Engaging Community for Participatory Design

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Abstract— **This paper illustrates an overview of the benefits provided by the practice of participatory design with special regard to the engagement of communities in the context of health promotion, as showed with the PEGASO experience.**

I. THE BENEFITS OF PARTICIPATORY DESIGN

In the last decades, the user-centered design (UCD) philosophy revolutionized the approach to the development of products, services, systems and processes. In fact, the UCD put the user with her needs, desires and limitations at the center of the design process marking the end of a blind technology-driven progress. However, this practice still presents a major limit: the lack of an active role for the users. This changed with the introduction of the Participatory Design (PD) practice, also called co-design. The PD refers to an approach attempting to actively involve all stakeholders in a collective creativity during the whole design process. The UCD methods have been focused more on what people say, think and do, while PD focused on what people make in order to explore also what users feel, know and dream [1]. Therefore, the adoption of the PD approach supplies designers with higher quality user requirements and developing systems that can better match users' needs improving users' satisfaction [2]. Furthermore, PD improves the mutual learning and understanding of designers and users originating a particular alchemy that brings to the combination of different perspectives eventually leading to a collaborative creativity generating new unexpected solutions. PD allows also the design of differentiated services with unique benefits and better value for users possibly triggering a more rapid diffusion and a better user acceptance that can result in sustained log-term engagement [2]. Moreover, PD enables inclusive design by involving the typologies of users that are usually design-excluded in a consumer-led approach that aims at the mainstream market. The benefits provided by practicing PD can go beyond the final interaction between the product and the users; in fact, it can offer an opportunity for education and to raise awareness. It is important to note that this learning activity is not unidirectional but is a mutual benefit. In fact, users learn about a new subject and to be creative, while the designers can learn from the users, who are experts of their experiences, habits and behaviors. This is particularly important in the healthcare domain, where empowering the users, both during the design process and the service provision, allows achieving more effective solutions and ensuring sustainability of programs.

II. PARTICIPATORY DESIGN IN PEGASO

PEGASO is a project funded by the European Commission and it aims at providing a multi-dimensional and cross-disciplinary ICT-based system that exploits engaging game mechanics to motivate behavioral changes towards healthy lifestyles during adolescence for obesity prevention [3]. During the first year of this project, several sessions of UCD and PD have been conducted to design the system. In particular, the serious game design workshops with teenagers provided interesting insights. The workshops aimed at designing a mobile game to promote healthy nutritional habits. The ideas provided by the young participants were indeed original and the insights about their habits in playing games illuminating. During an informal interview with the teachers who helped us in organizing the workshops, we found out that the main result of this PD sessions consisted of the twofold learning opportunity for the teenagers. First, we were able to raise awareness about the importance of healthy nutritional habits, enabling health promotion in the frame of the design phase of the project, before the provision of the real service. Secondly, these young participants learnt to feel more confident about their creativity. Indeed, it has been reported that they became more motivated to study during class. The reason for this change depended not only on the topic (games), which was very relevant for them, but also on the fact that this PD session made the teenagers very enthusiastic about playing an active role in the design process and to contribute to create something new and important. This led to an unprecedented confidence about their creativity and about their possibility to become authors of future services and products. This enthusiasm about being a "maker" became epidemic and the word of month induced the students from other classes to ask their teachers to replicate this workshop with them. This is the first step towards the creation of an active community. Moreover, implementing an online platform to support the co-creation process could allow the involvement of a larger sample of youth and could help fostering the long-term engagement of the community. This can enable a sustainable bottom-up innovation process, which is essential to the smart cities of the next future, especially with regard to healthcare and prevention domain.

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