# Chapter 6
# Development of the User Interface:
## Re-Coding Homes With User Participation


## ABSTRACT

*This chapter includes the final phase of the Re-Coding Homes Project, which has been conducted as a TUBITAK (The Scientific and Technological Research Council of Turkey) research. In the case of Istanbul-Maltepe Başıbüyük Housing, which was constructed by TOKI (Housing Development Administration) within the final phase of the study, a digital interface has been designed and operated in order to bring all the outputs of the project as variations, which are customized for different users. The interface works as a website, which includes representation and information on different variations offered by the design model. With the web interface, a system has been obtained in order to provide user participation and mass customization as well, as it will contain information about the project and will be used as a communication tool to share this information.*


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## INTRODUCTION

In web interface development process which is the last phase of the study, the main objective is to provide the user with residential interior designs which are diversified according to the needs of users and modular furniture that meet the identified needs. This chapter constitutes an important step that will provide user participation to the project with the aim of ensuring the adaptation of the family types to the standardized housing spaces, who have various features and live in urban transformation houses where the case study is carried out. It is aimed to obtain an interface which brings together the needs of the inhabitants and provides specific solutions to them with all the outputs obtained from the project.

Within the scope of the project which is studied as a model in the selected residential area, user participation has been provided in two important phases. In the first phase, the features and needs of existing users were determined through survey and field studies and these data were included in the design process as direct design parameters. In the final phase of the study, a simple survey including user preferences was prepared according to the pre-determined design parameters. This survey works as a tool to provide the opportunity to see and choose from spatial variations through user participation on the website. A coding system has been developed that includes all of the solutions to arise according to the different responses to the survey questions. This coding system includes combinations of all possible answers to the survey questions, respectively. To upload spatial solution alternatives that respond to all possible codes to the relevant section of the website, generation of generations process was initiated. In this phase, the necessity of preparing the visuals that can be uploaded to the website of the alternatives produced by the expert system emerged. Plan layouts and axonometric perspectives were prepared for each alternative and a formula was determined to calculate the approximate cost values. The developed interface was structured through web hosting services and shared via website publishing. The interface functioning as a website will work as a mass customization tool that brings together the users and the project outputs.

## BACKGROUND

User participation issue in design fields was examined in different ways and for different purposes. Sanoff (2008) argues that design processes with user participation are applied in many different disciplines from urban design and planning to industrial and information technology. He defines participatory design as an attitude about a force for change in the creation and management of environments for people (Sanoff, 2008). The activity of community participation is based on the principle

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