership. The first members of the project, which is located in an initially negatively rated new development area, came from a project initiative that had already failed once. Most of the flats are subsidised by different funding programmes in Munich.

Wilhelmshaven, Lower Saxony
The cooperative initiated and supervised the project group in the context of the refurbishment of an existing building in cooperation with the city council's representative of senior citizens. The project group decided on cohousing for elderly instead of a multi-generation project. It is not planned to repeat the experiment because of the extremely complicated implementation process, especially due to the high turnover of the interested parties.

Langen, Hesse
The citizens' initiative took seven years to move into the first building that includes a shared flat for persons with dementia. In the course it changed its concept from a multi-generation to a 50plus project. The search for a developer and land that could be purchased through the church proved difficult. The property developer, a large, formerly not-for-profit housing company had already carried out the construction for six residential initiatives.

Cohousing projects as a potential solution to social challenges

The six case studies are innovative compared to "conventional housing" (see figures 1 and 2, pp. 236 f.), especially in social matters (Hacke et al. 2018). Self-organisation and collective decision-making, which even played a role in the *60plus* project, brings residents together. As the residents' survey showed, the opportunity to participate was a frequent expectation of living in a cohousing project, which was fulfilled in most cases. Large shares of respondents reported taking on tasks and responsibilities in the projects (such as caretaker, property management, neighbourhood assistance) and confirmed that the majority of residents also contribute to the community. For instance, establishing rules for living together was a matter of course for most respondents. All projects have created a network of neighbourly relationships and genuine friendships. Almost all the respondents are in contact with their housemates in some form or other. Low-threshold help and support are available in everyday life and take many forms. This was – regardless of age or family situation when moving in – an important hope of respondents, which was essentially fulfilled. If conflicts arise, a common approach is to find a solution together. Most respondents did not believe that such conflicts – which are quite frequent – imply the failure of the idea of cohousing.

90 percent of the respondents would move into a cohousing project again – mainly due to the contacts in the project, followed by the possibility of active contribution and the feeling of being in good hands. The most important motives for moving in varied by age: those younger than 50 wanted to live in a community of like-minded people; those older wanted to avoid loneliness in old age. The desire to live together with people with similar attitudes was a universal motive for living in all the projects considered.

One contribution that cohousing can make in terms of social as well as economic sustainability is the commitment to keep housing costs stable and low in the long term compared to the commercial housing market by avoiding speculative profits and market-level rent increases. The represented cooperatives are guided by the principle of cost rent, that is, rents are calculated so that they cover the costs for maintaining the building and forming reserves, but not to generate profits. In particular, the surveyed tenants were satisfied with the development of housing costs. In the projects, a dampening of resale and rental prices compared to the market depends on the good will of the owner, but the prices of the cooperative flats are controlled by the members. In addition, operating costs were reduced through in-house services. With the exception of Wilhelmshaven, all projects were characterised by a sharing culture (see below).

>

Wider impacts of cohousing projects

According to the experiences of the housing companies or project managers involved, the projects are characterised by very careful handling of the building and low expenses for the caretaker service. Interviewees reported that residents are sending impulses to the outside world (figure 2) – providing information and initiating follow-up projects, through volunteer work in the neighbourhood, but also through concrete offers (e. g., cultural events) to the immediate vicinity. In Munich, the commitment of the group contributed to the fact that the initially unpopular development area became an active and attractive neighbourhood. The high interest of this group in their district is a good example of projects acting as "door openers" to integrate residents. Housing groups can be more easily addressed due to their self-organisation and often bring together a "critical mass" of committed people. This includes the potential for "docking" with other sustainability innovations, such as energy or water infrastructure systems. The two cases featuring a flat-sharing group of dementia patients or care-dependent persons (Langen and Landau) also show that a combination with neighbourhood-based facilities is possible, such as a housing-related outpatient care infrastructure; they also show the possible pitfalls due to planning errors.

From an ecological point of view, all six projects were built in an energy-efficient manner, and in some cases they use regenerative energy sources. One project has committed itself to reducing the number of cars. In most projects, inhabitants share appliances like washing machines, garden tools, drills or other tools, bicycle trailers, and also consumer goods like newspapers.

Diffusion of cohousing projects

In spite of the individual and societal benefits outlined so far, the number of cohousing projects is still low, although growing. Therefore, this section takes a closer look at the factors influencing the (faster) diffusion of cohousing projects in Germany. Within the framework of the analyses, various factors could be identified that have an inhibiting or a beneficial influence on the emergence of cohousing. Key issues that housing projects face include:

- finding and fostering a group of interested people,
- solving financing issues and, closely related to this, agreeing on a legal form appropriate to the group's objectives (e. g., cooperative or homeowners' association),
- acquiring a property, and
- if applicable, acting as a collective actor.

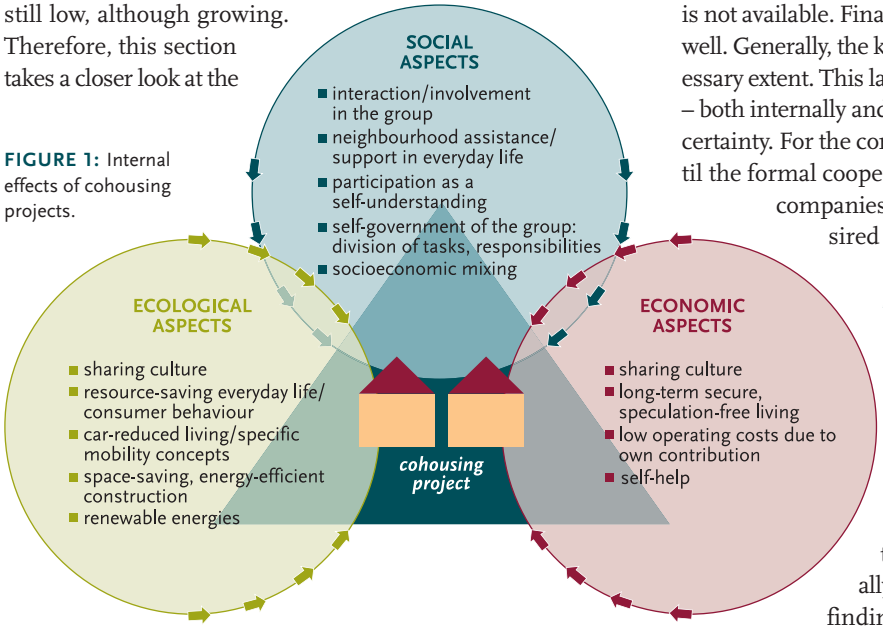


FIGURE 1: Internal effects of cohousing projects.

The challenges are particularly high when rental flats are part of the concept. Important obstacles to implementation result from the fact that laypeople have to set up companies and function as such on the market. When they set out, their organisations have neither a clear organisational or administrative structure nor equity. The latter must first be collected from members and supporters, which requires considerable confidence-building and clear perspectives.

Barriers

Establishing an initiative group: Intrinsically motivated people able to attract, inspire and moderate a group of interested individuals are required at the beginning. Since very few people have experience with neighbourhood projects, they are often not in people's mind as an option. Thus, the initiators not only have to organise the group, but also make efforts in public to present and promote their cohousing idea as distinct from shared housing and "communes".

Vague performance perspective: The long lasting uncertain implementation horizon is another obstacle. Usually, a suitable object is not available. Financing and the legal form must be clarified as well. Generally, the knowledge required is not available to the necessary extent. This lack of know-how hinders confidence building – both internally and externally – and leads to long periods of uncertainty. For the considered projects, this phase did not end until the formal cooperation with external consultants or housing companies – sometimes with consequences for the desired legal form.

Lack of professional partners: In addition, suitable cooperation partners were often found only by chance. A professional consulting scene with advice on financing and legal issues and project management offers has so far developed only to a limited extent. There is a lack of professionally competent advisors especially outside larger towns and cities. The projects in Heikendorf, but especially in Langen and Landau, had huge problems finding the relevant competent advice. Housing

companies have little incentive to cooperate with initiatives. The Langen group started with a long unsuccessful search for a cooperating housing company. The Stuttgart cooperative was founded because housing initiatives did not find any partner.

Lack of equity: Without a cooperating housing company to take over the (pre-)financing of the property, providing sufficient equity/creditworthiness also represents a major hurdle. This is especially the case if the group wants to integrate parties with few assets. The formation of community property (e.g., in a cooperative) may be a solution, because one person's insufficient equity can be offset by higher contributions from the others. However, currently, there are no ways to compensate for the benefits of investing in individual home ownership and to increase the motivation to participate in community ownership. New cooperatives often do not see any possibility of paying off the redemption payments members have made (which exceed depreciation) until they want to move out, or of compensating inflation for the capital injected. In contrast to the gain on the sale of home ownership, such payments must also be taxed. Therefore, legal forms are often chosen that allow private use of the contributed capital. This is why only one of the four bottom-up projects (Landau) formed cooperative property; the others combined a cooperative for subsidised rented housing with private residential property.

Difficult inclusion of low-income households: Due to the credit burden, rents of a young cooperative without subsidies are too high for low-income members. Therefore in Landau and Heikendorf, the project members offered some financial benefits for families by shifting costs internally. The housing company in Langen faced the same problem: rents were not affordable for low-income households. Since the financing burden was not much lower than in ownership formation, the share of rented housing in this mixed project decreased significantly. However, only a few federal states have tailored funding programmes in place to include low-income households.

Competing for land or housing property: Gaining access to a building plot is one of the main problems of cohousing projects. In competition with financially stronger and faster acting investors, they stand little chance of winning, or fail due to high prices.

The implementation rate of cohousing projects shows little dynamics, due to the problems mentioned. In addition, the projects are usually not geared towards enlargement or repetition, so that the hard-earned knowledge and the potential for trust are usually not passed on. However, there are some indications that politics and the housing industry are gradually opening up to new ideas. Moreover, in some regions professional, supportive counselling options and alternative providers have become established. This development can be used to derive favourable conditions for the increased implementation of cohousing projects. There are other pointers available from alternative development paths taken, for example, in Denmark (Tornow 2017).

Success factors

Consulting infrastructure: Public start-up financing enabled a consulting infrastructure for cohousing projects to be set up in Hamburg and Berlin as well as in the states of North Rhine-Westphalia and Schleswig-Holstein. Publicly-funded information centres are also available in some other major cities and recently in the state of Rhineland-Palatinate. The tasks include public relations and "lobbying activities" for cohousing projects to be considered at the political level and in housing companies. The existence of a fundamentally interested basis must also be fostered through low-threshold offers (e.g., initial consultation, information events). Ideally, cooperation partners will also be recruited and services provided for the implementation phase (financial and legal advice, project management, structuring of communication). The latter are paid by the projects as part of the construction costs. Promoting the establishment of such a municipal or state-level >

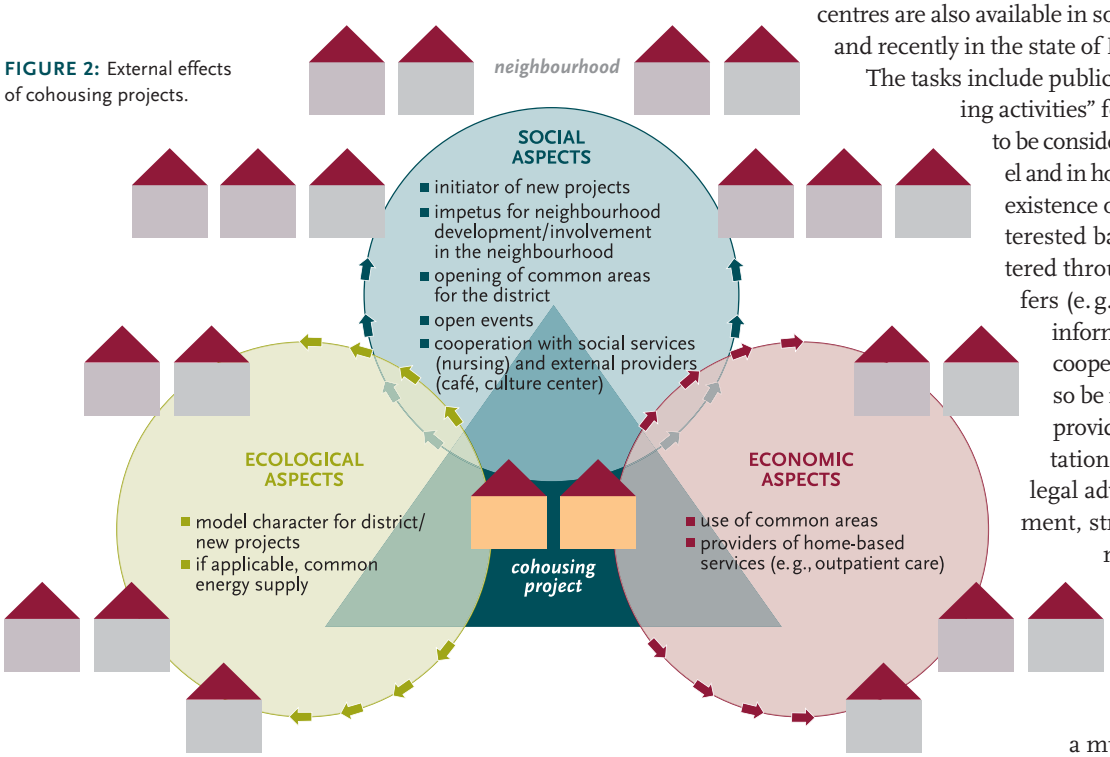


FIGURE 2: External effects of cohousing projects.

advisory infrastructure could be part of a wider, more open consultation, for example for models of retirement living. Without basic and start-up financing, the threshold to self-supporting professional counselling offers is usually too high. Greater standardisation of procedures and the necessary know-how could also help to promote such infrastructure.

Land allocation: Four of the five new construction projects (Landau, Heikendorf, Stuttgart, Munich) received municipal support in the search for land. The fifth group (Langen) was able to acquire a church-owned property after a lengthy search.

In Hamburg and Munich, all urban development projects reserve a share of the available building land area for communities and cooperatives and allocate the land according to criteria-based award procedures ("concept") at the market value or a politically determined price. The concept also determines the rental mix to be achieved (e. g., proportion of subsidised flats). If real estate is principally allocated according to concept in tight markets, traditional investors will also comply with. The allocation of land associated with a concept thus promotes urban development geared to urban needs and, cohousing projects are part of this.

Part of a forward-looking property policy would be municipal authorities purchasing land to have "in stock" and granting leasehold rights instead of selling it. Increasingly tight municipal budgets and the debt relief policy of German states have led to this path becoming increasingly difficult for municipalities to take.

State and municipal funded housing promotion: Residential development programmes suitable for housing projects exist in the states of Hamburg, Schleswig-Holstein, North Rhine-Westphalia and the city of Munich. Of particular importance are support paths with income limits above those of the *Housing Support Act*. In Hamburg and Munich, this is done through a housing subsidy with different income limits and land allocation at reduced prices. In return, there is a long-term ban on privatisation and a binding rental price or reduced prices without income limits, but with specifications for flat and household sizes and long occupancy commitments with regard to privatisation and rental prices. Without support, access for middle-income households is often difficult, and home ownership is more attractive for higher-income households, especially for younger households. Channelling funds from wealthy interested parties into cooperative projects (e. g., by supporting the acquisition of cooperative shares) would facilitate the implementation of socially mixed rental projects. Very beneficial would be cheap loans with low repayment instalments, such as those offered in Switzerland by central financing institutions to non-profit housing developers. In the case studies examined, price reductions (also for flats without income limits) offered by the city played an important role in Munich and Stuttgart.

Cooperation with traditional housing companies: Private landlords are the main suppliers of dwellings in Germany. Just one third of the whole housing stock is hold (by nearly equal shares) by private professional companies, public companies and cooperatives. The two latter ones – together with a small stock hold by the catholic and the protestant churches – are the desirable partners for cohousing initiatives as social corporate responsibility and a lower profit margin allow for such a not-for-profit cooperation. But cohousing project initiatives challenge housing companies with unfamiliar demands and communication requirements that are not matched by any clear benefits. The project groups are often weakly formalised and companies are not focused on user participation. Regularly cooperating companies with experience in planning participation such as the company in Langen are an exception, and even this required a stable group structure as a starting point. The availability of consultants who act as "interpreters", qualify the group for cooperation, structure communication and thus reduce the burden on the company can contribute to the opening up of traditional companies. Establishing allocation criteria for land that favour companies providing rental housing for cohousing projects serves as further incentive, as consultants report from Hamburg and Munich. Such boundary conditions are more likely to exist in the major cities.

Supporting organisations: Instead of cooperating with housing companies, forming their own organisations seems to be the more promising route for cohousing projects in Germany. They offer greater opportunities to cultivate participation forms in the long term and to influence rent development. Since the 1980s, a number of so-called umbrella cooperatives have been set up, which provide project initiatives with a legal and administrative framework, contribute to trust building and sometimes accompany them professionally during the phase of implementation. Entrepreneurial umbrella cooperatives – which are able to expand on their own initiative and can also provide the necessary pre-financing – have so far only developed in the Munich area. One of them was one of our case studies. Even if they do not build for nonmembers, they contribute to the dissemination of the cohousing idea by offering their residents shared spaces and "a voice" at house and cooperative level, and by promoting neighbourhood activities. In addition, there are improved chances of success for a management approach that uses asset accumulation to support further projects. It remains unclear how such forward-looking companies could be established on a larger scale. Committed actors have to make a living from their work in a foreseeable future and, if possible, cooperate with capital-intensive institutions during the initiation phase.

Outlook

The analysed projects have developed forms of participation that can be adapted to changing needs and create a social network for their residents with many opportunities for contact. Often they include highly dedicated members who join activities in the neighbourhood, thus contributing to a supportive environment especially for families and seniors. This is even more important in the context of demographic change. The self-organisation of the projects also increases the opportunities for a reduction in resource

consumption through sharing facilities and objects as well as for the use of ecological innovations (e. g., mobility concepts). Projects with housing for renters and a corresponding legal form (e. g., cooperative) also make a contribution to rent reduction and social mixing.

However, cohousing projects often have to survive a long search and development process – there is a shortage of equity, know-how and "entrepreneurial" persons. As long as every new project in some ways needs to be "newly" invented the innovation will not spread. Due to their structurally related problems, the projects are dependent on compensation for these disadvantages through public support and nonprofit housing investors like existing larger housing cooperatives or residential property developers with a public mandate. A dissemination of basic principles of cohousing is promoted by housing companies such as Wogeno eG Munich which offers its residents planning participation, common areas and self-administration elements. Public awareness and acceptance are increased by successful flagship projects. If they are in line with public policy objectives (e. g., affordable housing, neighbourhood spaces) they can also gain political attention and support for cohousing. Promising public support strategies include means of funding, land allocation and assistance for empowering during the planning, financing and construction process. Such support could be part of an urban development strategy that combines housing with environmental goals and the strengthening of social networks.

We thank the German Federal Ministry of Education and Research (BMBF) for the financial support of the *TransNIK* project within the *Social-Ecological Research (SOEF)* funding priority of the BMBF and the *SOEF* funding measure *Sustainable Economy.*

References

Baumann, A. et al. 2018. *Zusammenleben in gemeinschaftlichen Wohnprojekten. Ergebnisse einer Bewohnerbefragung in sechs Fallbeispielen.* www.transnik.de/transnik-wAssets/docs/TransNIK_Werkstattbericht_Nr_10_Bewohnerbefragung_IWU.pdf. (accessed November 14, 2018).

BBSR (Bundesinstitut für Bau-, Stadt- und Raumforschung). 2012. *BBSR-Immobilienmarktbeobachtung.* www.bbsr.bund.de/BBSR/DE/WohnenImmobilien/Immobilienmarktbeobachtung/ProjekteFachbeitraege/MietenPreise/Mieten/Mieten.html (accessed November 14, 2018).

Brech, J. 1999. Ein Wandel im Wohnen in der Zeit des Umbruchs. Eine Studie zu Neuen Wohnformen. In: *Neue Wohnformen im internationalen Vergleich.* Edited by Wüstenrot Stiftung. Stuttgart: Kohlhammer. 81–160.

Dütschke, E. et al. 2019. Moving towards sustainability: Insights from district heating, water systems and communal housing projects in local communities. Paper presented at the *eceee 2019 Summer Study "Energy efficiency first, but what next?".* Belambra Presqu'île de Giens, France, June 3–8.

Friedrichs, J. 1995. *Stadtsoziologie.* Opladen: Leske + Budrich.

Ginski, S. et al. 2012. IBA Berlin 2020. *Kurzüberblick/Projektrecherche "Besondere Wohnformen".* digital.zlb.de/viewer/rest/image/15655306/pt_materialien_ 30.pdf/full/max/0/pt_materialien_30.pdf (accessed November 14, 2018).

Goebel, J. et al. 2015. Einkommensungleichheit in Deutschland bleibt weiterhin hoch – junge Alleinlebende und Berufseinsteiger sind zunehmend von Armut bedroht. *DIW Wochenbericht* 82/25: 571–586.

Hacke, U. et al. 2017. *Gemeinschaftliche Wohnprojekte für Ältere. Aspekte von Rechts- und Finanzierungsformen und weitere Kriterien für die Auswahl der Fallbeispiele im TransNIK-Handlungsfeld Bauen & Wohnen.* www.transnik.de/transnik-wAssets/docs/TransNIK_Werkstattbericht_Nr_2_Fallauswahl_Wohnen_IWU.pdf (accessed November 14, 2018).

Hacke, U. et al. 2018. *Faktoren der Entstehung gemeinschaftlicher Wohnprojekte. Eine Analyse von sechs Fallbeispielen auf Basis der Multi-Level-Perspektive.* www.transnik.de/transnik-wAssets/docs/Fallstudienbericht_Wohnen_final_korr_Mai_2018.pdf (accessed November 14, 2018).

Häußermann, H. 2009. Zur Notwendigkeit neuer Wohnformen. Gemeinschaftliche Bedürfnisse der individualisierten Gesellschaft. In: *morgen: wohnen! Neue Wohnformen.* Edited by Bund Deutscher Architekten. Berlin. 12–19.

Hallenberg, B. 2017. Wohnen im Alter und die Veränderung von Lebensstilen und Lebenswelten. In: *Altersgerecht wohnen und leben im Quartier.* Edited by H. Sinning. Stuttgart: Fraunhofer IRB. 29–50.

Hugentobler, M., U. Otto. 2017. Gemeinschaftliche Wohnformen für die zweite Lebenshälfte. Qualitäten im Kanton Zürich. In: *Altersgerecht wohnen und leben im Quartier.* Edited by H. Sinning. Stuttgart: Fraunhofer IRB. 135–162.

Müller, K. et al. 2017. *Wie weiter auf dem Weg zu mehr gemeinschaftsorientiertem Wohnen?* www.transnik.de/transnik-wAssets/docs/TransNIK_Werkstattbericht_Nr_3_Output_Praxispartner_WS_IWU.pdf (accessed November 14, 2018).

Schubert, H. J. 1990. *Private Hilfenetze. Solidaritätspotentiale von Verwandtschaft, Nachbarschaft und Freundschaft. Ergebnisse einer egozentrierten Netzwerkanalyse.* Materialien des Instituts für Entwicklungsplanung und Strukturforschung 145. Hannover: Institut für Entwicklungsplanung und Strukturforschung.

Statistisches Bundesamt. 2015. *Statistisches Jahrbuch Deutschland und Internationales 2015.* Wiesbaden: Statistisches Bundesamt.

Statistisches Bundesamt. 2016. *Statistisches Jahrbuch Deutschland und Internationales 2016.* Wiesbaden: Statistisches Bundesamt.

Tornow, B. 2017. *Zur Entwicklung gemeinschaftlichen Wohnens in Dänemark.* www.transnik.de/transnik-wAssets/docs/TransNIK_Werkstattbericht_Nr_7_Daenemark_WS_IWU.pdf (accessed November 14, 2018).

Wohnbund (Ed.) 2015. *Europa. Gemeinsam Wohnen.* Berlin: Jovis.



Ulrike Hacke
Studies in sociology and psychology. Since 2000 senior researcher at the Institute for Housing and Environment (Institut Wohnen und Umwelt, IWU) Darmstadt, Germany. Research interests: socio-scientific energy and housing research.



Kornelia Müller
Clerk at the Institute for Housing and Environment (Institut Wohnen und Umwelt, IWU) Darmstadt, Germany. Since 1998 member of the board of WohnSinn eG, a cooperative with two intergenerational neighbourhood projects (others in planning).



Elisabeth Dütschke
Studies in psychology, business administration and marketing. PhD in social sciences. Since 2009 senior scientist at Fraunhofer Institute for System and Innovation Research, Karlsruhe, Germany, since 2019 head of the business unit *Actors and Acceptance in the Transformation of the Energy System.* Research interests: technology and innovation acceptance and societal transitions.