MAN AND HIS NEEDS AS THE PURPOSE AND MEASURE OF APPLICATION OF INFORMATION TECHNOLOGIES IN THE CITY

Summary of the doctoral dissertation

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The popularization of the use of information technologies in everyday life, mobile access to the Internet and the connection of information with the space it concerns cause that, to an increasing extent, cyberspace supplements the city – its physical, social, administrative and economic dimensions – with a new layer. The ways of interacting with the urban environment are undergoing transformation. In this way, information technologies influence the areas of life traditionally associated with the opportunities offered by the city – work, education, relationships, entertainment.

It seems necessary to look for criteria that would allow to assess the effect of the observed changes – to what extent they serve the inhabitants, how they change the living conditions in the city, or what negative side effects are associated with them. The concept of the well-being of inhabitants, understood as the state of best meeting the diverse needs of people and urban communities, seems to have interesting possibilities for the assessment of actions taken in cities.

Information technologies constitute a new, virtual layer of the city, closely related to the other, physical layers. And although no mobile application can replace a well-designed space, information technologies have a chance to contribute significantly to solving existing problems and better meeting the needs of residents, as well as opening up new opportunities. Therefore, it seems justified to take up this subject also in the areas dealing with various aspects of the design and functioning of the urban environment – including urban planning and architecture.

In order to try to clarify the concept of the well-being of city dwellers and the factors determining the quality of life in the city, available studies in various fields of knowledge have been analyzed. It was necessary to take an interdisciplinary approach and refer to knowledge from various fields about human needs. Works in the field of psychology, sociology, economics, spatial planning, architecture and town planning were taken into account.

In relation to information and telecommunications technologies, both the fundamental elements, which constitute the basis of specialized solutions, the Network and its infrastructure, as well as more advanced concepts, such as the so-called Internet of Things, Smart Environment (Ambient Intelligence) or Augmented Reality have been considered. The solutions that, thanks to their nature and potential universality, can have a real impact on a wider group of inhabitants and actually change the way of “using” the city were included. This applies to both solutions and services aimed at individual users, as well as those having a more massive impact, which will ultimately translate into the quality of life in the city of an individual resident.

The main subject of the analysis are solutions built on the basis of information technologies that can be used by individual users – mainly mobile applications and web portals. Tools were selected that relate to those aspects of the urban environment that are of key importance for the well-being of residents. It presents the changes that elements of urbanized space undergo under the influence of information technologies and how the discussed solutions affect human-city relations.