

## Trasharyans – Waste Sorting Game

**Location:** Armenia

**In-Country Partner Organization/Client:** “ISSD” Innovative Solutions for Sustainable Development of Communities” NGO. Our mission is to ensure sustainable development in Armenia through implementation of innovative projects in waste management, agriculture, education, business and promotion of circular economy and women empowerment. Website: <http://issdngo.com/>

**Project Background:** Armenia is a small landlocked country with 3 million inhabitants and more than 60000tons of plastic waste which ends up in landfills, rivers, forests and mountains. Additionally, it has scarce resources and with current waste attitude, the country will run out of resources in a very short period of time. USA Today (2019) has identified Armenia as the 6<sup>th</sup> country across the globe producing the most waste per capita. The main challenges are the accumulation of plastic, a lack of education and awareness of waste and nutrient management, limited financial resources, and a lack of technical expertise. Based on the survey conducted by the ISSD, 79% of interviewees are eager to sort and recycle their waste if they can see with their own eyes that it is being recycled into something else of use. However, after starting implementation of “Recycle it!” project, which has over 200,000 stakeholders we revealed that people (especially kids) need more motivation to start sorting their waste. Educating our kids is the most important aspect for ensuring the well-being of our country and planet overall.

**Project Problem Statement:** Our team has decided to develop a game which will teach schoolkids how and why should they sort their waste. The idea is that there is a family of trash monsters and each of the monster eats specific type of trash and gives incentives (e.g. if you recycle 10 bottles you can get a pair of sneakers, or you can recycle aluminum forever, etc.). The game will offer special power ups that can be unlocked when they actually deliver their waste to recycling station through our organization. Every month the game will have winners (both schools and individuals), who will get special prizes from our organization. ISSD has developed the initial concept and reached agreements with schools. ISSD would like D-Lab students to research (identify existing games on the market), further develop the game concept, and test prototypes of the game.

### Project Goals and Objectives:

1. Feasibility Study
  - a. Investigate existing waste sorting and waste educational games
2. Conceptual Design
  - a. Conduct prior art research on youth waste education
  - b. Work with the client to determine design criteria





**UC DAVIS**

*D-Lab*

- c. Make recommendations for D-Lab II
3. Design; Build; Test (D-Lab II)