

SHAPING CONTEMPORARY URBAN AREAS IN CONTEXT OF SUSTAINABLE DEVELOPMENT

Abstract

This work deals with shaping contemporary urban space in the context of the idea of sustainable development. The essence of sustainable development is rational use of resources and maximizing social, economic and environmental benefits from human activities. As most of those activities take place in cities and is conditioned, to some extent, by the way cities are organized, naturally the idea of sustainable development has several implications for urban design.

The principles of shaping the built environment, formulated within the paradigm of sustainable urbanism, postulate a holistic approach in three scales: polycentric structure of regions, metropolis and cities; urban grid of districts and neighborhoods; and the micro scale of an urban block, and buildings providing active frontages for public space. It implies the rediscovery of the value of traditional, compact and multifunctional urban grid, with local access to services, green space and urban amenities. In such a structure, density and intensity rationalize sustainable mobility, which means reducing transportation needs, and promoting alternatives to personal motorization: walking, cycling and public transport. Compact urban form is related to the notions of neighborhood, as a distinct area, where the local community lives and identifies itself with the place.

The work discusses contemporary aspects of shaping urban form. This social, cultural, technological and economic issues, include new lifestyles and working habits, new ways of housing. Evolving forms of urban transport include so called Personal Mobility on Demand, which combines car sharing, bike sharing, and smart management of vehicles by computerized logistic systems. New tools for analysis and design of urban space are also discussed, such as rating systems for urban districts and neighborhoods, as well as parametric and algorithmic designs of the urban structure. So called Parametricism as a new style and new design paradigm is described as a consequence of aiming at optimizing the use of resources. However, it also seems to be a new urban utopia, which may bring about several questions and threads to both urban design as a process, and as a profession.

An essential part of the work deals with applying the principles of sustainable urbanism in specific conditions in the practice of urban design.

This issue is discussed in relation to best practice examples from European cities. A detailed study analyzes case studies of recent city-making projects in Polish cities, that is complex urban development undertakings, which include new buildings, new elements of transportation systems, and new public spaces. For the needs of this study, the projects were divided into four categories: Large scale projects of whole new urban districts, so called town in the city (or urban village) projects by private developers, compact suburban neighborhoods as an alternative to chaotic urban sprawl, and urban regeneration projects which include densifying and restructuring of existing urban tissue. The study shows several possibilities, but also several challenges which arise in such projects.

Another essential part of the work is a discussion of author's own design experiences, above all the competition project - Kraków - Nowa Huta of the Future. This project received the first prize in the international ideas competition for a program and spatial development vision and socio-economic stimulation of the east part of Kraków, organized by the Municipality of Kraków and Mittal Steel in 2012. The proposed strategy, routed in the paradigms of a sustainable and resilient city, envisioned a compact and multifunctional urban structure – a contemporary reinterpretation of dense urban centers, such as historic Kraków. This spatial structure is however integrated with public transportation, according to the principles of Transit Oriented Development. The vision includes a regeneration strategy for some post-industrial areas belonging to Mittal Steel, as well as a range of flagship projects, which may constitute new investment offers and new recognizable attractions and landmarks. This project gave the author the possibility of applying the principles of sustainable urbanism in a specific area in Poland.

The conclusions indicate the importance of urban design issues in Poland, where shaping an urban environment which supports sustainable lifestyles seems to be one of the main contemporary civilization challenges. A positive change in the development tendencies require both improving national policy, and right decisions at a local level. Conceptualization of good urbanism though the requirements of sustainable development should give potentially better possibilities and inspiration for activities, which may result in better, more rational and more harmonious space around us.