

## **ABSTRACT**

Since the release of the first iPhone in 2007, smartphones have undergone remarkable rapid development and have become a cornerstone of modern society. Their societal importance originates from the transformative impact on basically all areas of modern life: communication, information access, economics, social connectivity, empowerment, healthcare, and education. The continuous development of smartphones shapes the way individuals live, work, and interact with the world, underscoring their enduring significance in modern society. However, as demand for smartphones grows and their environmental impact becomes increasingly evident, there is a critical need to address sustainability concerns while maintaining user satisfaction.

This thesis starts with an in-depth review of current sustainability concepts, particularly the idea of a Circular Economy. It then continues by examining sustainability attributes in smartphone design and their significance, such as material selection, energy efficiency, recyclability, and ethical sourcing. The fundamental purpose of this research is to investigate consumer preferences towards sustainable smartphones. To achieve this goal, an adaptive Conjoint Analysis methodology is used, utilizing online surveys to capture consumer preferences and choices among various product features. Furthermore, environmental awareness and key performance indicators concerning individual smartphone usage were considered.

Based on data collected from 16 European countries, the investigation unfolded that the price of the product is the primary argument for the product decision, closely followed by the argument of extensive warranty. Repairability was also deemed a crucial feature, but interestingly, the type of phone (new or used) ranked fourth in importance. Also, rather unexpected, the local production argument was favored over a sustainability label.

The expectation from the research findings are to offer guidance on how to prioritize sustainability attributes and integrate them into smartphone design. Applying these results, the goal is to develop strategies for closing the gap between sustainability and user satisfaction in the constantly evolving smartphone industry. Such strategies should facilitate to change consumer preferences and technological advancements. Ultimately, this approach might contribute to the development of more environmentally responsible smartphone products.