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Shaping of the living environment of the elderly and its relations with the surrounding areas upon the example of copenhagen

Kształtowanie środowiska życia osób starszych i jego relacji z otoczeniem na przykładzie kopenhagi

Abstract

This paper demonstrates the possibilities of shaping of the living environment of the elderly in connection with the existing urban tissue according to the principle of inclusion in the space used together with the younger generation.The subject matter of the analysis are selected examples of   Danish architectural and urban projects implemented in Copenhagen over the last decade. Denmark is one of the leading European countries in terms of its policy towards seniors and shaping of the living environment of elderly people.

Keywords: architecture, urban design, living environment of the elderly

Streszczenie

W artykule zaprezentowano możliwości kształtowania środowiska życia osób starszych w powiązaniu z istniejącą tkanką miejską na zasadzie włączania w przestrzeń wspólnie użytkowaną z młodszymi pokoleniami. Przedmiotem analizy są wybrane przykłady duńskich realizacji architektoniczno-urbanistycznych, które powstały na terenie Kopenhagi w ostatniej dekadzie. Dania należy do krajów o dużych osiągnięciach w zakresie polityki senioralnej, a także w zakresie kształtowania środowiska życia dla osób starszych.

Słowa kluczowe: architektura, urbanistyka, środowisko życia osób starszych

1. Introduction – demographic processes and senior policy of Denmark as factors deciding on the shaping of the housing environment for elderly people

The objective of this paper is to demonstrate the possibilities of shaping the living environment of the elderly in connection with the existing urban tissue according to the principle of inclusion in the space used together with the younger generation[1]. The subject matter of the analysis are selected examples of architectural and urban projects implemented in Copenhagen over the last decade, inscribed in the principles of universal design[2].

Making use of the experience of Denmark in the scope of the subject matter of this paper is justified byits accomplishments in terms of the senior policy. It should be also added that this country occupies one of the leading positions in terms of expenses incurred for healthcare and social welfare amongst European states[3].

The concepts of shaping of the living environment of elderly people presented herein and their relationships with the urban space constitute an attempt by their designersto answer the demographic processes and changes in the social structure of Denmark observed in recent years. Hence,a brief characterisation of these processes and of the state policy relating to them is provided below.

In Denmark, similarly to other European countries, for several decades now the process of the aging of the society has been observed. It manifests itself in the growing number of elderly people and the simultaneous drop of the share of the youngest age groups in the demographic structure[4]. In different regions of the country this process is uneven.

The population of the country as of today is 5,750,000. 19% of this number are people aged more than 65, and ca. 4% are people aged more than 80 [10]. Forecasts for 2040 assume that the population will rise to 6.3 m, 25% of which will be constituted by a group of people aged 65 and more[5].

At the same time, in Denmark, similarly to all Scandinavian countries, a phenomenon of constant growth of the length of life of the country's inhabitants becomes clearly marked. Additionally, they enjoy good health and condition much longer than inhabitants of other European countries.

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[1] In this paper the terms 'elderly people' and 'senior citizens' are used interchangeably. It is a social group which is economically heterogeneous, diversified in terms of lifestyle, education, health condition. The common determinant of 'an elderly person' or 'a senior citizen' is old age.

[2] Universal design – philosophy of designing products, buildings, and their surrounding areas so as to make them possible to be used by all people in as broad a scope as possible, without the need to adapt or design them in any special way.

[3] The state allocates to this purpose nearly twice as high a percentage of GDP as Poland does.

[4] Different measures and classifications allowing to evaluate the progress of aging of the society are used in demography. Studies concern the share of people aged 60 and more in a specific population and quantitative relations between basic age groups (children: aged 0–14, adults: aged 15–64, the elderly: aged 65 and more). These studies aim to determine intergenerational relations in the society and to evaluate the level of demographic old age. Owing to the advancements in medicine and prolonging life expectancy, the threshold of old age is usually assumed to be 65 and morein the subject literature [5].

[5] It is assumed that the threshold of the demographic old age for a given country is determined by the following data: 12% of people aged 60 and more or 7% of people aged 65 and more [4, p. 5].

Changes occurring in the demographic structure, particularly the growing share of the oldest age groups, have their effect on decisions of the authorities referring to the directions of the senior policy, economic policy, space shaping policy, social and migration policy.

The senior policy is the cutting edge of the directions of activities undertaken by public administration of the state, as well as of different organisations and institutions whose goal is to promote decent and active life of senior citizens. It is based on national recommendations, as well as on recommendations contained in international documents. In this respect one should mention the Madrid International Plan of Action on Aging (MIPAA, Madrid, 2002) and the Regional Strategy of Implementation of International Action Plan on Aging (UNECE Regional Implementation Strategy RIS, Berlin, 2002), planned to be implemented by European states.

Within the scheme of implementation of the recommendations contained in the latter document, the Danish government undertakes actions covering 10 areas in the adjustment to the aging processes of societies. These are: 1 – adjustment of social and economic policy to demographic processes, 2 – securing full integration and participation of elderly people in social life, 3 – promotion of sustainable economic development, 4 – social protection, 5 – adjustment of the labour market and promotion of professional activity, 6 – promotion of training and continuing education, 7 – securing well-being and good quality of life at any age, 8 – equal opportunities for women and men, 9 – supporting families taking care of the elderly and intergenerational solidarity, 10 – promoting regional cooperation in terms of implementation of the policy for the benefit of the elderly [11, 6, p. 19–20].

Within the scheme of the senior policy, it is assumed that the forecast growth of the oldest group of citizens (aged 80 and more) constitutes most of all a challenge for the healthcare and social welfare system. Therefore, considerable importance is attached to the development of various medical services, in particular in the sector of long-term care. The state's support in this respect is necessary because informal carers play a relatively small role in the Danish care system compared to other European states[6]. It should be emphasized that the elderly take part in the decision-making process within the scheme of the senior policy by their activities in organisations that operate according to the principles of voluntary services promoted and supported financially by the state[7].

The senior policy is also directed towards the creation of a diversified housing offer for elderly people, which fosters their activity, the process of establishing social relations, and which prevents isolation in the urban space. Seniors individually decide about the type of household they wish to have, depending on their degree of independence and state of

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[6] In developed countries long-term care is understood as all medical and social measures, with different distribution of responsibilities of both sectors. Its broader definition is provided by WHO, describing it as an integral part of healthcare, relating to activities for the benefit of people in need, implemented by informal carers (relatives, friends, neighbours), formal carers (including medical professionals and social workers), as well as by traditional carers and volunteers. According to: Actual State and Perspectives for Development of Long-Term Care in Poland, Ministry of Health, Warsaw, December 2012, p. 4.

[7] The most important of them are: the Dane Age Association (600,000 members) and the Danish Association of Senior Citizens (330,000 members).

health[8]. The offer comprises the opportunity to live e.g. in houses with apartments adjusted to the needs of senior citizens, in housing cooperatives, in apartments with an assistant, in nursing homes, or to benefit from services provided by day care centres[9]. These centres are addressed to people who use medical and care services, therapies and all sorts of activities on a temporary basis. The analysis of the latest projects allows the directions and tendencies currently emerging in the process of shaping of housing environment for the elderlyto be determined[10]. In general, it can be assumed that the process consists in the search of the closest possible relationships between this community and the existing urban tissue in order to create relations with other social groups. These relations are discussed in more detailed below, on the basis of an analysis of selected examples.

2. Activities aiming to create mutual bonds between inhabitants and their relations with the urban environment – examples of specific solutions

The examples presented below constitute projects implemented within the territory of the capital city of Denmark. This choice is justified by the fact that Copenhagen belongs to the group of the friendliest places for living in Europe due to the standards of urban public spaces, the organisation of transport, and the quality of the natural environment, as well as of the housing environment. Harmonious development of the urban space results from activities, consistentlyimplemented for decades now, which aim to increase the comfort of living of the city inhabitants. The high quality of medical and care services and promotion of a healthy and active lifestyle are also essential for their sense of well-being. It should be added here that the capital of Denmark strives to reach the position of a leader in creatinga model sustainable city (Eco-Metropolis) amongst metropolises globally.

Copenhagen is the largest Danish city and its population is ca. 600,000. Compared to the population of the country, as well as other capital cities of the European Union, it is characterised by theyoung age structure of its inhabitants. The metropolitan region also has the highest percentage of people in the productive age (20–64). People aged 65 and more constitute 10.3% of the city population[11]. Forecasting the further growth of this group of city inhabitants, the city is preparing a strategy so as to stimulate their activity, as well as their intra- and intergenerational cooperation. The priority of this strategy is an assumption that

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[8]   In 2006 ca. 5% of Danish people aged 65 or more were covered with long-term care at home, whereas 9.5% of them were covered with care provided by institutions (nursing homes) [7].

[9]   Nursing homes function as conventional, subsidised, or non-profit entities.

[10]   Living environment of the elderly – this term comprises housing environment as the most important place of living, and urban space, used by elderly people irrespective of their health condition, age, lifestyle, family situation, individual interests. The term 'housing environment' as used in this paper comprises most of all a house, an apartment, an adjacent area (micro-housing environment). Relations between the housing environment and the urban space as used in this paper refer to relations with:
   ▸   The space of a housing estate, a district along with services and green areas (broader housing environment)
   ▸   Space of the city, with its services, public space, and transport (macro-housing environment).

[11]   Data for Q1 2017: StatisticsDenmark [10].

elderly people should remain in their homes as long as possible, with access to all forms of assistance. In the case of making use of institutional forms of care in the city, in nursing homes addressed to senior citizens, they are usually located close to services and housing developments addressed to other generations. This principle is implemented by e.g.:

- ▸ introduction of homes for senior citizens within the scheme of transformation of post-industrial areas in the contemporary housing environment (example: Flintholm Care Home),
- ▸ introduction of homes for the elderly within the scheme of modernisation of housing estates from the 1960s (example: Bomi-Parken nursing home within the territory of the Gyldenrisparkensocial housing estate),
- ▸ introduction of homes for the elderly within the scheme of designing new urban districts (example: Ørestad nursing home on Amager island).

The first of the examples listed above – the Flintholm Care Home – is a home combining apartments for elderly people with secured access to services rendered by assistants. The two other examples are typical nursing homes.

Social building with apartments for elderly people in Flintholm, Frederiksberg. Arch. Frederiksen & Knudsen Architects, 2007

This example demonstrates the search for optimal mutual relations between inhabitants inside the complex. At the same time, it addresses their expectations in terms of strengthening their bonds with the local community.

Flintholm is located on the outskirts of Frederiksberg, which is an independent administrational unit situated inside the capital city of Denmark.

Location and relations with the surrounding area:

The decision about the location of housing structures for senior citizens is inscribed in the activities fostering the transformation of post-industrial areas into a contemporary district, with a rich urban programme. It is to serve different age groups, as well as to stimulate the development of the area and to generate new jobs. A new image for the district is to be created by the attractive housing and service complexes that are built here, such as schools, a cultural centre, day care centres for the elderly, retail outlets, and administrative and office facilities with high standards.

In this context, one must emphasise the dominating complex – thecomplex of theinternational auditing and consulting company KPMG (arch: 3XN, 2012) along with the new public space that accompanies it – Marguerite VibysPlads square, with a historic building of the gasometer and a green recreational zone. The programme of the area is completed with a sustainable energy-efficient building NCC'sFlintholm Company House with the BREEAM certificate (VilhelmLauritzenArchitects, 2011).
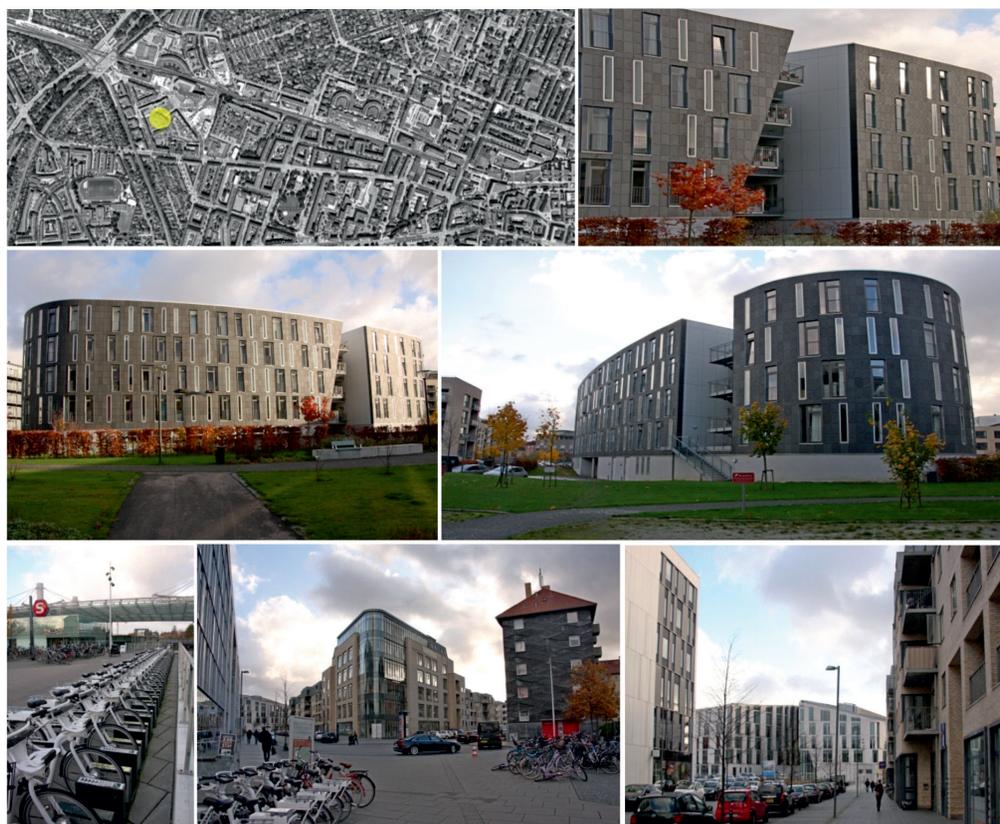
The building for senior citizens (FlintholmCare Home) is situated in the green urban interior that fills the quarter of multi-family housing development. The choice of the location for this building was connected with the need to secure close access to the main public transport routes, as well as to the new underground station – Flintholm Station (2004) –

for its residents. It is an important public transport hub, linkingthe area with the centre of Copenhagen, the underground lines, and the fast city train lines.

Architectural concept:

The social house with apartments for the elderly was erected according to a design selected in a competition. Thesmall scale of the facility was to give it an intimate, non-institutional character. It is designed on a floorplan in the shape of an ellipse, which enabled to inscribe it in the plot of land allocated to this development in a favourable way, and at the same time allowed to obtain larger, centrally positioned commonly utilised spaces intended for the residents' integration on each floor. These spaces house zones of activities and rest, kitchens, and dining rooms.

On the ground floor, there are the main entrance zone, administrative rooms, service outlets, and rooms for the staff. The other four floors house 50 independent residential units for elderly people, accessible from the commonly utilised interiors [2].

Il. 1–7. Flintholm Care Home: localization, architecture and its mixed-use neighbourhood.
Photo: M. Strzelecka-Seredyńska

A true advantage of this project is its location, which secures good access to all sorts of services in the close vicinity of the building, and the possibility of contacting other residents. This allows to strengthen the intergenerational solidarity and enhances the feeling of belonging to the neighbourhood. A feature that turned out to be disadvantageous for the house residents is the reduction of the size of the park that surrounds it compared to the one planned in the competition design.

Bomi-Parken nursing home in the Gyldenrisparken housing estate, Amager, Copenhagen, Denmark

Arch. WitrazArchitects, Vandkunstenand Wissenberg(authors of the revitalisation concept of the housing estate and of the design of the nursing home), 2006–2014.

This example presents a concept of inclusion of the housing development intended for senior citizens in the existing structure of the housing estate within the scheme of activities relating to its renovation.

The Gyldenrisparken social housing estate, erected in the 1960s (arch. S. Fournais and H.O. Christiansen, 1964–1966), is located in the Southern part of Copenhagen, on Amager island. It consists of 4-floor multi-family buildings, made of concrete pre-fabricated panels. Residents of the housing estate (900 people) are a diversified group in terms of family structure, as well as in terms of their ethnic and social background.

Sustainable revitalisation aimed to adjust the existing residential buildings and green areas to the contemporary standards. The concept of transformations stemmed from consultations with users, who were included in the designing process in compliance with the requirements pertaining to social housing in force in Denmark. The need to integrate and stimulate the local community inhabiting the housing estate was taken into account, by introducing a diversified programme of services, addressed to the youngest and the oldest residents. Within the scheme of the revitalisation measures, the quality of the green areas was improved as well by introducing new walking lanes, sports facilities, and playgrounds for children. The housing estate was furnished with elements of street furniture fulfilling practical and recreational functions. The leisure zones are adjusted to the needs of the residents of the nursing home.

As a result of the revitalisation, the living conditions of all people inhabiting the housing estate were improved. Additionally, favourable conditions for building bonds among neighbours were created, as well as for adjusting the living standards to the ones occurring in other districts of Copenhagen. Simultaneously, the attractiveness of the entire area was improved in functional and aesthetic terms.

Location of the nursing home, relations with the surrounding area:

The nursing home for senior citizens was introduced in the tissue of the revitalised housing estate, locating it in its central zone, in the common recreational zone, surrounded by the residential development subjected to revitalisation measures. The extended floor plan of the building is inscribed in the green interior designed with no barriers, accessible to all residents of the housing estate. The close vicinity of a modern, large, energy-efficient pre-schoolbuilding was intended to secure the inclusion of the elderly in the living environment of younger generations.

Architectural concept:

This two-floor building houses 81 individual apartments, adjusted to the needs of senior citizens, most of whom are aged 75 and above. The physical form of the structure has the shape of a ribbon enveloping the internal courtyards, which fulfil recreational functions. They are accessible to all residents of the housing estate.

The ground floor houses a programme addressed to its residents, as well as to the entire local community with the purpose of mutual integration. It comprises such services as an activity centre, spaces for different forms of movement therapy, a library, and a coffeeshop. Senior citizens also use service outlets located within the territory of the housing estate and in its close vicinity. Ecological solutions have been adopted in the building, such as e.g. a green roof and healthy construction materials.

The project discussed above constitutes a model solution, which combines revitalisation measures in the urban space with shaping of the living environment for the elderly, with no

Il. 8–14. Nursing home in the Gyldenrisparken housing estate: localization, architecture and its surroundings.
Photo: M. Strzelecka-Seredyńska

barriers and exclusion. It is referred to as an example of a good practice in Denmark in terms of actions for the benefit of improving the standards of the urban space with the adjustment to the life cycle of different residents [8].

Ørestad nursing home, Ørestad, Amager, Copenhagen, Denmark
Arch. JJW Architekter, 2011–2012

This project isan example of inclusion of residential development for senior citizens in new, comprehensive urban complexes.

Ørestadis a district of Copenhagen at the edge of a natural reserve on AmagerIsland. The municipal plan from 1993 assumed that this area was to be transformed into a new, attractive urban space, located in the geographical centre of the Øresund region [1] Over the last decade this district has become a location of high-standard architectural projects, concentrating predominantly housing development and all sorts of services.

Location and its relations with the surrounding area:

The location of the residential building for senior citizens in the centre of the district aims to achieve its residents' integration with the surrounding area and to include them in the life of the city. The building is located in the Southern part of Ørestad, dominated by housing, in close vicinity to the Vestamager underground station. The building is inscribed in the quarter of urban development, situated at a recreational and walking route that accompanies a water canal. In close vicinity of the nursing home there is a housing complex for students (120 small residential units). Nearby there are also organised openareas for sports and recreation, cycling lanes, green areas, squares, and a pre-school.
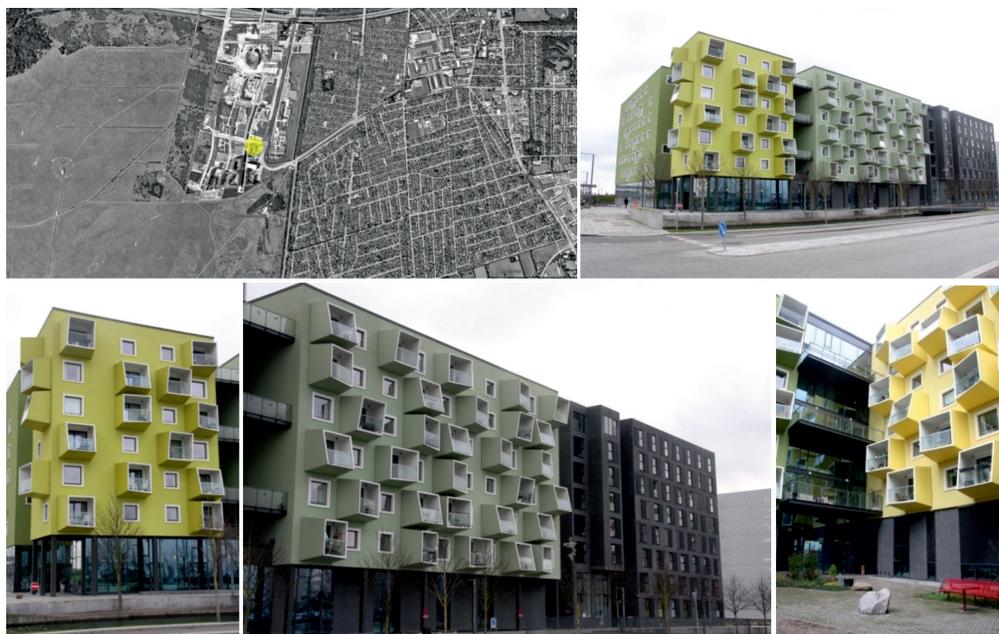
Architectural concept

The architectural concept, selected in a competition, corresponds to the model of life proposed to the elderly and accepted by them in Scandinavian countries.

The complex consists of 114 residential units with balconies and terraces. It is designed around an internal courtyard, which is used for the purposes of common recreation. Its green interiors open up towards the residential buildings intended for students. A recreational function is also played by a garden located on the roof of the building.

The composition of the floor plan of the building, consisting of eight main units linked by means of passageways, corresponds to the development of housing estates composed along little streets and squares. Individual residential units for senior citizens, combined in complexes, are located near broad, bright spaces intended for shared activities and moving around. Interiors which fulfil the function of recreation can be freely shaped thanks to the application of sliding walls. The ground floor of the entire complex houses service outlets open to all residents of the district.

The attractiveness of this architectural solution is dictated by the shape of the building itself, its details in the form of balconies in characteristic, diversified shapes, as well as bright colours, which correspond to the colours of tenements located in the historical part of Copenhagen.

The project constitutes an example of implementing the principles of universal design in the everyday life of the elderly and their inclusion in the urban neighbourhood, diversified in terms of its programme.

Il. 15–19. Ørestad Nursing Home (Copenhagen): localization and architecture.
Photo: M. Strzelecka-Seredyńska

3. Summary and conclusions

The demographic situation in European countries, as well as the forecasts relating to it, means that architects and urban planners are facing a new challenge – the adjustment of the urban space to the needs of the constantly growing group of elderly and disabled people.

Based on the analysis of the latest solutions, it can be stated that in Denmark – similarly to other Western European countries – architects depart from designing residential projects for the elderly in the form of closed complexes, which only in the mid-20th century enjoyed great popularity. A tendency to search for an optimal inclusion of the living environment of senior citizens in local communities can be observed now. It is believed that providing senior citizens with appropriate housing standards and the opportunity to fully participate in the public life has a direct effect on their health and well-being.

The selected design concepts described above constitute answers to the expectations of most elderly people. They are recognised as examples of a good Danish practice in terms of actions for the benefit of improving the standards of the urban space, with the adjustment to the life cycle of different residents.

They share a similar approach to the selection of the location of the residential buildings within the city. Designing such facilities near green enclaves, in the vicinity of intensely developed areas, with good access to public transport, is definitely preferred.

The goal of such decisions is to create the conditions fostering active and creative participation of the elderly in the life of younger generations in the urban space with no barriers, exclusion, orfeeling of isolation. This approach is also consistent with the concept of designing a universal urban space adjusted to the needs of all generations (age-integrated society). It fulfils the expectations of the citizens of Denmark, too, who usually exhibit a strong community spirit, satisfaction with life, and social commitment. Elderly inhabitants of the country in particular constitute an open group of people who are willing to take part in different forms of urban life.

Combining the living environment of the elderly with other generations is also inscribed in the principles of sustainable urban planning, which promote combining different forms of services and housing development in order to obtain a cohesive, friendly, and attractive neighbourhood for young people, families with children, and elderly people (mixed-use neighbourhood).

To sum up, it should be emphasised that the quality of life of senior citizens in the city depends on the quality of the built environment as well as of the social environment. The quality of the physical environment is expressed most of all in decent housing standards, public space, as well as public transport. The social environment can, on the other hand, have a positive effect by stimulating active citizenship and professional activity, providing access to services, most of all medical ones, as well as activities fostering different forms of participation of senior citizens in the city life.

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