E-WASTE LANKA – AN IT SOLUTION FOR THE E-WASTE MANAGEMENT IN SRI LANKA

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Abstract

Over the past few decades, an exponential growth in the production and usage of electronic equipment could be significantly observed. Meanwhile, the lifespan of these electronic equipment becomes shorter and as a result, E-waste has become one of the fastest growing waste streams worldwide. Control of pollution caused by e-waste and management of it are two significant challenges confronted by all the countries around the world due to the fact that, the toxic constituents present in them could contaminate the environment and threatened the human health. Therefore, the main aim of this project is to design and develop a centralized IT solution platform to connect e-waste contributors, recycle companies and the waste distributors in order to establish a well-defined E-waste Management System. Online Questionnaires, interviews and observation were the data collection methods used in this project to collect data. A well elaborated study was done by evaluating all the strengths and weaknesses of the existing e-waste management processes in Sri Lanka and a well-designed digital solution was developed. Iterative software development methodology was used due to the advantages it has over the traditional software development methodology. Main web development principles and mobile development principles were used in the development of this IT solution. Engaging the general public in the e-waste management practices and improving the standards of business processes incorporated by the recycling companies are the main practical importance for developing this IT solution. Thereby, through implementing this advanced digital IT technology, many people will contribute and involve in the process, making this e-waste management system more efficient and productive. Hence, this IT solution will create an integrated platform to the waste contributors, recycle companies and waste distributors mitigating the prevailing barriers in the e-waste management. As a result, it will enhance the quality of e-waste management practices in the country and it will pave the way for a less pollution free environment. Legal, ethical and social issues were considered throughout the development of this project for a more efficient, productive and functional output.