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Advancing E-waste Recycling in Albania

An Interactive Qualifying Project submitted to the faculty of Worcester Polytechnic Institute in partial fulfillment of the requirements for the Degree of Bachelor Science

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Abstract

Recycle Albania, a non-profit organization in Tirana, Albania, strives to increase the amount of electronic waste that is collected and disposed properly. The organization provides Eco-Boxes to collect electronic waste from over one hundred partner companies. We worked with Recycle Albania to attract more partners by updating its promotional strategies and materials. We consulted marketing experts in Albania, interviewed existing and potential partner companies, recommended changes in promotional strategies and implemented changes in promotional materials. Several of the companies we visited agreed to partner with Recycle Albania. The increased number of partners for Recycle Albania is a step towards more electronic waste being properly recycled in Albania.

Acknowledgments

Our project could not be successfully completed without the support and assistance we received since the beginning. Therefore, we would like to take some time to express our gratitude towards the people and organizations that have generously helped us.

We would first like to thank our sponsor Recycle Albania. Without Recycle Albania, our project would not have existed. It is an amazing organization that helps protect the people and environment in Albania from the negative effects of electronic waste. We would specifically like to thank Mariglana Hasimi and Rinalda Proko from Recycle Albania. Without them, we would not have successfully accomplished our objectives. We also would like to thank Sazan Guri, an environmentalist and board member of Recycle Albania, as well as Petrit Levendi, the director of Colombo. We want to thank them for taking the time to share information with us on electronic waste recycling in Albania.

Several professors from Worcester Polytechnic Institute also contributed greatly to our project. We want to thank Professor Peter Christopher and Professor Robert Hersh for their valuable advice on our project and report. We also want to thank Professor Yan Wang and Professor Purvi Shah for sharing their knowledge with us on electronic waste recycling and general marketing strategies respectively.

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Likewise, we appreciate the representatives from several companies and institutions for taking the time to answer our questions. This includes representatives from the Bank of Albania, Tirana City Council, Great Britain Embassy, Swedish Embassy, Union Bank, and Coca Cola.

Last but not least, we want to thank our peers from Albania Group B'13 for their valuable comments and opinions as well as our local coordinator, Frida Bahja, for her help on our project and our experience in Albania.

Executive Summary

The modern world is built upon technology which leads to a growing demand for new devices. Electrical and electronic equipment is being consumed at an ever growing rate leading to a tremendous amount of electronic waste. Electronic waste is considered to be electronic equipment that has reached its end-of-life state once it is broken or has become obsolete to the user. Unfortunately, not all of this waste is disposed of properly and much of it ends up in landfills. This is problematic because electronic waste contains hazardous components that can negatively affect the environment and people. The proper disposal method of electronic waste is recycling because it safely handles the waste. Electronic waste recycling is still developing in countries throughout the world, including Albania. Recycle Albania is a non-profit organization that was established to take the initiative on electronic waste recycling in Albania, specifically in its capital city Tirana. It supplies Eco-Boxes to collect electronic waste from over 100 partner companies and governmental offices, but it is looking to expand its partner list. Some of the major partners it currently collects from include Coca-Cola, Albtelecom, Raiffeisen Bank, as well as various embassies and ministries.

The goal of our project was to contribute to the efforts of the collection and proper disposal of electronic waste in Albania. In order to achieve our goal, we worked with Recycle Albania to help promote its electronic waste recycling program. We developed three objectives to complete our overall goal. First, we evaluated Recycle Albania's existing promotional strategies. We shadowed our sponsor liaison to assess how Recycle Albania interacts with companies and how it promoted itself. We also evaluated its existing promotional materials by examining whether they contained key content and were appealing to the reader. Next, we researched and developed ideas for potential promotional strategies. To accomplish this, we interviewed target companies and current partners as well as consulted marketing experts. This research along with our evaluation allowed us to develop ideas for Recycle Albania's existing materials. Finally, we implemented our ideas for certain promotional materials. We updated the materials, so they reflected suggestions from our experts and contained necessary information.

By completing our objectives, we obtained essential results that were used to form recommendations for Recycle Albania. When shadowing our liaison, we observed that when she met face to face with target companies, they usually joined Recycle Albania's program.

However, our liaison often had trouble setting up these meetings and would often have to leave the pamphlet without meeting the intended representative. On these occasions, we never heard of any further response from the target company. Our evaluation of Recycle Albania's promotional materials concluded that these materials do not contain some of the key aspects and are not reader friendly. Our interviews with target companies and current partners informed us of the motivational factors for joining Recycle Albania's program. Marketing experts provided us with information about how to best convey Recycle Albania's message through its materials. We also conducted a discussion with a graduate level international marketing class which provided us feedback on Recycle Albania's materials. We developed ideas on updating the materials based on our evaluations, interviews with companies, and marketing experts' advice. These ideas suggested that we include motivational factors, add more consistent content to the materials and also improve the layout of the materials. Following our ideas, we implemented the suggestions and updated the materials.

We developed conclusions and recommendations based on our findings about Recycle Albania's existing promotional strategies. We concluded that face to face personal communication is the most effective method of gaining new partners. A lack of personal communication with target companies did not lead to successful interactions with these companies. Therefore, we recommend that Recycle Albania uses face to face personal communication. To make this possible, we recommend that it focus on building relationships with target companies by making contact in advance and setting up meetings with the company. Also, we concluded that Recycle Albania should update its existing promotional materials, and we took on part of this responsibility. We have provided Recycle Albania with updated materials and we recommend that it uses these materials for its promotion. Since we did not have the opportunity to update its website, we have provided recommendations for editing Recycle Albania's website. One of our other recommendations is that Recycle Albania should maintain strong relationships with its partners. Currently, it has strong relationships with some of its partners but it needs to spend more time on listening to the requests of others. From our interviews with companies, we learned that strong relationships can lead to its partners recommending Recycle Albania to other companies. Our recommendations will help Recycle Albania to expand its partner list, resulting in more electronic waste being collected and disposed of properly in Albania.

Authorship

Each section of this report was contributed to equally by each member. The contributions to the report included conducting research, writing and peer editing the various sections. All four members equally contributed to the completion of the overall project.

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1 Introduction

Over the past few decades, the amount of electrical and electronic equipment in the average business and household has increased tremendously. The growing demand for technology directly increases the amount of electronic waste produced. However, this electronic waste is often disposed of improperly. If it ends up in landfills, the hazardous components of electronic waste can leak out and affect the surrounding environment and people (Wang, Leung, Wu, Yang and Wong, 2009). To prevent such harmful effects, electronic waste needs to be processed properly. Recycling is the proper disposal method of electronic waste because it allows for reuse of parts and materials while also correctly handling any hazardous components (Stowe, 2008). Unfortunately, few businesses or people are aware of available recycling options.

Albania, along with the rest of the world, struggles with management of electronic waste disposal. There are no regulations specifically on electronic waste in Albania, but there is a law on hazardous waste that encompasses some electronic waste. However, a lack of enforcement on the hazardous waste law allows businesses to dispose of their electronic waste improperly. Improper disposal is a convenient method because electronic waste can be discarded with normal garbage, which is problematic. Recycle Albania is working to solve this problem. It is a non-profit organization that collects electronic waste from companies around Tirana, the capital city of Albania. Its effort is rapidly expanding, but it needs help to make people aware of the dangers of improper disposal (Hasimi, personal communication, October 29, 2013).

The overall goal of our project was to contribute to the efforts of the collection and proper disposal of electronic waste in Albania. To achieve this, we worked with Recycle Albania by updating its existing promotional strategies. Recycle Albania's program collects electronic waste free of charge from businesses when needed. It supplies these businesses with Eco-Boxes to collect their electronic waste. Then, it works with a recycling company to ensure this electronic waste is properly disposed. Currently, Recycle Albania collects electronic waste from over 100 businesses in Tirana (Hasimi, personal communication, October 29, 2013).

To achieve our overall goal in Albania, we identified and completed three main objectives. Once we arrived in Tirana, we evaluated Recycle Albania's existing promotional strategies. Our evaluation assessed the promotional materials it uses and also how it interacts with companies. As soon as we understood how Recycle Albania operates, we researched

potential promotional strategies. This research allowed us to develop ideas for Recycle Albania's materials and later about Recycle Albania's process. We ensured that the ideas considered information from our evaluations as well as information from interested parties and promotional experts. From our ideas for the materials, we implemented the changes. The materials were updated to better convey Recycle Albania's message and increase electronic waste recycling.

We shadowed our liaison to observe how Recycle Albania interacts with companies and we evaluated the effectiveness of this method. This also gave us the opportunity to interview target and current companies to identify their motivation for joining, which would later help us to develop recommendations. We evaluated Recycle Albania's existing materials but also sought assistance from promotional experts. We consulted two professors of marketing, one from Worcester Polytechnic Institute and one from the University of Tirana. Furthermore, we took the opportunity to go to an international marketing class in Tirana where we presented Recycle Albania's promotional materials and obtained critiques from students. We took the suggestions we received about Recycle Albania's materials and incorporated them with our evaluations to develop ideas for updating. We implemented these ideas for the promotional materials as well as created new materials for Recycle Albania.

2 Background

The goal of our project was to contribute to the efforts of the collection and proper disposal of electronic waste in Albania. To achieve this, we worked with Recycle Albania to help promote electronic waste recycling. This chapter provides an overview of the recycling infrastructure. We begin by introducing Recycle Albania's program. After this, we define electronic waste and discuss its sources. Next, we detail and explain the recycling process and its products. Following this, we discuss the harmful effects of electronic waste on the environment and people. Then, we examine the rules and regulations regarding electronic waste from around the world. Finally, we consider the challenges this recycling process faces on a broad level.

2.1 Recycle Albania

Recycle Albania is a non-profit organization that manages the collection of electronic waste from businesses and governmental offices in Tirana. It accepts computers, printers, batteries, ink cartridges and similar items except for phones, which are collected by Vodafone, a mobile phone retailer. To collect electronic waste, Recycle Albania provides collection boxes, called Eco-Boxes, to partnered companies. When these boxes are full, they are transported by Colombo to its facilities. Colombo is a recycling company based out of the city of Vlora with a storage facility in Tirana. It specializes in the recycling of printers and ink/toner cartridges but also repairs and resells other electronic waste. Any waste that cannot be resold by Colombo is broken into separate materials and sent to the appropriate facility. These components include metals, plastics, paper, batteries, and motherboards (Levendi, personal communication, 2013). When Recycle Albania was established, its founders decided to work with Colombo based on its friendship with the director, Petrit Levendi.

A board of directors composed of environmentalists founded Recycle Albania in 2012. Mariglana Hasimi is the executive director and is in charge of communicating with companies. Along with Mariglana Hasimi, Rinalda Proko works with Recycle Albania to expand its program. This includes speaking with target companies about joining Recycle Albania along with checking the status of current companies' electronic waste levels. At this time, Recycle Albania has over 100 partners enrolled in its program. In the future, it hopes to add to the number

of participating companies in Tirana and possibly expand its program to increase electronic waste recycling throughout Albania (Hasimi, personal communication, 2013).

2.2 Characterizing Electronic Waste

Electronic waste is a prevalent issue around the world. It has increased in recent years due to mass production of electrical and electronic equipment. To understand the consequences of this increase, the treatment of electronic waste must be carefully analyzed.

2.2.1 Defining Electronic Waste

Electronic waste is considered to be waste from electrical and electronic equipment (WEEE). Electronic equipment is considered to have reached its end-of-life state once it is broken or has become obsolete to the user (Cui, 2003). Once electronics reach their end-of-life state, they can also be described as electronic waste. Electronic waste can be categorized into ten sub-categories (Mayers, 2012):

- Large household appliances
- Small household appliances
- Information technology (IT) and telecommunications equipment
- Consumer equipment
- Lighting equipment
- Electrical and electronic tools
- Toys, leisure, and sports equipment
- Medical devices (with the exception of all implanted and infected products)
- Monitoring and control instruments
- Automatic dispensers

WEEE and e-waste are two other terms that may be used to describe electronic waste throughout this report.

2.2.2 Growing Electronic Demand and Electronic Waste

The modern world is built upon electrical and electronic equipment. People are producing and buying an ever increasing number of electronics (Babu, Parande & Basha, 2007). The growth of electronics in areas like the United States and Europe is impressive, but for some developing countries like China, it is staggering. Figure 1 below gives an example of this for

personal computers but other technologies have seen similar increase in demand. This demand generates one of the fastest growing business sectors and creates enormous potential in the production of electrical and electronic equipment (Babu et al., 2007). Furthermore, the advance of technology in the last twenty years also contributes to the growth of the amount of electrical and electronic equipment. Due to the high rate of development of new products, electrical and electronic equipment becomes outdated quickly. This decrease in lifespan of technology can be seen in Figure 2, where lifespans were shown to decrease from 1992 and were projected to decrease through 2006.

The increasing consumption and production of electrical and electronic equipment leads to a tremendous amount of electronic waste. In 2004, an estimated 100 million PCs were discarded. In Europe, the amount of electronic waste is predicted to grow by three to five percent per year (Babu et al., 2007). Electronic waste is already a considerable fraction of all waste at about eight percent and it is only going to grow (Widmer, Oswald-Krapf, Sinha-Khetriwal, Schnellman, & Böni, 2005). Unfortunately, not all of this waste is disposed of properly and much of it ends up in landfills (Kang & Schoenung, 2005).

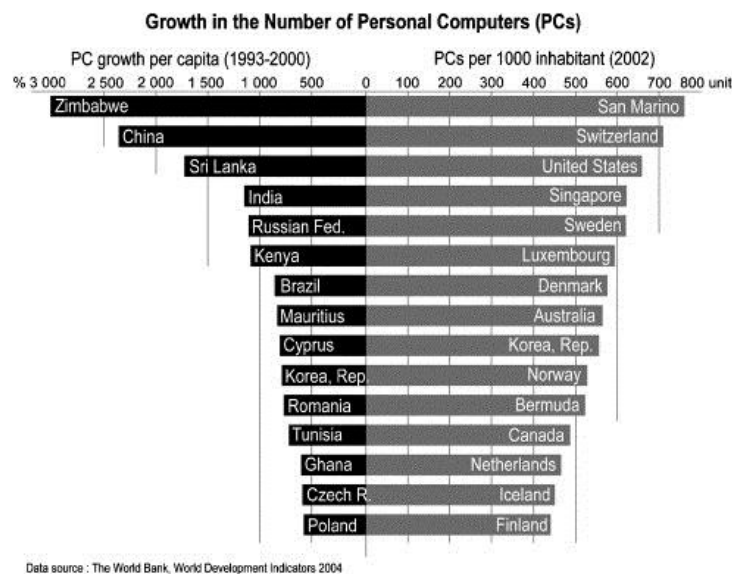


Figure 1 Growth in the number of personal computers (Widmer et al. 2005)

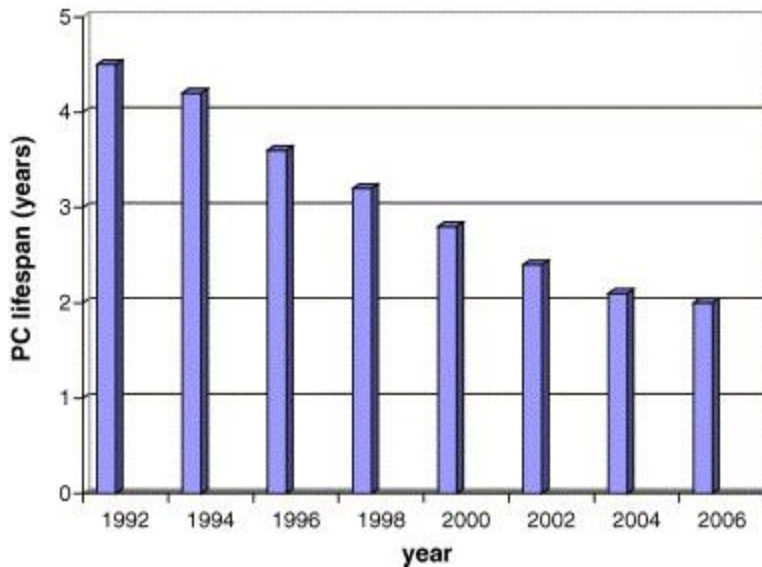


Figure 2 Projected decrease in personal computer lifespan (Kang & Schenung, 2005)

2.2.3 Sources of Electronic Waste

The proper disposal method of electronic waste is recycling. The first and most involved step during the recycling process is collection (Kang & Schoenung, 2005). The two main methods to collect electronic waste from the general public are at a permanent collection site or at a special day event. Permanent collection sites can be established almost anywhere and allow for recycling year round. Special day events allow people to bring their electronic waste to a specific site set up for one or more days. In the United States, when people are choosing between attending a permanent collection center versus a special event, it is about an even split of attendance (Kang & Schoenung, 2005). Recently, major technology companies in the United States and Europe have also established take-back programs for the public, where they will take-back your old electronics and sometimes give an incentive to do so (Babu et al., 2007). More information can be found on this in a case study of a take-back program in Section 2.5.4.

Electronic waste from the public is not a very consistent source of materials. The type of electronic waste recyclers receive from municipal waste is much more varied and therefore it takes extra time to sort and de-manufacture. Large companies or government departments are a much better source of electronic waste for recyclers, because the waste they supply is more consistent. Usually, they provide electronics that are three to five years old and of a similar type and brand (Stowe, 2008). Stowe (2008) says in the United States, “Seventy-five percent of recycled equipment comes from large organizations.”

2.3 The Recycling Process

Once electronic waste has been collected, it is transported to a recycling plant. At this location, the processing of electronic waste begins. This section details possible routes electronic waste may take.

2.3.1 Recycling

Recycling is the proper disposal method for electronic waste and it provides valuable parts and materials. The recycling process for electronic waste can be broken into three broad stages: sorting, de-manufacturing, and further processing. Through these steps, electronic waste will either be reused or recycled further into raw materials. Figure 3 details a simple flow chart of the electronic waste recycling process. More detailed processes of recycling refrigerators, televisions and monitors, printed circuit boards, and cell phones can be found in Appendix A.

The overall recycling process is complex and time consuming. Manual labor is heavily involved in sorting and de-manufacturing electronic waste. There is very little automated equipment that can be used for these processes because of the variety of received material. Especially in developing nations, facilities rely on manpower (Robinson, 2009). A profit can be made from recycling but it depends on the type of electronic waste available. Some types of electronic waste, such as items containing precious metals, can be very profitable, while other items, such as those composed of simple metals or plastics, are not as valuable (Wang, personal communication, September 27, 2013). The quantity of material is also important. If a recycling plant has a considerable amount of the same type of material, it is much easier to process and make a profit. When a profit cannot be made from the materials, the recycling plant must charge another entity (Scollins-Rankin, personal communication, October 3, 2013).

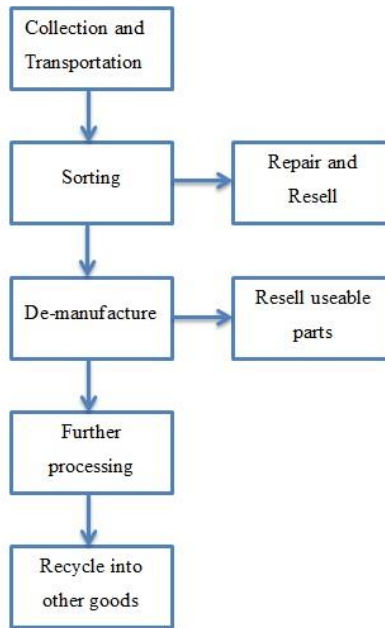


Figure 3 Simplified flow chart of Appendix A Figure 16 (Cui, 2003)

2.3.2 Reusing

The proper recycling process involves processing materials correctly to allow for the most profit to be gained from materials. Reselling reusable electronic devices and their parts can be very profitable because used electronics often have a comparable performance to new devices. However, since they are used, they are sold at a lower price and this attracts consumers (Levendi, personal communication, 2013). Therefore, sorting is one of the most critical steps in the recycling process. It determines whether or not electronic devices can be reused or if they should be further processed. Surprisingly, there is a significant amount of electronic waste that is still functioning and reusable. For example, in the United States, over half the computers from special drop off events are still in good working condition (Kang & Schoenung, 2005). It is important for workers to have proficient knowledge on sorting to be able to pick out functional devices. Some non-fully functional devices may require testing for identification of functional parts that might be reusable. Finding functional parts in nonfunctional devices is complicated and requires even more experienced workers.

2.3.3 Recycled Materials

If there are no reusable parts, metals, plastics, or other materials from electronic waste can be recycled. Plastics can be separated from fother materials and then processed at plastic

recycling plants. They are of low value and not in high demand (Scollins-Rankin, personal communication, 2013). About fifty percent of metals in recycled materials can be recovered for further recycling (Graedel et al., 2011). Recovered metals with low value can be used in television board or monitor board manufacturing; metals with medium value can be used in computer board manufacturing; metals with high value can be used in printed circuit board and cell phone manufacturing (Hagelucken, 2006). Precious metals such as gold and silver can be recovered at a rate of five to fifteen percent from electronic waste (Graedel et al., 2011). This low recovery rate means there must be a significant quantity of e-waste being recycled for the recycler to be able to make a profit (Stowe, 2008).

2.4 Consequences of Improper Recycling and Disposal

If done improperly, the recycling process has potentially harmful effects on the people and environment. In addition, if electronic waste is not recycled at all and it is deposited in a landfill, it can be hazardous. This section describes the processes by which people and the environment are exposed to the harmful content of electronic waste and also looks at the negative effects that can occur.

2.4.1 How People are exposed

Improper handling of electronic waste can release content which is toxic to people. A landfill with electronic waste can cause lasting damage to the environment and people. If electronic waste is left to decompose at unregulated waste dumps, its contents can leak into the surrounding area. The soil and water sources will become contaminated, which can potentially expose people to harmful substances (Wang, Leung, Wu, Yang and Wong, 2009).

Proper recycling of electronic waste can produce many valuable products and help to keep the environment clean and safe. However, a problem occurs when recycling is done with improper methods. One of the most common examples of this is burning piles of wire. This is a crude way to obtain the copper found in wires, and the burning of wires releases dangerous fumes into the air which is potentially inhaled by the workers (Williams et al., 2008). People can also be exposed to harmful content during the electronic waste disassembly process where it produces a form of dust. This dust is composed of a combination of heavy metal and polymer particles, all of which are released during both the proper and improper recycling processes.

When electronic waste is broken up, particles are released into the air that then coat the workplace and are blown into the surrounding area. This dust is picked up by workers inside of recycling plants and often these workers return home coated in this material, leading to more people being exposed (Leung et al., 2008). Proper recycling plants take precautionary measures against exposure to dust. They supply employees with face masks and protective clothing (Scollins-Rankin, personal communication, 2013).

2.4.2 Health Impacts of Electronic Waste

When people are exposed to electronic waste, there are potentially serious consequences to their health. These consequences originate from the many different elements and compounds found in electronics. Although the toxicity of each of the elements is not completely understood, the health risks of certain elements like lead and cadmium are well known (Chen, Dietrich, Huo & Ho, 2011). Lead is one of the most common metals in electronic waste and has been related to many different health problems. One of its devastating effects is a drop in intellectual capacity following exposure. There is also some evidence indicating lead could be a carcinogen. Another possible carcinogen that comes from electronic waste is cadmium (Järup, 2003). In addition to heavy metals, there are dangerous polymers in electronics (Man, Naidu & Wong, 2013). Polybrominated diphenyl ethers (PBDEs) are a type of polymer used as a flame retardant in electronics. This polymer is as new as electronics and therefore the effects have not been fully studied but it is known to be dangerous (Leung, Duzgoren-Aydin, Cheung & Wong, 2008).

Children can be especially affected by exposure to electronic waste. One of the most significant threats of electronic waste is its ability to cause neurological defects. Lead, mercury, cadmium and PBDEs are a few substances that have been linked with neurological defects. These hazardous materials can affect the cognitive abilities and motor skills of those exposed. Other affected functions can be found in Figure 4. These disorders are specifically applied to children who have been exposed to the hazardous material (Chen et al., 2011).

Contaminant	Neuropsychological functions affected and caused	How they are exposed
Lead	Cognition (verbal and performance), fine and gross motor skills, memory, attention, executive function, academic achievement, hyperactivity, delinquent behavior	Air, dust, water, soil, leaded paint or gasoline
Mercury	Cognition, language, motor function, attention	Air, seafood, mercury vapor
Cadmium	Cognition	Air, dust, food (rice, vegetables), tobacco smoke
PBDE (Polybrominated Diphenyl Ether)	Cognition	Air, dust, food

Figure 4 Simplified version of Appendix A Figure 21 (Chen et al., 2011)

2.4.3 Environmental Impact of Electronic Waste

Improper handling of electronic waste includes informal recycling as well as improper disposal into normal waste. This improper handling can cause serious detrimental effects on the environment. Specifically, when the waste is left in landfills, it decomposes and leaks into the ground affecting the surrounding area. Informal recycling can also be harmful because of the incorrect techniques that are used. The paragraphs below detail specific cases of environmental damage from electronic waste in China and Albania.

Guiyu, a village in China, is an example of a location of an electronic waste recycling center where the waste has not been recycled properly. Contaminants which originate from acid baths seeped into the nearby rivers. Heavy metals that ended up in the rivers attached to the sediment on the bottom which was a source of food for a local fish population. The contamination did not stop there; it affected the crustaceans of the area as well as local bacteria (Wang et al., 2009). In addition to this particular ecosystem being affected, the land and air around Guiyu were reported to be contaminated with high levels of PBDEs. Residents of Guiyu, the majority of whom worked in the recycling center, were also exposed to high levels of PBDEs (Ni & Zeng, 2009).

Another example of improper handling is large scale electronic waste activities in Hong Kong. These activities have damaged an old agricultural area so detrimentally that hundreds of years will need to pass before the land becomes useable again. Most of the land was used as a

dumping zone and tests have shown the soil was contaminated with heavy metals and PBDEs. A few improper recycling operations also took place here which used crude methods such as acid baths and burning (Lopez et al., 2010). This land was previously used for agriculture but now it cannot be used in any manner until a proper cleanup is done.

Asia is not the only home for problems associated with electronic waste. Tirana, Albania is another location that struggles with these problems. The Sharra dumpsite is located just outside of the city and holds many types of waste, not just electronic. Fires constantly burn here and the contaminants are spread through the air towards Tirana, contributing to the smog sometimes seen in the city. This site is a major health hazard to the inhabitants of Tirana (Baraj & Mansaku-Meksi, 2006). Another problem is the soil in and around the city is contaminated with high levels of heavy metals commonly found in electronic waste. However, it is not confirmed that these high levels come from e-waste exclusively because heavy metals can be found in alternate sources, such as lead in paint (Gjoka, Felix-Henningsen, Wegener, Salillari & Beqiraj, 2011).

2.5 Legislation and Implementation

Rules and regulations have been put into place to safeguard people and the environment from the harmful effects of electronic waste. We examined the European Union legislation and its implementation in two case studies of Germany and Bulgaria. This section also details the current standing of Albanian policies towards electronic waste.

2.5.1 European Union

The European Union (EU) has put in place regulations which require its member states to dispose of electronic waste properly. Since the United States has no federal regulations on electronic waste, we looked at the EU's policies toward it and how effectively member states were able to implement them. The EU's policies also impact Albania because the country hopes to join the EU sometime in the future. To do so, it would have to comply with all EU directives, including the one regarding electronic waste.

The European Union's WEEE Directive, 2002/96/EC, has the objective to increase the volume of recycled electrical and electronic waste in the EU. In order to achieve this, it states that producers of electrical and electronic equipment (EEE) are responsible for the treatment,

recovery, and financing of recycling WEEE. This system is known as extended producer responsibility (EPR). Producers are defined as: manufacturers who sell under their own brand, resellers who do not list the manufacturer on the product, or importers and exporters of EEE (Dully, 2009). Each country in the European Union must enact its own legislation which exceeds or equals the requirements set up in the European Union WEEE Directive.

Each member state must achieve a minimum average rate of 4 kilograms per inhabitant per year for the collection of e-waste from private households (Deubzer, 2011). If a country does not comply with the directive, then legal action can be taken against it. Collection facilities must be available and accessible locally so the consumers and distributors can hand in used EEE at no cost. The distributors must make sure that when supplying a new product, the final users can return the waste of the old product free of charge (Deubzer, 2011). The producers shall set up the system for the end-of-life treatment of e-waste or at least finance the collection, treatment, and proper disposal of e-waste. Additionally, the producers must reach certain minimum targets for recovery and recycling of the e-waste (Deubzer, 2011).

An article from the *Journal of Waste Management & Research* specifically reviews the EU's WEEE directive and concludes that it is the most "comprehensive implementation of a specific e-waste legislation" (Khetriwal, Widmer, Kuehr & Huisman, 2011). It also provides eight lessons for effective WEEE legislations: providing a framework, flexibility to adapt to a fast changing market-scape, applying differentiated targets, applying meaningful categorization and differentiation, balancing competition, enabling awareness and enforcement, ensuring low burden of administration, facilitating international harmonization (Khetriwal et al., 2011). These lessons point to the fact that over time adaptations to legislation and implementation may be needed. Providing a framework will give the system structure while the flexibility will allow the system to change based on the current electronic waste practices. Targeting different kinds of people, for example, corporations versus the public, will provide a more successful collection of electronic waste. The program must create awareness for the public so they are encouraged to recycle. At the same time, the program must also enforce its rules for people who choose not to participate. Using lessons learned from the EU directives and realizing policies may change over time, nations can develop their own successful plans of action regarding the recycling of electronic waste.

2.5.2 Case Study in Germany

This case study looks at the United Nations report, *E-waste Management in Germany* (Deubzer, 2011).

The WEEE directive was enacted within EU member states in 2003. In Germany, the Electrical and Electronic Equipment Act (ElektroG) was enacted in 2005 in response to the EU's directive. The ElektroG is the transposition of the WEEE directive into German legislation. The key players of ElektroG are public waste management authorities and producers of electronics and electrical equipment.

The local government is the only agency allowed to deal with waste management. The public waste management authorities (PuWaMA) are responsible for setting up collection points for consumers to use. The consumers are not charged when returning their used electronics or electrical equipment to these points. The number of collection points in a local district depends on the local population density. Producers are responsible for labeling EEE to ensure consumers are informed that they cannot dump electronic waste with general waste. However, it is still up to the consumer to separate electronic waste out. These labels also serve to help producers track which items have been recycled. Figure 22 of Appendix A contains more information on the tracking cycle. Once electronic waste has been collected, it is sorted and PuWaMa gives it to the producers without any charges. Figure 23 of Appendix A contains more information about how e-waste is sorted. Producers must recycle electronic waste with certified recycling businesses and they must pay for the full cost of this recycling.

The WEEE directive sets an average minimum of 4 kilogram per inhabitant per year for the collection of e-waste from private households. In 2008, Germany achieved 7.8 kilogram per inhabitant per year for the collection of e-waste from private households. However, only 50% of e-waste in Germany goes through the proper electronic waste recycling system. The reason for this is not clear but there is a strong indication that some waste has been exported illegally (Deubzer, 2011).

2.5.3 Case Study in Bulgaria

Bulgaria is an example of a country that had difficulty following the European Union's legislation on electronic waste. When the EU passed the WEEE act in 2003, Bulgaria was undeveloped in waste management sector. They had only recently developed recycling of metal

scraps and paper while lacking the infrastructure to recycle plastics and dispose of other waste (Dimitrova, 2010). Another problem was the lack of support from the Bulgarian people. They were not informed about the functioning of the recycling system, doubted that a portion of their tax money was actually being used for recycling, and overall did not have an interest in recycling (Ivanov, 2011).

Fortunately, there was the possibility of improvement for Bulgaria. The Bulgarians did believe in the ideals of the legislation but lacked motivation to follow through (Ivanov, 2011). In 2008, Bulgaria received aid from the “Life +” program of the European Commission. The “Life +” program aided Bulgaria with the construction of the first facility for the safe disassembling of cathode ray tube monitors. With this facility being the first of its kind in Bulgaria, the project was viewed to be a demonstration and it also helped to inform people about the benefits of recycling as well as how the process works (Dimitrova, 2010). Collection sites were formed across the country and recycling practices began.

Over time, electronic waste recycling in Bulgaria has evolved and improved. According to the Bulgarian Recycling Website, they now have plants with the capability of recycling that ranges from small electronic waste to refrigerators. The transition of Bulgaria from a country that only recycled paper and scrap metal to a country that now complies with EU regulations on recycling electronic waste can prove to be an example for other developing countries that wish to form more sophisticated recycling practices. The key factors in this transition were the financial aid and the guidance from an educated source, “Life +” program, that helped to produce a recycling plant which was also able to teach people about recycling (Dimitrova, 2010).

2.5.4 Case Study of a Company in the United States

In the United States, some states require the producers take responsibility for recycling electronic equipment that they have produced (ERCC.org). Toshiba, along with Panasonic and Sharp, founded the Electronic Manufacturers Recycling Management Company (MRM), which works to comply with these regulations. The MRM looks for partnerships with manufacturers and it also provides collection sites for e-waste from households in many states. Once it gets enough electronic waste, it will ship the waste to various national recycling companies (Toshiba.com). Toshiba is also innovating with PC recycling. It has its own trade-in program for PCs where consumers can bring their old Toshiba PC to receive credits towards purchasing a new one. Its website clearly expresses the interest for this trade-in program. The valuable

materials can be recovered from the e-waste and they can be reused in the manufacturing of new PCs. Furthermore, Toshiba holds a partnership with an online company, Gazelle. Customers can sell and send in their used electronics to Gazelle. Most of the time, the shipping charge is covered by Gazelle. Gazelle then does renovations on the used electronics to resell them (Toshiba.com).

2.5.5 Albanian Policies

Albania does not have legislation specific to electronic waste. However, its legislation on hazardous waste encompasses electronic waste with hazardous components. This legislation requires companies to properly dispose of electronic waste. A representative from the Ministry of Environment, interview found in Appendix I, told us this law is not well enforced. However, there has been an effort to create a larger piece of legislation on the environment that includes electronic waste. Environmentalists are currently working with government officials to get this legislation enacted. A new government was elected in 2013 and it may take time for them to address the issue of electronic waste disposal (Guri, personal communication, 2013). Some businesses, especially international ones, might have internal regulations on electronic waste disposal, but there are many that do not have any such policies (Hasimi, personal communication, 2013).

2.6 Challenges of Electronic Waste Recycling

Implementing an effective electronic waste recycling program has many obstacles. This section looks at challenges regarding collection and transportation, unregulated electronic waste recycling, and financial feasibility.

2.6.1 Collection and Transportation

The electronic waste recycling process begins with the collection of e-waste. This seemingly simple step of collection has proven to be a difficult undertaking because of the variety of collection options. The various methods of electronic waste collection come with benefits but also trade-offs as can be seen in Figure 5. Even with all these options, there is no single collection method that will achieve a satisfactory amount of electronic waste. The only way to receive satisfactory recovery rates is the implementation of multiple collection methods, but this becomes costly (Kang and Schoenung, 2005). After being collected, electronic waste

must then be transported to a recycling facility or a storage center. Transportation burns fossil fuels which are costly and emissions are another negative effect on the environment (Achillas, 2012). Together the collection and transportation steps are the most costly steps in e-waste recycling process and have been estimated to represent more than eighty percent of the total cost of recycling (Kang & Schoenung, 2005). Strategic planning and costs are major challenges that must be overcome when running a successful electronic waste recycling program.

Collection options	Responsible for transportation		Advantages	Disadvantages
	To collection site	To recycling site		
Curb side	–	Local government or recycler	Convenient. Resident participation	Potential theft and abandonment. Need extra sorting. High transportation cost
Special drop-off event	Consumer	Local government or recycler	Increase recycling awareness. Good for rural area	Irregular collection amount. Need storage space
Permanent drop-off	Consumer	Local government or recycler	High sorting rate. Low transportation cost. Most cost-effective	Need regular checking. Not effective for all communities
Take-back	–	OEMs or recycler contract with OEMs	No collection site needed	High shipment cost. Need special packaging. Consumers visit shipping location
Point-of-purchase	Consumer	Retailer	Low cost. High visibility if promoted by retailer	Retailer commitment. Need storage space

OEM: original equipment manufacturer

Figure 5 Methods of collection of electronic waste – advantages and disadvantages (Kang & Schoenung, 2005)

2.6.2 Unregulated Electronic Waste Recycling

Illegal handling of electronic waste happens on many fronts, from local to international, and the main reason behind it is financial gain (Ni & Zeng, 2009). Systematic legislation and strict regulation on electronic waste disposal in developed countries force the producers to suffer from high recycling costs. Exporting electronic waste at a much lower cost becomes an incentive to producers to break the law. Furthermore, people in countries with largely unregulated electronic waste recycling industries are willing to accept electronic waste because they can make a profit. China is the country which receives the most electronic waste in the world. In

China, there is no enforcement behind its regulations so illegal activities can occur (Ni & Zeng, 2009). Although most electronic waste is exported to China, many European countries take advantage of loopholes in EU legislation and export to developing countries in Eastern Europe (Bisschop, 2012). Figure 6 shows the destinations of where electronic waste is exported.



Figure 6 Exportation of electronic waste around the world (greenpeace.org)

2.6.3 Financial Feasibility

According to various case studies, different recycling programs have different financial obstacles. In Japan, customers are responsible for paying the recycling and transportation fees associated with recycling when they dispose of their electronics. This may cause people to dispose e-waste illegally since they want to avoid payment (Chung & Murakami, 2008). In South Korea, manufacturers are solely responsible for recycling. To ensure they do this, they have to pay the government a deposit but they can retrieve this once they recycle. However, the cost of recycling is so high manufacturers have started to not recycle and lose the deposit to the government (Chung & Murakami, 2008). California is also having trouble with funding its recycling program. The fees charged to consumers have been reported as insufficient for covering the recycling cost (Nixon & Saphores, 2007). The electronic waste recycling system in Germany works efficiently. The local government takes care of collection and transportation which makes recycling more feasible. Only producers are billed for the cost of recycling as is done in an EPR system (Deubzer, 2011). The financing of a recycling system is a major obstacle to overcome when starting electronic waste recycling.

3 Methods

The goal of our project was to contribute to the efforts of the collection and proper disposal of electronic waste in Albania. One method to achieve this was to improve Recycle Albania's program. We worked with Recycle Albania to update its promotional strategies. We developed a list of objectives to help us achieve the project goal:

1. Evaluate Recycle Albania's existing promotional strategies
2. Research and develop ideas for potential promotional strategies
3. Implement certain changes to the promotional materials

This chapter explains how we collected information from various sources to achieve our goals.

3.1 Evaluating Recycle Albania's Original Promotional Strategies

Evaluating Recycle Albania's promotional strategies involved examining several different aspects. We examined how Recycle Albania interacts with target companies and studied the existing materials that it uses to promote its operations. Working together with Recycle Albania, we created a presentation and brochure that was distributed to assess the responses.

3.1.1 Interactions with Target Companies

Communication between Recycle Albania and target companies was the first aspect of Recycle Albania's promotional process that we observed. To fully understand this part of the process, we accompanied our sponsor liaison, Mariglana Hasimi, while she visited these companies. We specifically looked for how our sponsor approached them and how well they received the message. When permitted, we asked questions to the representatives of companies who had meetings with Recycle Albania. The questions were centered on why the company would want to join with Recycle Albania and any concerns about joining. Their responses can be found in Appendix G.

Originally, we were not planning to communicate with target companies because of our concern about negatively influencing their decision on whether or not to join Recycle Albania's program. Our concern was that our questions may cause the company to believe Recycle Albania's program has flaws. We realized that target companies held valuable information which

current companies could not provide us and this outweighed our concerns. They informed us about concerns with joining the program or any reasons not to join the program. Also, these target companies gave us information about the positives of joining Recycle Albania's program. We had greater access to companies than we expected because we shadowed our sponsor while she visited these companies. This gave us ample opportunities to interview them.

3.1.2 Informational Materials

In addition to evaluating Recycle Albania's direct communications with target companies, we also assessed its promotional materials that are presented to target companies. These materials consist of a brochure and a pamphlet. We had the materials translated by Professor Peter Christopher from Albanian into English. Another material that Recycle Albania has available is a website which we also evaluated. We identified what information the materials provided to prospective partners of Recycle Albania and what was lacking. The key information we sought to identify included: a definition of electronic waste, an explanation of the negative effects of electronic waste, the distinction between improper versus proper disposal methods, and a description of what Recycle Albania's program provides. The materials were also evaluated for reader friendliness and effectiveness of the layout.

3.1.3 Contact through Email

Recycle Albania asked us to create a flyer and slideshow presentation to send to target companies. In the process of designing these, we solely used background research because we had yet to research Albanian promotional strategies. Upon completion, both the presentation and the flyer were approved by our sponsor and then emailed to target companies as attachments. We then evaluated the effectiveness of conveying information using this method. This evaluation was completed by noting the number of positive responses received from target companies.

3.2 Potential Promotional Strategies

For our second objective, we conducted research on promotional strategies and developed ideas for Recycle Albania. We first evaluated its relationship with current companies and then we consulted marketing experts to understand possible promotional strategies. Last, we developed ideas for updating Recycle Albania's materials.

3.2.1 Current Companies

We conducted several interviews with Recycle Albania's current partners including corporate companies and governmental offices. We asked these partners how they learned about Recycle Albania and why they joined its program. Their responses to these questions provided information about how Recycle Albania promotes itself and the motivation for companies to join the program. We also asked questions about their current partnership with Recycle Albania, specifically to ask if working with Recycle Albania was convenient. Our interviewees included representatives from the Embassy of Great Britain, the Embassy of Sweden, Union Bank, and Coca-Cola. The detailed interview questions and responses can be found in Appendix H.

3.2.2 Promotional Experts

To better promote Recycle Albania, we consulted sources that have an expertise in promoting. We interviewed professors of marketing from both Worcester Polytechnic Institute in the United States and the University of Tirana in Albania. We conducted an interview with Professor Purvi Shah of the WPI School of Business. She teaches marketing at WPI and from her, we obtained valuable knowledge on general marketing strategies. The detailed interview information can be found in Appendix J. While we were in Albania, we interviewed Professor Ilija Kristo from the Faculty of Economics at the University of Tirana. He described how promoting can be accomplished in Albania. The detailed interview information can be found in Appendix J. Professor Kristo also allowed us to hold a discussion with his graduate level International Marketing class. We distributed copies of Recycle Albania's brochure and pamphlet to the class. Assistant Professor Adela Llatja helped to lead the discussion with the class and also provided advice. We asked the students for their thoughts and comments on the content and layout of the materials. The detailed interview information can be found in Appendix K. With all the information we obtained from these professionals, we developed ideas for updating the materials.

3.2.3 Developing Ideas for Recycle Albania's Materials

We incorporated information from our evaluations, interviews with current partners, and interviews with experts in the business marketing field to develop ideas for updating Recycle Albania's materials. Interviewing current companies ensured that our ideas were focused on important factors in the decision making process for target companies. Interviews with

professors of marketing provided us with ideas for the improvement of the content and layout of the existing material. The ideas that we formed include what information should be emphasized and how this information can be distributed in the best way. Changes for these materials can be found in the results chapter.

3.3 Implementation of Updates and New Material

Our team had the opportunity to go beyond developing ideas and decided to apply certain changes. We updated some of Recycle Albania's materials and we also added new promotional materials of our own.

3.3.1 Updating of Recycle Albania's Material

Our evaluations along with the input from companies and marketing experts provided us with the basis to develop ideas for changing the existing materials. We implemented the changes for the brochure and pamphlet. From our sources, we received numerous suggestions on how to change both content and layout of Recycle Albania's materials. Some concepts conflicted and we were required to choose between these. We favored concepts that were shared by the majority of sources but in a situation where there was no consensus, our team made the final decision. These updated materials were presented to Recycle Albania for its approval before they were finalized.

3.3.2 New Materials

Our team decided that Recycle Albania could benefit from having additional promotional materials. We updated a previously designed slideshow presentation that provided simplified information concerning electronic waste. The updated slideshow contained more comprehensive information about electronic waste and a detailed description of Recycle Albania's program. This presentation was uploaded to the Internet with the possibility of it being added to Recycle Albania's website. We also provided Recycle Albania with a blueprint of a poster. This poster can be displayed with the Eco-Box in order to better inform employees about electronic waste. Our additional materials could help to increase Recycle Albania's visibility in Albania in the future.

4 Results

We evaluated Recycle Albania's existing promotional strategies. Our team formed ideas for Recycle Albania's promotional materials based on evaluations of its original materials, company interviews, and expert advice. We then implemented these ideas to update its materials and create new materials for promotion.

4.1 Evaluation of Existing Promotional Strategies

We evaluated Recycle Albania's interactions with companies and its existing promotional strategies. In this evaluation, we identified which aspects of its promotional strategies were effective and which aspects should be improved.

4.1.1 Evaluation of Target Company Interactions

By working with and shadowing our sponsor liaison, Mariglana Hasimi, we determined how effective Recycle Albania's original promotional strategies were at attracting new partners. Recycle Albania has two different methods of interacting with target companies. Most of the time, our sponsor would walk into companies without any appointment. She would try to meet with a representative from the technical department or someone who was responsible for old equipment. In this situation, representatives would not always have time to meet because of other obligations. When this occurred, Mariglana Hasimi would leave the pamphlet with other people in the companies who could pass the message to her intended target. This method was not effective because our sponsor cannot be certain whether or not the intended target received the message.

Sometimes, Recycle Albania would take the time to make contact with target companies by phone or email. If target companies appeared to be interested in the program, our sponsor tried to set up an appointment for further presentation and discussion of Recycle Albania's program. Mariglana Hasimi would then meet with representatives from companies or institutions and distribute a pamphlet to them about electronic waste and Recycle Albania's program. While they were reading the pamphlet, our sponsor orally presented details about the program and she also answered questions or concerns that these representatives had. This process was successful most of the time when they were able to meet in person.

4.1.2 Concerns from Current and Target Companies

While shadowing our liaison, we had the opportunity to interview target and current companies and we found that they had some concerns towards Recycle Albania's program. One of the concerns brought to our attention by the Bank of Albania was the risk of confidential information being exposed from hard drives of computers. Recycle Albania is not able to guarantee the security of the recycling process for hard drives because they do not have the technology to fully destroy them. Therefore, the Bank of Albania will not recycle these hard drives with Recycle Albania. Another concern mentioned by the Swedish Embassy was that Recycle Albania called too frequently to check the Eco-Box's level.

4.1.3 Contact through Email

We examined how effective Recycle Albania's approach was at gaining new companies when a flyer and presentation were distributed through email. This was one method it used for its promotional strategies. We created our own flyer, seen in Figure 7, and presentation, seen in Figure 8, based on knowledge we gained from background research. Our sponsor provided us a list of target companies' email addresses and we sent an email containing our brochure and presentation to all companies on the list. In the following week, we received ten responses out of about two thousands email addresses. All of the respondents showed an interest in joining Recycle Albania's program. However, based on the numerical statistics, this method was not effective in attracting target companies. One reason for this was that out of about two thousand email addresses, some of them were repetitive and many of them were not valid anymore. Another reason could be that we did not include any information we had obtained while researching in Albania. Therefore, the content of the materials may not have motivated the target companies to want to contact Recycle Albania. Furthermore, many target companies may have ignored our email since the materials were attachments and were in English.

Electronic Waste

Electronic waste is the waste from electrical and electronic devices.

What is improper disposal?



- Throwing away electronic waste with regular waste
- Burning hazardous material



Effects of Electronic Waste on

<u>Environment</u>	<u>People</u>
<ul style="list-style-type: none"> • Lasting damage to soil • Contamination of water sources • Pollution of the air 	<ul style="list-style-type: none"> • Potential carcinogens • Harms children's intelligence and motor skills • Drop in intellectual capacity




We urge you to recycle your electronic waste!

Recycle Albania provides electronic recycling service, free of charge. Please contact us if interested.

Figure 7 Flyer for electronic waste

Electronic Waste

Presentation by Recycle Albania

1

What is Electronic Waste?

Electronic waste is the waste from electrical and electronic devices



2

How NOT to Dispose

Throwing away with general garbage leads to landfills or burning



3

What are the Harmful Effects?




When not disposed of properly...

- Contamination of the environment
- Causing various negative health effects

4

What is the Right Way?

Recycling allows for electronic waste to be disposed of properly



5

How to recycle

Contact Recycle Albania!
A non-profit organization that collects electronic waste



6

What does Recycle Albania do?

- Provides an Eco-Box for your electronic waste
- Collects electronic waste free of charge
- Ensures that it is properly recycled



7

How to Contact Recycle Albania

Email: info@recyclealbania.com
Website: www.recyclealbania.org

Do your part!
Save Albania!



8

Figure 8 Initial version of slideshow

4.2 Ideas for Updating Materials

We evaluated the original materials Recycle Albania used to promote itself to target companies. Along with the evaluation of materials, we spoke with companies and experts to identify important information that could be added and how this should be displayed. Based on these findings, we formed ideas for updating the original materials.

4.2.1 Evaluation of Original Materials

We evaluated promotional materials Recycle Albania originally used. The content of these materials contained most of the four key points and only in some cases was the information lacking. To review, the points we looked for were: a definition of electronic waste, electronic waste's negative effects, improper versus proper disposal methods, Recycle Albania's program. The website, brochure, and pamphlet were each evaluated individually for the key information as well as reader friendliness.

Website

Recycle Albania's website contained information concerning electronic waste and its organization. Our evaluation went through each menu available on its website. The home page was the first page to be examined for key information. On the home page, we found a paragraph discussing several of the important points. It did include some minor information about what Recycle Albania does and also a description of some different forms of electronic waste. However, this paragraph lacked information about improper disposal, what the consequences of not recycling can be, and a proper definition of electronic waste. In addition to the content on the page, we also noticed the image on top of the page failed to load. We recommend that the content of this page be updated and the image be fixed.

The "Rreth Nesh" page, or "About Us", contained valuable information but was lacking information about Recycle Albania. Instead, the page contained key points pertaining to electronic waste and its negative effects. Although this page provided information, it was not provided in an appealing format. The page contained too many paragraph breaks which created a cluttered look. From this evaluation, we noted that this page provided high-quality details about electronic waste but it was not reader friendly. We recommend that this page be renamed "About Electronic Waste" and the writing format be changed.

“Latest News” could be accessed from any page by selecting “view all news”. This page seemed hidden as it was not located with the rest of the links to the main pages. Once selected, this brought you to the “About Us” page written in English. This page contained information regarding Recycle Albania, specifically its mission and purpose. It did have one update with the various negative effects of electronic waste which was only visible because it was the latest post. Any other “Latest News” was hidden in the website. We recommend that the “About Us” page be made more visible and the “Latest News” page be updated more often.

The “Partneret tane” page, or “Our Partners”, was missing an extensive list of companies currently working with Recycle Albania. The first part of this page contained a general list of partners, such as embassies and local governmental institutions. Although this list gave a sense of who currently recycles, it did not provide a complete list of partners. This page also had lists of specific companies who have refused to cooperate with Recycle Albania, which may not be appropriate. We recommend that a complete list of partners be included and the list of uncooperative companies be removed.

The “Galeria”, or “Gallery”, contained very limited photographs of electronic waste. We had previously seen photographs of a recycling conference as well as a youth education day located on a different website about Recycle Albania but they were not included on this page. The most interesting part about the gallery page was the link to a YouTube video about Recycle Albania. This video was very informative about electronic waste as well as Recycle Albania’s program. The video was hidden away in the “Gallery” page but we identified it as a potentially key source of information for potential partners. We recommend that the video be moved to the home page and include photographs of their past events.

The “Contact Us” page was much simpler to evaluate. On the page, there were various methods for reaching Recycle Albania. This page supplied an email, several telephone numbers and an address. One convenient feature allowed people to send an email to Recycle Albania directly from the page. Other less appealing features included an address which was in Indonesia as well as a link for the website. We recommend that the address be changed and the contacts be made consistent.

A summary of our results from the evaluation of the website can be found in Figure 9. Some of our key points were found in the website. There was sufficient information about electronic waste’s negative effects and information about Recycle Albania’s program. A clear

definition of electronic waste was not present in the website. Improper disposal methods were never listed and proper disposal methods were only discussed in a limited amount. Several issues concerning the website’s hyperlinks occurred and the webpage’s software was out of date and required an update. We recommend that the key points be added to pertinent sections and that technical issues are solved.

	Definition of electronic waste	Electronic waste’s negative effects	Improper versus proper disposal methods	What Recycle Albania’s program provides
Home Page	Available	Not available	Only proper methods	Available
Rreth Nesh	Available	Available	Not available	N/A
Partneret tane	N/A	N/A	N/A	N/A
Latest News	Not available	Available	Not available	Not available
About Us	N/A	N/A	N/A	Available
Gallery	N/A	N/A	N/A	N/A
Contact Us	N/A	N/A	N/A	N/A

Figure 9 Information originally available on the website

Brochure

We discuss each page of the brochure individually for its effectiveness. Below we provide our evaluations of Recycle Albania’s brochure. At the end of each page description, we provide ideas for updating the respective page.

The first page we examined was the cover page which contained bright photographs and appeared very presentable. The only information located on this page was the contact information of Recycle Albania. This information needed to be updated because they supplied conflicting phone numbers.

Page one of the brochure discussed the law regarding hazardous waste and provided a definition of electronic waste. A few things were missing from this page that could have been used to improve the message. Titles were missing on all of the pages, not just page one. The use of titles provides a clear message as to what the page will be discussing. In addition, the definition of electronic waste provided was lacking in detail and it only provided a list of examples. Electronic waste should be fully defined and presented before the law concerning hazardous waste was mentioned.

Page two provided examples of the negative effects of electronic waste and was split into two paragraphs. The first paragraph discussed large growth of electronics and improper disposal practices. The second paragraph talked about health impacts from exposure to electronic waste as well as dangerous materials present in electronic waste.

The next page, page three, of the brochure was the motivational page for perspective partners. This page attempted to provide inspiration to join with Recycle Albania. It cited reasons such as environmental concerns and laws that have been or will be enacted. Specifically, it mentioned the European Union and its legislation.

The last page with text supplied the reader with a description of Recycle Albania's program. This page discussed Recycle Albania's program, which provides collection points called Eco-Boxes. Included on this page was a good photograph of what an Eco-Box looks like but the quality of the image was not clear. It was unclear that Recycle Albania provided the Eco-Box to partners. The Eco-Box photograph should be updated and information on Recycle Albania's program be stated clearly.

The back cover of the brochure was very presentable and provided contact information of Recycle Albania. They had good graphics on the back and this page provided a better layout compared to the cover page. The contact information needed to be updated because, as previously mentioned, the phone numbers were not consistent with what we had seen.

Overall, titles should be added, consistent font size be applied, and photographs be updated.

Pamphlet

The informational pamphlet is the main material Recycle Albania uses when presenting itself to companies. This pamphlet contained two out of four key points. It neglected to include a clear definition of electronic waste and improper disposal methods. When discussing the other two points, it was not very well written and contained long sentences. The pamphlet included a list of current partners in bold font. When evaluating the informational pamphlet, our team noted that the Recycle Albania logo was out of date, a link to the website was not present, and phone numbers were not consistent. The key information should be discussed, the amount of text be decreased, and the previous sentence regarding formatting be addressed.

4.2.2 Recommendations from Companies

While interviewing current and target companies, we identified which aspects motivated them to join as well as which aspects they appreciated about Recycle Albania's program. Most companies felt they had a moral obligation to prevent Albania's environment from being harmed. Recycle Albania was also the first organization to take the initiative and approach companies about electronic waste recycling in Albania. Another motivating factor was that Recycle Albania provides its services free of charge. The current companies also highly appreciated its flexibility with communication and collection. We suggest that these motivational factors should be included in all of Recycle Albania's existing materials.

4.2.3 Recommendations from Experts

We also consulted experts in business marketing to identify general points about promoting that we could use to make recommendations for Recycle Albania. Purvi Shah, WPI Marketing Professor, provided ideas about general marketing. She suggested that we ensure there is a clear and consistent message throughout all of Recycle Albania's materials. She also advised that all of the materials should use a similar format. These points would help to improve the writing for the materials as well as the appearance of the materials, so we believe both ideas should be implemented. We also were able to speak to a Marketing Professor, Ilija Kristo, from the University of Tirana Economics Faculty. He suggested some changes and allowed us to show one of his classes Recycle Albania's materials. The class and Assistant Professor Adela Llatja provided many new ideas concerning the appearance and content of the brochure and pamphlet. The full list of their suggestions can be found in Appendix K.

We used many of the suggestions made by the class, but there were several we chose not to implement. One such suggestion was the inclusion of a company list on the brochure. Including this list on the brochure would have added too many words. However, we used this idea when we were updating the pamphlet. Another suggestion was to have fewer words on the brochure. We were not able to apply this suggestion because we did not want to alter the message Recycle Albania originally included in its brochure. After completing our updates to the materials, we returned to the same class to present our new materials and to have them provide more suggestions. Overall, the class enjoyed and approved of our updated pamphlet and brochure. They had a few minor comments about how to slightly improve the materials. Their comments from our second meeting can also be found in Appendix K.

4.3 Implementation of Updates and New Material

Our team updated Recycle Albania’s materials, using ideas we developed. We detailed the changes we made below. We also added some new materials of our own to aid in the promotion of Recycle Albania.

4.3.1 Updating of Recycle Albania’s Material

The brochure and pamphlet were improved by updating their appearance and rearranging certain parts to enhance the flow and order of the information conveyed. Before and after versions of the materials can be seen in their appropriate sections below.

Brochure

For the cover page, we decided to use the photograph on the back page of Recycle Albania’s existing brochure. We created a color scheme by using green, yellow and blue. This theme was used throughout the brochure in headings and text. We moved “Recycle Albania” to the top of the page and below the photograph included their slogan “Do your part! Save Albania!” The contact information provided was updated to include the correct telephone number as well as Recycle Albania’s email address and website. A border was added to match the color scheme that was previously mentioned.

On the top of page one, we added the title “Electronic Waste” translated into Albanian. We also added two photographs to the page, an image providing examples of electronic waste and an image of the city of Tirana.

We titled the second page “Problems with Electronic Waste” translated into Albanian. Most of the existing text that Recycle Albania had originally written was kept. However, we decided to cut out one sentence that talked about the specific time it takes for electronic waste to degrade. This created a less cluttered look on this page. We deleted the unnecessary “Recycle Albania” in the middle of the page. A new photograph was added that shows an example of electronic waste left in a landfill.

For the third page, we used Recycle Albania’s slogan as the title. Another “Recycle Albania” was deleted from the middle of the page. The top photograph was replaced by an image of people moving an Albanian recycling bin. A photograph from the existing brochure was also used here.

The title “Recycle Albania” was added to the next page. A new image of an Eco-Box was included here. A text box was added to the bottom explaining that Recycle Albania will collect electronic waste of all sizes, not just what would fit into the Eco-Box. The existing material’s text on this page originally included a sentence saying only toner should not be thrown out. We changed this by replacing the word toner with electronic waste. During our second meeting with the international marketing class, they helped to reduce the amount of text while keeping the same message. Professor Adela Llatja helped with the specific wording and layout of this page.

The back cover was redesigned to include Recycle Albania’s contact information. A new photograph was added of the Albanian flag’s symbol with a recycling symbol over it. The updated logo of Recycle Albania was included here as well. Following are the initial and final versions of the brochure, Figure 10 and Figure 11 respectively.

Page Four

DO YOUR PART SAVE ALBANIA!

Kurseni lobe dhe angazhim, duke na kontaktuar ne, per evadimin e ketere mberjeve duke respektuar ambientin, por njekohesisht edhe veten si qytetare te anshlohem te Komunitetit Europian.

Vendosni nje kuti Eco-Box (si ajo qe shihni ne foto) ne zyrat e nrtacioneve apo bizneseve tuaja. Cdo toner qe del jashte perdiesimit hidhet aty dhe jo ne koshin e plehrave. Ne bejme mbledhjen e tyre cdo javc ose me shpejt nese na kontaktoni.



Page One

Te nalerat qytetare Shqiptare. Duke qene ne dijeni te Ligjit Shqiptar per MENDSHEMIN E INTEGRUAR TE MBIGZJEVE Nr. 10 465, date 22.9. 2011 si edhe direktives 2006/12/CE te Parlamentit Europian, nra mberjet e rrezikshme me afat te gjate delkomponimi, qyqyrojne nje nisme per te gjithe qytetaret Shqiptare, qe trajtojne sasia te konsidereshme kartacash per printera dhe fotokopje, pastaje kompjuterike, printera, fondepise qe jane jashte perdiesimit, per ti ndare keto ligj nderq nje mberjet e tyre.



Back Page



Recycle Albania



Tel: 046-303374
Mob: 0694031716
www.RecycleAlbania.org

Page Two

Mbieratet elektronike, jane bese qe qytetare shqiptare sasia per ambientin, sepe me mendje ne nje s ardhore elektronike behen ne tate cdo vit. Shumë komponente tate jone te vevdijshme ve pastajet elektroneke perdiesimit tekton te cilat mund te poretrope ne vate dhe detyroje mjedite.

Mendet e rreth te mbieratet elektronike si vate te planda, kafshat dhe maketat paraqetin nensje sasia mjedite dhe shkaktojne dhe mund te shkaktoje dome te rreth te mjedite. Mbieratet elektronike gjithashtu koftepe qe kofte dhama si gazi te detyroje beshqije, qe do te shkaktojte sate do te vevdijshme sasia sasia per shkak me mjedite. Mberjet plastike te ketere paraqetin, te cilat mund te vate vate per 50 vites, do te sasia qe sasia perbrendes tue me kofte sasia, qe i shkaktojte cdo qytetare.

RecycleAlbania



Cover Page



Page Three

Cdo kofte mund te kofte sasia, per sasia te ndryshme sasia sasia me mberjet plastike, qe te past direktives Europiane, kofte sasia te mberjet. Nuk jo kofte sasia, qe te kofte sasia qe sasia Shqiptare te ndryshet te me pak te jete e mundet. Ne kofte sasia pak poretrope sasia, vevdijshme qytetare dhe mbieratet.

RecycleAlbania



Figure 10 Initial version of brochure

Page Four

Recycle Albania



Kurseni kohë dhe angazhim duke na kontaktuar! Respektoni mjedisin, por edhe veten tuaj!

Vendosni një kuti Eco-Box (si ajo që shihni në foto) në ambiente tuaja. Çdo mbetjet elektronike hidhni aty. Ne do t'i mbledhim ato.

Ndihmojeni mjedisin të marrë frymë!

Back Page



Recycle Albania

Na kontaktoni
Rr. Ali Riza Kolonja
Tirane, Albania
Mobile Phone: 0674015241
Tel: 046303374
info@recyclealbania.org



Cover Page

Recycle Albania



"Do your part!
Save Albania!"



Redukto, Riperdor,
Riciklo

Mobile Phone: 0674015241
Email: info@recyclealbania.org
Website: www.recyclealbania.org

Page One

Mbetjet Elektronike



Të nderuar qytetarë Shqipëtarë,

Duke qenë në dritën e Ligjit Shqipëtar për: MENAXHIMIN E INTEGRUAR TË MBETJEVE Nr. 10 /463, më datë 22.9.2011 si edhe bazuar në direktivën 2006/12/CE të Parlamentit Evropian, mbi mbetjet e rrezikshme me afat të gjatë dekompozimi, sygjerojmë një nismë për të gjithë qytetarët Shqipëtarë, që trajtojnë ashtu të konsiderueshme kartonash për printera, fotokopje apo pajisje kompjuterike që janë jashtë përdorimit, për t'i ndarë këto lloj



Page Two

Probleme me Mbetjet Elektronike

Mbetjet elektronike janë kthyer në një çështje shqetësuese për ambientalistët, pasi një numër në rritje i artikujve elektronik hidhen në mënyrë të pakontrolluar çdo vit. Shumë konsumatorë nuk janë të vetëdijshëm se pajisjet elektronike përmbajnë toksina, të cilat mund të penetrojnë në tokë dhe dëmtojnë mjedisin.



Metalet e rënda tek mbeturinat elektronike të tilla si plumbi, kadmiumi dhe mërkuri paraqesin rreziqe serioze mjedisore. Gjithashtu, ato mund të shkaktojnë dëme të rënda në mushkëri dhe në shëndet. Mbetjet elektronike kërkojnë kohë të gjatë biodegradimi, duke qëndruar për shekuj me radhë në tokë si mbetje.

Page Three

Do your part! Save Albania!



Çdo kush mund të kontribuojë për mos ta dëmtuar tokën tonë me mbetje plastike, të cilat sipas direktivës Evropiane klasifikohen si mbetje të rrezikshme. Nuk ju kushton asgjë që të kontribuoni në mbrojtjen e territorit Shqipëtar sa më shumë të jetë mundur. Ne kërkojmë rritje të përgjegjësisë, vëmendjes qytetare dhe asaj intelektuale.



Help keep electronic waste from growing.

Figure 11 Final version of brochure

Pamphlet

The pamphlet was updated to reflect our evaluations and the critiques from marketing experts. We used the same border from the cover page of the brochure on the pamphlet. Also, the same color scheme and Recycle Albania's new logo were implemented on the pamphlet to match with the brochure. The content we developed was translated from English to Albanian by our Local Coordinator, Frida Bahja. We placed Recycle Albania's motto alone under the bar because we wanted it to stand out. Under the motto, we listed key facts about Recycle Albania that were split by a photograph of an Eco-Box. Bulleted facts were used so when people read it, they can easily see the message. A blue border was added to the key points to help organize the page. Under the text boxes the Albanian words for "Reduce" and "Reuse" were added. Together with "Recycle", these three words form another slogan Recycle Albania commonly uses. Another text box with blue border came under these words and this included a description of an Eco-Box. In the text box, we included the information about Recycle Albania's flexibility with electronic waste collection. Under the text box, we listed a few of Recycle Albania's key current partners to attract target companies' attention. At the very bottom, we included the final word of their slogan, "Recycle", and two photographs relating to recycling as well as contact information for Recycle Albania. Following are the initial and final versions of the pamphlet, Figure 12 and Figure 13 respectively.



Recycle Albania

DO YOUR PART! SAVE ALBANIA!

Te nderuar qytetare, perfaqesues, punonjes, te institucioneve dhe kompanive Shqiptare.

"Recycle Albania" eshte themeluar ne Mars 2012. Misioni i saj eshte ndergjegjesimi ambiental, edukimi per trajtimin e mbetjeve, marrja e nismave ligjore e qytetare ne mbrojtje te ambientit.

Ne baze te ligjit Shqiptar, nr. 10463, dt 22-09-2011 dhe direktives 2006/12/CE se Parlamentit Europian mbi mbetjet e rrezikshme me afat te gjate dekompozimi, ju drejtohem institucioneve shteterore e private, te cilat trajtojne sasira te konsiderueshme kartucash fotokopje per printera dhe fotokopje, pajisje kompjuterike, printera, fotokopje te rojerra jashte perdorimit, per t'i ndare keto foje mbetjesh nga mbetjet e tjera te degradueshme. Mbetjet plastike te ketyre pajisjeve, treten ne toke vetem pas 300 vitesh. Cdokush mund te kontribuojte per te mos e bjelle token tone me mbetje plastike, te cilat klasifikohen te rrezikshme. Toksinat e tyre, te qarqeve, monitoreve, permbajne mbetje te plumbit, kadiumit, merkurit, zhives, etj. e cilat kur shperbahen, bashkohen me ujerat nantokesore, krijojne avullim, duke perbere rrezik per jeten. Nuk ju kushton asgje, qe te kontribuoni qe territori Shqiptar te ndotet sa me pak te jete e mundur. Kurrseni kohe dhe angazhim duke na kontaktuar ne per evadimin e ketyre mbetjeve, duke respektuar njehkohesisht ligjin, ambientin por edhe veten si qytetare te ardhshem te Komunitetit Europian.

Ne bashkepunojme me:

Bashkia Tirane, Ambasada Austriake, Gjermane, Angleze, Italiane, FMN, Soros, Ministria e Bujqesise, Financave, Shendetsise, Integritimit, Drejtesise, Ekonomise Banka Procredit, Societe General, Intesa Sanpaolo, Veneto, NBG, Union Bank etj Altelekom, Eagle, Plus, Agna Group, Celsi, Gazeta, Televizioni Publik Shqiptar, bashkite kryesore, gjykatat, etj kompani dhe instiucione ne te gjithe vendin.

Kerkohet se pari vemendje institucionale, por dhe vemendje qytetare dhe intelektuale. Vendosni nje kuti Eco-Box (si ajo qe shihni ne foto), nje kuti e presuar kartoni per hedhjen e mbetjeve, kartuca printeri dhe fotokopje, per t'i ndare keto mbetje ne vendin ku perdoren. Mbetje te tjera vluminoze si printera, fotkopje, kompjutera, jashte perdorimi tarriqen nga ana jone nje here ne disa muaj. Duke shpresuar ne mirekuptimin dhe bashkapurimin tuaj, kontaktoni per riciklimin e mbetjeve te siper permendura.



Adresa: Rr. 46 Ripollera, K. 7, Tiranë
E-mail: info@recyclealbania.com Cel: 06845221, 06 42 13 78 84-2024

0684015241

Figure 12 Initial version of the pamphlet

Recycle Albania



"Do your part! Save Albania!"

- U themelua 2 vjet më parë
- Organizata e parë për riciklimin e mbeturinave elektronike në Tiranë
- Organizata ka mbi 100 partnerë



- Organizatë jo-fitimprurëse
- Ofron shërbime pa pagesë
- Bën largimin e mbeturinave elektronike sipas standarteve

Redukto

Riperdor

Recycle Albania ofron **Eco-Box** për largimin e mbeturinave elektronike. Ne do të mbështesim në maksimum kompaninë tuaj. Ne mbledhim mbetje elektronike në çfarëdolloj sasish. Metjet riciklonhen sipas standarteve evropiane.

Ne bashkepunojme me:

Albtelekom, Eagle Mobile, Plus, Celsi, Coca-Cola, DHL, Bashkia Tirane, Union Bank, Intersanpalo Bank, Raiffeisen Bank, Ambassa Austriake, Gjermane, Angleze, Italiane, Ministria e Bujqesise, Financave, Shendetsise, Integrimet, Drejtesise, Ekonomise, etj...



Riciklo



Na kontaktoni!
Mobile Phone: 0674015241
Tel: 046303374
Info@recyclealbania.org

Figure 13 Final version of the pamphlet

4.3.2 New Material

We created a slideshow, originally made for the mass email, and a blueprint for a poster while keeping in mind the principles we had used to update the other materials. The final versions of the materials can be seen in their appropriate sections below.

Slide Show

When editing our original slideshow, we updated it to be more effective at conveying information on electronic waste recycling to Albanians. We changed the slideshow's background and color scheme to better fit a recycling topic. We also added Recycle Albania's new logo to the title page. The "What is Electronic Waste?" page had its photographs updated and rearranged. The "What are the Harmful Effects?" page had information added and was also rearranged to be more visually appealing. An "About Recycle Albania" page was added containing basic facts and information about the organization. The "What does Recycle Albania do for You?" page was updated to be more specific and clear. A "Why join Recycle Albania's Program?" page was added including the motivational factors for companies to join with Recycle Albania and following this page a simplified partner list was added. The final slide "How to Contact Recycle Albania" was updated to include both phone and fax numbers while also being made more visually appealing. We then created a Slideshare account on www.slideshare.net and uploaded our presentation, <http://www.slideshare.net/ewastea13/slideshow124>. The presentation is titled "E-waste Recycling in Albania" on Slideshare. Following is a screenshot of the presentation, Figure 14.



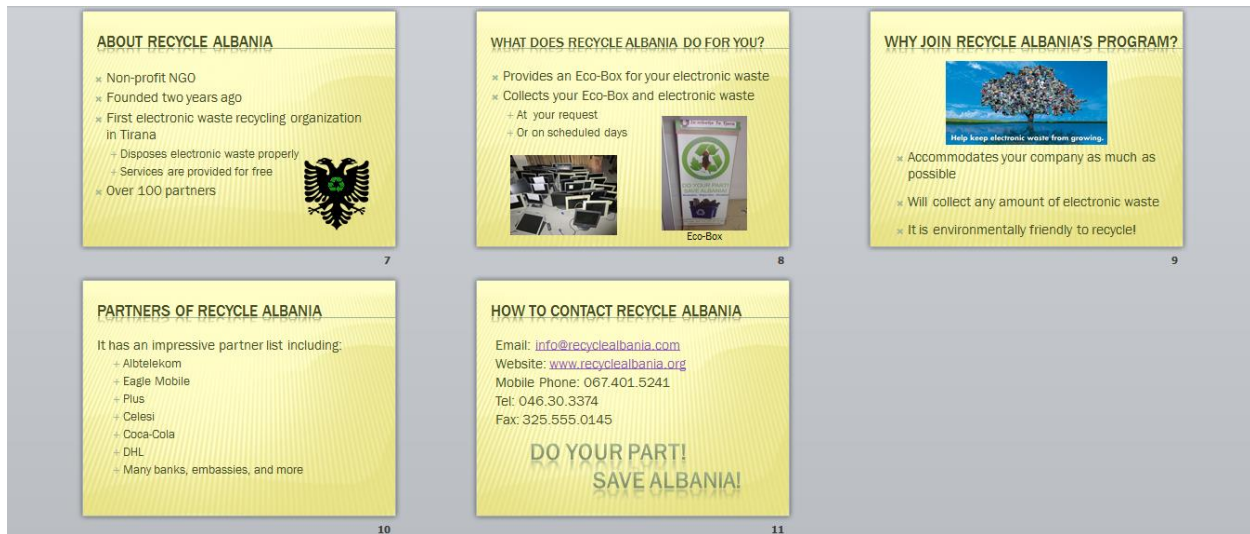


Figure 14 Final version of slideshow

Poster

We created a poster blueprint for Recycle Albania to be placed with its Eco-Boxes. On this poster, we first introduced a definition of electronic waste. Under the definition, we presented the improper disposal methods of electronic waste. A table was created which contained information on the consequences of improper disposal. It was placed after the improper disposal method. Below the table, we expressed that recycling is the proper disposal method and we reminded the reader about using the Eco-Box. At the bottom, we included a photograph of recycling and Recycle Albania's logo. We chose a blue color scheme and simple layout for this poster because we wanted to display the message clearly. Following is a blueprint for the poster, Figure 15.

Electronic Waste

Electronic waste is waste from electrical and electronic devices.

Improper Disposal Methods

- Throwing away electronic waste with regular garbage
- Using unorthodox methods to process electronic waste

Consequences of Improper Disposal

Environment

- Lasting damage to soil
- Contamination of water sources
- Pollution of the air

People

- Potential carcinogens
- Permanent brain damage
- Especially dangerous to children

Proper Disposal Method for Electronic Waste Is:

Recycling

Please take advantage of the Eco-Box!



This information is presented by:



Recycle Albania

"Do your part! Save Albania!"

Figure 15 Blueprint of poster

5 Conclusions and Recommendations

From our evaluations and research, we have produced conclusions about Recycle Albania's existing promotional strategies and recommendations for them. We have also included potential topics for future considerations.

5.1 Conclusions

Based on the results of our team's evaluations of Recycle Albania's process and promotional materials, we developed conclusions about its process of promoting itself. Our conclusions cover the interactions that Recycle Albania has with companies and the effectiveness of its existing promotional materials.

5.1.1 Personal Communication

We found that the most successful method to contact target companies and persuade them to join Recycle Albania is face to face personal communication. While shadowing our liaison, we observed that meeting and having a discussion with target companies usually led to the companies agreeing to join the program. In fact, this was the only method we observed that successfully worked in gaining new partners for Recycle Albania. Our observations were confirmed by Professor Ilia Kristo who informed us that face to face interactions were the best way to conduct business in Albania. When there was no chance to communicate directly with the intended target representative, Recycle Albania was less effective at gaining new partners. In these scenarios, our liaison would leave an informational pamphlet and we could not know for sure if it actually was delivered to the target representatives. After this scenario occurred, we were never notified that Recycle Albania received any contact from these companies. This method failed to expand Recycle Albania's program because personal communication is a key factor in gaining partners. Leaving an informational pamphlet for a target representative is not an effective method to gain partners.

Building personal communications leads to stronger relationships between Recycle Albania and its partners. Representatives of Union Bank and Coca-Cola informed us that they appreciated a phone call or office visit over an email. Both of these institutions praised Recycle Albania's personal communication and commented on how great the relationship is going. This led Union Bank and Coca-Cola to recommend Recycle Albania to other institutions in Albania.

Creating and maintaining personal relationships is a very important factor for Recycle Albania's growth.

5.1.2 Updated Materials

Recycle Albania's existing materials required updates to increase their efficiency. The content did not contain all of the necessary information and had grammatical errors. Also, the appearance of the existing materials was not pleasing to the reader. The updates made to the brochure and pamphlet helped to correct these problems. Key facts on electronic waste were added to the materials as well as the motivational factors for companies to partner with Recycle Albania. The problems with wording and grammar were fixed with help from Albanian native speakers. The appearance was adjusted to satisfy recommendations received from experts and through using our own judgment. The updates to the existing material are meant to convey Recycle Albania's message more efficiently and in a more appealing way. However, the website still needs to be updated to be more efficient at describing Recycle Albania and more user friendly.

5.1.3 Increase in Electronic Waste Recycling

By aiding Recycle Albania to gain new partners, more electronic waste will be disposed of properly in Tirana. The updated materials will help Recycle Albania attract target companies and our recommendations for improvement of its overall system will improve the chances of those target companies becoming partners. With more partners joining Recycle Albania's program, there will be more electronic waste recycling activities in Tirana.

The future of electronic waste recycling in Albania is unclear. Recycle Albania has increased electronic waste recycling tremendously in the brief period since it was established. With only a small group of committed people, the organization has achieved an impressive list of partnered companies. One positive sign for recycling that we observed was an increase of environmental awareness within the country. During our time in Albania, people participated in a nationwide "Clean-Up Day" as well as a peaceful and successful protest against the prospect of dismantling of chemical weapons from Syria in Albania. An area of great uncertainty is the matter of how the government might deal with electronic waste in the future. When we spoke with a representative from the Ministry of Environment, he mentioned that the Ministry was considering the possibility of working with a foreign company for the processing of all electronic

waste in Albania. More details about this possible arrangement were not given. Such an agreement may improve electronic waste recycling in Albania, but it would also affect Recycle Albania's program as well as the existence of private companies that currently process electronic waste.

5.2 Recommendations for Recycle Albania's System

We developed recommendations for interactions that Recycle Albania has with companies and the design of its existing promotional materials. Our results showed that it will be in Recycle Albania's best interest to adopt our recommendations so that more electronic waste will be properly disposed of in Albania. A simplified recommendation sheet can be found in Appendix L.

Recycle Albania should seek out personal communications with target companies.

Recycle Albania should strive to seek out personal communication when addressing target companies. From working with Recycle Albania we have seen that this method is the most effective at gaining new partners. Our research has indicated that several areas of Recycle Albania's current method of promotion could be changed. We recommend that Recycle Albania meet face to face with target companies. To start this process, we suggest the building of relationships with target companies before meeting to talk about Recycle Albania, as suggested to us by Professor Ilia Kristo. Before approaching a new company about joining Recycle Albania, a representative of Recycle Albania should take the time to get acquainted with its contact by calling in advance. This will allow for easier communication between Recycle Albania and target companies. While working with our liaison, a problem that we frequently encountered was the inability to arrange a meeting with a company's representative. In order to address this problem, we recommend that Recycle Albania attempt to establish specific meeting times with these individuals. These recommendations would work well together. In addition to changing how Recycle Albania prepares for meetings, we also recommend that Recycle Albania assign more volunteers to individually contact target companies. We believe that if there are more representatives, they will be able to establish more personal communications with target companies and Recycle Albania will expand faster.

Sometimes, email is the preferred method to reach target companies since it can be used to address many representatives at once. However, we recommend that Recycle Albania alter

how it emails target companies. One improvement they can make is to update target companies' email address list. This list should contain valid and non-duplicated email addresses so Recycle Albania can send its message successfully to all of its target representatives. Another suggestion for improving email contact with target companies is to include any promotional materials in the body of the email, instead of as attachments. It is more convenient for the reader to have the message displayed directly in the body of the email.

Recycle Albania should use the updated materials.

The updated promotional materials should be used for future communications with target companies. Recycle Albania's existing materials include a pamphlet as its promotional material to present to companies. However, it also has a brochure which contains more information on electronic waste and its program. Our team modified the brochure and the pamphlet based on our own evaluations and the knowledge we gained from marketing experts. These modifications updated the materials layout and their content. We recommend that Recycle Albania present this updated brochure and pamphlet while meeting with target companies. The brochure comprises information about electronic waste while the pamphlet contains information about Recycle Albania. These materials are meant to be used in tandem.

Recycle Albania should implement our recommendations for the website, poster, and Facebook.

We recommend that Recycle Albania update its website to be more informative and user friendly. Our evaluation and recommendations for the website can be found in section 4.2.1 and should be implemented in the near future. Once updated, we recommend that Recycle Albania mention this website directly to companies during communications so that these companies have an alternative way to learn about its program. Our presentation, previously discussed in 4.3.2, entitled "E-waste Recycling in Albania" should be linked to Recycle Albania's website under the media section.

Recycle Albania should spread the message of electronic waste recycling so that more people will be aware of it. One way for Recycle Albania to start this is to put a poster on each Eco-Box and we provided them a blueprint for this. This poster could include information such as the definition of electronic waste and its adverse effects. At the bottom, the poster would indicate that Recycle Albania helps to properly dispose of electronic waste. By doing this, more people will become aware of electronic waste's harmful effects and they will also have a positive

impression on Recycle Albania. Creating a poster is financially feasible because it has a low cost and is easy to mass produce. We have provided a blue print of what a poster could look like in our results section.

We recommend that Recycle Albania condense its separate Facebook accounts. A Facebook page allows for the organization to advertise itself easily. However, Recycle Albania currently has three different accounts open which creates confusion when trying to search for its primary page. Only one of these pages is regularly updated so the other two accounts should be deleted, making this page the only Recycle Albania Facebook page.

Recycle Albania should maintain strong relationships with its partners.

Better management of partnerships can lead to stronger relationships with current companies. We recommend that Recycle Albania communicate with its current partners once every two months to gather their opinions and assess their level of satisfaction with its program. This schedule is recommended because this is the time period that current companies usually have full Eco-Boxes. In addition, we recommend that Recycle Albania have a partnership appreciation day once a year. On this day, Recycle Albania can send out an email to its partners to express appreciation for their cooperation. By following these recommendations, Recycle Albania can maintain strong relationships with its partners, who in turn will recommend Recycle Albania to other businesses. This will result in more electronic waste being recycled.

5.3 Topics for Future Consideration

The goal of our project was to contribute to the efforts of the collection and proper disposal of electronic waste in Albania. While our project recommendations will help to accomplish this, there are alternative approaches to help complete this goal.

5.3.1 Projects

Recycle Albania's long range goal is to collect electronic waste from all of Albania. At the present time, it is partnered only with companies inside of Tirana. A future project for Recycle Albania or other student teams could be the identification of new target companies outside of Tirana. There are multiple challenges that could accompany a project of this kind. There may not be a great or concentrated supply of electronic waste outside of Tirana. In addition, it could be difficult for a small organization such as Recycle Albania to make personal

contact with companies far from Tirana, which has proven to be the most effective way of gaining new partners. One way for Recycle Albania to deal with this last difficulty would be to gain volunteers in cities outside of Tirana. These volunteers would be able to establish branches of Recycle Albania in cities other than Tirana to help spread the word about its program and electronic waste recycling.

Our project focused solely on promoting electronic waste recycling to corporations. A future project could attempt to inform the public about the dangers of electronic waste and start public electronic waste recycling. This could be accomplished with new advertising that targets the public instead of companies. A day similar to the “Clean-Up Day” could be one way to raise awareness. Recycle Albania could hold a national event where people could properly dispose of any end-of-life electronics that they possess. A project of this nature would also have many problems. One problem with this project idea could be that people may be unwilling to give up their old electronics with no compensation. Another problem is that general recycling in Albania is in its infancy. This means that it may take time for people to respond to messages about recycling. The topic of general recycling could provide the inspiration for another challenging project in Albania.

5.3.2 Concepts

Before we leave Albania, we will have the opportunity to appear on an Albanian talk show to discuss Recycle Albania. We will appear with Sazan Guri, Rinalda Proko, and Professor Peter Christopher. Sazan Guri and Rinalda Proko would be presenting about Recycle Albania’s mission. We will supplement their statements with our experiences working with Recycle Albania as well as speaking about our time in the country. Professor Peter Christopher can discuss WPI’s global program and why he wanted to bring students to Albania as well as his experiences in the country. An appearance on this talk show could help to increase Recycle Albania’s visibility to the public. This could make the organization more recognizable to businesses that it approaches to join its program.

From our team’s shadowing experience with our liaison, we observed that Recycle Albania has a car for transporting electronic waste in Tirana. We thought that there is a potential opportunity for Recycle Albania to promote itself by renovating the appearance of the car. One idea regarding this renovation is to paint the car body bright green and blue colors, the colors of Recycle Albania. In addition to this, Recycle Albania’s symbol, motto, website URL, and the

eagle we created for the brochure can be put on the car. The reason behind this idea is that the flashy car can successfully attract people's attention, much like Red Bull's campaign car. By looking at the Recycle Albania car, people may become intrigued and visit its website to seek out more information. This will lead to more people learning about Recycle Albania's program but more importantly, an increase in electronic waste recycling.

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Appendix A - Background Figures

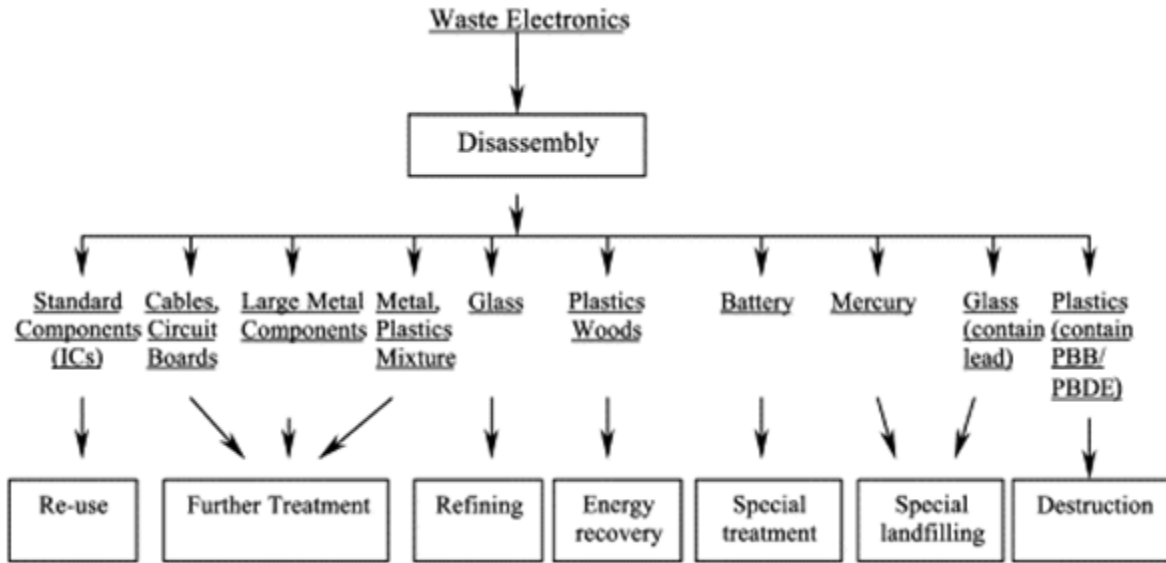


Figure 16 Recycling process flowchart (Cui, 2003)

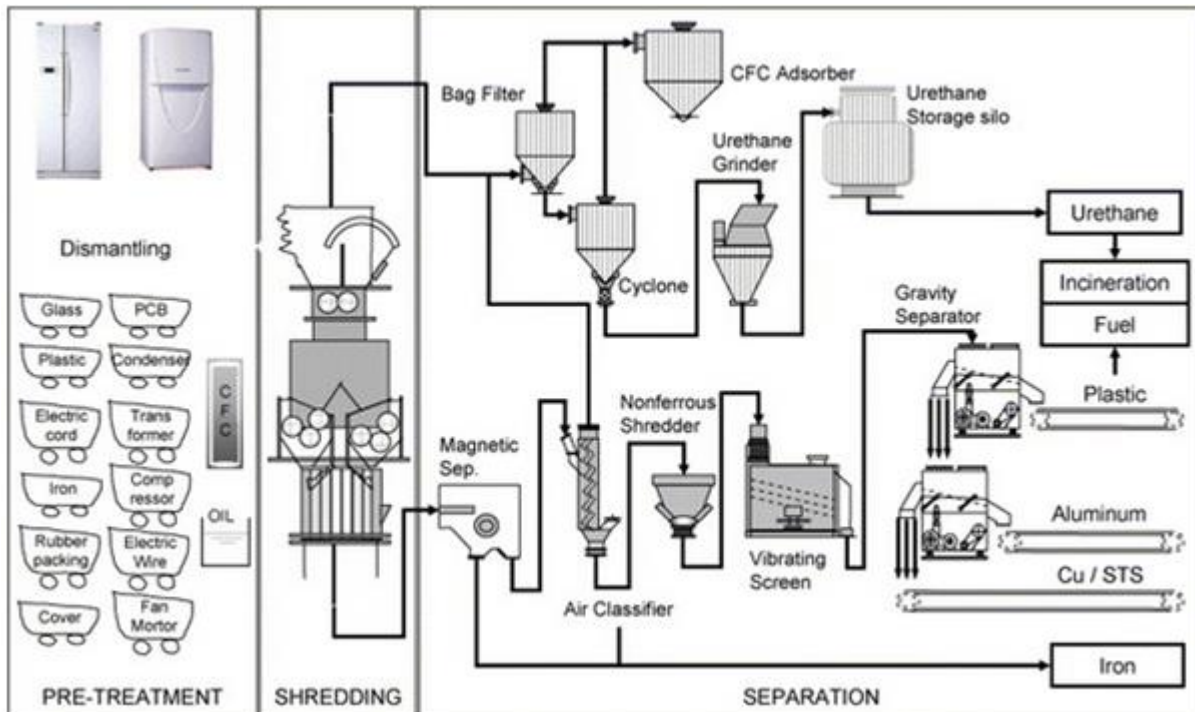


Figure 17 Refrigerator process (Lee, 2007)

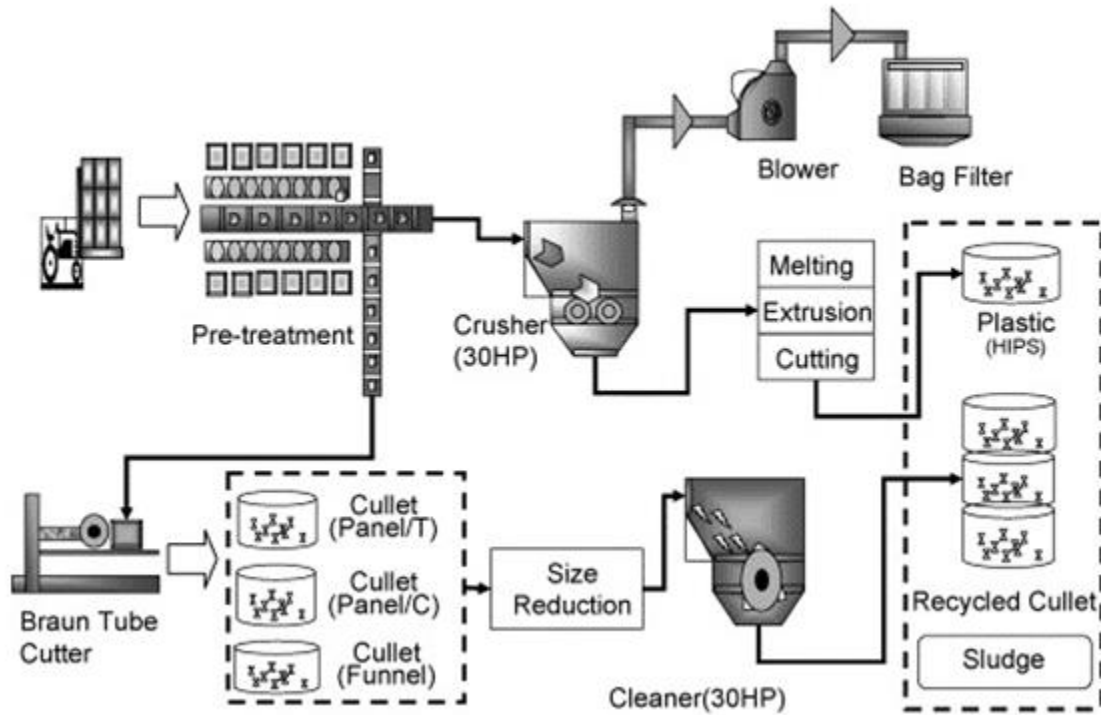


Figure 18 Television and monitor process (Lee, 2007)

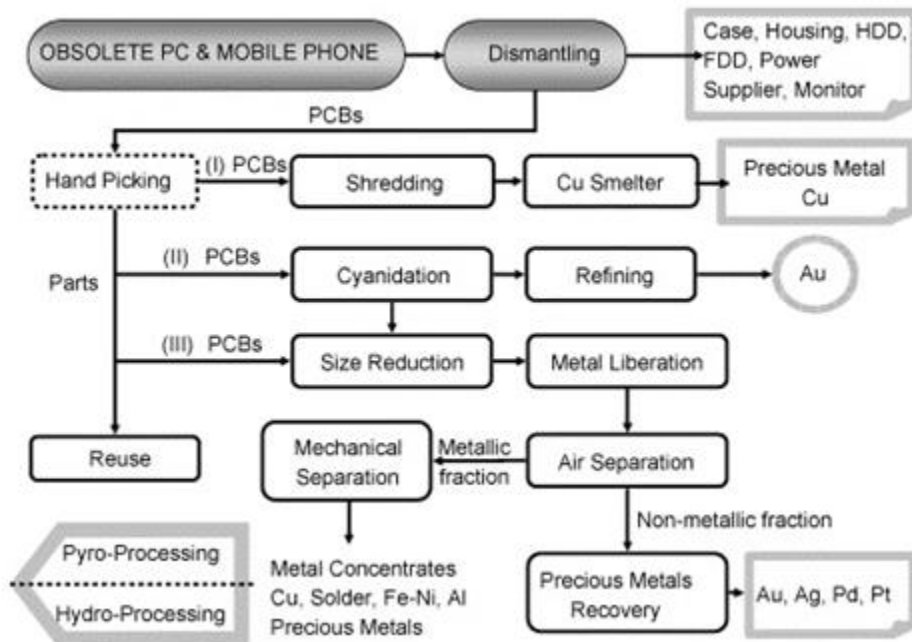


Figure 19 Printed circuit board process (Lee, 2007)

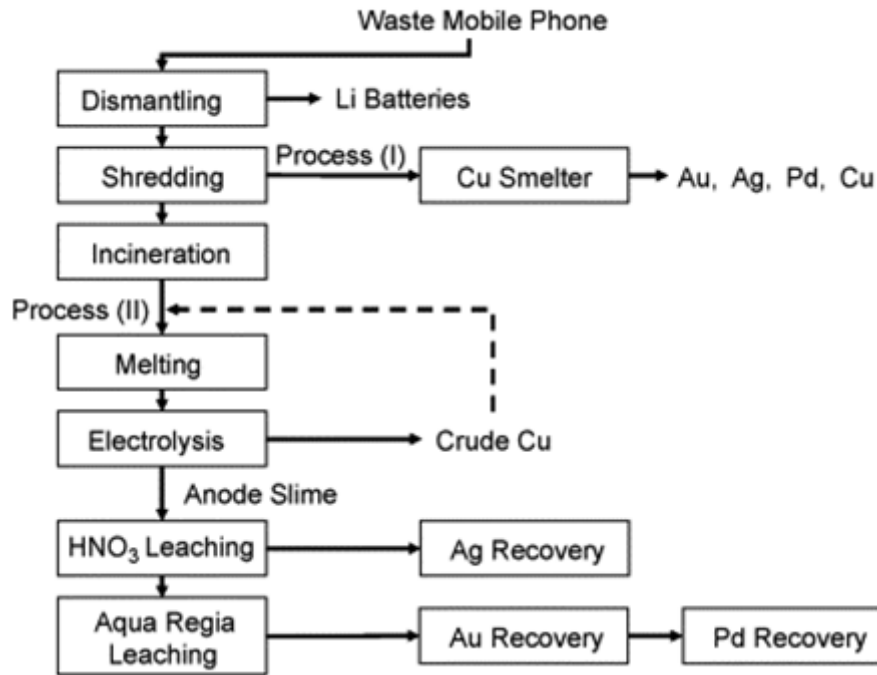


Figure 20 Cell phone process (Lee, 2007)

Toxicant	Potentially affected neuropsychological functions in children	Transplacental exposure	Lactational exposure	Exposure route of childhood
Pb	Cognition (verbal and performance), fine and gross motor skills, memory, attention, executive function, hyperactivity, academic achievement, delinquent behavior	Yes	Yes	Air, dust, water, soil, leaded paint, leaded gasoline (if not banned)
Hg	Cognition, language, motor function, attention	Yes	Yes	Air, seafood, Hg vapor
Cd	Cognition	Limited	Yes	Air, dust, rice, vegetables, environmental tobacco smoke
Cr	Motor function (animal study only)	Yes	Yes	Air, dust, water
PBDEs	Cognition	Yes	Yes	Air, dust, food
PCBs	Cognition, visual-spatial function, memory, attention, impulse control, executive function, motor, behavior	Yes	Yes	Air, dust, seafood
PCDD/PCDFs	Cognition	Yes	Yes	Air, dust, soil, food
PAHs	Cognition	Yes	Yes	Air, dust, soil, food

Figure 21 Negative effects of electronic waste on children (Chen, Dietrich, Huo, Ho, 2011)

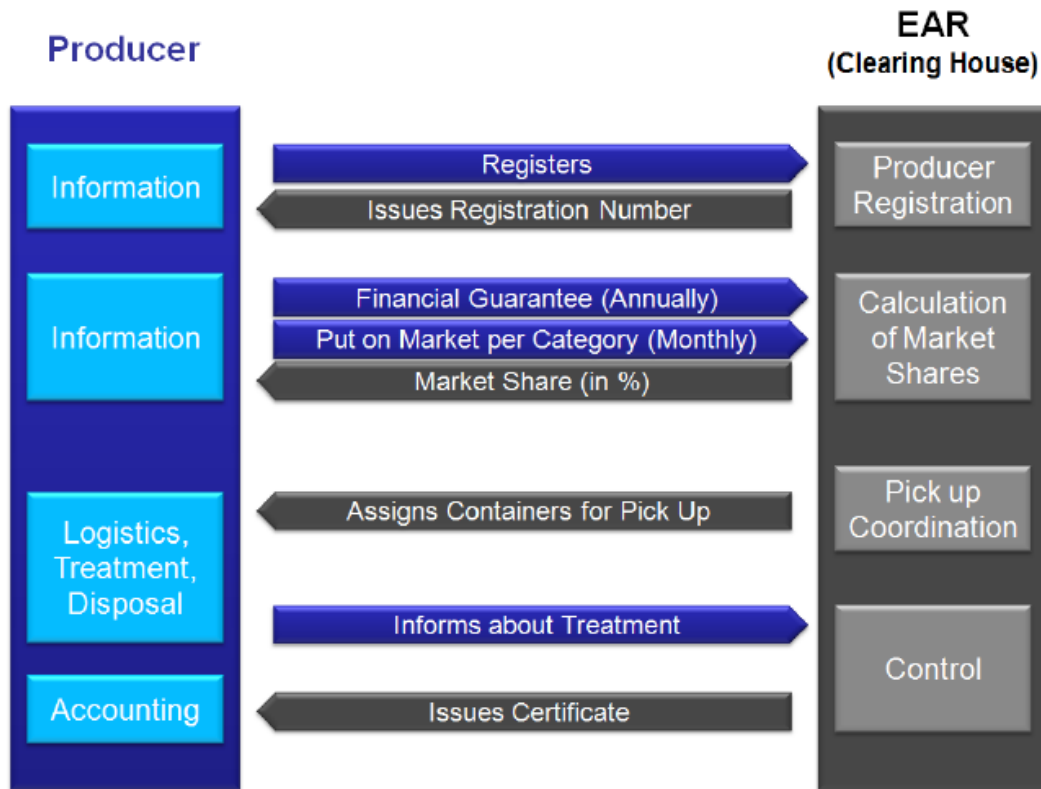


Figure 22 Labeling of electronic waste in Germany (Deubzer, 2011)

The clearing house EAR is constituted as a foundation. It supervises tasks such as producer registration, calculation and the reporting of the producers' market shares. The number of sales of one producer must equal to the number of items for recycling. The PuWaMA also has to inform the clearing house EAR before it hands over the e-waste to the producers. The following figure shows the interaction between the producers and the clearing house F2. However, when the competence of the clearing house EAR becomes limited, the governmental authorities may take the action.

Collection group (ElektroG 2005)	Corresponding category of EEE (Annex I ElektroG 2005 and WEEE Directive 2003)		Example types of equipment according to (Annex I ElektroG 2005, WEEE Directive 2003)
1	1	Large Household Appliances	Washing machines; clothes dryers; dish washing machines; cooking electric stoves; electric hot plates; microwaves; other large appliances used for cooking and other processing of food; electric heating appliances; electric radiators; other large appliances for heating rooms, beds, seating furniture; electric fans; air conditioner appliances; other fanning, exhaust ventilation and conditioning equipment
	10	Automatic Dispensers	Automatic dispensers for hot drinks, hot or cold bottles or cans, solid products or money; all appliances which deliver automatically all kind of products
2	1	Large Household Appliances	Large cooling appliances; refrigerators; freezers; other large appliances used for refrigeration, conservation and storage of food
3	3	Information and Telecommunication Equipment (ICT)	Centralized data processing: mainframes, minicomputers, printer units; personal computing: personal computers (CPU, mouse, screen and keyboard included), laptop computers (CPU, mouse, screen and keyboard included), notebook computers, notepad computers, printers; copying equipment; electrical and electronic
			typewriters; pocket and desk calculators; other products and equipment for the collection, storage, processing, presentation or communication of information by electronic means; user terminals and systems; facsimile; telex; telephones; pay telephones; cordless telephones; cellular telephones; answering systems; other products or equipment of transmitting sound, images or other information by telecommunications
	4	Consumer Electronics	Radio sets; television sets; video cameras; video recorders; hi-fi recorders; audio amplifiers; musical instruments; other products or equipment for the purpose of recording or reproducing sound or images, including signals or other technologies for the distribution of sound and image than by telecommunications
4	5	Lighting Equipment	Luminaries for fluorescent lamps with the exception of luminaries in households, straight fluorescent lamps, compact fluorescent lamps ("energy saving lamps"), high intensity discharge lamps, including pressure sodium lamps and metal halide lamps, low pressure sodium lamps, other lighting or equipment for the purpose of spreading or controlling light with the exception of filament bulbs
5	2	Small Household Appliances	Carpet sweepers; other appliances for cleaning; appliances used for sewing, knitting, weaving and other processing for textiles; irons and other appliances for ironing, mangling and other care of clothing; toasters, fryers, grinders, coffee machines and equipment for opening or sealing containers or packages; electric knives; appliances for hair-cutting, hair drying, tooth brushing, shaving, massage and other body care appliances; clocks, watches and equipment for the purpose of measuring, indicating or registering time; scales
	6	Electrical and Electronic Tools	Drills; saws; sewing machines; equipment for turning, milling, sanding, grinding, sawing, cutting, shearing, drilling, making holes, punching, folding, bending or similar processing of wood, metal and other materials; tools for riveting, nailing or screwing or removing rivets, nails, screws or similar uses; tools for welding, soldering or similar use; equipment for spraying, spreading, dispersing or other treatment of liquid or gaseous substances by other means; tools for mowing or other gardening activities
	7	Toys, Sports and Leisure Equipment	Electric trains or car racing sets; hand-held video game consoles; video games; computers for biking, diving, running, rowing, etc.; sports equipment with electric or electronic components; coin slot machines
	8	Medical Products	Radiotherapy equipment; cardiology; dialysis; pulmonary ventilators; nuclear medicine; laboratory equipment for <i>in-vitro</i> diagnosis; analyzers; freezers; fertilization tests; other appliances for detecting, preventing, monitoring, treating, alleviating illness, injury or disability
	9	Monitoring and Control Instruments	Smoke detectors; heating regulators; thermostats; measuring, weighing or adjusting appliances for household or as laboratory equipment; other monitoring and control instruments used in industrial installations (e.g. in control panels)

Figure 23 Electronic waste categories in Germany (Deubzer, 2011)

Appendix B – Interview with Professor Wang

Our team decided to conduct an interview with Professor Yan Wang. He was able to provide us with useful information about electronic waste recycling and why companies join.

We introduced ourselves as students from the United States working on a research project. We explained that we are working with Recycle Albania to improve the promoting of their electronic waste recycling program. We explained that participation is voluntary and that if they wish us not to use their name then we will not. We carried out the interview in a semi-standardized fashion, allowing for the wording and questions to be somewhat flexible.

Q: Why do corporations and manufacturers of electronics participate in recycling in the U.S.?

Q: Do manufacturers pay for recycling?

Q: Do you think recycling is profitable?

Q: In some developing countries, do people prefer to reuse other than recycle?

Q: How do you think we should convince corporations to recycle?

Interview with Professor Wang

September 27, 2013

- In most cases, manufacturers that participate in electronic waste recycling are under governmental influence. Other than that, if the e-waste possesses certain value after they get recycled, the manufacturers would like to collect the e-waste.
- Companies pay to have their waste recycled. But in some cases, if the recyclers see some potential benefits from certain type of e-waste, they are willing to purchase e-waste from the companies.
- Recycling electronic waste can be profitable depending on what type you recycle. For example, recycling of batteries does not have profit at all since the recycled batteries do not have a high value while the recycling process costs a lot. If you recycle cell phones, you can get some precious materials at the end of recycling but this happens only when you have a big amount of used cell phone.
- It also matters when and how things were made. If it is 10 years ago, the recovered materials from one used cell phone can worth \$5 whereas now, they only worth \$0.50 since the cost of material and the manufacturing process are relatively cheaper compare to the past.
- Recycle is usually considered as the last option. They prefer to remanufacture or reuse before recycle.
- Assuming there is neither governmental regulation nor any financial incentive that can be provided at this time. He suggested that we distribute survey to general public and ask people if their positive feeling would increase towards a company if that company does recycling since at this point. This could potentially give an incentive to companies to recycle.

Appendix C – MeTech Plant Tour

Our team decided to conduct an interview with MeTech Customer Service Representative, Stephanie Scollins-Rankin on Thursday October 3rd. She gave us an extensive tour of the MeTech recycling facility. She was able to provide us with useful information about how an electronic waste facility works in the United States.

We introduced ourselves as students from the United States working on a research project. We explained that we are working with Recycle Albania to improve the promoting of their electronic waste recycling program. We explained that participation is voluntary and that if they wish us not to use their name then we will not. We carried out the interview in a semi-standardized fashion, allowing for the wording and questions to be somewhat flexible.

Q: What type of e-waste do you recycle?

Q: Do you repair and resell items?

Q: What are the steps that you take in the process of recycling?

Q: Why do people recycle with you?

Q: What states nearby have regulations and how do you handle that?

Q: How do you make money?

Q: How do you advertise?

Q: Do you have any public collection days?

Interview and Tour with MeTech Representative, Stephanie Scollins-Rankin

October 3, 2013

- They recycle just about any type of electronic waste
- They are just starting a new part of their business to repair and resell items. . They brought in a new person to set it up and they have started talking to companies about it. Some will not want this though, because they want their stuff to be destroyed for security reasons. (This might be a reason we could use in Albania, should probe electronic waste recycling plant about this.)
- Steps in the process: First it is given a tag/paperwork and then it is weighed. Next it is dismantled, 60% is hand dismantled. After this it is sorted into different bins based on material. Some materials are then directly sold to other recycling plants such as plastic and aluminum components. (The more valuable precious metals usually require more work.) Other materials are further shredded or sometimes smelted down. Of everything brought in 97% is recycled and the rest is disposed of properly. Try to keep things in the United States but sometimes that is not feasible.
- Companies choose Metech because they are e-Steward certified, so they know that they are a good company that will handle their materials properly. (e-Steward is a US electronic waste recycling certification, they inspect the facility and the process to make sure it is environmentally friendly). In Mass companies and people do not have to recycle e-waste. However, many companies understand that they should. They charge companies a small fee, but it is not much, so they are willing to use Metech. (It would cost them nothing to just throw away.) They also properly dismantle everything and can guarantee that equipment is destroyed properly. If they give us a lot of material, then it is possible for them to get money.
- In Connecticut, there are regulations on disposal of e-waste. Producers have to pay to sell products there. The local government provided collection days to the people. Some town's send their waste to Metech, since they are one of the approved companies to take it in. They take down the producers of the different types of electronic waste they get and the producers are charged by weight. For example, if they had a printer by Lexmark, they would bill Lexmark for disposal of the printer.

- Unless companies bring in a lot of electronic waste, they are charged a fee of 20 cents per pound on their electronic waste. If they bring in a lot of waste that is valuable, Metech may be able to set up a share on the profit that those materials bring. With our new repairing/reselling business, Metech would also revenue share with companies.
- Advertise: They are e-Steward certified, so if you look that up you will find us. They are present on Google, if people were to search for electronic waste recycling. Also they have a team that goes out and talks to local businesses about disposing their electronic waste.
- Have public collection days, if someone is willing to sponsor the cost of that.

Appendix D – Initial Contact with Sponsor Liaison

Our team has decided to conduct an interview with Mariglana Hasimi from Recycle Albania. We believe that they will be able to provide us with useful information about their collection process and original promotional strategies.

We introduced ourselves as students from the United States working on a research project. We explained that we are working with Recycle Albania to improve the promoting of their electronic waste recycling program. We explained that participation is voluntary and that if they wish us not to use their name then we will not. We carried out the interview in a semi-standardized fashion, allowing for the wording and questions to be somewhat flexible.

Q: How does Recycle Albania work?

Q: What programs does Recycle Albania do?

Q: How are these programs funded?

Q: How do you currently recruit companies? Do you have any advertisements?

Q: Do the companies you recruit know what you do with electronic waste?

Q: What type of electronic waste does Recycle Albania collect?

Q: How do you collect and transport the Eco-Boxes? Do they go directly to the recycling center?

Q: How much electronic waste does Recycle Albania collect?

Q: What does the recycling center do with electronic waste?

Q: Are there any current problems?

Conversation with Recycle Albania over Skype with Mariglana Hasimi

October 1, 2013

- The person we interviewed with was the executive director of Recycle Albania Mariglana Hasimi. She is 22 year old and she is very passionate about electronic waste recycling.
- Recycle Albania was created in March 2010 from a board of director which includes several college professors and Mariglana herself. It is also non-profit.
- The first project that the Recycle Albania had was "One institution, one company, one Eco-Box". In this project, the Recycle Albania provided Eco-Box to its partners to collect used electronics. Currently, it has a total of 110 institutions and companies joining as its partners. These companies include Coca Cola, Pepsi, and DHL, etc.
- Recycle Albania collects printers, photocopiers, batteries, and cartridges, etc.
- Our sponsor mentioned that they work with another recycling company. The first option they consider is to reuse. If that does not work, the waste then will be separated into plastics and metal and will be sent to plastic and metal recycling company. Our sponsor also works with those recycling companies.
- Recycle Albania's first project was funded by sponsors. People who worked in the project also got paid from this funding. However, there was no charge for collecting electronic waste.
- Albanian do recycle plastic and paper but 60% of them do not have any knowledge of the danger of electronic waste. (We are not sure how they gathered this information. This might be something to ask about in the future)
- Our sponsor wants us to make leaflets for them and distribute them to the potential corporations who have interest of electronic waste recycling. Informing the danger of electronic waste to Albanian citizens and promoting electronics waste recycling to the public are also being considered as our goals.

In Country Interview with Mariglana Hasimi

October 29, 2013

- Recycle Albania collects battery, computer, printer, cartridges but they don't take cell phones. Vodafone does take phones.
- Mariglana calls companies frequently and asks if they need a pick up
- When the Eco-Boxes are full Mariglana calls Columbo and they sort through the electronic e-waste. There are two technical boys that try to repair devices for reuse. If can't then they disassemble the e-waste and send the different materials to different companies to be recycled.
 - cartridges, can refill and reuse in printers, go to Columbo
 - batteries and hazardous parts to Safimet (in Italy)
 - plastics, go to Everest in Elbasan
 - paper, go to Edipack but need to have enough paper to make it worth it
- Mariglana's current strategy is to call IT department and tells them about the Recycle Albania's program. If they seem interested she goes and makes a presentation with them.
- One problem that Recycle Albania is sometimes running into is that employees of the companies illegally take electronic waste for themselves. They can make a profit from electronic waste sometimes and the Eco-Box is not well monitored.
- Another problem is that sometimes the Eco-Box is just ignored and the companies don't use it to dispose of e-waste. Mariglana then has to set up a meeting with the company again to remind them about their commitment.
- Usually collect from companies every couple of months.

Appendix E – Interviews with Director of Colombo

Our team decided to conduct an interview with the Director of Colombo, Petrit Levendi. He was able to provide us with useful information about how Colombo recycles electronic waste as well as how their partnership works with Recycle Albania.

We introduced ourselves as students from the United States working on a research project. We explained that we are working with Recycle Albania to improve the promoting of their electronic waste recycling program. We explained that participation is voluntary and that if they wish us not to use their name then we will not. We carried out the interview in a semi-standardized fashion, allowing for the wording and questions to be somewhat flexible.

Q: How did the partnership between you and Recycle Albania begin?

Q: How much electronic waste do you receive from Recycle Albania per year?

Q: Is Recycle Albania the only organization that you work with? Who else?

Q: How do you recycle electronic waste? Steps?

Q: Do you send materials to other recyclers?

Q: Do you advertise yourself? If so, how?

Q: Do you have any public collection days?

Questions from our second interview:

Q: Would Colombo be able to deal with growth from Recycle Albania?

Q: What changes would you be alright with us making to the website?

Q: What are your thoughts about the Ministry of Environment working with a British company?

Interview with Colombo Director, Petrit Levendi

November 15, 2013

- Petrit is friends with Sazan Guri and other members of Recycle Albania's board of directors. Colombo works only with Recycle Albania, and advertises Recycle Albania instead of itself.
- Colombo is about ten years old.
- Colombo takes electronic waste from Recycle Albania and sorts it at a warehouse in Tirana. Repairable waste, printers, and cartridges are transported to Vlorë to be processed. The repairable waste is fixed, cleaned, and sold. The printers are recycled. The cartridges are reused or recycled.
- Non-repairable waste is broken into different materials (metal, plastic, paper, batteries, and motherboards) and shipped to other recyclers, usually in Italy.
- Colombo would be interested in doing public collection events, but would need governmental assistance. This is a goal in the future

Second Interview with Colombo Director, Petrit Levendi (Peter Christopher was present)

November 21, 2013

- Their warehouse in Vlore is large and would be able to accommodate any growth.
- We can make any changes that we want to the website. Possibly we should check with Mariglana about changes. The list of uncooperative companies is there to show the public that they are not cooperating. It did not seem like he cared whether or not that list was kept.
- He mentioned that Mariglana had told him about the Ministry of Environment possibly working with a British company. He is disgruntled that his business might be in jeopardy. The Ministry of Environment can potentially give this foreign company a monopoly over electronic waste recycling

Appendix F – Meeting with a Member of Recycle Albania’s Board

Our team has decided to conduct an interview with Suzan Guri an environmental expert and member of the Board of Directors for Recycle Albania. We believe that they will be able to provide us with useful information about the legislation in Albania.

We introduced ourselves as students from the United States working on a research project. We explained that we are working with Recycle Albania to improve the promoting of their electronic waste recycling program. We explained that participation is voluntary and that if they wish us not to use their name then we will not. We carried out the interview in a semi-standardized fashion, allowing for the wording and questions to be somewhat flexible.

Q: Is there any legislation regarding to electronic waste recycling in Albania currently?

Q: If no, has any one tried to put an effort on proposing such legislation?

Q: Are businesses required to recycle their electronic waste now?

Q: Besides proposing the drafts of the legislation, have you made any other efforts on promoting electronic waste recycling?

**Conversation with Sazan Guri, One of the Board Directors of Recycle Albania
October 29th, 2013**

- Unlike European Union and United States, there is no legislation regards to electronic waste recycling in Albania now.
- A group of environmental professors including me tried to propose a draft for the legislation of electronic waste recycling since last year. The draft was being reviewed by the Ministry of Environment. However, the governmental election made the process to become harder since new minister are not familiar with the draft.
- Businesses are not required to recycle electronic waste currently.
- Before the election of new government, we asked several political parties to sign Green Contract with us. The Green Contract required the parties to support environmental friendly actions which made the public images of the parties to look better.

Appendix G – Target Company Communications

Our team has decided to conduct an interview with Target Companies of varying sizes and resources. We believe that they will be able to provide us with useful information about why they intend to join Recycle Albania program and their concerns toward the program.

We introduced ourselves as students from the United States working on a research project. We explained that we are working with Recycle Albania to improve the promoting of their electronic waste recycling program. We explained that participation is voluntary and that if they wish us not to use their name then we will not. We carried out the interview in a semi-standardized fashion, allowing for the wording and questions to be somewhat flexible.

Q: How did you hear about Recycle Albania’s program?

Q: Did you have any knowledge on electronic waste recycling before?

Q: Do you think electronic waste recycling is important?

Q: What factors do you consider when deciding whether or not you want to join Recycle Albania’s program?

Q: Do you have any concerns toward Recycle Albania’s program?

Q: Is there anything you want to know more about Recycle Albania or electronic waste recycling that is not in the presentation?

Q: What do you expect from Recycle Albania if you decide to join its program?

Q: Do you have any suggestions on how Recycle Albania present its program?

Interview with Bank of Albania

October 31, 2013

- Bank of Albania was not currently partnered with Recycle Albania at the time of this interview.
- Bank of Albania currently crushes their electronic waste and then dumps it into the garbage. In other words, they did not recycle properly.
- When asked why they were expressing an interest in Recycle Albania they provided the following reasons:
 - Recycle Albania appears to be very flexible
 - They liked that Recycle Albania had many prestigious partners already
 - Showed they had experience
 - Recycle Albania is the first and only initiative that targets electronic waste in Albania
- When asked about what they are taking into consideration when looking at the program they cited the same reasons as listed above.
- They did bring up their concern for the sensitive data that they store on their computers, such as personal customer details.
 - Decided to keep some hardware stored away themselves and they will recycle the rest

Interview with Tirana City Council

November 20th, 2013

- I have learned electronic waste recycling from the reading of scientific papers.
- I think recycling is important because it is good for the environment. Electronic waste recycling is especially important because they contain precious materials. It would be very beneficial for Albania to recover these materials from recycling process.
- At this point, I do not know Recycle Albania very much since I have not worked with it yet. However, I expect that Recycle Albania can handle our electronic waste successfully and be responsible.

Appendix H – Current Partner Communications

Our team has decided to conduct an interview with Current Partners of varying size and resources. We believe that they will be able to provide us with useful information about why they joined in Recycle Albania program.

We introduced ourselves as students from the United States working on a research project. We explained that we are working with Recycle Albania to improve the promoting of their electronic waste recycling program. We explained that participation is voluntary and that if they wish us not to use their name then we will not. We carried out the interview in a semi-standardized fashion, allowing for the wording and questions to be somewhat flexible.

Q: How did you hear about Recycle Albania's program?

Q: Why did it sound interesting to you?

Q: Who did you speak to?

Q: Why did you end up joining?

Q: How easy has it been to work with Recycle Albania?

Q: Do you tell your customers that you are recycling your electronic waste?

Q: Have you mentioned Recycle Albania to other companies?

Interview with Elona Paskali, Secretary at the Great Britain Embassy

November 11, 2013

- Recycle Albania contacted them with an email about joining. They replied back expressing their interest in learning more about Recycle Albania.
- One motivating factor was an interest in helping the environment. They also mentioned that involvement with Recycle Albania cost nothing for them.
- They enjoyed that working with Recycle Albania is easy.
 - Recycle Albania calls to check on the status of their Eco-Box every couple of weeks
 - Recycle Albania takes care of the collections process as well
 - No hassle for them
- No suggestions for the improvement of Recycle Albania's system

Interview with Mikel Smaci, Swedish Embassy

November 11, 2013

The Swedish embassy heard about Recycle Albania's program via an email that was sent to them.

- They described working with Recycle Albania
 - They call every week to check their Eco-Box
 - Eco-Box needs to be emptied every two or three months and contains mostly ink cartridges and batteries
- One suggestion that they had was that Recycle Albania should call less. They did not appreciate so many calls and would have preferred to have the calls happen less, maybe once a month

Interview with Marjeta Koça, Representative from Union Bank

(Peter Chistopher was present)

November 20, 2013

- Union Bank is an Albanian bank that is seven years old
 - Does not create that much e-waste (PC, printers, copiers, toner)
 - Collects all e-waste at bank headquarters
 - Recycles a lot of cardboard with a NGO like RA
- Mariglana came to present RA to Union Bank 1-2 years ago
 - First NGO to present e-waste recycling proposal to them
 - Hazardous waste law demands that e-waste be recycled, not thrown away
 - Easy way to get rid of their e-waste and free
 - Better for the environment to recycle (moral obligation)
 - Frees up space in warehouse to store other things instead of waste
- Their electronic waste is collected once a year scheduled
 - Can call RA for other collections when needed
- Partnership is going very well
 - This partnership (recycling) does not affect their public image
- Union bank has suggested RA to other banks and believes that all banks should be involved in the program
 - “All banks are, or should be, interested in the program”

Interview with Fllora Mucili, Representative from Coca Cola

November 21st, 2013

- Recycle Albania contacted us by phone and I had a meeting with Mariglana.
- There was nothing like this before in Albania and we thought it was good to start to recycle electronic waste in Albania. Our companies have internal laws on recycling and we have certain requirements to follow. However, we do not have any laws on e-waste but we think it is good for the environment in Albania.
- Our cooperation is perfect. Recycle Albania answers all of our requests and it is very easy to contact.
- Yes I did. However, e-waste recycling is not a common thing in Albanian culture but whenever we brought up recycling in our conversation, I would recommend it to my partners.

Appendix I – Interview with Ministry of Environment

Our team has decided to conduct an interview with a representative from the Ministry of Environment. We believe that they will be able to provide us with useful information about legislation regarding electronic waste

We introduced ourselves as students from the United States working on a research project. We explained that we are working with Recycle Albania to improve the promoting of their electronic waste recycling program. We explained that participation is voluntary and that if they wish us not to use their name then we will not. We carried out the interview in a semi-standardized fashion, allowing for the wording and questions to be somewhat flexible.

Q: What legislation is there regarding electronic waste?

Q: Is this legislation enforced at all?

Q: What are your thoughts on electronic waste recycling?

Interview with Representative of Ministry of Environment (Peter Christopher was present)
November 20th, 2013

- Mariglana told us that it took her three months to set up this interview. She did most of the talking. Afterwards, she told us about some of what happened and Peter Christopher debriefed us on the rest.
- There is a law on hazardous waste that affects electronic waste with hazardous components. There is no larger legislation on electronic waste.
- This law is not enforced and there is no way to monitor whether or not companies follow the law.
- The Ministry of Environment is considering contracting a British electronic waste recycling company to deal with electronic waste in Albania. There were not too many details about this at the time.

Appendix J – Interviews with Marketing Professionals

Our team has decided to conduct an interview with a WPI Professor of Marketing and Tirana Professor of Marketing. We believe that they will be able to provide us with useful information about potential promotional strategies.

We introduced ourselves as students from the United States working on a research project. We explained that we are working with Recycle Albania to improve the promoting of their electronic waste recycling program. We explained that participation is voluntary and that if they wish us not to use their name then we will not. We carried out the interview in a semi-standardized fashion, allowing for the wording and questions to be somewhat flexible.

Q: What are important marketing strategies that a recycling program might use?

Q: If we were to be targeting corporations, how would it be best to do this?

Q: If we were to be targeting the public, how would it be best to do this?

Q: What information would our target audience want to know about the recycling program?

Q: What type of information should we mention and what type of information should we avoid?

Q: What are some difficulties that we might face in marketing a recycling program?

Q: How could we best overcome any difficulties?

Interview with Purvi Shah, Assistant Professor of Marketing at WPI

October 8, 2013

- General Marketing: Clarity, consistency, convincing. communications impact. Feedback can be important to know how effective your message was. Either want to standardize, keep same thing, or adapt, change for audience. If adapting, you want to maintain some sort of consistency, like colors but must be careful that a different culture doesn't read something else into it. The more writing you have, the more adapting you will want to do
- We should show companies how they can benefit from joining. Can be from less money, less insurance, showing social responsibility. Want our message to be simple but innovative.
- Difficulties could be from language, but also people might value different things. Need to figure out what they value. Should empathize with the people and try to understand how they do things. Maybe work with another organization.
- Ideas for us: Probably want to do public relations stuff or advertising. Advertising usually cost money where as public relations do not. Since nonprofit, they would probably appreciate it, if you do not need much money. You should host an event and invite the media, like newspaper and tv. Then they can write up something about what you did and spread the message to lots of people. You want to make an event that is interesting though, like hosting an event or teaching kids at a school. If you have time to make it large enough, you could also get a company to sponsor an event and they would get some good press too. They could pay to host the event or to give a prize.

Interview with Ilia Kristo

November 22nd, 2013

- From my knowledge, companies here usually have boxes of old electronic equipment that are outdated but most of the time they do not know how to dispose electronic waste and they think it would be wasteful to throw it in trash.
- Large companies typically produce electronic waste in a yearly manner. It is really hard to talk to someone from the companies about recycling because everyone is busy and the economy is not really well so that people would not spend time on talking to you. When you get a chance to take to them, you must stress out the benefit they can get from joining your program. It would be good if you know well about the people that you will talk to before you talk to them. I can help you to make contact with companies since I know many people who work in different companies.
- One problem with the pamphlet is that people from companies may receive lots of soliciting pamphlet so that they typically ignore the message. It is important for you to sit down with the people and to discuss your pamphlet with them.
- The pamphlet should contain more meaningful photographs and less text in order to present the message better. The color green is also overused on this pamphlet.
- The website should contain a list of companies that work with Recycle Albania. A list of companies of companies that do not corporate with Recycle Albania should not appear on its website.

Appendix K – Discussions with Graduate International Marketing Class

Our team conducted a discussion with a master's level International Marketing class. We provided them with copies of Recycle Albania's pamphlet and brochure and asked for their comments on both. Also present were Professor Ilia Kristo and Assistant Professor Adela Llatja, who helped with the discussion.

We introduced ourselves as students from the United States working on a research project. We explained that we are working with Recycle Albania to improve the promoting of their electronic waste recycling program. We explained that participation is voluntary and that if they wish us not to use their name then we will not. We carried out the interview in a semi-standardized fashion, allowing for the wording and questions to be somewhat flexible.

November 25, 2013

Comments on Pamphlet:

- Yellow may work better than blue
- Last line of current companies needs to be revised
- More on how Recycle Albania functions
 - Philosophy
 - System, where does the e-waste go?
- Target students as well as companies
- Top of cover page needs to be addressed (looks childish)
- Less text, simpler text
- Make Eco-Box photograph bigger
- Add negative effects
- Fully define how collection works (small waste deposited in box, other waste collected else ware)
- Make more attractive

Comments on Brochure:

- Less text, add negative effects more specifically
- Clarify collection (large vs. small waste)

- Add titles to all pages
- Improve photographs, add photographs of better quality, make photograph size consistent
- Before and after photographs of Tirana
- Add a company list
- Cover page: remove lower photograph, slogan is good but make bigger
- Use strong colors, contrasting colors
- Break up photographs and text (photograph-text-photograph instead of text-photograph-photograph)
- General rule of thumb: limit to ten lines of text per page

General Notes:

- Fix grammar and typos
- Brochure is more effective than pamphlet
- New logo idea: recycle bin with Albanian flag

December 9, 2013

We met with the class and Assistant Professor Adela Llatja for a second time. The purpose of this meeting was to present our updated material to the class. This meeting was carried out in a similar manner as the first one.

Comments on Pamphlet:

- Enjoyed the new design of pamphlet
- Break up the text inside the final box with text
- Did say some information was missing and wanted an answer to their questions
 - Where does the waste go?
 - Is it properly recycled?

Comments on Brochure:

- One comment was made about the contact information being on the front and back cover and suggested deleting the information on the front
 - The rest of the class seemed to disagreed with the idea
- Double headed eagle with the recycling logo on it is a good symbol of the cause

- Like the photograph of general recycling boxes
 - Makes the link to recycling
- The box on the bottom of page four should be expanded and the wording on the page is too long.
 - Suggested some different phrases to be used instead



Figure 24 International marketing class

Our team can be located in the front left row of the classroom. Professor Christopher can be located standing in the back of the room.

Appendix L – Our Recommendations

Our team wrote the following recommendation sheet to provide to our sponsor, Recycle Albania. It is written in a bullet format which is meant to be easy to read. Also included are our detailed evaluations and recommendations for Recycle Albania's website as well as an informational poster blueprint.

Recycle Albania should seek out personal communications with target companies.

- Call the target companies to schedule specific meeting time and date
- Be sure to always meet face-to-face with target companies
 - This has a high success rate
- Build a personal relationship with potential partners
- When contacting companies through email
 - Do not use any attachments, put all information in the body
 - Update email list so no duplicated or invalid email addresses are on it

Recycle Albania should use the updated materials.

- We have created a brochure and pamphlet that you can use
 - The brochure contains information concerning electronic waste
 - The pamphlet contains information about Recycle Albania
 - They are meant to be distributed together

Recycle Albania should implement our recommendations for the website, poster, and Facebook.

- We evaluated your website and have attached recommendations
- Also attached is the idea for a poster
 - The poster is meant to be included/displayed with the Eco-Box
 - The poster will help to educate employees who work in buildings with Eco-Boxes
- Recycle Albania has multiple Facebook pages open and only one is used
 - Take down the other pages so people can more easily find your page

Recycle Albania should maintain strong relationships with its partners.

- Listen to companies requests
 - Many companies like that you call often
 - Some companies do not enjoy the frequent calls
 - Consult companies once every two months
- When companies like you, they recommend you to other companies
- We recommend having a partnership appreciation day once a year
 - One idea is to send an email to all of your partners that thanks them for their cooperation

Website

Recycle Albania's website contained information concerning electronic waste and its organization. Our evaluation went through each menu that is available on its website. The home page was the first one to be examined for key information. On the home page, we found a paragraph that discusses several of the important points. It did include some minor information about what Recycle Albania does and also a description of some different forms of electronic waste. However, this paragraph lacked information about improper disposal, what the consequences of not recycling can be, and a proper definition of electronic waste. In addition to the content on the page, we also noticed that the image on top of the page failed to load. We recommended that the content of this page be updated and the image fixed.

The "Rreth Nesh" page, or "About Us", contained valuable information but was lacking information about Recycle Albania. Instead, the page contained key points that pertained to electronic waste and its negative effects. Although this page provided information, it was not provided in an appealing format. The page contained too many paragraph breaks which created a cluttered look for the page. From this evaluation, we saw that this page provided high-quality details about electronic waste but it was not reader friendly. We recommended that this page be renamed "About Electronic Waste" and that the writing format be changed.

The "Partneret tane" page, or "Our Partners", was missing an extensive list of companies that currently work with Recycle Albania. The first part of the page contained a general list of partners, such as embassies and local governmental institutions. Although this list gave a sense of who currently recycles, it did not provide a complete list of partners. This page also had lists of specific companies that have refused to cooperate with Recycle Albania, which may not be appropriate. We recommended that a complete list of partners be included and that the list of uncooperative companies be removed.

"Latest News" could be accessed from any page by selecting "view all news". This page seemed hidden as it was not located with the rest of the links to the main pages. Once selected, this brought you to the "About Us" page written in English. This page contained information regarding Recycle Albania, specifically its mission and purpose. It did have one update with the various negative effects of electronic waste which was only visible because it was the latest post. Any other "Latest News" was hidden in the website. We recommended that the "About Us" page is made more visible and the "Latest News" page be updated more often.

The “Galeria”, or “Gallery”, contained very limited pictures of electronic waste. We had previously seen pictures of a recycling conference as well as a youth education day located on a different website about Recycle Albania but they were not included on this page. The most interesting part about the gallery page was the link to a YouTube video about Recycle Albania. This video was very informative about electronic waste as well as Recycle Albania’s program. The video was hidden away in the “Gallery” page but we identified it as a potentially key source of information for potential partners. We recommended that the video be moved to the home page and include pictures of their past events.

The “Contact Us” page was much simpler to evaluate. On the page, there were various methods listed that can be used to reach Recycle Albania. This page supplied an email, several telephone numbers and an address. One convenient feature allowed people to send an email to Recycle Albania directly from the page. Other less appealing features included an address which was in Indonesia as well as a link for the website. We recommended that the address be changed and the contacts be made consistent.

A summary of our results from the evaluation of the website can be found in Figure 9. Some of our key points were found in the website. There was plenty of information about electronic waste’s negative effects and information about Recycle Albania’s program. A clear definition of electronic waste was not present in the website. Improper disposal methods were never listed and proper disposal methods were only discussed in a limited amount. Several issues concerning the website’s hyperlinks occurred and the webpage’s software was out of date and required an update. We recommended that the key points be added to pertinent sections and that the technical issues are solved.

	Definition of electronic waste	Electronic waste's negative effects	Improper versus proper disposal methods	What Recycle Albania's program provides
Home Page	Available	Not available	Only proper methods	Available
Rreth Nesh	Available	Available	Not available	N/A
Partneret tane	N/A	N/A	N/A	N/A
Latest News	Not available	Available	Not available	Not available
About Us	N/A	N/A	N/A	Available
Gallery	N/A	N/A	N/A	N/A
Contact Us	N/A	N/A	N/A	N/A

Figure 25 Information originally available on the website

Electronic Waste

Electronic waste is waste from electrical and electronic devices.

Improper Disposal Methods


- Throwing away electronic waste with regular garbage
- Using unorthodox methods to process electronic waste

Consequences of Improper Disposal


Environment	People
<ul style="list-style-type: none"> • Lasting damage to soil • Contamination of water sources • Pollution of the air 	<ul style="list-style-type: none"> • Potential carcinogens • Permanent brain damage • Especially dangerous to children

Proper Disposal Method for Electronic Waste Is:
Recycling

Please take advantage of the Eco-Box!



This information is presented by:



Recycle Albania
"Do your part! Save ALBANIA!"

This is the “poster”. We think it would be a good idea to educate the employees of companies that have an Eco-Box. Putting any information about electronic waste on or near the Eco-Box could help to accomplish this.