

Smartphone Lifecycles and E-Waste Awareness Among Students

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1 Introduction

This project investigates how university students manage smartphones throughout their lifecycle and how these decisions relate to environmental awareness and e-waste production. The aim is to identify student patterns in device replacement, reuse, repair, recycling and disposal, while also exploring the motivations, barriers and knowledge that shape sustainable or unsustainable behaviour. Results of the study will contribute to a better understanding of e-waste generation among young consumers and support the development of initiatives that promote responsible smartphone use, repair and recycling.

2 Survey

2.1 Survey Structure

2.1.1 Methodology

2.1.2 Questions

The questions in the survey distributed to students with answers were as follows:

1. Question1
 - answer1
 - answer2
2. Question2

2.2 Results

2.2.1 Analysis

2.2.2 Discussion

3 Alternative Solutions

3.1 Why people don't use buyback programs?

From the survey results, we found that a lot of people don't use buyback programs. We wanted to see what are the reasons for that. I checked some of the buyback programs and got some interesting results. In Slovenia, there are only two buyback programs for smartphones that I found. The first buyback program is used by Telekom Slovenije, A1, Telemach and BigBang and is called "Risajkl". The runner of the program is a company called "Janus Trade d.o.o." and is mostly focused on promotions ran by Samsung, since they are importing Samsung devices.

By discovering only 2 buyback programs exist in Slovenia, we can conclude that demand for buyback programs is low. Same could also be deducted from the survey results, where most of the students said they keep their old phones in a drawer at home. These phones could be already recycled and their materials reused. These phones could also be dangerous at home, since phones are usually not stored properly and batteries could leak or even explode in some cases.

By conducting further research into buyback programs in Slovenia, I found they are not used often, mainly because of poor buyback prices. For example a 3 year old Google Pixel 6a phone in almost perfect condition is bought back for only 40 euros. Or my personal iPhone 16

pro Max, which is only 1 year old, is bought back for only 500 euros. This is a very low price, since the phone itself costs 1300 euros when bought new.

3.2 Recycling

Recycling is one of the crucial steps in managing e-waste from mobile phones. Old phones contain a lot of rare earth materials that can be recycled and reused in the production of new devices. Recycling helps to reduce the need for mining new materials, which can positively impact the environment by reducing the need for mining new materials, which can have significant environmental impacts. We can also reuse other materials like glass, plastic and metal from phones that would otherwise end up in peoples drawers or end up in landfills.