

# Ethical Phone for a Fair, Circular, and Sustainable Future: Fairphone Business Case and Possible Application in a Smart City Context

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## EXECUTIVE SUMMARY

*Fairphone is a Dutch company that produces ethical mobile phones relying on a circular business model. The company was born after a campaign condemning the “bloody minerals” sourced by the mobile phone industry and the huge amount of e-waste this industry produces. For what attains the reduction of e-waste, Fairphone is implementing both slowing and closing resource loop strategies to reduce the tendency of rapid smartphone replacements. Fairphone is also engaging in complex supply chain management operations to assure that all its partners provide high quality social standards. Given the complexity of the business model, Fairphone has created a unique network of stakeholders,*

*with customers playing a pivotal role, each providing fundamental help. Given the innovative and holistic approach Fairphone is implementing, the company could also generate positive effects in the growing field of smart cities. The chapter is dedicated to the analysis of Fairphone's business case and the positive impacts the company could generate within smart cities.*

## **INTRODUCTION**

For the past 150 years (Reuter et al., 2018), many of the products we use in our everyday life have been manufactured according to the principles of a linear economy: new or existing raw materials are extracted, processed into a ready-to-consume product and finally thrown away after use, thus becoming waste. This process forces the economy to repeat the same pattern over and over again: extraction, production, distribution, consumption and disposal. This causes enormous environmental damage, but in recent years there has been a growing awareness of the need to move towards a circular economy: an economy designed to regenerate itself, so that waste becomes a resource for others. According to the Ellen MacArthur Foundation, the circular economy approach aims to maximize the usefulness of products, their components and materials throughout their life cycle, recovering inputs once products reach the end of their useful life.

Circular economy has been implemented in many sectors, including the tech industry. The latter generates an increasing amount of waste year over year, furthermore, only 18% of such waste (e-waste) has been collected and recycled in 2019 (Barros & Dimla, 2021). The production system traditionally used by the tech industry is planned obsolescence. This is a strategy adopted by companies in order to make a product that will become obsolete in a set time frame (De Giovanni, 2022). Planned obsolescence determines the creation of a huge amount of electronic waste having a negative impact on the environment: in fact, its disposal requires a specific process due to the presence of materials such as lead, copper and mercury that, if disposed of in the wrong way, can seriously harm the environment. This phenomenon has generated awareness and the need to approach a circular economy.

The tech industry is approaching the transition from linear to circular economy both rethinking product design and component use (Jalali et al., 2020). The main challenge is ensuring a long-life product with higher performance components thus reducing e-waste.

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