

E-waste Tracker  
(Technical Report)

Obstacles to Recyclability: The Mounting E-waste Problem  
(STS Research Paper)

An Undergraduate Thesis Portfolio  
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Bachelor of Science in Computer Science

by

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## **Preface**

How have e-waste recycling practices fallen short of environmental standards?

How can e-waste recyclers connect with consumers trying to safely dispose of goods?

Society lacks methods to get people involved in sustainable recycling practices or educate people about properly disposing of e-waste. Technology manufacturers purposefully limit the lifespan of electronics to force customers to purchase new devices. These old devices are often disposed of using methods that are harmful to the environment and surrounding communities. Without a tool that provides information about what can be done with electronics as they get old, or what happens to those electronics once disposed of, there is no incentive to change current e-waste trends. The proposed new application allows consumers to enter information about their device, and provide feedback on the best course of action. Consumers could also track their recycled devices through its chain of custody to ensure it is recycled properly. By providing easily accessible information to consumers the lifespan of electronics can be increased. Electronics recyclers would be incentivized to dispose of e-waste properly.

Electronics manufacturers and recyclers have resisted efforts to reduce waste. Lack of regulation and profitability in unsustainable practices have led manufacturers and recyclers to oppose efforts at reducing e-waste. Electronics manufacturers, recyclers, organizations fighting for sustainable practices, individual consumers, and businesses are the main participants. The major efforts and motives of these participants are analyzed. Through these accounts, context is given to the rapidly increasing amount of e-waste.

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