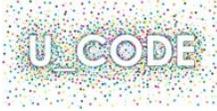


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0.2	01.12.2016	Katrina Heijne	Initial version sent to reviewers
1.0	19.12.2016	Katrina Heijne	final version for submission (with reviewers comments incorporated)

Executive Summary

This report originated from research project „*U_CODE: Urban Collective Design Environment: A New Tool for Enabling Expert Planners to Co-create and Communicate with Citizens in Urban Design*“, which is funded by the European Union.¹ Under the leadership of the Technical University of Dresden Laboratory of Knowledge Architecture (Prof. Dr.-Ing. Jörg R. Noennig), the pan-European research project will develop methods and processes for the involvement of a broader public community in large Urban Design projects.

Deliverable 2.1, “*Survey on co-design methodologies in urban design (initial version)*” is about:

1. establishing a deeper understanding of the dynamics of Co-Creation processes;
2. reviewing existing community-based tools and methods with a special focus on game-based approaches;
3. providing insight in the impact of cultural differences and legal frameworks within different European countries.

This report (and its sub studies) cover this broad spectrum of topics and additionally aims to provide already some initial guidelines and requirements for the U_CODE designers and developers. Research methods and analysis include literature research, reviews, expert interviews, systematic internet research, case studies and discussions within the U_CODE team.

User-Centered Design, Participatory Planning and Co-Creation

Both in literature as well as in daily practice, the concepts of Public Participation and Co-Design are not straightforward. Different disciplines and even different people within the same discipline use these concepts in different ways in different situations. Therefore, the first aim of this report was to develop a definition regarding these concepts to promote a shared understanding within the context of U_CODE. In order to develop the definitions, the stakeholder groups were simplified into two groups: Customers and Professionals. Customers are the end-users of the U_CODE tool, e.g. citizens, local authorities, interest groups and local business. Professionals are the people professionally involved in the project of urban planning, urban design and architectural design, e.g. urban planners, authorities, architects, etc. Three Professional-Customer interaction types were distilled: User-Centered Design (UCD), Participatory Planning (PP) and Co-Creation (CC). The latter two (PP and CC) can actually be referred to as a form of Co-Design. The main difference between PP and CC is that in CC the Professionals and Customers interact and collaborate in a mutual value creation process, while in PP the Customer is only involved and consulted by the Professional.

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Horizon-2020-Programme „ICT 19: Technologies for creative industries, social media and convergence“, Grant ID 688873 U_CODE. Further information at <http://www.u-code.eu>

The proposed definition for Co-Creation is *“the process of mutual Professional-Customer value creation. This facilitated (creative) process generates an active form of interaction and sharing between Professionals and Customers (instead of the active Professional, passive Customer interaction). One of the results of Co-Creation is that the contact between Professionals and Customers moves away from transactional and becomes an experience.”*

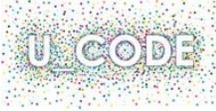
Co-Design (PP and/or CC) has many benefits for Professionals (both from an agency and project perspective) as well as the Customers. E.g. for citizens and future users it results in a better experience and satisfaction with the public space and a more developed civil society. For projects, it improves the quality and fit of the end result, while reducing the risk of implementation which directly influences duration and costs of a project. Regarding agencies, it improves their credibility, trust and support; leads to better relations and cooperation internally and externally and it also helps them become more effective and human-centered.

However, these benefits only apply when the right conditions are secured and the principles of Co-Design are taken into account. Otherwise, it will only create mistrust, waste Professionals’ and Customers’ time and money and can seriously undermine future Co-Design attempts. Some examples of Co-Design principles are: being clear on the purpose; having multiple solution directions still open; creating suitable and purposeful Boundary Objects; and Providing feedback to the Customers on how their inputs were used. Some principles that specifically apply to Co-Creation are that Professionals and Customers should: closely collaborate in a mutual value creation process; be able to exchange ideas; and provide some sort of (value) input into the joint space of creation. In addition, the three basic rules of Creative Facilitation should be applied: firstly, role rigidity (between Facilitator, Problem Owner and Resource Group); secondly, the golden rules for each state (diverging and converging); and thirdly, a clear problem statement (SPARK!).

Gamification

By implementing game elements in non-game contexts – in the present case matters of urban planning – desired user actions can be fostered. These user actions comprise giving contributions in regard to the urban planning process such as publishing ideas, opinions and comments and thereby ensure an intense discourse. That is why gamification is considered suitable for effectively supporting participation processes. Because an appropriate gameful design can be highly valuable for creating mutual collaboration between all stakeholders, gamified tools in the field of urban planning have already been implemented in various ways. Especially crowdsourcing platforms intensely added game elements such as leaderboards, badges or so called missions to their platforms in order to make participation more enjoyable and in that way, to also foster long-term motivation.

Nevertheless, this report will show that implementing game elements in a proper manner is a complex task and should not be underestimated. In some cases, a false implementation of game elements can cause reverse effects and lead to demotivation, for instance if new entrants of a participation platform realize their profiles on the bottom of a long-term leaderboard.



Furthermore, gamification is no panacea as some participants may see the serious field of urban planning inappropriate for being gamified. Though, current scientific research states an overall positive effect of gamification when it comes to user motivation and therefore is worth being investigated within this project.

Tools & methods

A database has been developed containing all kinds of Co-Design and Game-Based tools and methods, mostly in the context of Urban Planning, some in other contexts, e.g. Product Service Systems.

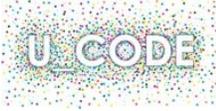
The database covers a state-of-the-art research and as such contains tools and methods that are useful in order to improve participation processes in the field of urban planning. For reasons of clarity, the database presents the results by using three main categories that were examined by theoretical implications on the different stages of public participation: therefore, it was investigated whether a tool or method improves the (1) information or the (2) consultation of the public as well as the (3) collaboration between citizens and other relevant stakeholders. (Note: this division is different from the 3 Professional-Customer interaction types; UCD, PP and CC). Additionally, the database provides several filtering options that e.g. locates a database entry in the stage of the urban planning process or distinguishes whether it is to be used online or offline and. In that way, the database facilitates the further exploitation of the findings.

Methodologies, mindsets and Culture

Tools and methods are never a stand-alone matter. Tools and methods are organized, clustered and approached through methodologies. But most critical is the mindset with which these tools and methodologies are used. This mindset depends again on the culture. Therefore this report pays special attention to the mindset which is needed to apply Co-Design, e.g. how the mindset for diverging stages differs from converging stages. Cultural dimensions in different European countries were compared and it was concluded that some countries are culturally more predisposed towards using Co-Design tools and methods. Besides cultural dimensions, countries also differ in how the legal framework is institutionalized. U_CODE should find a way to use those frameworks to her advantage. It must be noted that direct transplantation of a U_CODE tool into all European countries may be challenging.

Conclusion and next steps

D2.1 is the initial report, which means that this report is about exploring the topics mentioned above and identifying challenges, successfactors and interesting leads for U_CODE. Based on these insights an initial list of design requirements has been developed. Further interesting and relevant topics - like Co-Creation on a large scale and Selection Bias - will be elaborated in the final version (D2.3) to be delivered by February 1st, 2018 (M24). Also, any upcoming developments in literature on Co-Design, Gamification, Creative Facilitation, Tools & Methods and EU Legal Frameworks will be covered. In addition, certain activities will be conducted, like developing a benchmark out of the already identified Tools & Methods; developing a *Common*



European Legal Framework Practice; and guarding that the U_CODE designers will apply the best practice guidelines regarding Co-Design, Creative Facilitation and Gamification to the utmost and that the differences in cultural dimensions and legal frameworks between the different European countries will be respected.