Electronic Waste Management System

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E-waste is the fastest-growing waste stream in the world, producing 20-50 million tons annually, and it is expected to reach 120 million tons by 2050. It is dangerous due to its poisonous compounds and is being produced rapidly due to reduced costs and disposal rates. In our Palestinian community, the E-waste problem is even worse. Thousands of tons of electronic devices accumulate annually and are dealt with randomly and incorrectly due to the lack of awareness among citizens. This includes mixing it with other waste in trash containers, getting rid of it near homes, and burning it in trash containers and open landfills. Burning E-waste releases harmful chemicals and pollutants into the air, which can affect a person's nervous system, especially children, who are particularly vulnerable to environmental pollutants due to their growth and development. These practices were emphasized when conducting several meetings with municipalities and environmental quality authorities. They indicate that E-waste in our community has become a threat and serious problem, and a solution must be found. To solve this problem, an integrated system was built to handle the accumulation of e-waste in three stages: sorting E-waste from other wastes, sorting E-waste into four categories (Cellphones, Batteries, Hard disks, E-waste), and sending statistics to a developed website to serve municipalities and environmental quality authorities. This website will also have a significant role in raising citizens' awareness of the safe use and disposal of E-waste. The outcome of this project will be a step towards achieving a more sustainable community with children free from deformities, living in a healthy and safe place, and hoping for a better future.

Awards Won: