Working Title: Exploring the use of experiential marketing and extended reality technology to support the consumer learning process of sustainability policies and principles
(Author(s): R. Gandiwa   Supervisors: Dr. R. Leahy, Dr. P. Fenton)

What's the problem we are addressing ? Why is it important?

According to the EPA, Ireland has a waste problem and is currently struggling to meet EU Waste Framework Directive targets for sorting and recycling of 55% by 2025.

- Poor waste sorting has potential negative impacts on the environment and public health.
- Sustainable waste management practices are crucial and **SDG 12** focuses on ensuring sustainable consumption and production patterns.
- Research addresses need for education and awareness of Irish population on how to effectively sort household waste.

Recycling Bin
Packaging accounts for 55% of the items in the recycling bin
64% of materials were in the correct bin
15% could be segregated into general waste bin
3%* could be segregated into organic waste bin
*An additional 10% was contamination on materials.
8% could be segregated into bring centres

General Waste Bin
21% of the waste in the general waste bin is food & garden waste
36% of materials were in the correct bin
24% could have been segregated into recycling
21% could have been segregated into the organic waste bin
19% could have been segregated into bring centres

Organic Waste Bin
Compostable waste accounts for 95% of the organic waste bin.
But the organic waste bin is only capturing one third of available food waste.
95% of the materials found were in the correct bin
3% could be segregated into recycling bin
1% could be segregated into bring centres
1% could be segregated into general waste bin

Source: EPA Household Municipal Waste Characterisation Report (2022)

What is our approach to solving the problem?

- Experience is the best teacher
- VR is a highly effective and persuasive technology in learning and training situations
- Leveraging on the escapism, playfulness and novelty of XR technologies
- An experimental study will be carried out with participants taking part in a VR experience called Recyclage VR which teaches about waste sorting in a simulated environment.

RecyclageVR

Working across disciplines - Interdisciplinary Considerations

- This research is interdisciplinary and combines data from marketing, computer science, and sustainability.
- Collaboration has so far been established with Nimbus Centre and VRAI Studios (France)
- Future collaborations expected with Clean Technology Centre in MTU.
- Research team is open to collaborating with researchers in Consumer Psychology, Sustainability, and Human Computer Interactions.
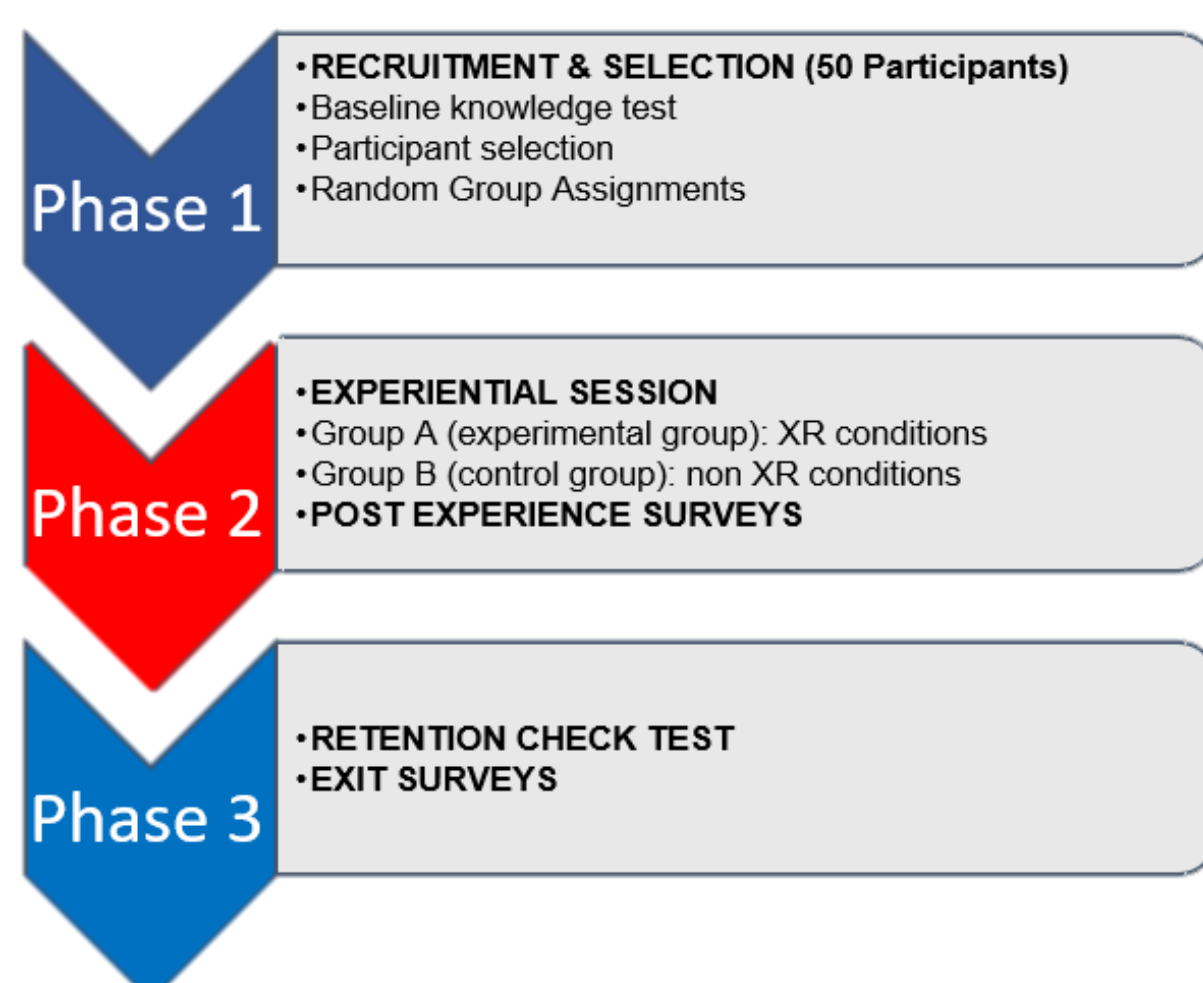
How our research generates IMPACT

This research study will achieve the following:

- educate and raise awareness about waste sorting to achieve behaviour and attitude change.
- educating the public about waste sorting in a fun, playful and memorable way.
- provide a framework marketing practitioners can use to leverage XR technologies and their unique elements to communicate persuasively
- a positive change in Irish households' waste sorting practices and meeting EU waste management targets.

Methodology

The research study is an experimental study designed as follows;

Phase 1
- RECRUITMENT & SELECTION (50 Participants)
- Baseline knowledge test
- Participant selection
- Random Group Assignments

Phase 2
- EXPERIENTIAL SESSION
- Group A (experimental group): XR conditions
- Group B (control group): non XR conditions
- POST EXPERIENCE SURVEYS

Phase 3
- RETENTION CHECK TEST
- EXIT SURVEYS

Project Team and Key Collaborators

- PhD Student: Rumbidzai Gandiwa
- Level of Study: 2nd Year
- Project Funding Organisation: SFI Advance CRT
- Professional Background: Marketing and Public Relations
- Project Supervisors: Dr. Rose Leahy and Dr. Pio Fenton.

This research study is expected to benefit the waste industry, public and private sector marketing practitioners, as well as the general population of Ireland.

Presenter Contact Details
LinkedIn: Rumbidzai Gandiwa
Email: rumbidzai.gandiwa@mycit.ie