

SUMMARY OF DOCTORAL THESIS

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titled: „Analysis of tools for involving communities in the design of urban-architectural solutions resulting from climate change including technology-based tools”.

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The dissertation addresses the issue of involving local communities in the design of urban-architectural solutions resulting from climate change.

The aim of the dissertation is to identify characteristics that determine the effectiveness of methods and tools in contemporary participatory processes, taking into account the needs arising from climate change, and to develop a participatory model for the implementation of solutions to prevent climate change.

The dissertation is research-based and presents general knowledge in the field of participatory design in the discipline of architecture and urban planning. The subject of the research is participatory methods, techniques and tools and their application in the participatory process. According to the assumed thesis, it is possible to identify a group of methods and tools that are particularly supportive in participatory urban-architectural design processes in the context of building urban resilience, sustainable design and climate change adaptation.

In the adopted research methodology, an analysis of literature sources on examples of participatory processes, applied methods and tools was carried out in order to identify a participatory model supporting the building of urban resilience against climate change. Research was carried out on the social and organisational determinants of public participation, analysis of selected examples of participatory processes and selected toolkits developed to carry out inclusive activities. The next step was to isolate the factors determining the selection of participatory methods and tools, as well as to identify the key phases of the participatory process and the elements of the participation model taking into account the iterative nature of the process. The collected knowledge was used to test the model solution on selected participatory processes in which the Author of the work participated. The results of the testing allowed for the clarification of the Author's Participatory Model and the development of conclusions to guide further research in the area of participatory design.

The work consists of seven chapters. The first part is the introduction, in which the genesis and rationale for undertaking the work is described, together with the aims, the thesis and a description of the methodology adopted. The next chapters are the analytical part of the thesis, in which a literature study of the social and organisational determinants of public participation and research related to climate change and the directions of urban development: the sustainable city, the resident city and the Human Smart City concept is undertaken. Chapter three undertook an analysis of contemporary participatory methods and techniques based on selected participatory processes and toolmakers. The research covered the use of tools and the timing of their application, the effects of participation, the components of processes and the roles of designers. The conclusions of the research described in Chapter Four were used to develop the author's participatory model, which includes assumptions

about the investment process, the designer's tasks and the principles for selecting participatory tools. On the basis of the principles and objectives of testing the model set out in Chapter Five, a process was carried out to check the degree of application of the model's assumptions in the processes of which the Author of the thesis was a co-author. The results of the testing were used to develop conclusions and to discuss the future of participatory processes in the face of climate change.

Among the conclusions of the research work, issues related to the discussion of urban resilience and climate change adaptation challenges and education, as well as organisational and public engagement issues are important. The factors identified in the research provide a basis for analysing the effectiveness of participatory processes particularly in terms of building urban resilience and increasing public engagement. An important result is also the range of activities covered by the Author Participatory Model, which can support organisers of participatory processes in planning and conducting such activities. In order to take full advantage of the opportunities offered by the model, issues related to the responsibility for the comprehensive conduct of processes and the effects resulting from them are important. The research also results in the range of competencies that a designer may have in participatory processes, which may have a bearing on the development of the architectural and urban planning profession in the future.

The dissertation also has a practical dimension and can support organisers of participatory processes including municipal authorities, officials and local leaders in addressing climate change issues.