

Green Packaging: A Guideline and Tools for Environmentally Sound Packaging Practices for Computer and Electronics Products.

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A Group Project Proposal to the Donald Bren School of Environmental Science and Management, University of California, Santa Barbara

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Introduction

The environmental impacts of product packaging and its waste are an issue of growing importance and concern worldwide. All companies use various quantities of materials and other resources to package their products to survive distribution and other harmful elements. Today, our natural environment is adversely affected by product packaging and packaging waste. Environmentally sound packaging seeks to minimize the amount of material used and address the environmental concerns that surround product packaging.

This document proposes a project that addresses this global issue to be conducted by Bren Class of 2005 students. Ideal students will be interested in gaining experience in life cycle assessment, supply chain management, solid waste management and overall corporate environmental management. The goal of the project is to develop an environmental packaging guideline and education program geared toward helping computer and electronics corporations like Hewlett Packard achieve environmentally sound packaging.

The main client for this project will be Paul Russell, Corporate Packaging Program Manager with Hewlett Packard Company. Mr. Russell's role at HP is to ensure package design processes are optimized for distribution, product protection, and environmental needs. In addition, other technology corporations have expressed interest in becoming involved. There is a strong possibility of an "industry coalition" to support this project and its eventual product.

Background

In 1992 Paul Russell led an industry team that developed an environmental packaging guideline document. The document's goal was to educate the computer and electronics industry about the need and the possibilities to reduce the environmental impacts of product packaging. Over ten years have passed and much has changed in the way packaging is designed, managed and regulated worldwide. Executives at HP, and other technology companies, are thus interested in revising and updating the original set of guidelines. In addition, they see value in developing further their environmental packaging knowledge and practices.

Significance

According to the EPA, annual generation of municipal solid waste in the United States has increased from 88 million tons in 1960 to 229 million tons in 2001. Containers and packaging made up almost one third of those 229 million tons. The waste generated by industrial processes along the supply chain dwarfs municipal waste. Industry in the United States is reported to create 7.6 billion tons of non-hazardous waste each year. Industrial packaging significantly contributes to that figure.

Global regulations focused on reducing packaging waste have been increasing. Currently, there are environmental packaging design requirements in more than 25 countries and package reporting and advanced disposal fees in 30 countries (soon to be 35). All these countries' programs vary in terms of material definitions, packaging definitions, kinds of packaging covered, and fee structures.

Objectives

The overall objective for this project will be to provide corporations in the technology industry with comprehensive, up-to-date strategies, guidelines and tools which advise their employees, as well as suppliers and customers, on how to devise, assess and implement packaging designs and practices that are environmentally sound and comply with all relevant packaging regulations.

Key aspects of the project include:

- Analysis of existing packaging designs and practices, including how companies have used the current guideline since it was created in 1992
- Life cycle based assessments of product packaging, including industrial packaging (suppliers to manufacturers) and consumer packaging (manufacturers to consumers)
- Analysis of how the waste management hierarchy applies to product packaging
- The business implications of packaging reduction, reuse and recycling
- Analysis of the international regulatory requirements regarding packaging and packaging waste

Approach

Group members will use knowledge gained at Bren, additional research, and expertise and information provided by the client organizations to develop this project.

The project team will begin by gathering the necessary data and materials. HP has committed to provide the data necessary, including information on internal packaging practices, as well as those of suppliers. In addition, the project team will likely need to supplement this with additional secondary research.

Once the data is collected, the team will be able to conduct the analyses discussed in the 'Objectives' section. This will include Life cycle methodology to understand the environmental impacts of inputs and outputs related to the development and use of product packaging.

Stakeholders

Stakeholders will include not only clients, but also the customers, suppliers and contractors they do business with. Where compliance issues are involved, government regulatory agencies, such as the EPA, will also influence the project.

Deliverables

- A redeveloped environmental packaging guideline document – This new document will include information and strategies designed to enable computer and electronics packaging professionals to improve the environmental performance of their business practices.
- Training module – A course curriculum designed to reinforce the key points from the guideline.
- Certification exam – A test designed to certify that professionals have a solid comprehension of principles related to environmental packaging.

Support

Hewlett Packard will provide the support necessary for the success of this project, including industry expertise and information. Other companies interested in becoming involved will be expected to do the same.

While not yet confirmed, summer internships may be possible for group project members. Negotiation for internships will continue.

Costs for this project will be limited to minor expenses, including office supplies, postage, phone charges, software and presentation materials.

Total budget: **\$2000**

Any balance over what the Bren School provides the group will be covered by HP. In addition, HP will pay for print publication of the final guideline document as well as host a web-based version at www.hp.com.

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