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Technology for recycling and citizens engagement: Lessons learned from the RECICLOS project in Spain

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Statement of the Problem: The <u>recycling</u> target of plastics is expected to increase Europe-wide from the current 22.5% imposed by the Packaging Directive 94/62/EC to 55% by 2025, motivated in part by rising awareness among the general public of the externalities of plastics. Reaching this target by 2025 means that more than 10 million tons of recycled material needs to be absorbed by the end markets. A multitude of measures to achieve the above-mentioned goals must be implemented by the different actors of the wider eco-system, affecting product design, waste collection, sorting, recycling, and a key actor, the end user.

The purpose of this study: A virtual reward token called RECICLOS was created in 2019 to encourage recycling among families in Spain, using incentives and awards to improve recycling behavior and a webapp to register the recycled plastic. By the end of the first 6-weeks pilot project, 10% of the targeted population was registered in the pilot area of the county of Pla de l'Estany, Spain. The second pilot of RECICLOS currently being implemented in three cities in the range about 100.000 inhabitants in the metropolitan area of Barcelona. In the success case of Sant Boi of Llobregat the active participation of the relevant stakeholders, namely the municipality representatives on the political and technical level, associations, local ONGs etc. made a positive impact on the recycling of plastic with an increase of 15% in the pilot year. From 2020 on, RECICLOS is in expansion so far implemented in over 60 Spanish municipalities with over 100.000 users. Key success factors of the different pilot phases in a variety of urban contexts are analyzed and compared.

Conclusion & Significance: RECICLOS solution is contributing to environmental awareness, more and better recycling habits, and potential long-term change for the future.

Biography

Denisa Gibovic, PhD student, business owner and promotor of open innovation and sustainability solutions based on advanced technology and social innovation. Andrea Bikfalvi, 'Serra Húnter' Associate Professor, teaching and research staff in the Department of Business Administration and Product Design at the University of Girona (Spain). She holds a PhD in Business Administration. She is currently the deputy director of the Chamber of Commerce Chair of Family Business at the same university. During her trajectory, she conducted several research projects for the regional government of Catalonia, Spain, as well as a series of national and EU projects. Her main research interest is in strategy, entrepreneurship and holistic approaches of innovation in all types of organizations.

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