

The 15-minute neighbourhood game

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Keywords: *15-minute city, serious game, participatory tools*
Wordcount: 637 (max 700)

Problem statement

Popularity of the 15-minute city concept has been increasing in the recent years. The concept is seen as a way to improve accessibility, sustainability, and liveability; however, there are knowledge gaps in finding the successful pathways for its implementation, particularly in urban outskirts. For instance, there is scarce research on the barriers and needs of different population groups for the uptake of the 15-minute city concept. Moreover, it is still not fully clear which essential services such as mobility hubs, grocery stores, or healthcare centres are required to have a 15-minute city by bicycle or walking. To address these knowledge gaps, participatory methods such as serious gaming involving different stakeholders is a promising method to aid in the development of 15-minute cities.

Research objectives

This study explores the impact of a design game to investigate barriers and opportunities regarding the transition towards a 15-minute city, especially in urban outskirts. This research focuses on the game as a potential tool for practitioners to develop more awareness on the diversity in needs and interaction between different citizens in the development of a 15-minute city. The objective of the research is to: “*Explore the usefulness of a serious game as a tool for practitioners for the co-creation of 15-minute cities*”.

Methodological approach

To address the research objectives discussed in the previous section, we developed a serious game and experimented with it during a challenge-based workshop. The participants of the workshop were asked to design a 15-minute neighbourhood from the perspective of a local citizen or entrepreneur. The workshop took place during a European Consortium of Innovative Universities (ECIU) conference in Barcelona between 2-5 October 2023. The participants (N=32) work in several countries throughout Europe and are mostly working at universities or research institutes, with a few practitioners from municipalities. During the workshop, four separate groups composed of eight participants played the game. Each group was moderated by a game master (4 of the co-authors of the paper) while the other 2 co-authors were observing the process of the four tables.

The “15-minute Neighbourhood game” (15mN-game) is designed as a serious game, adapted from the *SmartHubs* design game of the Dutch living lab, where the game is used to co-design a mobility hub (Tellioglu et al., 2023, pp. 37-40). The goal of the 15mN-game is to co-design a neighbourhood that fulfils and satisfies the goals and needs of the player’s character. Before the start of the game, the players were given a character card describing a local citizen or entrepreneur’s persona. Based on this persona, the player formulates a personal goal which should be fulfilled through the design of neighbourhood. The players design their neighbourhood by placing or removing the design elements (e.g. supermarket, school, bus stop, car parking, etc.) on the gameboard while negotiating and discussing their actions with the other players. At the end of the game, the players discuss their satisfaction with the final design. When the game was finished, the participants filled in a survey on the interactions during the game and the usefulness of the game as a tool.

Results

During the mobil.TUM 2024 conference, we will discuss the game process and present the results obtained during the workshop (N=32). The process will be discussed based on the observations from the game masters and on the survey completed at the end of the workshop. In terms of results, we will present the differences and similarities between the 4 sub-groups of players in terms of the personas’ goals, their final 15mN design, their overall

satisfaction, and the impact of using personas in general. The study aims to contribute to the field of participatory design, citizens engagement methods and problem-based learning strategies outside the academic realm. The game could help stakeholders and civil society to understand citizens' perspectives in the development of the 15-minute city.

References

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