

## **Summary (streszczenie rozprawy doktorskiej w języku angielskim)**

*Health and well-being in collective accommodation buildings for elderly. Technological and economic conditions* Maksymilian Stec, MSc (Arch)

The dissertation explores the issues of housing for seniors in view of the demographic, technological and economic changes taking place in Poland and in the world. A systematic increase is observed in the population of senior inhabitants as a percentage of the total population in Poland and other European countries. This group of citizens requires many amenities in their environment, such as functional amenities, utilities, or amenities in transportation. Buildings intended for residential purposes (also for elderly people) are subject to planning restrictions concerning the use of technologies, and energy efficient systems. Housing occupied by seniors is in constant use which generates high building maintenance costs.

The main purpose of this dissertation was to evaluate facilities for seniors. Based on the conducted research, the author concluded that type of the user must be considered when sustainable construction and energy-efficient approaches are adopted. Elderly people usually use modern equipment based on their own understanding of how it should function rather than the information in user manuals. As a result, solutions relating to design and installation must be adapted to the needs of this population or work as the background centrally steered system.

Additionally, an inventory of architectural, urban planning, and functional solutions, as well as solutions relating to utilities and installations for elderly-friendly residential buildings was compiled. A classification of environmentally-friendly strategies in architectural and urban planning for senior housing was also prepared.

This study was conducted based on a literature review and an analysis of 70 facilities, 27 of which were described in detail in dissertation. Two projects prepared by the author were also included in this work as an example of implementation of the solutions discussed. The literature review includes both Polish and foreign publications. The author presented the history of senior housing design and included information on the current demographic situation and future demographic predictions. Both assisted and independent living facilities for senior citizens were analysed in this work. In terms of parameters, they included both energy-efficient and passive buildings. Each of the presented facilities is an example of sustainable construction due to their attitude towards the users, construction and maintenance cost, and approach to design and construction.

Subject Headings: Living environment, Old age, Accessibility in design, Senior housing, Interior design, Renewable energy

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